



# Balanced Budget and Investment Rule: Two Sides of the Same Coin?!



# Balanced Budget and Investment Rule: Two Sides of the Same Coin?!

Analyzing the economic effects of a binding public  
investment commitment in Germany

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# Abstract

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In their statement from December 2016, the independent commission of experts for strengthening investment in Germany, appointed by then-Federal Minister of Economics Sigmar Gabriel, calls for a significant expansion of investment dynamics in Germany. Along with proposed measures to strengthen private investments, the commission stresses the importance of creating the kind of institutional and political framework needed to push public investments so as to not endanger welfare and economic growth in Germany.

In light of this, this study shows what effects an increase and stabilization of the public investment level in Germany would have. To do this, distinct investment scenarios have been created and their impact on a number of economic and politico-economic indicators up to the year 2025 was measured.

The results clearly show that an increase in public investments in Germany would lead to a significant rise in German GDP growth over the following years. Factors like productivity, volume of work and the state's capital stock similarly show higher increases in scenarios with more public investments relative to scenarios with a lower investment level.

Another important result of the study is that such a proposed rule of investment would not have to be in conflict with the already existing debt rule of the federal government. Although scenarios with a higher level of public investment first lead to a lower budget balance, the differences between the individual scenarios become insignificant over time due to both the higher economic growth in those scenarios with more investments and the underlying assumptions regarding the counter-financing of these investments. In all five scenarios observed, the debt/GDP ratio swiftly falls below 50 percent in the year 2025.

For the purpose of this study's calculations, additional investments will be financed through an increase in taxes and a cut in spending on public consumption. The focus of this paper is purely macroeconomic, taking a look at the effects of different levels of public investment on the German economy.



# Contents

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<b>Introduction</b>	<b>8</b>
<b>Method</b>	<b>10</b>
<b>Findings</b>	<b>13</b>
Effect on GDP and expenditure components	13
Effect on public budgets	17
Impact on tax rates	19
Other effects	19
<b>Conclusion</b>	<b>23</b>
<b>Literature</b>	<b>25</b>
<b>Imprint</b>	<b>27</b>

# Introduction

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While some of its European neighbors are still feeling the after-effects of the debt and structural crises, Germany appears to have come out the other side relatively unscathed. Economic output has grown by more than twelve percent since 2010, unemployment is at its lowest level since reunification, and the budget – in addition to having been successfully consolidated – is actually generating a surplus. But once you factor in other macroeconomic values, these encouraging developments give way to far less promising signs. In terms of future growth and the prosperity of future generations, Germany is draining more and more of its public capital stock.

The Deutsches Institut für Wirtschaftsforschung (DIW; German Institute for Economic Research) has calculated an average investment gap of three percent of Germany's gross domestic product (GDP) in the years 1999 to 2012, or €75 billion per year (Bach et al. 2013).<sup>1</sup> In one analysis, the Deutscher Industrie- und Handelskammertag (DIHK; Association of German Chambers of Commerce and Industry) point to a cumulative investment gap of over €600 billion between 2003 and 2012 (DIHK 2014).<sup>2</sup> Figures from the Deutsches Institut für Urbanistik (Difu; German Institute for Urban Studies) indicate an apparent local authority investment shortfall in the order of €136 billion for 2015 (KfW-Kommunalpanel 2016).

Convening in August 2014 under then-Federal Minister of Economic Affairs and Energy Sigmar Gabriel, an independent commission of experts<sup>3</sup> tasked with preparing concrete recommendations for action to strengthen private and

public investment in Germany asserted in a recent statement that: “Despite the additional expenditure in public investment, deficiencies remain in both private and public investment” (Expertenkommission 2016: 6). In its assessment of public investment levels, the commission recommended that the government establish a budgetary commitment to public investment that would offset the depreciation of public assets over a certain period. Pointing to the present budget surplus, the commission recommended this be slated primarily for public investment in the areas of education, research and development (Expertenkommission 2016).<sup>4</sup>

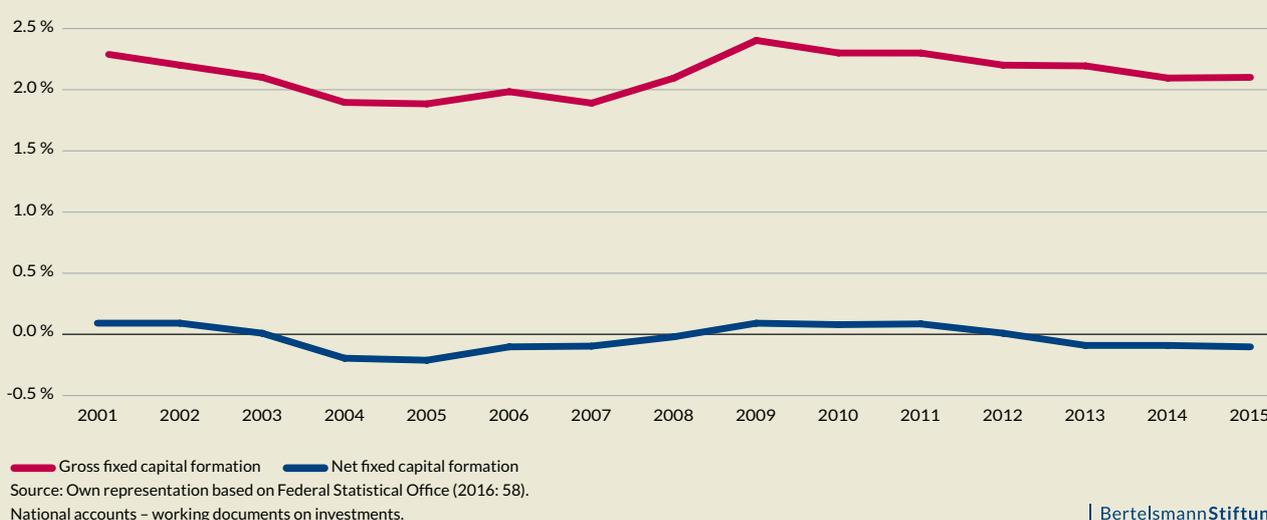
This study focuses on the macroeconomic effects a binding government commitment to public investment levels, as advocated by the commission, would have. At the same time, this study addresses the issue of budgetary fiscal sustainability. If we don't wish to overly burden future generations with debt, it makes little sense to effectively increase this burden through other means, that is, through the failure to undertake public investments. Debt legislation – that is, expenditure concerns – alone cannot ensure fiscal sustainability. Instead, public assets must be secured for present and, above all, future generations. Failing to undertake public investment will only increase this burden.

Investment underpins growth and employment in any economy, so establishing this kind of “regulation for stabilizing public investment levels” could reinforce this foundation for future generations as well. In a modern economy, investments are key to enabling and strengthening economic growth, and thus increasing the prosperity of society. Technological advances, entrepreneurial success, the creation of qualified jobs – they would all be impossible without modern capital stock. If Germany is to sustain its ability to offer prosperity and employment for future gen-

1 Here the investment gap for Germany is measured as the difference between investments in the eurozone and investments in Germany (relative to GDP).  
2 The DIHK study measures the German gap (relative to GDP) in comparison with 17 industrialized countries.  
3 The independent commission of experts consists of 21 members representing a broad cross-section of business, society and science. It is headed by Prof. Dr. Marcel Fratzscher, President of the German Institute for Economic Research. In April 2015, the commission of experts presented a report in which it expressed its intent to provide support for the implementation of its recommendations and its desire to help advance investment activities in Germany (Expertenkommission 2015).

4 In its statement, the commission of experts also discussed building up a potential “investment reserve” that could be formed in periods featuring an “unforeseen budget margin” for financing long-term investment projects (Expertenkommission 2016).

Figure 1: Trend of public investment as a percentage of GDP



erations, it must invest in tomorrow – today. This is where public funds play a particular role.

A current study, commissioned by Germany’s Ministry for Economic Affairs and Energy, highlights the positive effects of public investment. The authors of the study show that investment in infrastructure, in all-day schools and nurseries, and in universities increases overall levels of economic production, employment and fiscal sustainability (Krebs und Scheffel 2016).

But turning to the public investment levels in Germany reveals a far from satisfactory picture. For more than ten years, the rate of public net fixed capital formation – defined as gross fixed capital formation minus depreciation – has been pegged at around zero. Since 2012, it has been consistently negative (see Figure 1), which points to stagnation and a deterioration of public capital stock.<sup>5</sup> In light

5 Here it is important to note that there is some controversy around conclusions drawn solely on the basis of public net fixed capital formation. The reasons are, first, the statistical depreciation rules used,

of this, it is clear that we need to be more diligent in stabilizing public investment as a legally enshrined counterbalance to debt rules.<sup>6</sup>

The first section of the study provides examples of configuration options for rules regarding the investment of public funds. The next step estimates the macroeconomic effects of each option in scenarios calculated up to 2025. Finally, the key findings are summarized with an outline of the challenges in establishing such a rule for the stabilization of public investment.

and second, the difficulty of interpreting this data where prudent privatization leads to a reduction in public investment. One example of this comes from Austria, where authorities outsourced the motorway and highway network to the Autobahnen- und Schnellstraßen-Finanzierungs-Aktiengesellschaft (ASFINAG; Motorway and Highway Financing Corporation).

6 For a discussion of the stabilization of public investment, see also Enderlein und Pisani-Ferry 2014; in their report for Sigmar Gabriel and Emmanuel Macron they call for a “minimum speed for investments” in Germany that is in line with the debt brake, with the goal of retaining the value of public assets (Enderlein und Pisani-Ferry 2014).

# Method

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If government commitment to public investment were introduced as proposed by the commission in its statement on strengthening investment in Germany, what macro-economic effects would this generate? To answer this question, this study examines five different scenarios in which the level of obligatory public investment follows various different principles. Prognos AG's macroeconomic model VIEW was used to calculate the effect on the economy (see box, p. 11). Here, the observation horizon for the individual scenarios stretches to 2025.

The following five scenarios examine various configuration options for regulations, whereby the sole subject of the scenario in each case is public investment. The individual scenarios are based on the following assumptions:

**Scenario 1:** Implementation of an investment quota equivalent to the OECD average (excluding Germany) for the years 2005 to 2014 ("OECD average" scenario). The investment quota here corresponds to the public gross fixed capital formation relative to GDP.

**Scenario 2:** Implementation of an investment quota that corresponds to the average for the years 2005 to 2014 in Germany ("business as usual" scenario).

**Scenario 3:** An investment rule in which gross investments correspond to depreciation, that is, the public capital stock stagnates at the current level ("stagnation" scenario).

**Supplementary scenarios 4a and 4b:** Investment rules that correspond to the "business as usual" scenario, but expands to include a simplified economic trend component. This involves both a pro-cyclical and an anti-cyclical variation.

**Scenario 4a, "pro-cyclical":** In the event of a positive output gap (current GDP/trend GDP >1), public investment is increased to half the difference between the current GDP

and the trend GDP, and correspondingly reduced in the event of a negative gap.

**Scenario 4b, "anti-cyclical":** For a negative/positive output gap, the additions/deductions in public investment are an inversion of those in the "pro-cyclical" scenario.

These assumptions result in various paths of public investment (Figure 2).

In the "OECD average" scenario, pegging the investment quota at 3.3 percent would lead to a considerable future increase in public investment. In the "business as usual" scenario, the investment quota is fixed at just 2.2 percent. The growth of investments is significantly lower, but still positive overall. The "business as usual" scenario is also the scenario that most closely follows the progression of the "basic" scenario in the VIEW calculation model (see box, p. 11).<sup>7</sup> In the "stagnation" scenario, in which public capital stock remains constant, public investment shows a slight decline because there is also a slight reduction in the amount of depreciations over time.

The progression in the two supplementary scenarios – "pro-cyclical" and "anti-cyclical" – is volatile due to the economic trend component. In the pro-cyclical scenario, the average level of public investment is at around the level of the "OECD average" due to the current positive output gap. For the anti-cyclical scenario, on the other hand, the volume of public investment is considerably reduced – also a result of the positive output gap.

For the two supplementary cyclical scenarios it should be noted that these investment rules would also result in different stimuli if they proceeded from a different economic point of departure. If we were to find ourselves in a situa-

<sup>7</sup> For ease of comprehension, the results presentation in Chapter 3 excludes the "basic" scenario. However, the results for the "business as usual" scenario more or less equate to the results for the basic prognosis in VIEW.

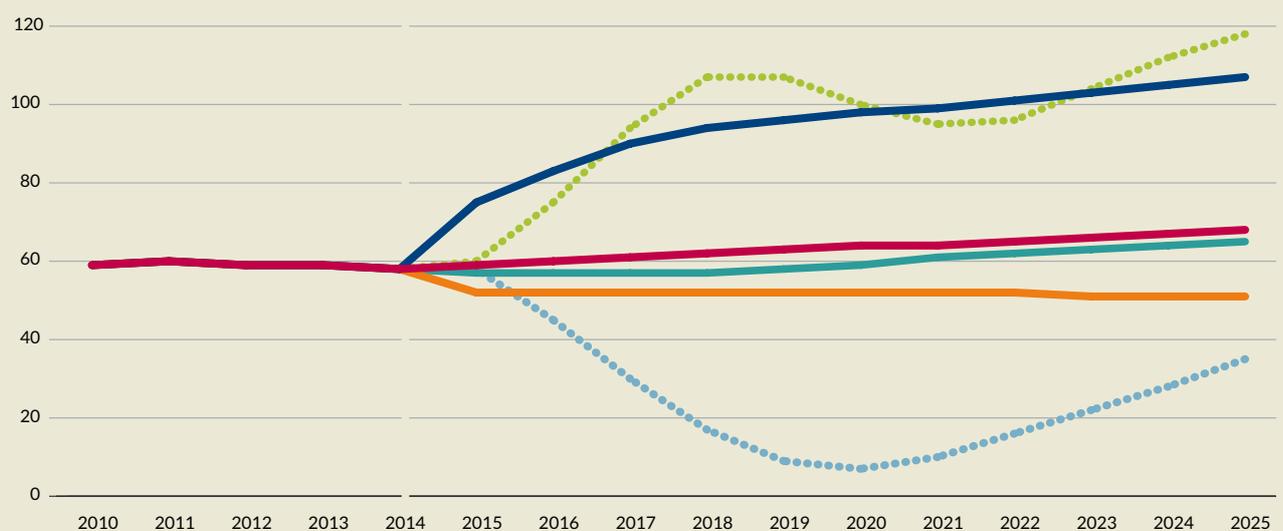
## The Prognos VIEW global economic model

VIEW is a prognosis and simulation model that consistently depicts the future development of the global economy. It considers the 42 most important countries in the world based on economic performance and thereby encompasses over 90 percent of global economic output.

In VIEW, the public investment expenditure simulated in the context of this study takes effect through different channels that correspond to the rules it implements. In essence, the model first defines the planned (permissible) structural budget balance in such a way that it results in a debt ratio of around 60 percent in the long-term. Where a scenario foresees the planned expenditure of the state increasing due to increased public investment, this is financed through spending cuts in public consumption and an increase in tax rates so that the planned budget balance still corresponds to target. The allocation of reciprocal financing to spending cuts and increased tax rates generally equates to 50 percent. For taxes, there is a distinction made between indirect taxes, direct taxes from private households and direct taxes on companies. The public investments lead on the one hand to a greater public capital stock with a positive effect on productivity, on the other hand to a decrease in consumption opportunities for private households. These changes lead to further feedback effects, thus expanding the stimulus' reach throughout the economy. In the short term, this can lead to deviations between planned and actual budget balances, because it is precisely on the income side that the reference values (disposable income, nominal GDP) can change. Moreover, VIEW makes no distinction between the level of authority for the investment (federal, state, local authority).

A detailed description of the model can be found on the Prognos AG website at: [www.prognos.com/publikationen/weltreport/modell-view/](http://www.prognos.com/publikationen/weltreport/modell-view/).

Figure 2: Volume of public gross fixed capital formation, by scenario, in real prices (2010), bn euro



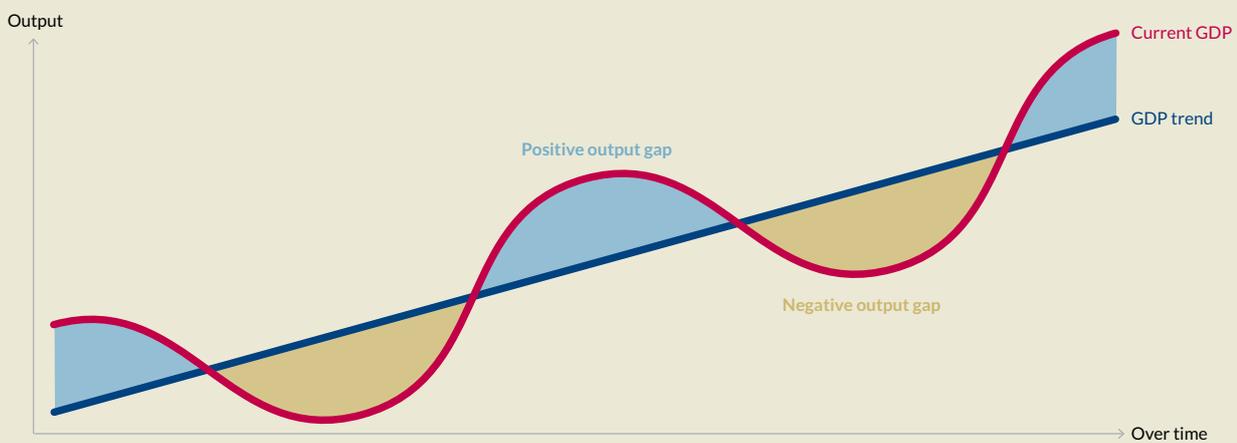
Scenarios: — "Business as usual" — "OECD average" — "Stagnation" — "Benchmark" — "Pro-cyclical" — "Anti-cyclical"

Cyclical scenarios are dependent on the state of the economy; values through 2014 based on real figures; values after 2014 based on model calculations.

Source: Prognos 2016

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Figure 3: Negative and positive output gaps



Source: Own representation

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tion with a negative output gap (current GDP below trend GDP, see Figure 3), this would result in a far more favorable progression in the “anti-cyclical” scenario than that seen in the calculations below.

Moreover, the economic trend components can be arranged so that the resulting spread of public investment volumes would be weaker than that shown in Figure 2. Similarly, the cyclical components – simplified for purposes of calculation – could be expanded to include further rules, such as a minimum investment volume. In the “anti-cyclical” scenario, in particular, this would lead to a more “realistic” progression of the resulting public investments and prevent the collapse of investment volumes around 2020. As this study is intended to represent the widest spectrum of scenarios possible, it deliberately uses a somewhat broader range of cyclical investment stimuli. The advantage of this approach is that we can more clearly see the potential impact that a hypothetical major decline in investment

would have on other economic values. At the same time, both cyclical scenarios should be seen as supplementary and are therefore only shown as dotted lines in the following figures.

# Findings

The presentation of the findings highlights the effect on the GDP, as well as the implications for the state and for tax rates. A selection of further effects is also shown.

## Effect on GDP and expenditure components

Increased public investment has a positive effect on GDP growth (Figure 4). In the “OECD average” scenario, GDP growth is markedly higher than in the “business as usual” and “stagnation” scenarios. With their economic trend components, the two supplementary scenarios present a far more volatile progression. A view of the average growth rates reveals that the differences are not as dramatic as the graph might suggest.

The slight decline in GDP growth that appears in every scenario between 2018 and 2020 can be traced back to the underlying basic scenario in the model (not included in the graph). The “business as usual” scenario is the closest to the basic prognosis that underpins the model (see Chapter 2). Here we proceed from the assumption that global economic framework conditions will deteriorate slightly in the period in question. However, the progression of the basic scenario is of little relevance for interpretation of the findings presented below, as the proportional differences between the scenarios would be similar even if we were to assume, for example, consistent GDP growth.

Closely related to growth of the GDP is the productivity trend. This is more evident in the scenarios with higher public investment quotas (Figure 5). This means the higher rate of GDP growth here isn’t solely attributable

Figure 4: Change in GDP, real (2010) prices, in percent p.a.

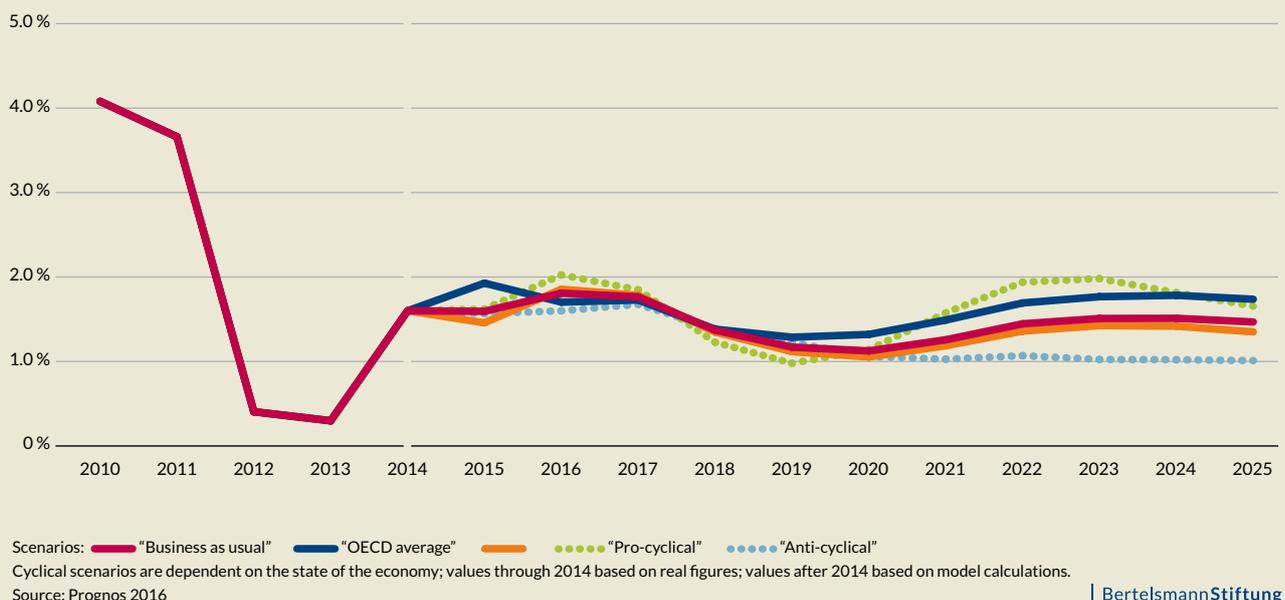
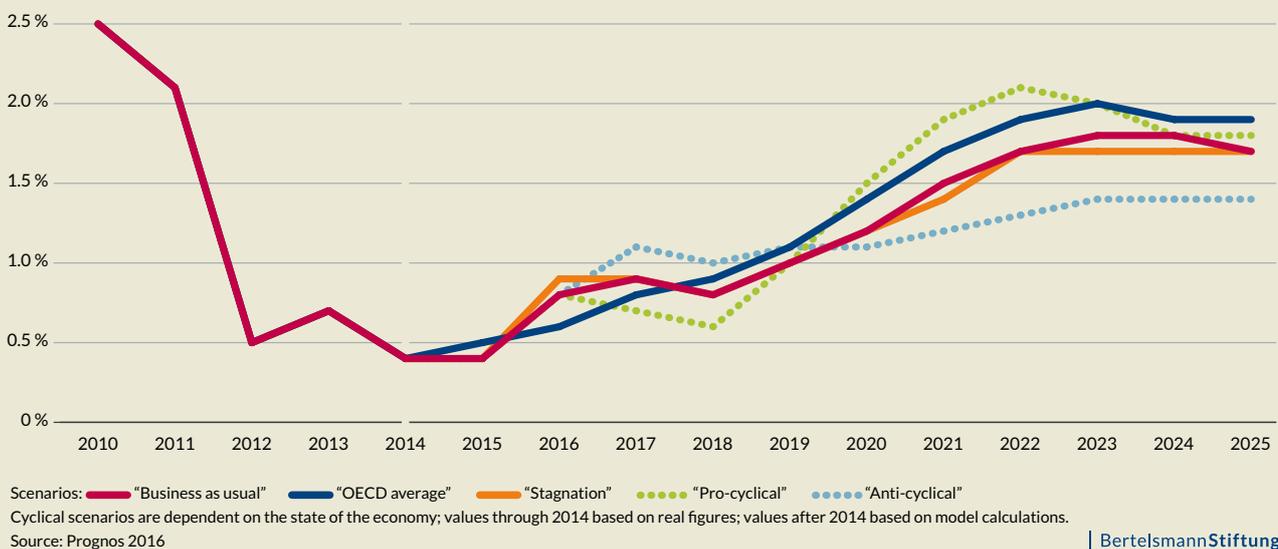


Figure 5: Change in hourly productivity, real (2010) prices, in percent p.a.



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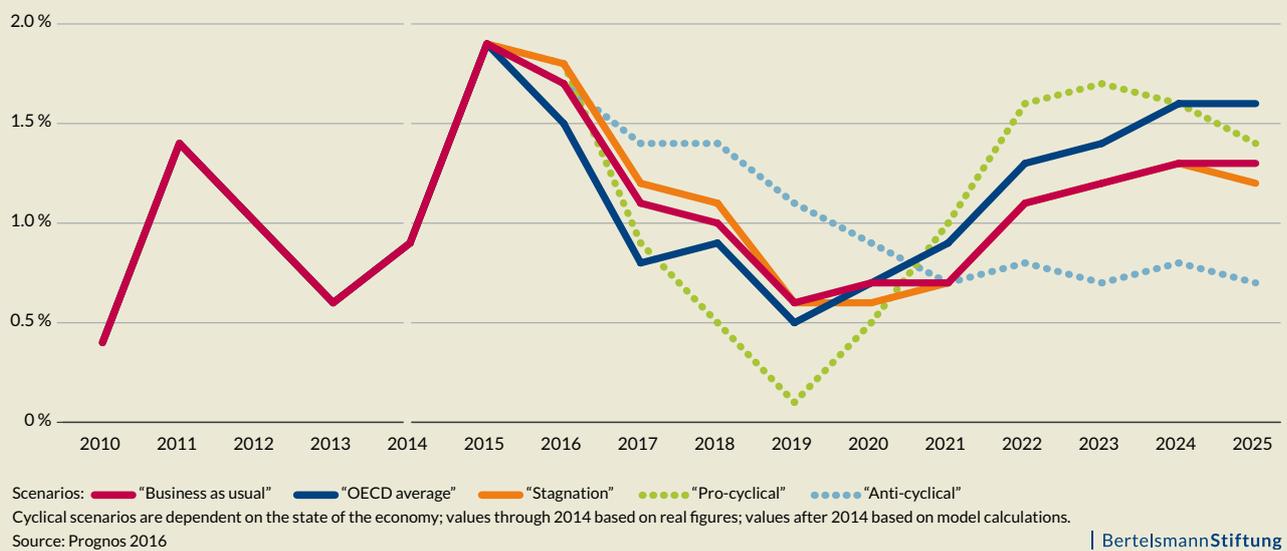
to the investments made on the demand side, but also to an increase in work productivity due to better capitalization.

The scenario-specific configuration of public investment also has an impact on the growth in private consumption (Figure 6). For all scenarios, this is initially less pronounced in the period prior to 2020. Like the previously described progression of the GDP, this can be attributed to the basic scenario underlying the model. At the same time, it shows that growth in private consumption in this period is higher in those scenarios in which there is less investment. One reason for this is that the resulting lower tax burden on private households encourages greater consumption expenditure. From 2021, on the other hand, growth is higher in those scenarios where there is greater investment. The reason for this is the income effect from the higher economic growth in these scenarios. Moreover, catch-up effects due to reduced consumption could play a part in the period up to 2020.

The development of private consumption offers the same correlation as for private consumption. Where public investments are lower, the state initially has more options for consumption at its disposal (Figure 7). This is the situation in the "stagnation" scenario, for example, as well as the supplementary "anti-cyclical" scenario. For public consumption, the contrast between the different scenarios is markedly stronger than for private consumption. Here, too, it is plainly evident that a higher public investment quota at the OECD level can lead to greater growth in public consumption in the long term, here from 2022.

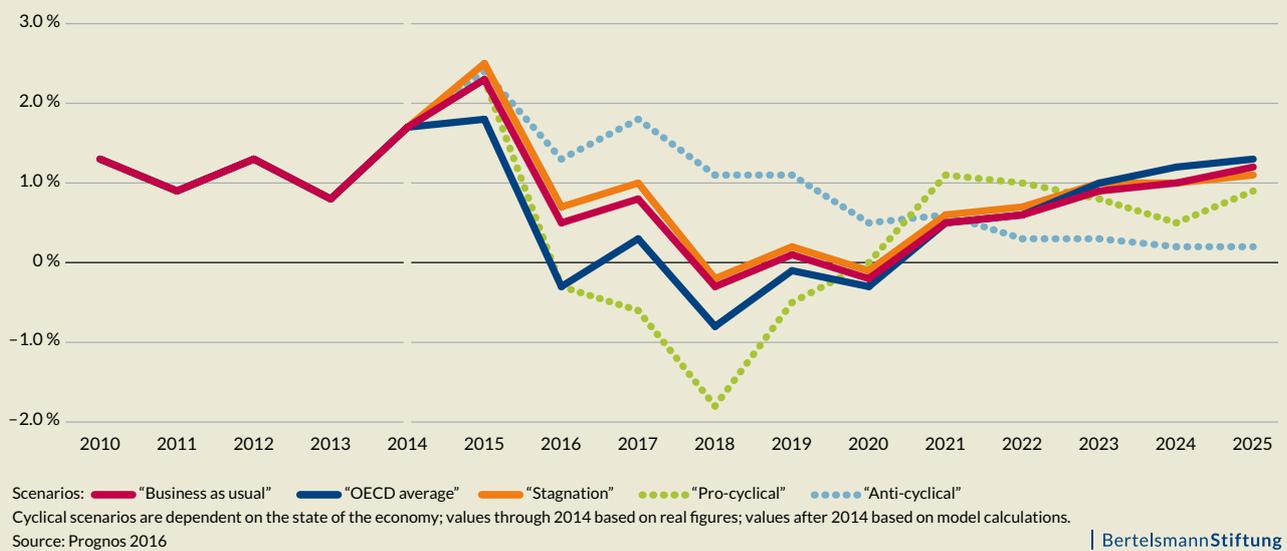
When considering overall investment, it becomes apparent that this too increases as public investment grows (Figure 8). This can be attributed in part to the fact that public investments represent a component of aggregated economic investments. In the past, public investments together represented around eleven percent of overall investments. In addition, a public investment stimulus leads to various feedback effects, which can – depending

Figure 6: Change in private consumption, real (2010) prices, in percent p.a.



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Figure 7: Change in public consumption, real (2010) prices, in percent p.a.



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Abbildung 8: Change in total investment, real (2010) prices, in percent p.a.

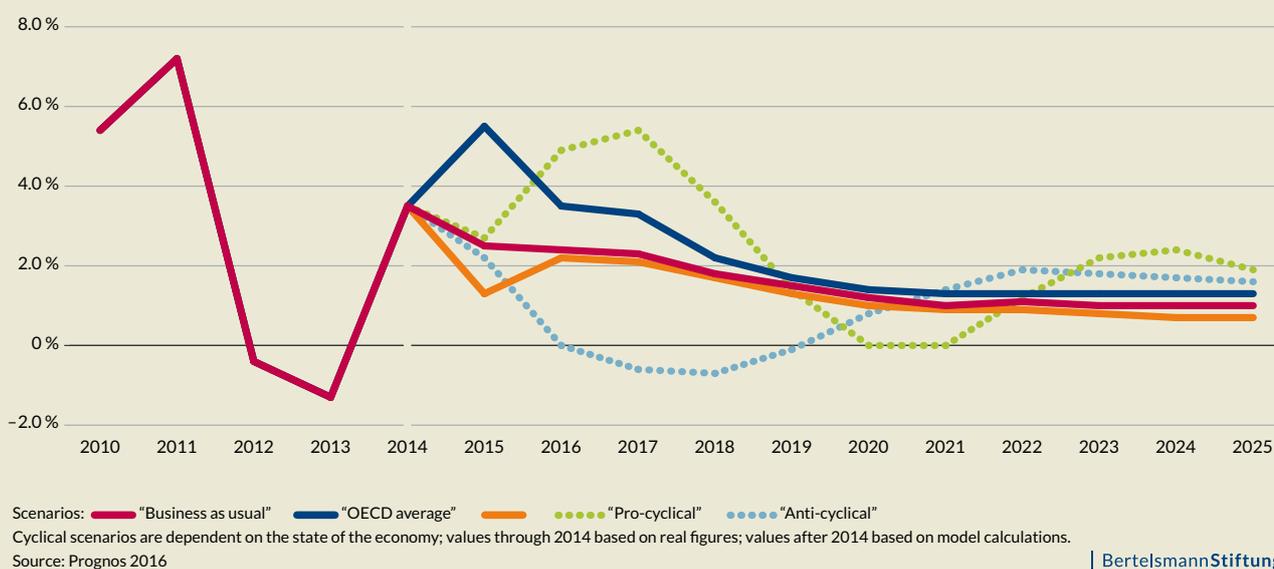
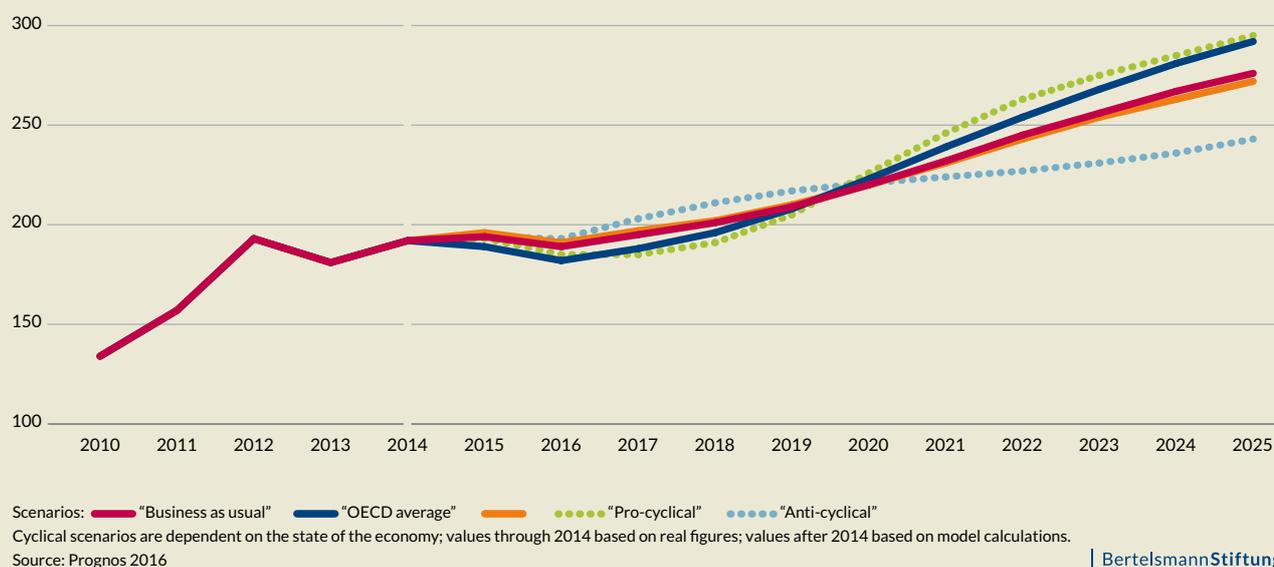


Abbildung 9: Net exports, real (2010) prices, in bn euro



on the scenario in question – either strengthen or weaken private investment overall. This means that public investments stimulate positive effects for the overall economy and so contribute to an improved investment climate for private investors. Moreover, public investments often complement private investments and thus strengthen them.

It also becomes evident that the effect of a public investment stimulus, initially quite strong, weakens over the course of time. There are two reasons for this. First, the change in public investment assumed by the scenarios develops a much greater dynamism in the years prior to 2020 than in the years after (see Figure 2). Second, this once again reflects the influence of the underlying basic scenario, which assumes a similar weakening in the growth of aggregate investments to that seen in the “business as usual” scenario.

Looking at net exports it becomes clear that the effect on exports and imports occurs in interaction with the visible impact (Figure 9). In scenarios with higher public investments, net exports are temporarily lower than in the comparative scenarios. This is partly because increased investments – particularly in the short term – lead to an increase in imports of intermediate goods.

But is also explained by the fact that the investment stimulus barely has an impact on exports in the short term. In scenarios with higher public investment due to more favorable productivity trends, and thus unit labor costs, it is only over the long term that we see a somewhat higher rate of exports. Overall, however, the differences between the scenarios in relation to the cumulative net exports is not significant. The reason for this is the mirror-image progression of scenarios before and after 2020. This means that a greater investment stimulus would presumably lead to a somewhat more volatile progression of net exports.

## Effect on public budgets

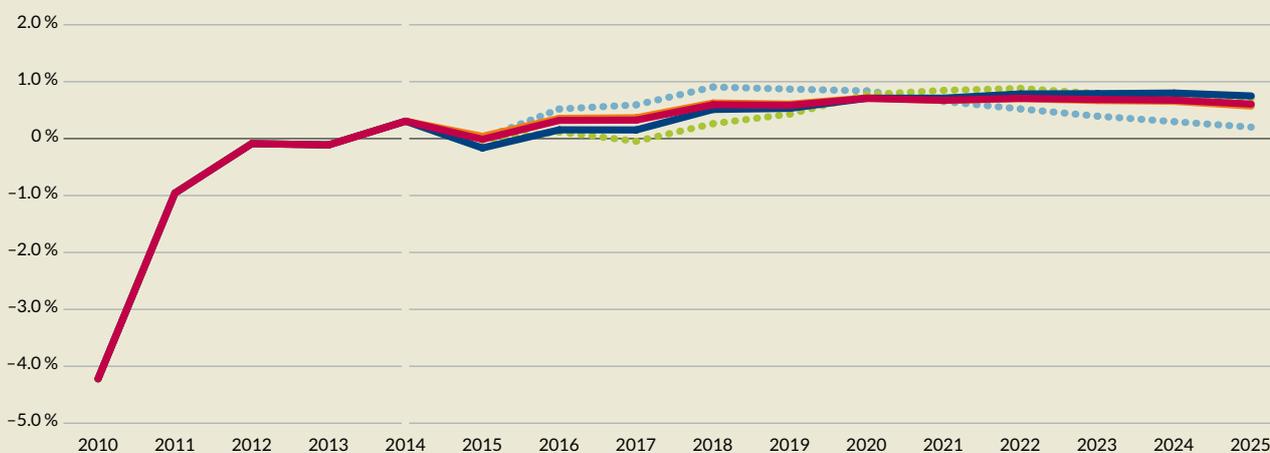
An increase (decrease) in public investment is associated with higher (lower) expenditure. However, in order to keep the state’s planned budget balance at a level that can be achieved with a decline in the government debt ratio, reciprocal financing occurs through corresponding adjustments in public consumption and in tax rates (see box, p. 11). The findings presented in this section are therefore highly dependent on the model specification of reduction of the government debt ratio. Meanwhile, in the short term – depending on the configuration of financing – there is a direct impact on the actual budget balance and the state’s debt levels.

Prior to 2020, the budget balance is greatest in the supplementary “anti-cyclical” scenario, at almost one percent (Figure 10). In this scenario, state expenditure is particularly low due to low investment. This effect is not entirely offset by the flatter progression of GDP development. It is only later that the budget balance drops below that of the other scenarios. A mirror image of this correlation is seen in the “OECD average” scenario as well as the supplementary “pro-cyclical” scenario.

While a lower budget balance has an inhibiting effect on the reduction of the government debt ratio, overall there are only minor differences between the various scenarios (Figure 11). In every scenario, there is a rapid reduction of the present debt ratio to under 50 percent in 2025, in line with the model definition in VIEW (see box, p. 11).

In relation to the state’s capital stock, the correlation between scenarios is clear. In the “pro-cyclical” and “OECD average” scenarios, there is a pronounced increase, while the capital stock in the “business as usual” scenario only exhibits slight growth (Figure 12). In the “stagnation” scenario, the capital stock remains consistently in line with targets, while a contraction of capital stock can be observed in the supplementary “anti-cyclical” scenario. Here, in

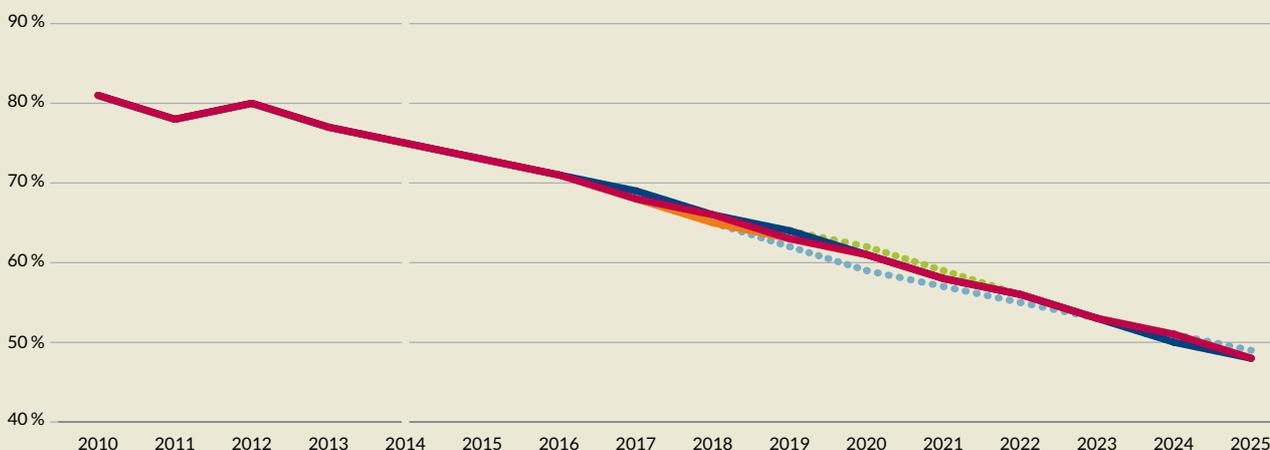
Figure 10: Nominal budget balance, as percentage of GDP



Scenarios: "Business as usual" "OECD average" "Pro-cyclical" "Anti-cyclical"  
 Cyclical scenarios are dependent on the state of the economy; values through 2014 based on real figures; values after 2014 based on model calculations.  
 Source: Prognos 2016

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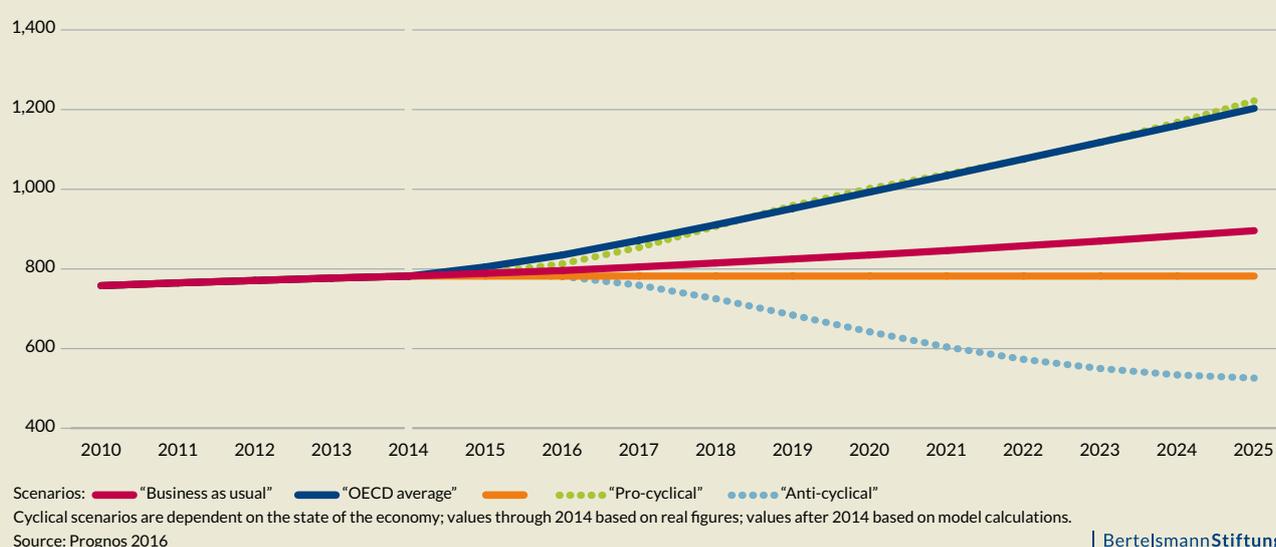
Figure 11: Nominal government debt ratio, as percentage of GDP



Scenarios: "Business as usual" "OECD average" "Pro-cyclical" "Anti-cyclical"  
 Cyclical scenarios are dependent on the state of the economy; values through 2014 based on real figures; values after 2014 based on model calculations.  
 Source: Prognos 2016

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Figure 12: State capital stock, real (2010) prices, in bn euro



parts, there is an immense difference in absolute deviations between the individual scenarios. In the event of an investment quota at the OECD level, the Germany of 2025 would have over €650 billion more in capital stock than for the supplementary scenario of anti-cyclical investment activity. In comparison to a continuation of existing German investment levels, too, the introduction of an investment rule at OECD levels would still lead to an almost €300 billion increase in capital stock by 2025.

### Impact on tax rates

In the model calculations, higher public investments are funded by higher tax revenues, among other things. In the "OECD average" scenario and the supplementary "pro-cyclical" scenario, the quota of indirect taxes increases by about 0.3 percentage points (Figure 13).

For direct taxes – the tax rates affecting private households (Figure 14) and companies (Figure 15) – a similar picture emerges. The rates increase in those scenarios that assume an expansion of public investment. In the scenarios with constant or decreasing public investment, on the other hand, tax rates remain almost constant, or decline. However, here it is important to note that the differences are in the region of just 0.5 percentage points.<sup>8</sup>

### Other effects

Along with the findings depicted, it is also interesting to note the impact on work volumes as well as the inflation rate. Here it can be seen that an increase in public investment also leads to an expansion of the work volume (Figure

<sup>8</sup> It is also apparent that there was a considerable increase in company tax rates between 2010 and 2012 – to 9.5 percent. This increase is primarily a return to pre-2009 levels, that is, prior to the considerable drop in company tax rates caused by the financial crisis.

Figure 13: Indirect tax GDP ratio, in percent

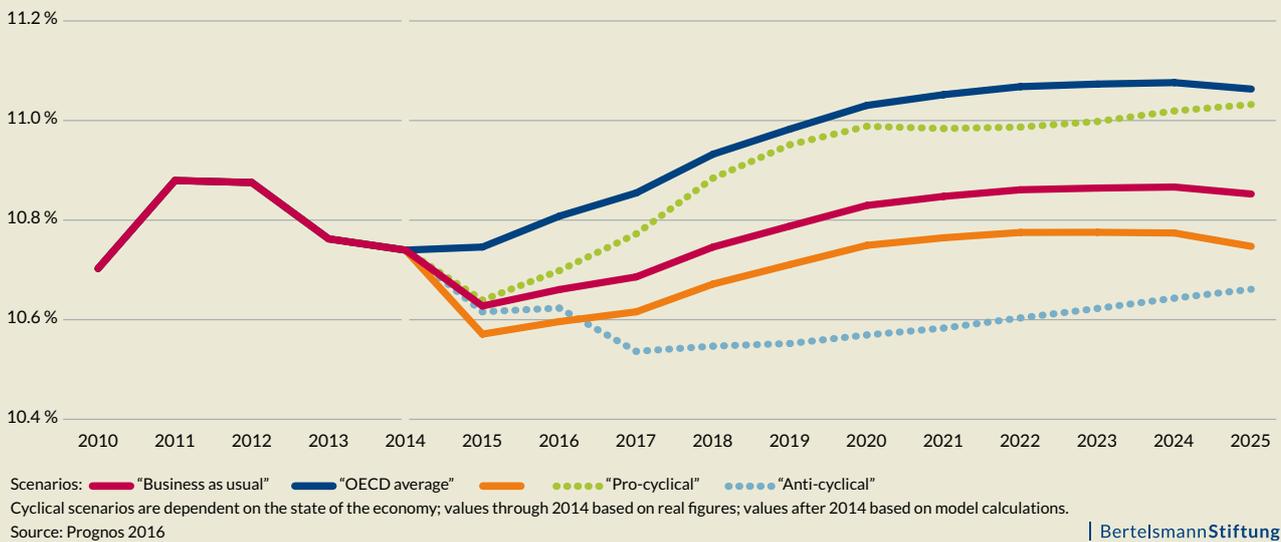


Figure 14: Private household tax rates

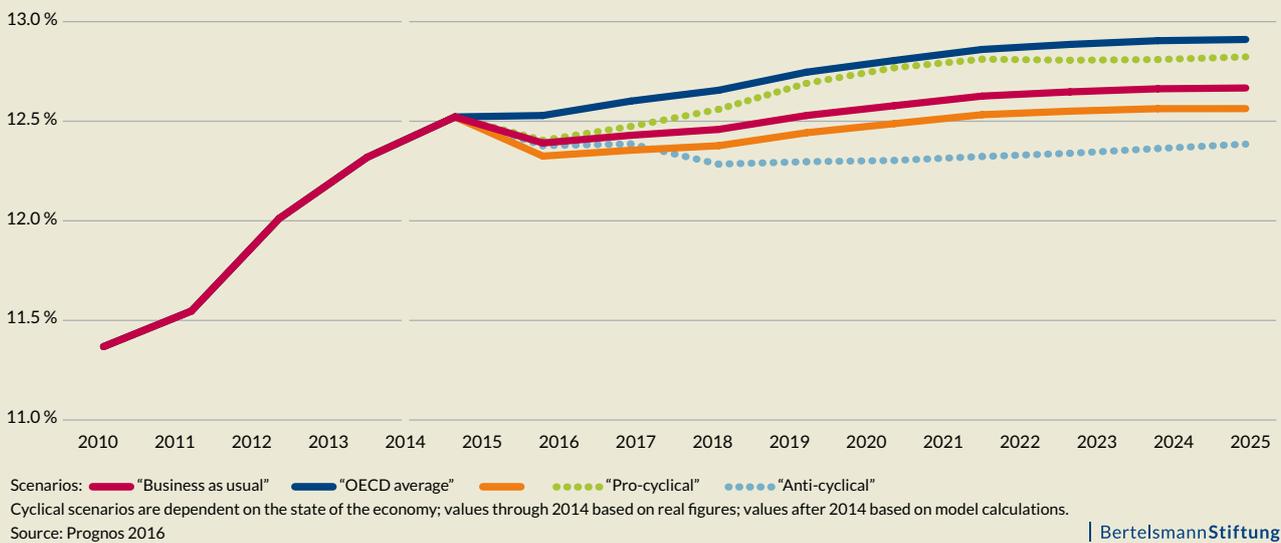
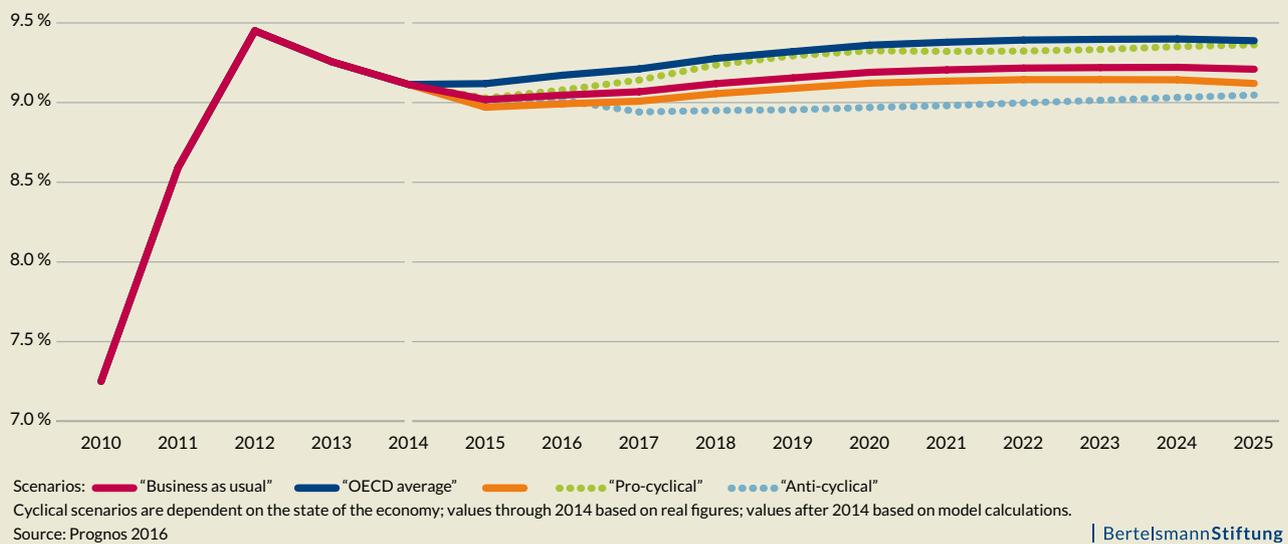
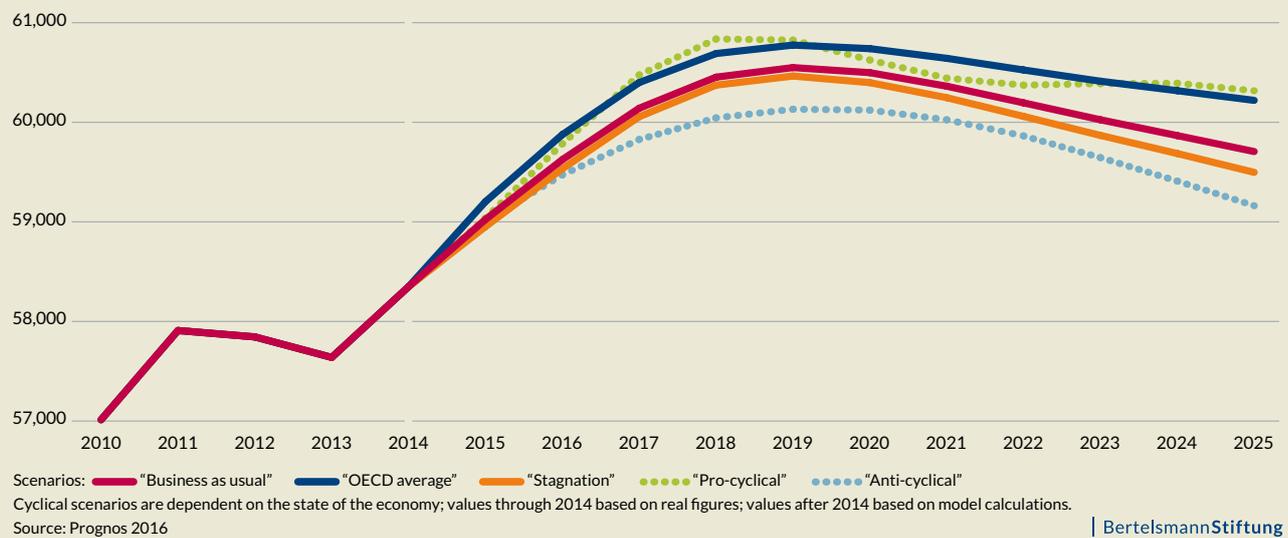


Figure 15: Corporate tax rates



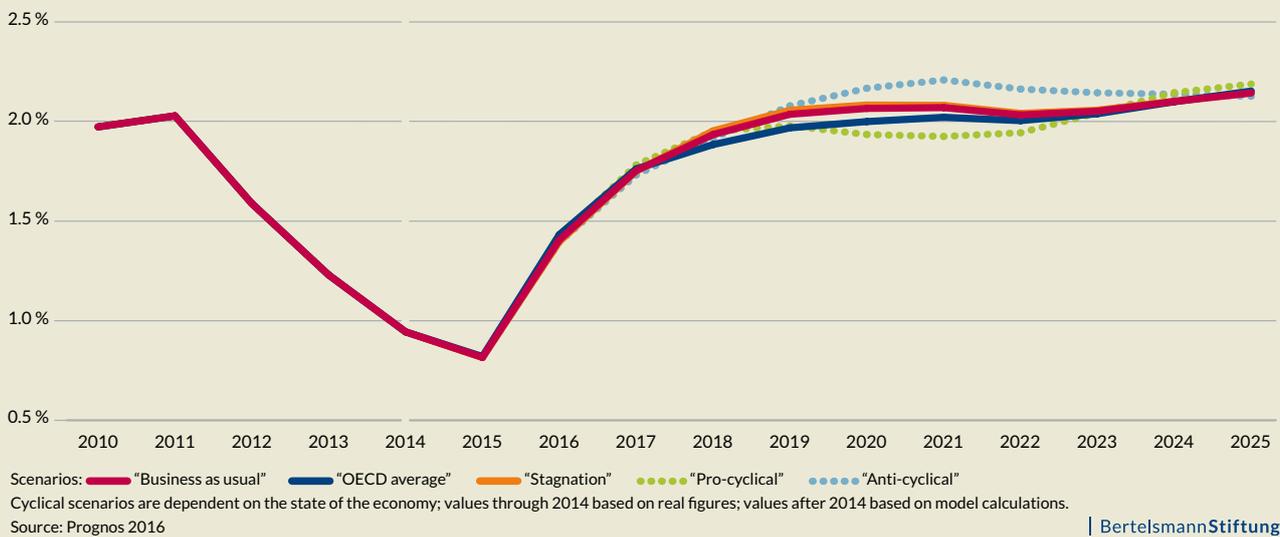
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Figure 16: Volume of work, in bn hours



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Figure 17: Inflation rate (change in deflator of household final consumption expenditure), in percent p.a.



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16). This applies despite the induced productivity increase. The additional investment goods must be created; they are then only partially exported abroad. This effect is particularly pronounced in construction investment, which entails both a high work intensity and a high domestic value creation share.

The increase in working volumes by 2020 or so, common to all the scenarios here, and the subsequent fall, is attributable to economic development but even more so to demographic development. According to the population trend for the coming years that underpins the model, there will still be an absolute increase in population in the working age between 15 and 64 before a decline sets in around 2019 (in the VIEW model the second variant is based on the 13th coordinated population projection of the Federal Statistical Office).

Inflation rate effects are also rather clear. Public investment requires a temporary increase in the inflation rate

(Figure 17). Depending on the scenario under observation, the difference in the mid-term is around 0.3 percentage points. This can essentially be traced back to the starting situation with a positive output gap. In this situation, well-utilized capacities also turn greater demand into positive price effects. Toward the end of the observation period, on the other hand, the inflation rate is consistently around 2.2 percent. This means that there is no long-term impact on changes in price levels to be observed.

## Conclusion

The calculations of the individual scenarios clearly indicate that legally binding public investment levels above the current level in Germany would lead to a relative increase in economic growth in the coming years and thus have a palpable, long-term effect on the macroeconomic growth path.

However, the differences in the effect of the individual investment paths are considerable. The simulated average GDP growth ranges between 1.6 percent p.a. in the “OECD average” and “pro-cyclical” scenarios and 1.2 percent p.a. in the supplementary “anti-cyclical” scenario. For the “business as usual” and “stagnation” scenarios, the average growth rate amounts to 1.5 and 1.4 percent p.a., respectively. Meanwhile, factors such as productivity, the volume of work and the state’s capital stock exhibit clear growth in scenarios with higher investment quotas relative to scenarios with lower quotas.

A further key finding of the study is that an investment rule needn’t conflict with the government’s existing debt rule in any way. While the scenarios with higher investment quotas initially lead to a lower state budget balance, the differences between the individual scenarios level off in the long term. The reason for this is the parallel increase in economic growth as well as the form of reciprocal financing that underpins the model. In all of the scenarios observed, the model specification, which has the present debt ratio rapidly decreasing to less than 50 percent in 2025, can be implemented without significant negative effects on consumption and economic growth.

Nevertheless, removing reciprocal financing doesn’t mean that additional public investment will be available for free, either. Higher investment quotas are accompanied by moderately higher tax rates. Initially, then, it is private households and companies that bear this burden. However, the trend of private consumption also shows that positive income effects in the case of higher public investment in the mid-term lead to dynamism in private consump-

tion above reference levels, so that private households also profit in such a scenario.

From a methodological point of view it should be noted that the impact on individual investment paths is also dependent on the form of financing chosen (see box, p. 11). Changes to the financing model would change concrete progressions without imperiling the long-term effect. Moreover, we can assume that in reality, the impact would depend to a large extent on the type of public investment as well as the level of government involved (federal, state, local authority). This cannot be examined in the scenarios with aggregated investment stimuli. Moreover, in its statement the commission of experts pointed out that capacity and skills shortages mean that funds made available are often not applied where they are actually required. It was not possible to further elaborate these aspects in this study. Finally, the role of the present output gap in progressions, particularly the two supplementary scenarios “pro-cyclical” and “anti-cyclical,” should be emphasized. Under different economic conditions and a more complex configuration of cyclical components, these investment regulations would also lead to different stimuli. In the “anti-cyclical” scenario, in particular, it is clear that a straightforward configuration of such a regulation can lead to extreme and unrealistic investment paths and that further components would therefore have to be enhanced. Along with these methodological comments, at this point it is important that we also consider the political feasibility of a commitment to public investment levels. As the commission statement rightly notes, such an obligatory investment regulation is accompanied by numerous budgetary and federal challenges. Which investments would be affected by such a rule? How would special assets be treated? What role would the states and local authorities be accorded if such a rule were implemented (Expertenkommission 2016)?

Even if all these questions cannot be wholly answered at present, it is essential that weak and therefore negative

trends in public net investment be offset with solutions.<sup>9</sup> A budgetary commitment from the state is one such solution. When considering the numerous challenges with which the country is confronted – including the effects of demographic change, the integration of refugees as well as the lack of investment in Germany’s competitiveness as a business location – it is clear that we need to pursue the issue of stabilizing public investment levels and its possible macroeconomic effects. This study is a contribution to that discussion.

<sup>9</sup> For further discussion on the future of investment in Germany, see Thöne and Krehl 2015.

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