# Der kleine Akademiker

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Der kleine Akademiker ist ein studentisches Journal der Fachschaft WiWi.

Hier werden freiwillig eingesendete Abschlussarbeiten jeglicher Art (Seminar-, Bachelor- und Masterarbeiten) ausgegeben, die mit der Note "sehr gut" bewertet wurden. Dies soll Studierenden die Möglichkeit bieten, erfolgreiche Arbeiten zu sichten, und sich aktuellen Forschungsthemen des Fachbereiches näherzubringen.







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#### LIEBE PROFESSORINNEN UND PROFESSOREN,

Alljährlich betreuen Sie eine Vielzahl an wissenschaftlichen Arbeiten an der Goethe-Universität Frankfurt. Das Journal *"Der kleine Akademiker"* bietet Studierenden nun die Möglichkeit, Seminar-, Bachelor- und Masterarbeiten zu veröffentlichen.

An Sie richten wir nun folgende Bitte um Unterstützung: Sollten Sie besonders erwähnenswerte Arbeiten innerhalb der letzten Semester betreut haben, würden wir uns sehr freuen, wenn Sie einen Kontakt zu den Autoren dieser Arbeiten herstellen könnten. Sie können Vorschläge hierbei gerne direkt an journal@wiwi-frankfurt.de senden oder sich an die Fachschaft Wirtschaftswissenschaften wenden. Vielen Dank für Ihre Kenntnisnahme.

Mit freundlichen Grüßen

### THE NEED FOR EFFECTIVE INVESTOR-BORROWER PROTECTION

von ADRIJAN SUSTO

The last decades have seen a substantial increase in the pace of financial innovation, with new and ever more complex financial products appearing on the market for retail investors. This goes hand in hand with consumers being swamped with an overwhelming amount of information. Simultaneously, households are now expected to rely on their own knowledge and abilities to navigate financial markets. They are forced to take on responsibility for their own financial welfare and need to make financial decisions ranging from pension plan contributions to choosing the right debt instruments to adequately finance home purchases, exposing them to the risk of delinquency.

However, the household finance literature provides ample evidence of financial instruments utilisation resulting in harmful outcomes for investors. Research focused on household stock trading (Barber and Odean, 2001; Barber et al., 2009) has found that households overtrade stocks located in brokerage accounts, resulting in diminished wealth generation caused by exorbitant transaction costs. Barber and Odean (2000) analyse a data set from a large discount brokerage firm containing information on the investments of 78,000 U.S. households and observe that households with the most trades earn an annual return of 11.4 percent, which

they contrast to the market return of 17.9 percent in the same period. Furthermore, they discover that the average household turns over 75 percent of its portfolio annually.

A pervasive, perplexing phenomenon first observed by Morrison (1998) has consumers rolling over high-interest credit card debt despite simultaneously being in possession of low-interest liquid assets, which a financially savvy ("rational") household would use to pay down the revolving debt. Researchers have dubbed this phenomenon the credit card debt puzzle. These very liquid assets are usually held in checking and savings accounts with interest rates well beyond one percent in most developed countries. On the other hand, according to data from the Federal Reserve, the average credit card interest rate in the U.S. is 14.65 percent.

Using the 1995 Survey of Consumer Finances, Bertaut and Haliassos (2006) establish that an astonishing 39 percent of credit card revolvers have the necessary liquid assets to pay off their balance in full. There are multiple reasons for such outcomes. Firstly, a customer may be faced with an unfamiliar, extraordinarily complex financial product. It is also possible that the buyer is financially unsophisticated. Suboptimal decision-making brought about by cogni-

tive biases can never be completely eliminated.

In this paper, the market for financial advice needs to be examined first. Financial advisers theoretically serve as informed individuals who are able to provide households with the essential information they need to make reasonable financial decisions. However, this is often not the case in practice because advisers are tempted to enrich themselves at the expense of their clientele. Moreover, motivations behind adviser misconduct are explored. This is done in the context of misselling and, while largely applicable to financial markets, can also apply to other industries where marketers profit from convincing customers that products are worth more than they are inclined to believe.

When it comes to household financial decisions, the topic of efficient regulation cannot be ignored. Regulation can prevent households from falling into pitfalls that would lead to overwhelming debt accumulation or even delinquency. That is why regulation plays a vital role in improving household outcomes. Nevertheless, regulation is only one component in the comprehensive framework consisting of financial education and financial literacy provision, nudging and rules of thumb, and other mechanisms that rely on the findings generated by behavioural economics and cognitive science.

#### WFITERI ESEN?

DIE KOMPLETTE ARBEIT FINDEST DU IM NETZ: WIWI-FRANKFURT.DE/DKA-04-01

# TECHNOLOGICAL CHANGE AND EDUCATION: GENERAL VS. VOCATIONAL EDUCATION IN GERMANY

von DAVID WITTEKOPF

Countries' educational systems differ by their emphasis on education types, which can be decomposed into two categories: general and vocational education. Vocational education (e.g. apprenticeship) provides an occupation-specific education, and therefore a smoother school-work-transition and further, develops individuals to be highly skill-based. While general education (e.g. university) is thought to strengthen the ability to learn new competencies that facilitate life-long learning.

The German education system promotes occupation-specific vocational education. Currently roughly 60% of the population hold a vocational qualification as their highest educational degree, according to Statistisches Bundesamt. In comparison, the US provides a more general-based education resulting in a modest share attending a vocational school. However, short-term benefits of higher employment likelihood for individuals holding a vocational education face long-term costs compared to general concept-based education. A reason for this tradeoff might be that individuals with a vocational qualification are less adaptive to new technologies. Therefore, technological change - as an

indication for the development of new technologies - makes the obsoletion of specific-skills even more pronounced throughout the career.

Conceptually, this masterthesis tries to empirically analyze two questions. One, if there is technological change, how do the age-employment profiles of individuals with general and vocational education differ in Germany? Or more precisely: is there a short-term and long-term trade-off between the two education types in Germany? And secondly, is technological change, in fact, a driver for this differences?

A descriptive analysis reveals that individuals with vocational education have an early-career stage advantage over individuals with a general education. This seems reasonable as the vocational education system is designed to ease the school-work transition. However, this advantage at the beginning of the career turns into a disadvantage as the career progresses. This difference in employment fraction by type of education is, in fact, non-linearly increasing with age. Additionally, people holding a vocational degree are more exposed to a technologically changing environment.

To further assess that the early-career stage advantage of being vocationally educated over having a general education becomes disadvantageous to individuals in Germany, I exploit a comparative approach. To overcome selection bias into the different education types, I apply a fixed-effect regression model. Additionally, the analysis is extended to determine the impact of technological change on labor-market outcomes of individuals of the two education types.

The analysis confirms the descriptive results that there exists an early-career stage advantage for individuals with vocational education compared to generally educated. This initial advantage of a higher employment probability, however, becomes disadvantageous as the career progresses. To be more precise, people holding a vocational qualification as their highest degree are less likely to be employed after the age of 32 than individuals with general education.

The baseline analysis is complemented by a measure of technological change to assess its impact on the differences. The analysis showed that, in fact, changing technology negatively impacts the vocationally educated. However, as the initial negative impact of technological change is persistent throughout the career it decreases slightly as the career progresses. This finding is in contrast to existing theory.

As a general result of this master thesis, in the discussion about the education system in Germany, the advantage of the smooth school-to-work transition by the vocational education system has to be put in the context of the disadvantage later in the career. Further, technological change has an impact on the age-employment profiles between individuals holding a general vs. a vocational qualification. But whether the difference in adaptability to a changing technological environment is a driver for the employment differences cannot be finally determined, since the impact slightly decreases with age and, so, further research is necessary.

#### WEITERLESEN?

DIE KOMPLETTE ARBEIT FINDEST DU IM NETZ: WIWI-FRANKFURT.DF/DKA-04-02

Jun.-Prof. Dr. Klaus Miller (Juniorprofessur für Quantitative Marketing) und Prof. Dr. Bernd Skiera (Professu für e-Commerce)

#### CAN YOU BUY PRIVACY?

#### von DANIEL HINZ & FLORIAN HAGEN

Currently, about 3 million Android applications (apps) can be downloaded using the Google Play Store. About 96% of those can be downloaded free of charge, while 4% require the user to pay for the app. While the latter can generate revenue solely with their purchase prices, monetization for free apps is more complicated.

Every app can ask for certain permissions when being installed and is theoretically able to collect different kinds of information from the device it is installed on – or "track" information over time – utilizing so-called trackers. The collected data can then be used in various ways by the publishers and developers.

However, some of those ways lead to means of monetization and thus can generate revenue, even though the app might be free for the consumer to download, install, and use. This leads to a trade-off: either the purchase price of an app generates enough revenue, or the publishers have to rely on collected information from trackers or permissions, or both, thus creating a risk of privacy for the user, depending on how the data is used.

In our thesis, we will put this trade-off to the test and analyze statistically, whether the use of free apps actually compromises the consumer's privacy more than the use of paid apps. To achieve that we examine the data collection practices measured in user tracking and asked permissions for 2731 apps using a web-scraper with Exodus Privacy. It is a tool that recognizes and lists implemented permissions and trackers for numerous Android apps. The data comes from Kaggle.com and encompasses over 1 million apps, of which we took the 3000 most popular free and 3000 most popular paid apps (popularity measured by number of installations) and checked them against Exodus' database. The data also included purchase prices, which play an important part in answering our question.

We found that, measured by the average number of dangerous permissions, privacy is generally lower in free apps (1). However, an app's category has a strong impact on asked permissions as well (2), leading to great differences of free-paid-effects between different categories (3).

We conclude that the difference in privacy of free and paid apps is higher in categories which require less dangerous permissions in order to function (like games) and lower in categories where functionality is highly dependent on dangerous permissions (such as weather-apps). The consumer implication whether it is worth paying for an app from a privacy perspective thus depends on the category.

#### WEITERLESEN?

DIE KOMPLETTE ARBEIT FINDEST DU IM NETZ: WIWI-FRANKFURT.DE/DKA-04-03



# DOES ACTIVIST INVESTING CREATE SHAREHOLDER VALUE?

#### von JAKOB BRUNNENGRÄBER

In recent years, activist investing in European blue-chip corporations has strongly increased. Between 2013 and 2017, the capital invested by activist investors in Europe almost doubled, from \$24 billion to \$47 billion (Jahn, Köhler, Landgraf & Rickens, 2018). Activist investors often put pressure on target companies with extensive demands for corporate strategy changes, such as spin-offs, renegotiations of takeovers or management board changes. The aggressive behaviour of investors makes the phenomenon not only controversial but also relevant for the share price performance of target companies. Existing research, however, has mostly focused on activism in the US. Despite the recent wave of activist campaigns, empirical studies of shareholder activism in Europe are still scarce. By analyzing 31 campaigns between 2014 and 2018 on targets listed in European prime stock market indices (thereof 24 launched by hedge funds), I aim to contribute by investigating short-term excess returns caused by the disclosure of shareholder activism. For this purpose, I conduct an event study in which I compare the returns achieved immediately after the entry of activist investors became known, with the required returns implied by common asset pricing models (CAPM and Fama-French). The event study finds strong abnormal returns in the short run, significant

at the 99% confidence level. The average daily excess returns in the three-day event window amount to 1,09% (CAPM) and 1,09% (Fama-French), implying excess returns that are more than 80 times as high as the required returns. Furthermore, I conduct mean-difference analyses to identify potential determinants of the stock market's reactions to activist campaigns, including categorized campaign contents, the geographical distribution of target companies, and the notorious reputations of a hedge fund. For the geographic occurrence of the campaigns, I find higher excess returns for campaigns in the UK, significant at the 90% confidence level. Finally, I investigate whether a correlation between the acquired stake of activists at first entry and the realized excess return exists. I do not find a significant positive relationship between the relative share acquired by the investor at the first entrance and the size of excess returns. While this study focusses on the short-term reactions to disclosure of activist campaigns, the long-term results of the increased engagement of activists can only be fully evaluated in the future, since many recently launched campaigns are ongoing. The highly significant findings on shortterm excess returns of this study encourage to conduct further research on the medium- and long-term equity value implications of activist

campaigns in European stock markets.

#### WFITERI ESEN?

DIE KOMPLETTE ARBEIT FINDEST DU IM NETZ:

WIWI-FRANKFURT.DE/DKA-04-04



Prof. Dr. Dres. h.c. Bertram Schefold (Professur für Wirtschaftstheorie)

# DAS ZWEITE BUCH DER PSEUDO-ARIS-TOTELISCHEN OIKONOMIKA UND DES-SEN DEUTSCHE REZEPTION

#### von JOHANNA KLEENSANG

Nur wenige antike Schriften setzen sich systematisch mit wirtschaftlichen Zusammenhängen auseinander, wenngleich es auch im Altertum schon rege Wirtschafts- und Handelsbeziehungen gab. Umso mehr lohnt eine Untersuchung der pseudo-aristotelischen Oikonomika, einer Lehrschrift zur Ökonomie aus dem späten 4. oder dem 3. Jahrhundert v. Chr., um zu ergründen, wo die Ursprünge der Ökonomie als Wissenschaft liegen und welche Besonderheiten die antike Wirtschaft aufweist.

Die antike Wirtschaft zeichnet sich durch den von Karl Polanyi geprägten Begriff der "Einbettung" (Polanyi 1979) in gesellschaftliche Strukturen aus. So wurde von wohlhabenden Bürgern erwartet, dass sie Leistungen für die Gesellschaft finanzierten, wie z.B. die Ausstattung eines Kriegsschiffes oder einer Theatervorstellung. Außerdem sollte der antike Haushalt so bewirtschaftet werden, dass sich ein mäßiger Wohlstand einstellte, der ausreichte, um ein gutes Leben zu führen und ermöglichte, sich politischen Tätigkeiten zu widmen. Tauschbeziehungen dienten der Bedürfnisdeckung des Haushalts und nicht einer reinen Gewinnakkumulation, die als Selbstzweck stark verurteilt wurde. Einige Schriften der Antike geben eine Anleitung zur Bewirtschaftung des Haushalts [...], so z.B. Xenophons *Oikonomikos*. Dies geschieht jedoch meist im Hinblick auf eine moralisch gute Lebensweise und ohne gesamtwirtschaftlichen Bezug.

Das zweite Buch der Oikonomika hebt sich nun insofern von anderen antiken Schriften zur Wirtschaft ab, als dass es nicht nur eine praktische Anleitung zum Wirtschaften im Alltag liefert, sondern, trotz seines fragmentarischen Charakters, Züge eines systematischen Lehrbuchs mit gesamtwirtschaftlichem Bezug trägt. Es gliedert sich in zwei Teile, wobei der erste Teil verschiedene Wirtschaftsarten klassifiziert (ein typisches Merkmal des antiken Lehrbuchs) und dabei sowohl staatliche- als auch private Haushaltsführung thematisiert, was ungewöhnlich für die antike Ökonomik-Literatur ist. Der zweite Teil beinhaltet eine Sammlung historischer Beispiele, durch die in der Antike versucht wurde, die Staatsfinanzen aufzubessern. Diese Maßnahmen dienten dazu, kurzfristige Krisen abzuschwächen und umfassen die Erhebung von Steuern und Abgaben, die Schaffung von Monopolen, aber auch – entgegen der oben beschriebenen Idealvorstellung - moralisch zweifelhafte Methoden, wie Erpressung oder

Nach einer Analyse beider Teile des zweiten Buchs der Oikonomika geht die vorliegende Arbeit auf die deutsche Rezeptionsgeschichte des Werks ein. Ein besonderer Fokus liegt dabei auf dem Buch De Aerario des Juristen und Kameralisten Kaspar Klock aus dem 17. Jahrhundert. Klock verfasste Kommentare zum zweiten Buch der Oikonomika. Diese sind nicht nur als Teil der Rezeptionsgeschichte interessant, sondern geben auch Aufschluss über das kameralistische Wirtschaftsdenken zu Klocks Zeit.

Die Arbeit schließt mit einem Überblick über die neuere Rezeptionsgeschichte der Oikonomika. Dabei wird vor allem auf die Frage der Autorschaft und Datierung des Werks eingegangen. Sowohl die Oikonomika als auch die antike Wirtschaft im Allgemeinen wurden kontrovers bewertet und somit bleibt das Werk auch heute noch ein interessanter Untersuchungsgegenstand.

#### **KOMMENTAR DES PROFESSORS:**

Gerne empfehle ich die Bachelorarbeit von Frau Kleensang als Vorbild einer Studie zur Geschichte des ökonomischen Denkens für die studentische Lektüre und danke der Fachschaft für ihre Vermittlung. (...)

Die Bachelorarbeit von Frau Kleensang ist nicht nur inhaltlich interessant, sondern entspricht auch den Standards formaler Qualität; sie wurde mit "sehr gut" benotet. Sie ist klar und sinnvoll gegliedert. Vor der eigentlichen Analyse der Schrift bespricht die Autorin die Bedeutung für die Dogmengeschichte, wobei sie auf weitere antike Werke zum Wirtschaftsdenken eingeht. Außerdem stellt Frau Kleensang die Oikonomika in ihren historischen Kontext, indem sie die Besonderheiten der antiken Wirtschaft analysiert. Die eigentliche Untersuchung der Beispielsammlung zur Aufbesserung der Staatsfinanzen gliedert Frau Kleensang sinnvollerweise thematisch nach den jeweiligen ökonomischen Maßnahmen. Nach dieser detaillierten Analyse folgt eine Rezeptionsgeschichte, die bei der spätmittelalterlichen Wiederaufnahme des Texts beginnt. Die Kommentare des Kameralisten Kaspar Klock berücksichtigt Frau Kleensang ausführlich, indem sie den lateinischen, bisher nicht ins Deutsche übersetzten Originaltext untersucht und so auch Besonderheiten des Wirtschaftsdenkens in der Zeit des Dreißigjährigen Kriegs im Alten Reich beleuchtet. Frau Kleensang hat die Forschungsliteratur zum zweiten Buch der Oikonomika eingehend berücksichtigt. Die Arbeit zeichnet sich durch Genauigkeit und eine kultivierte Sprache aus; es gelingt Frau Kleensang, die Besonderheiten der Oikonomika treffend und unter Berücksichtigung der historischen Bedingtheit der Schrift darzustellen.

#### WEITERLESEN?

DIE KOMPLETTE ARBEIT FINDEST DU IM NETZ: WIWI-FRANKFURT.DE/DKA-04-05

# RECENT TRENDS IN INEQUALITY IN GERMANY

#### von LARA KLEIN

The debate about inequality has gained significant attention within the last years. Reports about rising income inequality surface on a daily basis and various actors from all kinds of different backgrounds have started to occupy themselves with the issue more frequently. Research on income inequality has flourished since the start of the new millennium and publications like Thomas Piketty's bestseller "Capital in the Twenty-First Century" (2014), which addresses the evolution of the income and wealth distribution in several countries and suggests how inequality and economic growth are related, have further fuelled the interest in inequality of economists, politicians and the broad public alike.

But why should we care about inequality in the first place? Atkinson (2016) claims that people have an intrinsic motivation to care about fairness and that the degree of inequality within a society has a considerable impact on its harmony and ability to live together. A more equal society would have a stronger social cohesion and develop a better sense for common interests. He argues that one should therefore also study the income distribution to develop a better understanding of the whole economy, as differences between people will influence national output in the long run. Alvaredo et

al. (2018) note that while no universal truth about an optimal inequality level can exist, all people care about inequality and hold different, oftentimes contrasting beliefs as to what they perceive as fair and just. While the authors acknowledge that inequality is inevitable to a certain degree, they name too high levels of inequality as a source of political, economic and social conflicts. Keeley (2015) suggests that there are essentially two opposing views on the meaning of inequality for economic growth. The supporter side claims that inequality can be good for growth, as it provides incentives for entrepreneurs to innovate and invest into the economy. Excessive redistribution could negatively influence the innovative capacity within a society, as the outcome of hard work would not solely be attributed to the initiator anymore, but rather to an abundance of unrelated people. Hence, inequality could have a stimulating impact on the economy by allowing people to hold on to their rewards. The opposing side, however, argues that inequality is bad for growth since it reinforces economic differences within a society and leads to political and social instability. Low-income families tend to be out of employment more often and invest less in their children's education than the richer part of the population. Lacking decent opportunities from an early age on,

these children are in turn subject to intergenerational economic disadvantages and they become more likely to pass on these disadvantages to their own offspring, while high-income earners manage to secure an ever-increasing share of total income.

An increasing number of policy makers have thus dedicated themselves to the issue of rising inequality and have therefore designed plans to counter any upward trends. The United Nations (2015) anchor the fight against inequality within their "2030 Agenda for Sustainable Development" under its proposed "Sustainable Development Goals" (SDGs). Reducing inequalities within and among countries serves as the 10th SDG and as such, the UN have vowed to establish equal opportunities for all and reduce inequalities of outcome until 2030. The European Commission (2019) has committed itself to fulfilling the SDGs and hence reducing inequality, both within as well as outside of the European Union. The Commission notes that inequality has a considerable impact on many aspects, including, but not limited to, economic growth, poverty, social cohesion and conflicts, therefore its reduction is considered a main objective of the EU and its member states. The sustainability policy of the German government is also based on the 2030 Agenda. The reduction of inequality is hereby mainly addressed by the Federal Ministry of Labour and Social Affairs, which sees a high level of employment as an effective measure to decrease income inequality and lists policies like the introduction of a legal minimum wage or the provision of public transfers to ensure the existential minimum for

all citizens as examples for its contribution to lowering the income dispersion (Bundesregierung, 2018).

Given the high relevance and attention the inequality debate receives from all sides, this thesis aims to illustrate recent trends in income inequality in Germany. I will first provide an overview of the established literature on income inequality in Germany, delineating as well as giving reasons for the evolution of the income distribution from the start of the 20th century up until today. For my own analysis, I will start by describing the data and variables used and subsequently present my own findings about the development of inequality in Germany from 1991 to 2017. In the following conclusion, I will relate my findings to those of other authors and provide a short outlook.

#### WEITERLESEN?

DIE KOMPLETTE ARBEIT FINDEST DU IM NETZ: WIWI-FRANKFURT.DE/DKA-04-06

# THE SINGLE SUPERVISORY MECHANISM AND CENTRALIZED VS. DECENTRA-LIZED DECISION MAKING IN SUPERVI-SION

#### von LAURA GRUNDMANN, SEBASTIAN MUCK

After the financial crisis, the start of European debt crisis and resulting bank failures and rescues, politicians, regulators and experts agreed to take measures in order to make the European banking sector more resilient. The European Commission (2012) had the vision to create a European Banking Union (EBU), which should be able to resolve the problems that arose during the crises.

The first step towards the EBU was the establishment of the Single Supervisory Mechanism (SSM) in 2014 within the European Central Bank (ECB). The SSM centralizes banking supervision of the largest banks in the Eurozone, while smaller banks' supervision remains with the relevant national competent authorities.

Prior to the establishment of the SSM, all banks were supervised decentrally by their national competent authorities. This paper answers why the European Union (EU) responded to the crisis with partly centralizing supervision and shows which problems this entailed. For that, it analyzes the advantages and disadvantages of centralized and decentralized supervision.

When analyzing centralized and decentralized approaches to supervision, one cannot evade looking at hybrid supervisory systems, as purely central and decentral solutions appear to be rather rare in reality. Hybrid supervisory systems entail both, components of centralized and decentralized supervision, but in varying extends and forms and thus, provide valuable insights when answering the question of benefits and costs of both pure forms of supervision. Hence, this paper focusses on hybrid supervisory systems, such as the SSM in order to answer the question on advantages and disadvantages of centralized and decentralized supervision.

The main advantages of centralized supervision comprise a reduction in coordination efforts and problems among local supervisors in multinational bank supervision, the fact that a multinational supervisor considers cross-border externalities which increasingly gain importance due to the cross-border integration of financial markets, a homogeneous supervision and minimum standards for all supervised entities leading to a decrease in financial risk and regulatory arbitrage and, finally, an independent and more efficient supervision as a result of unhinging national competent authorities from their local environment and, where applicable, bringing monetary and supervisory authority and know-how together under a single,

politically and regulatory shielded umbrella. In contrast, disadvantages of centralized supervision mainly relate to the persisting heterogeneity of jurisdictions under one supervisor so that an "one-fits-all approach" does not seem to fit all (especially not for very fractioned financial markets such as in Germany it would impose overproportioned regulatory burdens for small institutions), but also to different preferences on whether to prioritize financial stability over economic growth and thus, supervisory strictness over laxity, as well as to the renationalization of the banking sector and the divergence between centralized supervision and decentralized deposit insurance.

Taken together and balanced against each other, these advantages and disadvantages of different approaches to supervision suggest that there is no patent for an optimal supervisory architecture, but that the ideal approach majorly depends on a few variables. These encompass the existence, form and magnitude of cross-border externalities, the heterogeneity of jurisdictions, the divergence of interests across them and the opaqueness of the supervised banks and the specificity of their assets (exogenous variables) as well as markets' reactions on supervisory structures (endogenous variable).

As an outlook, the paper draws the attention on two aspects which may influence the weighting of some advantages and disadvantages mentioned in this paper and the variables which matter for creating a well-fitted supervisory architecture: Cross-border banking consolidation in Europe and the transmission to a European Deposit Insurance Scheme (EDIS).

To enhance the financial stability of the European banking sector, more bank mergers are required, as big banks fall under the SSM, which reduces financial risks through common supervision and rules. Accordingly, easing regulatory requirements and promoting incentives might be a way to encourage cross-border banking consolidation. But many banks seem too weak to facilitate a cross-border merger as they are still facing the aftermaths of the financial crises. Concludingly, cross-border banking consolidation would rather be an option for the long-term to increase the stability of the European banking sector.

Therefore, in the short(er)-term, the initiative to introduce an EDIS besides existing national deposit insurance funds further contributes to a stable European banking sector as it would complement centralized banking supervision by requiring all member states to contribute to a common Deposit Insurance Fund (DIF) covering payouts in banking crises. As suggested by the ECB, fund intervening would be structured in the same hybrid way as banking supervision within the EBU and the co-existence of both in a fully-fledged manner would prevent what was still at the edge in recent years: cross-subversion of banks and the adverse consequences for financial stability and the real economy.

#### WEITERLESEN?

DIE KOMPLETTE ARBEIT FINDEST DU IM NETZ: WIWI-FRANKFURT.DE/DKA-04-07

# MONETARY POLICY RULES IN AN ESTI-MATED DSGE MODEL WITH FINANCIAL FRICTIONS

#### von LUKAS ESSER

The global financial crisis of 2007 led to a deep recession in the world economy and revealed weaknesses and shortcomings in the financial supervision strategy (Crotty 2009). The main reproach is that policymakers have ignored financial systemic risk (Angelini et al. 2011). Indeed, most countries had adopted an inflation targeting approach which implied that monetary policy "should focus solely on macroeconomic developments and largely ignore financial booms" (Filardo and Rungcharoenkitkul 2016, p. 3). The Central banks' task was to only react to asset prices and financial circumstances in the case they posed a direct thread to the inflation and output targets.

However, financial stability was targeted by a prudential supervision framework. Yet, the supervision strategy focused primarily on microprudential regulation that seeks to minimise institutions' individual risk (Borio 2011). Aggregate risk that arises due to the behaviour of all institutions was not targeted appropriately.

In the European Monetary Union (EMU), overly high credit growth rates stimulated by a low level of interest rates, GDP growth rates that were above the countries' potential as well as a massive increase in asset prices, especially real estate prices, led to rising financial imbalances

(Quint and Rabanal 2014a).

In the aftermath of the crisis, Gerali et al. (2010) confirm that financial shocks are an important source of business cycle fluctuations in the EMU. Moreover, Claessens et al. (2009) and Jorda et al. (2013) demonstrate that financial crises amplify the business cycles, particularly the burst side of it, and they are followed by slower recoveries.

To tackle these problems, some papers suggest the so called 'leaning against the wind' (LAW) approach to monetary policy: Central banks should react to the presence of rising financial imbalances by setting a higher interest rate than adequate in order to reach inflation and output goals. Contrary to the pre-crisis policy LAW reacts to financial imbalances before they burst

Regarding the prudential framework, macroprudential tools that focus on aggregate financial risk were introduced in order to decrease the built-up of financial imbalances (FSB-BIS-IMF 2011).

This paper is part of a growing strand of literature that evaluates different monetary policy and macroprudential regimes using DSGE models. Special attention is paid to the question whether LAW policies are not only able to enhance welfare but also to substitute macroprudential policies.

This paper uses the DSGE framework introduced by Quint and Rabanal (2014a). The model is a two country DSGE model of a common currency area estimated on European data.

In this work the model is used to find the optimal policy mix under an ad-hoc quadratic loss function. This function features the variances of inflation, the output gap and the period change of the interest rate as well as the macroprudential tool.

The first regime is a simple Taylor Rule that reacts to inflation, output growth and the lagged interest rate. This scenario represents a commonly used inflation targeting regime. Optimisation implies that the central bank should react stronger to inflation and the output gap compared to the baseline rule.

In a second step, the simple Taylor Rule is expanded by nominal credit growth. This rule can be regarded as the pure 'leaning against the wind' approach. In comparison to the simple Taylor Rule, the reaction to credit growth can decrease the losses further.

The combination of macroprudential policy with the simple rule represents the third policy regime. In contrast to other papers, the welfare benefit of a macroprudential over the simple Taylor Rule regime policy is small and the pru-

dential policy cannot deliver higher welfare results than LAW policies.

The last regime combines LAW with macroprudential policy. Optimisation results in a lower degree of macroprudential regulation than in the third regime. The additional prudential rule decreases the loss further compared to the pure LAW approach. It shows that monetary and macroprudential policies work in the same direction and that LAW policy cannot completely substitute macroprudential regulation even though a prudential approach alone is inferior to a pure LAW strategy.

#### WEITERLESEN?

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Prof. Dr. Helmut Gründl (Professur für Versicherungswesen, Versicherungsaufsicht und Versicherungsregulierung)

# INVESTIGATING THE EFFECTS OF INTE-REST RATE MOVEMENTS ON THE PER-FORMANCE OF INSURANCE COMPANIES

#### von LUKAS VOIGT

The global financial crisis of 2007 led central banks in many countries to decrease interest rates in order to facilitate borrowing activity and thereby stimulate their economies. This had mostly positive effects on large parts of the real economy, as it allowed businesses to obtain affordable funding and make necessary investments, which would otherwise not have been possible due to poor operating results. The decline in interest rate levels however also had a significant impact on insurance sectors around the world, which often were not prepared for a prolonged downturn in interest rates to an extent, as it materialized in the following decade.

With 15 percent of global assets under management1, and a provision of systemically important services to other industries2, the insurance sector plays an essential role for the functioning of the economy. Its business model revolves around the collection of unconditional premiums from policyholders in exchange for the promise to pay their claims in case of agreed-upon events. Because of this concept, insurers are typically exposed to substantial liabilities, which can last up to several decades for life insurers.

The ability of both life and non-life insurers to meet their obligations is dependent on their financial health. As for other financial service providers, the lower interest rates negatively affected the investment returns of both types of insurers in the years after the crisis. However, life insurers were particularly sensitive to changes in interest rates because of the long-term nature of their assets and liabilities. According to the related literature, this sensitivity is even higher if life insurers are involved in insurance products with minimum guaranteed rates of return or options for policyholders to change the duration of their contracts.

If life insurers are not prepared for a significant decrease in interest rates, a prolonged low-yield environment could hurt their solvency position, and thereby threaten their ability to meet their obligations towards policyholders. Mismatches between many insurers' asset and liability durations however indicate high exposures to interest rate risk. The situation, which arose in recent years, therefore, has the potential to sustainably impede financial stability.

These circumstances have raised the attention of both policymakers and researchers on the topic of interest rate risk in the insurance industry. Works by Brewer, Carson, Elyasiani, Mansur, and Scott (2007), Carson, Elyasiani, and Mansur (2008), and Berends, McMenamin, Plestis, and Rosen (2013) have investigated the interest rate sensitivities of life insurers and find varying sensitivities over time and based on insurer size, as well as market risk and financial strength. Serra and Harris (2013), Kablau and Weiß (2014), Berdin and Gründl (2015), and Möhlmann (2017) studied interest rate risk of life insurers in the German market and find significant exposures, which have the potential to erode their solvency situation.

This work contributes to the research on interest rate risk in insurance companies through a detailed analysis of the sensitivities of life and non-life insurers' profitabilities to changes in available long-term interest rates. The analysis is based on a two-factor regression approach, provided by Hartley, Paulson, and Rosen (2016), who analyze the interest rate sensitivities of publicly listed insurers from the United States, the United Kingdom, and continental Europe between 2002 and 2015. They find higher sensitivities for life insurers that make use of guaranteed products and policyholder options than for those, which do not. The goal of this work is to replicate their results, while also extending their approach by including additional regression variables, a larger number of insurers from different locations, a longer timeframe of the analysis, and a second dataset, based on daily instead of weekly data.

The work is structured as follows: Chapter 2 provides an introduction to interest rate risk.

Chapter 2.1 thereby discusses the causes and potential remedies for interest rate risk in insurance companies, while chapter 2.2 compares the regulatory frameworks for insurers in Europe and the United States. Chapter 3 describes the employed regression approach and presents information on the insurer samples, used in chapter 4. Chapter 4 then reports the regression results in four subchapters: Chapter 4.1 compares interest rate sensitivities in the United States and the United Kingdom. Chapter 4.2 implements a robustness check for the previous results with a sample of continental European insurers. Chapter 4.3 compares the sensitivities in the continental European sample with bottom-up measures of interest rate risk, provided by the European Insurance and Occupational Pensions Authority ("EIOPA"). Chapter 4.4 reports additional results for seven further samples of insurance companies from different regions around the world. Chapter 5 summarizes the results and concludes the work.

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### ÜBERSTEIGERTE ORGANISATIONALE IDENTI-FIKATION VON ARBEITNEHMER\*INNEN UND DIE GEFAHREN FÜR DEREN MENTALE GE-**SUNDHEIT**

#### von LUNA BECKER

Spätestens durch die aktuelle Corona-Pandemie hat das Thema mentale Gesundheit an Bedeutung gewonnen. Psychische Erkrankungen von Arbeitnehmer\*innen verursachen hohe Kosten für die Wirtschaft. Die Zahlen, der von den Krankenkassen erfassten Fällen, stiegen in den letzten zehn Jahren um 130% (Knieps & Pfaff, 2019). Auch wenn wir als Gesellschaft Fortschritte gemacht habe, von einer vollständigen Destigmatisierung psychischer Krankheiten durch alle Gesellschaftsschichten hindurch kann keine Rede sein.

Überspitzt gesagt "berühmt" ist das Konzept des Burnouts. Obwohl Burnout keine psychische Verhaltensstörung ist und erst 2019 von der WHO als Syndrom konkretisiert wurde, sind die davonausgehenden Risiken allgemein anerkannt. In einer Welt, in der Burnout als Synonym für Depressionen oder andere psychische Erkrankungen genutzt wird und insbesondere die "Leistungs-Elite" (van Dick & Groß, 2014) gefährdet, schadet es nicht schon Studierende vor dem Einstieg in die Berufswelt dafür zu sensibilisieren. Meine Seminararbeit hat nicht den Anspruch wachzurütteln, will aber im Rahmen des Möglichen einen Einblick in das komplexe Ursache-Wirkungsverhältnis von Überidentifikation und den möglichen Auswirkungen auf die mentale Gesundheit skizzieren.

Mit einer möglichen Ursache beschäftigt sich diese Arbeit: Überidentifikation. Organisationale Identifikation als eine Form sozialer Identifikation beschreibt kurz gesagt das Zugehörigkeitsgefühl zu einer Organisation oder einem Job. Unter anderem befriedigt organisationale Identifikation so bspw. das menschliche Bedürfnis nach Zugehörigkeit und Sicherheit (van Dick, 2016). Das eigentlich positiv besetzte Konzept der OI birgt allerdings auch eine Schattenseite. Kommt es zu übersteigerter organisationaler Identifikation, zu sogenannter Überidentifikation, können Workaholismus, Overcommitment und schlussendlich auch Burnout die Folge sein.

Diese Arbeit versucht zu Beginn die Konzepte der mentalen Gesundheit, Workaholismus, Overcommitment und Burnout, voneinander abzugrenzen, bevor danach auf organisationale Identifikation im Allgemeinen eingegangen wird. Nach einem Überblick über den Forschungsstand zur OI generell, widmet sich der Text der durch Überidentifikation entstehenden Problematik für die mentale Gesundheit von Arbeitnehmer\*innen. Es werden Gefahren und Risiken aufgezeigt sowie aktuelle Forschungsergebnisse bzgl. Burnout, Workaholismus und Overcommitment erläutert. Abschließend werden Lösungsansätze, Ausblicke und Limitationen diskutiert. Das eigens erstellte Interaktionsmodell verdeutlicht grafisch den angenommenen Zusammenhang.

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Verantwortlich im Sinne des Pressegesetzes: Lara Klein

Redaktion und Mitarbeiter:

Lara Klein, Yasemin Gülsan, Isabella Antusch, Nicolas Kautz, Maurice Schmidt, Sophia Klein, Felix Meixner

Autoren dieser Ausgabe:

Adrijan Susto, David Wittekopf, Daniel Hinz, Florian Hagen, Jakob Brunnengräber, Johanna Kleensang, Lara Klein, Laura Grundmann, Sebastian Muck, Lukas Esser, Lukas Voigt, Luna Becker

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Fragen? journal@wiwi-frankfurt.de



