Economic policy measures to boost growth in Germany

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1 Introduction

Ladies and gentlemen,

Thank you all for your interest in the topic of growth potential.

“Philosophers have only interpreted the world in various ways; the point, however, is to change it.” This quote by Karl Marx hangs on display in the foyer of the main building at Humboldt University. And, although the right formula for boosting growth in Germany is not necessarily to be found in Marx’s ideas, his quote provides good motivation for my speech today.

Many people have already offered their interpretations of the current economic situation. Growth potential in Germany now amounts to just 0.4 % per year. That’s one percentage point lower than over the past decade and currently more than one percentage point lower than in the EU (European Union) excluding Germany.[1] Many people have made suggestions with regard to which economic policy measures the incoming Federal Government should take in order to boost growth.

As President of the Bundesbank and a member of the ECB (European Central Bank) Governing Council, European monetary policy is my main task. We have now made a great deal of progress on the path towards price stability. It was therefore appropriate that the ECB (European Central Bank) Governing Council lowered the key interest rates by 25 basis points at its meeting in March.

However, legislators have also tasked the Bundesbank with advising the Federal Government on matters relating to monetary policy. I am here to fulfil this advisory role with regard to the future Federal Government.

To be clear upfront – my speech today will not address defence policy, even if there is an unmistakable need for action. Personally, I believe that exceptional times call for exceptional measures. And I think that we are currently living through exceptional times in Germany. Europe, too, is drawing closer together in the face of this and other challenges. And that is as it should be.

Nor will my speech be explicitly about scope for borrowing. In this context, however, I would like to stress that exceptional times justify exceptional fiscal measures, too. Last week, the Bundesbank presented detailed proposals on potential ways of reforming the debt brake in a stability-oriented manner and enabling greater investment.[2] This week, the Bundestag will debate motions to amend Germany's Basic Law (Grundgesetz). These envisage considerable additional scope for borrowing that extends far beyond that proposed by the Bundesbank. This year, the new Bundestag is set to discuss a fundamental reform of the debt brake. I think our proposals can make a meaningful contribution to this.

From a monetary policy perspective, it is crucial to overcome future challenges and, at the same time, maintain sound public finances – both in Germany and in Europe. And greater scope for borrowing alone will not remedy Germany's weak growth. Its causes are complex and more deeply rooted than that. They therefore require an entire package of measures – many of which do not focus specifically on funding at all.

In my speech today, I would like to address what I see as the twelve most important areas in which economic policymakers should make adjustments to put Germany on a structurally higher path of growth. These twelve areas concern three major sets of topics – labour, energy, and business dynamism. For each set of topics, I would like to examine four points: for an increased supply of labour, for the necessary transition towards net zero, and for a more dynamic corporate sector.[3]

2 Increasing the labour supply

Let us turn to the topic of labour. Demographic change means that workers are in ever shorter supply in Germany. The baby boomers of the 1960s are entering retirement and the number of working-age persons is in decline. This diminishes our growth potential. To ensure our prosperity, we need more people to work and more part-time employees to work longer hours. Four starting points would help to increase the supply of labour in Germany.

2.1 Increasing the working hours of part-time employees

First, part-time employees could work more hours per week. This would affect women in particular. Although labour force participation among women in Germany is slightly above the European average, women in Germany work far fewer hours per week than the German average.

One reason for this is disincentives in the tax and social security contributions system.[4] Certain regulations often mean that working more is not particularly attractive. Some examples are non-contributory inclusion in the statutory health and long-term care insurance schemes or special tax rules for those with low income in particular.

In addition, people often want to work more hours per week but are unable to do so. Despite all the efforts made by the federal states, there is a gap between demand for childcare places and the actual number of children in childcare. According to the Federal Ministry of Family Affairs, in 2022, there was a shortfall of 321,000 childcare places for children under the age of three alone. In addition, there was insufficient childcare for 5 % of kindergarten children aged three and above and 21 % of primary school children.[5] Better care for both children and other dependents may therefore pave the way for increasing the hours worked by part-time employees.

However, childcare and long-term care are actually areas that are already desperately looking for staff. This makes it quite clear that we need the immigration of foreign workers.

2.2 Encouraging labour market-oriented migration

Second, labour market-oriented migration should therefore be encouraged. After revising the Skilled Immigration Act (Fachkräfteeinwanderungsgesetz) in 2024, Germany now has comparatively liberal immigration law for skilled workers from third countries. However, cooperation between authorities is lacking. And some bureaucratic hurdles are extremely difficult for immigrants to overcome.

Visas need to be issued faster. Recognition of professional qualifications should be easier and cheaper for applicants. Ideally, qualified people interested in migrating to Germany, as well as their families, should have access to a single point of contact that would help guide them through the “regulatory jungle”. To do this, processes that are currently spread across many authorities would have to be centralised and digitalised.

At the same time, it is important that skilled workers can settle in Germany permanently once they have entered the labour market here. Since freedom of movement of workers was introduced in 2011, more than 30 % of all immigrants who came from other EU (European Union) countries to work in Germany left the country again within two years of entering the labour market.[6] Ensuring better labour market integration and making it more attractive to remain in the labour market – this is the heart of the matter, too, when it comes to the immigration of skilled workers. And this applies to everyone – no matter how long they have been living in Germany.

This can be supported, for example, by offering more language courses and granting third-country dependents the right to remain so that they have more planning certainty. Xenophobia cannot be tolerated, purely on the grounds of our shared humanity. And it is expensive, too: Germany cannot afford discrimination and exclusion.

2.3 Increasing incentives to work among recipients of the civic allowance

The third point focuses on increasing incentives to work among recipients of the civic allowance. Empirical analyses conducted by the Institute for Employment Research show that the civic allowance reform – and the widespread abolition of the sanctions regime that this entailed – has significantly reduced the number of people who make the transition from receiving the civic allowance to actively participating in the labour market.[7]

If we want to counteract this and integrate more recipients of the civic allowance into the labour market, we should consider reinstating the previous rules relating to grace periods, protected assets, breaches of obligations and failures to report.

2.4 Strengthening incentives to work amongst older people

The fourth point concerns older people. This group has considerable potential for additional, often highly skilled labour. Germany faces particular challenges in this regard: over the next 15 years, the ratio of retirees to working-age persons in Germany will develop much less favourably than on average across the OECD (Organisation for Economic Co-operation and Development).

In order to expand the labour force, early retirement should be made less attractive. For example, the current pension deductions for early retirement tend to be too low. Full pensions with no deductions after 45 years of contributions are a financial incentive for early retirement. They are taken up particularly by medium-skilled workers with high levels of professional experience. However, the criterion of 45 years of contributions is not especially well targeted at protecting persons in particularly stressful working environments. It would thus make sense to put an end to this special arrangement once again.[8]

In addition, the Bundesbank has long advocated for the retirement age after 2031 to be linked to life expectancy.[9] At present, the retirement age is rising incrementally, and will be 67 from 2031 onwards. This proposal certainly has not made us popular in all quarters, and politicians are likely to face similar opposition. But burying our heads in the sand is not a solution.

If we are living longer, and largely in better health than previous generations, it is anything but necessary to spend our extra years just drawing a pension for longer. It would make sense to stabilise the ratio of working years to retirement years. A retirement age linked to rising life expectancy in this way would not only mitigate the labour shortage and support economic growth. It would also reduce the financial pressure on the pension insurance scheme.

3 Transforming the energy sector in a way that supports the climate and the economy

My second set of topics concerns the energy sector. The aim here is to give the German economy the best possible support in achieving net zero emissions. This is an enormous undertaking, in terms of both the time frame and the financing. Under current legislation, Germany is supposed to achieve net zero by 2045, a period of just two decades.[10] At the same time, this will require a huge amount of investment.[11] What is needed for the energy transition to be achieved as efficiently as possible?

3.1 Applying adequate carbon pricing to all sectors equally

First, all sectors should be subject to a standardised carbon price as far as possible. Carbon pricing ensures that environmentally harmful emissions are factored into the calculations when it comes to providing goods and services. The carbon price thus has an effect via demand, on the one hand, by making carbon-intensive goods and services more expensive. And it acts via supply, on the other hand, by creating incentives to make products less carbon-intensive.

At present, however, carbon pricing differs across sectors.[12] Standardising the carbon price as far as possible would allow for considerable efficiency gains. Standardised carbon prices also make sense at the EU (European Union) level. In this context, it is important that Germany continues to advocate for carbon pricing in the EU (European Union) and, if possible, in other economic areas as well. Only a standardised carbon price can ensure that savings are made where they are most cost-effective. If carbon emissions can be reduced at low cost in one sector, but only at high cost in another, a standardised carbon price would mean that the cheapest reductions are made first.

Carbon pricing would also make it more attractive to use green technologies and make production more energy efficient.[13] Targeted support for research and development could help ensure that carbon pricing and economic activity can be well harmonised and that better use is made of productivity potential in the area of green technology.

3.2 Creating a reliable and coherent framework for the energy transition

Second, it is up to politicians to provide a reliable and coherent framework for the energy transition. Owing to the long planning horizon and large volume of investment, this is the foundation for a successful energy transition. Politicians must clearly set out how domestic renewable energy and imported energy will work together in combination in the future. Potential shortages in the energy supply must be taken into account, especially during periods with low wind and sunlight in winter.

An important component of this combination would be a plan to expand energy infrastructure, which must be backed by appropriate incentives. Our networks, reserve power plants and storage capacities must ensure that there is a reliable supply of energy. In the case of reserve power plants, keeping reserve capacity should be remunerated appropriately, as otherwise it is likely that too little of this capacity will be built up.

Planning and approval procedures have already been simplified in recent years. We must review whether this is now sufficient or whether further steps are needed. If procedures were faster, for example, it would be easier to make greater use of the far more cost-effective overhead power lines instead of underground lines when expanding the network.

At the same time, economic incentives should be created in order to achieve better alignment of supply and demand for electricity within Germany. Here, one option would be the combination of flexible electricity tariffs and innovative approaches such as bidirectional charging of electric cars.[14] Flexible electricity tariffs create incentives to reduce demand when electricity is in short supply and therefore high in price. If you were to charge your electric car at night instead of in the evening, for example, you would save on your electricity bill. At the same time, the market mechanism signals where it would make sound business sense to increase capacity. Electric cars could also serve as a storage solution in times of high electricity production and thus low prices.

In order to fundamentally support the growing use of electricity in the economy, Germany’s electricity tax could also be uniformly lowered to the European minimum rate.

3.3 Abolishing environmentally harmful subsidies

Third, environmentally harmful subsidies should be abolished. This is because they counteract the economic incentives of carbon pricing by encouraging the consumption of fossil fuels, whilst at the same time tying up scarce financial resources.[15]

3.1 Strengthening the integration of European energy markets

Fourth, it is important to strengthen the integration of European energy markets. Electricity production profiles in Europe complement each other to some extent: countries bordering the North Sea produce a comparatively large amount of electricity from wind energy. In southern Europe, solar energy is also an important source of renewable energy. And, if neither the wind is blowing nor the sun is shining, stored hydropower from Norway, for example, could mitigate the energy deficit.

Deeper integration of the European electricity grid would help to better balance supply and demand as well as reduce the number of reserve power plants needed.[16]

4 Increasing business dynamism

Now I would like to turn to the third set of topics: greater dynamism in the corporate sector. Looking back at longer-term economic developments in Germany, we see weak business investment,[17] declining productivity growth[18] and dwindling business dynamism.[19] Reversing these negative trends would lead the German economy back onto a steeper path of growth. But how can this be achieved?

In Germany, doors should be open wide for anyone who wants to invest, anyone who plans to start a business, and anyone who aspires to bring an innovative idea to fruition. At present, however, the doors are sticking. They are difficult to prise open and are often irritatingly squeaky. If we want more dynamism, we need to oil the hinges in certain places.

4.1 Reducing bureaucracy

First, whenever I talk with entrepreneurs, time and again I hear complaints about increasing bureaucracy and regulation.[20] The National Regulatory Control Council recommends that reducing bureaucracy should become the systematic rule rather than the occasional exception.[21] The "regulatory jungle" should therefore be reviewed critically on a regular basis. This applies, in particular, to the large number of requirements related to documentation, reporting and notification. It is also important to review whether the rules are working efficiently and whether better instruments might be available.

In order to limit the burden of compliance, EU (European Union) rules should be implemented as sparingly and as unbureaucratically as possible. This would include largely forgoing what is known as "gold plating". Gold plating EU (European Union) rules means applying an additional layer of regulation at the national level.

As part of the drive to cut red tape, it would also be important for authorities to interact more closely with each other and with the economy as well. The same or similar data is often requested by multiple different entities. If these were more closely interlinked, data would only have to be reported once. Public services should be offered from a single source wherever possible.

4.2 Facilitating start-ups and strengthening innovative power

Second, in order to unleash more business dynamism, we need to make it easier to start up new businesses and to strengthen innovative power. More than half of company founders perceive bureaucratic hurdles and delays as being a problem.[22] Potential entrepreneurs should be able to start their businesses at a "central port of call". Such a "one-stop shop" could handle all the typical affairs connected to founding a business.

We should be rolling out the red carpet precisely for innovative start-ups, rather than placing any unnecessary obstacles in their way. Start-ups and growth firms benefit from a large domestic market and a suitable palette of funding opportunities. Both factors make it easier for firms to scale their innovations and grow to a size that would enable them to survive at the international level as well. And deepening the EU (European Union) single market would be of central importance in both respects.[23]

What goes for goods also goes for services and with respect to the capital markets: barriers to cross-border economic activity need to go in order for Europe's economies of scale to be exploited to the fullest.[24] For instance, the long sought-after capital markets union is overdue, not least to mobilise more venture capital.[25] The future Federal Government should therefore do its utmost to advocate for progress to complete the European single market. I am sure that a well-oiled Franco-German motor will take us a long way in this regard.

In the field of research grants, too, merging European forces could pay off. It is precisely with regard to disruptive high-tech innovation, such as artificial intelligence (AI (artificial intelligence)), where there is a need to catch up.[26] A joint European initiative could help channel EU (European Union) funding more towards these future topics and attract top international talent.

As a new underlying technology, AI (artificial intelligence) is a launch pad for innovative applications in almost every sector of the economy. Consider humanoid robots, for instance. They resemble the human form. With the help of AI (artificial intelligence), they are able to identify their environment. And they can communicate too. As they also learn at the same time, there is a broad scope of applications, especially for industry. Leading the way with regard to the use of AI (artificial intelligence) in the economy will be one of the central tasks facing Europe in the years to come.

But at the national level, too, there are starting points for doing even more to support research and development. For instance, in Germany, there is generally a “Chinese wall” between military and civilian research. This is denying us opportunities, as examples such as the internet or GPS (Global Positioning System) show us that technology originally developed for the military can lead to significant innovation. Here, it could pay off to enable greater synergies.[27]

Studies show that government spending on defence research stimulates further expenditure on research: each US (United States) dollar of government expenditure generates between US (United States)$0.57 and US (United States) $0.72 of additional R&D (research and development) in the private sector.[28] It has also been shown that such an increase in private sector research spending also leads to gains in productivity.[29]

In order to get firms to invest more in research and development overall, they could be given better tax breaks.

4.3 Granting firms tax relief

This brings me to my third point for increasing business dynamism: tax relief for businesses. Accelerating write-offs over a certain period would create a targeted incentive to invest. This would have a key advantage for the government: it would generally only defer tax payments, not eliminate them altogether.

However, such targeted relief ultimately does not change the underlying diagnosis: the tax burden on firms in Germany is high by international standards. With an effective average tax burden of 28.5 % in 2024, Germany was almost ten percentage points above the EU (European Union) average.[30]

Reducing the corporation tax rate would probably be the most effective way of encouraging more multinational corporations to relocate to Germany. At the same time, however, this measure would also result in large shortfalls in tax revenue. In addition, it would be less targeted in terms of investment compared to accelerated write-offs or an investment allowance. The pros and cons therefore need to be weighed up carefully.

In any case, it would make sense to simplify and streamline corporate taxation. In Germany, however, this is politically a tall order: reasonable proposals have been around for decades yet have not been implemented. A recent report by the “Simplified business tax” expert commission presents a series of proposals worthy of consideration.[31] A new political attempt could be worth trying.

In order for tax incentives to have the desired effect and actually stimulate investment, progress is necessary elsewhere: in Germany, extensive and time-consuming planning and approval procedures often lie between good ideas and their implementation. Final decisions can often be delayed considerably due to court proceedings.

4.4 Simplifying and accelerating administrative processes

We therefore see simplifying and accelerating administration as the fourth point on the topic of business dynamism. For one thing, digitalisation, automation and standardisation should simplify administrative processes. For another, rules on the maximum period before a decision must be issued can lead to more planning certainty for applicants. Linking such rules to simplified indemnities for missing deadlines would create the relevant incentives.

Accelerated planning and approval procedures would also help the government to modernise its infrastructure more rapidly. Germany’s infrastructure is coming under mounting criticism.[32] Anyone who has driven on Germany’s roads or taken a train can, in most cases, confirm this impression.

And the search for high-speed internet is often an obstacle course, too. As a case in point, in an OECD (Organisation for Economic Co-operation and Development) study, Germany was ranked 36 out of 38 with regard to the percentage of fibre connections.[33] Fibre connections, though, are of central importance to firms’ competitiveness and innovative capacity. This was stressed by the Commission of Experts for Research and Innovation in its latest report, in which it recommended a rapid expansion of the fibre optic network, particularly in rural regions.[34]

All in all, we can see that there are more than enough doors that should be able to be opened more easily in order to enable greater business dynamism.

5 Conclusion

Ladies and gentlemen,

“Philosophers have only interpreted the world in various ways; the point, however, is to change it.” Applied to the situation in Germany today, the Karl Marx quote I cited at the beginning of my speech is strong advice to get things moving regarding economic growth.

I have listed a dozen areas where the new Federal Government can make adjustments in order for the German economy to achieve more growth once again. The vast majority of the measures that I have proposed would not be a burden on the Federal budget.

However, some things would come at a cost. It is therefore indispensable to review priorities – however unpopular that may be. That is also the case if extensive special funds and exemptions to the debt brake give some people the false impression that there are no constraints on funding. More debt – the assistance that this provides is ultimately only for a transitional period. Sustainable funding via the budget will have to follow. That is because more debt also means larger interest burdens and less fiscal space in the future.

The formation of a new government is progressing rapidly, and that is important. At this juncture, I do not want to delve any further into the results of last weekend’s preliminary coalition talks. The fact that there is the intention to address key challenges in some important areas is welcome. This particularly concerns defence, infrastructure, reducing bureaucracy, improving public services and mobilising employment.

At the end of the day, the specific implementation is what will be decisive, and many things naturally also have to be settled definitively. Policymakers need to make sure that new scope for borrowing is directed exclusively towards new, additional investment and is not ultimately used to plug holes in the budget by shifting financial resources to special funds or by means of exemptions to the debt brake. And the urgently needed reforms to strengthen potential growth and competitiveness have to be prioritised over special interests.

Ladies and gentlemen,

We are facing major challenges – political and economic. Smart, consistent and reliable economic policy can set out the framework – and unleash the sense of change we now need.

Germany has great strengths: stable political institutions, financially sound firms that are adaptable and innovative, and, in particular, well-educated, smart and hard-working people who want to roll up their sleeves. To help move our country forwards again.

Germany’s potential lies not least in its position at the heart of Europe. By now, if not beforehand, it should be clear to every last person that we in Europe have to draw closer together. This primarily concerns our ability to defend ourselves. But our economies have to draw closer together as well.

Taking greater advantage of the potential of the single market is of central importance in strengthening Europe’s competitiveness. The first things that need to be done are to complete the European banking union and finally accomplish the long sought-after capital markets union. It will provide the opportunity to increase the financial resources to transform our economies and to deploy them most effectively.

Europe has always made decisive strides forward whenever Germany and France have worked together towards a common cause. That is why Franco-German dialogue needs to be revived and fostered. It is true that our countries sometimes have very disparate views. However, the more threatening the world appears to be, the more important it is to remember what unites us. And to seek out and find compromises.

European integration is a hard nut to crack. It may be difficult. But it is worth it.

Thank you for your attention.

Footnotes:

1. See Deutsche Bundesbank (2024), Forecast for Germany: Significantly gloomier growth outlook – inflation decreases to 2 %, Monthly Report, December 2024, and European Commission (2024), European Economic Forecast, Autumn 2024, Institutional Paper 296, November 2024.
2. See Deutsche Bundesbank (2025), Sound public finances, stronger investment: a proposal to reform the debt brake, Monthly Report, March 2025.

3. Owing to time constraints, a number of other important factors for increasing potential growth – such as education, sufficient housing, internal security and reform of the federal system – are only mentioned in passing.
4. See also ifo (economic research institution) (2025), Women's Earnings in Germany Fall by 20 % After Marriage *[https://www.ifo.de/en/press-release/2025-03-07/womens-earnings-in-germany-fall-after-marriage]*, press release of 7 March 2025.
5. This means that, regardless of the volume of childcare required, several hundred thousand children had no childcare place at all. See German Council of Economic Experts (2023/24), Overcoming sluggish growth – investing in the future *[https://www.sachverstaendigenrat-wirtschaft.de/fileadmin/dateiablage/gutachten/jg202324/JG202324_ExecutiveSummary.pdf]*, p. 269. Another complicating factor is that, in some cases, the childcare available does not provide enough hours or is not sufficiently reliable. See, for example, Hans-Böckler-Stiftung (2023), Engpass Kinderbetreuung *[https://www.boeckler.de/de/boeckler-impuls-engpass-kinderbetreuung-51511.htm]* or Bertelsmann Stiftung (2023) Mehr Plätze und bessere Qualität in Kitas bis 2030 – wenn jetzt entschlossen gehandelt wird. *[https://www.bertelsmann-stiftung.de/de/themen/aktuelle-meldungen/2023/november/mehr-plaetze-und-bessere-qualitaet-in-kitas-bis-2030-wenn-jetzt-entschlossen-gehandelt-wird]*
   Moreover, inadequate options for dependent people in need of care are likely to prevent more and more women from increasing their working hours – or from working at all.
6. Not including seasonal workers. See Hammer, L. and M. Hertweck (2022), EU (European Union) enlargement and (temporary) migration: Effects on labour market outcomes in Germany *[https://www.bundesbank.de/resource/blob/885576/f7a2d4dbe302d666b50e0c452d0290cd/472B63F073F071307366337C94F8C870/2 02-21-dkp-02-data.pdf]*
   , Deutsche Bundesbank Discussion Paper No 02/2022.
7. See Weber, E. (2024), The Dovish Turnaround: Germany's Social Benefit Reform and Job Findings, IAB (Institute for Employment Research) Discussion Paper 07/2024.
8. It is difficult to gauge the extent to which additional financial incentives for working beyond the standard retirement age would have the desired effect.
9. See Deutsche Bundesbank (2019), Long-term outlook for the statutory pension insurance scheme *[https://www.bundesbank.de/resource/blob/811966/5cc6b47f3761d7f2d4e38a1b63fd25a7/472B63F073F071307366337C94F8C870/20 10-rentenversicherung-data.pdf]*
   , Monthly Report, October 2019 and Deutsche Bundesbank (2022), Pension insurance scheme: long-term scenarios and reform options *[https://www.bundesbank.de/resource/blob/893080/588460eb21cfeed3e726e1e53f451bdb/472B63F073F071307366337C94F8C870/20 06-rente-data.pdf]*
   , Monthly Report, June 2022.
10. See German Federal Government (2024), Climate Action Act (*Klimaschutzgesetz*).
11. The German Council of Experts on Climate Change analysed a total of 13 different studies and quantified the necessary annual volume of investment at between €135 billion and €255 billion ("transformation investment"). This is around 3.2 % to 6 % of GDP (gross domestic product). See Council of Experts on Climate Change (2025), Biennial Expertise 2024. In many cases, fossil fuel technologies are being replaced by climate-neutral alternatives. This requires additional funding only in cases where climate-neutral technologies are more expensive or the replaced capital stock has not yet been fully written off. The need for additional financing is thus significantly lower. For more on this, see Nagel (2025), Financing the transition to greenhouse gas neutrality: how much and with which instruments?, speech delivered at the Adam Smith Business School, University of Glasgow, 13 February 2025.
12. In Germany, carbon pricing is currently organised in two different systems. The EU (European Union) Emissions Trading System 1 (EU (European Union) ETS1 (Europäisches Emissionshandelssystem 1)) covers the sectors of electricity and heat generation, energy-intensive industry and aviation with the European Economic Area. The housing and transportation sectors have been covered by a lower national carbon pricing regime since 2021. The HGV (heavy goods vehicles) toll on federal motorways, which now depends on emission class, adds a considerable mark-up to the carbon price on these routes, however. As of 2027, the housing and transportation sectors are to be moved to a new EU (European Union) emissions trading system (EU (European Union) ETS2 (Emissions Trading System)). Based on current legislation, the carbon price should be higher under EU (European Union) ETS1 (Europäisches Emissionshandelssystem 1) than EU (European Union) ETS2 (Emissions Trading System), even after 2027. A standardised, all-encompassing carbon price within the EU (European Union) framework is currently envisaged for the period after 2031 at the earliest.
13. If the carbon price for housing and transportation is set by politicians, as it is in Germany, this must also be high enough to achieve emission targets.
14. As of 2025, energy suppliers in Germany are obliged to offer dynamic pricing models. On the demand side, however, this kind of service requires a smart meter. Swiftly rolling out these meters should therefore be an important building block on the way to a successful energy transition.

15. See Plötz et al. (2024), Climate-damaging subsidies correspond to negative CO_2 prices, Kopernikus-Projekt Ariadne, Potsdam.
16. Specifically, the following measures would be appropriate to integrate European energy markets: First, pan-European auctions for renewable energy and reserve capacity should be conducted. See Heussaff, C. (2024), Decarbonising for competitiveness: four ways to reduce European energy prices, Policy brief 32/2024, Bruegel. Second, the acquisition of long-term transmission rights by network operators should be simplified. This would be possible, for example, by increasing the frequency of auctions and introducing a secondary market. See also Zachmann, G. et al. (2024), Unity in power, power in unity: why the EU (European Union) needs more integrated electricity markets, Policy brief 03/2024, Bruegel.
17. See Scheuermeyer, P. (2025), Investitionsentwicklung in Deutschland – eine Bestandsaufnahme [https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-Fokus-Volkswirtschaft/Fokus-2025/Fokus-Nr.-485-Januar-2025-Investitionen.pdf]
, Fokus Volkswirtschaft No 485, KfW (Kreditanstalt für Wiederaufbau) Research.
18. See Deutsche Bundesbank (2021), The slowdown in euro area productivity growth [https://www.bundesbank.de/resource/blob/858448/144b27fb6dae9364eff8c7e6a4a74fb4/472B63F073F071307366337C94F8C870/20 01-produktivitaetswachstum-data.pdf]
, Monthly Report, January 2021.
19. See Deutsche Bundesbank (2024), Dynamism in the German corporate sector down overall in last two decades [https://publikationen.bundesbank.de/publikationen-en/reports-studies/monthly-reports/monthly-report-march-2024-926792?article=developments-in-euro-area-business-dynamism-928128%23Dynamism-in-the-German-corporate-sector-down-overall-in-last-two-decades]
, Monthly Report, March 2024.
20. This is also shown by the Bundesbank's representative survey of firms conducted in September 2024. When asked about pressing problems over the next six months, around two-thirds of firms made reference to the high level of regulation and government rules – no other problem was cited more frequently. See Deutsche Bundesbank (2024), Survey of firms (BOP (Bundesbank Online-Panel)-F): Challenges Faced by Firms [https://www.bundesbank.de/en/bundesbank/research/survey-of-firms-bop-f/challenges-faced-by-firms-847184]. According to an ifo (economic research institution) survey, the volume of regulation and bureaucracy in Germany is the most important barrier to investment; see von Maltzan, A. and L. Zarges (2024), Der Investitionsstandort Deutschland aus Unternehmenssicht [https://www.ifo.de/DocDL/sd-2024-03-vmaltzan-zarges-investitionsstandort-deutschland-familiendatenbank.pdf], ifo (economic research institution) Schnelldienst 3/2024.
21. See National Regulatory Control Council (2024), Good legislation. Digital administration. Less bureaucracy. Harnessing momentum, boosting impact [https://www.normenkontrollrat.bund.de/Webs/NKR/SharedDocs/Downloads/EN/Annual-Reports/Annual-Report-2024.pdf?__blob=publicationFile&v=1]
, Annual Report 2024.
22. See Metzger, G. (2024), Start-up activity lacks macro-economic impetus – self-employed peopoe are becoming more important as multipliers [https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-Gr%C3%BCndungsmonitor/Gr%C3%BCndungsmonitor-englische-Dateien/KfW-Gr%C3%BCndungsmonitor-2024_EN.pdf]
, KfW (Kreditanstalt für Wiederaufbau) Entrepreneurship Monitor 2024, KfW (Kreditanstalt für Wiederaufbau) Research.
23. See Adilbish, O. E., D. A. Cerdeiro, R. A. Duval, G. H. Hong, L. Mazzone, L. Rotunno, H. H. Toprak and M. Vaziri (2025), Europe's Productivity Weakness: Firm-Level Roots and Remedies, IMF (International Monetary Fund) Working Papers, WP (working paper)/25/40.
24. See also Nagel, J. and F. Villeroy de Galhau (2024), A common call for a Franco-German revival [https://www.bundesbank.de/en/press/contributions/a-common-call-for-a-franco-german-revival--945872], Guest contribution published in the "Frankfurter Allgemeine Zeitung" and "Le Monde", 22 November 2024.
25. On a further topic – the banking union – see Nagel, J. and N. Véron (2024), Breaking the vicious circle between banks and sovereigns for good [https://www.bundesbank.de/en/press/contributions/breaking-the-vicious-circle-between-banks-and-sovereigns-for-good-942468]
, guest contribution published by Politico, 22 October 2024.
26. See Fuest, C., D. Gros, P.-L. Mengel, G. Presidente and J. Tirole (2024), Reforming innovation policy to help the EU (European Union) escape the middle-technology trap [https://cepr.org/voxeu/columns/reforming-innovation-policy-help-eu-escape-middle-technology-trap], VoxEU Column, 19 April 2024.

27. See EFI– Commission of Experts for Research and Innovation (2024), Report on Research, Innovation and Technological Performance in Germany 2024.
28. See Pallante, G., E. Russo and A. Roventini (2023), Does public R&D (research and development) funding crowd-in private R&D (research and development) investment? Evidence from military R&D (research and development) expenditures for US (United States) states, Research Policy, 52 (8).
29. See Moretti, E., C. Steinwender and J. Van Reenen (2025), The Intellectual Spoils of War? Defense R&D (research and development), Productivity, and International Spillovers, The Review of Economics and Statistics, 107 (1).
30. See Spengel, C., J. Heckemeyer, K. Nicolay, J. Gaul, H. Gundert, J. Spix, D. Steinbrenner, S. Weck and S. Wickel (2025), Mannheim Tax Index Update 2024 – Effective Tax Levels using the Devereux/Griffith Methodology, MannheimTaxation Project.
31. See Federal Ministry of Finances (2024), Besteuerung der Unternehmen: einfacher und effizienter, Final report, "Vereinfachte Unternehmenssteuer" expert commission.
32. See IMD (International Institute for Management Development) (2024), 2024 IMD (International Institute for Management Development) World Competitiveness Ranking.
33. See OECD (Organisation for Economic Co-operation and Development) Broadband Statistics *[https://www.oecd.org/en/topics/sub-issues/broadband-statistics.html]*, Percentage of fibre connections in total broadband.
34. See EFI – Commission of Experts for Research and Innovation (2025), Report on Research, Innovation and Technological Performance in Germany 2025.