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Investing for the future

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While Europe is going through a difficult time, the German economy is in relatively good shape. German products are in demand, the SME sector is broadly diversified, German enterprises are healthy and well positioned, thanks also to the flexibility and wage restraint exercised by employees over the last decade. Unemployment is low, public finances have generated a small surplus in 2012, and the export ratio is at a record high. Germany's economic strength is considered exemplary worldwide. Nevertheless, in the shadows of this success story, two imbalances have formed as well: the world's highest balance of payments surplus and continuing weak investment. Both belong together.

Underinvestment takes a few years to slow down growth, but countermeasures need to be taken now. Low interest rates are an invitation to invest. High German savings and capital from abroad are readily available for financing. At present, most of these funds are being invested in housing construction or flowing (back) to other countries. Rising investment activity would also reduce the current account surplus without jeopardising export growth.

In order to increase corporate investment, what is mainly required is a more favourable economic outlook for Europe and for the world, as well as planning certainty with respect to regulations, the tax system and on the labour and energy markets. The state must seek ways of financing that allow compliance with the debt brake at the same time.

Germany is investing less and less. The investment ratio has been on the decline since the 1970s (Chart 1). Whereas investment still accounted for 23 % of gross domestic product (GDP) at the time, last year it was less than 18 %, and it is still falling. The downward trend was broken only by German unification.

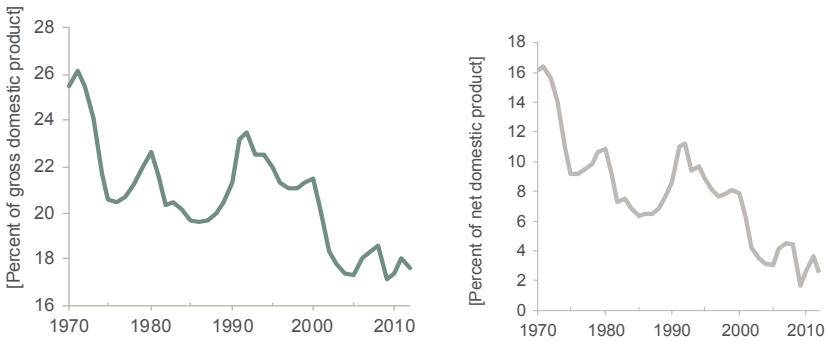
A glance at the net investment ratio is even more revealing (Chart 2).[1] Net investment is adjusted for depreciations. It measures the share of investment that goes beyond maintaining the value of capital stock. In 2012 the net investment ratio was only 2.5 %, significantly below the ratios before the turn of the millennium. Germany's capital stock is at risk of becoming obsolete. If the decline in investment continues, it may even shrink. This would limit the possibilities of production in the future and stifle growth.

In many cases, public investment is inadequate to maintain infrastructure

Weak investment is evident in all sectors (Chart 3). While private housing construction and enterprises at least continue to show positive net investment, the net public investment ratio has been consistently negative already since 2003.

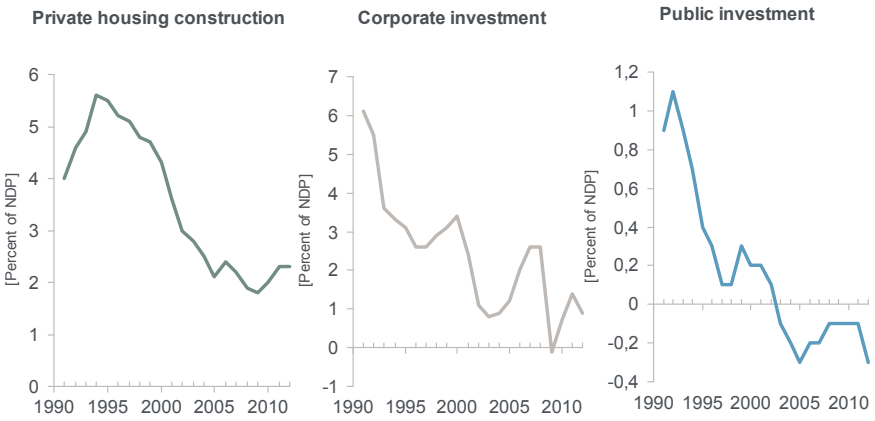
The main reason behind this is the almost continuous decline in municipal investment in fixed assets. Only the measures under the second economic stimulus package temporarily bolstered municipal investment activity between

Chart 1/2: Germany is investing less and less



Source: Federal Statistical Office

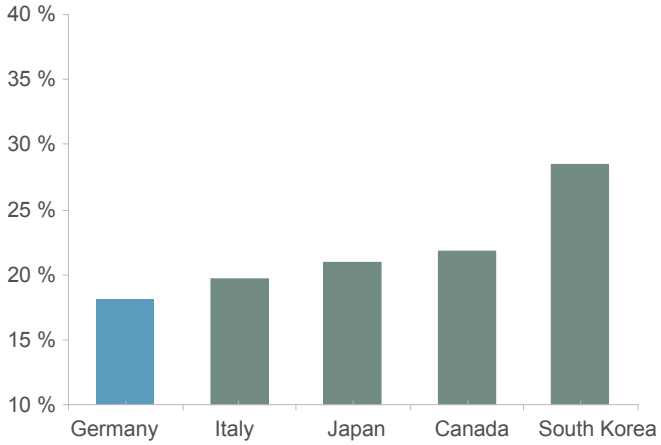
Chart 3: Net investment ratios of the sectors



Source: Federal Statistical Office, own calculations

Chart 4: International comparison

(gross investment ratios, 2001–2011, in percent of GDP)



Source: OECD

2009 and 2011. Insufficient investment leads to inadequately maintained infrastructure, which impairs Germany's growth potential in the medium term. The municipalities already face an investment backlog they themselves estimate at around EUR 100 billion[2], and which is likely to keep growing in the years ahead.

This diagnosis is also consistent with an analysis that takes into account the demographic trend. Municipal investment in fixed assets per capita has fallen by 35 % since 1992.

Germany's ageing population – one more reason for higher investment

In combination with the demographic trend, the medium and long-term consequences of weak investment activity for Germany's growth potential up to 2030 can be considerable. Germany's population is ageing, and it is becoming harder to achieve growth through employment. Unless countermeasures are taken, according to KfW's calculations, the growth potential will decline from 1.4 today to 0.3 % in the year 2030 as a result of an ageing and shrinking population.

Why? In 2030, almost five million fewer people of working age will be available to the labour market, so annual production increases will decline correspondently. Since the working population will decline sooner than the population overall, per capita growth will drop to 0.7 % in 2030 (2012: 1.3 %). In addition, redistribution pressure will increase because the proportion of working people to aged people and children (total age dependency ratio) will become less favourable.

The negative employment effect can be offset through a higher labour participation rate, longer working hours, immigration or a higher output per working hour. The latter is achievable through more education and more modern and more productive workplaces. Thus, higher investment should be a central element of any strategy aimed at counteracting declining per capita growth. If the capital stock grows faster and more capital is available per working hour, then as labour productivity increases, so will per capita income. If real per capita growth of around 2 % annually is to be achieved again consistently by the end of the decade, as was the case in the 1980s, then Germany's investment ratio must increase significantly.

In order to safeguard Germany's competitiveness in the future, the minimum goal should be to lift the gross investment ratio to the OECD country average. While in the years 2000 to 2011 the OECD countries used an average 20 % of their goods production for investment, Germany achieved only a ratio of just over 18 % in the same period (Chart 4). Germany's investment ratio is also low in a direct comparison with similarly ageing societies. For example, in order to draw level with Japan, investment would have to increase to as much as 22 % of gross domestic product.

An increase of 2 to 4 percentage points in the investment ratio[3] translates to around EUR 55–110 billion more in annual investment in the private and public sector at today's prices.

The quality of investments must be right

It is often questioned whether it can be worthwhile at all to increase the investment ratio of an already relatively capital-intensive economy whose population is beginning to contract. In Germany, it is (see Table 1). In the years 2000 to 2008, the increased availability of capital per working hour (capital intensity) was accompanied by a comparable increase in labour productivity. For European standards, this is a good result. In comparison with Italy, where investment appears to be fizzling out, in Germany investment has paid off.

It is also true, however, that private investors will not carry out more projects in Germany unless their investment is sufficiently profitable – not only in comparison with the financing costs but also with investments abroad. Through the

Table 1: Labour productivity and capital intensity

	Labour productivity (changes from 2000 to 2008)	Capital intensity (changes from 2000 to 2008)	Quotient (elasticity)
Italy	1 %	11.3 %	0.10
Denmark	4 %	7.7 %	0.57
France	9 %	16.0 %	0.58
Austria	14 %	17.4 %	0.82
Germany	13 %	14.6 %	0.86
The Netherlands	12 %	11.8 %	1.01

Source: Eurostat, own calculations

global financial markets, Germany also competes with emerging economies, which have high marginal capital productivity simply because of their low capital endowment.

As a large proportion of the additional investment obviously has to be undertaken by the private sectors, there are three task areas for the state:

(1) Make business conditions for private investors attractive by international comparison. Investment and innovation must be profitable and, in part, must also be supported financially.

(2) Improve the quality of education and professional development by international comparison.

(3) Overcome public sector underinvestment, above all in order to provide private-sector investment projects with the necessary infrastructure.

In performing these tasks, public promotional banks can support the state effectively and cost-efficiently, particularly in investment projects that require very long-term financing.

In order to succeed in increasing labour productivity and accelerating potential growth, the quality of public spending aimed at future prosperity is essential.

Specific measures might include:

(1) *Increasing education expenditure.* Germany spends less on education (5.3 % of GDP) than the average of the OECD countries (6.4 % of GDP). To remain competitive, Germany needs more human capital. In order to prevent negative productivity impacts through demographic change, the potential of each age cohort must be fully realised. One priority should be early childhood education since it lays the groundwork for future education investment, in addition to high labour market participation by the parents.

(2) *Promoting innovation.* The R&D activities of young and established enterprises should be reinforced, e.g. with tax credits. Research and technology transfer from research institutes to companies should be intensified. The promotion of exemplary innovative projects should be expanded, and the gap between supporting R&D projects and market-oriented innovation promotion must be closed.

(3) *Remove investment obstacles*. Secure investment financing for SMEs, speed up lengthy administrative and authorisation procedures.

(4) *Implement the energy turnaround.* After evaluating relevant scenario and forecast calculations made by external sources, KfW estimates the average annual investment needed to expand renewable energies, improve electricity efficiency, expand grids and build additional, highly efficient fossil-fuel based backup power plants alone to be at least EUR 27 billion up to the year 2020. Investment in thermal insulation and more efficient heating in buildings will require billions more. Energy efficiency improvements reduce energy costs for enterprises and households. The technological advancements thus triggered will increase the productivity of German enterprises. In particular, smart grid and storage technology innovations appear to be very worthwhile.

(5) *Eliminate municipalities' investment backlog*. Around EUR 25 billion will be needed to modernise the transport infrastructure that was neglected in the last decade. Schools and kindergartens, for example, are waiting for investments to the tune of around EUR 27 billion.[4]

How can the additional expenditure be financed?

Higher expenditure on investment, research and education will create corresponding financing needs. Despite the debt brake and the European Fiscal Compact, moderate financial scope exists under the federal government's medium-term financial planning for 2013 to 2017. Since the federal government already in 2012 remained below the upper limit of 0.35 % of GDP for new structural debt, which comes into effect from 2016, this means there is no further need for consolidation for the federal government. The financial planning even goes beyond the requirements of the debt brake and aims for a structural budget surplus of 0.31 % of GDP in 2017 (see Table 2). If it decided not to remain below the debt ceiling, the government would be in a position to spend some EUR 20 billion more on investment, innovation and education in 2017.

The situation is different at the level of states and municipalities. The states will have to reduce their new aggregate debt from around EUR 7 billion in 2012 to zero. Last year the municipalities were able to generate a surplus, but many of them suffer from structural underfinancing, which is also illustrated by the continuing increase in cash advances.

As raising education expenditure alone to the OECD average would require additional expenditure of some EUR 25 billion each year, further sources of funding would have to be found to expand public investment. Options include:

(1) **Increasing revenues under the existing taxation system.** Cancel exemptions, for instance from income tax and value-added tax.

(2) **Using funds more efficiently,** e. g. in line with the annual reports of the Federal Court of Auditors.

(3) **Shifting budget items at the expense of subsidies.**

(4) **Making more intensive use of public-private partnerships.** Under budget law, this form of financing is at-

Table 2: Cabinet decision on medium-term financial planning

	2013	2014	2015	2016	2017
Structural budget surplus in percent of GDP (plan)	-0.34	0.00	0.06	0.20	0.31
Financing scope in EUR billions	0.3	9.8	11.8	16.3	20.2

Source: Federal Ministry of Finance, IMF, own calculations

tributed to the corporate sector under certain conditions and is therefore not covered by debt regulations.

To safeguard the future, debt should not be a taboo

The experience of the years ahead will show whether the debt brake of 0.35 % of GDP proves of value. If this is not the case, the introduction of an investment and education component could be considered. For example, it would be possible to permit an additional structural deficit of 1.0 to 1.5 % of GDP for public spending on investment, education and R&D. This would be a moderate expansion of financial scope. Even if it were to be fully exhausted, Germany's debt position would fall under the Maastricht limit of 60 % in the long term.[5] Already in 2007, the Council of Economic Experts propounded in an expertise that debt financing for public net investment should be permissible.[6]

There are good reasons for this. Public investment in transport infrastructure or expenditure on education, for example, increase productivity growth. The overall economic rates of return, especially now, are higher than the interest owed by the state.

The higher income as a result of the investment justifies that future generations share the burden of financing. Subsequent generations will benefit from durable public infrastructure goods (sewerage, levees), so that they can also be required to finance them as taxpayers servicing the debt (principle of equivalence). Financing such investments exclusively on the backs of today's working generation either creates a very high tax burden or leads to the decision not to carry out those investments.

Finally, it must be noted that in principle there are sufficient domestic savings to finance more domestic investment. As the society is ageing, private provisions for old age are highly significant. Currently there are not enough options to invest these funds within Germany. Six per cent of GDP, or just under three quarters of total domestic savings, was invested abroad in 2012. ■

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[1] Net investment ratio is a percentage of net domestic product. Just like net investment, it is adjusted for depreciation.

[2] See Wolff, Sascha (2012), Trotz verbesserter Einnahmesituation kein Abbau des Investitionsstaus in Sicht – Ergebnisse des KfW-Kommunalpanels 2011, Fokus Volkswirtschaft Nr. 4 (*Despite improved income situation, no easing of the investment backlog in sight – results of the KfW Municipal Panel 2011, Focus on Economics No. 4*), KfW Economic Research.

[3] For the investment ratio, the reference value taken for this estimate was the nominal gross domestic product of 2012. Since this value increases, this should be understood only as the minimum threshold for necessary investment increases.

[4] See Wolff, Sascha (2012), Trotz verbesserter Einnahmesituation kein Abbau des Investitionsstaus in Sicht – Ergebnisse des KfW-Kommunalpanels 2011, Fokus Volkswirtschaft Nr. 4 (*Despite improved income situation, no easing of the investment backlog in sight – results of the KfW Municipal Panel 2011, Focus on Economics No. 4*), KfW Economic Research.

[5] In this calculation we assume average 3.5% growth of nominal gross domestic product.

[6] See Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (2007), Staatsverschuldung wirksam begrenzen, Expertise im Auftrag des Bundesministeriums für Wirtschaft und Technologie (*Council of Economic Experts on the Evaluation of the Overall Economic Development (2007) Effectively Limiting Public Debt, Expertise Commissioned by the Federal Ministry for Economics and Technology*), Wiesbaden, and Hornberg, Christian (2012), Falsche Diagnose, richtige Therapie? – Zur Sinnhaftigkeit von Schuldenbremsen, Studien und Materialien (*Wrong Diagnosis, Right Therapy? – on the Usefulness of Debt Ceilings),* Studies and Materials, KfW Economic Research.