



# SECURING THE FUTURE OF THE PUBLIC FINANCES

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This is a translated version of the original German-language chapter "Zukunftsorientierung der öffentlichen Finanzen stärken", which is the sole authoritative text. Please cite the original German-language chapter if any reference is made to this text.

## KEY MESSAGES

- Future-oriented public spending is not sufficiently prioritised by politicians. This is particularly evident in the areas of transport infrastructure, defence and education.
- The binding nature of such expenditure should be enhanced through institutional arrangements in budgetary and financial planning, which should be tailored to the respective area.
- For the transport sector, an infrastructure fund with its own revenues and, potentially, with limited credit authorisations would be appropriate. Specific minimum spending quotas based on clearly defined indicators are suitable for the areas of defence and education.

## SUMMARY

**Future-oriented public spending**, i.e. spending whose returns will accrue in the distant future, **has been low** in many areas in Germany **for years** and is low by European standards as well. This is particularly true for spending on transport infrastructure, defence and education. Public gross fixed capital formation in civil engineering has not been sufficient to **maintain** the average **level of modernisation of public transport infrastructure**. Freight and passenger transport is now being severely restricted by the outdated infrastructure, which is hampering Germany's economic growth. **In the defence sector, higher expenditure** than in the past and more efficient use of resources are **required in order to modernise equipment** and meet the NATO alliance's target. In education, Germany has recently performed worse than ever before in international comparisons, which is partly due to **low levels of public spending, particularly on early-years and primary education**.

One major obstacle to higher future-oriented expenditure is the strong **present bias in politics**, which prioritises short-term rewards for the current electorate over long-term rewards for future generations. Fiscal rules that counteract the present bias in borrowing can maintain the fiscal space for future generations, but they do not solve the problem of present bias in the choice of expenditure. Given the **increasingly limited fiscal space available**, there is also a risk that future-oriented expenditure will continue to be neglected. And, last but not least, **bureaucratic obstacles** in the form of time-consuming authorisation procedures and understaffing in parts of the public administration are likely to hamper future-oriented public spending.

Depending on the sector concerned, various institutional arrangements can **counteract this present bias**. In order to modernise the transport infrastructure and secure its long-term sustainability, a **transport infrastructure fund** could be set up **with its own revenues**, such as transport-specific levies or toll revenues. Separating this revenue from the core budget ensures that the fund does not create any additional scope for consumption expenditure. Given the need to upgrade the transport infrastructure, the fund could be provided with limited credit authorisations. **In the defence sector** the aim is to simplify lengthy procurement processes and increase the efficiency of using resources. In order to **ensure the long-term funding of the core budget**, NATO's two per cent target could be enshrined as a statutory minimum. **In education**, a **statutory minimum spending target** (e.g. based on expenditure per pupil) could be set at state level.

# I. INTRODUCTION

80. **Some of the public expenditure** – on items such as infrastructure and education – has **characteristics typical for investment**. Benefits, some of which only materialise after a long period of time, are initially offset primarily by costs. Such expenditure can be characterised as future-oriented. Political and economic problems, especially the excessive present bias in politics, mean that future benefits may be given too little weight in the political decision-making process. Expenditure whose benefits will mainly accrue in the future may therefore be systematically too low compared with expenditure benefitting the current electorate ('anti-investment bias').
81. **Significant shortcomings** have in recent years become apparent in **transport infrastructure, basic education and defence**, which clearly fall under the remit of the state. Public gross fixed capital formation in civil engineering, which largely comprises public transport infrastructure, has for decades been too low to maintain the degree of modernity. ↪ [ITEMS 98 F](#). Mobility and freight transport are now being severely restricted by the outdated infrastructure, constraining economic activity in Germany. ↪ [ITEM 440](#) Higher spending than in the past and more efficient use of resources are also required in defence in order to modernise equipment and meet the NATO alliance's target. ↪ [ITEMS 102 F](#). In education, Germany has recently performed worse than ever before in international comparative studies. ↪ [ITEM 101](#) Too low spending, particularly in early-years education, is likely to be one of the drivers of this development. ↪ [ITEM 107](#) Measures are needed in all of these areas to strengthen and stabilise future-oriented public spending.
82. Various obstacles are preventing such future-oriented public spending from being strengthened and stabilised. ↪ [ITEMS 118 FF](#). **Politicians' present bias** ↪ [ITEMS 119 FF](#) can lead to insufficient future-oriented spending. ↪ [ITEMS 124 FF](#). **Fiscal rules** can limit the stock of public debt and interest expenditure in the medium term and thus maintain the scope for future-oriented public spending. However, they do not guarantee that this fiscal space is actually used for future-oriented tasks. In the short term these rules can even cause politicians to reduce future-oriented public spending if they constrain the government's finances more than is necessary to ensure debt sustainability. ↪ [ITEMS 131 FF](#). Finally, there are **bureaucratic obstacles** to future-oriented expenditure in the form of complex permit processes and understaffing of the public administration involved, which can delay or hinder the implementation of investments. ↪ [ITEMS 134 FF](#).
83. In order to increase and stabilise **future-oriented public spending**, institutional arrangements of a highly binding nature are required to ensure that this type of spending is properly taken into account in budgeting and financial planning. The options discussed by the GCEE include the binding stipulation of a minimum level of future-oriented public spending as a share of economic output or other indicators. ↪ [ITEMS 143 FF](#). Alternatively, future-oriented public expenditure could be financed by new special funds, which could be endowed with allocated budget resources, their own revenues and, if necessary, additional credit authorisations. ↪ [ITEMS 146 FF](#). Another option is to provide public companies with

additional equity. ↘ [ITEMS 152 FF](#). A golden rule is also being discussed, but it poses challenges in terms of practical implementation. ↘ [ITEMS 158 FF](#). The available fiscal space could be expanded by conducting a continuous ex-post review and adjusting the prioritisation of expenditure. ↘ [ITEMS 168 F](#). In addition, a moderate adjustment to the debt brake, as set out by the GCEE in a policy brief in January 2024, could expand this **fiscal space without jeopardising debt sustainability** (GCEE, 2024). ↘ [ITEMS 170 FF](#).

84. **In order to prioritise future-oriented expenditure effectively**, the choice of **potential measures** should be **tailored to the respective area**. A distinction should be made between (1) whether a one-off or permanent increase in expenditure is to be achieved, (2) how clearly the expenditure can be identified and defined, and (3) at which federal level responsibility for financing and implementation lies. A transport infrastructure fund could be set up with its own revenues – stemming, for example, from the truck toll and the passenger car toll proposed by the GCEE, which should, in the medium term, compensate for the prospect of declining revenues from the energy tax on fossil fuels in the transport sector. ↘ [ITEM 492](#) The option of transferring revenues from the energy tax on fossil fuels in the transport sector and from the motor vehicle tax could be considered. ↘ [ITEM 177](#) Only such secure, continuous revenue streams can improve the long-term predictability of infrastructure spending. In order to address the backlog in the modernisation of transport infrastructure, the special fund could be provided with limited credit authorizations, although these would be subject to the general constraints of the applicable fiscal rules. For defence, the aim is to simplify lengthy procurement processes and ensure that the spending needed to meet NATO alliance’s financial target is part of the core budget after 2028. ↘ [ITEM 178](#) In education, a statutory minimum spending target – defined, for example, on the basis of minimum expenditure per pupil – could be implemented. ↘ [ITEM 179](#)
85. Overall, the **policy options favoured** by the GCEE aim to overcome the present bias and, specifically, the anti-investment bias by taking appropriate measures. The aim here is to **ensure that fiscal policy actually provides the necessary funding for future-oriented public spending**. To this end, the GCEE systematically focuses in this chapter on potential institutional arrangements of a highly binding nature designed to secure the long-term funding of future-oriented public spending. This distinguishes the analysis presented here from numerous proposals that focus primarily on ways to expand the scope for borrowing to finance public investment. Specific potential solutions are presented for the areas of transport infrastructure, basic education and defence. These options do not go beyond broadening the government’s overall scope for borrowing by introducing moderate, stability-based reforms of the debt brake.

## II. STARTING POINT: FUTURE-ORIENTED EXPENDITURE

86. **Public expenditure** can be categorised as **relating to either the present (for consumption) or the future (for investment)**. Although the revenue arising from future-oriented public expenditure is predominantly generated over the long term, [↪ ITEMS 110 FF.](#) its costs place a burden on the public finances in the present. [↪ ITEMS 124 FF.](#) The state plays a key role in the provision of public goods, such as defence and transport infrastructure, as well as goods with positive externalities, such as some education. [↪ ITEMS 87 F.](#) The majority of expenditure in these areas can be categorised as future-oriented. Public spending in these areas over recent decades has not been sufficient to maintain and modernise the relevant infrastructure. For example, the level of modernisation in civil engineering, which largely comprises public transport infrastructure, has fallen significantly. [↪ ITEMS 98 F.](#) The changing geopolitical situation in recent years requires the Bundeswehr (German armed forces) to be better equipped. [↪ ITEMS 102 F.](#) The performance of pupils at German schools is deteriorating, as the PISA results testify. [↪ ITEM 101](#) High levels of capital spending are required in order to address the deficits in these areas. [↪ ITEMS 104 FF.](#)

### 1. Identification and the state's remit

87. The public authorities in Germany perform a large number of governmental functions. One of **the main responsibilities of the state** is the **provision of 'public goods'**. This is because private-sector spending on public goods is typically inefficiently low in the absence of additional incentives (Musgrave and Musgrave, 1989, p. 42 ff.). Public goods are characterised by non-rivalry in the use of the good (Samuelson, 1954; Swan, 1956; Mas-Colell et al., 1995, p. 359). This means that the consumption of a public good by one person does not affect the use of the same good by other people. [↪ TABLE 13](#) Provision by the state is appropriate when individuals cannot be prevented from using the public good (Ostrom and Ostrom, 1977). The benefits of defence, for example, cannot be withheld from anyone within a country. Some goods, such as the provision of transport infrastructure, possess characteristics of both public and private goods. For example, it can be used without rivalry to a certain extent, but the benefit to individuals can be reduced if it is overused owing to congestion. At the same time, it is a good that can technically be excluded from use and could therefore be financed by toll systems. However, this reduces the efficient use of roads, at least as long as their use does not cause congestion.
88. **Individually and generally economically beneficial expenditure** may **deviate from the optimal level owing to various other problems**. For example, private spending on education may be too low without state intervention, as the positive externalities of better education – in particular the strong network externalities of high levels of general education – are not fully taken into account by individuals. Even private returns, for example from a university

education, may not be sufficiently reflected in private education decisions if there are private financing restrictions (‘credit rationing’), as the human capital to be acquired cannot be used as collateral for loans.

89. Expenditure is made on personnel, equipment and infrastructure such as buildings **in order to perform governmental functions. A distinction is often made between consumption expenditure and investment expenditure** (Blanchard and Fischer, 1989, p. 37 f.; Stache et al., 2007; OECD, 2023a, p. 158). Public expenditure that is used for day-to-day operations and the provision of public services and at best makes an indirect contribution to the creation of

▾ TABLE 13

**Government expenditure by area of responsibility<sup>1</sup>**

Area	Responsible	Main reason for state intervention	Utilisation of expenses by function <sup>2</sup>	Total government expenditure	Share of gross capital formation <sup>3</sup>
				in 2023	
				Billion euro	%
<b>General public services</b>	Federation, Länder, Municipalities	Securing of legal certainty and equality, public good	Public services, Executive and legislative organs, Foreign economic aid, Basic research	263.2	12.0
<b>Defence</b>	Federation	Protection of the state order, society and individuals; public good	Military weapon systems, maintenance, personnel, IT	40.1	18.3
<b>Public order and safety</b>	Predominantly Länder	Protection of the state order, society and individuals; public good	Police services, Fire-protection services, Law courts	67.3	7.5
<b>Economic affairs without transport</b>	Predominantly Federation	Externalities	General labour affairs and individual economic sectors	137.3	5.5
<b>Transport</b>	Federation, Länder, Municipalities	Externalities	Capital formation in infrastructure, Maintenance	106.6	30.5
<b>Health</b>	Predominantly Social security funds	Insurance/redistribution	Medical products, Outpatient and hospital services	315.1	0.8
<b>Education</b>	Predominantly Länder	Externalities, credit rationing problem	Pre-primary and primary education, Secondary education, Tertiary education	187.3	9.0
<b>Social protection</b>	Predominantly Social security funds	Insurance/redistribution	Sickness and disability, Old age, Survivors, Family and children, Unemployment	822.5	0.2
<b>Environmental protection</b>	Predominantly Municipalities	Externalities	Waste and waste water management, Pollution abatement	24.3	13.6
<b>Housing and community amenities</b>	Predominantly Municipalities	Externalities	Housing development, Community development, Water supply	19.2	17.3
<b>Recreation, sport, culture and religion</b>	Predominantly Länder and Municipalities	Externalities	Cultural services, Broadcasting and publishing services, Recreational and sporting services	42.0	12.4

1 – Government expenditure is allocated according to the Classification of the Functions of Government (COFOG) (Eurostat, 2019). 2 – The use of expenditure is based on the detailed classification of the functions of government (COFOG two-digit). 3 – Share of total government expenditure in the respective area of responsibility.

Sources: Federal Statistical Office, own calculations  
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new assets is considered to be consumption spending. According to the definition used here, these functions are performed by the general public administration, which includes the legislature and judiciary. Legislation, for example, sets the regulatory framework for private-sector capital formation in producer goods. A functioning judicial system provides legal certainty for private capital spending. Public order and safety mainly involves public-sector salaries, while social security funds mainly involve the payment of financial benefits to citizens. Both are highly relevant to the present. [↪ TABLE 13](#) In contrast, investment expenditure contributes (directly) to the creation of assets that can only be utilised in the future. Defence and transport infrastructure account for a high proportion of the investment allocated to the various areas of government activity. [↪ TABLE 13](#)

90. **In addition to these classic forms of capital spending there are other types of expenditure that are future-oriented** in the sense that the costs of a particular measure are largely incurred in the present while its returns largely accrue in the future. [↪ BACKGROUND INFO 2](#) This includes expenditure in the education sector. [↪ TABLE 13](#) This expenditure typically only increases potential output in the medium to long term, but generates sustainable positive returns and can therefore have a beneficial effect on economic output, the tax base and thus the long-term sustainability of the public finances.



[↪ BACKGROUND INFO 2](#)

#### Definition: future-oriented expenditure

As far as future-oriented expenditure in the economic sense is concerned, its costs are incurred in the present while its returns largely accrue in the (more distant) future. The **classic concept of investment** in the sense of the formation of physical capital is **expanded** to include **expenditure on maintaining and increasing human capital, natural capital and technical expertise**. The ‘future quota’ indicator developed for Germany’s Federal Ministry of Education and Research is based on these criteria (Heinemann et al., 2021; Bohne et al., 2024). It is calculated on the basis of the function and grouping plan in the federal budget. The public investment mentioned in the national accounts is therefore only partially suitable for presenting future-oriented public expenditure in full. On the one hand, spending on new school buildings counts as public investment, whereas the salaries of teaching staff count as consumption expenditure (Eurostat, 2014), although teaching increases future human capital. On the other hand, there may be unproductive capital formation that yields only low returns in future as defined by the national accounts.

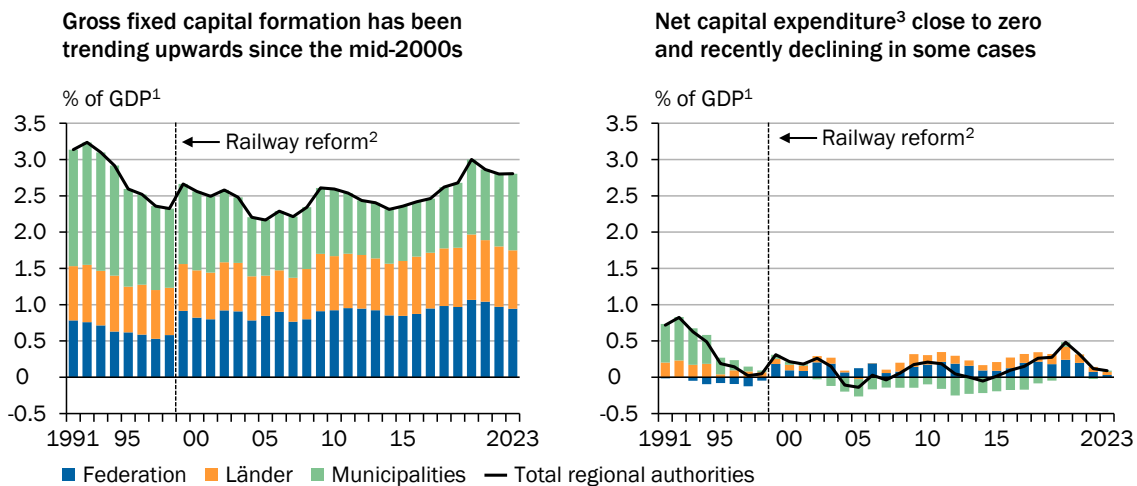
## 2. Developments

### Public investment

91. **Some future-oriented expenditure is represented by capital formation as defined in the national accounts.** [↪ BACKGROUND INFO 3](#) Although the national-accounts definition does not cover all major future-oriented expenditure, especially in education, it nevertheless has a number of advantages. Firstly, the national accounts provide a consistent database for tracking the capital

↘ CHART 35

### Public gross and net fixed capital formation



1 – Share of gross and net fixed capital formation of nominal GDP at current prices. 2 – In the national accounts, the infrastructure companies of Deutsche Bahn are allocated to the government sector following the railway reform in 1999. Accordingly, there is an increase in gross fixed capital formation by the Federation at this time. 3 – Gross fixed capital formation minus depreciation.

Sources: Federal Statistical Office, own calculations

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formation undertaken by various local authorities over time. Secondly, they allow public and private capital expenditures to be compared. Expanding public investment to include investment grants ↘ GLOSSARY also takes account of financial resources that the state provides to private actors to finance private investment, which can also have a future-oriented effect (Belitz et al., 2020).



↘ BACKGROUND INFO 3

#### Background: public investment in the national accounts

The national accounts are prepared in accordance with the rules of the European System of National Accounts (ESA 2010), which are binding on all EU countries (Eurostat, 2014). **The national accounts define public investment as gross fixed capital formation which is allocated to the public sector.** This represents acquisitions of gross fixed assets, including investment in residential and non-residential buildings (infrastructure), machinery, equipment and weapons (systems), including intellectual property such as software. **Market proximity determines whether capital formation by public companies is attributed to the public sector** in the national accounts (Schmidt et al., 2017). For example, although Deutsche Bahn AG is state-owned, only the rail network, DB Regio and DB InfraGO are allocated to the public sector. The other parts of the company are considered to be private market players, as they generate more than 50 % of their income from sales.

92. According to the national accounts, total government gross fixed capital formation, which comprises capital spending by municipalities, the federal states and the federal government, amounted to 2.8 % of gross domestic product (GDP) in 2023. ↘ CHART 35 LEFT The **level** of this share over the past three decades

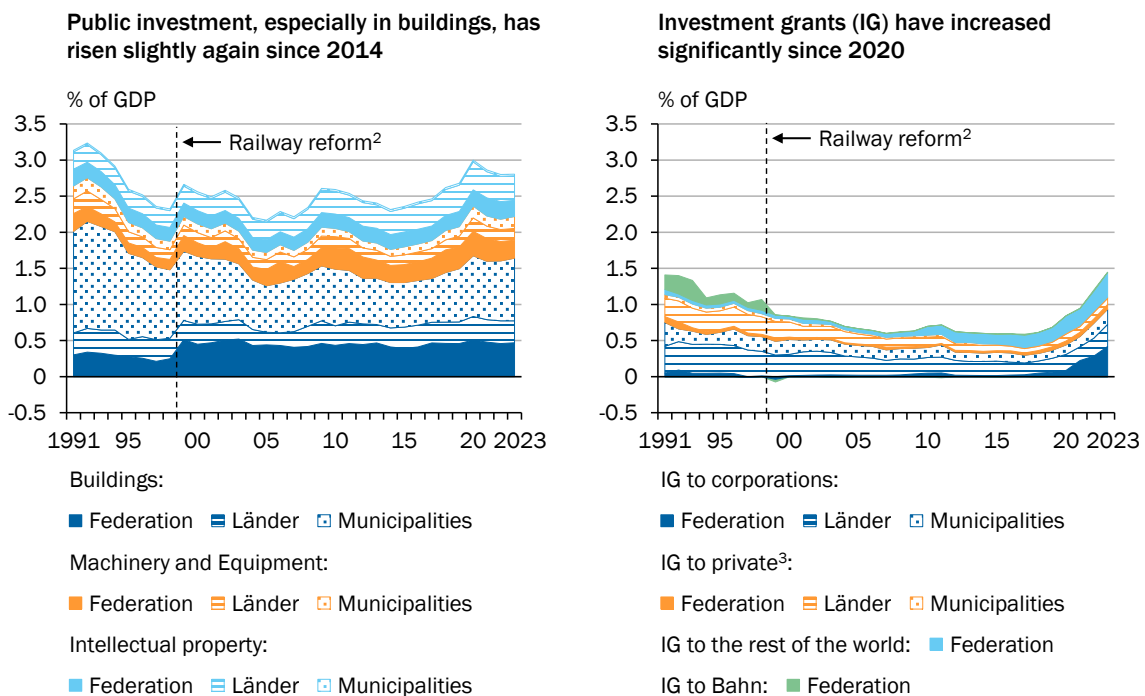


has been **strongly influenced by the investment activities of municipalities**. Their levels of gross fixed capital formation after German reunification were high, especially in the new federal states (GCEE Annual Report 1991 items 81 f.). While municipalities' decreasing share of such investment up to the mid-2000s led to a decline in total government gross fixed capital formation as a share of GDP, the subsequent increase in total government gross fixed capital formation – especially since 2017 – is due to the renewed expansion of the municipalities' investment activity. Accounting for a share of 37.6 % in 2023, **municipalities made the largest contribution to public gross fixed capital formation** that year, followed by the federal government (33.6 %) and the federal states (28.8 %).

93. **Net fixed capital formation**, for which **depreciation is deducted from gross fixed capital formation**, reveals a different picture. Public investment by local authorities over and above the pure replacement of imputed capital consumption has **been close to zero over the past two decades** and has been almost consistently negative on the part of municipalities since 2002. [↪ CHART 35 RIGHT](#) It is difficult to give a general assessment of whether investment activity is better represented by gross or net fixed capital formation. Regular maintenance, for example, can help to maintain the productivity of an asset but does not influence either gross fixed capital formation or depreciation (Eurostat, 2014,

↪ CHART 36

**Public investment and investment grants by local authority<sup>1</sup>**



1 – The capital formation and investment subsidies of social security funds are very small and are therefore not shown here. 2 – In the National Accounts, the infrastructure companies of Deutsche Bahn are allocated to the government sector following the railway reform in 1999. Accordingly, there is a shift from investment grants to the federal railway to gross fixed capital formation in construction by the federal government. 3 – Private households and non-profit institutions serving households.

Sources: Federal Statistical Office, own calculations  
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p. 85 ff.; Gühler and Schmalwasser, 2020). In addition, the net fixed capital formation reported can be reduced over time because what was previously classified as government expenditure is transferred to ‘other public funds, institutions and companies’ (sFEU), ↘ GLOSSARY which are attributed to the private sector. Disposals and depreciation then continue to be allocated to the public sector while new capital formation is allocated to the private sector (Christofzik et al., 2019).

94. **Public investment in the broader sense, i.e. gross fixed capital formation including investment grants to private actors**, has increased significantly in the national accounts since 2015 and especially since 2020.

↘ CHART 36 Total investment grants amounted to just under 1.5 % of GDP in 2023,

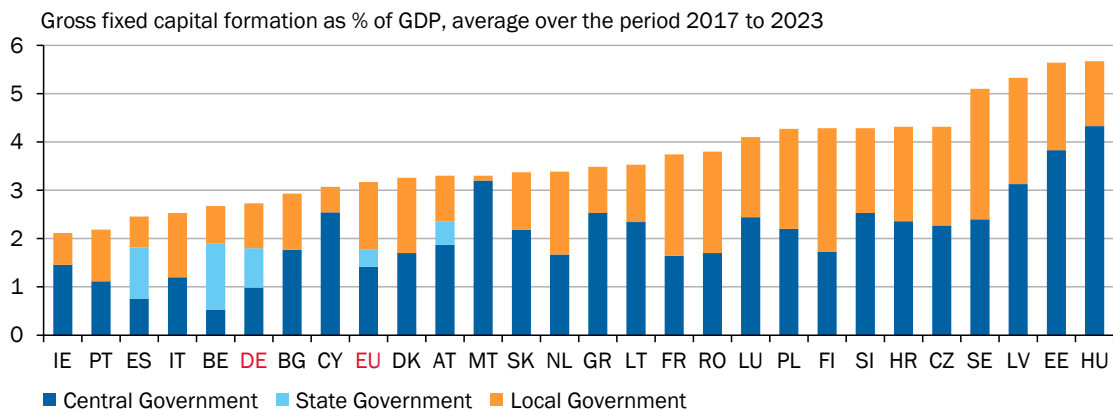
↘ CHART 36 RIGHT i.e. just under half of public gross fixed capital formation.

↘ CHART 36 LEFT The sharp rise in investment grants issued to corporations since 2020 is primarily due to expenditure from the Climate and Transformation Fund to promote energy efficiency and renewable energy in buildings. Financial aid to Ukraine will be included in investment grants to the rest of the world from 2022.

95. **A comparison with other European countries** shows that Germany’s total public gross fixed capital formation as a share of GDP is well below the European average. ↘ CHART 37 However, different institutional structures and public-sector definitions can make it difficult to compare investment levels across the EU member states – as in the case of transport infrastructure. Unlike in Germany, for example, capital spending on road transport in Austria is not counted as public fixed capital formation. This is because Autobahnen- und Schnellstraßen-Finanzierungs-Aktiengesellschaft (ASFINAG) is considered to be a private actor as a result of its toll revenues (Heimberger, 2017). The general revision of the national accounts in Germany in August 2024 means that local public

↘ CHART 37

**The level of gross fixed capital formation by local authorities is very heterogeneous in a European comparison<sup>1</sup>**



1 – IE-Ireland, PT-Portugal, ES-Spain, IT-Italy, BE-Belgium, DE-Germany, BG-Bulgaria, CY-Cyprus, EU-European Union (27 member states), DK-Denmark, AT-Austria, MT-Malta, SK-Slovakia, NL-Netherlands, GR-Greece, LT-Lithuania, FR-France, RO-Romania, LU-Luxembourg, PL-Poland, FI-Finland, SI-Slovenia, HR-Croatia, CZ-Czech Republic, SE-Sweden, LV-Latvia, EE-Estonia, HU-Hungary.

Sources: Eurostat, own calculations  
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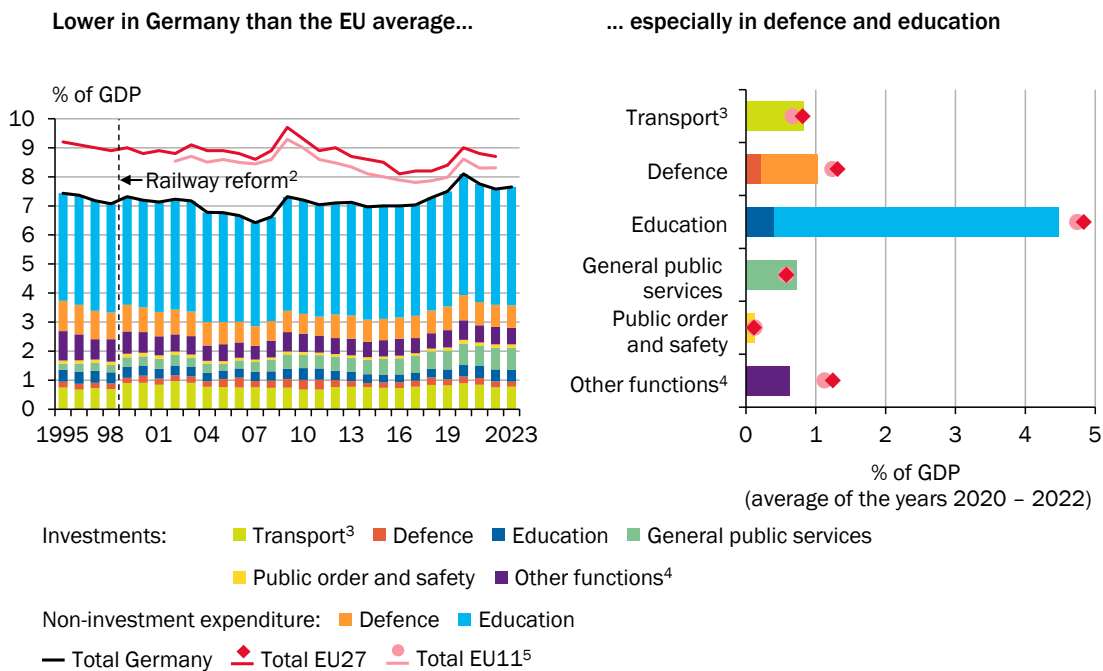
transport and parts of Deutsche Bahn have been retroactively included in the public sector from 1999 onwards (Federal Statistical Office, 2024a).

## Transport infrastructure, education and defence

96. The three governmental functions that can be particularly clearly classified as focusing strongly on the future – **transport infrastructure, basic education and defence** – currently account for a significant share of federal, state and municipal public spending at just under 25 %. Future-oriented expenditure as a share of GDP in these three areas has remained almost constant over the past few decades, with transport seeing a slight decline recently. [↪ CHART 38 LEFT](#) Overall, **future-oriented public spending** in Germany is currently higher than the average for the 2010s. Compared with other European countries, however, it was still below the EU average in the areas of defence and education. [↪ CHART 38 RIGHT](#) This also applies when the eleven founding states of the euro area are compared.

↪ CHART 38

### Future-oriented public spending<sup>1</sup>



1 – Gross investment (and other non-investment expenditure on defence and education) according to the Classification of the Functions of Government (COFOG). 2 – In the National Accounts, the infrastructure companies of Deutsche Bahn are allocated to the government sector following the railway reform in 1999. Accordingly, there is an increase in the gross investment attributed to the federal government at this time. 3 – Gross investment in the transport sector is only reported by the Federal Statistical Office for Germany from 2000 onwards and by Eurostat for the EU27 from 2001 onwards. Prior to this, gross investment in transport is approximated using the the share of gross investment in economic affairs.

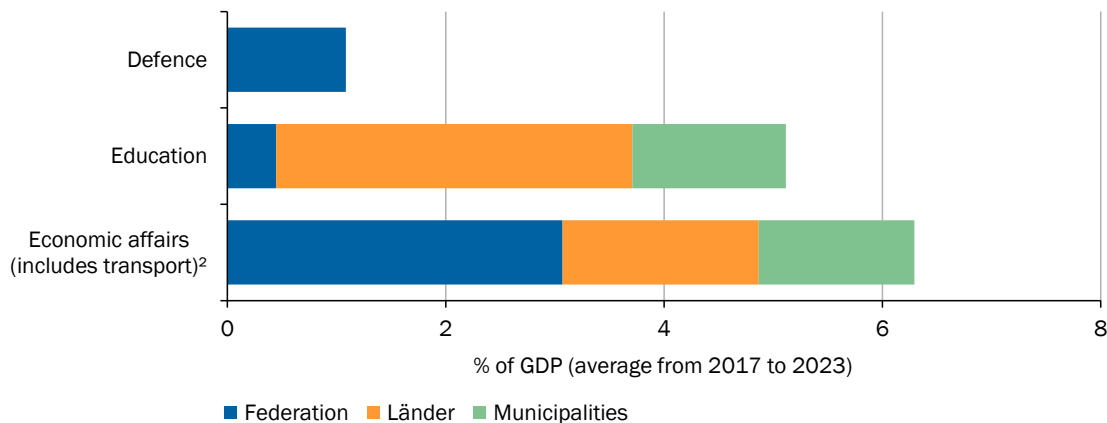
4 – Economic affairs excluding transport; environmental protection; housing and community amenities; recreation, sport, culture and religion; health; social protection. 5 – Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain. Data from 2002 onwards.

Sources: Eurostat, Federal Statistical Office, own calculations

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↘ CHART 39

**Selected government expenditure differs significantly in the areas of responsibility by regional authorities<sup>1</sup>**



1 – Government expenditure is allocated according to the Classification of the Functions of Government (COFOG) (Eurostat, 2019). Expenditure between regional authorities is not consolidated. 2 – For transport (COFOG two-digit) there is no breakdown of expenditure by regional authority. Public expenditure on transport accounts for just under 43 % of general government expenditure in the economic affairs sector on a long-term average. Gross fixed capital formation for transport accounts for as much as 74 % of gross fixed capital formation in the area of economic affairs.

Sources: Federal Statistical Office, own calculations

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**97. The contributions of the various local authorities to future-oriented public spending differ significantly** in the three areas of transport, education and defence. ↘ CHART 39 The federal government bears sole responsibility for defence. Responsibility for funding the public education system is generally shared by the federal states and the municipalities (KMK, 2021). While the municipalities bear the operating costs and, generally, also the cost of non-teaching staff in the school system, the education ministries of the federal states are responsible for the personnel costs relating to teachers. Public daycare centres are financed by the respective municipalities, the federal state and parental contributions. However, the federal government performs a funding role for digital technology – for example as part of the DigitalPakt Schule (BMBF, 2019). Transport infrastructure, which is assigned to the economic affairs area, is financed in roughly equal parts by all three levels of local authorities. ↘ CHART 39 This means that various decision-makers can be involved in the construction and maintenance of transport infrastructure. The federal government is responsible for federal transport routes, which include motorways, federal roads, federal railways and federal waterways (Deutscher Bundestag, 2020), while the federal states and municipalities are responsible for regional road and rail routes, such as local public transport.

**98. Investment in transport infrastructure forms part of public investment in construction**, which amounted to just under 1.7 % of GDP in 2023. ↘ CHART 36 LEFT One-third of this amount was spent on building construction and almost two-thirds on civil engineering, which includes much of the transport infrastructure such as roads, tunnels and bridges. Public housing construction plays only a minor role, accounting for less than 3 % of public gross fixed capital formation in construction. Public investment in new civil engineering works over

the past ten years has on average been twice as high as commercial investment in new civil engineering works, thus playing a decisive role in the economic development of this sector. Nevertheless, public investment in civil engineering works has not been high enough to maintain the level of modernisation in public civil engineering. [↪ BOX 9](#)

**99. The standard of modernisation of public transport infrastructure has deteriorated significantly, with almost half of the bridges on federal trunk roads in particular being in only adequate condition or worse.**

[↪ BOX 27](#) Around 72 % of the bridges rated as sufficient or worse were built before 1985 (BAST, 2024) and are therefore not designed for today's traffic load, meaning that they need to be maintained or replaced. [↪ ITEM 442](#) The rail network will require extensive upgrading over the next decade in order to improve its modernisation. [↪ ITEM 443](#) [↪ BOX 27](#) The poor condition of the transport infrastructure is increasingly causing congestion on motorways and low reliability in rail transport, which is hampering freight transport and economic activity. [↪ BOX 28](#)

↳ BOX 9

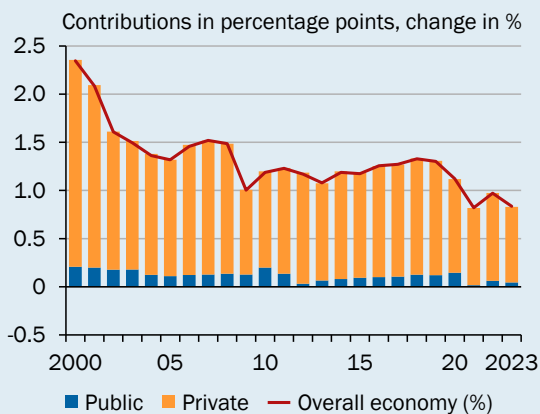
**Background: public capital stock and standard of modernisation**

The public capital stock reflects the value of public fixed assets (GCEE Annual Report 2023 items 74 ff.). A distinction is made here between gross and net fixed assets. Gross fixed assets at replacement cost include all fixed assets usable in the production process at the end of the year at their replacement value for as long as they are usable. Gross fixed assets at replacement cost thus represent the acquisition cost of the capital stock if it had to be completely repurchased as new in the respective reporting year. The change in gross fixed assets is calculated by offsetting acquisitions (gross fixed capital formation) and disposals of fixed assets, taking into account revaluation gains/losses (Gühler and Schmalwasser, 2020). According to this definition, the public capital stock in Germany at the end of 2023 represented around 96 % of GDP and thus 14 % of the aggregate capital stock. In contrast to gross fixed assets, net fixed assets at replacement cost take account of the depreciation charged since the date of investment. In the national accounts this depreciation represents the assets' imputed loss in value due to use.

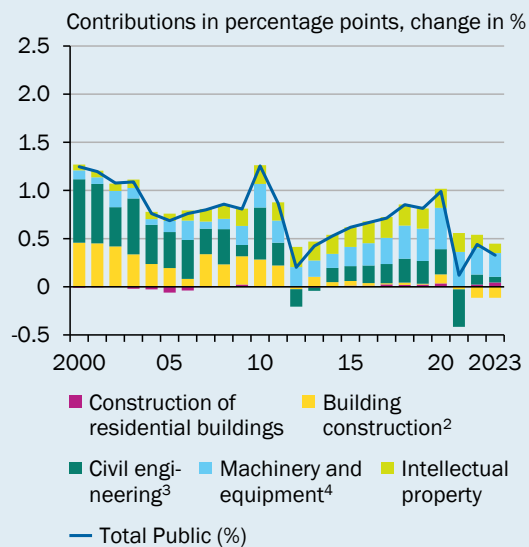
↳ CHART 40

**Contributions to growth of the capital stock<sup>1</sup>**

Contributions to growth from the state capital stock have recently been low



In particular, contributions to growth from public-sector building construction and civil engineering have decreased



1 – Measured as gross fixed assets. Price-adjusted. 2 – Building construction is part of the construction of non-residential buildings. It includes public buildings for administration, teaching and research or events. 3 – Civil engineering is part of the construction of non-residential buildings. It includes large parts of the transport infrastructure. This includes objects that run close to the ground line (e.g. roads) or below it (e.g. tunnels). Bridges are also often categorised as civil engineering. 4 – Including military weapon systems.

Sources: Federal Statistical Office, own calculations  
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Although the aggregate capital stock – measured as gross fixed assets at replacement cost – has grown in price-adjusted terms over recent decades, its trend growth has declined.

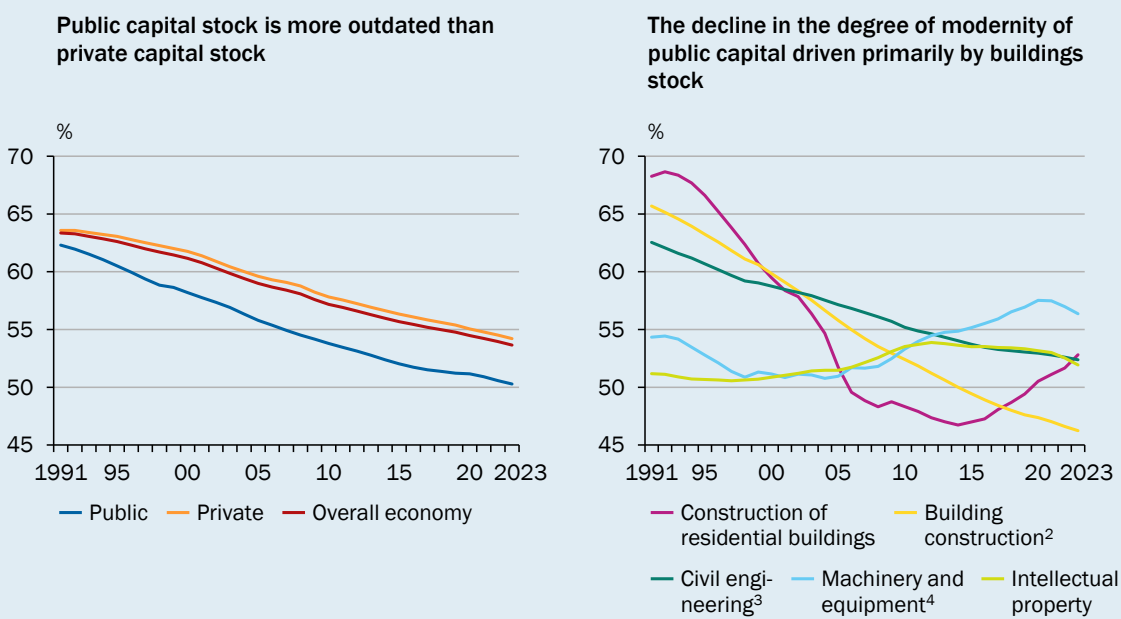
↳ CHART 40 LEFT The growth contributed by the public capital stock to the aggregate capital stock has been very low, especially since 2012, and on average has contributed less to aggregate economic growth than in previous years. In particular, the contributions made by public building construction and civil engineering to the growth of the public capital stock have been

significantly lower since 2012. [↪ CHART 40 RIGHT](#) At the same time, however, non-residential construction, which is the sum of building construction and civil engineering, accounts for the majority of the public capital stock.

**Although the public capital stock has grown in recent decades, its standard of modernisation has deteriorated significantly.** [↪ CHART 41 LEFT](#) The level of modernisation of the capital stock is the ratio of net fixed assets to gross fixed assets and thus indicates the proportion of capital stock that has not yet been depreciated. The lower the level of modernisation, the greater the proportion of capital that has already been in use for some time. The standard of modernisation of the public capital stock has deteriorated primarily owing to the sharp decline in the level of modernisation of public non-residential buildings, which include building construction and civil engineering and accounted for almost 84 % of gross public fixed assets in 2023. [↪ CHART 41 RIGHT](#) Of this total, slightly less than half is accounted for by buildings, which include administrative and school buildings. The standard of modernisation of buildings has declined particularly sharply. However, the level of modernisation of public civil engineering works, which largely consist of public transport infrastructure, has fallen by almost 10 percentage points since 1991.

[↪ CHART 41](#)

### Degree of modernity<sup>1</sup>



1 – The degree of modernity of the capital stock is the ratio of net fixed assets to gross fixed assets. The fixed assets are measured using replacement cost. 2 – Building construction is part of the construction of non-residential buildings. It includes public buildings for administration, teaching and research or events. 3 – Civil engineering is part of the construction of non-residential buildings. It includes large parts of the transport infrastructure. This includes objects that run close to the ground line (e.g. roads) or below it (e.g. tunnels). Bridges are also often categorised as civil engineering. 4 – Including military weapon systems.

Sources: Federal Statistical Office, own calculations  
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**100.** Educational institutions in Germany are predominantly publicly funded, and expenditure on them accounts for a significant proportion of the government’s budget. Public spending on education amounts to 4.6 % of GDP, which means that around **one in five euros spent by the federal government, federal states and municipalities is spent on education.** Education expenditure is

a particularly significant budgetary item here, accounting for 36.4 % of all expenditures by the federal states and 14.7 % of spending by municipalities (Federal Statistical Office, 2023).

- 101. There are numerous structural challenges and a need for action in early-years and school education**, particularly with regard to equal opportunities, digital services, the integration of children from migration backgrounds, increasing underachievement and limited early-years care (GCEE Annual Report 2021 items 342 ff.). Various studies also point to the need to renovate school buildings (Brand and Salzgeber, 2022a; Dullien et al., 2024). These problems manifest themselves in deteriorating performance (Wößmann et al., 2023), as evidenced by the latest PISA results in particular: in the 2022 survey, German pupils performed worse than ever before in maths, science and reading (OECD, 2023b). According to the STEM Young Talent Barometer, the proportion of underachieving children in maths has almost doubled since 2011 (acatech and Joachim Herz Stiftung, 2023). Some of these challenges are likely to be due to restrictions on the use of educational data and associated shortcomings in the evaluation of education policy (GCEE Annual Report 2023 items 537 and 543) as well as incorrect prioritisation of spending. However, the tendency to spend too little on education, especially in the early-years sector, is also likely to contribute to these poor educational results (GCEE Annual Report 2021 items 363 and 372). The urgency of solving these problems is further intensified by the increasing shortage of skilled labour in Germany.
- 102. Defence spending** has been well below NATO's two per cent target over the past decade, amounting to 1.2 % of GDP annually. In 2014 the NATO countries committed to moving towards this target within a decade (NATO, 2014). Even in 2024, excluding the special fund, this spending is only expected to be just under 1.7 % of GDP and therefore more than €13 billion below NATO's two per cent target. Measured against this target, Germany **would have had to spend** a cumulative €618 billion **more** on defence since 1989 (Dorn and Schlepper, 2023). Wolff et al. (2024) show that the number of military weapons systems in Europe, and particularly in Germany, has fallen sharply. There have been **budget cuts** not only in **capital formation in equipment but also in consumption expenditure on personnel and maintenance**. The Bundeswehr special fund set up in 2022 is intended to temporarily provide additional financial resources to offset at least part of this investment backlog. [↘ BACKGROUND INFO 4](#) In 2024 the regular defence budget will be increased by just under €20 billion from the special fund (BMF, 2024a, p. 72). This represents just under 0.5 % of GDP. Together with other expenditure items in the federal budget, which include financial support for Ukraine (Bardt, 2024), defence spending of €90.6 billion now accounts for over 2.1 % of GDP for the first time in decades (NATO, 2024).





➤ BACKGROUND INFO 4

### Background: Bundeswehr special fund

In addition to the regular defence budget the Bundeswehr special fund has **borrowing powers amounting to €100 billion to finance defence expenditure**. It is expected to be almost fully utilised by the end of 2027 (BMVg, 2024). It was set up with its own credit authorisations through a special arrangement in Germany's Basic Law, so it is independent of the federal budget and completely exempt from the debt brake. Repayment of its borrowings is planned to start no later than 2031.

103. The **Bundeswehr special fund** is intended to enable **public investment in equipment and military weapons systems** that have become necessary owing to the changing geopolitical situation. However, any increase in physical capital also requires ongoing maintenance and personnel for operation, the cost of which cannot be financed by the Bundeswehr special fund.

### Quantification of requirements

104. In recent years, deficiencies have come to light in the areas of transport infrastructure, education and defence, [➤ ITEMS 96 FF.](#) which make it necessary to increase future-oriented spending in these areas. Metrics such as the level of modernisation can serve as a starting point for assessing what needs to be done. Although a large number of studies provide estimates of the financial requirements in the areas mentioned (e.g. Bardt et al., 2019; Dullien et al., 2024; Heilmann et al., 2024), **it is very difficult to precisely quantify the additional government spending that is socially desirable**. Estimated spending requirements may vary, depending on the assumptions made about the strength of second-round effects, as a result of which public spending either supplements or crowds out private spending. [➤ ITEMS 110 FF.](#) In addition, some of the available estimates are based on surveys of voluntary participants. Given the self-selection of participants, these estimates may be biased upwards (Christofzik et al., 2019; GCEE Annual Report 2019 item 557). Furthermore, the follow-up costs of public investment are rarely taken into account. For example, the construction of additional buildings for schools or daycare centres also means higher public expenditure on their maintenance. The same applies to public investment in new software, which can incur retraining costs for staff. It is unclear to what extent this has been taken into account in previous studies.
105. **Political objectives** and the **instruments used** can also have a **decisive impact on the estimated need for future-oriented public spending** in various areas. For example, there may be different objectives with regard to road expansion, the scope of childcare or the strength of the German armed forces. In many areas in which functions can be performed by both the state and the private sector, the need for public funds is partly determined by the anticipated activities of private actors. Their activities and the need for public spending in turn depend on the government's mix of instruments. For example, incentives to transition to a carbon-neutral economy can be provided either through subsidies or through carbon pricing (GCEE Special Report 2019 items 109 ff.). While

subsidies incur additional expenditure, carbon pricing generates higher government revenue.

106. Additional expenditure is required for transport infrastructure, basic education and defence in particular. Cumulatively this could well amount to hundreds of billions of euros over the next five years alone. **Capital investment in transport infrastructure has for decades been too low to maintain the necessary level of modernisation**, with the result that the inadequate infrastructure is now constraining passenger and freight transport. [↪ ITEMS 98 F.](#) [↪ BOX 9](#) Raising the level of modernisation of transport infrastructure by one percentage point in 2023 would require additional one-off capital spending of around €40 billion as well as around double this amount over the next five years in order to maintain this level of modernisation. [↪ BOX 9](#) Updating the calculations done by Bardt et al. (2019), Dullien et al. (2024) estimate the requirement for the next ten years to be €30.4 billion per year.
107. There is also room for improvement in **the education sector**. [↪ ITEMS 100 F.](#) The GCEE has previously discussed numerous **potential approaches to overcome the challenges** in the education system, particularly in the area of early-years education (GCEE Annual Report 2021 items 342 ff.). Other committees and researchers have also pointed out a large number of necessary measures (Gathmann et al., 2019; Wößmann et al., 2023). Heilmann et al. (2024) estimate the funding required for the expansion of early-years care alone to be €30.4 billion by 2030. In an earlier study, Bardt et al. (2019) estimated that this would require €50 billion over ten years. According to Dullien et al. (2024), €34.7 billion will be needed over the same period to upgrade universities, while Heilmann et al. (2024) and Brand and Salzgeber (2022a) put the cumulative investment backlog in the school sector at €57.1 billion and €45.6 billion respectively.
108. After decades in which Germany benefited from the peace dividend and spent significantly less than 2 % of GDP on **defence**, [↪ CHART 38](#) there is also **strong pent-up demand for investment** in the rapidly changing geopolitical environment (Bardt, 2023; Dorn and Schlepper, 2023). [↪ ITEM 102](#) Given the long-term investment-to-consumption ratio of 1 to 3 in defence spending, the €618 billion reduction in defence spending since the end of the Cold War [↪ ITEM 102](#) would equate to almost €155 billion in underinvestment. Heilmann et al. (2024) estimate the Bundeswehr's **additional** funding requirements at between €52.3 billion and €103.1 billion by 2030, taking into account the latest planning and the resources available from the Bundeswehr special fund. [↪ BACKGROUND INFO 4](#)
109. In order to meet the aforementioned expenditure requirements in the three areas described, **total government spending in the various areas does not necessarily have to be increased to the same extent as the respective expenditure requirements**. Better prioritisation of spending, including the cancellation of the most inefficient expenditure, can improve the use of available financial resources and reduce the total expenditure required. [↪ ITEMS 140 FF.](#) Non-financial measures – such as improved monitoring, better legal enforcement of construction law for major infrastructure projects [↪ ITEM 495](#) and greater

cooperation between the federal states in the area of education (GCEE Annual Report 2021 items 37 f.) – can also make a valuable contribution here.

### 3. Macroeconomic impact

- 110. Public spending** can either **crowd in private spending or crowd it out**. Public spending – including that which is future-oriented – makes particular sense from a growth policy perspective if it does not crowd out private spending. In order to estimate the effects of additional future-oriented public spending [↘ ITEMS 104 FF.](#) it is therefore crucial to consider the impact from a macroeconomic perspective. The short-term economic effects of public spending [↘ ITEMS 111 FF.](#) should be distinguished from the long-term growth impact. [↘ ITEMS 115 FF.](#) ‘Fiscal multipliers’ can be used to estimate this impact. [↘ ITEMS 113 F.](#) They typically indicate by how many euros GDP rises after government spending has been increased by one euro. Firstly, the short-term impact on GDP in the year following the government spending shock can be calculated. And, secondly, the cumulative change in GDP over a longer time horizon can be calculated, which gives rise to the longer-term fiscal multiplier.
- 111. Higher government spending has the effect of boosting aggregate demand in the short term** (Blanchard, 2003, p. 139 f.). The associated short-term impact on GDP depends crucially on how private demand reacts. The additional demand from the state increases price pressures where there is full employment. A monetary policy geared towards price stability would react to this by raising interest rates, especially when capacity utilisation is high, and thus dampen private demand for consumer goods and capital equipment (‘interest rate crowding-out’), although the effect in a monetary union is likely to be significantly less if the price pressures only occur in one member state.
- 112. In addition, the macroeconomic impact depends on how government spending is funded.** If government spending is financed through taxes, for example, the interest rate crowding-out effect could be less significant than if it is funded through debt. If additional **government spending is tax-funded**, however, households will be able to afford less owing to their higher taxation (‘wealth crowding-out’). The economic impact then comprises the sum of the effects of additional government spending and additional taxes. The dampening economic effect of tax increases does not apply if government spending is funded by borrowing.

However, **government spending financed by debt** can be **indirectly associated with wealth crowding-out**. Since the debt has to be repaid in the future, rational households could already take the higher taxes expected in the future into account in their consumption/saving decision in the present and increase their saving (Barro, 1974). Deviations from this ‘Ricardo-Barro equivalence’ are possible for various reasons (Bernheim, 1989; Seater, 1993; Romer, 2006, p. 569 ff.). Saving can remain unchanged in the present if, in the case of funding through borrowing, future generations have to bear the higher taxes expected (Blanchard and Fischer, 1989, p. 129 f.). [↘ ITEM 119](#) It may also be the case

that households do not save additionally (Hubbard and Judd, 1986). Furthermore, deviations from Ricardo-Barro equivalence are also plausible, for example, if there is incomplete information on fiscal policy (Reiter, 1999; Kaplan et al., 2018). In these cases the short-term dampening effect of crowding-out wealth is less significant for funding through borrowing than for funding through taxes.

- 113.** The fiscal multipliers estimated in the literature vary considerably. **Fiscal multipliers of aggregate government spending** are estimated to be positive in the literature but **tend to be less than or equal to one** (Ramey, 2019). This means that raising government spending by one euro increases GDP but does not stimulate additional private activity and tends to crowd it out slightly, so GDP grows by less than one euro. [▶ ITEMS 110 F](#). Empirical studies show that private investment tends to be partially crowded out if there is an increase in aggregate government spending, i.e. the sum of public consumption and public investment (Blanchard and Perotti, 2002; Mountford and Uhlig, 2009; Ramey, 2011). However, the size of the fiscal multipliers depends significantly on the type of government spending and the persistence of the resulting fiscal shock. A merely temporary increase in government spending has more modest macroeconomic effects.
- 114.** The **multipliers estimated for public investment tend to be higher** than those for aggregate government spending. Empirical studies show that the long-term multiplier for additional government investment is often estimated to be greater than one (Auerbach and Gorodnichenko, 2012; Ilzetzki et al., 2013; Ciaffi et al., 2024). Gechert (2015) underpins this result with a meta-regression. However, Boehm (2020) shows empirically that a temporary increase in public investment can, in turn, have a small impact on GDP. The long-term multiplier for investment in research and development is particularly high (Deleidi and Mazziucato, 2021; Ciaffi et al., 2024). In addition, the multiplier for public investment tends to be higher during periods of economic weakness (Abiad et al., 2016). Belitz et al. (2020) empirically show in the case of Germany that public investment in property, plant and equipment can cause significant crowding-in of private investment in the short term.
- 115.** Investment in the public capital stock increases **potential output in the long term**. The **elasticity of production** [▶ GLOSSARY](#) is used as **a measure of the relationship between** the public capital stock and potential output. Using a meta-regression, Bom and Ligthart (2014) estimate the long-term production elasticity of the public capital stock to be 0.122. For Germany, this would imply a return on the public capital stock – measured in terms of gross fixed assets – of between 9.4 % and 13.8 %. This tends to be offset by lower capital utilisation costs, i.e. interest and depreciation within a year. According to an estimate by the GCEE, these have averaged just under 9.5 % over the long term. Investment in the public capital stock would therefore tend to be categorised as profitable.
- 116.** Estimates of production elasticity also vary according to the type of capital goods, with elasticities depending heavily on the amount of capital stock and its average useful life. Analysis conducted by the RWI for Germany and based on

data from the federal states estimates the **production elasticity of transport infrastructure in Germany** to be 0.04 to 0.08 (Barabas et al., 2010).

Kemmerling and Stephan (2002) use German city data to determine a production elasticity of 0.170 for local public infrastructure, while Krebs and Scheffel (2016) calculate a production elasticity of 0.053 for public investment in transport infrastructure and the expansion of digital infrastructure in Germany.

- 117. Investment expenditure** that increases the public capital stock can result in **additional private investment** being incentivised. The macroeconomic **effects of public consumption expenditure and investment spending** can be analysed and compared in a dynamic stochastic equilibrium model for Germany. [↪ BOX 10](#) Contrasting with a purely empirical approach, the model is able to map micro-founded transmission channels of the various types of public spending. It is thus possible to analyse whether public spending stimulates private investment. The model shows that temporarily expanding public investment increases GDP significantly more than boosting public consumption expenditure. One reason for this is that the productivity of the private capital stock rises if the public capital stock is expanded, thus stimulating private investment.

[↪ BOX 10](#)

**GCEE analysis: a quantitative assessment of the impact of public spending in Germany**

The effect of public investment on GDP can be categorised within a **dynamic stochastic equilibrium model** (DSGE model) and compared with the effect of public consumption expenditure. The model also indicates the extent to which public spending can crowd out or stimulate private spending.

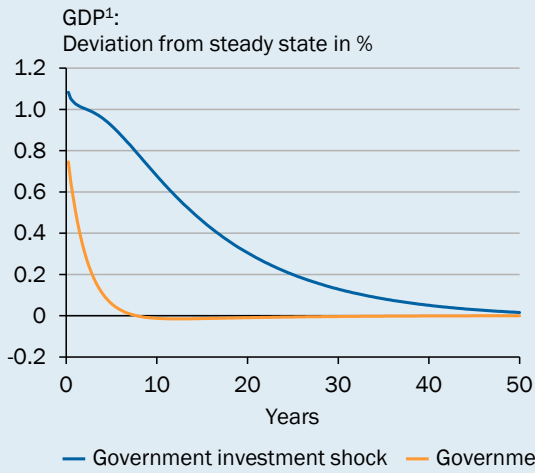
The **multi-sectoral model of an open economy** by Hinterlang et al. (2023), which is calibrated for the German economy, is used for this analysis. Positive temporary public spending shocks, each of which simulates an increase in public investment or public consumption expenditure of 1 % of long-term (i.e. steady-state) GDP, stimulate total economic output. [↪ CHART 42 LEFT](#) The effects are particularly significant for public investment. These stimulate private investment, as private capital becomes more productive by increasing the public capital stock. [↪ CHART 42 RIGHT](#) By contrast, private investment falls following an increase in public consumption expenditure. As the latter has no productivity-enhancing effects on the private capital stock within the model and output is not expanded sufficiently, less private investment takes place within the model in order to meet additional public consumption demand and smooth private consumption. Consequently, the overall effect on GDP is significantly lower than with public investment. The outcomes depend on the persistence of shocks. Shocks are modelled in such a way that public spending rises sharply, declines gradually – with a persistence of 0.9 – and returns to roughly its long-term level after around ten years. The more persistent the public investment shock, the greater the crowding-out effects. However, these are more than offset by the positive impact on productivity.

**In times of labour shortages**, however, **public spending could have a smaller impact on GDP** than if a sufficient number of workers were available. To shed light on this aspect, labour supply elasticity was lowered in an alternative simulation. However, the impact on the outcome is small owing to numerous interacting effects within the model and the nature of the production function.

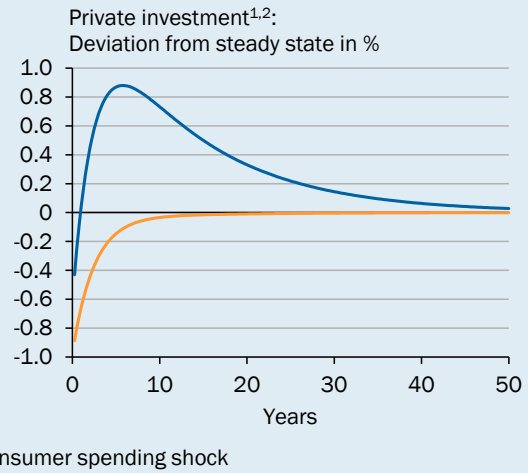
▸ CHART 42

**Public spending in a quantitative model**

**Public capital formation has a more expansive effect than public final consumption expenditure**



**Private investment is stimulated by public investment**



1 – Results are based on quarterly calculations. 2 – In the steady state, private capital formation amounts to around 23.9 % of GDP.

Sources: Hinterlang et al. (2023), own calculations  
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## III. CHALLENGES

118. **More future-oriented expenditure is needed** in various areas. [↘ ITEMS 104 FF](#). However, there are many obstacles to any such increase, some of which vary depending on the area of expenditure and need to be addressed accordingly.

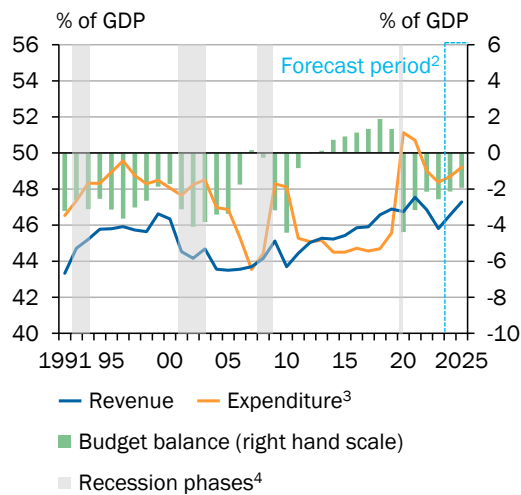
### 1. Political economy problems

119. The phenomenon of **present bias** describes political decision-makers' tendency to **favour** measures that meet **short-term goals rather than those that achieve long-term objectives** (Yared, 2019). This leads to an underestimation of the costs of consumption expenditure, such as those that can arise from long-term increases in public debt. In contrast, the positive effects of future-oriented expenditure, the returns on which only accrue in the future, are insufficiently taken into account. There are many causes of this phenomenon, as discussed in the literature. Among other things, the existence of fiscal illusion, [↘ GLOSSARY](#) a political 'tragedy of the commons', [↘ GLOSSARY](#) elderly electorates and frequent changes of government resulting from limited terms of office can contribute to the short-term focus of fiscal policy (Yared, 2019).
120. This is linked to political decision-makers' tendency to run budget deficits (**'deficit bias'**). **Tax rises and spending cuts tend to be postponed into the future** in order to prevent short-term and politically unpopular costs from being imposed on the current electorate (Wyplosz, 2013). This practice can cause budget deficits to be maintained or even widened. It can have positive political consequences for the incumbent government, as it strengthens support among the current electorate. In fact, it can create short-term **fiscal space for consumption spending** to provide immediate benefits to the current population. The **long-term consequences for the sustainability** of public finances will only become apparent in the future.
121. The present bias on the expenditure side can cause weak levels of future-oriented spending ('anti-investment bias'). Instead, **expenditure that delivers short-term (political) returns is prioritised**, while **future-oriented spending**, the benefits of which only become apparent in the long term, **is neglected** (Hellwig, 2021). In particular, **future-oriented public spending on infrastructure, education and research** is then weak (Scientific Advisory Board to the BMWK, 2023).
122. Future-oriented expenditure is particularly at risk **during periods of economic weakness**. During these phases the pressure to consolidate increases owing to declining tax revenues. As future-oriented expenditure is not legally binding, often appears less urgent and its reduction does not have immediate negative consequences for voters, it is often the first target of any austerity measures (Jacques, 2020). This can lead to pro-cyclical policies in which future-oriented spending is cut more than present-focused expenditure in times of crisis, even though this is precisely when it could contribute to economic

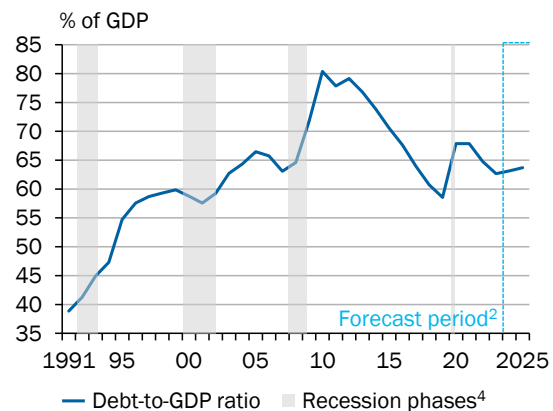
▸ CHART 43

### Development of public finances

Deficit<sup>1</sup> as a proportion of GDP only slowly reduced after crisis years



Debt ratio<sup>5</sup> increased as a result of crises



1 – National accounts. 2 – Forecast by the GCEE. 3 – Excluding capital transfers in connection with the takeover of the debts of the Treuhandanstalt and the housing industry of the former GDR in 1995 (119.6 billion euros). 4 – Presentation of the GCEE's economic cycle dating: February 1992 to July 1993; February 2001 to June 2003; January 2008 to April 2009; February 2020 to April 2020. 5 – General government gross debt as defined in the Maastricht Treaty.

Sources: Deutsche Bundesbank, Federal Statistical Office, own calculations  
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stabilisation and future growth (Guerguil et al., 2017). In addition, **political business cycles** can occur as a result of re-election efforts, whereby deficits can be increased by governments – especially in the run-up to elections (Alesina, 1989). Similarly, if the opposition has sufficient influence it can block or delay government policies (Howard and Roberts, 2015).

123. Another challenge for Germany is the country's **federal structure**. Spending on education and transport infrastructure comes under different areas of responsibility. ▸ ITEM 97 Decentralised decision-making enables public spending to be better aligned with local conditions. However, the positive externalities arising from this expenditure can extend beyond the boundaries of local authorities. For example, spending on education or improved transport infrastructure in one federal state benefits other states and the federal government as a whole. Too little future-oriented expenditure is provided, however, as most of the costs are borne by the federal states while the revenues are distributed across regions (Lenk et al., 2019; GCEE Annual Report 2021 item 374).

## 2. Limited fiscal space

124. The current situation of the public finances is challenging compared with the period from the early 2010s to 2019. Since the **COVID-19 pandemic started in 2020**, the budget at the general government level once again reported significant deficits, although these were gradually reduced with just a brief interruption in 2023. ▸ CHART 43 LEFT The federal government's total deficit is expected to

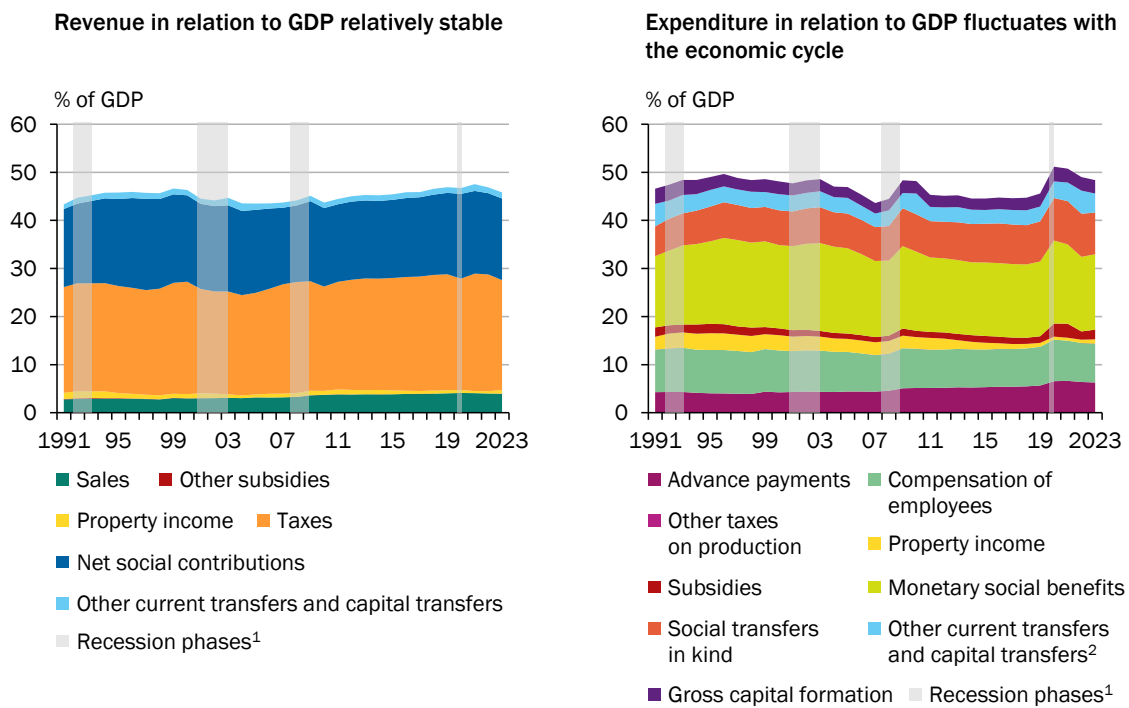


amount to 1.9 % of GDP in 2025. Having risen sharply during the COVID-19 pandemic, the debt ratio is likely to be around 64 % of GDP over the coming years and therefore slightly above the Maastricht limit of 60 % of GDP. [↪ CHART 43 RIGHT](#)

**125.** The development of **revenues** is currently **weaker than was expected just a few years ago**. Total revenue at the general government level has risen continuously since 2010 and amounted to around 47.5 % of GDP in 2021. [↪ CHART 44 LEFT](#) However, price-adjusted revenues and real gross domestic product remain below previous forecasts. [↪ CHART 45 LEFT](#) For example, the price-adjusted tax revenue expected in October 2024 for the current year is 5.5 % lower than estimated in autumn 2021 (BMF, 2021, 2024b; BMWi and BMF, 2021; BMWK and BMF, 2024a). The general government’s total revenue is expected to amount to 46.6 % of GDP in 2024. **The low level of tax revenue in real terms reflects the weak performance of the economy as a whole.** [↪ ITEMS 64 FF.](#) In addition to revenue, a cyclical component [↪ GLOSSARY](#) must be taken into account for the scope available for cyclical spending, which currently allows additional borrowing. After several years of crisis, however, this is only low. [↪ CHART 45 RIGHT](#) This also reflects the federal government’s **significant downward revision of potential output** since 2019. Following the downward revision according to the tax estimate of October 2024, the federal government’s scope for expenditure in 2025, measured on the basis of tax revenue (plus a cyclical component), has

[↪ CHART 44](#)

**Consolidated revenue and expenditure of the general government**



1 – Presentation of the GCEE’s economic cycle dating: February 1992 to July 1993; February 2001 to June 2003; January 2008 to April 2009; February 2020 to April 2020. 2 – Excluding capital transfers in connection with the takeover of the debts of the Treuhandanstalt and the housing industry of the former GDR in 1995 (119.6 billion euros).

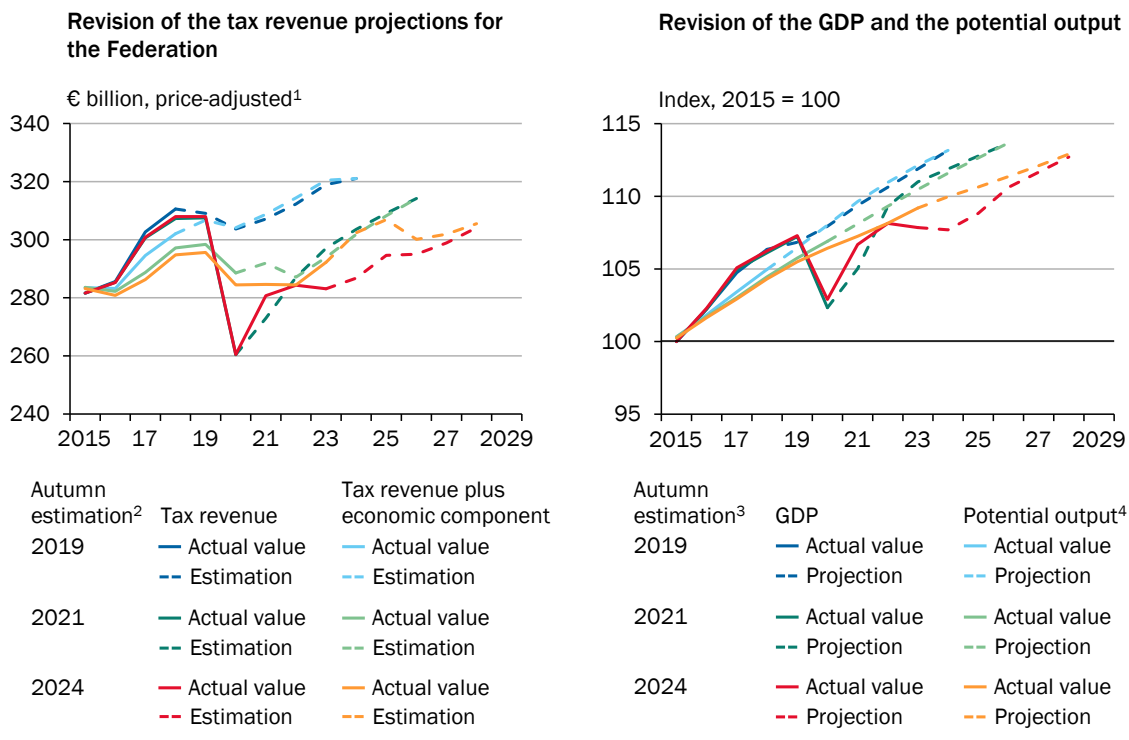
Sources: Federal Statistical Office, own calculations  
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decreased by €1.3 billion in price-adjusted terms compared with the estimate of October 2021. This differential would have been greater in the absence of changes to the EU transfer payment and the recalculation of the potential output estimate in 2024.

- 126. Although government spending as a share of GDP is decreasing again after spiking during the COVID-19 pandemic, [↪ CHART 44 RIGHT](#) expenditure remains above its average pre-pandemic level and exceeds revenue. [↪ CHART 44 LEFT](#) The decline in government spending as a share of GDP was due in particular to **the expiry of crisis-related measures**. In addition to aggregate **government consumption** (in particular compensation of employees, intermediate consumption and social benefits in kind), **monetary social benefits** account for the largest share of government spending, with intermediate consumption and social benefits in kind having gained in importance over time. **Interest expenditure** (property income paid) fell during the protracted period of low interest rates but are currently rising again since the **turnaround in interest rates**.
- 127. As in the previous year, the **2025 federal budget** is subject to the deficit limit of the debt brake, [↪ BACKGROUND INFO 5](#) with a cyclical deficit being taken into account. According to the government’s draft legislation, **net borrowing** by the federal government in 2025 is expected to amount to €51.3 billion (Deutscher Bundestag, 2024a). At €81 billion, expenditure on public investment is set to

↪ CHART 45

Revision of the tax revenue forecast and potential output since 2019



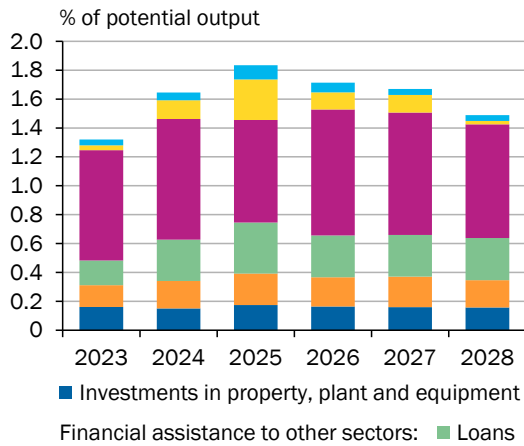
1 – Price-adjusted with the GDP deflator. 2 – Estimates by the „Tax Estimates“ working group. 3 – Autumn forecast by the Federal Government. 4 – Adjusted with the respective GDP of 2015.

Sources: Federal Ministry for Economic Affairs and Climate Action, Federal Ministry of Finance, Working group „Steuerschätzungen“, own calculations

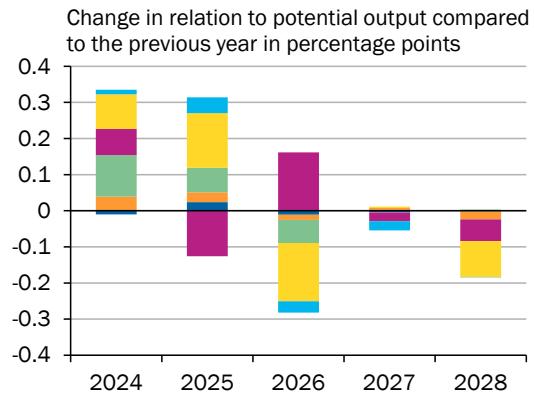
↘ CHART 46

**Investment spending in the federal budget<sup>1</sup>**

**Investment spending by the federal government: Strong increase until 2025, then a renewed decline**



**Increase in 2024 and 2025 mainly due to loans and equity investments**



1 – Actual expenditure for 2023, target expenditure for 2024, expenditure according to the draft budget and the financial plan for 2025 to 2028.

Sources: BMWK and BMF (2024b), Deutscher Bundestag (2024a), own calculations  
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amount to 1.8 % of GDP, i.e. €10.2 billion higher than envisaged in the supplementary budget for 2024. Some of the investment expenditure planned for 2025 will be funded by means of financial transactions using loans that will not affect the debt brake. For example, €13.4 billion will be used partly to increase the equity of, and partly as a loan to, Deutsche Bahn AG, ↘ [BACKGROUND INFO 6](#) while €12.4 billion will be made available to Stiftung Generationenkapital (Deutscher Bundestag, 2024b). The latter, at least, does not constitute capital formation in the real economic sense. Excluding the increased loans and equity investments, the federal government’s investment expenditure in 2025 will fall year on year as a ratio to potential output. ↘ [CHART 46](#)



↘ [BACKGROUND INFO 5](#)

**Background: the debt brake in Germany’s Basic Law**

The **debt brake** was enshrined in Articles 109 and 115 of Germany’s Basic Law in 2009 and is intended to limit **net borrowing** by the country’s federal government and states. Exceptions are permitted in the event of **exceptional emergency situations** and **natural disasters**. The German states have been subject to a complete structural ban on new borrowing since 2020. Article 115 of the Basic Law states that the federal government may have maximum structural new borrowing amounting to 0.35 % of GDP. This structural component (‘regular ceiling’) is adjusted to take into account **cyclical effects** and **financial transactions**.

**The design of the debt brake varies from one federal state to another** (Fischer, 2023). Some states have incorporated their specific form of the debt brake under state law and parts of its design into their state constitution. Other federal states enshrine its design exclusively in basic legislation. The federal states also vary with regard to their consideration of financial transactions, the majorities required to

declare an emergency situation and the adjustment of their fiscal balances for cyclical effects (ZDL, 2023). When considering the latter, the majority of states apply the federal method, under which an output function is used to determine cyclical effects. Others use a tax-trend or tax-level method. Bavaria is the only state that does not yet take into account cyclical effects, which tends to increase its scope for borrowing in good times but reduces it in bad times.



#### ▸ BACKGROUND INFO 6

### Background: financing the railways

The **funding of Deutsche Bahn AG's infrastructure division**, DB InfraGO AG, has been **amended** in the current draft budget. While an **equity increase** of €5.9 billion and grants of €4.5 billion were planned in the previous draft, the current draft provides for an equity increase of €10.4 billion and an **additional loan** of €3 billion but no more grants (Bundesregierung, 2024). The loan is to be used to redeem higher-yielding bonds in the market. The interest saved from the redemption of these bonds in the market should help the railway to generate the necessary income for its additional increase in equity.

128. In addition, the **draft budget for 2025 contains some amendments** that will alter the fiscal space in the core budget. For example, amounts allocated to the Climate and Transformation Fund (KTF) will be discontinued in 2025. The recently introduced accrual accounting of interest expenses, which the GCEE has advocated in the past (GCEE Annual Report 2021 items 106 ff.), will also reduce the estimates of interest expenses. By contrast, there is higher expenditure on economic development and energy – largely because the higher EEG surcharge has now been fully recognised in the core budget. [▸ CHART 47](#)
129. **The sum of global underspending (GMA)** [▸ GLOSSARY](#) included in the draft budget for 2025 **is very high** by historical standards at around €25.1 billion in total (around €12 billion in base GMA [▸ GLOSSARY](#) and €13 billion in GMA in the individual plans). The base GMA in particular – at 2.5 % of total expenditure – is extraordinarily high compared with the draft budgets of the past 15 years (Boysen-Hogrefe et al., 2024). As the funds approved in the budget are often not spent in full, federal **overbudgeting** in the amount of the global underspend can ensure that the actual total expenditure at the end of 2025 corresponds to the planned total expenditure. Recognising interest expenses on an accrual basis will relieve some of the pressure on the budget by €7.3 billion in imputed terms. In addition, a further reduction in the GMA is planned in the course of budget preparations (Bundesregierung, 2024). However, it is unclear whether this is realistic on the scale currently being planned. The budgeting process also assumed that **additional global revenue** would reduce the reported deficit. Among other things, additional revenue of €6.9 billion was optimistically recognised as effects of the growth initiative [▸ ITEM 76](#) and further additional revenue was assumed compared with the tax estimate from May 2024.
130. It is questionable how the government's planned **expenditure** will be funded in the medium term. According to the **medium-term financial planning**, there

will be extensive global underspending of up to €53.9 billion in 2028. This is because the **defence budget** will have to be financed entirely from the federal budget from 2028 onwards, as the **Bundeswehr special fund** [↪ BACKGROUND INFO 4](#) is likely to be exhausted by then. The current procurement contracts stipulate commitments beyond 2027, which is likely to place a burden on future core budgets (BMF, 2024a). This additional expenditure will be offset by additional global underspending (GMA) in 2028, as no specific reductions in spending have been planned for other categories to date.

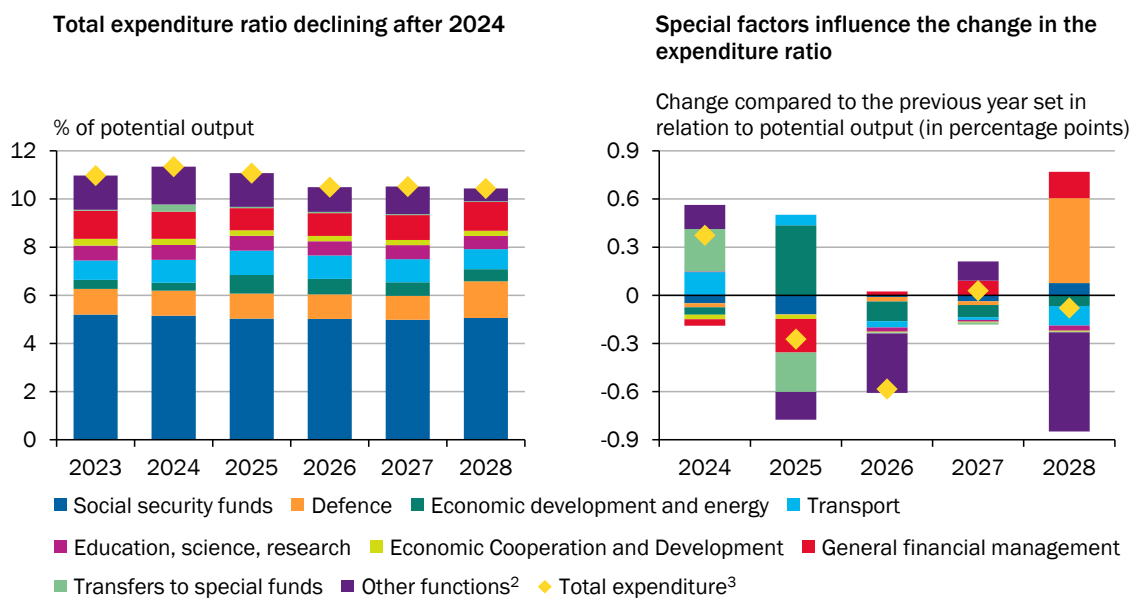
The **overall fiscal space available in the federal budget** is likely to **decrease in the medium term**. The same can be expected for the budgets of the states and municipalities. Given their overstretched budgets, the federal states of Bremen, Schleswig-Holstein, Saxony-Anhalt and Saarland have already declared a further emergency for 2024 in order to enable additional borrowing within their debt brakes (Deutsche Bundesbank, 2024a).

### 3. Effect of fiscal rules

131. In order to ensure **the long-term sustainability of the public finances**, fiscal rules limit the scope for current borrowing and thus curb political decision-makers’ tendency to run deficits. [↪ ITEM 120](#) At the same time, they could exacerbate the **anti-investment bias**, [↪ ITEM 121](#) as the trade-off between present-

[↪ CHART 47](#)

**Federal budget expenditure by government function for the years 2023 to 2028<sup>1</sup>**



1 – Actual expenditure for 2023, target expenditure for 2024, expenditure according to the draft budget and the financial plan for 2025 to 2028. The sector-specific global underspend (GMA) has already been deducted for the respective area of responsibility. 2 – Including food, agriculture and consumer health protection; construction and urban development; cultural affairs; environmental protection (excluding the Climate and Transformation Fund); sport; internal security, immigration; after deducting the base GMA and the GMA for the need for action. 3 – The base GMA and the GMA for the need for action have already been deducted from the total expenditure.

Sources: BMWK and BMF (2024), Deutscher Bundestag (2024), own calculations  
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focused and future-oriented expenditure is **often made at the expense of future-oriented spending** when **new borrowing** is strictly **limited** (Groneck, 2010; Bom, 2019).

132. These arguments suggest that the **design of fiscal rules** can influence politicians' spending behaviour. For example, while the debt brake in Germany's Basic Law limits net borrowing by the federal government and federal states as a whole, the European Union's (EU) recently reformed fiscal rules [↘ BOX 11](#) take special account of investment expenditure in some cases, albeit without defining a general investment rule.

[↘ BOX 11](#)

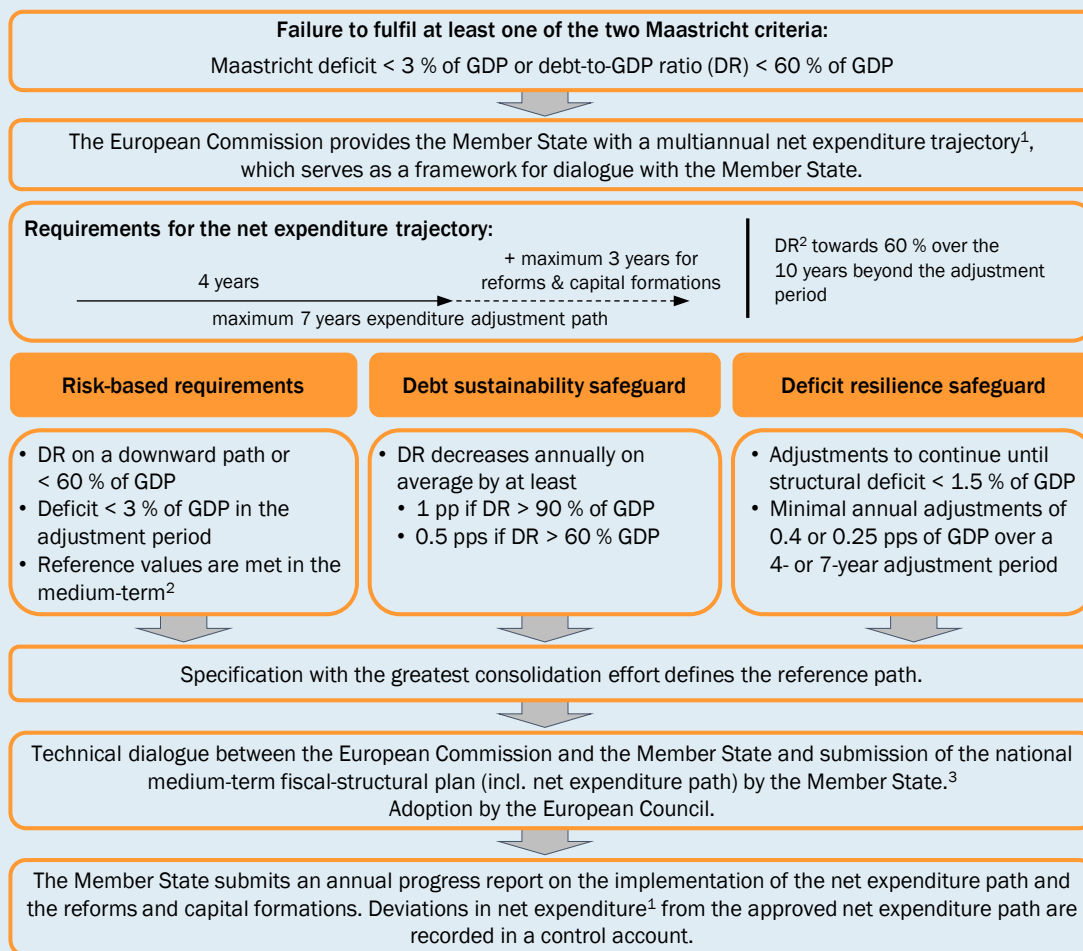
**Background: EU fiscal rules and future-oriented investment**

The **EU's fiscal rules** are intended to **prevent excessive deficits and debt ratios** (GCEE Annual Report 2022 items 226 ff.). Under the previous rules, however, the member states did not reduce their debt ratios to the required extent (GCEE Annual Report 2022 item 231). In addition, it has recently become apparent that a return to the previous limits is unlikely to be achievable for some countries following the crises of recent years (GCEE Annual Report 2022 box 13). The reduction paths envisaged by the previous rules would have been too ambitious for them. Unrealistic consolidation targets from the outset would have further damaged the credibility of the rules.

**The European fiscal rules were fundamentally reformed in April 2024.** They continue to consist of a preventive arm and a corrective arm. However, the **reforms fundamentally reconfigure the preventive arm**. In the past this was primarily focused on limiting the annual structural fiscal balance in accordance with the Medium-Term Objectives (MTOs), which amounted to 0.5 % for member states with a debt ratio of more than 60 % of GDP. The reforms replace **annual targets with multi-year, country-specific targets**. [↘ CHART 48](#) Member states that do not meet one of the two Maastricht criteria (debt ratio of less than 60 % of GDP; deficit of less than 3 % of GDP) will be provided by the European Commission with a country-specific reference trajectory for the net expenditure trajectory relevant under the EU regulation over an adjustment period of four years (European Parliament and Council of the European Union, 2024). This is intended to ensure debt sustainability and deficit resilience. Assuming that no further fiscal policy measures are taken, the projected debt ratio is to be brought onto a plausible downward path by the end of the adjustment period or kept below 60 % of GDP in the medium term. The projected deficit is to be reduced to below 3 % of GDP during the adjustment period and kept below this reference value in the medium term. [↘ CHART 48](#) In addition, the member states submit their own national medium-term fiscal-structural plans, which may include their own net expenditure path in addition to the planned reforms and capital formation. The European Commission assesses whether debt sustainability and deficit resilience can be ensured using the net expenditure path submitted. If these requirements are not met, the European Council will adopt the previously submitted reference path as the net expenditure path on the recommendation of the European Commission. If a member state commits to an investment and reform package, the country-specific adjustment period can be extended to up to seven years. Discrepancies between the net expenditure path approved by the European Council and the actual expenditure are recorded in a control account.

CHART 48

**Preventive arm of EU fiscal rules in case of non-compliance with at least one Maastricht criterion**



1 – Government expenditure excluding interest expenditure, discretionary revenue measures, expenditure on programmes of the European Union fully matched by revenue from European Union funds, national expenditure on co-financing programmes funded by the European Union, cyclical elements of unemployment benefit expenditure, and one-offs and other temporary measures. 2 – Assuming no further budgetary measures are taken. 3 – Technical dialogue should ensure that the national medium-term fiscal policy-structural plan meets the formal requirements. If the national-medium-term fiscal-structural plan includes a higher net expenditure path than in the reference trajectory issued by the Commission, sound and data-driven economic arguments must explain the difference.

Source: own illustration based on Grossmann et al. (2024)  
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The **previous regulations were criticised** for various reasons. The European Commission had considerable room for manoeuvre when interpreting the rules. This is likely to have contributed to a contradictory perception of the rules and an overall loss of credibility (GCEE Annual Report 2022 item 233). In particular, the binding nature of the preventive arm was minimal (GCEE Annual Report 2022 item 230). The newly established control account, which documents deviations from the defined net expenditure path, has provided an instrument for monitoring fiscal policy requirements in the preventive arm. In addition, the control account plays a key role in initiating deficit procedures. Germany’s Federal Ministry of Finance is of the view that although the European Commission’s room for manoeuvre in this regard has been restricted by these reforms (BMF, 2024c), it nonetheless remains high. For example, the European Commission is drawing up proposals for the country-specific reference paths. In addition, both the new and the old rules are highly complex (Deutsche Bundesbank, 2023). It was

also criticised that the previous regulations could not **provide the necessary room for manoeuvre** in view of the major transformation challenges to be met (GCEE Annual Report 2022 item 241). The new rules stipulate a departure from the rigidly prescribed debt reduction paths and the need to consider reform and investment plans. In addition to the goal of ensuring the sustainability of the public finances, the reformed fiscal rules should also take better account of the EU's transformation goals (European Commission, 2024). **Structural reforms and future investment will now be considered separately by extending the adjustment period.** On the whole, this should **promote growth and resilience**, improve the sustainability of the public finances and support the EU's common priorities. The latter include the green and digital transformations, energy security and defence capability. If a country deviates from its capital formation and reform commitments, the consolidation targets must be achieved within the usual four years instead of the extended period of seven years. This creates an incentive within the preventive arm, which could enhance its binding nature.

133. The empirical literature on the effects of fiscal rules mainly examines their impact on the deficit, revenue, expenditure and individual expenditure categories such as capital formation. Potrafke (2023) and Blesse et al. (2023a) provide recent overviews of this literature. There is a broad consensus that strict **fiscal rules reduce budget deficits primarily by reducing public spending.** Whether the relationship between fiscal rules and procyclical fiscal policy is positive or negative, however, is disputed. The **effect of fiscal rules on public investment** is likely to depend on the **design of the fiscal rules** and the macroeconomic situation (Blesse et al., 2023b). It cannot be generally assumed that fiscal rules have a dampening effect on capital formation (Potrafke, 2023). However, rigid fiscal rules appear to reduce public investment, especially during periods of economic weakness, while investment-driven rules can dampen procyclical trends in public investment (Guerguil et al., 2017). On the whole, the literature suggests that fiscal rules **address the deficit bias but not the anti-investment bias.**

## 4. Bureaucratic obstacles and lack of capacity

134. There are various **bureaucratic hurdles** facing public and private investment, which **can hinder or delay capital formation** even if sufficient financial resources are available. These include slow planning and approval procedures, the excessive burden on public administration, and laws that are difficult to implement in practice. The Bundeswehr's procurement processes, for example, are considered to be inefficient and protracted. One example is the so-called 'parliamentary loop'. Under this procedure, all of the German Ministry of Defence's procurement contracts worth €25 million or more must be approved by the budget committee. This is not the case for procurement by other ministries. The threshold amount has not been raised since 1981, although the consumer price index has risen by more than 130 % over this period (Krause, 2013; Deutscher Bundestag, 2022a; Deutsche Bundesbank, 2024b). If this threshold had risen in line with inflation, it would be €58.1 million today. Although some bureaucratic hurdles have already been removed as part of the Bundeswehr Procurement Acceleration Act (Deutscher Bundestag, 2022b), the time-consuming and



administratively burdensome ‘parliamentary loop’ remains. The fact that some of the funding from the Municipal Investment Promotion Fund and from the Climate and Transformation Fund has not been utilised in recent years is also partly due to bureaucratic hurdles (GCEE Annual Report 2021 item 202).

135. Planning, approval and legal procedures **delay capital formation in infrastructure to a large extent.** [↘ ITEM 495](#) The planning process accounts for around 85 % of the total time required to complete federal trunk road construction projects, while the construction process itself accounts for only 15 % (ZDB, 2022). **Various measures have been adopted since 2022 to speed up the capital formation process.** Particularly important rail projects are now subject to an overriding public interest and simpler rules on species protection (Bundesregierung, 2023a). In addition, no more approval is now required for bridges that are extended while being upgraded. This is intended to halve planning and approval periods (Bundesregierung, 2023b).
136. At federal, state and municipal level there are a large number of individual regulations that prevent processes from being accelerated at each administrative level. A **pact between the German government and the country’s federal states** was adopted in 2023 and provides 125 mandates for the federal government and 63 mandates for the federal states **to speed up planning and approval procedures.** Digital construction applications have already been implemented in eight federal states and are currently being developed in the remaining eight (Bundesregierung and Länder, 2024). However, there is further untapped potential – for example in the approval procedures governing large and heavy goods transport and in binding IT standards applicable at all federal levels (NKR, 2023). Nevertheless, if properly implemented, this pact could **speed up procedures effectively and relieve much of the burden on the state and the economy**, while serving as a model for the multi-level modernisation of complex processes (NKR, 2023, 2024).
137. **A well-equipped public administration is essential to ensure swift approval procedures.** However, demographic ageing will significantly exacerbate the shortage of skilled workers in certain occupations in the public sector over the coming years, as a large proportion of the active workforce is set to retire (Brand and Salzgeber, 2022b). Although staffing levels in municipalities have increased since 2011, this has mainly been in certain areas such as daycare centres. In areas relating to construction and planning, on the other hand, the number of jobs fell between 2011 and 2020 (Brand and Salzgeber, 2022b).

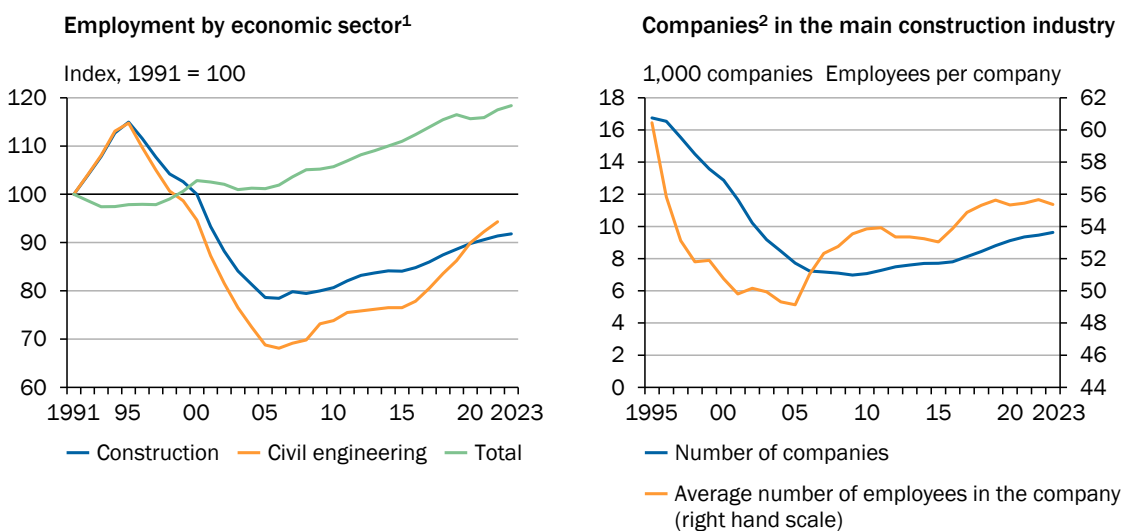
**Understaffing in public administration causes delays in the processing of approval procedures** and thus **inhibits capital formation.** Implementation of the already legally enshrined duty to digitalise many administrative services across the board could relieve much of the burden on public administration in the future (BMI, 2024a). Basic standard processes can then be automated, while the capacity freed up can be used for non-standardised processing and approval procedures. However, it will be years before these digital services goals are achieved and the shortage of skilled administrative workers can thus be compensated for. Previous digital services initiatives have failed to meet

expectations, as demonstrated by the Online Access Act passed in 2017. This required all public authorities to make online applications available for their administrative services by the end of 2022 (BMI, 2024a). By October 2024, however, only 16.8 % of the 6,876 administrative services that could be digitalised had met the requirements of the Online Access Act (BMI, 2024b).

**138. Low capacity** – measured as the number of people in employment and **construction firms** – is weighing on the construction industry. This is reflected in the fact that the number of people employed in the construction sector had **fallen significantly** by 2005. Although their number has risen again since the mid-2000s, particularly in civil engineering, it has not fully recovered. [↪ CHART 49 LEFT](#) The number of businesses had also plummeted by 2005 and has only increased slightly since then. This trend is not due to consolidation within the sector. The average size of firms also fell up to the beginning of the 2000s and has risen only slowly since then. [↪ CHART 49 RIGHT](#) Furthermore, there has been no growth in aggregate productivity in the construction industry since German reunification (GCEE Annual Report 2019 box 16). Labour productivity in the construction sector is actually currently well below the average of the years prior to the COVID-19 pandemic. [↪ BOX 7](#) At the same time, capital intensity in the construction industry rose less sharply between 1991 and 2019 than the average for the economy as a whole (BBSR, 2023). Overall, these developments indicate that capacity in the construction sector has decreased. If construction capacity in civil engineering is not available to the required extent as capital formation in transport infrastructure increases, this could cause a significant rise in construction prices. [↪ ITEM 343](#) The high level of capacity utilisation in the construction industry is also likely to have contributed significantly to construction price rises during the years prior to the COVID-19 pandemic (Deutsche Bundesbank, 2020).

↪ CHART 49

**Decline in capacity in the construction industry in the 1990s was not fully compensated for**



1 – According to the Classification of Economic Activities, 2008 edition (WZ 2008). 2 – Companies with 20 or more employees.

Sources: Federal Statistical Office, own calculations  
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## IV. POLICY OPTIONS: INCREASE AND SUSTAIN FUTURE-ORIENTED PUBLIC SPENDING

### 1. Improve decision-making for public spending

139. Decisions on **future-oriented public spending** are made as part of the political negotiation process. **In this context, cost-benefit analyses provide a sound basis for decision-making.** In the transport sector, all new and supplementary projects that are included in the federal transport infrastructure planning process must have a positive cost-benefit ratio (BMDV, 2024). However, the methodology used is not always consistent and does not cover all relevant aspects. Cost-benefit analyses should be prepared **according to academically rigorous standards** and be **methodologically transparent** and **verifiable for the (specialist) public.** To this end, it would make sense for the underlying assumptions, data and models to be published.
140. It is not only in the transport sector that cost-benefit analysis is enshrined in law. Greater systematic application of such analysis using methods standardised for the respective areas could improve public budgeting. This would increase comparability in the evaluation of different projects and could therefore help to identify expenditure with high cost-benefit ratios in a transparent manner. Prioritising this spending should enhance the legally required **efficiency and cost-effectiveness of public budgeting** (Section 7 BHO, Section 6 HGrG).
141. Some countries conduct **institutionally established economic analysis** of proposed legislation. In the United States, regulatory authorities such as the Environmental Protection Agency are obliged to carry out cost-benefit analysis of their regulatory proposals. They must use a standardised method developed by the Office of Management and Budget (OMB) and disclose their assumptions and the models used. Similarly, the bipartisan Congressional Budget Office (CBO) in the US primarily scrutinises the fiscal impact of proposed legislation. This analysis can help members of Congress with their decisions (Swagel, 2024). A similar institutional solution has been created in the form of the Parliamentary Budget Office (PBO) in Canada and Australia and the Centraal Planbureau (CPB) in the Netherlands.

### 2. Increase commitment

142. Even if decisions on future-oriented public spending can be better substantiated in advance, there is a risk that they will often not be taken, given politicians' present bias. [▶ ITEM 119](#) It is therefore important to identify improvements to the institutional framework to **prioritise future-oriented public spending.** Four potential **courses of action** are discussed below. [▶ TABLE 14](#) Some aim to reallocate spending within the budget, while others expand fiscal space. Most of the

policy options explicitly encourage future-oriented public spending. Constitutional amendments would be appropriate or even necessary for some potential courses of action, which makes political implementation more difficult but at the same time increases the binding nature of such measures.

▾ TABLE 14

**Four options for increasing forward-looking public spending<sup>1</sup>**

Criterion	Option			
	Minimum quota	Special funds	Public companies	Golden rule
Expansion of fiscal space	No	Without loans: No With loans: Yes	(Yes)	(Yes)
Explicit prioritisation of future-oriented expenditure	Yes	(Yes)	(Yes)	(Yes)
Stabilisation of future-oriented expenditure	Yes	With own revenue: Yes Without: Restricted	(Yes)	Yes
Constitutional amendment necessary	Yes, for high binding effect	Yes, for high binding effect	No	Yes
Possible undesirable side effects	Rigid	With loans: Relocation of investments	Lack of transparency and legal risks	Possible expansion of fiscal space for consumption, unlimited increase of debt if cap is missing

1 – Figures in brackets indicate that the assessment depends on the exact design.

Source: own presentation

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## Minimum quotas

143. The introduction of **minimum quotas for certain future-oriented public expenditure** can limit politicians' present bias ▾ ITEMS 119 FF. This form of privileged investment does not allow additional borrowing. It is particularly suitable when expenditure of a certain amount is to be met, such as NATO's two per cent target. It can also be helpful if spending quotas can be defined on the basis of minimum expenditure as a share of GDP or, for example in the education sector, per pupil or additionally in relation to GDP per capita (GCEE Annual Report 2021 item 375). In order to operationalise a minimum quota it is firstly necessary to define what expenditure counts as future-oriented; secondly, whether the minimum quota is calculated in relation to GDP, total government expenditure or other indicators; and, thirdly, what are the consequences of failing to achieve the quota.

Alternatively, a **maximum spending quota** could be defined **for certain types of consumption expenditure**. There is, for example, such a spending rule in the United Kingdom and Sweden, which is intended to limit welfare spending (Sweden: Government Offices of Sweden, 2018; United Kingdom: Keep, 2024). However, the fiscal space that could potentially be gained as a result of such a cap does not guarantee that it will be used for future-oriented public spending. Moreover, experience of the basic statutory cap in the UK suggests that it has a weak binding effect, as the government can and has altered the cap

by a simple majority (OBR, 2019). In addition, some welfare spending in Germany, such as the level of basic needs under the Citizen's Income, is constitutionally protected to ensure the minimum subsistence level, which makes it difficult to implement a maximum quota in conformity with the constitution.

144. A **minimum quota** could be based on the following **design criteria**. Future-oriented public spending could be defined in accordance with the future-oriented expenditure share indicator [↪ BACKGROUND INFO 2](#) (Heinemann et al., 2021; Bohne et al., 2024). One argument in favour of defining the **minimum ratio as a share of GDP** and not as a share of the government's overall budget is that the latter does not spare public investment during periods of general cuts to the public finances. **Alternatively, a reference to potential output** would be conceivable in order to ensure the stability of future-oriented expenditure even during phases of economic weakness. The minimum ratio can be defined either in general terms or for specific sectors. A sector-specific definition is advisable in order to take into account indicators relevant to the sector. In the education sector it seems sensible to consider the demographically determined number of pupils and students when setting a minimum spending quota. A sanction mechanism could be used to strengthen compliance with the minimum quotas. If, for example, the minimum threshold is not reached, the scope for borrowing permitted under the debt brake could be further restricted. Anchoring this principle in the medium-term financial planning process could also create greater incentives for firms to permanently expand their capacity – e.g. in construction – in line with demand. [↪ ITEM 138](#)
145. A **minimum quota** should **be enshrined in law** in order to have the greatest possible binding and signalling effect. If it is enshrined in simple law, however, there is a risk that the regulatory limits can be modified by the respective government majority. This risk does not exist if it is enshrined in Germany's Basic Law, as amendments require a two-thirds majority of the Bundestag and Bundesrat. This would guarantee compliance, as a budget that does not meet the minimum quota would be unconstitutional. **However**, enshrining the **minimum quota** in the Basic Law poses **challenges** for this **instrument**. Given the high political hurdles to overcome for any constitutional amendment, constitutionally enshrined specific numerical values for individual expenditure items pose the risk of being too inflexible and difficult to reverse, even if they have proven to be outdated or even counterproductive after changes in the framework – such as price trends or demographic change – or erroneous assumptions. Enshrining them in the Basic Law should therefore be limited to general principles and leave specific cases to regular legislation.

### Special funds or investment funds

146. A greater degree of commitment can be achieved in the form of earmarking by transferring future-oriented expenditure to an **independent supplementary budget (special fund)** [↪ GLOSSARY](#) if this is linked to a clear long-term funding commitment such as a separate source of revenue or a fixed transfer from the core budget. Such a special fund can be established either **in the Basic Law or by simple legislation**. Its **binding effect** is greater if it is enshrined in the

➤ CHART 50

Organisation options for special assets

	Without the possibility of debt	With debt option
Without amending the Basic Law	<ul style="list-style-type: none"> <li>• Low <b>binding effect</b></li> <li>• Equipment with <b>revenue</b> necessary</li> <li>• No shift towards consumptive expenditure</li> </ul>	<ul style="list-style-type: none"> <li>• Low <b>binding effect</b></li> <li>• Endowment with <b>loans</b>; receipts not absolutely necessary</li> <li>• No shift towards consumptive expenditure</li> </ul>
With amendment of the Basic Law	<ul style="list-style-type: none"> <li>• Higher <b>binding effect</b></li> <li>• Equipment with <b>revenue</b> necessary</li> <li>• No shift towards consumptive expenditure</li> </ul>	<ul style="list-style-type: none"> <li>• Higher <b>binding effect</b></li> <li>• Endowment with <b>loans</b>; receipts not absolutely necessary</li> <li>• Additional scope for borrowing, shift towards consumptive expenditure possible</li> </ul>

Source: own presentation

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Basic Law. In the case of its own revenues or allocated amounts, the special fund can also operate without any borrowing powers. Alternatively, it can be provided with borrowing powers which then **reduce the scope for borrowing relevant to the debt brake in the core budget** (BMF, 2022). This applies if no separate additional borrowing power is specified in the Basic Law for this purpose, as in the case of the Bundeswehr special fund, whereby the borrowing power could be granted not for a fixed nominal amount over a fixed period but for a longer term and in relation to GDP, for example. ➤ CHART 50

147. One possibility would be to **transfer investment expenditure to an earmarked fund without any borrowing facility**, to which the fund's own revenues or clearly defined grants from the federal budget would be allocated. For example, a transport infrastructure fund could be provided with revenue from the truck toll and the passenger car toll proposed by the GCEE. ➤ ITEM 492 The option of transferring revenues from the energy tax on fossil fuels in the transport sector and from the motor vehicle tax could also be considered. Allocating the fund's own revenues would also be one specific **way of institutionalising a minimum quota**, whereby the allocated amount would have to ensure compliance with the quota.
148. Similarly to the minimum quota, a fund for infrastructure expenditure would depend on reliable political commitment. This is likely to be less in the case of a statutory regulation than in the case of a regulation enshrined in the Basic Law. The advantage of a constitutional regulation would be the ability to conduct **long-term planning of investment** through such a fund – e.g. for investment in transport infrastructure. With long-term financial planning, such a transport infrastructure fund could stabilise future-oriented public expenditure, helping to build up capacities in the construction industry and utilise them continuously. ➤ ITEM 138 **Infrastructure funds in Switzerland** could serve as

such a model for funding transport infrastructure by using sources of revenue enshrined in the constitution. [↪ BOX 12](#) Unlike there, an intermodal structure could also be chosen in which capital formation is made in both rail and road infrastructure.

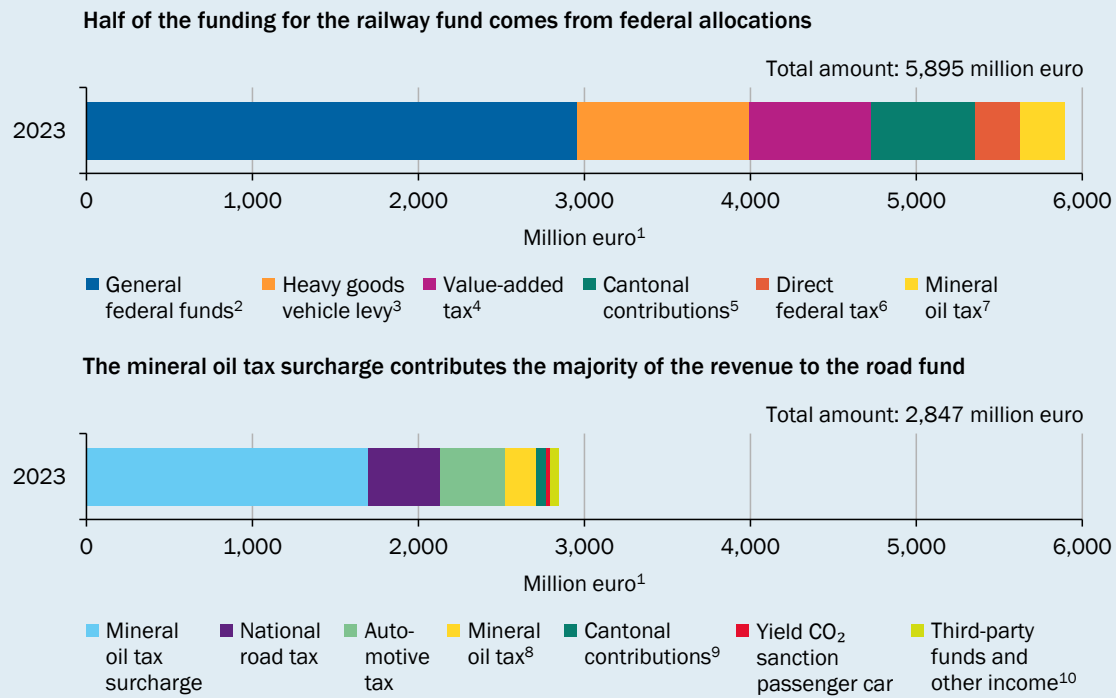
[↪ BOX 12](#)

**Background: Swiss infrastructure funds**

There are **two separate infrastructure funds** in Switzerland, each of which pools funds for transport infrastructure in the **rail and road networks**. The railway infrastructure fund (BIF) exists for the rail network, while the national road and agglomeration transport fund (NAF) is used for the road network. These funds are **responsible for the expansion, operation and maintenance** of the relevant infrastructure. Both funds benefit from a high degree of **planning certainty, as many of their relevant sources of revenue are enshrined in the constitution, and multi-year funding plans** guarantee a stable, future-oriented allocation of resources.

[↪ CHART 51](#)

**Composition of the revenue of infrastructure funds in Switzerland**



1 – Conversion from Swiss francs to euros is based on the ECB's average exchange rates of 0.9718 Swiss francs to 1 euro for 2023. 2 – The funds from the general federal budget correspond to CHF 2.3 billion, which are adjusted to the development of real gross domestic product and inflation (rail inflation index). 3 – A maximum of two thirds of the net revenue from the heavy vehicle charge. 4 – A value-added tax per mille (additional per mille until 2030 at the latest). 5 – cantonal contributions totalling CHF 500 million (indexed from 2019). 6 – Share of 2 % of revenue from direct federal tax on natural persons. 7 – Share of 9 % of the net income from the earmarked mineral oil tax (until full repayment of the advance, but no more than CHF 310 million in 2014 prices). 8 – Generally 10 % of the mineral oil tax (2023: approx. 7.2 %). 9 – Contribution from the cantons represents a compensation contribution due to the transfer of cantonal roads to the federal government as part of the New Network Decree (NEB). 10 – In addition, the fund will receive 100 % of the levy on electric vehicles introduced in 2024.

Sources: ECB, Swiss Federal Office of Transport, Swiss Federal Roads Office, own calculations  
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The **railway infrastructure fund** was established at the beginning of 2016, replacing the existing FinöV Fund (named after the legal basis of the ‘Bill on the construction and funding of public transport infrastructure’). The latter had been created in 1998 to finance major railway projects and was time-limited until 2017 (FOT Switzerland, 2024a). In contrast, the railway infrastructure fund is **open-ended**. In addition to expanding the railway infrastructure, it is also responsible for running its operation and has correspondingly larger financial resources (FOT Switzerland, 2024b). The fund is legally dependent and is **affiliated with the Swiss Federal Office of Transport**. It keeps its own accounts. Although the fund is not authorised to borrow, the Swiss government – the Federal Council – was able to grant the fund interest-bearing advances until the end of 2020 (Federal Assembly of Switzerland, 2013). The **government** prepares a **three-year financial plan** for the railway infrastructure fund and submits it to parliament (the Federal Assembly). **The Federal Assembly decides on the amount of the withdrawals** and approves a **medium-term payment framework for the construction and maintenance funds**. The relevant revenue amounted to €5.9 billion (5.7 billion Swiss francs, or 0.7 % of GDP) in 2023. ↘ [CHART 51 TOP](#) The largest share of this was accounted for by the contribution from the federal budget.

The **national road and agglomeration transport fund (NAF)** was established at the beginning of 2018, replacing a temporary predecessor fund introduced in 2008. While the previous fund already financed the expansion of national roads and major agglomeration transport projects (transport in conurbations), the new fund is also responsible for the operation and maintenance of this infrastructure and has been provided with additional resources accordingly. The railway infrastructure fund served as a model for the establishment of the NAF (DETEC Switzerland, 2024). This fund is also **open-ended**, is legally dependent, keeps its own accounts and is not permitted to borrow. Unlike the railway infrastructure fund, the NAF’s resources are not allocated directly by the government. However, the government submits a multi-year financial plan to parliament every year. Parliament then **decides both on the amounts allocated and, as with the railway infrastructure fund, on their withdrawal** (Federal Assembly of Switzerland, 2016). ↘ [CHART 51 BOTTOM](#) Irrespective of these differences, the multi-year financial planning for both funds is based on the financial planning for the previous year and is confirmed by parliament.

149. There is also the possibility of funding additional future-oriented expenditure or capital formation by creating a special fund **with its own borrowing powers**. Unless the Basic Law is amended, the scope for borrowing utilised by such a special fund at federal level would reduce the current scope available in the core federal budget by the same amount. An alternative option would be to define a separate borrowing facility for the special fund in the Basic Law, as is the case with the **Bundeswehr special fund**. Such a proposal has been made by various parties in view of the considerable funding costs and against the background of the Federal Constitutional Court’s ruling of 15 November 2023 (Fuest et al., 2024). In this case the special fund’s borrowing would not count towards the net borrowing limited by the debt brake, but it would still be restricted by the European fiscal rules. Such a special fund could also be provided with its own permanent revenues, for example when it comes to performing permanent tasks such as operating and maintaining financed investments.
150. A special fund with additional borrowing power can be beneficial if **limited, clearly defined, extensive expenditure** is necessary in **terms of time and amount** and could otherwise only be financed by large tax increases or



spending cuts in the core budget (Fischer, 2023, p. 15). The Bundeswehr special fund was therefore intended to help compensate for the investment backlog in the Bundeswehr in changing geopolitical conditions. [▶ ITEM 102](#) Limited loans would also be possible to finance the backlog in transport infrastructure. A special fund with its own revenues could be provided with limited loans in order to stabilise expenditure if revenues fluctuate over the economic cycle, for example.

From a political economy perspective it is argued that a fund could have **a good chance of being implemented politically** because it would allow multi-year investment programmes to be designed in a transparent, comprehensible and legally certain manner (Fuest et al., 2024). However, the transfer of permanent expenditure – such as for future maintenance – would also require permanently allocated funds, for example in the form of the fund’s own revenue or allocated resources. Funding permanent functions purely through a special fund with limited borrowing would appear to be a transitional solution at best, as the actual problem of insufficient, inconstant expenditure will continue to exist in the absence of further measures once the limited special fund expires. This is precisely the case with the Bundeswehr special fund. [▶ ITEM 130](#)

151. As far as the prioritisation of future-oriented expenditure is concerned, it is problematic that such a fund could also be used to fund **expenditure that was already planned in the regular budget**. To the extent that this would happen, no additional investment expenditure would be made. Instead, the deficit limit would merely be temporarily increased and more fiscal space would be created for other spending – including consumption expenditure – in the core budget. This problem of **cross-subsidising the core budget** exists in particular if expenditure cannot be clearly distinguished from spending made and planned from the core budget. As is the case with the Bundeswehr special fund, there is also a risk that although such a solution can guarantee the current government’s expenditure, additional requirements not covered by a quantitatively limited special fund will be resubmitted during the next legislative period. A strict time limit – similar to the temporary emergency – can also **prevent** the building of production capacity and thus the **stabilisation of capital formation**. In addition, the incumbent government has an incentive to spend resources from the special fund during its own period in office. In this case a special fund could **even reinforce the present bias**.

## Public companies

152. **Borrowing through separate supplementary budgets or public companies** that are **not in the government sector** in the budget accounts relevant to the debt brake or even under the stricter definition of the national accounts relevant to the EU fiscal rules could have a fiscal effect similar to a special fund with borrowing powers in the Basic Law. The regulations applicable to the debt brake and to the EU fiscal rules differ in terms of the entities and enterprises they take into account. An injection of funds by the federal government or the states in the form of equity or loans to legally independent entities could be categorised as a **financial transaction** under certain conditions and would therefore not count towards the net borrowing limited by the debt brake. Net

borrowing by the federal government or the federal states could also remain unaffected if these entities were to take out loans (possibly guaranteed by the state). [↪ BACKGROUND INFO 7](#)



[↪ BACKGROUND INFO 7](#)

### **Background: net borrowing in compliance with the debt brake and definition of the state sector in the national accounts**

Germany's **debt brake limits net borrowing** by the federal government and the federal states, with net borrowing by the federal government including not just the federal government's **core budget** but also net borrowing by **legally dependent special funds of the federal government** (without their own legal personality) if they were established after 31 December 2010 (BMF, 2022). **Legally independent entities** are not included here, meaning that these entities are generally not subject to the borrowing restrictions of the debt brake (Hermes et al., 2020).

The **definition of the government sector in the national accounts** is used in the net lending/net borrowing figure reported in the national accounts, which is relevant to the EU fiscal rules. In addition to legally dependent entities under this definition, legally independent entities may also be included if they do not predominantly (>50 %) provide market services (Schmidt et al., 2017). If the 50 % limit is exceeded, these entities are not counted as part of the state sector in the national accounts and their debt is not limited by the EU's fiscal rules.

- 153.** DB InfraGO AG and Autobahn GmbH are current examples of entities that are not subject to the **debt brake** in principle but are subject to the EU's fiscal rules because of their inclusion in the government sector in the national accounts. In contrast, the deficit relevant to the EU fiscal rules remains unaffected by such entities' (new) borrowing if these entities are **not defined** as market players in the national accounts as part of the general government **sector** but are classified as other public funds, institutions and companies (sFEU) [↪ GLOSSARY](#) (Schmidt et al., 2017). Examples of this are Kreditanstalt für Wiederaufbau (KfW) at federal level and Charité Universitätsmedizin Berlin at state level (Federal Statistical Office, 2024b). Such sFEUs often perform important municipal functions such as water and energy supply or waste management (Hesse et al., 2017).
- 154.** If debt-financed capital formation is carried out by legally independent entities, their borrowing is generally not taken into account by the debt brake in the Basic Law. This also applies to any loan-financed increase in equity or the granting of loans by the government. As the increase in equity or the granting of loans to external entities is accompanied by an increase in the government's (financial) assets, they are deducted as a financial transaction from the federal government's net borrowing relevant to the debt brake. The federal government has chosen this approach in order to replace the federal subsidies for **funding capital formation by public companies**, such as Deutsche Bahn AG, which are otherwise relevant to the debt brake, in the federal budget in 2025 (Bundesregierung, 2024). The railway is to receive **additional equity and loans instead of grants**. [↪ BACKGROUND INFO 6](#)

155. From a legal perspective, however, **certain conditions** must be met to ensure that **legally independent entities' loans or increases in equity and the granting of loans** are not counted towards the debt brake. If these conditions are not met, they would be considered to be illegal circumventions of the debt brake, and the chosen constructions would be at risk of failing before the constitutional courts in the event of a lawsuit. One of the conditions applicable to legally independent entities is that they have a clearly defined remit and do not predominantly or exclusively perform financial functions (Hermes et al., 2020). Legally independent entities are the organisational forms of public law (e.g. 'Anstalt des öffentlichen Rechts') and private law (e.g. 'Aktiengesellschaft' and 'Gesellschaft mit beschränkter Haftung'). Questions of company formation, allocation of functions, organisation, powers to act, borrowing powers, and forms of corporate control and supervision are typically regulated by federal law.
156. **Loan financing of public infrastructure by public companies has its limits.** This can be the case, for example, when granting loans if the public companies **do not have their own revenue** that they can use to repay the loans. If they do have their own revenue, this can be used to service the loans, as is the case with DB InfraGO AG (Hellermann, 2024). If – as in the case of Autobahn GmbH – the company has no revenue of its own, the debt service for a loan granted by the federal government to Autobahn GmbH would have to be paid in full using grant funds from the federal government. There is therefore a **risk** that the granting of a loan as a substitute for a grant model would be seen as an **abuse of law** that is merely designed to shift the burden on the federal budget into the future (Hellermann, 2024).
157. The structuring of legally independent entities or **public companies as investment companies** can, in principle, provide an answer to the question of **how to fund public infrastructure projects**. Given the legal restrictions discussed above, however, such structuring must be done carefully at both federal and state level. Transparency issues and constitutional risks, particularly following the ruling by the Federal Constitutional Court (BVerfG, 2023), can create uncertainty about the sustainability of such solutions. Infrastructure funds protected by simple legislation or even constitutional law would therefore be preferable in a direct comparison – especially for more extensive investment requirements – for reasons of transparency and sustainable planning. ↘ [ITEM 147](#)

## Golden rule

158. Another proposal for prioritising future-oriented public expenditure is to exclude public investment from the deficit limited by fiscal rules (e.g. Musgrave, 1939; Blanchard and Giavazzi, 2004). Such an exemption allows borrowing to finance public investment and is referred to as the **golden rule** of public finance. If the golden rule is applied only to **net capital formation**, i.e. **gross capital formation less depreciation**, the net public capital stock would increase as a result of debt-financed capital expenditure (GCEE Occasional Report 2007 item 7). Such a golden rule for net capital formation could reduce the **anti-investment bias**. Ways of encouraging investment spending in Germany by means of appropriately designed fiscal rules has been discussed and

recommended in detail by various authors (Truger, 2015, 2021; Board of Academic Advisors to the BMWi, 2020; Breuer, 2021; Scientific Advisory Board to the BMWK, 2023; GCEE Occasional Report 2007).

159. A golden rule applied to the German federal government and federal states until 2009, which **exempted gross public capital formation** from the deficit restrictions in force at the time in terms of the definition of federal and state budgetary regulations (GCEE Occasional Report 2007 item 7). This old golden rule had various conceptual flaws. For example, its focus on gross capital formation, unlike net capital formation, does not guarantee an increase in the public capital stock and also leads to relatively high permissible deficits. In addition, borrowing did not tend to fluctuate symmetrically around the value of public investment, but rather served as a borrowing baseline, above which larger loans were often taken out, due to the vaguely defined concept of disruption to the macroeconomic equilibrium (Truger, 2015; GCEE Occasional Report 2007 item 81). Alongside exogenous political shocks such as German reunification, this is likely to have been the main reason why the debt-to-GDP ratio grew sharply under this rule, [↘ CHART 43 RIGHT](#) while net public capital formation fluctuated around zero [↘ CHART 35 RIGHT](#) and the level of modernisation of the public capital stock fell. [↘ CHART 41 RIGHT](#)
160. A **golden rule based on net capital formation** could also cause an undesirable increase in the fiscal space for consumer spending. Net capital formation completed before the introduction of the rule may be financed by loans after its introduction, which frees up the corresponding amount of **additional funds for consumer spending**. Given the current level of net capital formation amounting to 0.1 % of GDP, however, the fiscal space created in this way would be small. Furthermore, the golden rule must be compared with the current rule, which generally allows new borrowing of 0.35 % of GDP. Additional scope for deficit financing of consumer spending would therefore only arise if net capital formation were greater than 0.35 % of GDP. With net investment currently amounting to 0.1 % of GDP, the scope for deficit financing under the golden rule would be even lower than today – namely only 0.1 % of GDP. The fiscal space for deficit-financed consumer spending would also be lower, falling from 0.25 % of GDP today to 0 %. The introduction of the golden rule would therefore actually create strong incentives to expand net public capital formation and even restrict the scope for consumer spending.
161. If implemented as a net investment rule, depreciation on the current public capital stock would have to be recognised as a correction. The necessary **determination of depreciation under budgetary law is a challenge**, as depreciation is an unobservable variable that requires estimates. The national accounts contain comprehensive estimates of depreciation of the public capital stock for the entire public sector, based on which it would be possible to estimate depreciation for the individual levels of government. Moreover, the **introduction of a capital account for the federal government and federal states** is conceivable in the future (GCEE Occasional Report 2007 item 165), which could also help to recognise depreciation more accurately.

162. Another problem with an uncapped golden rule on net capital formation would be if the net capital formation and, consequently, the permissible deficits were so large that they clashed with the sustainability of the public finances. This possibility could be ruled out by **capping the level of permissible net capital formation** (Truger, 2021; Blesse et al., 2023a). Deutsche Bundesbank (2022), for example, proposes allowing loan financing of net capital formation of up to 0.5 % of GDP. Truger (2015) has proposed a limit of between 1 % and 1.5 % of GDP for deductible public investment in the EU context. If the government wants to utilise the maximum possible lending volume specified by the cap on loan-financed net capital formation, the effect of this cap is similar to a minimum quota for net capital formation.
163. One frequently voiced criticism of the classic golden rule is that it favours investment in tangible assets in particular but neglects other future-oriented expenditure – especially spending on education (GCEE Occasional Report 2007 item 129). A golden rule could therefore **favour investment in tangible assets as defined in the national accounts at the expense of other future-oriented expenditure** (Blesse et al., 2023a). Since the golden rule creates additional fiscal space, however, other future-oriented expenditure is not displaced. Nonetheless, it is not prioritised either, so it could continue to be neglected during the budgeting process. [▶ ITEM 121](#)

To avoid this, the definition of investment might have to be expanded to include other productive expenditure, such as spending on education. **Broadening the definition of investment**, however, can cause difficulties in determining depreciation and, consequently, net capital formation. Although there is an established procedure in the national accounts for determining depreciation on fixed assets, it does not exist for private human capital, as would be necessary for education expenditure. In principle, it is possible to develop a systematic procedure for estimating depreciation of human capital. However, the empirical literature on estimating **net investment in human capital** suggests that it is likely to be low or even negative in developed economies due to demographic change. In the United States, population growth is the primary driver contributing to the positive net investment in human capital and outweighs the effect of an ageing population (Christian, 2017). In Germany, the adverse effect of ageing is likely to be even higher than that in the US, which is why net investment in human capital can generally be expected to be very low or even negative. The GCEE came to a similar conclusion back in 2007 (GCEE Occasional Report 2007 item 130). An exception for net investment in human capital would then limit the scope for borrowing.

164. Overall, there is a **trade-off between** the possibility of **expanding the definition of investment** and making it more economically appropriate **and the practical feasibility** of implementing a golden rule. One pragmatic solution might be to consider the various forms of future-oriented expenditure by pursuing different approaches. Deficit financing of net capital formation could, for practical reasons, be based on the narrow definition of investment in the national accounts (GCEE Occasional Report 2007 item 131).

165. The design of the golden rule as mentioned in the Basic Law up to 2009 was mainly criticised for its outdated definition of investment, which was based on gross capital formation. [↪ ITEM 160](#) The GCEE proposed at an early stage that the definition of gross capital formation should be changed and that net capital formation less depreciation could be used instead (GCEE Occasional Report 2007). In addition to introducing a golden rule based on the concept of net investment, the Scientific Advisory Board to the BMWK (2023) proposed the **Golden Rule Plus** and suggested transferring the details of the concept of investment and **the monitoring of its implementation** during the budgetary process to an **independent institution**. The monitoring body would be responsible for scrutinising the government’s planned capital expenditure to determine whether it actually meets the definition of investment. Similarly, calculations of depreciation could be reviewed by such a body in order to determine the appropriate net capital formation. However, such a solution would be time-consuming and it would not be certain that an independent body would reach a consensual assessment. A pragmatic approach using the definition from the national accounts in combination with improvements to the planning process [↪ ITEM 140](#) might therefore be a more practicable and sensible solution.
166. A pragmatic golden rule based on the national-accounts definition of net public capital formation and including a cap on permissible new borrowing could, in principle, be a sensible way of increasing and stabilising public investment in the narrower sense. When it comes to the **permanently plannable, binding prioritisation of future-oriented expenditure** in specific areas where there has been a lack of replacement investment to date, however, **other options** are likely to be **more effective**. This is particularly true in the area of transport infrastructure with respect to a special earmarked fund in which the allocation of resources is clearly defined.

### 3. Expanding the fiscal space

167. Various instruments such as a minimum quota [↪ ITEMS 143 FF.](#) and a fund with its own revenues [↪ ITEM 147](#) can increase the commitment to future-oriented public spending effectively and thus counter the anti-investment bias. [↪ ITEM 121](#) **Moderate, stability-based reforms of the debt brake**, as proposed by the GCEE in January 2024, **can expand the necessary fiscal space** for this. [↪ ITEMS 170 FF.](#) An evaluation of existing expenditure can ensure the efficient use of public funds. [↪ ITEMS 168 F.](#)

#### Evaluation of existing expenditure

168. **Continuous reviews and evaluations are crucial for the efficient use of public funds**, regardless of whether they are used for consumption or investment. This increases the efficiency of budgeting and the utilisation of funds. If inefficient expenditure is avoided or reduced, fiscal space is created in the budget that can be utilised for future-oriented expenditure. The Federal Ministry of Finance (BMF) has worked with the relevant ministries to conduct **spending reviews** – thematic budget analysis that supplements the federal budgeting

process (BMF, 2024d). These reviews assess the **effectiveness and efficiency** of government measures and aim to develop proposals for improvements in the respective policy areas. The eleventh spending review, for example, proposed the medium- to long-term use of standard indicators to improve efficiency analysis and performance reviews in terms of the achievement of sustainability goals (BMF, 2024d). It is conceivable that these spending reviews could be expanded in the future and be based more on cost-benefit analysis than in the past. [▶ ITEMS 139 FF.](#)

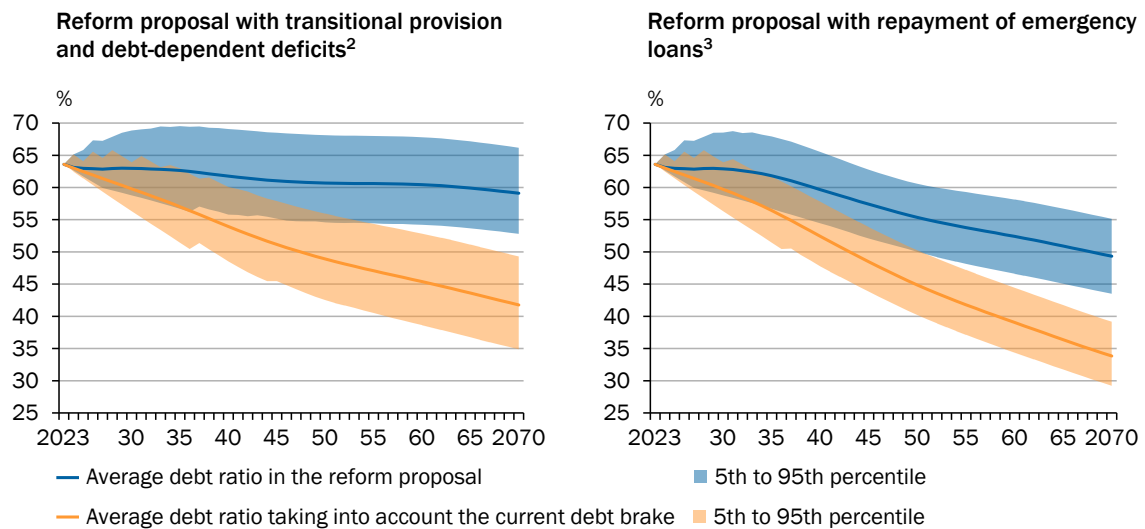
- 169. Sunset clauses** can help to regularly review the effectiveness and efficiency of political measures on the legislative side. A **fixed end date** is set, **after which any continuation of such measures requires a new decision by the legislature**. For example, new funding programmes and subsidies, particularly in the form of tax breaks, could in future only be approved for a limited period and subject to mandatory evaluation. Such sunset clauses have been practised in tax legislation in the United States for decades (Gale and Orszag, 2003). For example, the tax measures contained in the Tax Cuts and Job Creation Act of 2017 will largely expire at the end of 2025 unless the US government explicitly seeks to continue them and obtains the necessary majorities in the parliamentary process (Oshagbemi and Sheiner, 2024). Examples of temporary measures introduced in Germany for which an expiry date has been set include the temporary general reduction in VAT at the beginning of the COVID-19 pandemic (1 July 2020 to 31 December 2020; Bundesrat, 2020), the cut in VAT on natural gas (1 October 2022 to 31 March 2024, Bundesregierung, 2022), the energy price caps (1 March 2023 to 30 April 2024; Deutscher Bundestag, 2023) and the degressive depreciation allowance (1 October 2023 to 30 September 2029, BMWSB, 2024).

### Stability-based reforms of the debt brake

- 170.** Between 2009 – the year in which the debt brake was adopted in Germany’s Basic Law – and 2019, the government’s overall **debt ratio in Germany** fell from over 80 % of GDP to just under 60 %. It briefly rose to 69 % of GDP in the wake of the COVID-19 pandemic and the energy crisis. Since then it has been falling again. According to the GCEE’s forecast, it is expected to be **63 % of GDP in 2024** and rise to 64 % of GDP in 2025. [▶ ITEM 71](#) Simulations done by the GCEE, however, show that the current debt brake rules allow for a significant drop in the debt ratio to below 60 % of GDP in the future (GCEE, 2024). The deficit limit of the debt brake is therefore stricter than necessary to ensure the debt sustainability of the public finances and to comply with the Maastricht criteria. The **GCEE** has therefore **outlined reform options** that could **increase the flexibility of fiscal policy without jeopardising its stability** (GCEE, 2024).
- 171. The flexibility of the debt brake can be increased by making two adjustments.** Firstly, a **transition phase** should be introduced **during the years immediately following the application of the debt brake’s exemption clause** [▶ BACKGROUND INFO 5](#). The permissible structural deficit could be above the normal limit during this transition phase but would have to be steadily reduced. This would make it possible to react to the post-crisis effects of the

↘ CHART 52

### Limiting the general government debt ratio through the debt brake<sup>1</sup>



1 – The simulations are based on the debt ratio in 2023 and the GCEE's projections for the the growth in real potential output up to 2070 (GCEE Annual Report 2023 item 101). An inflation rate of 2 % is also assumed. There is a 20 % probability of an emergency situation occurring. In the emergency situation, the deficit amounts to 3 % of GDP. In the non-emergency situation it amounts to 0.35 % of GDP. 10 million paths are simulated in each scenario. 2 – After an emergency situation, a transitional regulation applies that imposes a linear reduction of the deficit to the normal situation within three years. In the non-emergency years, the deficit may also amount to 1 % or 0.5 % of GDP with a debt ratio of less than 60 % or less than 90 % of GDP. 3 – In addition to the assumptions in footnote 2, the emergency loans taken out during the emergency or transitional phase must be repaid within 20 years from the fifth year after they were taken out.

Source: own calculations

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shocks that led to the utilisation of the exception clause in subsequent years and strengthen the recovery. It also avoids debates about having to re-justify any use of the exception clause. And, last but not least, any restructuring of the budget that may be necessary after a crisis – e.g. in view of the changing geopolitical situation – is made easier. The Federal Constitutional Court has ruled (BVerfG, 2023) that none of this is currently possible. The continued use of borrowing powers from the time when the exception clause was in force is therefore no longer permitted and the requirements for the continued use of the exception clause have been tightened.

Secondly, the **ceiling for the annual structural deficit** should be **staggered in line with the debt ratio**. The ceiling could be designed in such a way that higher structural deficits than in the past are permitted for a lower debt ratio. For example, a structural deficit of 0.5 % of GDP would be possible for a debt ratio below 90 % of GDP, while a structural deficit of a maximum of 1 % of GDP would be permitted for a debt ratio below 60 % of GDP. As in the past, if the debt ratio exceeds 90 % of GDP, the structural deficit should not exceed 0.35 % of GDP.

172. **Simulations suggest** that even if the **debt brake is made more flexible, as proposed, the debt-to-GDP ratio is likely to fall further in the medium term** (GCEE, 2024). ↘ CHART 52 LEFT This takes account of the fact that emergencies can occur regularly. Even if this were the case every five years on



average, the average debt-to-GDP ratio should fall steadily to 59 % of GDP by 2070 according to the simulations in the policy brief. To simplify the necessary calculations, no **repayment of emergency loans** was assumed in these simulations. However, such repayment is required in the Basic Law. The emergency loans taken out during the COVID-19 pandemic and the energy crisis must be repaid over the period from 2028 to 2058. Although these repayments will reduce the fiscal space available in the future, they will bring down the level of debt more significantly in the long term. Assuming that emergency loans have to be repaid within twenty years of the fifth year after they are taken out, the average debt ratio will fall to around 49 % of GDP by 2070. [↘ CHART 52 RIGHT](#)

173. A **debt brake reformed** in line with the GCEE’s proposals would ensure debt sustainability and thus address the political and economic problem of the deficit bias. [↘ ITEM 120](#) **However, this would not eliminate the anti-investment bias.** [↘ ITEM 121](#) Measures such as those mentioned above are therefore necessary to ensure that the additional funds available are used for future-oriented expenditure that has a strong long-term effect on GDP. [↘ ITEMS 142 FF.](#) Higher future-oriented spending could boost growth. [↘ ITEMS 110 FF.](#) In this case, the debt ratio would fall faster than in the simulation’s reference scenario and would create additional fiscal space.

## V. CONCLUSION

174. In this chapter the GCEE systematically analyses potential **institutional arrangements that have a strong binding effect** on the long-term financing of future-oriented public spending. The focus on such institutional arrangements, which reliably ensure future-oriented expenditure, distinguishes the GCEE’s analysis from numerous studies that primarily discuss how to expand the scope for borrowing to finance public investment. **Specific potential solutions** are presented **for the areas of transport infrastructure, basic education and defence**. It is difficult to clearly define future-oriented expenditure, and this cannot be done without setting political objectives and weighting them accordingly. [↘ ITEM 105](#) Even answering the question of what expenditure should come from the public finances is fraught with similar problems. Nevertheless, it is plausible to classify spending in the areas of transport infrastructure and defence as well as large parts of education expenditure as both future-oriented and clearly attributable to the public sector in Germany. [↘ ITEMS 87 FF.](#) There is currently a considerable need for additional spending in these areas. [↘ ITEMS 104 FF.](#)
175. In order to increase and stabilise this future-oriented expenditure, three conditions must be met. Firstly, **cost-benefit analysis** should be used more systematically than in the past to improve the rationality of the planning process. [↘ ITEMS 139 FF.](#) Secondly, **institutional arrangements** are needed that effectively oblige politicians to actually use budget funds for future-oriented expenditure in order to overcome the anti-investment bias. [↘ ITEMS 142 FF.](#) A reasonable

balance needs to be found between creating a **strong binding effect**, for example by enshrining it in Germany’s Basic Law, and imposing too great a **restriction on the ability to react flexibly to new situations**. Thirdly, fiscal space [↘ ITEMS 167 FF.](#) should be mobilised for future-oriented expenditure. Systematic evaluation of the use of funds can contribute to this, as can the stability-oriented reform of the debt brake proposed by the GCEE, which increase fiscal flexibility without causing the debt-to-GDP ratio to trend upwards over time (GCEE, 2024).

176. The financial demands, administrative responsibilities and content requirements for the instruments used to secure future-oriented expenditure differ significantly in some cases in the areas of transport infrastructure, defence and education considered here. The instruments that can be used to counteract the present bias should be tailored to (1) whether a one-off or permanent increase in spending is to be achieved, (2) how clearly the expenditure can be identified and delimited, and (3) which federal level bears responsibility for funding and implementation. The **institutional arrangements** should therefore be **tailored to the respective area**.
177. A **permanent transport infrastructure fund** should be particularly suitable for ensuring that infrastructure investment – in both the road and rail networks – is stabilised to the required extent. This should be permanently funded **from its own sources of revenue**, as continuous revenue streams improve the predictability of infrastructure spending. Amounts allocated from the truck toll and the passenger car toll proposed by the GCEE – which, in the medium term, should compensate for the prospect of declining revenues from the energy tax on fossil fuels in the transport sector [↘ ITEM 492](#) – could be available over an extended period of time for the expansion, modernisation and maintenance of transport infrastructure, as with the infrastructure funds in Switzerland. [↘ BOX 12](#) The option of transferring revenues from the energy tax on fossil fuels in the transport sector and from the motor vehicle tax could be considered. The transport infrastructure fund could be enshrined in the Basic Law to ensure that it achieves a strong binding effect. [↘ ITEM 148](#) In order to address the **backlog in the modernisation of transport infrastructure**, the transport infrastructure fund could also be provided with limited borrowing powers that could be utilised as part of a reformed debt brake [↘ ITEMS 170 FF.](#) and within the framework set by the EU’s fiscal rules.

If the project is limited to **federally owned transport infrastructure**, Germany’s Federal Ministry for Digital and Transport (BMDV) could be used as the managing authority. By foregoing legal independence, administrative costs should remain low. **Earmarking expenditure** for maintenance, replacement and new construction, as in the Swiss model, [↘ BOX 12](#) makes sense so that new builds are not prioritised over maintenance simply because funds are available for certain purposes. The transport infrastructure fund should be designed to be intermodal, i.e. it should cover expenditure in the road and rail transport sectors (and, possibly, water as well) and coordinate it with regard to the desired mobility goals, similar to the proposal made at the Conference of Transport Ministers (VMK, 2024).

178. **The two per cent target set by NATO would be a good benchmark** for the **long-term funding of defence**. Germany currently only achieves this target by taking additional funding from the Bundeswehr special fund. [↪ ITEMS 102 F](#). In the long term, however, further additional expenditure is necessary to modernise military equipment and achieve the two per cent target. [↪ ITEM 108](#) The statutory definition of this target as a minimum quota could increase its binding effect. [↪ ITEMS 143 FF](#). This quota should be financed from the core budget. Sufficient scope for this could be created through a more efficient use of funds, taking cost-benefit analyses into account. [↪ ITEMS 139 FF](#). The reforms of the debt brake proposed by the GCEE could also create additional fiscal space of up to 0.65 % of GDP in the long term as soon as the rule limit on the deficit rises to 1 % of GDP with a debt ratio of below 60 %. [↪ ITEMS 170 FF](#). This would represent slightly more than the average annual contribution made by the Bundeswehr special fund over the five years in which it is to be spent according to current plans. The Bundeswehr's procurement processes – particularly for major contracts – should also be accelerated. [↪ ITEM 134](#)
179. In the area of education it would be possible to introduce a **statutory requirement for a minimum level of expenditure on education** – defined, for example, as minimum spending per pupil (GCEE Annual Report 2021 item 372). Such a minimum quota would have to be implemented at the level of the federal states, as most of this expenditure is incurred by them. [↪ ITEM 97](#) In order to take account of cost differentials – owing to regional variations, for example – these minimum quotas should be set on a state-specific basis, although nationwide coordination would make sense.

## A differing opinion

180. One GCEE member, Veronika Grimm, agrees with the Council majority’s assessment that future-oriented government spending – particularly in the areas of education, defence and infrastructure – should be strengthened. However, this Council member cannot fully share the conclusions reached by the Council majority. In addition, the dissenting Council member does not share various assessments given by the Council majority in respect of the policy actions currently being discussed. Some additional arguments are therefore put forward below to assess the potential policy actions discussed in the text, and specific concerns are raised about the conclusions reached by the Council majority. The dissenting Council member is of the view that **proposals to strengthen future-oriented public spending cannot be implemented without creating reliable fiscal space as part of structural reforms**. If this does not happen, requirements to prioritise future-oriented public spending could inappropriately restrict the decision-making powers of legitimate decision-makers in parliaments.

### 1. On the potential policy actions mentioned in the report

#### Cost-benefit analysis

181. In the section entitled ‘Improve decision-making on public spending’ <sup>▷ ITEMS 139 FF.</sup> the Council majority discusses the need for ‘greater systematic application’ of cost-benefit analysis ‘using methods standardised for the respective areas’. This could ‘help to identify expenditure with high cost-benefit ratios in a transparent manner’.
182. However, these proposals are vague, which is why it remains unclear how exactly any improvement is to be achieved with regard to the identification and prioritisation of future-oriented expenditure. Endeavours to ‘improve the rationality of the planning process’ with the help of cost-benefit analysis by state institutions <sup>▷ ITEM 175</sup> will simply not work owing to the fact that **no objective evaluation of projects is possible**. Both fundamental theoretical and practical obstacles make it impossible to aggregate individual preferences into a social welfare function (such as the incomparability of benefits or heterogeneous preferences, cf. Arrow, 1951; Sen, 1970; Hausman and McPherson, 2006). Attempts to create the appearance of an ‘objective’ assessment can therefore give rise to justified criticism and weaken acceptance of the results and recommendations for action (Edenhofer and Kowarsch, 2015). **Decision-making** in a federal democratic constitutional state therefore takes place **as part of a negotiation process at all levels of government** and is ultimately legitimised by democratically elected representatives (Habermas, 1992). **Academics play a key role** in this negotiation process (cf. e.g. Edenhofer and Kowarsch, 2015).

183. It is with good reason that there are numerous research institutes in Germany with different disciplinary focuses that contribute to the debate and provide data sources based on their specific expertise. In addition, there are a large number of think-tanks and associations that influence the social debate with their contributions. This **diversity of perspectives and actors provides** wide access to political and economic participation and is therefore a prerequisite (but not a guarantee) **for laws and political decisions to emerge from a fair, inclusive discourse** that takes account of both factual circumstances and normative standards (Habermas, 1962; Sen, 1999; Acemoglu and Robinson, 2012). Analysis based on different assumptions and models that are in competition with each other as well as researchers who explain their analysis and assumptions and defend their relevance against criticism are key components of the public and political opinion-forming process (Ostrom, 1990; Mouffe, 2000; Acemoglu and Robinson, 2012).

**The credibility of analysis and acceptance** of the decisions based on it **are unlikely to be enhanced if** the ‘relevant’ **analysis is pooled in a politics-related environment**. Even during the COVID-19 pandemic, pooling expertise in a central council of experts proved to be difficult and ultimately did not work. In the course of grid development planning, for example, it recently became clear that scenarios that imply the non-achievement of energy policy targets could not be analysed, even though the non-achievement of expansion targets for renewable energy or a smaller increase in electricity demand are entirely realistic possibilities. Important scenarios would then not be considered at all in any political decision on the choice of scenarios.

184. **Cost-benefit analysis is better suited to criticising expenditure** than to selecting new projects, as it is primarily focused on efficiency and the objective evaluation of clearly defined aspects. It often only considers short-term, measurable benefits and does not take account of all the indirect and long-term effects of a new project, which are difficult to assess at an early stage (Böhringer and Löschel, 2006; Dunn, 2017). Such **projects, for example in environmental or education policy, can be extremely valuable** in the long term **but are unlikely to be optimally assessed by any cost-benefit analysis** (Masur and Posner, 2011; Boardman et al., 2018). Consequently, cost-benefit analysis is methodologically better suited to scrutinising existing expenditure for inefficiencies rather than underpinning ambitious projects with uncertain long-term benefits. On the whole it encourages budgetary discipline by revealing optimisation potential in ongoing programmes.

### Special funds and investment funds

185. In the section entitled ‘Increase commitment’ <sup>▷ ITEMS 142 FF.</sup> the Council majority discusses the prioritisation of future-oriented public expenditure in the form of special funds and investment funds. For various reasons, special funds do not do justice to the long-term prioritisation of future-oriented expenditure. The main text of the report mentions the risk of a loss of transparency owing to the outsourcing of functions to supplementary budgets and the unsuitability of purely loan-financed special funds for long-term tasks such as defence, education and

infrastructure. ↘ ITEM 150 However, there are further concerns about the use of special funds to strengthen future-oriented public spending. For example, **special funds are often proposed by interest groups for large-scale subsidy programmes** that could hinder rather than encourage structural change, which is important in the current situation. The breadth of the estimates listed in the main text ↘ ITEMS 104 FF. illustrates this, as does their diversity. If an attempt is made to prevent any inefficient use of funds when creating special funds by **clearly defining the expenditure permissible**, this **makes it more difficult to adapt** to changes in the regulatory framework **that may become necessary over time**. **Flexible structuring** of special funds, on the other hand, **poses the risk of inefficient use of funds** owing to the available room for interpretation.

186. Although infrastructure funds are one option for financing infrastructure projects, there are several challenges that could make their implementation more difficult. A fund that is limited to federal projects does not solve any financing problems for the federal states and local authorities. However, the biggest deficits in infrastructure funding affect local authorities. They have been suffering from a considerable investment backlog for years, which is now estimated to be around €190 billion (KfW Research, 2024). In addition, there are **political differences over the focus of these funds**, such as whether the funds should be intermodal (road and rail together) and, if so, **how they should prioritise between rail and road**. There are likely to be considerable differences between the political parties and their supporters in this regard, **the negotiation of which is difficult to outsource to an infrastructure fund and methodologically limited cost-benefit analysis**.
187. One possible alternative is to **outsource the provision of infrastructure**, in consultation with the European Commission, **to revenue-financed infrastructure companies with their own borrowing capacity**, modelled on the Austrian ASFINAG (Expertenkommission Stärkung von Investitionen in Deutschland, 2016). These companies could act operationally and financially independently and would therefore **not be directly bound by the debt brake**. Depending on how they are organised, however, the debt limit within the framework of the European fiscal rules would have to be observed. Their revenue financing would enable them to independently fund the necessary capital formation without placing a burden on the regular public finances or affecting the public sector's borrowing capacity. In particular, **funding in the form of contributions and fees** would **help to ensure that infrastructure development is geared towards users' preferences**. In this context, it is important to give private investors an appropriate share of the risk so that they have a vested interest in ensuring that the provision of infrastructure is aligned with the preferences expressed in users' willingness to pay. The state could continue to commission infrastructure that serves regional policy objectives by purchasing the necessary transport routes from investment companies – i.e. through explicit subsidies.

## Golden rule

188. The ‘golden rule’ section <sup>↘ ITEMS 158 FF.</sup> discusses the expansion of fiscal space. A ‘golden rule’ for net capital formation, which allows for additional targeted government spending, is generally viewed positively by the majority of the Council (‘A pragmatic golden rule based on the national-accounts definition of net public capital formation and including a cap on permissible new borrowing could, in principle, be a sensible way of increasing and stabilising public investment in the narrower sense.’ <sup>↘ ITEM 166</sup>). The dissenting Council member does not share this assessment.
189. The introduction of a golden rule for net capital formation is likely to pose considerable challenges in terms of practical implementation. Firstly – as the Council majority concedes <sup>↘ ITEM 163</sup> – there is a significant definition problem, as it is difficult to clearly separate future-oriented public expenditure from consumption expenditure. This definition problem was one reason why the previous object-related debt limit was abandoned (see Advisory Board to the Federal Ministry of Finance, 2007). Given this definition problem, it is proposed that **the relevant definition be based on the national accounts**. However, past experience has shown that the construction of water parks, regional airports and other public **prestige projects**, which would be covered by such a definition, has **often burdened subsequent generations with high follow-up costs** and **contributed little or nothing to productivity growth** (Fuest and Grimm, 2023).
190. Furthermore, any definition of investment based on the national accounts means that **key challenges, such as education spending, are not adequately considered**. Although this clearly constitutes future-oriented public expenditure, it largely consists of personnel expenses, which would not be covered by such a definition. Such investment **could even be crowded out** if expenditure that comes under the definition used for the golden rule has to be increased in order to achieve positive net capital formation and thus additional scope for borrowing in these areas.
191. If a **more comprehensive definition of future-oriented public expenditure** is chosen, this would require **the federal government and the federal states** to present **a reliable statement of their assets and liabilities**. However, there are no plans to introduce a mandatory switch to double-entry bookkeeping in the federal and state budget accounts, which would be able to show all relevant assets, liabilities and their changes. This would also pose considerable financial and organisational challenges and would not be achievable within a reasonable period of time.

## 2. Reform options for future-oriented policies

192. In order to strengthen future-oriented spending, it may not be enough to establish additional rules on the use of available budget funds. If one limits oneself to this approach, it ignores important potential courses of action that could ensure

the availability of additional fiscal headroom for future-oriented public spending without increasing national debt in the first place. For example, the **implementation of a series of reforms** could provide **structural relief for the public finances** and thus **create greater scope for future-oriented public spending**. This should increase the political majorities in favour of minimum spending √ ITEMS 143 FF. AND 179 or infrastructure funds √ ITEM 177 within the democratic process in the first place, as there would still be sufficient scope for other government functions despite these – then self-imposed – restrictions. In the absence of any structural reforms, strengthening future-oriented public spending would probably only be feasible if a significant increase in national debt were accepted. However, the Council majority rules out any such growth in national debt over and above the proposed moderate reforms of the debt brake. √ ITEMS 170 FF. √ ITEM 85 Moreover, the EU fiscal rules do not offer any scope for this. √ ITEM 211

193. The debate on future-oriented government spending must consider not only the ‘anti-investment bias’ (i.e. the overweighting of present-focused spending in the budgeting process) but also **to what extent future-oriented spending should be undertaken by the state or left to the private sector by creating a suitable regulatory framework**. In order to ensure sufficient fiscal headroom for future-oriented government spending, it is particularly important to **avoid intervention spirals** (von Mises, 1929; Schumpeter, 1942; von Hayek, 1944; Buchanan and Tullock, 1960). These occur when, owing to dysfunctional regulatory frameworks for the private sector (for which political decisions are often directly responsible), the state necessarily increases its involvement but is unable to address the existing challenges (Grimm et al., 2024a). This phenomenon can be observed, for example, in the housing market and in climate protection.
194. **Five areas for action are crucial** to providing sufficient scope for future-oriented government functions in the public finances and enabling prioritisation: (1) the (partial) **withdrawal of the state** from sectors of the economy that are not part of the state’s remit, (2) a switch from subsidies to **reliable regulatory frameworks** in various markets, (3) **consistent spending reviews**, (4) **structural reforms** to create fiscal headroom in budgets and stabilise local authorities’ revenues, and (5) the **‘reservation’ of borrowing potential** to make these reforms possible. A combination of these measures could enable the prioritisation of future-oriented expenditure and acceptance of the democratic decision-making processes leading to this.

(Partial) withdrawal of the state from sectors of the economy that are not part of the state’s remit

195. Various functions are performed by the state although they are not classed as traditional government responsibilities. These include investing in companies, undertaking some activities in the housing market, rescuing failing firms and providing extensive subsidies and financial aid in areas such as energy and climate change. The volume of subsidies provided in the form of federal financial aid and tax concessions recently rose from €37.9 billion in 2021 to an estimated €67.1 billion in 2024 (BMF, 2023). There is controversy as to whether this



additional involvement on the part of the state is desirable (Feld et al., 2023; Wambach, 2023; Fuest, 2024; Laaser and Rosenschon, 2024). **Extensive state aid** for companies with structural problems is more likely to **prevent urgent structural adjustments** and thus delay the **necessary modernisation**. As far as the transformation of industry is concerned, it is questionable whether the state's involvement identifies the best projects for achieving transformation goals (Edenhofer and Grimm, 2022; Wambach, 2023). In addition, government support for certain activities can crowd out private activity or reduce the appeal of private-sector investment (Boehm, 2020; Nguyen, 2023). ▷ ITEMS 110 FF. Ultimately, **private investment may fail to materialise** because it is waiting for government support, **there is growing uncertainty about the applicable regulatory framework** or because government subsidies and market intervention distort competition (Ambrosius et al., 2020a, 2022; EEM, 2024).

196. **Government intervention** and the inefficient design of regulatory frameworks in various policy areas have **put further pressure on politicians to engage in government activity**. This includes policies on energy, climate change and housing (EEM, 2024; Grimm et al., 2024b; NWR, 2024; GCEE Annual Report 2018 items 656 ff.). In all three areas, which are briefly discussed here as examples, the distortion of prices owing to a lack of – or faulty – regulation creates perverse incentives that provoke ever more extensive state support to achieve the government's objectives.
197. In the **housing market**, the regulation of rents causes uncertainty among private investors and low expected returns, resulting in a shortage of supply and, consequently, calls for more government intervention (Fuest, 2024). ▷ ITEMS 414 FF. In **climate protection**, emission prices well below the social costs of emissions and a regulatory jungle create a need for extensive subsidies to achieve the targets set (EEM, 2024; Grimm et al., 2024b). In the **electricity market**, uniform electricity prices throughout Germany create a need for subsidies to ensure that generation capacity is located where it benefits the system, which prevents the necessary market flexibility (Bichler et al., 2024; BMWK, 2024; EEM, 2024; Grimm and Ockenfels, 2024). All of the examples mentioned involve large sums of money being spent on government initiatives, although the relevant targets are often not achieved. By **adjusting the regulatory framework** it may be possible to **stimulate private investment** and, at the same time, **relieve some of the pressure on the public finances**. The partial withdrawal of the state from various sectors of the economy could create **fiscal headroom in the public finances**, which could be used **for primary, future-oriented government functions**.

Strengthening the regulatory framework and increasing the predictability of government action

198. In energy and climate policy, the **introduction of regionally varying electricity prices in wholesale markets** and the **strengthening of emissions trading** can **boost investment incentives and improve the efficiency of electricity markets** (Grimm et al., 2021, 2024b; EEM, 2024). For example, regionally varying electricity prices in wholesale markets increase incentives to

expand capacity at locations that are beneficial to the system and to operate them in a system-friendly manner (Ambrosius et al., 2020b; Grimm et al., 2021; Bichler et al., 2024; Grimm and Ockenfels, 2024), while higher emissions prices would make climate-friendly investment more attractive (Döbbeling-Hildebrandt et al., 2024). Government subsidies could then be eliminated (Grimm et al., 2022; EEM, 2024). Although combinations of policy instruments usually have a stronger effect than individual measures, it is the pricing of emissions that ensures their effectiveness. For example, non-pricing measures are significantly strengthened by the pricing of carbon emissions (Khanna et al., 2021), and politically popular regulatory law is often only effective at all in such a combination (Stechemesser et al., 2024).

199. **Strengthening the pricing of carbon emissions while dismantling the numerous other regulations** that affect the pricing of emissions would **boost incentives to invest** in climate protection. At the same time, this would **generate transitional revenue** that could be used to compensate for social hardship, for example (Groß et al., 2022; EEM, 2024). Such redistribution significantly increases acceptance of pricing instruments, especially if they are used to finance climate-friendly investment in things such as infrastructure and climate money (Groß et al., 2022; Mohammadzadeh Valencia et al., 2024).
200. Measures necessary for carbon neutrality, such as the **procurement of green hydrogen and hydrogen derivatives**, could **be coordinated at EU level** (Bauer et al., 2023; Grimm et al., 2024b). The procurement of large quantities could accelerate cost reductions and the EU could benefit from lower prices as a result of competition among potential suppliers (Grimm et al., 2024b). **Consequently, the necessary government subsidies are likely to be significantly lower than the financial support currently being provided to individual firms.** At present, for example, a total of €10 billion is being made available to reduce the carbon footprint of selected energy-intensive companies. These support measures tie up considerable human resources in government ministries, are likely to be accompanied by substantial deadweight effects and enable other players in European emissions trading to generate higher emissions.
201. Future-oriented adjustments to regulation  $\supset$  ITEMS 414 FF. are needed in the **housing market to prevent the necessary state involvement from exceeding the government's resources.** In particular, the design of rent regulation should provide better incentives for the efficient use of housing, on the one hand, and for private investment in housing construction on the other.
202. These examples illustrate that an **economic policy based less on discretionary measures and which creates a predictable investment environment** should **enable the state to focus its human and financial resources more on the sort of future-oriented functions** that are clearly the government's responsibility. Only if sufficient fiscal headroom for future-oriented public spending is likely to materialise should it be possible to adopt regulations for central-government responsibilities such as education, infrastructure expansion and defence that ensure minimum spending in these areas without

crowding out other important present-focused and future-oriented public spending on too large a scale.

203. The **withdrawal of the state** from the areas mentioned (and possibly others) **would free up human resources in government agencies**, as the burden on the state bureaucracy caused by the planning and administration of discretionary measures would be reduced. The **planning and implementation times** for remaining tasks are likely to **decrease considerably** as a result. In addition, it would be possible to act much more quickly in those areas for which the state is no longer responsible. This is because **decisions can be made more swiftly in firms than in the political arena**. If it is possible to create clarity about the regulatory framework, companies will focus primarily on customer service and the legal guidelines.
204. **It is possible to consider externalities and frictions** in individual markets **by using appropriate government instruments** (such as pricing of carbon emissions to take account of the relevant externalities or housing benefit to ensure social inclusion). The design of the market environment, for example in energy markets, is also often determined by lawmakers and is crucial for the smooth functioning of markets. Although the creation of effective institutions or their reform to adapt to new challenges are complex tasks, they often offer a sustainable answer to the problem of insufficient future-oriented expenditure (in contrast to recurring state intervention).

### Consistent spending reviews

205. Government spending amounted to an average of 46.5 % of economic output between 1991 and 2019. This ratio rose sharply in the wake of the pandemic and the energy price shock and remains well above its pre-crisis level (2019: 44.2 %; 2023: 48.4 %). The latest economic forecast predicts that government spending will rise to 49.2 % of GDP by 2025 based on current fiscal policy. The state thus continues to intervene significantly in the economy. Additional funding requirements for future-oriented tasks as described above should therefore be met not from additional expenditure but rather by reallocating resources from the public finances to private-sector activity. In addition, **greater prioritisation on the basis of a government spending review** may be appropriate. Cost-benefit analysis can play a key role here when it comes to scrutinising existing expenditure for inefficiencies.

### Creating reliable fiscal space by implementing structural reforms

206. In addition to the state withdrawing from various areas of activity in conjunction with the creation of reliable institutions to mobilise private investment, **structural reforms of welfare spending and reforms of federalism** can increase the fiscal headroom available for future-oriented government spending.
207. The GCEE and numerous other advisory bodies have in recent years made proposals aimed at curbing the expected increase in present-focused spending. The connection here with prioritising future-oriented public spending is obvious:

lower present-focused expenditure creates more scope for spending that should be prioritised in order to boost potential growth and secure future prosperity. **Only if the rise in welfare spending is curbed will it be possible to ensure that minimum quotas (such as those for education and defence spending) can continue to be met in the long term.** A few (non-exhaustive) examples are given below.

208. Major reforms relate to **statutory pension insurance**, where the retirement age in particular should be linked to changes in life expectancy over the longer term and the increase in existing pensions could be curbed (Advisory Board to the Federal Ministry of Finance, 2020; GCEE Annual Report 2020 items 648 ff.; GCEE Annual Report 2023 items 403 ff.). In addition, old-age pensions without deductions for those insured for at least 45 years ('pensions from the age of 63') and the maternity pension and widow's pension should be critically scrutinised (GCEE Annual Report 2020 items 657 ff. and 678 ff.; GCEE Annual Report 2023 items 416 ff. and 443 ff.). Corresponding measures should also be applied to civil servants' pensions where appropriate. **Strengthening private pension provision** could reduce reliance on the statutory pension in the medium to long term (Advisory Board to the Federal Ministry of Finance, 2022; GCEE Annual Report 2023 items 449 ff.). These measures could curb the increase in pension insurance contributions and subsidies from the federal budget. Spending on transfer payments could also be limited by **making social security more efficient**, for example by avoiding duplication (Advisory Board to the Federal Ministry of Finance, 2023; GCEE Annual Report 2023 items 318 ff.) and reducing bureaucracy. Social security could be made more cost-effective if social policy measures were increasingly implemented through the tax and transfer payments system. Contributions to funding such benefits would be based on the ability-to-pay principle, while needs assessments could be based on the budgetary principle. In many cases this would make it possible to achieve more targeted and needs-based support (GCEE Annual Report 2023 items 502 ff.). The digitalisation of administrative processes could play an important role in all of these measures.
209. Further efforts should be made in the federal system to stabilise revenue where fluctuations in the economic cycle cannot be offset by adjusting debt. In this context the Joint Economic Forecast (Gemeinschaftsdiagnose, 2024) proposes **making municipal funding more stable and less cyclical by reforming federalism** and reducing municipalities' reliance on highly volatile trade tax revenues. Instead, a larger proportion of municipal income could be funded by more reliable sources of revenue such as property tax, income tax or a share of sales tax. This would mean that local authorities would be less affected by economic upturns and downturns and would improve their financial planning skills. The resulting smaller fluctuations in municipal investment activity should ensure that **capacity in the construction industry is better aligned with investment needs**. When transferring responsibilities to the municipal level, especially in the welfare sector, the federal government and federal states should improve the municipalities' financial resources accordingly (principle of connectivity) to ensure the fiscal headroom for municipal investment.

## Utilising fiscal space for reforms

210. In its policy brief (GCEE, 2024) the GCEE showed that even scenarios with regularly recurring deep crises offer a certain amount of scope for borrowing, even if the aim is to prevent the debt ratio from rising. However, this fiscal headroom is comparatively small. The structural reforms outlined above are therefore necessary in order to create additional fiscal space within the budget over the long term. **However, this additional fiscal space could (and should) be used to make structural reforms possible.** Structural reforms inevitably create winners and losers and are therefore not easy to implement. Urgent reforms here would be, for example, an adjustment of the energy market's design (regional prices, see Bichler et al., 2024; EEM, 2024; Grimm and Ockenfels, 2024), a significant increase in the price of carbon emissions with simultaneous reliefs in the form of reductions (for social costs, see Tol, 2023), a gradual easing of restrictions on rises in existing rents, <sup>↘ ITEM 421</sup> and reforms of federalism (Gemeinschaftsdiagnose, 2024).
211. Given its debt ratio of over 60 % of GDP, however, Germany must agree a reference path for its total government spending with the European Commission as part of the preventive arm of the EU's fiscal rules, which will reduce the country's debt ratio to less than 60 % of GDP. **The fiscal headroom is therefore likely to be limited for the time being,** as the European fiscal rules also include expenditure from supplementary budgets (see Deutsche Bundesbank, 2018), for example as part of the Bundeswehr special fund and, possibly, the state's involvement in Deutsche Bahn (Federal Statistical Office, 2024a). It is becoming apparent that the level of expenditure will significantly exceed the Commission's forecast and the country-specific recommendation (Council of the European Union, 2024) for the current year (see Independent Advisory Council of the Stability Council, 2024). Consequently, **tight limits must be imposed on the expenditure path so that spending can evolve in line with the European fiscal rules.** Relaxation of the debt brake is only likely to create additional fiscal headroom once the debt ratio falls below 60 % of GDP and Germany is therefore no longer affected by the measures imposed under the preventive arm of the EU fiscal rules.
212. The **creation of additional fiscal space** resulting from reforms of the debt brake **should urgently be negotiated in conjunction with major structural reforms** that provide additional investment incentives in the private sector and, at the same time, create additional fiscal headroom for future-oriented spending in the public finances, if such headroom exists at all in the short term. If this does not happen, policymakers would relinquish an important lever for enabling such reforms. The dissenting Council member is therefore sceptical about any reforms of the debt brake in the absence of such conditionality.

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