

# Press Release 2/2024

Halle (Saale), January 12, 2024

# Green transition and the debt brake: Implications of additional investment for public finances and private consumption in Germany

The German Climate Protection Act stipulates, among other things, that greenhouse gas emissions in Germany are to be reduced by 65% by 2030 compared to 1990 levels. The green investments required to achieve this target are likely to amount to around 2.5% of gross domestic product each year. According to the medium-term projection of the Halle Institute for Economic Research (IWH), the associated additional government spending on public investment and support measures cannot be financed from projected tax revenues. It is therefore to be expected that the tax burden on households will increase and private consumption will be curbed accordingly, if both the current form of the debt brake and the greenhouse gas reduction targets are maintained.

The German Climate Protection Act requires drastic reductions in greenhouse gas emissions that have far-reaching consequences for overall economic development and public finances. Investment has to increase by about 2.5% in relation to gross domestic product. A macroeconomic growth model helps assessing the consequences for private consumption and public households. A scenario in which there is no investment in climate emissions reduction beyond the current trend and the climate protection targets are missed serves as a benchmark. In this case, gross domestic product increases by 0.75% per year up to 2030, which is slightly less than in previous years.

In order to achieve the emission reduction targets, the use of fossil fuels must decrease more than is to be expected without further policy action. In principle, this could be achieved by accelerating the expansion of renewable energies. "Even if we assume that the rate of expansion of renewable energies doubles, gross domestic product will grow at an annual rate of just under 0.5%, which is slower than in the scenario without further emission reduction measures," says Oliver Holtemöller, head of the Macroeconomics Department and vice president at IWH. To estimate the effects on private consumption, it is assumed that the increase in the costs of green investments that are borne by the private sector is at the expense of other private investment activity. Furthermore, the state bears two thirds of the total investment costs by subsidising private investments and expanding public investments, and taxation on private households increases in order to comply with the debt brake. In

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this case, the higher investments are at the expense of private consumption, which stagnates per capita, while it would increase by 0.2% annually in the scenario without the climate targets. The government revenue ratio increases in this case from 47% in 2022 to just under 51% in 2030 (49% in the scenario without further political measures). Burdens on private consumption would be less if investments were financed via public deficits. In this case and to the extent that foreign investors invested in the government bonds issued, the high German current account surplus would be somewhat reduced. This, however, means higher government interest expenditure in the future. If no additional investments are made but the climate targets are nevertheless met by restricting the use of fossil fuels, gross domestic product will stagnate and private consumption will fall slightly.

The extended version of the forecast contains three boxes (all in German):

Box 1: On the revision of the production potential

Box 2: On the assumptions used for the projection

Box 3: On the formal structure of the growth model used

# Long version (in German)

Andrej Drygalla, Katja Heinisch, Oliver Holtemöller, Axel Lindner, Alessandro Sardone, Christoph Schult, Birgit Schultz, Götz Zeddies: Grüne Transformation und Schuldenbremse: Implikationen zusätzlicher Investitionen für öffentliche Finanzen und privaten Konsum, in: IWH, Konjunktur aktuell, Jg. 11 (4), 2023, 141–159. Halle (Saale) 2023.

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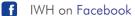
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