ZEWNEWS

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November/December 2021

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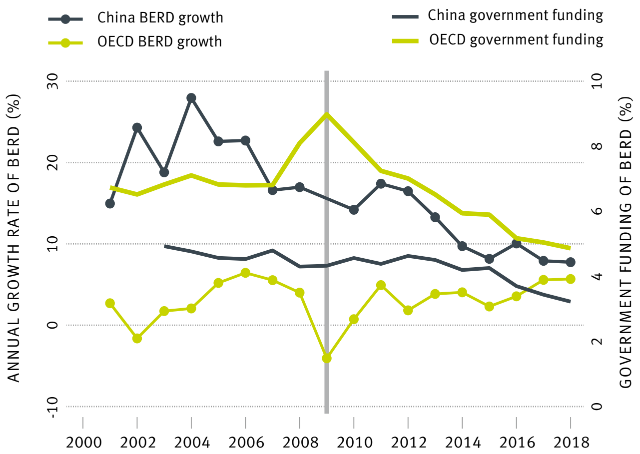
Misappropriation of Subsidies Weakens Effectiveness of Chinese Innovation Policy

With its 14th Five-Year Plan, the Chinese government has set itself the ambitious goal of creating a more innovation-based economy and becoming the world's leading nation in science and technology by 2050. This indicates that the country's innovative capacity is still considered insufficient. To this end, gross expenditures on research and development (R&D) are targeted to grow by at least seven per cent annually between 2021 and 2025. Therefore, there are programmes to stimulate more R&D in companies through extensive subsidies and other policy incentives.

Over the past two decades, business expenditure on R&D (BERD) has been the main driver of R&D growth in China. The annual BERD growth rate has been consistently higher than the average growth rate of OECD countries. At the same time, government support for R&D spending in China officially reached only 4.3 per cent between 2003 and 2018, well below the OECD average of 6.7 per cent. In order to become more innovative, China's R&D spending is to increase by at least seven per cent annually over the next five years, supported by government R&D subsidies.

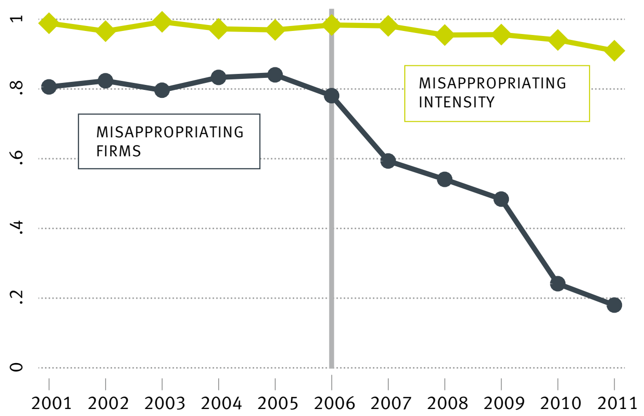
However, this is not the end of the story. As a recent study by ZEW Mannheim shows, large amounts of R&D subsidies were misused in China in the past, which prevented the efficient use of state funding. Therefore, as early as 2006, a seminal change in China's innovation and industrial policy took place and numerous measures were introduced to improve funding instruments and curb their misuse. Should such measures become even more effective in the future, China will turn into an increas-

BUSINESS EXPENDITURES ON R&D (BERD) IN CHINA AND THE OECD



Annual growth of BERD and state funding of BERD according to OECD data. The grey line marks the year of the global financial crisis.
Source: OECD/ZEW

MISAPPROPRIATION IN FIRMS ALONG THE INTENSIVE AND EXTENSIVE MARGINS



Misappropriating firms and misappropriation intensity describe the share of firms having misappropriated R&D subsidies (extensive margin) and the proportion of misappropriated R&D subsidies to total R&D subsidies (intensive margin), respectively. The grey line marks the year of the introduction of the MLP, a seminal change in China's innovation and industrial policy.
Source: ZEW

ingly innovative competitor on the world market and become more and more attractive as an R&D location for foreign companies.

Massive increase in the share of companies receiving subsidies

In China, the share of firms receiving any kind of subsidy among listed companies increased massively after the turn of the millennium: from 31.7 per cent in 2001 to 90.0 per cent in 2011. On average, about 10 per cent of total government subsidies to companies were specifically earmarked for R&D activities. However, the current ZEW study shows that 42 per cent of recipients of R&D subsidies misappropriated the funds in whole or in part in the period 2001 to 2011 by using them for non-research purposes.

At the company level, misappropriation was measured by comparing the actual R&D expenditures published in the companies' annual reports with the R&D subsidies received. Overall, 53 per cent of total R&D subsidy payments were ultimately not used for research purposes. Often, subsidies are misused to cross-subsidise non-R&D related investment, e.g. to reduce production costs, which may distort competition in international markets. According to the ZEW study, R&D expenditure did increase as a result of the subsidies, but the increase in the subsidised companies could have been more than twice as high as it actually was. The R&D subsidies also led to a rise in investment in physical capital, employment and sales among the companies.

By contrast, R&D policy had no impact on grantees' productivity, the number of IT high-tech inventions, university-industry collaborations, or employment of foreign inventors. The ZEW study further reveals potential for optimisation in the selection of companies receiving support. In the case of state-owned enterprises, R&D subsidies had no effect at all, the study finds. The researchers also recommend that subsidies in the high-tech sector should also be granted in a more differentiated way in the future. Overall, a funding policy in which subsidies are paid out less frequently or in smaller amounts has produced better results.

Furthermore, the authors observe that misappropriation has been decreasing significantly over time: from 81 per cent in 2001 to 18 per cent in 2011. This decrease was also achieved by the Chinese government through its Mid- to Long-Term Plan for Science and Technology Development, which addressed some structural problems in China's innovation system and initiated necessary improvements. In addition, the administration of subsidy programmes has been reorganised so that companies can now be selected more precisely and the use of subsidies can be better monitored. These reforms had a clear impact, as the ZEW study confirms.

Europe must get ready for more intense competition in the high-tech sectors

China has not yet proven that it is able to produce innovation and cutting-edge technology in a way that beats the world's leading innovation systems in the United States. However, if the 14th Five-Year Plan succeeds in further improving the design and implementation of China's innovation policy, business productivity is likely to increase in the future and lead to economic growth driven by 'Innovation Made in China'. Policymakers and businesses in Europe would be well-advised to already prepare for more intense competition especially in high-tech sectors, the authors conclude.

The ZEW expert brief is available to download at: *www.zew.de/PU82923-1*

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Which Measures Promote Energy Savings in Private Households Most Cost-Effectively?

French policies to support households in refurbishing their homes for energy savings purposes differ considerably in terms of their cost-effectiveness. As a recent analysis by ZEW Mannheim shows, energy consumption in households can be reduced most cost-effectively with funding from energy efficiency certificates – so-called white certificates – of energy suppliers.

The researchers evaluated four French incentive programmes designed to help private households carry out renovations to reduce the energy consumption of their houses and flats: a grant scheme for low-income households, a reduction of the value-added tax (VAT) from 20 to 5.5 per cent and an income tax credit – all three financed by the public sector – as well as energy efficiency certificates ("white certificates"), with which private energy suppliers prove that they have carried out energy-saving measures in their customers' homes.

The researchers examine these four measures with regard to their cost-effectiveness and the redistribution associated with them. The analysis is based on data from a representative survey conducted on behalf of the French Agency for Ecological Transition (ADEME) in spring 2017 among 45,000 French households, of which around 14,000 implemented energy efficiency measures in the years 2014 to 2016.

High- and low-income households benefit equally

In terms of cost-effectiveness, energy efficiency certificates by energy suppliers perform best, as they achieve the highest savings in household energy costs relative to the amount of subsidy received. This could be due to the fact that energy suppliers have an incentive to reach households that have large savings potentials. The VAT reduction and the low-income household grant score moderately with respect to cost-effectiveness. The lowest savings relative to the subsidy amount are achieved with the income tax credit. In terms of distributional effects, the measures under review do not differ significantly. Households in the upper and lower half of the income distribution equally benefit from all four subsidy instruments examined. The average subsidy amount distributed and the energy cost savings in both groups do not differ for any of the instruments.

The study results are an insightful contribution to the current debate on the effectiveness of various measures to reduce energy consumption and emissions in the buildings sector. Buildings account for 40 per cent of energy consumption in the European Union. This is why the European Commission wants to at least double the renovation rate of private and public buildings

The white certificate scheme, which requires energy suppliers to help consumers reduce their energy consumption, perform best in terms of cost-effectiveness.

as part of the EU Green Deal. Various EU Member States have already launched a variety of funding programmes to promote the refurbishment of private buildings.

The study can be downloaded at: *www.zew.de/PU82714-1*

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IN THIS ISSUE

Debt-Equity Bias Should Be Addressed on National Rather Than on EU Level

The economic crisis following the COVID-19 pandemic has increased the debt levels of corporations and reduced the level of investments. Companies can use both equity and debt capital to finance investments. From a tax perspective, interest payments on debt are generally deductible from the corporate tax base, while costs related to equity are not. This debt-equity bias is a deep-rooted issue in today's tax system and inhibits equity-financed investments.

According to a recent ZEW policy brief, harmonisation at the European level is not suitable for solving the tax-induced distortion. Instead, the researchers recommend addressing the debt-equity bias on national level, e.g. by implementing a dual income tax.

The structural tax-induced distortion of financing decisions is undesirable and leads to adverse economic effects. To provide a stable and supportive tax environment for a sustainable recovery after the coronavirus crisis, the European Commission published a framework on "Business Taxation for the 21st Century" in May 2021. Besides other proposals, a debt-equity bias reduction allowance (DEBRA) should be developed to address the tax-induced distortions of debt financing. For a legislative proposal, the EU Commission identified three possible concepts to address the debt-equity bias, which are assessed by the researchers as follows:

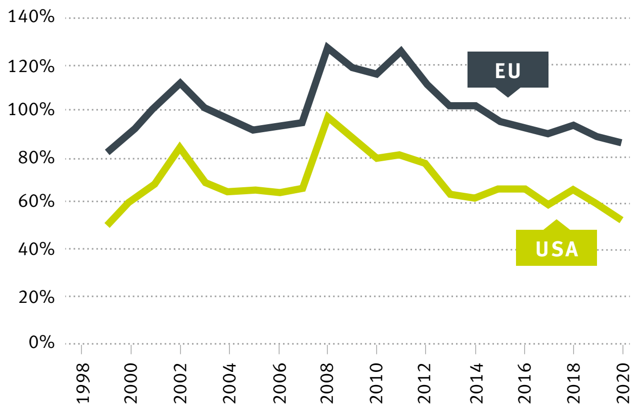
The first concept, a Comprehensive Business Income Tax (CBIT), disallows the tax-deductibility of any financing costs and thus, would discourage corporate investments. This could result in a decline in corporate investments and would contradict the European Commission's intention to foster investments and a fast economic recovery after the COVID-19 crisis. To counteract the potential negative investment effects, EU Member States would have to decrease their statutory corporate income tax rate. However, the fiscal scope for this policy measure is extremely limited due to the economic consequences of the coronavirus pandemic.

The second concept, an Allowance for Corporate Equity (ACE), which provides for the deductibility of notional interest on either all equity or new equity, could stimulate corporate investments. However, it provides new tax planning opportunities for corporations and could result in tax revenue losses for EU Member States. This effect is crucial as the COVID-19 crisis has drastically increased government spending and leaves no room for further decreases in state revenues.

The third concept, which consists in the proposal to align the treatment of debt and equity financing by deducting a notional return on all capital, a so-called Allowance for Corporate Capital (ACC), is also unsuitable. Due to the high sensitivity of an ACC to the notional interest rate, its effects cannot be determined a priori, resulting in great uncertainty for corporations and EU Member States.

In order to address the debt-equity bias in the long run, the overall treatment of financing costs and capital income has to be considered. This involves not only corporate income taxation but also shareholder taxation, which has so far been neglected by the European Commission. Therefore, the authors appeal not to introduce a CBIT, an (incremental) ACE, or an ACC in an EU-wide harmonised way, as all concepts require subsequent adjustments in the personal income tax. So far, the personal income taxation lies in the sole competence of the Member States. In addition, it is unclear how the introduction of any proposed measure would interact with the reform proposals to address the challenges of the digital economy by the OECD.

MEAN DEBT-TO-EQUITY RATIO OF NON-FINANCIAL CORPORATIONS IN THE EU AND THE USA



Source: Own calculations based on OECD (2020)

Dual income tax as a viable alternative

Policymakers should not address the debt-equity bias through harmonisation at the European level. Instead, the researchers recommend eliminating the tax-induced distortion between debt and equity financing at the national level, for example by introducing a dual income tax. A dual income tax establishes not only financing neutrality, but also neutrality with regard to profit distributions and legal forms. Consequently, according to the authors, a dual income tax is well suited to achieve the goals set out by the European Commission.

Download the ZEW policy brief at: *www.zew.de/PU82861-1*

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M&A REPORT

ZEW-ZEPHYR M&A Index Stabilises as Negative Trend May Come to an End

The ZEW-ZEPHYR M&A Index – established in 2005 to measure merger and acquisition (M&A) transactions involving German companies – is showing signs of stabilisation and currently stands at 91 points. Since 2019, the number of M&A transactions by and with German firms has steadily declined. Brexit, the trade war between the USA and China, and most recently the COVID-19 pandemic have made companies hesitant.

There are signs that the negative trend may be coming to an end. The twelve-month moving average has stabilised at its lowest level since 2011. The similarities between the current movement of the twelve-month moving average and that during the last global financial crisis are striking. Judging by the movement pattern of the index so far, it is quite possible that the negative trend is over. Nevertheless, it could still take a while before a positive trend emerges.

In the last six months, German firms were involved in some highly valued deals. One of the most notable transactions was the acquisition of US cancer treatment specialist Varian Medical Systems by the Germany-based company Siemens Healthineers for almost 13.68 billion euros. This is the largest M&A deal in the health care sector so far this year. The combined company would account for 70 per cent of the world's cancer treatment equipment.

Another notable deal was the takeover of US-based truck manufacturer Navistar International Corporation by German truck maker Traton SE for 3.12 billion euros. Volkswagen's truck division, Traton SE, which manufactures the Scania and MAN truck brands among others, hopes to increase its presence in the Chinese market through the acquisition. Both deals were already announced in 2020.

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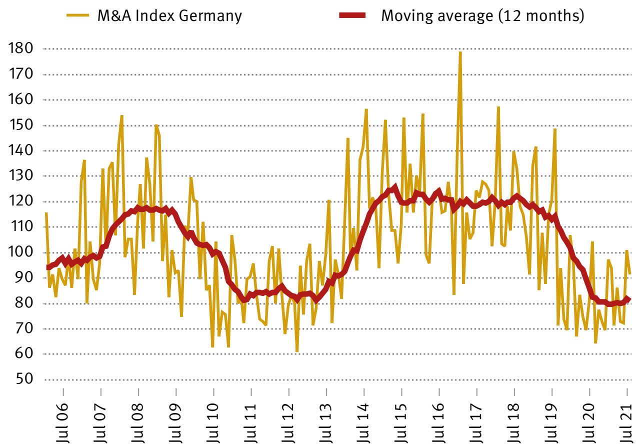
ZEW-ZEPHYR M&A INDEX GERMANY



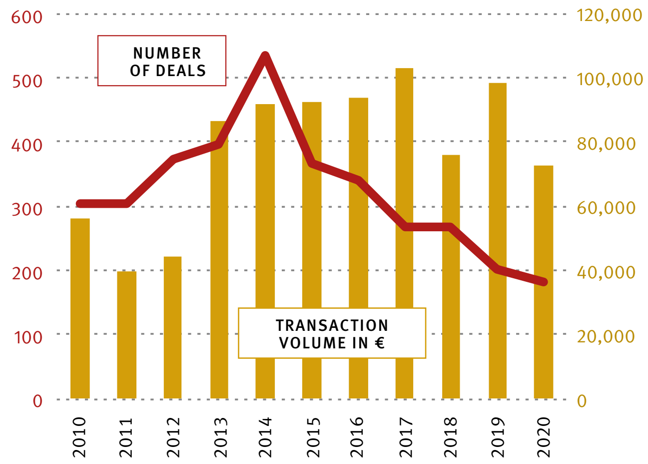
Source: Zephyr database, Bureau van Dijk, calculations by ZEW

The **ZEW-ZEPHYR M&A-Index** measures the number of M&A transactions completed in Germany each month. It considers only mergers and acquisitions by and with German companies. It does not differentiate between the country of origin of the buyer or partner. This means that both domestic and international buyer companies are considered, provided that the target companies are active in Germany. The M&A Report is a biannual publication issued by ZEW and Bureau van Dijk. It uses the Zephyr database to report current topics and developments in global mergers and acquisitions. The Zephyr database, which is updated on a daily basis, contains detailed information on over 1.9 million mergers and acquisitions, IPOs, and private equity transactions around the world.

BUREAU VAN DIJK
A Moody's Analytics Company

Oil Industry Consolidating at Rapid Pace as Number of M&A Deals Hits All-Time Low

M&A ACTIVITIES IN THE OIL INDUSTRY



Source: Zephyr database, Bureau van Dijk, calculations by ZEW

The number of megers and acquisitions in the oil industry reached a new low in 2020. In the early 2010s, oil companies were increasingly active on the global takeover market. Activity peaked in 2014 when oil prices began to fall dramatically. Since then, the number of M&A deals in the industry has been declining, reaching an all-time low last year. On the other hand, deal values have skyrocketed – the average deal value in 2020 (906 million euros) was more than twice the average value in 2014 (340 million euros). The combination of the two trends suggests that the industry is consolidating at a fast pace.

Decline in M&A deals due to global efforts to switch from dirty to clean energy sources

The coronavirus pandemic hit the oil industry hard, with the collapse in oil demand leading to net losses for many oil companies. While the pandemic may provide an explanation for the development of M&A activity in 2020, it does not explain the overall trend. The overall trend reflects global efforts to shift from dirty energy sources to cleaner ones. Advancing efforts to electrify the transportation sector pose a major risk to the oil industry – transport accounted for 65 per cent of oil consumption in the European Union in 2019. Falling demand for oil coupled with the rising demand for clean energy is fuelling consolidation in the industry. More high-value deals are expected to take place in the coming years.

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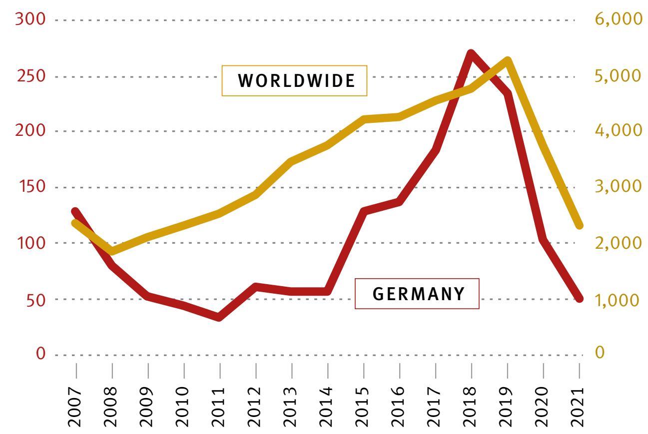
Pandemic Slows M&A Announcements in the German Real Estate Sector

M&A ANNOUNCEMENTS IN THE REAL ESTATE SECTOR



Source: Zephyr database, Bureau van Dijk, calculations by ZEW

In May 2021, German real estate giant Vonovia publicly announced a merger with Berlin-based Deutsche Wohnen. It took three attempts, but at the beginning of October the deal was finally sealed: Vonovia managed to secure a majority shareholding in its competitor Deutsche Wohnen, thus completing one of the largest takeovers in the history of the German real estate industry.

The German Federal Cartel Office had already declared in June that it had no objections to the merger. The purchase was valued at approximately 18 billion euros and will make the merged company Europe's largest residential real estate group. Together, the two companies own more than 500,000 flats, most of them in Germany, as well as residential properties in Sweden and Austria.

Although the Vonovia deal is one of the largest real estate deals ever, M&A activity in the German real estate sector and worldwide has slowed down in the last two years. The number of announced M&A deals involving a German company peaked in 2018 with 269 announced M&A deals. Since the coronavirus pandemic, M&A deal announcements in the real estate sector have stalled and are close to the levels recorded during the global financial crisis and the European debt crisis.

Uncertainty over the new government's political course

The sharp drop in announcements is mainly due to uncertainty about what the real estate market will look like in the future. The COVID-19 pandemic has brought about many changes, for example in how and where people work and live. While some changes will be short-lived, some could be permanent. In the case of Germany, the decline could also be due to the federal election in autumn 2021, which was marked by great uncertainty regarding the political course of the new government. Affordable housing is one of the most important issues for German voters and the new coalition government might take a more hostile stance towards the real estate sector.

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Uncertainty Stalls M&A Announcements by German Acquirers in the Automotive Industry

The effects of the COVID-19 pandemic are also clearly felt in the automotive sector. Announcements of mergers and acquisitions in the industry have declined significantly worldwide in the first half of 2020.

Announcements by German acquirers have halved, from an average of 20 announcements per half-year to only ten announcements since 2020. Compared to China and the US, where acquisitions appear to have returned to pre-pandemic levels, M&A announcements by German acquirers remain at their lowest level since 2010.

The situation is very similar with car sales, which have also recovered much quicker in China and the US than in Europe. While car sales in China and the USA have largely returned to pre-pandemic levels, they are still 25 per cent below the levels seen before the pandemic in Europe.

In addition to the disruptions caused by the coronavirus pandemic, such as a drop in demand and supply bottlenecks for electronic components, the German automotive industry also faces uncertainties regarding the decarbonisation policy of the future government coalition against the backdrop of the Bundestag elections in autumn 2021.

Decarbonisation policy of the future government coalition will be decisive

Now that the German elections are over, the new government will have to decide what these policies will look like. Therefore, car manufacturers might want to wait with their M&A plans until the political course of the new government is clear.

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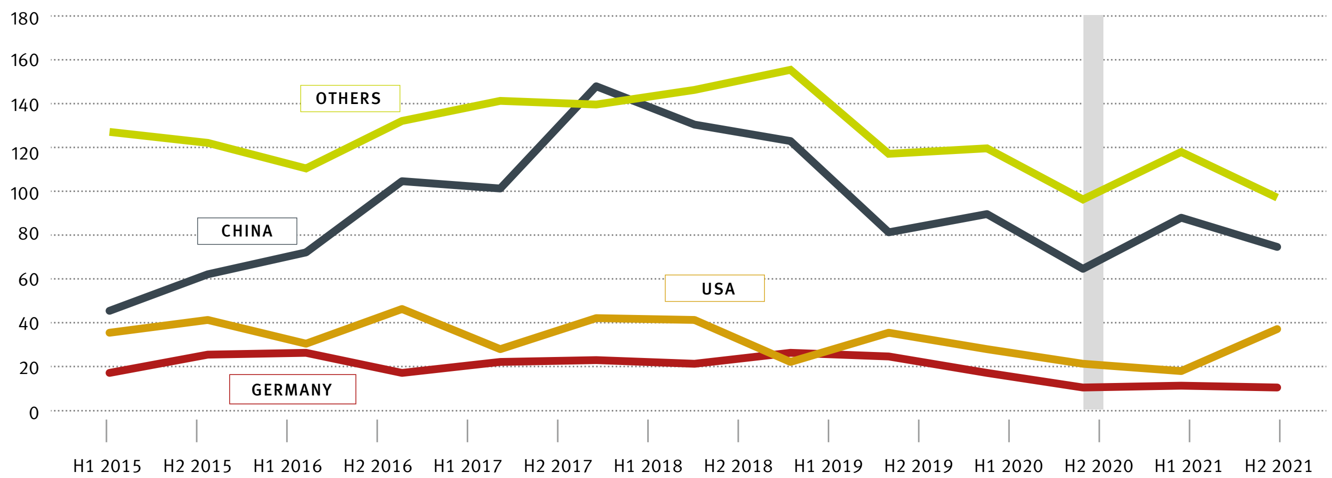
M&A ANNOUNCEMENTS BY COUNTRY



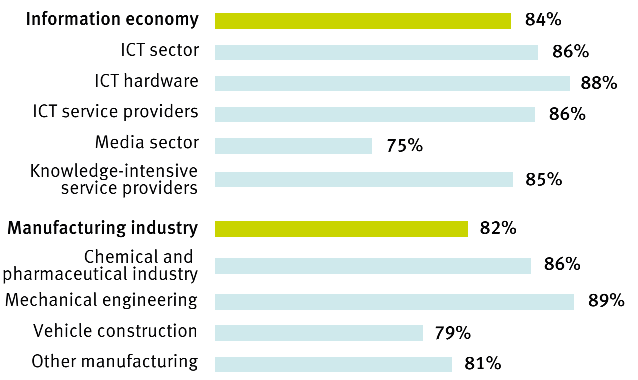
Source: Zephyr database, Bureau van Dijk, calculations by ZEW

Lack of Digital Sovereignty Threatens Competitiveness of German Companies

Germany and Europe are lacking digital sovereignty. This jeopardises the ability of the German economy and its European partners to respond effectively to future challenges, to innovate and to remain competitive. This is the result of a study by ZEW Mannheim, which is based on a comprehensive evaluation of the existing literature and a representative company survey. On behalf of the Federal Ministry for Economic Affairs and Energy, ZEW researchers surveyed more than 1,200 companies from the information economy and manufacturing industry.

According to the survey, more than 80 per cent of German companies feel that they are very or rather dependent on non-European providers and partners in at least one technology area. Large companies tend to feel more dependent than small ones, which are less likely to have non-European partners and might be able to change providers more flexibly. How problematic this dependency can be is shown by the recurring discussion about security concerns regarding Chinese providers and the monopoly-like position of some US tech giants. In addition, supply bottlenecks for semiconductors can lead to considerable production losses.

SHARE OF COMPANIES THAT FEEL THAT THEY ARE VERY OR RATHER DEPENDENT ON NON-EUROPEAN PROVIDERS/PARTNERS IN AT LEAST ONE OF THE GIVEN TECHNOLOGY AREAS



Source: ZEW Business Survey in the Information Economy, 2Q21

European alternatives are often missing

So why not switch to European providers? Often this option does not exist. The most frequent reasons given by the companies surveyed for the existing dependency are the fundamental lack of an alternative in the EU or the superiority of other, non-European providers. For the German economy, the elimination of existing dependencies in the technological field is therefore crucial for the future. In the relevant technology fields and key technologies, German and European companies must build up their own manufacturing and development skills. This is of central importance in order to help shape the digitalisation of the economy in the spirit of European legal concepts and values.

Retaining the ability to shape the digital transformation in a self-determined way

Existing literature indicates that for the economy to be digitally sovereign, it must ensure the availability of and access to appropriate digital technologies and data. For this, either the development of digital technologies at home or unrestricted access to these technologies, even in times of crisis, must be guaranteed. This does not mean becoming completely self-sufficient in all (technological) areas and producing solutions exclusively in one's own country (i.e. protectionism). Rather, it is about the ability to shape the digital transformation in terms of hardware, software, services and competencies in a self-determined way.

So far, however, only one in two German companies has heard of the term "digital sovereignty" and only about 25 per cent are planning measures to reduce their own dependence due to a lack of alternatives or knowledge about possible solutions, such as open source solutions. Nevertheless, the ZEW survey shows that companies attach great importance to this topic in the long term. In particular, data sovereignty is rated as important by 90 per cent of companies in the information economy and 84 per cent in manufacturing. The German economy has some strengths under its belt, such as provider competencies in the area of IT security. But there is still room for improvement in many areas, according to the authors of the study.

In order to strengthen Germany's and Europe's digital sovereignty, it is necessary to reduce information deficits and keep an eye on the dynamic risks of becoming dependent. Businesses and politics must be agile and act in cooperation. The researchers recommend building on existing strengths and investing in particular in future-oriented key technologies such as quantum computing, artificial intelligence and IT security. Projects such as the European cloud and data ecosystem GAIA-X should be implemented promptly. Both the regulatory and social framework also need to be strengthened. Digital skills are essential and need to be built up and developed in order to achieve digital sovereignty.

The study is available to download (in German only) at: *www.de.digital/DIGITAL/Redaktion/DE/Digitalisierungsindex/Publikationen/publikation-download-schwerpunkt-digitale-souveraenitaet-2021.html*

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Celebration of the 30th Anniversary of ZEW

What role do economic research institutes play in addressing economic policy challenges in Germany and Europe? This question was the topic of the panel discussion on 8 November 2021 on the occasion of the 30th anniversary of ZEW Mannheim. ZEW President Professor Achim Wambach was joined in the discussion by Dr. Guntram Wolff (Bruegel, Brussels) and PD Dr. Monika Köppl-Turyna (EcoAustria, Vienna). The panel was moderated by Silke Wettach from the news magazine "Wirtschaftswoche". The keynote speech at the event was held by Dr. Georg Müller, CEO of MVV, who, as chairman of the ZEW Sponsors' Association, made clear the strong relevance of ZEW.

In his welcoming speech, ZEW President Professor Achim Wambach outlined the development of ZEW from an institute that was ahead of its time with its empirical research in the founding year 1991 to becoming one of the most important economic research institutes in Germany and Europe today. Not only will economic research institutes have to deal with the increasing relevance of data in the future, but also with the greater importance of teamwork as well as the transfer of research results, said Achim Wambach.

Photo: Erich Dichiser EDM

On the occasion of its 30th anniversary, ZEW Mannheim hosted a panel discussion. From left to right: Dr. Georg Müller, Professor Achim Wambach, PhD, PD Dr. Monika Köppl-Turyna, Dr. Guntram B. Wolff, Silke Wettach, and Thomas Kohl.

In his keynote speech, Dr. Georg Müller, chairman of the ZEW Sponsors' Association, emphasised the excellence of ZEW and its researchers. The findings published under the ZEW brand are considered to be highly relevant. Müller appealed to ZEW to keep up the good work and to continue to make its voice heard in public debates in the future.

Peter Altmaier (German Federal Minister for Economic Affairs and Energy) and Winfried Kretschmann (Minister President of Baden-Württemberg) also congratulated ZEW on its anniversary via video. Kretschmann described ZEW as "powerful, dynamic and on the cutting edge" and Altmaier hopes that ZEW's work will continue to find its way into political deliberations in the future.

One of the highlights of the programme was the panel discussion on the topic, "After the federal elections. Setting the economic policy course for Germany and Europe – What's the contribution of economic research institutes?". According to ZEW President Professor Achim Wambach and Dr. Guntram Wolff, director of the Bruegel Institute in Brussels, a major challenge for economic research institutes is the transfer of research results from science to politics. There is often a conflict of goals between the demands of politics and science, and a balance is necessary in many cases, but often not easy to achieve. At the same time, cooperation between politics and science is more important than ever because of the enormous economic policy challenges for both Germany and Europe.

Europe, Green Deal and the problem of greenwashing

In the opinion of the panellists, the EU was given too little attention in the last German federal election campaign. Despite its huge importance, Europe played only a minor role in the election. As an economic heavyweight, however, Germany's positioning on various EU issues is decisive – especially against the backdrop of growing protectionism and nationalism in various Member States. "It is all the more important now to bring the benefits of the EU and free trade back into the spotlight," explained PD Dr. Monika Köppl-Turyna, director of the EcoAustria research institute in Vienna.

On the issue of climate change, the EU has taken a decisive step with the Green Deal. Attempts are already being made to circumvent regulations, for example through so-called greenwashing. Wolff spoke out in favour of establishing clear standards and uniform certificates to prevent greenwashing. Referring to the EU's "Fit for 55" package, Wambach said: "Germany must take a clear stance. If the government doesn't have a uniform position on this because the coalition partners can't agree, then Germany is slowing down the European decision-making process."

The panel also discussed what could have been done better during the COVID-19 crisis. According to Wambach, the coronavirus crisis, like the financial crisis, has ruthlessly exposed existing shortcomings from which we should draw lessons for the future. In any case, health policy should be better coordinated in Europe, said Wambach. He also noted that the recovery fund was necessary, but opportunities were missed in its design.

Asked how research institutes should deal with the fact that science is often very fragmented, while policymakers mainly expect answers to "big" questions, Wambach replied that institutes provide insights into smaller questions that are part of a larger puzzle. Science cannot be transferred one-to-one to politics, as there are multiple factors in politics that would have to be taken into account. For this reason, political decisions cannot be purely scientific.

The evening ended with a reception where the participants could further discuss their ideas.

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ZEW Economist Takes Over Professorship at the University of Mannheim

ZEW economist Kathrine von Graevenitz focuses on the research fields of environmental economics and applied econometrics, in which she has already successfully positioned herself on the international stage.

Kathrine von Graevenitz has taken up the professorship of economics with a focus on empirical environmental economics at the University of Mannheim on 1 October 2021. The appointment of the deputy head of ZEW's "Environmental and Resource Economics, Environmental Management" Department will further strengthen the intensive dialogue between ZEW Mannheim and the University of Mannheim. "The School of Law and Economics offers excellent opportunities for my work at ZEW," comments Kathrine von Graevenitz. "In my research, I study, among other things, the influence of environmental policy regulations and, in particular, the question of how the energy transition influences the economic success and pollutant emissions of German industry." The professorship is funded under the Leibniz Programme for Women Professors in the Leibniz Competition 2021. It is aimed at female researchers from all disciplines who have an outstanding international track record.

ZEW Panel Discussion on Sustainable Finance

On 22 September 2021, the Sustainable ZEW initiative organised a panel discussion hosted by ZEW President Professor Achim Wambach. Joined by around 80 online participants, four finance experts from academia and business debated the question of whether sustainable finance can ensure climate protection and addressed the most relevant current developments and topics in this field. The perspectives of the key players in sustainable finance were represented by Dr. Sabine Mauderer from Deutsche Bundesbank, Dr. Karolin Kirschenmann from ZEW's "International Finance and Financial Management" Department, Dr. Gerhard Schick of Finanzwende gGmbH, and Professor Martin Weber, co-developer of sustainable fund "Arero – Nachhaltig". After debating how sustainable finance can contribute to creating a more sustainable, climate-neutral economy and serve as a complementary tool for climate policy, the panel discussed the role of government institutions in achieving a green transition in finance.

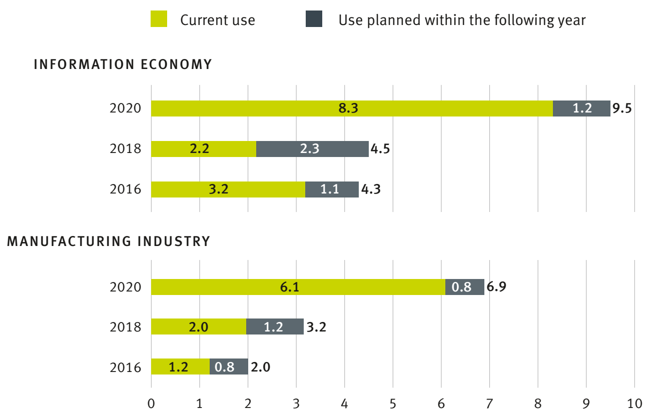
In the virtual panel discussion, the financial experts talked about climate protection and the financial system.

ZEW Economists Discuss Digital Economy and Platforms at the 2021 BHF

Digital platforms are an essential part of the digital economy. How do they work and which policy measures or interventions are useful and necessary from the point of view of consumers and the state? An online session hosted by ZEW Mannheim on the economics of digital platforms at the Beijing Humboldt Forum (BHF) on 25 September 2021 shed light on these questions from various perspectives. After an introdcution given by Professor Irene Bertschek, head of the ZEW Research Department "Digital Economy", experienced entrepreneur and investment consultant Peter Jungen gave some practical insights, pointing out China's immense contribution to global economic growth. In the second part of the session, ZEW researchers exchanged views with colleagues from German and Chinese universities on various topics related to the digital economy and digital platforms. The session included presentations on complex pricing and data neutrality, highlighting the impact of possible policy measures to regulate markets and platforms. Presentations on the market development of digital products and their application, for example in digital agriculture, once again underlined the global relevance of the topic.

Companies Increasingly Turn to Crowdsourcing

CURRENT AND FUTURE USE OF CROWDSOURCING IN GERMANY



Reading aid: In September 2020, 8.3 per cent of companies in the information economy reported that they use crowdsourcing. In addition, 1.2 per cent of the companies planned to use it by the end of 2021. Source: ZEW

The use of crowdsourcing platforms by firms in Germany has risen steadily in recent years. In 2020, 8.3 per cent of companies in the information economy and 6.1 per cent in the manufacturing industry made use of crowdsourcing. Crowdsourcing refers to the use of online platforms to outsource traditionally in-house tasks. Almost 800 companies from the manufacturing industry and the information economy took part in the survey carried out in Germany in September 2020. In 2020, 9.5 per cent of companies in the information economy were already using crowdsourcing or planned to do so by the end of 2021. Compared to the current results, notably fewer companies used or planned to use crowdsourcing in the past. In the information economy, this share was 4.3 per cent in 2016 and 4.5 per cent in 2018. Meanwhile, in manufacturing, this share has risen from 2.0 per cent in 2016 and 3.2 per cent in 2018 to currently 6.9 per cent. For the period from 2018 to 2020, both sectors have thus seen a significant boost in the use of crowdsourcing.

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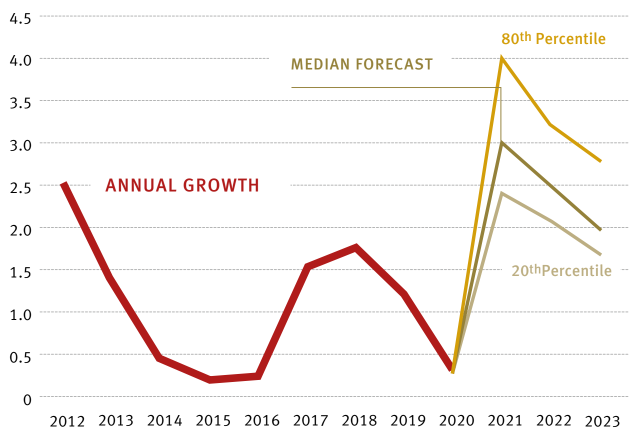
Eurozone: Inflation Expected To Exceed Two per Cent in the Medium Term

POINT FORECAST OF THE ANNUAL INFLATION RATE IN THE EURO AREA
(percentage change in the average annual growth rate of the HICP)



Source: ZEW

The currently very high consumer price inflation rates in the euro area are expected to gradually decline over the next two years, but are projected to remain well above the ECB's target of two per cent over this period. These are the results of a survey among financial market experts conducted by ZEW between 29 October and 8 November 2021. For the current year 2021, inflation forecasts average 3.2 per cent. An average price increase of 2.7 per cent is expected for 2022. For 2023, the average forecast is 2.2 per cent. For both years, the financial market experts also consider inflation rates of over three per cent to be possible. Respondents cite disruptions in international supply chains, raw material shortages and high energy prices as the main inflation drivers but expect their impact to become less important by 2023. On the other hand, the relevance of wage growth in the euro area for the experts' inflation expectations has increased significantly compared to previous surveys, especially for the year 2022.

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2022 Public Finance Conference

ZEW Mannheim is pleased to announce the 2022 ZEW Public Finance Conference 2022 on 5 and 6 May 2022. The annual conference aims to cover all fields of public economics. This year's keynote lectures by John Van Reenen and Danielle Li, both from MIT, will focus on the role of the state in promoting innovation. We particularly encourage the submission of papers that relate to the focus topic 'Government and Innovation'. Please submit your paper no later than 18 February 2022. Applicants will be notified of the acceptance decision in early March 2022.
More information: *www.zew.de/VA3661-1*

2022 MaCCI Annual Conference

The Mannheim Centre for Competition and Innovation (MaCCI), a joint initiative of ZEW and the University of Mannheim, is pleased to announce its 2022 Annual Conference on 24 and 25 March 2022. The aim of the conference is to provide a platform for exchange and discussion on topics in competition- and innovation-related research between academic researchers and practitioners. Given the present circumstances, it is difficult to predict what the global pandemic situation will be next year. According to current planning, the conference will be held in a hybrid format. More information: *www.zew.de/VA3665-1*

Photo: Anna Logue

Climate Policy: Embracing Europe

The agreement recently presented by Germany's new three-way coalition government of Social Democrats, Greens and liberals puts climate policy at the top of the agenda. However, what this transformation will essentially look like is being negotiated in Brussels as part of the "Fit for 55" programme and not in Berlin. The measures agreed in Brussels will have a direct impact on climate policy in Germany.

In December 2019, Ursula von der Leyen announced the goal of becoming climate neutral by 2050 as part of the EU Green Deal. In July 2021, the EU Commission presented the "Fit for 55" package, which aims to set the EU on the ambitious path to a greenhouse gas emissions reduction of at least 55 per cent by 2030.

An essential element for success is the creation of a second emissions trading system for the transport and buildings sectors. Together with the planned expansion of the already existing emissions certificate trading for energy and industry, about 80 per cent of the emissions in Europe would then be subject to carbon pricing. Since the number of certificates is to be based on the EU's reduction target, its achievement would be largely ensured.

This requires a joint European effort. Currently, the price for an emissions certificate in the energy and industry sectors is around 60 euros per tonne of CO_2. According to a ZEW simulation of the European Commission's proposal, the price in the transport and buildings sectors could rise to over 300 euros if the reductions are distributed as currently planned. To put this in perspective, the price of petrol would then rise by about 85 cents per litre. The study also shows that a more efficient distribution of the reductions among the sectors, namely more reductions in energy and industry and less in the "more expensive" sector of transport and heat, would distribute costs more evenly and thus lead to total cost savings of up to one per cent of GDP annually.

The question of how many emissions should be reduced in which sectors, and even more fundamentally whether there will be a second emissions trading system at all, is currently being negotiated at the European level. Some countries like France are not yet convinced. It is to be welcomed that the three coalition parties support the creation of a separate European emissions trading system in their agreement. Germany has already introduced a second national emissions trading system for the transport and buildings sectors. A Europe-wide expansion of this system would increase efficiency across borders – emissions would then be reduced throughout Europe where it is cheapest.

However, a consistent EU climate policy also has important consequences for national climate protection plans. Since the two emissions trading systems would largely guarantee the EU reduction target – with the exception of agriculture – the achievement of national targets would become secondary. If one country reduces more emissions, another will reduce less – if one country needs fewer certificates, others will have more available. National sectoral targets lose even more importance: although they can serve as orientation, they force politics and companies into a narrow and thus expensive system, and have no real (European) climate impact if they are pursued too rigidly. It is thus to be welcomed that the three coalition parties have agreed to dispense with an annual sanction-based control of the sectoral targets.

If the EU climate measures are successfully implemented, the hierarchy of political decision-making in climate policy will shift: Europe will then be responsible for achieving the EU climate targets with the two emissions trading systems. Germany must ensure that achieving the EU emissions target is socially and technically feasible. Measures accompanying the transformation and, above all, the expansion of energy infrastructures will be in focus. The faster grid expansion stipulated in the new coalition agreement, the goal of one million public charging stations by 2030 and the acceleration of planning and approval procedures for renewable energies are essential for this. A meticulous pursuit of national emissions targets, on the other hand, is less important.

President of ZEW, Prof. Achim Wambach, PhD

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