



**The German 'Debt Brake': Success Factors and Challenges<sup>1</sup>**

Lars P. Feld und Wolf Heinrich Reuter

21/10

Freiburger **Diskussionspapiere**  
zur Ordnungsökonomik

Freiburg **Discussionpapers**  
on Constitutional Economics

Institut für allgemeine Wirtschaftsforschung  
**Abteilung Wirtschaftspolitik und  
Ordnungsökonomik**

Albert-Ludwigs-Universität Freiburg



# THE GERMAN ‘DEBT BRAKE’: SUCCESS FACTORS AND CHALLENGES<sup>1</sup>

Lars P. Feld <sup>a</sup>

Wolf H. Reuter <sup>b</sup>

Final Draft, Version: 16 June 2021

## Abstract

Germany introduced a new fiscal rule, the ‘debt brake’, after the Global Financial Crisis and since then experienced a strong decline in its public debt to GDP ratio until the coronavirus pandemic struck. The past ten years and the reaction to the current crisis in Germany illustrate the intended effects of fiscal rules very well. Debt ratios are reduced during normal economic times, such that fiscal policy can forcefully counteract a severe crisis. Escape clauses are therefore an essential part of the design of fiscal rules. Much of the success of fiscal rules depends on the public and political acceptance of the fiscal rules and thus high political costs of not complying with them. Furthermore, the design and framework of the rules among others by restricting cyclically adjusted figures and a strong legal anchoring are important. It will be important for Germany and other economies to repeat the reduction in the debt to GDP ratio in order to be prepared for the next unexpected crisis. This also means improving the design and framework of fiscal rules, e.g., by making the cyclical adjustment less uncertain and susceptible to revisions, improving the transparency of fiscal policy and rule compliance, as well as discussing as to how fiscal rules can contribute to improving the quality of public finances. However, an abolishment of fiscal rules would hamper the ability of fiscal policy to cope with the long-term challenges and to prepare for unexpected short-term challenges.

**JEL Codes:** H62, H63, D78

**Keywords:** Public Debt, Fiscal Policy, Fiscal Rules

<sup>a</sup> University of Freiburg and Walter Eucken Institut, [feld@eucken.de](mailto:feld@eucken.de)

<sup>b</sup> German Council of Economic Experts, [wolf.reuter@svr-wirtschaft.de](mailto:wolf.reuter@svr-wirtschaft.de)

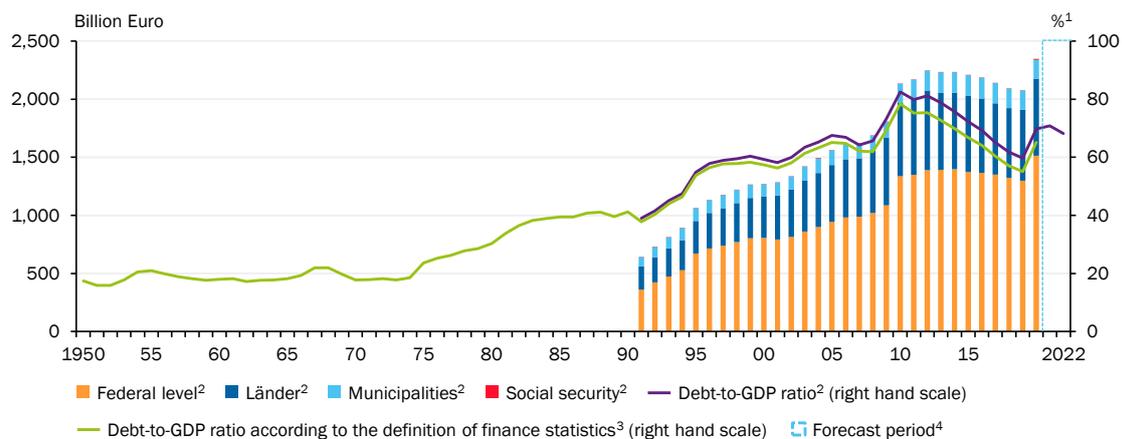
---

1 The authors would like to thank Mustafa Yeter for valuable inputs and discussions, Marina Schwab for excellent research assistance and the staff of the German Council of Economic Experts for data and preparatory support. This paper reflects the personal views of the authors and not necessarily those of the German Council of Economic Experts.

## 1. Introduction

Germany's debt to GDP ratio for the general government was at 59.6 % in 2019 before the coronavirus pandemic struck (Figure 1). To tackle the crisis, the government set up massive fiscal support and stimulus packages including large-scale credit and guarantee programs and pledged to make additional contributions at the European level. The debt ratio is forecast to increase to 70.6 % of GDP at the end of 2021. The low initial debt ratio together with the well-established existing fiscal institutions in Germany ensured that, despite the size of the crisis measures, the government has not had to worry about insufficient demand for its government bonds or strong interest rate increases. Rather, there are worries that other countries, especially in the Euro-Area, are more dependent on monetary policy and the availability of external public financing, e.g., through the European Stability Mechanism (ESM) or the Recovery and Resilience Facility, to keep interest rates on sovereign bonds low.

**Figure 1: Public debt in Germany**



1 - In relation to GDP. 2 - As defined in the Maastricht Treaty. 3 - Deviation from figures according to the definition of national accounts due to methodological differences (Heil and Leidel, 2018). Comparability over time prior to 2010 is limited due to methodological changes. From 1952 including Berlin (West) and from 1960 including Saarland. Since 1991 all-German results. Since 2009 including social security. Data as of 2020: Provisional debt of the general public budget. 4 - Forecast by the German Council of Economic Experts.

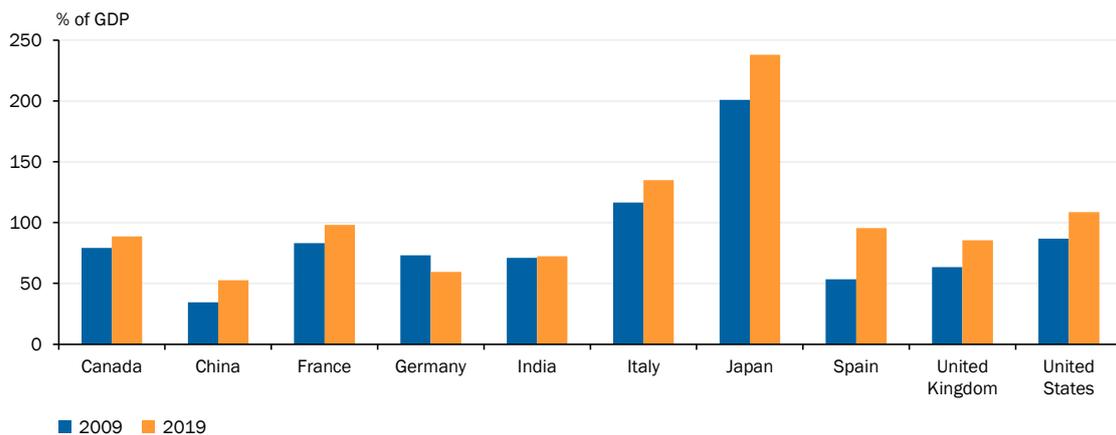
Sources: Deutsche Bundesbank, Federal Statistical Office, own calculations

© Sachverständigenrat | 20-597

Only ten years ago, after the global financial crisis in 2010, the debt to GDP ratio in Germany was at 82.3 %, the highest ratio since WWII (Figure 1). Since then, the debt to GDP ratio decreased on all levels of government until the coronavirus pandemic hit. In contrast to this development in Germany, during the same time period between 2010 and 2019 debt ratios of the largest economies worldwide increased (Figure 2). Several factors contributed to the decline in the debt ratio in Germany. The respective years were characterized by steady positive

economic growth rates, a booming labor market with an increasing employment ratio and declining interest expenditures of the government. Furthermore, the old fiscal rule in the German constitution was replaced by the ‘debt brake’ at the beginning of this time period in 2009, a fiscal rule which constrains the structural balances of the Federal government and the states (the Länder).

**Figure 2: General government gross debt in largest economies worldwide**



Source: IMF

© Sachverständigenrat | 20-593

In general, fiscal rules are introduced to counteract the deficit bias of governments and politicians. The deficit bias is well documented in the literature and shown empirically (Alesina and Passalacqua, 2016). It causes public deficits to be higher than optimal. This is reflected for example in debt ratios which increase during times of economic crisis, but are not reduced again in following years of economic upturn. Politico-economic theories contribute to explaining the long-term trends in public debt ratios worldwide, but also the heterogeneous increases across countries (Feld and Reuter, 2017). A stream of literature shows that fiscal rules actually work in confining the deficit bias, as they are associated with lower or limited fiscal deficits and debt ratios (Burret and Feld, 2014, 2018a, 2018b; Heinemann et al. 2018; Badinger and Reuter, 2017), as well as lower interest rates on government bonds (Heinemann et al., 2014; Feld et al., 2017).

Before Germany introduced the ‘debt brake’, it already had a constitutional fiscal rule constraining the budget balance since 1949. However, the public debt to GDP ratio of the general government increased from 17% in 1950 to 61% in 2008. This article provides a brief overview of the history of fiscal rules in Germany (Section II) and of the features of the ‘debt brake’, also compared to the previous rule (Section III). The debt brake is only in force for a few years, in

which a transition period followed the introduction, and it has not worked through a full business cycle yet. Thus, it is too early for an econometric assessment of the effects of the 'debt brake'. However, this article highlights some of the factors which, given the experience of the most recent years, might have contributed to a role of the 'debt brake' in reducing the debt to GDP ratio (Section IV).

Although Germany seems to be in a strong fiscal position in 2021, maintaining it will be very challenging for its governments in the coming years. Especially the rapid demographic change in Germany will create a large burden on social security systems and public finances. Thus, the challenges for the 'debt brake' (Section V), which became visible during its first years, need to be taken seriously. Addressing those could contribute to the sustainability of Germany's public finances and long-term prosperity.

## 2. Brief History of Fiscal Rules in Germany

Fiscal rules could already be found in the constitution of the German Empire from 1871 and the Weimar Republic from 1919. Both rules linked the amount of public debt issuance, among others, to the presence of extraordinary necessities. In 1949 a balanced budget rule was introduced in the German constitution. Debt issuance was only allowed for exceptional needs and special purposes. The latter was implemented under customary law as profitable expenditures in a commercial sense, i.e., that they finance themselves through higher revenues of the government in the following years (Deutsche Bundesbank, 2007). Both exceptions for debt issuance of this rule were interpreted broadly, such that an effective restraint was not achieved (GCEE, 2007).

A Golden Rule replaced the balanced budget rule in the constitutional reform of 1969. The new rule took business cycle developments into account and was more specific in distinguishing between different types of expenditure, namely between investment and current expenditures. In regular times, net borrowing was allowed to the extent of gross public investment expenditures. However, additional borrowing was allowed to ward off a disturbance of the macroeconomic equilibrium. While there were other parts of the constitution, which suggested that borrowing would have needed to be lower than investment in good times (Deutsche Bundesbank, 2007), the rule had been applied primarily asymmetrically. Thus, higher borrowing was observed in unfavorable economic conditions, but no corresponding consolidation in benign times. This contributed to the positive trend of the debt to GDP ratio from 1969 (Figure 1).

Several characteristics of the rule induced a wide scope for interpretation, uncertainty and legal challenges, which impaired the effectiveness of the rule (GCEE, 2019). Especially, the interpretation of a disturbance of macroeconomic equilibrium and the classification of expenditures as investment expenditures were often challenged and part of public debates. Only in 1989 a decision of the German Federal Constitutional Court demanded a more systematic explanation of how additional public debt would specifically counteract a macroeconomic imbalance and demanded a more precise definition of investment expenditures in budgetary terms. Nevertheless, the two parts of the rule were subject to public disputes also in the following years. Another problem of the Golden Rule was that it set the maximum debt issuance by using the investment expenditures in the planning, but not in the execution phase. Furthermore, debt issuance was not limited in magnitude other than by investment expenditures. Also special funds and off-budget activities were not included and no sanctions or correction mechanisms attached to the Golden Rule.

The Golden Rule was replaced by the current 'debt brake' as part of Federalism Reform II in 2009. The introduction was gradual, as there was a transition period between 2011 and 2016 for the Federal Government and until 2020 for the Länder. The fiscal rules at the federal level have to be seen in context with the rules at the state and local levels on the one hand and European fiscal rules on the other hand. The previous Golden Rule was also enshrined in the constitution of the Länder, as is the 'debt brake' now. While the state debt brakes are similar to the one at the Federal level, the exact implementation in the state constitutions varies across the Länder. Elements that can differ across states are, e.g., the method for cyclical adjustment or the design of the adjustment account.

The 'debt brake' does not apply to the local level. Municipalities are allowed to issue debt to finance investment and to obtain short-term liquidity. However, there is a structural balanced budget rule in the intergovernmental Fiscal Compact at European level which sets a limit to the structural balance of general government. With a national rule in place for the Federal and state governments, this creates a limit for aggregate municipal debt issuance. The rule in the Fiscal Compact is one of the more recent supplements to the set of fiscal rules at European level. The Stability and Growth Pact sets a debt and balanced budget rule for Germany already since 1997. The regulations were modified and additional rules were added in the Two-pack and Six-pack reforms in 2011 and 2013.

Although it is important for German fiscal policy in recent years, the notion of a nominally balanced budget, the 'black zero', in non-adjusted headline deficit terms is not codified in a formal fiscal rule. It rather represents a self-imposed political commitment by the then governing parties. It is also mentioned for example in the coalitional agreement of the current German government and often confused with the constitutional debt brake in public debates. While the 'black zero' can be a political tool to reign in additional expenditures and reduce debt more strongly in good times, it lacks the counter-cyclical features of the 'debt brake' which takes economic conditions into account.

### 3. The 'Debt brake' in Detail

Article 115 of the German constitution prescribes that a structurally balanced budget should be maintained in consideration of the economic cycle. More precisely, it defines the latter and states that the structural deficit of the central government is not allowed to exceed 0.35 % of GDP. The debt brake also applies to the state level. However, for the 'Länder' the budget needs to be balanced in structural terms, to comply with the debt brake. The finances of the local level are not constrained by the 'debt brake', but the Fiscal Compact at the European level prescribes a maximum for the structural deficit of 0.5 % of GDP for the general government. Given the limits set by the 'debt brake' for the other levels of government, this leaves 0.15 % of GDP for the aggregated local level. In contrast to previous rules, the 'debt brake' also applies to newly created special funds, as long as they are legally not independent. Furthermore, financial transactions are excluded such that, e.g., selling public assets does not contribute to compliance with the rule.

As the rule constrains the structural balance, it symmetrically takes the cyclical situation and temporary effects into account. The cyclical adjustment of the fiscal deficit is intended to ensure that automatic stabilizers can operate freely. It allows for larger deficits in economically bad times, when generally cyclical public revenues are lower and cyclical expenditures are higher, and lower deficits in good times. The methodology to calculate cyclically-adjusted figures is closely related to the method of the European Commission. The cyclical adjustment ensures that there is enough fiscal leeway in downturns of normal economic cycles and that accumulated debt is reduced again in upswings.

However, for special circumstances outside the control of the government like severe economic crises or natural disasters, the 'debt brake' is equipped with an escape clause. There have been several events which would count as such special events in the recent history of

Germany: the reunification in 1990, the financial crisis in 2008/2009 and the coronavirus pandemic in 2020. The idea is that the 'debt brake' increases fiscal space during normal economic cycles such that fiscal policy can forcefully counteract a severe economic shock, which sharply increases the debt ratio within a very short period of time. The existence of circumstances which warrant the activation of the escape clause needs to be decided by the German parliament with an absolute majority of its members. Together with the decision to activate the escape clause, the parliament also decides on the amount of additional debt issuance and a repayment plan.

Deviations arising between planning and execution of the budget are collected in an adjustment account. As soon as the cumulative deficit in the adjustment account reaches 1.5 percent of GDP, the deficit of the account has to be gradually reduced over time. This reduction has an annual cap and should only happen in cyclically benign times. However, the adjustment account does not work like a rainy-day fund. While a deficit needs to be reduced, a surplus cannot be used in the budget. Surpluses only prolong the time until a deficit in the account needs to be reduced.

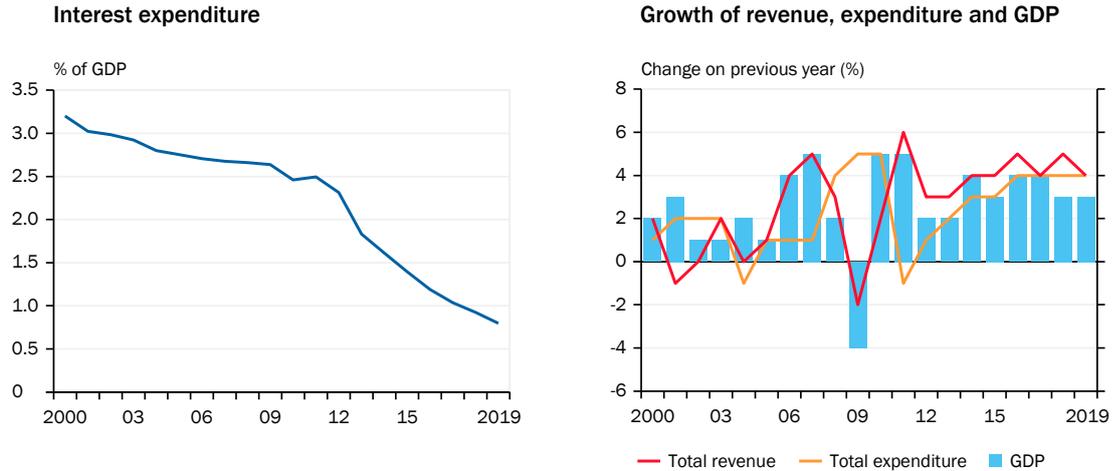
#### 4. Success Factors

The 'debt brake' has been in force only for a few years, which is why a solid empirical assessment of its effects is not feasible yet.<sup>2</sup> Moreover, until the coronavirus pandemic, those years have been characterized by economically benign conditions and a transition period of the 'debt brake' in which different limits applied in the years after its introduction. There is a broad stream of literature showing that fiscal rules go hand-in-hand with lower public deficits and lower interest rates on government bonds across countries and time (Burret and Feld, 2014, 2018a, 2018b; Heinemann et al., 2018; Badinger and Reuter, 2017). To identify causal effects, a correct construction of the counterfactual is key. When trying to evaluate the effects of the 'debt brake' in Germany, it is thus not sufficient to analyze observed fiscal variables, but required to identify which other fiscal policies would have been implemented without the 'debt brake' in place. A fiscal rule forces policy-makers to choose between different policies, while without a rule more of them might have been implemented at the same time.

---

<sup>2</sup> Regarding the Swiss debt brake, which faces similar difficulties, there are studies using the synthetic control method to assess its effects. See Pfeil and Feld (2018) and Salvi et al. (2020).

**Figure 3: General government expenditure, revenue and GDP in Germany**



Sources: Federal Statistical Office, own calculations

© Sachverständigenrat | 20-596

The main drivers of the reduction in debt to GDP in Germany since the Global Financial Crisis (GFC) were steady positive growth rates, a steady increase in revenues due to higher employment rates and a limited increase in expenditures. The growth of expenditures was always lower than the growth of revenues between 2010 and 2018 and both were close to the growth rate of GDP (Figure 3).

It becomes apparent that the decline in the debt to GDP ratio was not driven by any major expenditure cuts or discretionary tax increases. Especially as the steady increase in expenditures happened against the background of sharply decreasing interest expenditures during the same period (Figure 3). Furthermore, although a strong increase in investment expenditures would have been warranted given the low public investment figures in Germany (GCEE, 2019), the increase in expenditure was driven mainly by a strong increase in social spending and only to a smaller extent of investment expenditures. Nevertheless, only such an amount of additional expenditure measures was implemented that growth of expenditures remained lower than growth of revenues. Also on the revenue side, the magnitude of revenue and tax measures was not as large as to push revenue growth below expenditure growth.

Especially during such a longer period of economically good times and steadily increasing revenues, it is fair to assume that politicians would have had further ideas as to which expenditure or tax measures could be implemented. It is impossible to evaluate why those were not taken, but observing the public and political discussions suggests that the 'debt brake' played a crucial role. As an example, the coalition of CDU/CSU and FDP had agreed on large tax cuts even in their coalition agreement in 2009, but did not implement them during their term of office with reference to the limits set by the 'debt brake' for the following years. Other examples can be

found in descriptions of coalition negotiations of consecutive governments or discussions on possible stimulus packages in response to a looming recession in 2019. However, identifying which measures would have been implemented without the 'debt brake', is a tricky task. It is even possible that some measures have not been raised in the public debate due to a limit on public finances being in place, which complicates collecting measures that would have been implemented without the 'debt brake'.

Against the background of the findings in the literature that fiscal rules have a significant effect on public finances, it is worth discussing which factors might have contributed to a limiting effect of the 'debt brake' since the GFC.

#### 4.1. Constitutional Legal Basis and Fiscal Framework

The legal basis has been identified as an important design element of fiscal rules in various studies (Asatryan et al., 2017). Rules on a lower legal basis, for example only in coalition agreements, are easier to abolish or change and thus represent less binding limits with smaller effects. Especially when ruling coalitions change, they might want to change the limits set by previous governments. A stronger legal basis, e.g., rules enshrined in statutory law or the constitution, is associated with larger statistical effects (Nerlich and Reuter, 2013). In Germany the 'debt brake' was enshrined in constitutional law at the federal level subject to a two-thirds majority, then by votes of the Christian Democratic (conservative) parties (CDU and CSU) and the Social Democratic Party (SPD) in the Bundestag and by states governed by a variety of coalitions in the Bundesrat. The Länder also changed their constitutions, which, e.g., required the state of Hesse to hold a constitutional referendum on December 15, 2010, leading to a strong support of 70 percent of the electorate for the introduction of the debt brake.

Fiscal rules are especially important during benign economic times. When public surpluses and revenues are cyclically higher, interest groups and policy-makers are tempted to argue for higher spending and thus a breach or abolishment of fiscal rules. With reference to important tax cuts or investment or social security needs, not a change in priorities but more debt issuance is often demanded. Germany is a prime example for such tendencies. The country had economically benign years between the Global Financial Crisis and the beginning of the coronavirus pandemic with record-high public revenues and a declining debt ratio. Especially in the years right up to the pandemic, a large coalition of politicians and academics argued in favor of abolishing the 'debt brake' to allow for higher expenditures. The main argument was to increase public investment expenditures, which were low in Germany during the past 20 years, without wanting to slow the above-mentioned increase of other expenditure items. However,

fiscal rules are especially put in place to prevent a circumvention of setting priorities especially in times with high public revenues. They are introduced to build fiscal buffers during good times, which is only possible if they are in place during good times. Having a fiscal rule enshrined in the constitution helps to prevent an easy abolishment by the ruling parties, especially in economically favorable times.

#### 4.2. Public Acceptance and Role in Political Debates

Another factor which restrains the abolishment of fiscal rules is strong public support. In a representative survey of the German population in 2014 two-thirds of 3,575 respondents had a positive view of the 'debt brake' and only 15 % a negative one (Berger et al., 2017). In a survey conducted in 2013 among 2,042 representatively chosen German citizens, 61% supported the debt brake and only 8% opposed it (Hayo and Neumeier, 2016). This is in line with the outcome of the constitutional referendum on the introduction of the debt brake in the state of Hesse mentioned above.<sup>3</sup> The opinion seems to be similar not only in the general public, but also among economists and financial market experts. In a survey among 120 economists in Germany in 2019, only 28 % responded that the debt brake should not be retained for the federal government and the Länder (Blum et al., 2019). Among 198 financial market experts in Germany in 2019 only 12 % agreed with the statement that the debt brake should be abolished (Heinemann, 2019).

Studies point out that transparency and public awareness of fiscal rules are crucial for their role in limiting public deficits. A high acceptance of fiscal rules by the public increases reputational and electoral costs of non-compliance for politicians. In contrast, formal sanctions are not as effective, as they lack credibility and are often not implemented or watered down by the governments (Eyraud et al., 2018). Empirically, sanctions associated with rules at the national level also do not seem to increase compliance with fiscal rules (Reuter, 2017). In Germany, the direct sanctions following non-compliance with the 'debt brake' seem to be unclear to many politicians. A survey of 669 politicians in regional parliaments of the Länder shows that the uncertainty is high about the consequences of non-compliance (Blesse et al., 2016). Thus, this suggests that the stronger role in the enforcement of fiscal rules is associated with transparency and reputational or electoral costs of rule non-compliance.

Important elements to achieve transparency are the strength of the media reports about compliance with the rules as well as the importance of the fiscal rule for the general public and the

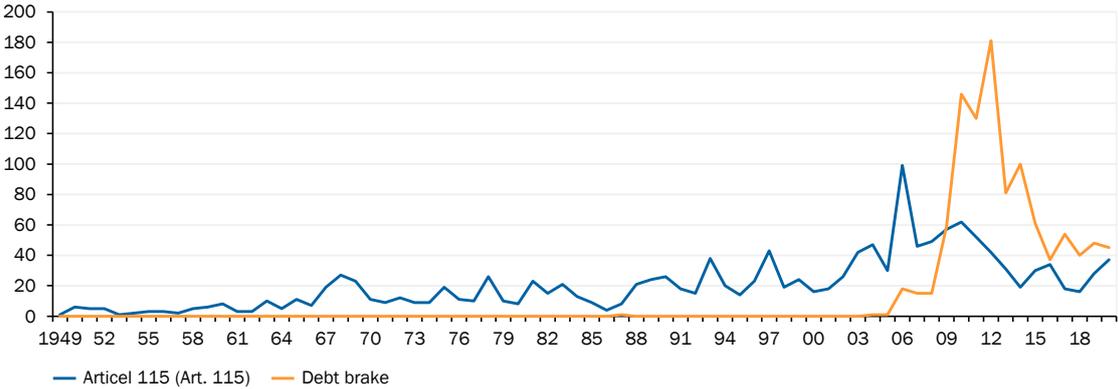
---

<sup>3</sup> This support is similar to that of the Swiss debt brake. In a constitutional referendum on December 2, 2011, 84.7 percent of the Swiss electorate voted for the introduction of the federal debt brake. See Feld and Kirchgässner (2008).

political process. If the public does not know about compliance or non-compliance and associated facts, the non-compliance costs, which should enforce compliance with the rules, are lower. The 'debt brake' plays an important role in the general media discussions of fiscal policy in Germany. Until 2017, the European Commission published the visibility of fiscal rules in the media in their respective countries in the EU fiscal rules database (European Commission, 2017). The German 'debt rule' was categorized in the highest category, category 3 which was defined as "observance of the rule is closely monitored by the media; non-compliance is likely to trigger". For comparison, the average category across all rules and countries for the variable was 1.9.

The 'debt brake' also seems to be firmly established in the political process. In a survey of 669 politicians in regional parliaments of the Länder, only 13.7 % gave a negative value to the answer of the question "How desirable do you consider it for your state to comply with the provisions of the 'debt brake'?" (Blesse et al., 2016). A share of 45 % of the respondents answered with the highest possible positive value. The 'debt brake' (or Article 115 in the constitution) is also often cited in plenary protocols and print products of the German Bundestag (Figure 4). While a spike of mentions was expected around the introduction of the 'debt brake', the numbers remained at an elevated level until 2019.

**Figure 4: Citations in plenary protocols and print products of the German Bundestag**



Source: German Bundestag

© Sachverständigenrat | 20-600

The approval of the 'debt brake' in Germany seems to be embedded in more general public support for low public deficits. For many years, the 'black zero', i.e., a nominally balanced budget, played a key role in German politics. It is not a legal fiscal rule, but a self-imposed political commitment which can be found, e.g., in the coalition treaty of the CDU/CSU and SPD from 2017.

### 4.3. Taking the Cycle and Severe Crisis into Account

Worldwide there is a large number of fiscal rules which constrain unadjusted public deficit or expenditure figures. According to the fiscal rules database of the IMF, such rules were in force in 50 countries worldwide in 2015. With this kind of rules, fiscal policy and especially automatic stabilizers can only stabilize the economy in downturns, if governments keep sufficient distance to the limit set by the rules in good economic times. Many of the fiscal rules are indeed introduced as upper limits which should only be reached in some years and not in all years. However, governments do not seem to interpret the limits in the intended way, but rather take them as targets (Reuter, 2015; Caselli and Wingender, 2018; Eyraud et al., 2018). Governments steer their fiscal policy towards those targets and due to the usage as target they comply with the upper limits only in a fraction of years. Fiscal rules in that way still have an effect on fiscal policy, but the limits do not work as intended.

As it seems politically very challenging to keep a distance from the upper limits set by the rules in good times, it becomes advantageous to introduce fiscal rules where the limits are adjusted with the economic cycle. Thereby the rules automatically create more fiscal space through a more restrictive limit in upturns and grants more fiscal leeway in downturns. The 'debt brake' is an example for those types of rules and constrains the structural balance, which takes cyclical fluctuations and one-off measures into account. In the years since the financial crisis, the structural balance was always equal to or lower than the nominal budget balance, reflecting the economically benign times. For most of the time both the budget balance and the structural balance were both positive, which was higher than the 'debt brake' prescribed (structural balance of -0.35 %).

The compliance with cyclically-adjusted measures – in this case the structural balance – is easier to judge than the provisions of the previous Golden Rule cum disturbance of the macroeconomic equilibrium. The requirement to ward off a disturbance of the macroeconomic equilibrium was too vague and made judgments without clear rules or statistical basis necessary. Furthermore, well-defined escape clauses are an important feature, which provides for a necessary flexibility of fiscal rules. Fiscal space is created in normal times to be available in severe economic crises or with natural catastrophes. In those cases the fiscal rule should not constrain fiscal policy as usually, such that the government can use the built-up fiscal buffers to counteract the economic shock. However, as history with fiscal rules in Germany tells, those escape clauses need to be carefully defined. Otherwise they can be applied too often or not systematically in situations when they are most needed. The 'debt brake' has a specific definition related

to emergency situations outside the control of the government and the hurdle for its activation is quite high. It is not the Ministry of Finance or other parts of the government which activate the escape clause, but the parliament with an absolute majority of its members. Furthermore, the escape clause is not granted unconditionally, but the government has to present a precise plan as to how it will repay the additional debt issued. Both ensure that the escape clause is not activated lightly and that debt is reduced after the exceptional situation to create scope again for the next crisis.

## 5. Challenges

### 5.1. Measurement and Transparency

The 'debt brake' is a so called 'second-generation fiscal rule' as described, e.g., by Eyraud et al. (2018). Those rules are much more flexible than the first generation and allow fiscal policy to react to cyclical fluctuations as well as severe crises. They allow for automatic stabilizers to operate freely and have clearly defined escape clauses. As with most of the second-generation rules they are an improvement as compared to the first generation; however this improvement comes at the expense of transparency and with higher complexity and measurement problems.

Calculating the indicator which is constrained by the fiscal rule, i.e. the structural balance, requires an estimate of the output gap as well as elasticities which are used to link the output gap and the budget balance. This calculation is associated with large errors. In the EU15, the mean absolute error for the output gap between 2005 and 2015 was larger than one percentage point of GDP for estimates within a specific year (in real time) and even above two percentage points in two-year ahead forecasts (Reuter, 2020). Moreover, errors do not only seem to be large but also to be biased, as the average error in real-time is also close to one percentage point of GDP. Across different country and time samples, studies found similar mean errors of the output gap (Eyraud and Wu, 2015; Kempkes, 2014; GCEE, 2019). The errors imply that given how the economy looked like ex post, e.g., a few years after a specific year, the output gap in real-time and even more so in forecasts showed a much worse cyclical position than it turned out to be. Translated to the structural balance it follows that the structural balance on average looked better in real-time as compared to how the cyclical position turned out to be ex post. Thus, fiscal rules constraining structural balances in hindsight on average were too lax during those time periods. The general conclusions which hold on average, also apply to Germany and the 'debt brake'. If the ex-post estimates of the output gap were used instead of the

real-time estimates during the initial years of the debt brake, i.e., from 2011 to 2016, then the allowed maximum debt issuance would have been lower (GCEE, 2019).

Errors of this magnitude render it very difficult to use the structural balance in fiscal planning or decision making. Various approaches exist that try to reduce the errors of real-time estimates (GCEE, 2019). For example, less revision-prone short-term (business cycle) indicators like surveys can be used to estimate the output gap (GCEE, 2017; GCEE, 2018; Ademmer et al., 2019; Weiske, 2018). Another possibility would be to change the filtering methods used to identify cyclical fluctuations (Quast and Wolters, 2019), which are especially uncertain at the end of the sample period. Other ways might be to use model-based approaches or structural vector autoregressive models to complement or replace time series methods. Furthermore, the EU added a judgement component and tries to mitigate the implications of uncertainty (Buti et al., 2019). However, so far no comprehensive solution is available for this problem, especially as alternatives would need to cope with other difficulties. Implementing rules without cyclical adjustment would be a step backwards in terms of procyclicality and transparency of the inclusion of the cyclical position. Relying on expenditure rules, which do not directly rely on output gap estimates, opens up potentially large errors especially when estimating the effect of discretionary revenue measures.

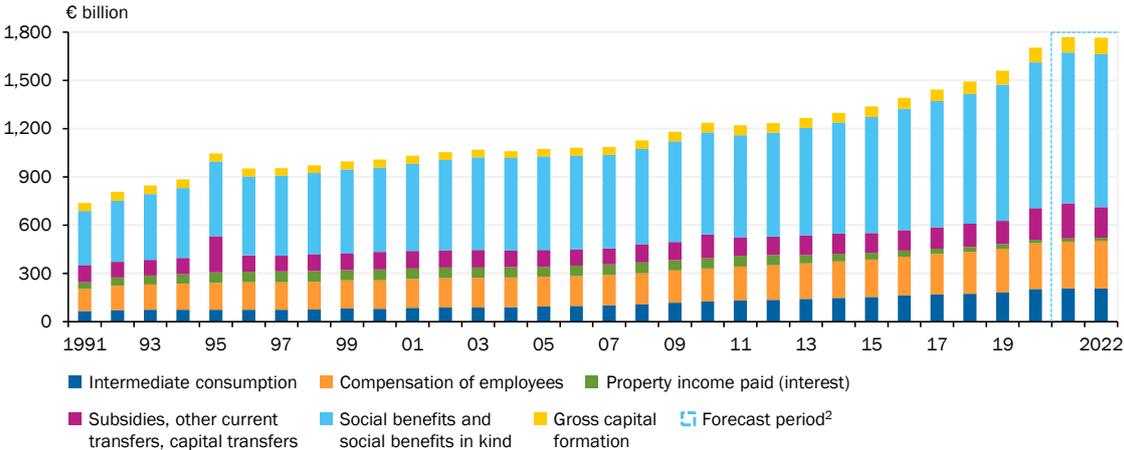
## 5.2. Quality of Public Finances

If fiscal rules have an effect on public finances, they might also have an effect on their composition and quality. The latter can be discussed in relation to various aspects of fiscal policy, but the most prominent discussion centers around the share of public investment in public expenditures (sometimes augmented by future related expenditures like education). In general, most fiscal rules – also the ‘debt brake’ – do not constrain the amount or share of investment expenditure. Both the amount and the share can be chosen by the government according to its priorities. The rules only set a limit to the amount that can be financed by debt issuance and not by current revenues.

Nevertheless, fiscal rules might have an indirect influence on the amount of investment expenditures. First, investment expenditures often are easier and quicker to cut and sometimes their reduction is politically less costly than, e.g., reducing the increase of public wages or social transfers. Thus, they would be reduced first if compliance with a fiscal rule needs to be achieved. However, this argument depends on political priorities of the voters. If they support higher investment and the transparency of fiscal policy is high, reducing investment becomes costlier for governments.

Second, investments often partially or mainly benefit future generations. If investment is not financed by debt, then the current generation needs to bear all costs but receives only parts of the benefits. Thus, if fiscal rules restrict debt financing, the amount of investment expenditures might be too low. This argument is only valid for net investment, as future generations only inherit additional assets such that depreciation of existing assets would need to be subtracted. Furthermore, it is often uncertain whether future generations would have made the same investment choices as the current generation. For example, the current generation might want to invest to support individual mobility like new roads and the further development of existing technologies, the future generation might want to restrict individual mobility to reduce carbon emissions and would want to invest in new breakthrough technologies. In addition, if debt issuance is not restricted, the current generation might choose higher debt levels to receive some of the short-term benefits and put less emphasis on the future side-effects.

**Figure 5: Distribution of general government expenditure in Germany**



1 - According to national accounts definition. 2 - Forecast by the German Council of Economic Experts.

Sources: Federal Statistical Office, own calculations

© Sachverständigenrat | 20-594

In Germany total expenditures of the general government increased by 26 % from 2010 to 2019. Investment expenditure (gross capital formation) increased by 44 % in the same time period and their share in total expenditures increased from 4.9 % to 5.5 % (Figure 5). This is the highest share since 1995, i.e. after the years right after reunification in the early 1990s. It seems that the introduction of the ‘debt brake’ did not lead to decreasing investment expenditures, but to the contrary the government prioritized investment expenditures relative to

other spending since the introduction of the 'debt brake'. In those years, even higher investment expenditures were rather pulled back by barriers like a high level of capacity utilization in the construction industry and public administration or long planning and approval procedures. Nevertheless, the question can be raised how fiscal rules can contribute to improving the quality of public finances. The main challenge is measuring investment expenditures and narrowly identifying those which actually lead to benefits for future generations, e.g., through higher prosperity or higher revenues. The current statistical definition in the System of National Accounts focuses on physical capital only. Ideally there would be a cost-benefit analysis associated with each project on which the subsequent decision depends, as also within defined categories not every project leads to the same effects. While it is already challenging to identify investment expenditures, it is even trickier to calculate consistent net investment figures which would be necessary if some kind of special treatment of investment expenditures was to be operationalized.

If prioritization of expenditures can work and public opinion is the best tool to achieve compliance with fiscal rules, then pressure by the public on governments might also be the best way to achieve higher quality of public finances. Increasing transparency on the benefits of specific expenditures, like for investment projects or education, compared to other expenditures could contribute to strengthening this channel. Furthermore, cost-benefit analysis and systematically comparing expenditure increases for different items with each other could be put more firmly and central into the political decision making process. Such analysis could be delegated, e.g., to strengthened independent fiscal councils which would have the task to inform and engage the public via various channels.

### 5.3. Fixed Numerical Limit

The 'debt brake' sets a fixed numerical limit for the structural balance of 0.35 % of GDP at the Federal level and 0 % at the level of the Länder. This can be problematic in two situations: when the debt ratio is already at relatively low levels and after a severe crisis for which the escape clause was activated.

With an average growth rate of nominal GDP of 3 % the limit set by the 'debt brake' of 0.35 % would in the long run lead to a debt to GDP ratio of 12 % (GCEE, 2019). This level of debt would arguably be too low for Germany and banning almost all public debt would economically not be reasonable. However, the speed of convergence to the long run point can be quite slow, such that this situation might not materialize. Starting at an initial debt ratio of 60 % it would

take 20 years to get below 40 % and 35 years to get below 30 %. If the debt ratio nevertheless reaches very low levels, it might be beneficial to have a laxer limit as long as the debt ratio remains low. The Fiscal Compact at the European level has such a state dependent limit, which increases from 0.5 % to 1 % of GDP if the debt ratio is substantially below 60 % and there are no risks to the sustainability of public finances.

If only one fixed target is chosen for a fiscal rule, there is a tradeoff between the long-term convergence point and the speed of convergence. Within a very short time period, the debt ratio can jump upwards by a lot due to a severe crisis for which the escape clause is activated. Thus, looking only at the long run value might be misleading, as those crises happen relatively often compared to the long run convergence. The low convergence points might never be reached as the ratio jumps upwards every decade or so. Then the focus when setting the numerical limit is not on the long run convergence anymore, but on the speed of reduction of debt ratios after those jumps and before the next one.

Public finances are often still stressed in the years following immediately after a crisis and the activation of an escape clause. Thus, going back to the fixed limit right after a crisis can be challenging. To smoothen this transition back to the fixed limit, the government has the possibility to create a kind of rainy day fund in the years before the escape clause is activated. The German government has already used reserves and kind of rainy day funds until recently and creates new reserves in the coronavirus crisis.

## 6. Conclusions

Germany introduced a new fiscal rule, the 'debt brake', after the Global Financial Crisis and since then experienced a strong decline in its public debt to GDP ratio until the coronavirus pandemic struck. It was not a period of major expenditure cuts or discretionary tax increases, but of steady positive GDP growth rates, an unusual increase in employment and decreasing interest expenditures. However, in this environment expenditure increases and revenue decreases remained limited, such that the government kept growth of expenditures below the growth of revenues. The 'debt brake' most probably played a role in ensuring that.

The past ten years and the current crisis illustrate the intended effects of fiscal rules very well. Debt ratios are reduced during normal economic times, such that fiscal policy can forcefully counteract a severe crisis. Activating the escape clause of fiscal rules in those circumstances is not equal to abolishing the rules or even a sign that the rules do not work. Rather, the escape clauses are an essential part of the design of fiscal rules. It will be important for Germany and

other economies to repeat the reduction in the debt to GDP ratio in order to be prepared for the next crisis. Much of the success of fiscal rules depends on the public and political acceptance of the fiscal rules and thus high political costs of not complying with them. Furthermore, the design and framework of the rules among others by restricting cyclically adjusted figures and a strong legal anchoring are important.

The challenges for fiscal policy especially in Germany are becoming more important due to rapid demographic change, globalization and the transformation of the energy system. In such an environment, it is important to create the necessary fiscal buffers to react to sudden and unexpected crises, as exemplified by the coronavirus pandemic. This also means improving the design and framework of fiscal rules, e.g., by making the cyclical adjustment less uncertain and susceptible to revisions, improving the transparency of fiscal policy and rule compliance, as well as discussing as to how fiscal rules can contribute to improving the quality of public finances. However, an abolishment of fiscal rules would hamper the ability of fiscal policy to cope with the long-term challenges and prepare for unexpected short-term challenges.

## Literature

- Ademmer, M., J. Boysen-Hogrefe, K. Carstensen, P. Hauber, N. Jannsen, S. Kooths, T. Rossian and U. Stolzenburg (2019), Schätzung von Produktionspotenzial und -lücke: Eine Analyse des EU-Verfahrens und mögliche Verbesserungen, Kieler Beiträge zur Wirtschaftspolitik Nr. 19, Institut für Weltwirtschaft, Kiel.
- Alesina, A. and A. Passalacqua (2016), The Political Economy of Government Debt, in J.B. Taylor and H. Uhlig (eds.), Handbook of Macroeconomics, Elsevier, Saint Louis, 2599–2651.
- Asatryan, Z., C. Castellón and T. Stratmann (2018), Balanced Budget Rules and Fiscal Outcomes: Evidence from Historical Constitutions, Journal of Public Economics, 167, 105–119.
- Badinger, H. and W.H. Reuter (2017), The Case for Fiscal Rules, Economic Modelling, 60, 334–343.
- Berger, M., S. Blesse, F. Heinemann and E. Janeba (2017), Föderalismuspräferenzen in der deutschen Bevölkerung, Perspektiven der Wirtschaftspolitik, 18, 145–158.
- Blesse, S., F. Heinemann and E. Janeba (2016), Einhaltung der Schuldenbremse und Bewertung von Länderfusionen – Ergebnisse einer Umfrage in allen 16 Landesparlamenten, ZEW Policy Brief, No. 6, Mannheim.

- Blum, J., K. Gründler, R. de Britto Schiller and N. Potrafke (2019), Die Schuldenbremse in der Diskussion, ifo Schnelldienst, 72 (22), 27–33.
- Burret, H.T. and L.P. Feld (2014), A Note on Budget Rules and Fiscal Federalism, CESifo DICE Report 12 (1), 3–11.
- Burret, H.T. and L.P. Feld (2018a), Vertical Effects of Fiscal Rules: The Swiss Experience. International Tax Public Finance, 25, 673–721.
- Burret, H.T. and L.P. Feld (2018b), (Un-)Intended Effects of Fiscal Rules, European Journal of Political Economy, 52, 166–191.
- Buti, M., N. Carnot, A. Hristov, K.M. Morrow, W. Roeger and V. Vandermeulen (2019), Potential Output and EU Fiscal Surveillance, VoxEU on September 23, 2019, <https://voxeu.org/article/potential-output-and-eu-fiscal-surveillance>.
- Caselli, F.G. and P. Wingender (2018) Bunching at 3 Percent: The Maastricht Fiscal Criterion and Government Deficits, IMF Working Papers 18/182, Washington, D.C.
- Deutsche Bundesbank (2007), Zur Reform des deutschen Haushaltsrechts, Monatsbericht, October 2007, Frankfurt a.M.
- European Commission (2017), Fiscal Rules Database, Archived Version (Old Methodology), Brussels.
- Eyraud, L. and T. Wu (2015), Playing by the Rules: Reforming Fiscal Governance in Europe, IMF Working Paper WP/15/67, Washington, D.C.
- Eyraud, L, X Debrun, A Hodge, V Lledó and C Pattillo (2018), Second-Generation Fiscal Rules: Balancing Simplicity, Flexibility, and Enforceability, IMF Staff Discussion Notes 18/04, Washington, D.C.
- Feld, L.P. and G. Kirchgässner (2008), On the Effectiveness of Debt Brakes: The Swiss Experience, in R. Neck and J.-E. Sturm (eds.), Sustainability of Public Debt, MIT Press, Cambridge/London, 223–255.
- Feld, L.P. and W.H. Reuter (2017), Wirken Fiskalregeln? Eine Übersicht über neuere empirische Befunde, Wirtschaftspolitische Blätter, 64 (2), 179–191.
- Feld, L.P. A. Kalb, M.-D. Moessinger and S. Osterloh (2017), Sovereign Bond Market Reactions to Fiscal Rules and No-Bailout Clauses: The Swiss Experience, Journal of International Money and Finance, 70, 319–343.

- GCEE – German Council of Economic Experts (2007), *Staatsverschuldung wirksam begrenzen*, Occasional Reports, Federal Statistical Office, Wiesbaden.
- GCEE – German Council of Economic Experts (2017), *Capacity Overutilisation in the German Economy Continues to Rise*, Chapter 3 in Annual Report “Towards a Forward-Looking Economic Policy”, Federal Statistical Office, Wiesbaden.
- GCEE – German Council of Economic Experts (2018), “International Economy: Slower Pace of Expansion, High Risks”, Chapter 2 in Annual Report “Setting the Right Course for Economic Policy”, Federal Statistical Office, Wiesbaden.
- GCEE – German Council of Economic Experts (2019), *The Debt Brake: Sustainable, Stabilising, Flexible*, Chapter 5 in Annual Report “Dealing with Structural Change”, Federal Statistical Office, Wiesbaden.
- Hayo, B. and F. Neumeier (2016), *The Debt Brake in the Eyes of the German Population*, *International Economics and Economic Policy*, 13(1), 139-159.
- Heil, N. and M. Leidel (2018). *Der Finanzierungssaldo des Staates in den Finanzstatistiken und den Volkswirtschaftlichen Gesamtrechnungen*. Statistisches Bundesamt, WISTA No. 6/2018, Wiesbaden.
- Heinemann, F. (2019), *Schuldenbremse als Investitionshindernis?*, ZEW-Kurzexpertise 19-07, Mannheim.
- Heinemann, F., S. Osterloh and A. Kalb (2014), *Sovereign Risk Premia: The Link between Fiscal Rules and Stability Culture*, *Journal of International Money and Finance*, 41, 110–127.
- Heinemann, F., M.-D. Moessinger and M. Yeter (2018), *Do Fiscal Rules Constrain Fiscal Policy? A Metaregression-Analysis*, *European Journal of Political Economy* 51, 69–92.
- Kempkes, G. (2014), *Cyclical Adjustment in Fiscal Rules: Some Evidence on Real-Time Bias for EU-15 Countries*, *FinanzArchiv N.F – Public Finance Analysis*, 70, 278–315.
- Nerlich, C. and W.H. Reuter (2013), *The Design of National Fiscal Frameworks and Their Budgetary Impact*, ECB Working Paper Series, No. 1588, Frankfurt a.M.
- Pfeil, C.F. and L.P. Feld (2018), *Does the Swiss Debt Brake Induce Sound Federal Finances? A Synthetic Control Analysis*, Freiburg Discussion Papers on Constitutional Economics No. 18/08, Walter Eucken Institut, Freiburg.

- Quast, J. and M.H. Wolters (2019), Reliable Real-Time Output Gap Estimates Based on a Modified Hamilton Filter, IMFS Working Paper 133, Institute for Monetary and Financial Stability, Frankfurt a.M.
- Reuter, W.H. (2015), National Numerical Fiscal Rules: Not Complied With, But Still Effective?, *European Journal of Political Economy*, 39, 67-81.
- Reuter, W.H. (2017), When and why do countries break their national fiscal rules?, *European Journal of Political Economy*, 57, 125-141.
- Reuter, W.H. (2020), Benefits and Drawbacks of an “Expenditure Rule”, as well as of a “Golden Rule”, in the EU Fiscal Framework, Study requested by the ECON Committee, European Parliament, Brussels.
- Salvi, M., C.A. Schaltegger and L. Schmid (2020), Fiscal Rules Cause Lower Public Debt: Evidence from Switzerland’s Federal Debt Containment Rule, *Kyklos*, 73, 605–632.
- Weiske, S. (2018), Indicator-Based Estimates of the Output Gap in the Euro Area, Working Paper, No. 12/2018, German Council of Economic Experts, Wiesbaden.

# Freiburger **Diskussionspapiere** zur Ordnungsökonomik

## Freiburg **Discussion Papers** on Constitutional Economics

2021

- 21/10 **Lars P. Feld / Wolf Heinrich Reuter:** The German ‘Debt Brake’: Success Factors and Challenges<sup>1</sup>
- 21/9 **Lars P. Feld:** Freiheitliche Wirtschaftspolitik ist Ordnungspolitik. 15. Berliner Rede zur Freiheit
- 21/8 **Lars P. Feld, Lukas Nöh, Wolf Heinrich Reuter und Mustafa Yeter:** Von der Corona-bedingten Schuldenaufnahme zur Wiedereinhaltung der Schuldenbremse
- 21/7 **Jan Schnellenbach:** The Concept of Ordnungspolitik: Rule-Based Economic Policy-Making from the Perspective of the Freiburg School
- 21/6 **Jan Schnellenbach:** Herausforderungen für die Finanzpolitik in Deutschland nach der Covid-Krise: Schuldenbremse und Vermögensbesteuerung
- 21/5 **Lars P. Feld / Ekkehard A. Köhler / Daniel Nientiedt:** Ordoliberalism and the Social Market Economy
- 21/4 **Bury Yannick / Feld, Lars P. / Burret, Heiko T.:** Skimming the Achieved? – Quantifying the Fiscal Incentives of the German Fiscal Equalization Scheme and its Reforms since 1970
- 21/3 **Le Maux, Benoît / Masclet, David / Necker, Sarah:** Monetary Incentives and the Contagion of Unethical Behavior
- 21/2 **Kolev, Stefan:** When Liberty Presupposes Order: F. A. Hayek’s Learning Ordoliberalism
- 21/1 **Burret, Heiko T. / Feld, Lars P. / Schaltegger, Christoph A.:** Fiscal Federalism and Economic Performance – New Evidence from Switzerland

2020

- 20/10 **Christofzik, Désirée / Feld, Lars P. / Yeter, Mustafa:** Heterogeneous Price and Quantity Effects of the Real Estate Transfer Tax in Germany
- 20/9 **Hirsch, Patrick / Köhler, Ekkehard A. / Feld, Lars P. / Thomas, Tobias:** “Whatever It Takes!” How Tonality of TV-News Affects Government Bond Yield Spreads During Crises
- 20/8 **Feld, Lars P.:** Die wirtschaftlichen Rahmenbedingungen nach dem Corona-Schock
- 20/7 **Feld, Lars P.:** Wohlstand für alle – Was das Versprechen heute bedeutet. Ein Vorwort
- 20/6 **Feld, Lars P.:** Wirtschaftskrisen der Zukunft
- 20/5 **Feld, Lars P. / Wieland, Volker:** The German Federal Constitutional Court Ruling and the European Central Bank’s Strategy
- 20/4 **Bury, Yannick / Feld, Lars P.:** Fiscal Federalism in Germany
- 20/3 **Vanberg, Viktor J.:** Walter Eucken’s Weg zum Ordoliberalismus
- 20/2 **Feld, Lars P.:** Verfahren zum Anleihekaufprogramm der EZB(2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16). Stellungnahme zum Fragenkatalog für sachverständige Dritte
- 20/1 **Feld, Lars P. / Reuter, Wolf Heinrich / Yeter, Mustafa :** Öffentliche Investitionen: Die Schuldenbremse ist nicht das Problem

2019

- 19/6 **Kolev, Stefan:** Antipathy for Heidelberg, Sympathy for Freiburg? Vincent Ostrom on Max Weber, Walter Eucken, and the Compound History of Order
- 19/5 **Feld, Lars P. / Frey, Christian / Schaltegger, Christoph A. / Schmid, Lukas A.:** Fiscal Federalism and Income Inequality: An Empirical Analysis for Switzerland
- 19/4 **Goldschmidt, Nils / Wolf, Stephan:** Klimaschutz auf Kosten der Armen? Vorschläge für eine markt- und sozialverträgliche Umsetzung von CO<sub>2</sub>-Steuern und des Emissionshandels
- 19/3 **Horn, Karen I.:** The Difficult Relationship Between Historical Ordoliberalism and Adam Smith

19/2 **Christofzik, Désiree / Feld, Lars P. / Yeter, Mustafa:** Öffentliche Investitionen: Wie viel ist zu wenig?

19/1 **Feld, Lars P. / Hirsch, Patrick:** Zur Grundsteuerreform

2018

18/13 **Doerr, Anabelle / Necker, Sarah:** Toward an Understanding of Collaborative Tax Evasion: A Natural Field Experiment With Businesses

18/12 **Bury, Yannick / Feld, Lars P.:** Die Heterogenität der kommunalen Haushalts- und Aufsichtsregeln als Herausforderung im vertikalisierten Fiskalföderalismus

18/11 **Feld, Lars P. / Köhler, Ekkehard A. / Nientiedt, Daniel:** The German Anti-Keynes? On Walter Eucken's Macroeconomics

18/10 **Dathe, Uwe / Hedtke, Ulrich:** Habent sua fata professores. Joseph A. Schumpeter an Walter Eucken

18/09 **Feld, Lars P.:** The Quest for Fiscal Rules

18/08 **Pfeil, Christian F. / Feld, Lars P.:** Does the Swiss Debt Brake Induce Sound Federal Finances? A Synthetic Control Analysis

18/07 **Feld, Lars P.:** Zur Politischen Ökonomik der wirtschaftspolitischen Beratung: Der Sachverständigenrat als ordnungspolitisches Gewissen?

18/06 **Koessler, Ann-Kathrin / Torgler, Benno / Feld, Lars P. / Frey, Bruno S:** Commitment to Pay Taxes: Results from Field and Laboratory Experiments

18/05 **Feld, Lars P. / Köhler, Ekkehard A. / Wolfinger, Julia:** Modeling Fiscal Sustainability in Dynamic Macro-Panels with Heterogeneous Effects: Evidence From German Federal States

18/04 **Burret, Heiko T. / Bury, Yannick / Feld, Lars P.:** Grenzabschöpfungsraten im deutschen Finanzausgleich

18/03 **Vanberg, Viktor J.:** Individual Choice and Social Welfare. Theoretical Foundations of Political Economy

18/02 **Feld, Lars P. / Schaltegger, Christoph A. / Studerus, Janine:** Regional Risk Sharing and Redistribution – the Role of Fiscal Mechanisms in Switzerland

18/01 **Andritzki, Jochen / Christofzik, Désiree I. / Feld, Lars P. / Scheuring, Uwe:** A Mechanism to Regulate Sovereign Debt Restructuring in the Euro Area

2017

17/03 **Feld, Lars P. / Köhler, Ekkehard A. / Nientiedt, Daniel:** The “Dark Ages” of German Macroeconomics and Other Alleged Shortfalls in German Economic Thought

17/02 **Doerr, Annabelle:** Back to work: The Long-term Effects of Vocational Training for Female Job Returners\*

17/01 **Baskaran, Thushyanthan / Feld, Lars P. / Necker, Sarah:** Depressing dependence? Transfers and economic growth in the German States, 1975-2005

2016

16/08 **Fitzenberger, Bernd / Furdas, Marina / Sajons, Christoph:** End-of-Year Spending and the Long-Run Employment Effects of Training Programs for the Unemployed

16/07 **Sajons, Christoph:** Birthright Citizenship and Parental Labor Market Integration

16/06 **Pfeil, Christian F.:** Electoral System Change and Spending: Four Quantitative Case Studie

16/05 **Sajons, Christoph:** Information on the ballot, voter satisfaction and election turnout

16/04 **Vanberg, Viktor J.:** Social Contract vs. Invisible Hand: Agreeing to Solve Social Dilemmas

16/03 **Feld, Lars P. / Ruf, Martin / Schreiber, Ulrich / Todtenhaupt, Maximilian / Voget, Johannes:** Taxing Away M&A: The Effect of Corporate Capital Gains Taxes on Acquisition Activity

- 16/02 **Baskaran, Thushyanthan / Feld, Lars P. / Schnellenbach, Jan:** Fiscal Federalism, Decentralization and Economic Growth: A Meta-Analysis
- 16/01 **Burret, Heiko T. / Feld, Lars P.:** Vertical Effects of Fiscal Rules – The Swiss Experience

2015

- 15/11 **Burret, Heiko T. / Feld, Lars P. / Köhler, Ekkehard A.:** Fiscal Sustainability of the German Laender. Time Series Evidence
- 15/10 **Feld, Lars P. / Fritz, Benedikt:** The Political Economy of Municipal Amalgamation. Evidence of Common Pool Effects and Local Public Debt
- 15/9 **Burret, Heiko T. / Feld, Lars P. / Köhler, Ekkehard A.:** (Un-)Sustainability of Public Finances in German Laender. A Panel Time Series Approach
- 15/8 **Feld, Lars P. / Köhler, Ekkehard A.:** Is Switzerland an Interest Rate Island After All? Time Series and Non-Linear Switching Regime Evidence
- 15/7 **Doerr, Annabelle / Fitzenberger, Bernd:** Konzeptionelle Lehren aus der ersten Evaluationsrunde der Branchenmindestlöhne in Deutschland
- 15/6 **Vanberg, Viktor J.:** Constitutional Political Economy
- 15/5 **Vanberg, Viktor J.:** Competitive Federalism, Government's Dual Role, and the Power to Tax
- 15/4 **Feld, Lars P. / Köhler, Ekkehard A. / Nientiedt, Daniel:** Ordoliberalism, Pragmatism and the Eurozone Crisis: How the German Tradition Shaped Economic Policy in Europe
- 15/3 **Vanberg, Viktor:** "Freiheit statt Kapitalismus?" Ein Kommentar zu Sahra Wagenknechts Buch aus Freiburger Sicht
- 15/2 **Schnellenbach, Jan:** A Constitutional Economics Perspective on Soft Paternalism
- 15/1 **Schnellenbach, Jan:** Die Politische Ökonomie des Entscheidungsdesigns: Kann Paternalismus liberal sein?

2014

- 14/8 **Schnellenbach, Jan:** Neuer Paternalismus und individuelle Rationalität: eine ordnungsökonomische Perspektive
- 14/7 **Schnellenbach, Jan:** Does Classical Liberalism Imply an Evolutionary Approach to Policy-Making?
- 14/6 **Feld, Lars P.:** James Buchanan's Theory of Federalism: From Fiscal Equity to the Ideal Political Order
- 14/5 **Reckendrees, Alfred:** Weimar Germany: the First Open Access Order that Failed
- 14/4 **Vanberg, Viktor J.:** Liberalismus und Demokratie. Zu einer vernachlässigten Seite der liberalen Denktradition
- 14/3 **Schnellenbach, Jan / Schubert, Christian:** Behavioral Public Choice: A Survey
- 14/2 **Goldschmidt, Nils / Hesse, Jan-Otmar / Kolev, Stefan:** Walter Eucken's Role in the Early History of the Mont Pèlerin Society
- 14/1 **Vanberg, Viktor J.:** Ordnungspolitik, the Freiburg School and the Reason of Rules

2013

- 13/14 **Wegner, Gerhard:** Capitalist Transformation Without Political Participation – German Capitalism in the First Half of the 19<sup>th</sup> Century
- 13/13 **Necker, Sarah / Voskort, Andrea:** The Evolution of Germans' Values since Reunification
- 13/12 **Biedenkopf, Kurt:** Zur ordnungspolitischen Bedeutung der Zivilgesellschaft
- 13/11 **Feld, Lars P. / Ruf, Martin / Scheuering, Uwe / Schreiber, Ulrich / Voget, Johannes:** Effects of Territorial and Worldwide Corporation Tax Systems on Outbound M&As

- 13/10 **Feld, Lars P. / Kallweit, Manuel / Kohlmeier, Anabell:** Maßnahmen zur Vermeidung von Altersarmut: Makroökonomische Folgen und Verteilungseffekte
- 13/9 **Feld, Lars P.:** Zur Bedeutung des Manifests der Marktwirtschaft oder: Das Lambsdorff-Papier im 31. Jahr.
- 13/8 **Feld, Lars P. / Köhler, Ekkehard A.:** Is Switzerland After All an Interest Rate Island?
- 13/7 **Feld, Lars P. / Necker, Sarah / Frey, Bruno S.:** Happiness of Economists
- 13/6 **Feld, Lars P. / Schnellenbach, Jan:** Political Institutions and Income (Re-)Distribution: Evidence from Developed Economies
- 13/5 **Feld, Lars P. / Osterloh, Steffen:** Is a Fiscal Capacity Really Necessary to Complete EMU?
- 13/4 **Vanberg, Viktor J.:** James M. Buchanan's Contractarianism and Modern Liberalism
- 13/3 **Vanberg, Viktor J.:** Föderaler Wettbewerb, Bürgersouveränität und die zwei Rollen des Staates
- 13/2 **Bjørnskov, Christian / Dreher, Axel / Fischer, Justina A.V. / Schnellenbach, Jan / Gehring, Kai:** Inequality and happiness: When perceived social mobility and economic reality do not match
- 13/1 **Mayer, Thomas:** Die Ökonomen im Elfenbeinturm: ratlos - Eine österreichische Antwort auf die Krise der modernen Makroökonomik und Finanztheorie
- 2012
- 12/5 **Schnellenbach, Jan:** The Economics of Taxing Net Wealth: A Survey of the Issues
- 12/4 **Goldschmidt, Nils / Hesse, Jan-Otmar:** Eucken, Hayek, and the Road to Serfdom
- 12/3 **Goldschmidt, Nils:** Gibt es eine ordoliberalen Entwicklungsidee? Walter Euckens Analyse des gesellschaftlichen und wirtschaftlichen Wandels
- 12/2 **Feld, Lars P.:** Europa in der Welt von heute: Wilhelm Röpke und die Zukunft der Europäischen Währungsunion
- 12/1 **Vanberg, Viktor J.:** Hayek in Freiburg
- 2011
- 11/4 **Leuermann, Andrea / Necker, Sarah:** Intergenerational Transmission of Risk Attitudes - A Revealed Preference Approach
- 11/3 **Wohlgemuth, Michael:** The Boundaries of the State
- 11/2 **Feld, Lars P. / Köhler Ekkehard A.:** Zur Zukunft der Ordnungsökonomik
- 11/1 **Vanberg, Viktor J.:** Moral und Wirtschaftsordnung: Zu den ethischen Grundlagen einer freien Gesellschaft
- 2010
- 10/5 **Bernholz, Peter:** Politics, Financial Crisis, Central Bank Constitution and Monetary Policy
- 10/4 **Tietmeyer, Hans:** Soziale Marktwirtschaft in Deutschland - Entwicklungen und Erfahrungen
- 10/3 **Vanberg, Viktor J.:** Freiheit und Verantwortung: Neurowissenschaftliche Erkenntnisse und ordnungsökonomische Folgerungen
- 10/2 **Vanberg, Viktor J.:** Competition among Governments: The State's Two Roles in a Globalized World
- 10/1 **Berghahn, Volker:** Ludwig Erhard, die Freiburger Schule und das 'Amerikanische Jahrhundert'
- 2009
- 09/10 **Dathe, Uwe:** Walter Euckens Weg zum Liberalismus (1918-1934)
- 09/9 **Wohlgemuth, Michael:** Diagnosen der Moderne: Friedrich A. von Hayek
- 09/8 **Bernhardt, Wolfgang:** Wirtschaftsethik auf Abwegen
- 09/7 **Mäding, Heinrich:** Raumplanung in der Sozialen Marktwirtschaft: Ein Vortrag
- 09/6 **Koenig, Andreas:** Verfassungsgerichte in der Demokratie bei Hayek und Posner
- 09/5 **Berthold, Norbert / Brunner, Alexander:** Gibt es ein europäisches Sozialmodell?

- 09/4 **Vanberg, Viktor J.:** Liberal Constitutionalism, Constitutional Liberalism and Democracy
- 09/3 **Vanberg, Viktor J.:** Consumer Welfare, Total Welfare and Economic Freedom – On the Normative Foundations of Competition Policy
- 09/2 **Goldschmidt, Nils:** Liberalismus als Kulturideal. Wilhelm Röpke und die kulturelle Ökonomik.
- 09/1 **Bernhardt, Wolfgang:** Familienunternehmen in Zeiten der Krise – Nachhilfestunden von oder für Publikumsgesellschaften?
- 2008
- 08/10 **Borella, Sara:** EU-Migrationspolitik. Bremse statt Motor der Liberalisierung.
- 08/9 **Wohlgemuth, Michael:** A European Social Model of State-Market Relations: The ethics of competition from a „neo-liberal“ perspective.
- 08/8 **Vanberg, Viktor J.:** Markt und Staat in einer globalisierten Welt: Die ordnungsökonomische Perspektive.
- 08/7 **Vanberg, Viktor J.:** Rationalität, Regelbefolgung und Emotionen: Zur Ökonomik moralischer Präferenzen. Veröffentlicht in: V. Vanberg: Wettbewerb und Regelordnung, Tübingen: Mohr, 2008, S. 241-268.
- 08/6 **Vanberg, Viktor J.:** Die Ethik der Wettbewerbsordnung und die Versuchungen der Sozialen Marktwirtschaft
- 08/5 **Wohlgemuth, Michael:** Europäische Ordnungspolitik
- 08/4 **Löwisch, Manfred:** Staatlicher Mindestlohn rechtlich gesehen – Zu den gesetzgeberischen Anstrengungen in Sachen Mindestlohn
- 08/3 **Ott, Notburga:** Wie sichert man die Zukunft der Familie?
- 08/2 **Vanberg, Viktor J.:** Schumpeter and Mises as ‘Austrian Economists’
- 08/1 **Vanberg, Viktor J.:** The ‘Science-as-Market’ Analogy: A Constitutional Economics Perspective.
- 2007
- 07/9 **Wohlgemuth, Michael:** Learning through Institutional Competition. Veröffentlicht in: A. Bergh und R. Höijer (Hg.). Institutional Competition, Cheltenham: Edward Elgar, 2008, S. 67-89.
- 07/8 **Zweynert, Joachim:** Die Entstehung ordnungsökonomischer Paradigmen – theoriegeschichtliche Betrachtungen.
- 07/7 **Körner, Heiko:** Soziale Marktwirtschaft. Versuch einer pragmatischen Begründung.
- 07/6 **Vanberg, Viktor J.:** Rational Choice, Preferences over Actions and Rule-Following Behavior.
- 07/5 **Vanberg, Viktor J.:** Privatrechtsgesellschaft und ökonomische Theorie. Veröffentlicht in: K. Riesenhuber (Hg.) Privatrechtsgesellschaft – Entwicklung, Stand und Verfassung des Privatrechts, Tübingen: Mohr Siebeck, 2008, S. 131-162.
- 07/4 **Goldschmidt, Nils / Rauchenschwandtner, Hermann:** The Philosophy of Social Market Economy: Michel Foucault’s Analysis of Ordoliberalism.
- 07/3 **Fuest, Clemens:** Sind unsere sozialen Sicherungssysteme generationengerecht?
- 07/2 **Pelikan, Pavel:** Public Choice with Unequally Rational Individuals.
- 07/1 **Voßwinkel, Jan:** Die (Un-)Ordnung des deutschen Föderalismus. Überlegungen zu einer konstitutionenökonomischen Analyse.
- 2006
- 06/10 **Schmidt, André:** Wie ökonomisch ist der „more economic approach“? Einige kritische Anmerkungen aus ordnungsökonomischer Sicht.
- 06/9 **Vanberg, Viktor J.:** Individual Liberty and Political Institutions: On the Complementarity of Liberalism and Democracy. Veröffentlicht in: Journal of Institutional Economics, Vol. 4, Nr. 2, 2008, S. 139-161.

- 06/8 **Goldschmidt, Nils:** Ein „sozial temperierter Kapitalismus“? – Götz Briefs und die Begründung einer sozioethisch fundierten Theorie von Markt und Gesellschaft. Veröffentlicht in: Freiburger Universitätsblätter 42, Heft 173, 2006, S. 59-77.
- 06/7 **Wohlgemuth, Michael / Brandi, Clara:** Strategies of Flexible Integration and Enlargement of the European Union. A Club-theoretical and Constitutional Economics Perspective. Veröffentlicht in: Warwick, J. / Lang, K.O. (Eds.): European Neighbourhood Policy, Opladen: Budrich, 2007, S. 159-180.
- 06/6 **Vanberg, Viktor J.:** Corporate Social Responsibility and the “Game of Catallaxy”: The Perspective of Constitutional Economics. Veröffentlicht in: Constitutional Political Economy, Vol. 18, 2007, S. 199-222.
- 06/5 **Pelikan, Pavel:** Markets vs. Government when Rationality is Unequally Bounded: Some Consequences of Cognitive Inequalities for Theory and Policy.
- 06/4 **Goldschmidt, Nils:** Kann oder soll es Sektoren geben, die dem Markt entzogen werden und gibt es in dieser Frage einen (unüberbrückbaren) Hiatus zwischen ‚sozioethischer‘ und ‚ökonomischer‘ Perspektive? Veröffentlicht in: D. Aufderheide, M. Dabrowski (Hrsg.): Markt und Wettbewerb in der Sozialwirtschaft. Wirtschaftsethische Perspektiven für den Pflegesektor, Berlin: Duncker & Humblot 2007, S. 53-81.
- 06/3 **Marx, Reinhard:** Wirtschaftsliberalismus und Katholische Soziallehre.
- 06/2 **Vanberg, Viktor J.:** Democracy, Citizen Sovereignty and Constitutional Economics. Veröffentlicht in: Constitutional Political Economy Volume 11, Number 1, März 2000, S. 87-112 und in: Casas Pardo, J., Schwartz, P.(Hg.): Public Choice and the Challenges of Democracy, Cheltenham: Edward Elgar, 2007, S. 101-120.
- 06/1 **Wohlgemuth, Michael:** Demokratie und Marktwirtschaft als Bedingungen für sozialen Fortschritt. Veröffentlicht in: R. Clapham, G. Schwarz (Hrsg.): Die Fortschrittsidee und die Marktwirtschaft, Zürich: Verlag Neue Zürcher Zeitung 2006, S. 131-162.
- 2005
- 05/13 **Kersting, Wolfgang:** Der liberale Liberalismus. Notwendige Abgrenzungen. In erweiterter Fassung veröffentlicht als: Beiträge zur Ordnungstheorie und Ordnungspolitik Nr. 173, Tübingen: Mohr Siebeck 2006.
- 05/12 **Vanberg, Viktor J.:** Der Markt als kreativer Prozess: Die Ökonomik ist keine zweite Physik. Veröffentlicht in: G. Abel (Hrsg.): Kreativität. XX. Deutscher Kongress für Philosophie. Kolloquiumsbeiträge, Hamburg: Meiner 2006, S. 1101-1128.
- 05/11 **Vanberg, Viktor J.:** Marktwirtschaft und Gerechtigkeit. Zu F.A. Hayeks Kritik am Konzept der „sozialen Gerechtigkeit“. Veröffentlicht in: Jahrbuch Normative und institutionelle Grundfragen der Ökonomik, Bd. 5: „Soziale Sicherung in Marktgesellschaften“, hrsg. von M. Held, G. Kubon-Gilke, R. Sturn, Marburg: Metropolis 2006, S. 39-69.
- 05/10 **Goldschmidt, Nils:** Ist Gier gut? Ökonomisches Selbstinteresse zwischen Maßlosigkeit und Bescheidenheit. Veröffentlicht in: U. Mummert, F.L. Sell (Hrsg.): Emotionen, Markt und Moral, Münster: Lit 2005, S. 289-313.
- 05/9 **Wohlgemuth, Michael:** Politik und Emotionen: Emotionale Politikgrundlagen und Politiken indirekter Emotionssteuerung. Veröffentlicht in: U. Mummert, F.L. Sell (Hrsg.): Emotionen, Markt und Moral, Münster: Lit 2005, S. 359-392.
- 05/8 **Müller, Klaus-Peter / Weber, Manfred:** Versagt die soziale Marktwirtschaft? – Deutsche Irrtümer.
- 05/7 **Borella, Sara:** Political reform from a constitutional economics perspective: a hurdle-race. The case of migration politics in Germany.
- 05/6 **Körner, Heiko:** Walter Eucken – Karl Schiller: Unterschiedliche Wege zur Ordnungspolitik.
- 05/5 **Vanberg, Viktor J.:** Das Paradoxon der Marktwirtschaft: Die Verfassung des Marktes und das Problem der „sozialen Sicherheit“. Veröffentlicht in: H. Leipold, D. Wentzel (Hrsg.): Ordnungsökonomik als aktuelle Herausforderung, Stuttgart: Lucius & Lucius 2005, S. 51-67.
- 05/4 **Weizsäcker, C. Christian von:** Hayek und Keynes: Eine Synthese. In veränderter Fassung veröffentlicht in: ORDO, Bd. 56, 2005, S. 95-111.

- 05/3** **Zweynert, Joachim / Goldschmidt, Nils:** The Two Transitions in Central and Eastern Europe and the Relation between Path Dependent and Politically Implemented Institutional Change. In veränderter Fassung veröffentlicht in: Journal of Economic Issues, Vol. 40, 2006, S. 895-918.
- 05/2** **Vanberg, Viktor J.:** Auch Staaten tut Wettbewerb gut: Eine Replik auf Paul Kirchhof. Veröffentlicht in: ORDO, Bd. 56, 2005, S. 47-53.
- 05/1** **Eith, Ulrich / Goldschmidt, Nils:** Zwischen Zustimmungsfähigkeit und tatsächlicher Zustimmung: Kriterien für Reformpolitik aus ordnungsökonomischer und politikwissenschaftlicher Perspektive. Veröffentlicht in: D. Haubner, E. Mezger, H. Schwengel (Hrsg.): Agendasetting und Reformpolitik. Strategische Kommunikation zwischen verschiedenen Welten, Marburg: Metropolis 2005, S. 51-70.

**Eine Aufstellung über weitere Diskussionspapiere ist auf der Homepage des Walter Eucken Instituts erhältlich.**