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## Its Current Form and Content

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# German Economics

## Its Current Form and Content

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**Abstract**

This paper provides a systematic assessment of academic economics teaching, research and policy advice in Germany. It assembles recent empirical studies and contributes by presenting their main findings in a comprehensible manner as well as contextualizing them in the current economic and methodological discourses. As most studies are only available in German this paper also contributes by making these findings accessible to the international debate on the special characteristics of economics as a discipline.

Keywords: Economics Education, Economics Research, Pluralism, Mainstream Pluralism, German Economics

JEL categories: A11, A14, A22, A23, B41

# 1. Aim and Overview

The concept of being an economist has undergone numerous changes in meaning throughout history and within different cultures. As science is a human endeavour it has, can and will be performed in various ways (Kuhn 1962; Schefold 1995; Daston 2008). To avoid relativism or 'anything goes' (Feyerabend 1975) it is important to be clear about those ways, to reflect them and to be open for discussions on the adequateness of one's method in the light of one's subject matter (Popper 1983). A growing consensus in the philosophy of science calls for an end to abstract ideal type discussions on methodological standards and instead shifts the focus to what scientists are actually doing (Hands 2001). To evaluate what makes good science is increasingly left to the scientific community (Dow 2004; Suárez 2004). However, by what criteria a community is scientific and trustworthy remains an open question. This paper is based on the notion that self-awareness is a first step for a scientific community to reflect on itself. Self-reflection is seen as a precondition for developing clear cut criteria within the discipline of economics (Davis/Klaes 2003). Following this train of thought the aim of this paper is to provide a systematic overview on academic economics education and research in Germany.

Such compilations of various aspects of the discipline of economics exist for the U.S. (Allgood et al. 2015). There has been no compiled assessment for the dimension of German economics according to our knowledge, but publishing activity on different aspects of the discipline have increased strongly during the past years. The Econ Plus survey offered a first systematic analysis on economics curricula in Germany (Beckenbach et al. 2016, Christian Rebhan 2018) provided a first quantitative study on the use of economics textbooks, Alfons Weichenrieder and Danilo Zehner (2014) surveyed the PhD students' perceptions of their own discipline, and Thomas Fricke (2015/2017), Arne Heise and Sebastian Thieme (2016), as well as Ernest Aigner et al. (2018) evaluated different aspects of professorships. Many more studies were initiated and assembled by the Research Institute for Societal Development (FGW), a publicly funded think tank based in Düsseldorf (Germany), during the period 2014-2019.[1] While some of the corresponding authors have published their results in English elsewhere[2], a collective evaluation of the bigger picture in English is still missing. One aim of this

1 Under the FGW's framework, analyses of textbooks (Graupe 2017; Peukert/Rebhan 2018), qualitative (Bäuerle et al. 2019) and quantitative (Engartner/Schweitzer-Krah 2019) surveys of attitudes and self-perceptions of economics students as well as for doctoral students (Roos et al. 2018) and professors (Fricke 2017) have been undertaken. In addition, Beyer et al. queried the paradigmatic stance of German professors (Grimm et al. 2017; Beyer et al. 2018) and citation patterns between economics journals (Aigner 2019). The main results of the FGW studies are provided as project reports online in German language (www.fgw-nrw.de) and have been summarized by van Treeck/Urban 2019.

2 Such as Heise/Thieme 2016 Glötzl/Aigner 2017, Pühringer/Bäuerle 2018 and Aigner et al. 2018

paper is to increase the accessibility of those studies, together with prior research, to provide a first comprehensive overview of German economics.

Before we present the results, we provide some general thoughts on economics as a social practice and some background on the current debate of orthodox, heterodox, and mainstream economics. As German economics is strongly integrated into the international field of economics, with a "textbook standard" and an internationalized publication system, we embed the results within the broader global academic debates at several stages of the paper and discuss the main findings against this background in the end.

It will turn out that German economics is no longer particular (Frey et al. 2002) but today presents itself very similarly to US American economics. Teaching at almost every university is done in a uniform manner, oriented towards the international textbook standard. Research in Germany is strongly focused on the top five journals and young scholars orientate their work accordingly. German ordoliberalism is almost not present in research anymore, but still influential within policy advising bodies. We conclude by pointing out some puzzles currently faced by the discipline.

## *1.1 Economics as a field and its social reproduction*

To structure the picture of the status quo and provide a dynamic outlook, we chose to approach German economics as a social practice with a focus on its reproduction. Davis pointed out that accessing the topics of doctoral theses can be an early indicator of the thinking of a new generation of professors, and their scope of research (Davis 2006). Similarly, Achim Wambach (the former chair of the German Economic Association - VfS) argued in favour of the current textbook canon as preparing students for later work as researchers and employees (Wambach 2018). In this line of thought, we conceive economics as a reproduction cycle.

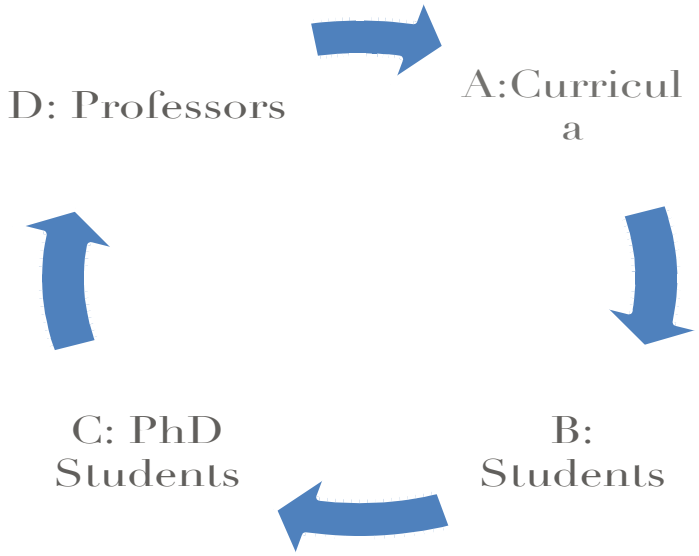



**Figure 1**: Social reproduction cycle of economists. Schematic representation.

Students enrol for a specific economics curriculum and study accordingly, PhD students perform their research and become professors, who then design and teach their economic curriculum which can be chosen by students etc. Ideally this cycle is an open process and adjusts to new knowledge. This vision is close to the ideal of a *unity of research and teaching* most famously established by Wilhelm von Humboldt (Albritton 2006). This cycle of academic economics reproduction is connected with society in many respects. While the input from society, like financial resources, is beyond the scope of our paper, we will address the issue of policy advice and image of the economy which students gain through economics education in the concluding remarks. As it will turn out in the studies assembled, there is a considerable gap between what is discussed in economics research and what makes its way into economics curricula. Teaching in academic economics is oriented at a uniform textbook standard, which has not changed substantially since the 1980´s (Zuidhof 2014; Allgood et al. 2015; Bowles/Carlin 2020). At the same time economic research has evolved in quite different directions (Colander et al. 2004; Colander 2005; Davis 2006; Rodrik 2015). While there has been a period when academic research was to large extents dedicated to theoretical work in line with the textbook version of economics, it has become a widely accepted practice to contribute to high ranked journals by pointing out anomalies of rational behaviour, market failure and many more shortcomings of the textbook ideal since the 1980s (Akerloff/Shiller 2016; Spiegler 2017). Criticism from heterodox economics has often referred to the textbook standard while the treatment of market anomalies has been interpreted as sticking to the same set of beliefs as laid out by neoclassical economics. A threefold distinction between orthodox economics (strongly associated with the textbook version), heterodox economics and a new mainstream economics turns out to be useful when analysing the current development of economics in Germany.

## *1.2 Orthdoxy, heterodoxy and the new mainstream. Towards different styles of economics*

In this section, we differentiate the orthodox neoclassical style of economics from heterodox positions and the new mainstream in economics. A first way to reflect upon economics is the old neoclassical style, the orthodox view, which is closely associated with the general textbook introduction and central figures in mainstreaming economics for educational purposes, such as Paul Samuelson or Gary Becker. Among the clearest advocates alive is Edward Lazear. He seems to suggest a uniform approach for economics, when he addresses 'our rigorous language' and specifies that it consists of three ingredients: 'individuals engage in maximizing rational behavior', the 'importance of equilibrium as part of any theory', and a 'heavy emphasis on a clearly defined concept of efficiency' (Lazear 2000, 100). Deviations from these principles are allowed as long as they are formulated in this language: 'When we obtain results that seem to deviate from what would appear to be individually rational, we re-examine the evidence or revise the theory. But the theoretical revisions almost never drop the assumption that individuals are maximizing something, even if the something is unorthodox.' (100). As a consequence, the style of orthodox neoclassical thought rests on a clear principle:[3]The belief that there is a single way to 'think like an economist'. This principle is entailed in major publications, like the discourse about economic education (Becker 2000; Siegfried et al. 1991) or in economic textbooks (Mankiw 2014, 17; Samuelson/Nordhaus 2009, xvii). For proponents convinced of the superiority of this style, methodological reflections become obsolete. The belief in the superiority of the economic approach makes this view monistic.[4] In contrast, the term heterodox economics refers to a variety of styles of economics connected by their opposition against the hegemony of the neoclassical style. Among those are such diverse programs such as Evolutionary, Marxist, Feminist, Ecological or Post-Keynesian Economics.[5] Amongst this, necessarily wide, spectrum, there are some dissenting monist positions that are convinced that their theoretical paradigm is superior and should get more influence (De Langhe 2009). However, many heterodox economists turn towards a complementary view, dissolving the 'cold war dichotomous thinking' (Garnett 2006), as they believe that the subject of economics is too complex to access it with one theory (Dobusch/Kapeller 2012) and subscribe, for instance, to an open system ontology (Chick/Dow 2001; Dow 2004). They stress the importance of dialogic competence and reflection skills for economic training (Bigo et al. 2008; Colander/McGoldrick

3 Cathrine Herfeld 2013 has pointed out a huge and fruitful variety of rational choice theories developed out of these principles.

4 Especially when methodological reflection is separated from scientific activity, as an exemplary stance by Ricardo Reis suggests: 'But the focus always remains on understanding the economy, not the profession of economics. I personally love reading biographies and delight in thinking about what a young Alfred Marshall would say to a young Kenneth Arrow. Yet, I do not confuse these *pleasurable intellectual leisure times* with my job as a researcher.' (Reis 2018, emphasis added).

5 For an overview we suggest: https://www.exploring-economics.org/en/

2010; Reardon 2015). As each approach comes with its own standards of evaluation this new generation of economists advocates pluralism. While a state of 'anything goes' seems untenable and some principles, such as logical consistency are drawn upon (Dobusch/Kapeller 2012), it remains an open question how to choose the right (bundle of) perspective(s) for a given problem (Rommel 2015; Schneidewind et al. 2017).

The third concept is mainstream pluralism, owing to the diversity of research areas and methods in current top ranked journals. In 2000 David Colander pointed towards an increasing variety in mainstream research and proclaimed the death of neoclassical orthodoxy. John B. Davis later termed this development "Mainstream Pluralism" and many authors come to describe the emergence of various new research programs since the 1970s which blur the sharp line of a neoclassical orthodoxy (Davis 2006; 2017; Rodrik 2015; Becker et al. 2017; Cedrini/Fontana 2017). Bachman and Davis report that the variety in mainstream research has become so diverse that researchers from different fields are not able to understand each other anymore (Bachmann 2017). The term mainstream pluralism is, similar to heterodox economics, not defined by one style of theorizing about the economy but addresses everything which is to some extent resembled in the social category of mainstream, referring to representation in high ranked journals, universities and access to resources. Mainstream economics accommodates diverse programs which are grouped under two trends in the methodological literature: (Evolutionary) Game theory, behavioral economics and mechanism design are considered part of a *normative turn* (Guala 2007; Hands 2015; Davis 2017; Herfeld 2018). It consists of a turn from rational choice as a descriptive program towards a norm for institutional design. As a second trend applied economics and new methods, such as quasi- or natural experiments, which build on empirical methods independent of equilibrium models are referred to as part of an *empirical turn* (Angrist/Pischke 2010; Hamermesh 2013; Backhouse/Cherrier 2017). How this seemingly contradictory "turns" relate to each other is another open question. The concept of mainstream pluralism remains a descriptive category yet and no criteria have been suggested to evaluate research according to it. A clear conceptual map of this field has not been drafted yet and a discussion of adjusting the JEL Classification Codes on these developments is currently underway (Cherrier 2017). Frank Beckenbach strongly disputes the existence of a new mainstream pluralism and argues for a lasting paradigmatic dominance of neoclassical economics (Beckenbach 2019). However, the new pluralism in mainstream economics research puts pluralism on the agenda for all economists. The moment a discipline rejects a single style of thought, some answers are needed to address questions like criteria which make approaches belong to economics and how those approaches relate to each other, to advance the understanding of the economy.

## 2. German Economics

In this chapter we summarize the status quo of German economics along its social reproduction cycle.[6]

## *2.1 Economics Education*

This section focuses on economics education at German universities, with specific focus on the Bachelor level. Since the European Bologna reform, study programs leading to the diploma have been transformed into Bachelor and Master programs. Universities and departments decide which study programs to offer and ask authorized institutions to accredit these programs. The studies we refer to here rest on a plurality of methods, thus providing a fuller picture of the form and content of economics education.

### *2.1.1 Curricula*

Evaluating various studies related to economics curricula in the United States Allgood et al. draw a very clear line: 'The coursework for the economics major has not changed substantially since 1980, with most institutions requiring the same set of ten courses (two principles, two intermediate theory, statistics or quantitative analysis, and five electives). The number of institutions requiring a course in econometrics has increased substantially, suggesting the growing importance of technical rigor in the discipline and the value of numeracy in the workplace' (Allgood et al. 2015, 317). Regular surveys and reports are available for the curriculum of economics in the U.S. (Siegfried et al. 1991; Becker/Watts 2001; 1996; Watts/Becker 2008) and are discussed in detail in the Journal of Economic Education since 1969. Those contributions share a uniform ideal of economic education. Students have to learn to "think like an economist", referring to the narrow understanding we pointed out with the example of Lazear in the introductory section of this paper (Siegfried et al. 1991; Becker 2000). The discussion takes place with regard to the didactic methods most appropriate to train students in this way of thinking.[7] Similar research on German economics curricula was not carried out until 2016 when the Econ Plus survey was published (funded by the Hans-Böckler Foundation). Frank Beckenbach, Maria Daskalakis and David Hofmann systematically assessed 54 programs at different German universities and provided a questionnaire to lecturers (winter term 14/15). They used text-mining tools to query the accredited module descriptions of the introductory courses, checking for the frequency of orthodox and heterodox terms

6 In summarizing such vast work, we necessarily tend to a less complex representation. In relying on research already performed, we also carry over the potential methodological shortcomings of these studies. While the respective authors make them explicit, in favour of clarity we decided to present what we judged as quite stable results, but strongly recommend having a second look at the material itself.

7 Studies and surveys for other countries indicate a state of pluralism in economics curricula for Brazil, the spreading of neoclassical economics for India and its dominance for Ghana, Australia (for various countries Decker et al. 2018), the UK (Reimann 2004; Wigstrom 2016) and some other European countries (Gärtner 2001).

as well as a semantic network analysis (Beckenbach et al. 2016, 130). They also asked lecturers for their course material and received those from 79 persons. The results show that in all 54 economics programs neoclassical content outnumbers heterodox terms by a factor of 20 to 1. Even though no full assessment of economics curricula is available yet, those results indicate that German economics curricula are as uniform as in the United States. However, the authors quoted do not interpret this result as a good sign and raise questions with regard to academic freedom and democratic values. They even point to a serious conflict with Article 5.3 Section 1 of the German constitution which guarantees the freedom of academic research and teaching. Furthermore, Beckenbach et al. find an unusually high correspondence among textbooks, module descriptions and actual teaching (Beckenbach et al. 2016, 221-222). The courses are mostly organized along with the chapters of economics textbooks.

### *2.1.2 Textbooks*

A specific canon in economics textbooks plays a defining role in current economics education. It could be said that in the social reproduction cycle of economics, they provide an initial framing, which is remarkably uniform and formative for the thinking of economists. In this paragraph, we introduce new research on the textbook market and research with a focus on the content and form of this canon for the German context. Authors in the 1990s began to direct attention to the high sales numbers and global spread of certain economics textbooks, especially Paul A. Samuelson's textbook 'Economics' with its first edition published in 1948 and with continuing prevalence (Stiglitz 1988; Skousen 1997; Colander 2010). Gregory Mankiw's textbook was considered Samuelson's heir with regard to market share and global reach of an introductory book into economics (Nasar 1995). While current numbers on dominant textbooks are difficult to acquire as publishers stopped making sales numbers available in the 1990s (Colander 2010), Mankiw indicates his book sales in 2019 with 4 million copies in print including translations (Mankiw 2019). This amounts to the spread previously reached by Samuelson (Skousen 1997).[8] Christian Rebhan provides a first quantitative approximation for Germany through an assessment of economics textbooks listed as main references in economics curricula. He surveyed the module handbooks, examination regulations and university web pages of German economics departments at Bachelor level and added information acquired from direct requests to lecturers. For the courses microeconomics, macroeconomics and introduction into economics, different amounts of data points were generated which imply that for that certain amount, information on economics textbooks have been available. The resulting ranking allows for multiple textbook recommendations and accounts for the number of students studying at a respective university. If for example information on microeconomics courses from

8 A further indicator for sales can be the number of editions, an approach which van Treeck and Urban chose for their edited volume (van Treeck/Urban 2017).

52 universities were obtained, the listing of Hal Varian's textbooks counts as one data point, weighted by the number of students studying at that specific university. Rebhan's analysis conveys (figure 2) that in 36 out of 52 microeconomics courses (69%) Hal Varian's textbook 'Intermediate Microeconomics: A Modern Approach', or its German counterpart is recommended. The second most used textbook is with 60% Robert S. Pindyck's and Daniel L. Rubinfeld's 'Microeconomics', or its German version. In the field of macroeconomics (N=38) Olivier Blanchard's and Gerhard Illing's 'Macroeconomics' or its German counterpart is recommended in 53% of the courses and N. Gregory Mankiw's and Mark P. Taylor 'Macroeconomics' in 39%. For the introductory courses (N=39) N. Gregory's Mankiw's 'Principles of Economics', in its German version is recommended in 64% of the module handbooks (Rebhan 2017). These results confirm the tendency described in the literature that the textbook market is not only highly internationalized, or U.S. focussed, but also conveys an oligopolistic structure.

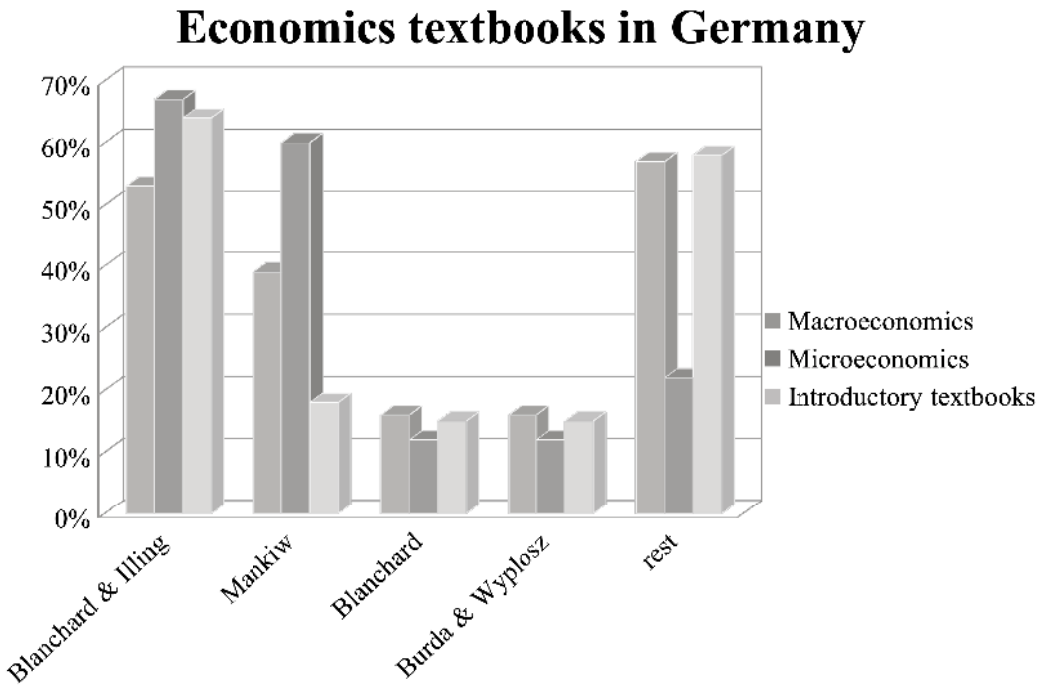



**Figure 2:** Economics textbooks in Germany. Own representation based on Rebhan 2017.

The second question concerns the content and form of this textbook canon. David Colander describes the evolution of economics textbooks as indicative for economists' understanding of their own practices. He suggests that Samuelson's textbook reflects the understanding more prevalent in the 1930s, of economics as a pure science from which policy recommendations can be drawn. While this vision changed in and through research practices, most economics textbook authors

followed Samuelson's style (Colander 2010). Adding to the wide spectrum of textbook analyses (e.g. Robson, 2001; Kalmi, 2007; Ötsch/Kapeller 2010; Green 2012; Madsen 2013; Göpel 2016), the new set of studies published in German language focussed specifically on how further developments of the current mainstream vanish in textbooks and the way in which historical debates and heterodox contents are (made) absent (van Treeck/Urban 2018; Peukert/Rebhan 2018). In continuance with what Hanno Pahl has coined as "textbook economics" (Pahl 2011), Silja Graupe maps out systematic patterns of framing which can result in (unintended) manipulation (Graupe 2012; Graupe/Steffestun 2018). The treatment of the topics of trade and different categories of markets serves as an example on the way in which further developments of the current mainstream are made irrelevant in economics textbooks. While mainstream economics research has come up with diverse models of real-world trade relations, Achim Truger shows how models of imperfect competition, decision-making under risk, and behavioural economics do not appear in the textbooks by Samuelson/Nordhaus, Mankiw/Taylor and Krugman (Truger 2017, 237). Helge Peukert points to the lack of consideration of adaptation costs, economies of scale, optimal tariffs, income inequalities, ecological externalities, speculation or the perspective of winners and losers of trade in his review of Blanchard's and Illing's book. The variety of models which is yet presented in the textbooks is often summarized by the authors with statements such as: 'Most arguments for tariffs [...] cannot withstand any economic analysis.' (Samuelson/Nordhaus 2009, 362 in Truger 2017, 240) or: 'economists believe that free trade is usually the better policy' (Mankiw 2014, 434 in Truger 2017, 236). This way of presenting economics resembles in many ways the pedagogy shaped by Samuelson, and includes patterns of manipulation such as systematic omissions, simplifications, or biased use of language which will be discussed subsequently. A similar reduction of mainstream economics variety can be found with regard to the question of different categories of markets. The microeconomic textbooks by Pindyck/Rubinfeld and Varian make excessive reference to the competitive market model, although the economic areas and real world examples the textbook authors cover vary widely. Varian for example even subsumes monopolies under the competitive market model. This may be regarded as somewhat problematic due to didactic reasons, and against the background of his position as chief economist of Google (Peukert 2018a, 2). Problems which may arise from excluding other economic paradigms or historical debates within the discipline become apparent when looking at the discussion of the Phillips curve and the general equilibrium in the textbooks. Model variations of the Phillips curve are presented in a simple succession without giving information on the different world views of i.a. Austrian or Keynesian economics which motivated a critique and subsequent adaption of the model. As the different models have very different policy implications which are still relevant in current day policy making, presenting the alternatives without context and current empirics leaves students without a basic grasp on the question of unemployment and inflation (Peukert 2018a, 3). The

general equilibrium is discussed in such a way in the textbooks by Varian and Pindyck/Rubineld that neither its role as reference model becomes apparent nor that entrance points for heterodox economic approaches such as complexity economics are left open. Rather it is introduced as a model from which a wide range of policy judgments can be drawn (Heinrich 2017; Gräbner 2017). At last, the treatment of the financial and economic crisis of 2008 hints to the tendency that the content and shape of economics textbooks can remain the same throughout decades, despite major economic occurrences. Broad summary statements are given preference before a more nuanced assessment in Mankiw's and Taylor's standard economics textbook. While financial crises did not figure in the 2008 edition, they conclude in their 2011 edition,' that '[i]n hindsight, the catalogue of problems that built up and led to the financial crisis and subsequent deep global recession seem obvious' (Mankiw/Taylor 2011, 837). Blanchard and Illing stay more cautious with regard to their crisis interpretation but do not question the adequacy of the models in general:

> 'After five years in liquidity trap it has become apparent that the usual adjustment mechanism of lowering interest rates does not work out. It is also apparent that the available options - no matter if monetary or fiscal policies - are more limited than thought beforehand. If there is a consensus, then the conviction that the adjustment process works in the case of smaller shocks and under normal conditions; it fails with extraordinary big shocks, and the policy space is limited. It can take longer times for the economy to recover' (Blanchard/Illing, 2017, 732 in Peukert 2018b, 73)[9]

Silja Graupe (2017) has drawn on insights from cognitive psychology and public relation research to analyse the specific use of language in the formerly and currently dominant textbooks by Paul A. Samuelson and N. Gregory Mankiw. She comes to the conclusion that the textbooks by no means satisfy the standards of an objective-mathematical value free approach but convey systemic patterns of framing (Lakoff/Wehling 2008). Framing builds emotional (subconscious) rather than rational (conscious) ties to certain concepts. Graupe points to i.a. selective framing and concealment which can influence students by focusing directly on certain (economic) aspects, such as the market and prices, and by leaving out for example explications of the reasons and historical background for the use of mathematical models, socio economic contexts or empirics. Appeals to authority such as to 'scientific objectivity' and the attributes 'most famous' and 'brilliant' with regard to certain thinkers can be found throughout the books, similar to ideological and political framing (Graupe 2017, 3). Samuelson and Mankiw make use of the latter, potentially without knowing, when they associate the word 'government' with the words 'communism' and 'poverty', and the word 'market' with words such as 'success' or 'well-being'(Samuelson/Nordhaus 2010, 26 and Mankiw 2014, 6-5 in Graupe 2017, 54-55). They also do not abstain from drawing on words with strong emotional ties such as 'verge of starvation' or 'mortal terror', or engage in methaphorical mapping by describing markets as machines, mechanisms or

9 This quote was translated by the authors of this paper, as the English version by Olivier Blanchard does not include the same statement.

personified actors (Graupe 2017, 3). Other textbooks seem to convey similar patterns in the use of language. Questions related to workers' representation and public policies are framed in mostly negative ways in the textbooks by Varian, Pindyck/Rubinfeld and Blanchard/Illing (Truger 2017; van Treeck 2017; Peukert/Rebhan 2018). Altogether the studies suggest that the quality of economics textbooks may be even more problematic than discussed beforehand, as they have shaped a certain style of pedagogy which may train uniform rather than reflexive economic thinking.

### *2.1.3 Students*

The aforementioned studies show that economics curricula and textbooks provide major structuring elements of economics education. Research focusing on students of economics can complement this picture as they have an insider's perspective. There have been few studies mediating and preparing students' voice for academic discourse or investigating their collective attributes. Research rather focused on decision making behaviour of economics students. For example, what has been prominently discussed is the finding that economics students are more selfish compared to those from other disciplines (Rubinstein 2006; Bauman/Rose 2011). Two conflicting explanations for this observation have been put forward: The 'indoctrination hypothesis' according to which this is an effect caused by economic education and the 'self-selection bias' according to which economic education has no effect on students' selfishness but economics is already chosen by students prone to it. Within the frame of the FGW research program two studies systematically access students' voices, development and collective attributes. For a first study (Bäuerle et al. 2019) group interviews at five central German speaking universities have been conducted. A second study (Engartner/Schweitzer-Krah 2019), surveyed 351 students of five of the largest universities in Germany on their perception of their study environment and of economics as a discipline in general. We present both projects hereafter. As the first qualitative approach to students' perceptions of economics curricula in the German speaking context Stephan Pühringer, Lukas Bäuerle and Walter O. Ötsch conducted 16 group interviews between autumn 2016 and summer 2017 at five universities (Cologne, Frankfurt-Main, Mannheim, Vienna and Linz). According to the Handelsblatt-Ranking and RePec-Ranking those universities are among the highest ranked in the German speaking world. Altogether 53 students in 16 groups with an average age of 22 years voluntarily took part in the interviews. The composition of the interviewees resembles the gender distribution among German economics students as 35 men and 18 women took part in the study. Two to six students took part in those interviews. Three groups were taken out of the analysis to control the effect of students already active in the pluralist movement and to reach a maximal contrast between sets of groups in distinct attributes. These interviews have been interpreted according to the documentary method (Bohnsack 2010; Bohnsack et al.

2010), approaching economic education as a field of daily experience, structured by habitualized sources of knowledge that actors within the field (students) subconsciously adopt in order to orientate themselves within the field. The aim of this method is an authentic group talk with a self-maintaining momentum. Therefore, the interviewer only initiates the group talk and remains widely passive during the course of a 1.5 to 2.5 hours talk. The interpretation of the collected material takes into account *what* students say and *how* they say it and when the group reaches some consensus. The interviews are accompanied by observation protocols of the surroundings and short anonymized questionnaires to collect sociodemographic data. Four results could be identified as stable across the different groups and locations: Students of economics focus in their decisions towards the structure and formal requirements of courses rather than towards the content (1). Mathematics is perceived as a self-evident basis for economics (2). Links to real world economic problems are missing especially during the first years (3). Finally, students perceive a sharp contrast between the first 1-4 semesters of a rigid program and more freedoms of choice afterwards (4). Beyond those general findings, the study provides a series of concrete student experiences which help to better understand the semantic field. Students seem to agree on some necessity to stop learning for comprehension and turn towards learning abstract concepts by heart without an idea how to apply or relate those concepts. Across all groups there was a strong negative perception of this disconnectedness. Moreover, participants showed a high degree of discontent with the curricula, especially of the first four semesters. After some time, students turn to choose those courses which allow for a relatively easy 'harvesting' of ECTS points and rather turn away from genuine topics and courses of interest. With regard to their working attitude, they often skip lectures because these are too close to the textbooks and other teaching material and focus only on things relevant for exams. They also turn towards perceiving other persons or institutions, like the university, as rational actors opting for a large number of university graduates on low expense. In fact, the experience of studying economics appears as a uniform endeavour. Hence, we can legitimately speak of a collective experience (of studying economics) independent of the university. That does not mean that there are no students who show deviating behaviour but those are ideal types of *collective attitudes*, perceived as normal, while at the same time students individually seem to suffer following these norms. The results of groups, that included students engaged in the critical pluralist movement did not deviate systematically from those of other groups. Complementary to the first study, a quantitative study on the motivations, experiences and opinions of economics students with regard to their studies and the field of economics in general was conducted by Tim Engartner and Eva Schweitzer-Krah. The surveys were taken in mandatory courses with 351 students in their fourth semester in the summer semester 2017 at five of the universities with the largest economics departments in Germany (Bonn, Frankfurt (Main), Hamburg, Heidelberg and Mannheim). The gender distribution was close to

the national average of two thirds male to one third female, the average age somewhat below and the final grade from school somewhat above the average of all economics students in Germany. Hence, while the authors only speak of indicative results, we regard them as a quite reliable result for a first approximation. With regard to the selection vs. indoctrination hypothesis mentioned above, Engartner and Schweitzer-Krah find new evidence in the students' self-reporting. When asked for their initial motivation, curiosity in economic issues is named by 72%, while 61% mention curiosity in societal relations. 41% state that they started to study economics to make the world a better place. Only 30% chose economics for career purposes and for 12% it was an emergency solution. Such subject and social oriented motivations would speak against the selection hypothesis which holds that economics students are above average selfish individuals. Another indicative result of the survey comes from a question on students' self perceived character change through the study of economics (figure 3).

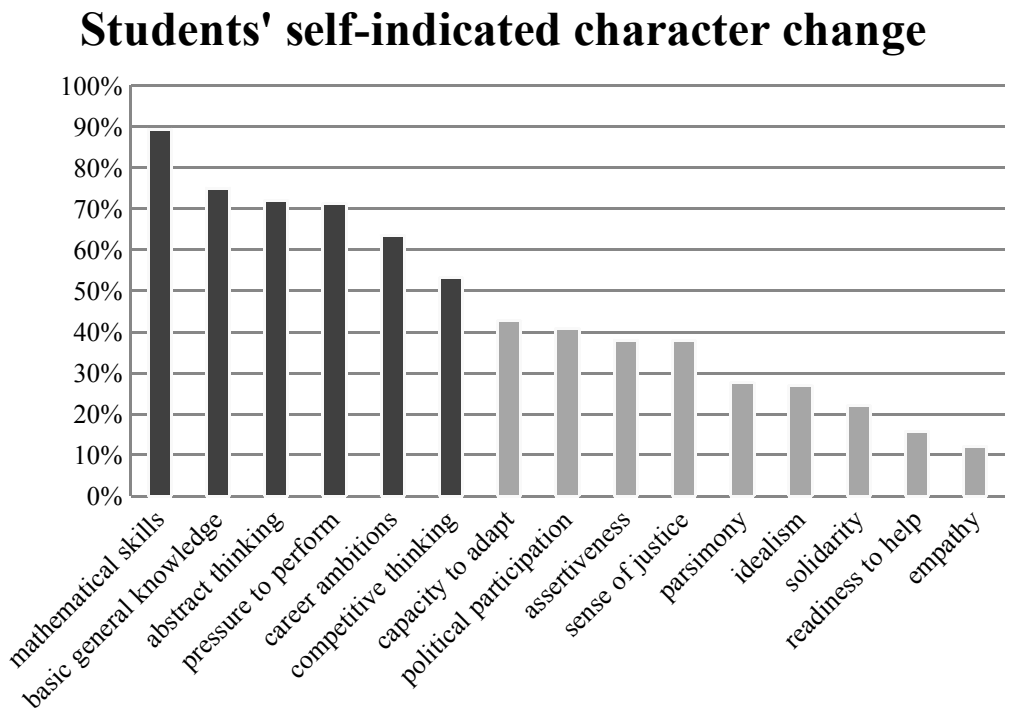



**Figure 3:** Students' self-indicated character change. Own representation based on Engartner/ Schweitzer-Krah 2019.

Next to a rise in mathematical skills and abstract thinking, students feel that the pressure to perform had risen (yielding a 21% higher average value to the 50% break-even point of an in- or decrease in students' self-reported character change), as well as that career ambitions and competitive thinking had increased. Attitudes such as idealism, solidarity and empathy had fallen by 20% to 38% on average

through studying economics. This gives further support to the indoctrination hypothesis, but potentially not originating from the usually discussed neoclassical content. As there is a certain overlap in university locations of this with the former study, and if we may speak of *collective attitudes* present in economics study programs in general, the results suggest that the study environment shapes students' thinking potentially as much as the actual content.

Turning to the content side then, the survey shows that orthodox methods prevail while empirical analysis has a high relevance, too: 94% of the students responded that they learn about equilibrium models in their economics courses, 92% indicated aggregated macroeconomic models, and 79% regression models. Methods from other social sciences or heterodox economics do not appear to be very prevalent. Only 40% of students have heard about interviews or surveys as a way of doing economics in their fourth semester, and 15% state to have learned about network analysis. Students report that most reference is made to the subject of mathematics in their courses (75%) while a reference to sociology is rarely made (13%). When asked for their perception of the superiority of mathematical modelling in economics and their views on a potential crisis of legitimacy, they cast some doubt on the former while mostly embracing the continued relevance of economics in general. The claim for pluralism seems to be more widely spread than thought before: 70% of students indicate to have heard about the debate on pluralism in economics and some 6,4% are actively engaged in it or follow it intensively (13,7%), while only 8,2% report to not be interested in this topic at all.

These quantitative results combined with the qualitative analysis from before suggest that economics students appear as broadly interested individuals who – confronted with their study environment and mostly orthodox mainstream economics teaching – become partly detached from their original professional and personal motivations. This will have an effect on who will stick to the subject of economics in the next step of the reproduction cycle and who will have left it.

## *2.2 Economic Research*

This section focuses on economics research from the vantage point of publication data and surveys with economics PhD students and professors. In many countries economic research is strongly focussed on publications in high ranked journals, measured by the Journal Impact Factor (JIF). It does not judge content but is oriented at citation frequencies of the last two years. This is because the JIF was originally developed by librarians to make subscription decisions (Bertuzzi/Drubin 2013). It is now frequently used to for evaluating candidates for tenure and professorships according to their publication in high ranked journals. This is not required by law but has turned into common practice in Germany and many other countries (Graber et al. 2008; Gibson et al. 2014; Heckman/Moktan 2017; 2018;

Kaplan 2019). James J. Heckman[10] and Sidharth Moktan show the influence of having published in the top five journals for receiving tenure in the U.S. They voice concerns to which extent this growing career requirement causes uniformity in the research approaches chosen by young economists (Heckman/Moktan 2018). The general tendency also seems to apply to Germany. Michael Graber, Andrey Launov, and Klaus Wälde predict that for economists to receive tenure after 2006, they need to have placed their papers in considerably higher ranked journals compared to the baseline period of 1970 to 2006 (Graber et al. 2008). Rosser et al. speak of an Americanization of European economics and hint to a potentially problematic way of this development: 'They [the Europeans] are overemphasizing quality-weighted journal articles and losing sight of creative and exciting new ideas that emerge from cutting edge work.' (Rosser et al. 2010, xiii-xiv)

Based on a new set of data, Ernest Aigner provides an exhaustive overview of the international publication trends of the past decades and Germany's position in it.[11] Publication activity increased tremendously, coming from 2.600 articles published in 1957 to 21.500 articles in 2017. During this period, the degree of uniformity mostly increased with regard to journals, geography, and disciplinary boundaries. Heterodox economics articles received a slight uplift from the financial crisis of 2008. While countries worldwide gain in shares of citation, the U.S. are still the major point of reference with regard to relevant journals (32% of all citations between 1997 and 2017 go to the top five journals, four U.S. American, one British) and overall citations (54% of all citations go to the U.S.). Germany's share in citations increased most strongly compared to other European countries, coming from 4% in 1997 to 7% of all citations in 2017 – close to Great Britain's current position. The regional diversity of citations and variety of academic reference bodies cited decreases in Germany as in all other countries, pointing again to an internationalization and homogenization of the field. What sticks out in Germany is a higher degree of internal citation compared to what is measured in other countries and a higher reference to the words 'unemployment' and 'tax competition', giving some indications on what a German Sonderweg is described with (Aigner 2019). With regard to the paradigmatic stance of economics research, the financial crisis of 2008 has led to an upward trend in the citation of heterodox economic journals, increasing from 2% to 4% in Germany, and figuring around 2% in the U.S. (Aigner 2019). Ernest Aigner, Matthias Aistleitner, Florentin Glötzl and Jakob Kapeller complement this analysis with a content oriented evaluation of the same database in order to find out about potential changes in economics research effected by the crisis. They come to the conclusion that the financial and economic crisis of 2008 did not change the methods or theoretical concepts applied in economics research, and that the paradigmatic discourses remain divided (Aigner et al. 2018). Aigner though shows that the journal "ecological economics" was able

10 One of the highest ranked economists according to this ranking.

11 He uses data from the Web of Science with 3.5 million citations in 450.000 articles of peer-reviewed economics journals to map the social organisation of the research field.

to attract most citations of all heterodox classified journals between 1998 and 2017 and that the topic of sustainability is much more central in heterodox economics publications (Aigner 2019). This may point into a direction of a topic related opening up of mainstream economics. How such meta tendencies of concentration but also innovation arrive at or are initiated by the next generation of economists forms part of the discussion of the next empirical evaluation of German economics.

### *2.2.1 Doctoral Students*

The qualification phase poses a number of challenges to doctoral students of economics: having received a specific kind of economics education, they have to come up with innovative topics and research designs while orientating themselves towards the international system of journal publications. Heckman and Moktan surveyed 308 assistant and associate professors in the top 50 economics departments in the U.S. to find further support for the relevance of top five journal publications for the academic career (Heckman/Moktan 2018). For Germany, Alfons J. Weichenrieder und Danilo Zehner conducted a comprehensive study on the satisfaction of PhD students in structured PhD programs vis-á-vis the ones in other qualification positions and some of their attitudes towards their profession for the German Economics Association (VfS) (Weichenrieder/Zehner 2014). While a minor part in the study conveys some dividedness in perceptions on the topics of the real-world orientation and mathematical modelling approach of economics a fuller picture on PhD students' attitudes and potential effects of the internationalization of the discipline was obtained by Roos et al. 2018. Michael Roos, Julia Sprenger, Frederik Banning and Johanna Meier online-surveyed 448 PhD students in the German speaking countries in 2017, covering their research topics, use of methods and attitudes towards the field. The gender distribution of the respondents was 38% female and 62% male (the overall ratio for law, economics and the social sciences PhD students in 2014/15 was 44% female to 56% male (Hähnel/Schmied 2016) while Weichenrieder and Zehner report 30% female respondents). The number of respondents decreased over the course of the survey as it was relatively long. Most questions were answered by around 300 individuals, which can be regarded as a sufficiently high draw while a potential self-selection into the questions in the later part of the survey has to be accounted for (Roos et al. 2018).

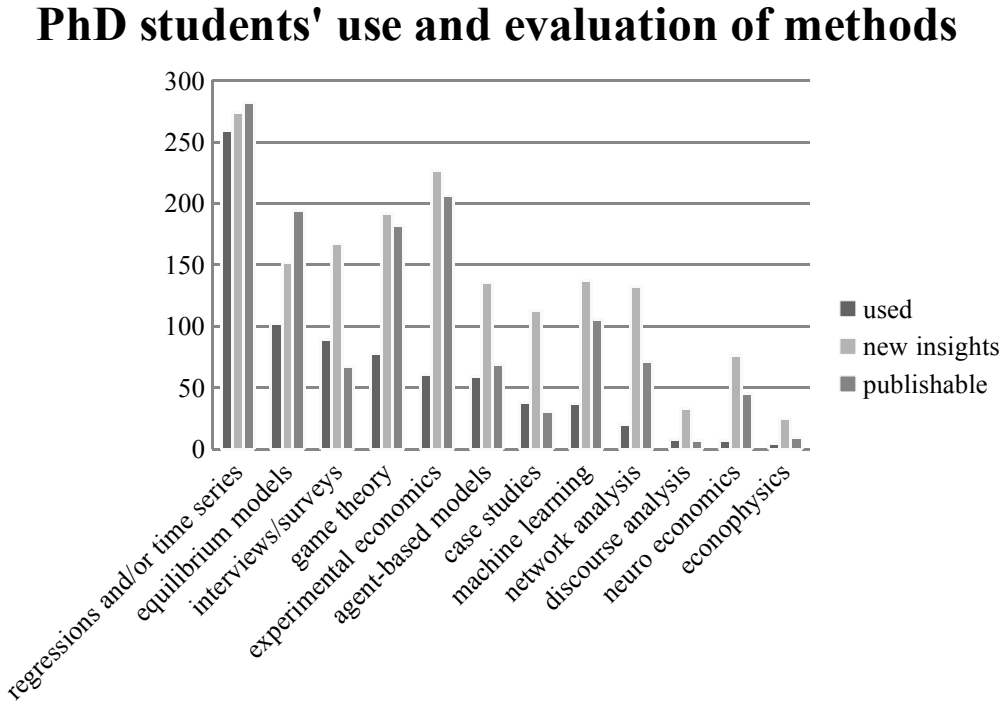



**Figure 4:** PhD students' use and evaluation of methods. Own representation based on Roos et al. 2019.

Similar to the economics students surveyed by Engartner & Schweitzer-Krah, PhD students share a high interest in contributing positively to societal challenges, a career path motivation which was chosen by 57,4% (N=408) in a multiple option question. The strongest motivation was the PhD student's interest in a certain topic (69,9%), and only 30,1% took the decision in favour of a PhD due to career chances in science. A study by the German union of education and science (GEW) portrays that only an estimated 20% of economics PhD students will get re-employed as Postdoc (Burkhardt 2016, 41-43), and that German universities, compared to France, the UK or the U.S., also employ fewer professors (Kreckel 2008). The tight labour market and/or the general orientation within economics appear to have an ambivalent effect on the PhD students surveyed. Two thirds of doctoral students indicate that they were relatively or absolutely free in their choice of topic.[12] With regards to the choice of methods the picture, however, changes. When asked to state their own use of methods, their perception of these methods for generating new insights, and the probability of a paper with a certain method to get published, the impact of the international system of publications of

12 The keywords most used to describe the content of their theses were macroeconomics (91), followed by labour market economics (74), behavioural economics (72), econometrics (69) and microeconomics (60). Financial markets (54), developmental economics (52), experimental economics (50), education economics (52) and environmental economics (39) also figured high which altogether hints to mainstream pluralism, understood as the use of econometric methods and applying economics to all fields of society.

mainstream economics can be felt. Not only do most PhDs follow the path of an empirical turn,[13] they also appear to have a clear idea of which method will have publishing success and which will not (figure 4). The most commonly used methods are regressions and time series analysis (259 out of 328) which are regarded as yielding new insights (274), and as conducive for publishing success (282). For other methods the divergence is much larger. Equilibrium models are regarded as highly publishable (194 out of 312) but only 78 think this method generates new insights. The opposite is true for interviews and surveys: While 167 out of 295 regard these as helpful for getting new insights, only 73 perceive them as easily publishable. A similar pattern of a prospect of new insights but a low perceived probability to get published can be found for rather heterodox methods, such as agent-based-modelling, data mining and network analysis, and the qualitative method of case studies. There is another interesting discrepancy. PhD students attribute a high potential to experimental economics[14] (227 out of 303) and game theory (192 out of 312) to yield new insights and regard them as highly publishable but only a fraction of them uses these methods in their PhD theses (61; 79) (Roos et al. 2018). This may be related to their university education which still focuses on standard mainstream concepts and methods as discussed in the prior section. The PhD students thus indicate to be only limitedly satisfied with the university education they received (N=325): 64% answered to have learned their PhD research method in university courses while 84% indicate to have taught it to themselves through reading, and only 36% found the doctoral courses or summer schools helpful for acquiring new methods. When asked for their opinion on the philosophy of science, many respondents answered that it should be part of doctoral programs (209 out of 276) and half of them said that good economics is not possible without a solid knowledge of the philosophy of science. Roughly one half of them (126 out of 276) is sceptical that good science is determined by the practice of scientists which stands in some contrast to what scientists working on methodological issues increasingly suggest as a way forward (Roos et al. 2018). This may be related to how they perceive economists' practices in the research field. An open space for comments on the potential lack of relevance of economics was placed in the back third of the questionnaire and was filled out by 125 PhD students (of 219 responding before and after). The answers can broadly be divided between a more optimistic and a more pessimistic group in their views on the publication system and the spread of certain economic methods. The first group welcomes the use of more elaborate methods with statements like 'Strong focus on econometrics, data, and empirics. Less focus on theory, meaningless ideological fights. But this is the direction we are already moving to, so I don't see a need for change'.[15] The second

13 In a different question in the survey, 60% of PhD students describe their research approach as empirical on a scale between empirical and theoretical.

14 A shortcoming of the keyword 'experimental economics' is that both experimental economics close to behavioural economics in a lab situation can be meant as well as quasi-natural experiments with quantitative data. As both methods belong to the plural mainstream, in our perception the results remain indicative.

15 The quotes are translated from German into English by the authors of this paper.

group voiced concerns such as ‘More time for the respective research projects. Many researchers cheat heavily, some because this is the way they are, others due to a lack of time and publication pressure’ and ‘Economic issues should be discussed in a wider context instead of focusing on minimally further developing complex models’ (Roos et al. 2018). The path onto which the new generation of economists puts itself can be characterized as a relatively open but also quite insecure one. Observing the international research trends they may not feel very well equipped for using methods which they either haven’t learned at university or which have a low expected publishing success. These findings seem to confirm the arguments present in the literature that the internationalization of the field and the publication standards may create more disciplined rather than innovative and well-founded research behaviour. The choice of methods indicates that more orthodox methods such as equilibrium models are not so central for the young generation anymore and that the empirical turn is prevalent in German economics. This situation though is not a reason for enthusiasm to all PhD students, as some see limits to the use of more and more elaborate mathematical techniques and a growing mainstream pluralism which may leave the discipline without direction.

### *2.2.2 Professors*

Within the social reproduction cycle of economics, professorships are the position with the greatest freedom to shape the working and researching process in the field of economics. According to federal state legislation and university statutes it is the decision of professors to determine how study programs are designed, how module plans are filled and interpreted and which direction and advice PhD students will receive. In Germany professors already in charge at a department prepare the call for a vacant professorship position and select a person through a commission, in which they also constitute the majority. Traditionally a professorship is a life-long employment, an appointment hence constitutes a greater political, thematic and strategic decision. This selection process enjoys high recognition, as it builds on the intellectual openness, the social and democratic responsibility of the professors, and to large extents shields the academic sphere from the influence of the state. Concerns have been raised as to how the increased focus on economists’ publications in high ranked journals limits this academic right to self-determination or at least lowers their innovation potential (Heckman/Moktan 2018; Rosser et al. 2010). Beckenbach et al. suggest that the post-Bologna university provides higher obligations for professors with relatively scarce resources and freedom (Beckenbach et al. 2016, 123). In their analysis of professorships in Germany between 1970 and 2012, Arne Heise and Sebastian Thieme come to the conclusion that the focus on publications and external university funding increased the narrowness of economics, at least with regard to paradigms (Heise/Thieme 2016; Heise et al. 2016).

Karl M. Beyer, Christian Grimm, Jakob Kapeller and Stephan Pühringer provide an assessment of the development of research in German and US American economics

based on journal publication data between 1971 and 2017 to gain insights on the paradigmatic and thematic focus of the discipline. A comparison between Germany and the U.S. allows them to draw some conclusions on the influence of the US American centrality in the research arena on other countries such as Germany. The authors assembled journal publications of all active economics university professors in Germany (N=569) and compared them with a random sample of 100 universities in the top 25% of the IDEAS-Ranking (IDEAS 2019) in the United States (N=570). The research orientation of professors was then categorized along multiple dimensions, seven of which are relevant to our evaluation. Professors fall into the mainstream (1), heterodox (2) or plural mainstream economics (3) category, when publishing in mainstream journals, in heterodox journals as indicated by the Heterodox Economics Directory, or in both types of journals.[16] The plural mainstream (3) category reflects how much academic exchange there is between mainstream and heterodox economists but differs from what we have identified as such. The additional category *Colander's edge* (4) accounts for developments into the fields of evolutionary game theory, ecological economics, behavioural/psychological economics, complexity theory, experimental economics[17], computer simulation (Colander et al. 2004, p. 496) and economic geography (Dobusch/Kapeller 2012). With *Colander's edge* (4) parts of a plural mainstream and a *normative turn* can be measured, but the categorization misses to grasp tendencies from the *empirical turn*. It still provides us with a first approximation of the size of a turn towards the plural mainstream. Professors were further categorized with regards to their publications in microeconomic research journals (5), with references to ordoliberalism (6), and to the topic of crisis (7) (Beyer et al. 2018).[18] The empirical assessment reveals that 92% of professors currently belong to the mainstream in Germany, and 94% in the U.S., while the heterodoxy makes up 3% in Germany and 0.5% in the U.S.[19] The plural mainstream amounts to about 5.5% in both countries which shows that mainstream and heterodox economists hardly engage in a common academic debate. 17% of professors were found to belong to *Colander's edge* in Germany, and 15% in the U.S., Within *Colander's edge* experimental and behavioural economics dominate, while ecological economics and complexity economics only reach a marginal appearance (Beyer et al. 2018).

16 Mainstream economists have according to this categorization published less than three articles in heterodox journals, heterodox economists at least three articles in heterodox journals and less than half of their publications in mainstream journals, and plural mainstream economists at least three articles in heterodox journals but more than a half in mainstream journals.

17 Here experimental economics refers to research in lab situations.

18 Economists with an ordoliberal preference have published at least two articles in ordoliberal journals. Professors with a preference for the topic of crisis are the ones who have at least 5% of their publications on the topic of crisis.

19 There is a sample bias due to the situation that heterodox economists in Germany tend to work in colleges and in the U.S. they will tend to work in lower ranked universities and colleges and are less likely to be employed in elite institutions.

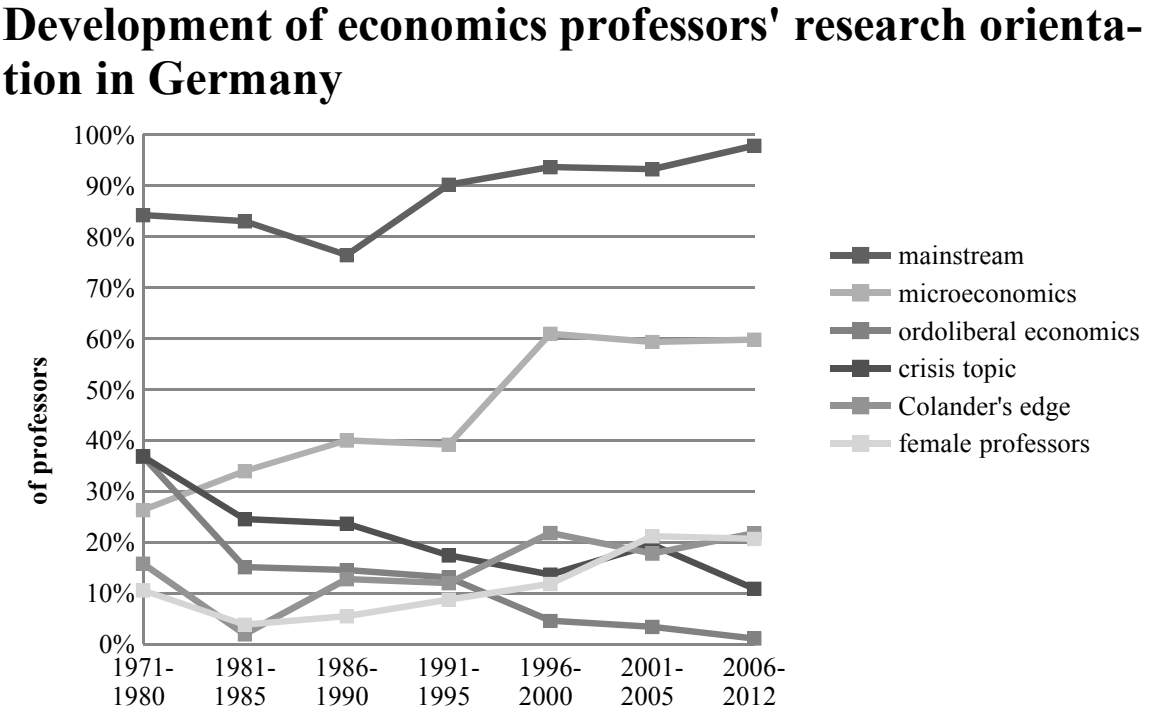



**Figure 5:** Development of economics professors' research orientation in Germany. Own representation based on Beyer et al. 2018.

Looking at developments by age cohorts of German professors (figure 4), we can observe that their research orientation into mainstream economics increased by roughly 20% to 98% and by 30% to 60% into microeconomics in the current generations. Of the professors who most recently received tenure, 21% are working in *Colander's edge* related research fields, which amounts to a 10% rise compared to what the 1980s and 1990s generations have been working on. The high turn-out on mainstream economic and microeconomic research mirrors the developments through time in the U.S., while Germany recently supersedes the U.S. in professors' focus on microeconomic research. Colander's edge related research amounts to between 12% and 21% in the U.S. since the 1970s and is only on a slight constant rise. On a purely descriptive level, a gain in relevance in microeconomic research coincides somewhat with a reduction in professors researching on the topic of crisis in Germany and the U.S. The generations who received tenure in the 1990s show a particularly low interest in the topic, while the lowest point is reached by the youngest generation in Germany with only 11% publishing on crisis related topics (with 5% of publications as a threshold) (Beyer et al. 2018).

This evaluation confirms the claim that economics has grown less pluralistic with regards to paradigms and has been little prepared for the crisis of 2008 which intensified the interest in a meta-perspective on the discipline. The noticeable but somewhat limited increase in Colander's edge research implies that a fundamental shift to the basic tenets of mainstream economics thinking has not taken place (e.g.

in the sense of behavioural economics as the new foundation). The notion of mainstream pluralism though would have to be further researched in a different methodological set-up. With regard to the hypothesis of an Americanization of European research, this study reveals a strong tendency towards assimilation. As Ernest Aigner had shown in his analysis of citation patterns, regional variety decreases constantly which in Germany seems to also have contributed to the decline in ordoliberal economic research. Which effect this situation of a currently widely internationalized economics research field and an older generation of economists has in the perception and political influence of German economics, is part of the closing section of the empirical part of this paper.

### *2.2.3. A German Sonderweg? Academic policy opinions and representation in public policies*

The paradigmatic orientation of German economics received international attention during the last financial and euro crisis. "German economics" was repeatedly criticized by US American and British economists like Paul Krugman or Martin Wolf for holding very orthodox views, 'harping on about non-existent problems, endorsing austerity when it is least needed, committing the fallacy of composition at every possible juncture, and more or less just getting it all wrong' (Burda 2015). While Michael Burda argues that such ordoliberal and orthodox orientations hardly exist in German economic research anymore, he suggests that these may be present in the policy advising bodies (Burda 2015). Sebastian Dullien and Ulrike Guérot point into a similar direction as not mainly economic research but programs of German political parties showed an ordoliberal handwriting (Dullien/Guérot 2012).

Thomas Fricke surveyed the members of the academic association for German speaking economists, the Verein für Socialpolitik (VfS), in the years 2006, 2010 and 2015[20] and added results from a survey by Schneider et al. of 1981[21] to shed some light on their research opinions with regard to a potential German Sonderweg, as well as on their attitudes towards their own discipline. He shows a recurring gap between the academic opinions of German economists and prominent representatives of the field who tend to be hold more orthodox views than the average. The policy proposals put forward by the German Council of Economic Advisors (SVR) on the topics of labour market, central bank policies or the German export surplus do not represent the qualified judgements of the economics field as a whole. With regard to labor market policies, German economists exhibit views that are closer to the SVR positions (Fricke 2017). Such a tendency of a less pluralistic representation of German economists' research orientations in the policy advising bodies is confirmed by the study by Karl M. Beyer, Christian Grimm, Jakob Kapeller and Stephan Pühringer. They differentiate between "policy support"

20 Results first published by Thomas Fricke on https://neuewirtschaftswunder.de/ and formerly present on https://www.socialpolitik.de/

21 In the years 2006 (N=551), 2010 (N=1158) and 2015 (N=1002) (Fricke 2017).

which is researching in publicly funded research institutes and “policy advice” which is working in bodies with direct political links or offices, such as in ministries and economic councils of the state. Referring to the formerly introduced categories, a larger diversity of economists’ focus is present in policy support, with 1.6% heterodox, 4.7% plural mainstream, 12.3% Colander’s edge and the rest mainstream economists. In policy advice, neither heterodox nor plural mainstream and only 9.4% of Colander’s edge economists are present, with a rest of 91.6% with a mainstream orientation (Grimm/Pühringer 2019). While the research focus can serve as an approximation for the economic policy opinions of economists, the study by Fricke also shows that they are also embedded in the broader political discourse. In 1981 31% fully agreed to the statement that fiscal policy can be an effective tool for stabilizing the economic cycle. In 2006 only 12% agreed to that statement, by 2010 it was 18%, and in 2015 36%. Most likely also due to the crisis, 46% indicated in 2015 that economics is in a crisis of legitimacy, 59% regarded the 2008 financial crisis strongly or partly as the failure of market fundamentalism, and 56% mostly agreed to the students’ demand for pluralism (Fricke 2017). The younger generation of respondents though showed to be less critical towards the public standing of their discipline, which either points towards a more withdrawn vision of how effective their research is in society or towards a less reflected attitude. Both interpretations may be problematic, if a younger generation of professors is left without sufficient time to engage in broader societal debates.

## 3. Summary and Discussion

We set out to provide an overview on the current form and content of German economics, based on a new series of studies which have been published mostly in German language in recent years. Although the research projects were partly linked to each other through the FGW, the projects differed in their hypotheses for which the results presented show a more diverse picture than we would expect in a larger, unified research project. The concept of a reproduction cycle nevertheless allowed us to relate the research findings to each other, and to show the different tendencies which take place at each node in the cycle. While the quantitative survey studies are not representative, a satisfyingly high number of between 351 and 1158 respondents with a gender distribution close to the population relevant was reached. The assessment of the curricula and lecture content, journal citations and the professorships in Germany involved full samples of the available data, and a randomized draw of professorships in the U.S. The qualitative research projects used reflective methods which allowed for the generation of new insights on the character and potential specificity of the field of economics in the social sciences and its social environment. For the reproduction cycle of economics, we sum up and discuss the results on the current form and state of economics in Germany. Starting out with the analysis of economics teaching and curricula, Frank

Beckenbach, Maria Daskalakis and David Hoffmann find that lecturers stick very close to the module descriptions, which currently makes orthodox mainstream economics the only way for teaching without alternatives. Analysing the curricula with regards to the textbooks recommended, Christian Rebhan shows the dominance of five internationally successful textbooks, two for microeconomics, two for macroeconomics and one for introductory economics in the economics teaching at German universities. In their qualitative assessments of these prevalent textbooks, Till van Treeck and Janina Urban (ed.), Helge Peukert and Silja Graupe find a strong homogenization of content and some political biases. Systematic semantic biases, as pointed out by Silja Graupe, raise questions regarding what didactic concepts meet the standards of a mathematical science and which do not. Students however, as shown by Lukas Bäuerle, Stephan Pühringer and Walter Ötsch, and by Tim Engartner and Eva Schweitzer-Krah, are not primarily occupied with the teaching content, but the stressful study environment of economics. Economics education apparently fails to nourish the larger intrinsic and epistemic motivation students show when entering university. Support for the indoctrination hypothesis thus, may come from a different angle than discussed beforehand. The content students report to learn follows the core of orthodox economics with its focus on equilibrium models, with some relevance of empirical methods. Students perceive the contents to be mostly dis-embedded from real world contexts and other social sciences.

While teaching content is externalized to textbooks, the publication system calls for the full attention of young economists. Michael Roos, Julia Sprenger, Frederik Banning and Johanna Meier show how PhD students on the one hand feel the opportunity to mostly choose whatever topic they wish to - which speaks for the topical plurality current economic research offers. On the other hand, they feel less free regarding their choice of method. This appears to originate from two sources. First, PhD students know very well which methods are more likely to get published and which are not. The expected publication success can sometimes diverge from the degree of the expected new insights from the use of a certain method, but it is more likely that PhD students choose the publication success over new insights. Second, the survey suggests that PhD students are somewhat dissatisfied with their university education which does not seem to prepare them sufficiently for questions of plural methods and the theory of science. Concerning the growing degree of quantitative methods and more complicated techniques of empirical research they seem to be divided as to its improvement or impairment for the relevance and societal role of economics.

The general tendencies within economics research and professorships for Germany and the U.S. from the 1970s on were evaluated by Karl M. Beyer, Christian Grimm, Jakob Kapeller and Stephan Pühringer. The study reveals that the youngest cohort of professors almost exclusively publishes in mainstream journals and those newer methods from *Colander's edge* have grown, but stagnate at 17%, while being also underrepresented in the policy advising bodies in Germany. Next to a

marginalization of heterodox economists in universities and policy advice, the phenomenon of more conservative economists in the public may be explained by their larger involvement in diverse networks. Their representation stands in some contrast to the diversity of academic opinion which Thomas Fricke could show in his surveys. Protests from the younger generation of economists are though no to be expected, as most of them do not see the discipline in crisis.
Altogether the studies suggest that there is nothing particularly German about German economics. Despite the larger presence of orthodox economists in policy advising bodies - which is a choice taken within the political system and not by economists - the structure of teaching and research appears rather typical within a field which is increasingly internationalizing. Methods of a normative turn may be superseded by or combined with the empirical turn as the tendencies in the professorships and PhD students' research suggested. Not a small number of economists - especially the older generation - observes the development of the field with some concern.

# 4. Conclusion

Teaching at almost every university is done in a uniform manner, orientated at an international textbook standard. It provides a collective experience for students, thus shaping their attitudes and practice in a uniform way. Research in Germany is strongly focused on the top five journals and young scholars direct their work accordingly. Besides this clear picture, the state of economics provides us with some serious puzzles and problems. Influential German economists (Wambach 2018) defend the orthodox-textbook model of teaching as it prepares students for economic research. PhD students, however, increasingly discard this canon and need to learn new methods to catch up with the existing plurality entailed in top journals. While this new plurality still does not contain heterodox schools, which remain marginalized, some diversification takes place. Students are not only badly prepared for the current discourse but are also not taught to handle diverse approaches at all. The whole structure of their curricula and style of their textbooks take place in the mode of received truths. Critical thinking, internal as well as external debates, historical diversity of thought and philosophy of science are hardly ever properly dealt with in textbooks. Colander and Kupers (2014) suggest teaching philosophy and literature to enhance this capacity.[22] With regard to the increasing mainstream pluralism the question of how to handle pluralism seems to become an issue for all economists who want to belong to the mainstream and make use of current research.
The current system of fixed curricula and competition of only a few prestigious journals seems to provide a high pressure on students, PhD students and

22 This fits the debate on economic models as credible (Sugden 2000), fables (Cartwright 2000) or scientific representation as fiction (Frigg 2010) suggesting the importance of hermeneutics for any scientific endeavour even for the natural sciences (Fullbrook 2012).

professors alike. It could be stated, that a high stress level is a good sign of rigorous competition. But the qualitative insights indicate that the degree of competition does hinder comprehensive learning for students and draws PhD students away from methods they regard as promising. Professors in Germany perceive a serious legitimation crisis. Criticism is increasingly voiced from within the mainstream.

## Literature


Aigner, E. (2018): Netzwerke, Paradigmen, Attitüden. Der deutsche Sonderweg im Fokus. *FGW-Publ. Neues Ökon. Denk. 7b.*

Aigner, E./Aistleitner, M./Glötzl, F./Kapeller, J. (2018): The focus of academic economics: before and after the crisis. *Inst. New Econ. Think. Work. Pap. Ser.* No 75.

Albritton, J. (2006): Humboldt's Unity of Research and Teaching: Influence on the Philosophy and Development of U.S. Higher Education (*SSRN Scholarly Paper No. ID 939811*). Social Science Research Network, Rochester, NY.

Allgood, S./Walstad, W.B./Siegfried, J.J. (2015): Research on teaching economics to undergraduates. *J. Econ. Lit.* 53, 285–325.

Angrist, J./Pischke, J.-S. (2010): The Credibility Revolution in Empirical Economics: How Better Research Design is Taking the Con out of Econometrics. *J. Econ. Perspect.* 24, 3–30.

Akerlof, G. A./Shiller, R. J. (2016): *Phishing for Fools: Manipulation und Täuschung in der freien Marktwirtschaft.* Ullstein eBooks.

Bachmann, R. (2017): Zur aktuellen Pluralismusdebatte in der Ökonomik: Ansichten eines wohlwollenden Pluralismusskeptikers. *Wirtschaftsdienst* 97, 843–847.

Backhouse, R.E./Cherrier, B. (2017): The age of the applied economist: the transformation of economics since the 1970s. *Hist. Polit. Econ.* 49, 1–33.

Bäuerle, L./Pühringer, S./Ötsch, W.O. (2019): „Ohne Effizienz geht es nicht" - Ergebnisse einer qualitativ-empirischen Erhebung unter Studierenden der Volkswirtschaftslehre. *FGW-Publ. Neues Ökon. Denk. 13.*

Bauman, Y./Rose, E. (2011): Selection or indoctrination: Why do economics students donate less than the rest? *J. Econ. Behav. Organ.* 79, 318–327.

Beckenbach, F./Daskalakis, M./Hofmann, D. (2016): *Zur Pluralität der volkswirtschaftlichen Lehre in Deutschland – Eine empirische Untersuchung des Lehrangebotes und der Einstellung der Lehrenden.* Marburg: Metropolis.

Beckenbach, F. (2019): *Paradigmadominanz in der modernen Ökonomik und die Notwendigkeit eines kompetitiven Pluralismus.* In: Perspektiven einer pluralen Ökonomik. Wiesbaden: Springer VS 3-24.

Becker, J./Dullien, S./Bachmann, R./Graupe, S./Heise, A. (2017): Wirtschaftswissenschaften: zu wenig Pluralität der Methoden und Forschungsrichtungen? *Wirtschaftsdienst* 97, 835–853.

Becker, W.E./Watts, M. (1996): Chalk and Talk: A National Survey on Teaching Undergraduate Economics. *Am. Econ. Rev.* 86, 448–453.

Becker, W.E. (2000): Teaching Economics in the 21st Century. *J. Econ. Perspect.* 14, 109–119.

Becker, W.E./Watts, M. (2001): Teaching Methods in U.S. Undergraduate Economics Courses. *J. Econ. Educ.* 32, 269–279.

Bertuzzi, S./Drubin, D.G., (2013): No shortcuts for research assessment. *Mol. Biol. Cell* 24, 1505–1506.

Beyer, K./Grimm, C./Kapeller, J./Pühringer, S. (2018): Netzwerke, Paradigmen, Attitüden. Der deutsche Sonderweg im Fokus. *FGW-Publ. Neues Ökon. Denk.* 7a.

Bigo, V./Negru, I. (2008): From fragmentation to ontologically reflexive pluralism. *J. Philos. Econ.* 1, 127–150.

Blanchard, O./Illing, G. (2017): *Makroökonomie*, 7. ed. München: Pearson.

Bohnsack, R. (2010): Dokumentarische Methode und Typenbildung. Bezüge zur Systemtheorie. In: John, R./Henkel, A./Rückert-John, J. (ed.): *Die Methodologien des Systems. Wie kommt man zum Fall und wie dahinter?* Wiesbaden: Springer VS, 291-320.

Bohnsack, R./Pfaff, N./Weller, W. (2010): Qualitative analysis and documentary method: *In international educational research.* B. Budrich.

Bowles, S./Carlin, W. (2020): What Students Learn in Economics 101: Time for a Change. *J. Econ. Lit.* (In Press)

Burda, M., (2015): Dispelling three myths on economics in Germany. VoxEU.org. URL https://voxeu.org/article/dispelling-three-myths-economics-germany (accessed 9.18.19).

Burkhardt, A. (2016): *Professorinnen, Professoren, Promovierte und Promovierende an Universitäten: leistungsbezogene Vorausberechnung des Personalbedarfs und Abschätzung der Kosten für Tenure-Track-Professuren.* Gewerkschaft Erziehung und Wissenschaft, Frankfurt a.M., 67.

Cartwright, N., (2010): Models: Parables v. fables, in: *Beyond Mimesis and Convention.* Springer, 19–31.

Cedrini, M./Fontana, M. (2018): Just another niche in the wall? How specialization is changing the face of mainstream economics. *Camb. J. Econ.* Volume 42, Issue 2, March, Pages 427–451

Cherrier, B. (2017): Classifying economics: A history of the JEL codes. *J. Econ. Lit.* 55, 545–79.

Chick, V./Dow, S.C. (2001): Formalism, logic and reality: a Keynesian analysis. *Camb. J. Econ.* 25, 705–721.

Colander, D. (2000): The death of neoclassical economics. *J. Hist. Econ. Thought* 22, 127–143.

Colander, D. (2005): The future of economics: the appropriately educated in pursuit of the knowable. *Camb. J. Econ.* 927–941.

Colander, D./Holt, R., Jr, B.R., (2004): The changing face of mainstream economics. *Rev. Polit. Econ.* 16, 485–499.

Colander, D.C./McGoldrick, K. (2010): *Educating economists: the Teagle discussion on re-evaluating the undergraduate economics major*. Cheltenham UK, Northampton USA: Edward Elgar Publishing.

Kupers, R., & Colander, D. (2014): *Complexity and the art of public policy*. Princeton: Princeton University Press.

Daston, L. (2008). *On Scientific Observation*. Isis 99, 97–110.

Davis, J.B./Klaes, M. (2003): Reflexivity: curse or cure? *J. Econ. Methodol.* 10, 329–352.

Davis, J.B. (2006): The turn in economics: neoclassical dominance to mainstream pluralism? *J. Institutional Econ.* 2, 1–20.

Davis, J. (2017): Is Mainstream Economics a Science Bubble? *Rev. Polit. Econ.* 29, 523–538.

De Langhe, R. (2009): How monist is heterodoxy? *Camb. J. Econ.* 34, 793–805.

Decker, S./Elsner, W./Flechtner, S. (2018): *Advancing Pluralism in Teaching Economics: International Perspectives on a Textbook Science*. London: Routledge.

Dimmelmeier, A./Heussner, F./Pürckhauer, A./Urban, J. (2017): Making the incommensurable comparable: a comparative approach to pluralist economics education. *European Journal of Economics and Economic Policies*: Intervention, 14(2), 250-266.

Dobusch, L./Kapeller, J. (2012): Heterodox United vs. Mainstream City? Sketching a framework for interested pluralism in economics. *J. Econ. Issues* 46, 1035–1058.

Dow, S.C. (2004). Structured pluralism. *J. Econ. Methodol.* 11, 275–290.

Dullien, S./Guérot, U. (2012): The long shadow of ordoliberalism: Germany's approach to the euro crisis. *European Council on Foreign Relations* (ECFR).

Engartner, T./Schweitzer-Krah, E. (2019): Wie denken Studierende über die Pluralismusdebatte in der Volkswirtschaftslehre? Ergebnisse einer quantitativen Befragung an deutschen Hochschulen. *FGW-Publ. Neues Ökon. Denk.* 10.

Fricke, T. (2017): Altes Einheitsdenken oder neue Vielfalt? Eine systematische Auswertung der grossen Umfragen unter Deutschlands Wirtschaftswissenschaftler_innen. *FGW-Publ. Neues Ökon. Denk.* 3.

Frey, B. S./Eichenberger, R. (1993). American and European economics and economists. *Journal of Economic Perspectives*, *7*(4), 185-193.

Frigg, R. (2010): Fiction and scientific representation, in: *Beyond Mimesis and Convention*. Springer, pp. 97–138.

Fullbrook, E. (2012): To observe or not to observe: Complementary pluralism in physics and economics. *Real-World Econ. Rev.* 62, 20–28.

Feyerabend, Paul (1975): *Against Method*, New York: Verso Books.

Garnett, R.F. (2006): Paradigms and pluralism in heterodox economics. *Rev. Polit. Econ.* 18, 521–546.

Gärtner, M. (2001): Teaching Economics to Undergraduates in Europe: Volume, Structure, and Contents. *J. Econ. Educ.* 32, 219–230.

Gibson, J., Anderson, D.L., Tressler, J. (2014): Which journal rankings best explain academic salaries? Evidence from the University of California. *Econ. Inq.* 52, 1322–1340.

Glötzl, F., Aigner, E. (2017): Six Dimensions of Concentration in Economics: Scientometric Evidence from a Large Scale Data Set. *Institute for Ecological Economics Working Paper Series No.* 15

Göpel, M. (2016): Why the Mainstream Economic Paradigm Cannot Inform Sustainability Transformations, in: *The Great Mindshift*. Springer, pp. 53–117.

Graber, M., Launov, A., Wälde, K. (2008): Publish or perish? The increasing importance of publications for prospective economics professors in Austria, Germany and Switzerland. *Ger. Econ. Rev.* 9, 457–472.

Gräbner, C. (2017): The Complexity of Economies and Pluralism in Economics. *ICAE Working Paper Series.*

Graupe, S. (2012): The power of ideas. The teaching of economics and its image of man. *JSSE-J. Soc. Sci. Educ.* 11, 60-84.

Graupe, S. (2017): Beeinflussung und Manipulation in der ökonomischen Bildung Hintergründe und Beispiele. *FGW-Publ. Neues Ökon. Denk.* 5.

Graupe, S./Steffestun, T. (2018): "The market deals out profits and losses" – How Standard Economic Textbooks Promote Uncritical Thinking in Metaphors. *JSSE-J. Soc. Sci. Educ.* 5–18.

Green, T.L. (2012): Introductory economics textbooks: what do they teach about sustainability? *Int. J. Plur. Econ. Educ.* 3, 189–223.

*Grimm, C./Kapeller, J./Pühringer, S. (2018a): Zum Profil der deutschsprachigen Volkswirtschaftslehre - Paradigmatische Ausrichtung und politische Orientierung deutschsprachiger Ökonom_innen. FGW-Publ. Neues Ökon. Denk.* 2.

Grimm, C./Kapeller, J./Pühringer, S. (2018b): Paradigms and Policy: The state of economics in the german-speaking countries. *ICAE Working Paper Series* - No. 77 - March 2018

Grimm, C./Pühringer, S. (2019): Männlich, mikroökonomisch, Mainstream? *Makronom.* URL https://makronom.de/deutsche-vwl-maennlich-mikrooekonomisch-mainstream-29502 (accessed 9.27.19).

Guala, F., (2007): How to do things with experimental economics. In: MacKenzie, D./Munesia, F./Siu, L (eds.), *Do Economists Make Markets?:* On the Performativity of Economics. Princeton and Oxford: Princeton University Press. 128-162.

Hähnel, S./Schmied, S. (2016): *Promovierende in Deutschland* - Wintersemester 2014/2015. Stat. Bundesamt 78.

Hamermesh, D.S. (2013): Six decades of top economics publishing: Who and how? *J. Econ. Lit.* 51, 162–72.

Hands, D.W. (2001): *Reflection Without Rules: Economic Methodology and Contemporary Science Theory*. Cambridge: Cambridge University Press.

Hands, D.W. (2015): Normative Rational Choice Theory: Past, Present, and Future (*SSRN Scholarly Paper No. ID 1738671*). Social Science Research Network, Rochester, NY.

Heckman, J.J./Moktan, S., (2017): *Publishing and promotion in economics: the curse of the top five.* Presented at the 2017 INET Plenary Conference, Session: Taking The Con Out Of Economics? The Limits of Negative Darwinism.

Heckman, J.J./Moktan, S. (2018): Publishing and promotion in economics: the tyranny of the top five. *National Bureau of Economic Research.*

Heinrich, T. (2017): Die Rolle des Optimierungskonzepts in den Standardlehrwerken der Mikroökonomik., in: *Wirtschaft Neu Denken: Blinde Flecken in Der Lehrbuchökonomie*. Berlin: iRights Media.

Heise, A./Thieme, S. (2016): The Short Rise and Long Fall of Heterodox Economics in Germany After the 1970s: Explorations in a Scientific Field of Power and Struggle. *J. Econ. Issues* 50, 1105–1130.

Heise, A./Sander, H./Thieme, S. (2016): *Das Ende der Heterodoxie?: Die Entwicklung der Wirtschaftswissenschaften in Deutschland*. Wiesbaden: Springer-Verlag.

Herfeld, C. (2013): The many faces of rational choice theory. *Erasmus J. Philos. Econ.* 6, 117–121.

Herfeld, C. (2018): From Theories of Human Behavior to Rules of Rational ChoiceTracing a Normative Turn at the Cowles Commission, 1943–54. *Hist. Polit. Econ.* 50, 1–48.

Hodgson, G.M./Rothman, H. (1999): The editors and authors of economics journals: a case of institutional oligopoly? *Econ. J.* 109, 165–186.

IDEAS (2019): *Economics rankings: US Economics Departments* | IDEAS/RePEc [WWW Document]. URL https://ideas.repec.org/top/top.usecondept.html (accessed 9.29.19).

Kalmi, P. (2007): The disappearance of cooperatives from economics textbooks. *Camb. J. Econ.* 31, 625–647.

Kaplan, R.S. (2019): Reverse the Curse of the Top-5. Account. *Horiz.* 33, 17–24.

Kreckel, R. (Ed.) (2008): *Zwischen Promotion und Professur: das wissenschaftliche Personal in Deutschland im Vergleich mit Frankreich, Großbritannien, USA, Schweden, den Niederlanden, Österreich und der Schweiz*. Leipzig: Akad. Verl.-Anst.

Kuhn, T. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago Press.

Lakoff, G./Wehling, E. (2008): *Auf leisen Sohlen ins Gehirn. Polit. Sprache Ihre Heimliche Macht.* Heidelberg: Carl Auer Verlag.

Lazear, E.P. (2000): Economic imperialism. *Q. J. Econ.* 115, 99–146.

Lazear, E.P. (2015): Gary Becker's Impact on Economics and Policy. *Am. Econ. Rev.* 105, 80–84.

Madsen, P.T. (2013): The financial crisis and principles of economics textbooks. *J. Econ. Educ.* 44, 197–216.

Mankiw, N./Taylor, M. (2011): *Economics* (revised ed.). Andover: Cengage Learn.

Mankiw, N.G. (2014): *Principles of economics*. Andover: Cengage Learning.

Mankiw, N.G. (2019): *Reflections of a Textbook Author*. University of Harvard Upload.

Nasar, S. (1995): A Hard Act to Follow? Here Goes. *N. Y. Times* Section D, Page 1.

Ötsch, W.O. (2019): *Mythos Markt. Mythos Neoklassik: Das Elend des Marktfundamentalismus*. Marburg: Metropolis.

Ötsch, W.O./Kapeller, J., (2010): Perpetuating the failure: Economic education and the current crisis. *JSSE-J. Soc. Sci.* Educ. 9.

Pahl, H. (2011): Textbook Economics: Zur Wissenschaftssoziologie eines wirtschaftswissenschaftlichen Genres. *Prokla-Z. Polit. Okonomie Sozial. Polit.* 164, 369.

Peukert, H. (2017): Volkswirtschaftslehre als Indoktrination und die (Nicht-)Auswirkungen der Finanzkrise., in: *Wirtschaft Neu Denken: Blinde Flecken in Der Lehrbuchökonomie*. Berlin: iRights Media.

Peukert, H./Rebhan, C. (2018): Eine kritische Analyse an deutschen Hochschulen vorherrschender Einführungen in die Mikro- und Makroökonomie und plural-heterodoxe Alternativlehrbücher. *FGW-Publ. Neues Ökon. Denk.* 9.

Peukert, H. (2018a): Ideologisch einseitig und didaktisch zweifelhaft: Eine Analyse vorherrschender mikro- und makroökonomischer Lehrbücher. *FGW-Publ. Neues Ökon. Denk.* 9.

Peukert, H. (2018b): *Makroökonomische Lehrbücher: Wissenschaft oder Ideologie?* Marburg: Metrolopolis.

Pindyck, R./Rubinfeld, D.L. (2013): *Microeconomics* Eighth Edition. pp: 499-500. London: Pearson Education.

Popper, K. (2013): *Realism and the aim of science: From the postscript to the logic of scientific discovery.* London: Routledge.

Pühringer, S./Bäuerle, L. (2018): What economics education is missing: the real world. *Int. J. Soc. Econ.*

Reardon, J. (2008): Barriers to entry: heterodox publishing in mainstream journals. *Horiz.* 16, 185–197.

Reardon, J. (2015). Roundtable dialogue on pluralism. *Int. J. Plur. Econ. Educ.* 6, 272–308.

Rebhan, C. (2017): *Einseitig oder plural? Eine quantitative Analyse der wirtschaftswissenschaftlichen Einführungslehrbücher an deutschen Hochschulen.* Marburg: Metropolis.

Reimann, N. (2004): First-year Teaching-Learning Environments in Economics. *Int. Rev. Econ. Educ.* 3, 9–38.

Reis, R. (2018): Is something really wrong with macroeconomics? *Oxf. Rev. Econ. Policy* 34, 132–155.

Robson, D. (2001): Women and minorities in economics textbooks: Are they being adequately represented? *J. Econ. Educ.* 32, 186–191.

Rodrik, D. (2015): *Economics rules: The rights and wrongs of the dismal science.* New York: WW Norton & Company.

Rommel, F. (2015): Performing Pluralism. Essay, *Mark Blaug Student Essay.*

Rommel, F./Barth, J. (2019): Transformative economics – calling for a more conscious economics and society relationship between economics and society, in: *Principles and Pluralist Approaches in Teaching Economics: Towards a Transformative Science.* Routledge.

Roos, M./Sprenger, J./Bauermann, T./Baning, F./Meier, J. (2019): Neues ökonomisches Denken in der Doktorandenausbildung. Welche Faktoren fördern neues ökonomisches Denken bei Nachwuchswissenschaftler_innen? Ergebnisse einer Onlineumfrage. *FGW-Publ. Neues Ök. Denken* 11.

Rosser, J.B./Holt, R.P./Colander, D.C. (2010): *European economics at a crossroads.* London: Edward Elgar Publishing.

Rubinstein, A. (2006). A Sceptic's Comment on the Study of Economics. *Econ. J.* 116, C1–C9.

Samuelson, P.A./Nordhaus, W.D. (2009): *Economics.* 19th International Edition. New-York: McGraw-Hill Education.

Schefold, B. (1995): *Theoretical Approaches to a Comparison of Economic Systems from a Historical Perspective.* Theory Ethical Econ. Hist. Sch. 221–249.

Schneidewind, Uwe/Pfriem, R./Graupe, S., Barth, J. (2017): *Transformative Wirtschaftswissenschaft im Kontext nachhaltiger Entwicklung.* Marburg: Metropolis.

Siegfried, J.J./Bartlett, R.L./Hansen, W.L.,/Kelley, A.C.,McCloskey, D.N., Tietenberg, T.H. (1991): The Status and Prospects of the Economics Major. *J. Econ. Educ.* 22, 197–224.

Skousen, M. (1997): The perseverance of Paul Samuelson's economics. *J. Econ. Perspect.* 11, 137–152.

Spiegler, R. (2019): Behavioral economics and the atheoretical style. *American Economic Journal: Microeconomics*, *11*(2), 173-94.

Stiglitz, J.E. (1988): On the market for principles of economics textbooks: Innovation and product differentiation. *J. Econ. Educ.* 19, 171–177.

Suárez, M. (2004): An inferential conception of scientific representation. *Philos. Sci.* 71, 767–779.

Sugden, R. (2000): Credible worlds: the status of theoretical models in economics. *J. Econ. Methodol.* 7, 1–31.

Truger, A. (2017): Hohepriester der Freihandelssekte. Internationaler Handel und Globalisierung in Standardlehrbüchern der Volkswirtschaftslehre., in: *Wirtschaft Neu Denken: Blinde Flecken in Der Lehrbuchökonomie* Berlin: iRights Media.

van Treeck, T./Urban, J. (2019): Neue Serie: Wie plural ist die Ökonomik in Deutschland? *Makronom*. URL https://makronom.de/wie-plural-ist-die-oekonomik-in-deutschland-29213 (accessed 9.27.19).

van Treeck, T. (2017): Der "große Zwiespalt" zwischen Effizienz und Gerechtigkeit: Realität oder Ideologie?*,* in: *Wirtschaft Neu Denken: Blinde Flecken in Der Lehrbuchökonomie.* Berlin: iRights Media: 128–138.

van Treeck, T./Urban, J. (2017): *Wirtschaft neu denken: Blinde Flecken in der Lehrbuchökonomie.* Berlin: iRights Media.

Varian, H.R. (2014): *Intermediate microeconomics with calculus: a modern approach*. New York: WW Norton & Company.

Wambach, A. (2018): Wirtschaftswissenschaften - Wie die Finanzkrise verändert hat, was in der Ökonomie gelehrt wird. Deutschlandfunk. 15.09.2018. https://www.deutschlandfunk.de/wirtschaftswissenschaften-wie-die-finanzkrise-veraendert.680.de.html?dram:article_id=428102

Watts, M./Becker, W.E. (2008): A Little More than Chalk and Talk: Results from a Third National Survey of Teaching Methods in Undergraduate Economics Courses. *J. Econ. Educ.* 39, 273–286.

Weichenrieder, A.J./Zehner, D. (2014): Einschätzungen zu Promotion und Postdoktorandenzeit. *Wirtsch.* 15, 256–270.

Wigstrom, C.W. (2016). A survey of undergraduate economics programmes in the UK. *INETs Econ. Curric.* 1012 18.

Zuidhof, P. W. (2014): Thinking like an economist: The neoliberal politics of the economics textbook. *Review of Social Economy*, 72(2), 157-185.