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September/October 2017

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Even years after a crisis, an increase in inequality remains visible in the US.

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Cross-Country Comparison – Economic Crises Increase Inequality in the United States

One of the top priorities of the G20 is to improve the resilience of its members against the negative effects of economic crises. A study conducted by ZEW on behalf of the independent foundation Bertelsmann Stiftung compared how eight OECD countries have coped with crisis-related slumps in exports since the 1970s.

The resilience test carried out by ZEW researchers includes all significant export-sector crises since the 1970s. This enables researchers to distinguish long-term crisis-management patterns within the observed economies that are not immediately evident when examining individual current crises.

The study defines an export-sector crisis as a decline in exports relative to gross domestic product (GDP) of at least one quarter of a percentage point. This seemingly moderate deterioration in export performance is to be interpreted in the context of the strong growth in world trade over recent decades. For example, the German exports-to-GDP ratio increased by an annual average of 1.29 percentage points between 1970 and 2016. Against this background, a year with a decline of at least 0.25 percentage points represents a significant set-back relative to the export-growth trend.

An economy's resilience is reflected in its performance during and in the aftermath of a crisis. The evaluation of performance includes four measures of welfare: the growth rate of the real GDP, the unemployment rate, the at-risk-of-poverty rate, and the Gini coefficient for disposable income.

Of the countries analysed in the study, Japan and Australia proved to be most resilient. Since the oil crises of the 1970s, both countries have repeatedly been successful in overcoming the negative effects of global trade slumps in a short space of time. Japan and Australia were able to avoid both a significant increase in unemployment and a sharp decline in growth.

France and Italy on the other hand have so far demonstrated an especially low level of resilience to crises. France's performance is particularly unsatisfactory, with consequences evident across all four welfare dimensions even years after the end of a crisis. In the analysis, Italy also showed considerable weaknesses with regard to growth. The country experienced the largest comparative declines in growth during export-sector crises; however, it performs relatively well with regard to the other welfare indicators. Furthermore, in these countries, export slumps typically leave long-lasting traces in the form of higher poverty and unemployment rates.

Germany performs well by international comparison

Germany, by contrast, shows a high level of resilience. Although crises in earlier decades have led to a significant decline in growth in the Federal Republic, the recent financial crisis has not had long-lasting negative effects on Germany's economic performance. According to the results of the study, Germany is vulnerable to sudden global trade slumps due to its high export quota. The researchers conclude that the country has, however, become adaptable enough to process these shocks quickly. A similarly positive development was found for Canada and the United Kingdom, with both countries improving their performance in terms of growth and the Gini coefficient.

The United States show an exceptional crisis-management pattern. Even though the country is quick to regain stable growth and employment rates following a slump in exports – possibly due to active countercyclical policies –, an increase in inequality remains visible for years after the crisis. The crisis resilience strategy of the US therefore does not serve as an appropriate model for European states. The study concludes that the lack of assistance the losers of a crisis receive in the US is unlikely to find acceptance in Europe.

The complete study is available for download at: *www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/NW_Building_Resilience_OECD-comparison.pdf*

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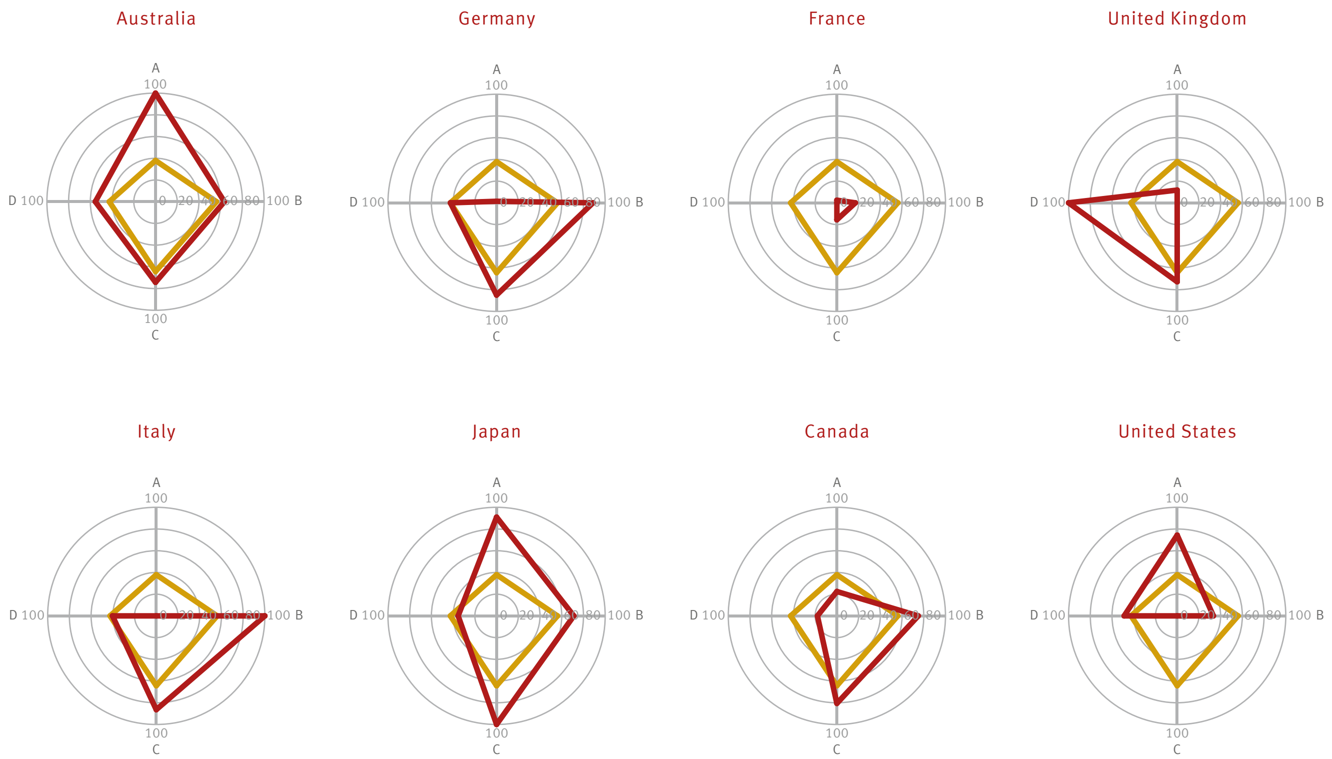
CROSS-COUNTRY COMPARISON OF RESILIENCE TO EXPORT-SECTOR CRISES



Country X Average of countries A: GDP B: Unemployment rate C: Gini coefficient D: At-risk-of-poverty rate

Reading aid: In order to ensure comparability between the performance dimensions, values for each dimension were normalised on a 0 to 100 scale, on which 100 represents the best and 0 the worst value in cross-country comparison.
Source: Own calculations based on OECD data.

Innovation Indicator 2017 – Germany Comes in Fourth Place Globally for Innovation

The Innovation Indicator 2017 has revealed that Germany's innovation system fares well by international comparison – at least at first glance. In competition against the most highly innovative economies around the world, Germany has managed to climb up the international ranking by one place, coming in fourth behind Belgium. However, Germany is still unable to catch up with the leading countries, Switzerland and Singapore.

These are the principal findings of the Innovation Indicator 2017, a survey conducted on a regular basis by the Fraunhofer Institute for Systems and Innovation Research (ISI) and ZEW, on behalf of the German National Academy of Science and Engineering (acatech) and the Federation of German Industries (BDI).

In the overall ranking of the Innovation Indicator, Germany is practically on the same level with other leading industrial nations such as the US, Great Britain, South Korea and France. In some cases, the performance of the individual countries, however, varies significantly within the five subfields of the innovation system considered in the study, namely economy, science, education, state, and society. Switzerland is the only country to achieve a top ranking in each of the five subfields, while Singapore and Belgium also display a well-balanced innovation system with strong performances in all subfields.

Germany needs to catch up in the area of digitalisation

Germany's innovation system showed both strengths and weaknesses, which were analysed as part of the study. According to the Innovation Indicator, Germany's strengths include high-quality professional training with a large share of highly qualified academics in STEM subjects (science, technology, engineering and mathematics), large contributions from the high-tech sectors to value added, comprehensive state funding of the nation's research system as well as a high number of patent applications per capita compared to other industrialised nations.

The area in which Germany particularly needs to catch up is digitalisation, having come in well behind other industrialised countries. Germany's weaknesses in innovation include – in comparison to the Innovation Indicator from 2015 – the decrease in Germany's trade balance in high-tech goods as well as the drop in the employment share in the knowledge-intensive service sector. Venture capital investments in relation to GDP also experienced a decrease. Unlike most other industrialised nations, Germany's government has thus far refrained from providing tax incentives for research and development (R&D). The level of R&D funding provided directly to companies by the government is also comparatively low.

Germany's high ranking on the Innovation Indicator can largely be attributed to the country's balanced innovation system. Instead of aiming for cutting-edge achievements in individual areas, Germany scores highly thanks to its great willingness to innovate across a wide range of social and economic areas. The reasearchers conclude that it should be the top priority of innovation policy to maintain this outlook.

The study is available for download (in German only) at: *www.innovationsindikator.de/fileadmin/2017/PDF/Innovationsindikator_2017.pdf*

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The Innovation Indicator

The annually published Innovation Indicator is a study which compares countries in terms of their innovation performance. The study analyses the conditions for innovation in Germany and develops a ranking which compares Germany to other leading industrial nations and emerging countries in terms of economic policy, research, education, state and civil society, as well as in terms of an overall indicator. This provides a basis for innovation policy. The Innovation Indicator is published by acatech – the German National Academy of Science and Engineering – and the Federation of German Industries (BDI). The study is carried out jointly by the Fraunhofer ISI and ZEW. The Innovation Indicator was a joint initiative of BDI and Deutsche Telekom Stiftung, before acatech joined as a cooperation partner in 2015.

IN THIS ISSUE

Changing a movie's release date may increase its overall sales by up to six million US dollars.

United States: Strategically Changing a Movie's Release Date Drives up Sales

The release date of a movie in the United States is likely to be changed when competition is particularly high due to a number of other high-quality movies that are set to hit screens in the same week. According to a recent ZEW study analysing the US film market, this decision to reschedule can increase a movie's revenue significantly.

Given the great number of cinema releases per week, it is common in the film industry to strategically plan release dates. A recent ZEW study investigates a sample of 2,732 movies in the United States over the period from 1 January 2006 to 17 January 2014. Of this sample, an average of 4.5 new movies open per week, which then typically run between eight and ten weeks before they are taken out of the programme to make room for new releases.

In addition, there is de facto no price competition in the film market, since cinemas charge standard ticket prices regardless of a movie's quality. Exceptions are 3D movies and movies with a longer than average running time.

Less intensive competition has positive effects on a movie's revenue

For the study, the researchers investigated competitive effects in product niches regarding the timing of product releases of experience goods. Experience goods are goods whose quality cannot be assessed a priori and is only revealed after consumption. Critics' reviews are therefore very important as quality indicators, and ultimately have a considerable influence on customers' behaviour.

An analysis of the US film market has shown that it may be profitable to change release dates if competing film productions are too similar in terms of, for instance, the movie cast, the team of movie directors or the genre. It may therefore pay off for movie producers to strategically choose a release date at which market competition is lower.

On the one hand, film producers prefer to release movies during periods of particularly high demand. On the other hand, however, they also try to avoid strong competition from other movies. As a consequence, it may be more profitable to postpone the release date if competition is likely to be less intense at a later point of time.

When experience goods enter the market, the choice of strategic variables is fairly limited

Finally, the ZEW analysis indicates that a movie's box-office revenue decreases if a number of high-quality movies are running in the same week. By contrast, revenues increase by an average of seven to eight per cent if there is less competition on the rescheduled date. If competition is high in a movie's opening week, the decision to reschedule its release tends to increase its overall sales by up to six million US dollars compared to the sales the movie would have generated with its original release date.

The strategic importance of the release date not only holds for movies, but also for other markets for experience goods. The researchers point out that once entertainment products, such as movies, books or video games, are ready to enter the market, the choice of strategic variables is fairly limited, with the release date being one of the few options remaining.

The study is available for download at:
www.zew.de/PU79354-1

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Q&A: How Achievable Are the Goals of the Paris Climate Agreement Today?

"The Signal Donald Trump Is Sending with His Decision Is Disastrous"

Signed by almost 200 countries, the Paris Climate Agreement represents a milestone in the global fight against climate change. US President Donald Trump recently announced that the United States would withdraw from the climate agreement. The European Union still believes in adhering to the pact and intends to exceed its climate goals. ZEW environmental economist Sebastian Voigt offers his thoughts on the potential impact of the US withdrawing from the agreement and the consequences this might have for global climate policy.

The reactions to Donald Trump's decision to pull the US out of the climate agreement range from "very concerning" to "not so bad". What is your assessment?

I'm of two minds. It is true that a large number of US states and municipalities are planning to stick to their own climate targets. There are also many companies interested in measures to counteract climate change, partially because they would benefit from decreasing energy costs. It remains to be seen whether, despite Trump's decision, the pledges made in the Paris Agreement will be at least partially fulfilled. However, whichever way you choose to look at it, the signal the US President is sending is disastrous. Over the coming years, the United States will no longer be present at the highest levels of international climate policy – whilst remaining the second largest emitter of greenhouse gases worldwide.

Will the departure of the US lead to closer cooperation between Europe and China?

I personally do not expect that there will be any cooperation in the form of bilateral treaties between the European Union and China beyond the parameters of the Paris Agreement. There will, however, be more cooperation on the economic level, for example on issues closely linked to environmental policy. We can already see this in the areas of photovoltaics and electromobility, for instance. There is already a great deal of cooperation in research supported by EU research funding, for example in the sharing of knowledge and experience regarding emissions trading. I think this kind of cooperation is likely to increase in the future.

China has done an about-turn in terms of climate policy. Is the People's Republic now becoming a shining example for climate policy?

I wouldn't go that far. On the one hand, China's climate ambitions are also a side-effect of their efforts to reduce the incredibly high levels of air pollution in Chinese cities. This pollution is causing harm to the local population and has the possibility to create political problems domestically for the Chinese government. Given that the smog problem largely results from the mining and combustion of coal, savings will inevitably be made here. On the other hand, there are also concrete economic reasons for China to implement tougher climate energy policies: namely, to reduce energy costs and to increase competitiveness. Regardless of the motivation for the change in policy, we will certainly see some improvement on the current situation. I wouldn't say China was a shining example, though I wouldn't use the term to describe Europe either.

What steps should the EU now take in the fight against climate change?

The EU has already decided on a timetable up until the year 2050. The focus of this plan is on reducing greenhouse gas emissions, with emissions trading still being the EU's most important climate policy tool. By 2030, emissions are to be reduced by 40 per cent compared to 1990 levels, and by at least 80 per cent by 2050. These goals would have still come into effect if the Paris Agreement had not been ratified. But it is emissions trading where there is the greatest need for action. The currently low prices of emission certificates are a problem, particularly in the long term. Low prices mean there is no incentive for the necessary investment in more energy efficient technologies, for example. After 2030 in particular, the EU could face some difficulties in reaching its emissions target.

One measure intended to bring about an increase in the CO_2 price is the Market Stability Reserve, which is set to be introduced in 2019. However, many experts doubt that this will lead to any noticeable change in prices. A more effective measure could be the introduction of a CO_2 tax. This is unlikely to be implemented at the EU-level, however, since it would set an unwelcome precedent for an "EU tax". The EU therefore needs to find another way to incentivise investment that will help Europe achieve its ambitious climate goals.

Dr. Sebastian Voigt
is deputy head of the Research Department "Environmental and Resource Economics, Environmental Management" at ZEW. The principal focus of his research is in the areas of climate and environment policy and the use of simulation models to conduct macroeconomic quantitative analyses. He is particularly interested in the continued development of the EU emissions trading scheme. Within the Research Department, he coordinates the research area "Macroeconomic Analysis of Environmentally Relevant Policies".

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Highly Digitalised Companies Show Greater Resilience in Times of Crisis

ICT-intensive firms were less exposed to the economic crisis of 2008 and 2009 than firms with a low degree of digitalisation. This holds in particular for firms from service industries. While highly digitalised firms have hardly experienced any decreases in productivity levels and growth, less digitalised firms have suffered substantial losses over the course of the crisis.

Economic crises come with huge economic and social costs, resulting from firm exits, unemployment and lower productivity, to name but a few. In order to reduce these costs, it is important to understand what makes firms, industries and countries more resilient.

One potential source of firms' resilience may be information and communication technologies (ICT) as so-called general purpose technologies. Firms using ICT in a clever way may be able to deal with economic shocks more flexibly since they can more easily reorganise their production processes, and possibly enhance their competitiveness. In contrast, firms lagging behind in the adoption of new technologies run the risk of being driven out of the market. The use of ICT and its inherently innovative capabilities may thus help to increase firm resilience during economic downturns. Are ICT-intensive, or highly digitalised, firms more resilient in times of crisis?

This question is the subject of a recent ZEW study, which examines the performance of ICT-intensive firms in terms of their productivity and innovation success and comparing it to that of less digitalised firms. The study relies on data provided by Eurostat's novel and unique Micro Moments Database (MMD), which allows a differentiation by firm characteristics such as ICT intensity within industries. ZEW researchers assessed information on twelve European countries and seven industries for the years 2001 to 2010.

In the study, firms are classified as ICT-intensive if at least 40 per cent of their employees have access to broadband internet in the workplace. This measure may seem rather one-dimensional as it does not directly reflect the many dimensions of digitalisation, which may comprise devices and applications such as computers, enterprise software, cloud computing, e-commerce, and many others. However, previous research has found that broadband access is highly correlated with the use of digital components since it is also a prerequisite for many digital applications, and is thus an appropriate measure of firms' ICT intensity.

In all seven industries considered in the study, ICT-intensive firms displayed a higher labour productivity than non-ICT-intensive firms, and this productivity differential was more pronounced during the crisis than before the crisis.

Labour productivity of ICT-intensive firms barely decreased during the 2008–2009 crisis

ICT-intensive firms were indeed hit less hard by the economic crisis. Their labour productivity and growth levels barely decreased during the crisis period 2008–2009, whereas non-ICT-intensive firms experienced considerable productivity losses. This result holds in particular for services firms, as a differentiated analysis of manufacturing and services firms reveals. At the same time, ICT-intensive firms were found to increase their relative innovative capacity in terms of realising process innovations. In other words, they implemented new or significantly improved production or work processes, which in turn allowed them to save costs through a more efficient process design. By contrast, product innovation activity did not change significantly during the crisis, reflecting the low demand for new products and services during that period.

This being the case, companies that invest in digital technologies and use them in a clever way are better equipped to adapt to changes in economic conditions and to meet the challenges associated with economic crises. Supporting the digital transformation of European companies is therefore an investment in stability and resilience not only for these companies, but also for economies as a whole.

The complete study is available for download at: *www.zew.de/PU79337-1*

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Companies investing in digital technologies are better equipped to overcome economic crises.

Photo: ©iStockphoto.com/Easyturn

Antitrust officials have recently been investigating allegations against German car manufacturers. In the fight against cartels, the EU leniency programme has proven to be an effective detection tool.

Photo: ©PantherMedia/zhuzhu

Corporate Leniency Programmes Are Effective in the Fight Against Cartels

Corporate leniency programmes have become a vital instrument in the fight against cartels in many industrialised countries. Firms involved in cartels can benefit from such leniency programmes, which allow them to receive full or partial immunity from fines imposed by the European Commission in exchange for providing evidence as a witness or even chief witness. In an empirical study, ZEW investigated how leniency applicants differ from other cartel members fined by the EU Commission for cartel infringements.

The fight against hardcore cartels is ranked high on the agenda of competition authorities in Europe and around the world. The recent efforts of the European Commission to detect and subsequently punish cartels have resulted in an improved enforcement record. While the EU Commission ruled on only ten cartel cases between 1995 and 1999, their number increased to 30 in the period between 2000 and 2004, and to 33 between 2005 and 2009. Although this substantial increase has certainly been driven by various policy changes such as new fining guidelines and increased cooperation between competition authorities, it is often argued that the introduction of the Commission's leniency programme in 1996 – which was revised in 2002 and 2006 – is likely to have been a key driver.

Generally, a leniency programme grants law breakers either a reduction of or even full immunity from fines if they disclose an infringement to the responsible authority and cooperate in the subsequent investigation. Such programmes thus constitute a considerable incentive for firms involved in price-fixing conspiracies to apply for leniency in exchange for providing evidence, as has been observed in the recent allegations of collusion among German car makers.

However, the design of leniency programmes offers certain degrees of freedom that may influence the incentives of infringing firms to report themselves, as for example the way repeat offenders are treated and the degree of fine reductions awarded to the first firm to report. By identifying the key determinants which prompt cartel members to report themselves, competition authorities would be able to adapt both the design of the leniency programme and the fining guidelines accordingly, thus increasing the incentives for cartel members to come forward and report the cartel.

In an empirical study, ZEW researchers investigated how firms which were granted full immunity differ from those fined by the EU Commission. The analysis is based on 76 decisions made by the Commission on cartel infringements in the period between 2000 and 2011. A total of 442 firms and, where applicable, their legally liable subsidiaries were involved in these cases.

The higher the basic amount of the fine, the more likely a cartel member is to apply for leniency

The collapse of a cartel or the withdrawal of one member from a cartel is the result of heterogeneous individual decisions. The analysis indicates that before the introduction of the EU Commission's revised leniency programme, the probability of a repeat offender becoming a chief witness only increased if the fines for previous infringements exceeded a certain amount.

According to the ZEW study, repeat offenders are much more likely to become chief witnesses since the European Commission revised the leniency programme in 2002. This suggests that future revisions of the leniency programme should bolster the incentives for repeat offenders to self-report, for example, by increasing the fines imposed on such firms. The study also finds that the higher the basic amount of the fine, the more likely a cartel member is to apply for leniency and submit evidence against its former accomplices. Whether the fine is reduced or waived entirely depends on the quality of information provided and its value to the case in question.

In addition, there is a positive correlation between leniency applications and the degree of multinationality of the company group as well as the size of the company's market share in the sector in which the cartel operates. In other words, if a company participating in a cartel is active in several countries and has a dominant position in the market, this company is more likely to become a chief witness. This finding suggests that increased international cooperation among competition authorities increases the likelihood of one cartel member deciding to report its involvement in the infringement.

The study is available for download at:
www.zew.de/PU69996-1

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Hard Times for German Car Industry

The German car industry is beleaguered on multiple fronts, from devastating emissions scandals and cartel allegations to being left in the dust by a Californian startup in the race for dominance on the e-car market. Remarkably, German authorities have been treating the industry with kid gloves. Instead of taking it to task for emissions-cheating, the federal government organised the National Diesel Forum, a summit of leading politicians and industry representatives, in order to rebuild public trust in the sector.

How to account for the German government's goodwill? The chief reason is economics: No other country is more dependent on its automotive branch than Germany. Around five per cent of all jobs are directly or indirectly bound up with motor vehicle manufacturing. The sector's high productivity and above-average salaries give it an even larger share – seven to eight per cent – in economic output and national income. And its many ties with other branches mean that a crisis could send ripples through the entire German economy, leading to sharp rises in unemployment and salary cuts for many workers. The effects would be particularly pronounced in the German states of Baden-Württemberg, Lower Saxony, Bavaria and Saxony, where the automobile industry is concentrated. Unsurprisingly, the German government wants to prevent such a scenario at all costs. Indeed, a long-standing cornerstone of its economic policy has been to create and maintain a favourable climate for car manufacturing.

The EU's adoption of stricter emissions regulations has thrown a monkey wrench into Germany's efforts. The German carmakers rely heavily on diesel, a relatively low-CO_2-emission fuel that, thanks to tax breaks, is more affordable than petrol. But the EU now requires lower nitrogen oxide emissions from diesel motors, and building such a motor is expensive.

More importantly, car manufacturing in Germany is geared toward the production of large, heavy vehicles. This is primarily due to the strong position of Audi, BMW, Daimler and Porsche in the premium market, which values comfort, high-performance engines and extra features above all.

The cost of reducing nitrogen oxide emissions in diesel motors coupled with the heft of premium cars makes conformance with EU's tight restrictions difficult. The German government tried to block EU regulations that premium car manufacturers would find too severe, but to no avail. The EU Commission was more concerned about the harm that car exhaust causes to the environment and human health. For the rest of Europe, restrictions on the manufacture and sale of high-emission vehicles has many environmental upsides and zero economic downsides.

Worry that electric cars won't attract premium buyers

Once stricter emission standards had become unavoidable, industry players realised that the technological advances that needed to be achieved would not come soon enough, so they decided to cheat emissions tests using illegal software. And when it comes to rolling out battery-powered vehicles, premium carmakers continue to drag their feet amid fears that electric cars won't offer the premium features that their customers have come to expect: quick acceleration, dynamic all-wheel steering and weight-increasing additional features. Perhaps more to the point, the industry has also voiced concerns about the short supply of rare earth metals for electric batteries, and the inevitable price spikes when demand increases. They have come to believe that the high price tag of electric cars will keep sales figures down at home and abroad for the foreseeable future. It is therefore highly unlikely that German carmakers, who depend on exports and target high-volume markets, will replace combustion engines with electric motors anytime soon.

So far, the German government has done its best to protect domestic car manufacturing, and its lax regulation has helped offset the difficulties that new EU regulations pose. But it is doubtful that the government will be able to keep this up for long, considering the industry's recent woes. Even at home, hard times are ahead for German carmakers.

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The diesel scandal and collusion allegations against carmakers have cast a shadow over the German car industry.

Photo: ©istockphoto.com/Adkasai


A delegation of Chinese doctoral and postdoctoral students visited ZEW following this year's "6th Lindau Meeting on Economic Sciences". Photo: ©ZEW

Young Chinese Economists Visit ZEW

Following this year's "6th Lindau Meeting on Economic Sciences", a 15-member delegation of Chinese doctoral and postdoctoral students visited ZEW in Mannheim. ZEW was the first stop of a one-week trip across Germany, organised by the German Research Foundation (DFG) for excellent young Chinese economists who had previously attended the meeting in Lindau.

Every three years, Nobel Laureates in the economic sciences gather at Lake Constance for the "Lindau Meeting on Economic Sciences" to meet the next generation of leading economists from all over the world. The event aims to encourage the exchange of thoughts and ideas among scientists of different nationalities at different stages in their careers. In order to participate in the meeting, young researchers have to pass a multi-step application and selection process. Three young ZEW researchers were able to secure the much-coveted tickets for this year's Meeting at Lake Constance, namely Dr. Nicolas Fugger, Sebastian Blesse and Maximilian Todtenhaupt.

The fruitful scientific exchange which had begun at Lake Constance later continued in Mannheim. At ZEW, the Chinese delegation was keen to find out more about Germany as a research location as well as the research conducted at the Mannheim-based institute. ZEW President Professor Achim Wambach welcomed the visitors to ZEW and provided an overview of the institute's research areas. He laid a particular focus on the great number of cooperation projects between ZEW and its Chinese partners, which include the Fudan University in Shanghai. Since 2013, ZEW and Fudan University have been jointly publishing the China Economic Panel (CEP), a survey regularly conducted among international experts which allows for an outlook of China's economic development in a global economic context.

Afterwards, ZEW employees held short presentations on the opportunities for cooperation offered by the institute, such as completing a research stay at ZEW within the framework of the ZEW Visiting Researchers Programme, or participating in the "Strengthening Efficiency and Competitiveness in the European Knowledge Economies" (SEEK) research programme. The Chinese delegation also gained insights into ZEW researchers' daily work at the institute, the fields of research they are working on, as well as the international dimension of their work.

ZEW Well-Represented at EEA-ESEM 2017

ZEW put in a strong performance at this year's 32nd Annual Congress of the European Economic Association (EEA), which took place at the University of Lisbon from 21 to 25 August and ran in parallel with the 70th Annual European Meeting of the Econometric Society (ESEM).

During the five-day event, ZEW researchers held a total of five presentations and two poster sessions, during which they presented recent research results from the fields of labour markets, market design, competition and corporate taxation. Among other issues, ZEW researchers discussed how a minimum wage increases solo self-employment, whether the search behaviour of customers influences electricity pricing from suppliers, and how bidders behave in first-price auctions when they have limited information on the valuation of other bidders.

In addition to the presentations, ZEW also hosted an information stand at the congress, where participants had the opportunity to find out more about career, collaboration and training possibilities at ZEW and take a look at the institute's latest research findings.

The list of more than 1,600 participants who attended the 2017 EEA-ESEM included leading international researchers and members of the Executive Board of the ECB. French economist and EEA President Professor Philippe Aghion was joined at the event by his Spanish colleague Professor Jordi Galí of the Center for Research in International Economics (CREI), as well as Professor John van Reenen of the Massachusetts Institute of Technology (MIT) and Vice-President of the ECB Vítor Constâncio.

The EEA currently has more than 3,500 members and publishes the renowned Journal of the European Economic Association (JEEA) six times per year. The annual congress provides a platform for discussion and the exchange of ideas in the field of economics. ZEW will be participating in next year's EEA-ESEM, which is to take place at the University of Cologne.

ZEW Honours International Up-and-Coming Researchers

ZEW presented this year's Heinz König Young Scholar Award to two young researchers, Jiekai Zhang from the Centre de Recherche en Économie et en Statistiques (CREST) at the École Nationale de la Statistique et de l'Administration Économique (ENSAE) Paris-Tech and Bernhard Kasberger from the University of Vienna. Jiekai Zhang was awarded the prize by ZEW in recognition of her research into the effects of regulated TV advertising for both TV viewers and advertisers, while Bernhard Kasberger was recognised for his work on the efficiency of mobile communications markets following frequency auctions.

The Heinz König Young Scholar Award, which is awarded annually, is named after the late founding director of ZEW, Professor Heinz König, who died in 2002, and it recognises excellent empirical research papers by up-and-coming researchers. The award comes with an endowment of 5,000 euros and includes the opportunity to spend an extended research visit at ZEW. The Heinz König Young Scholar Award 2017 was financed by MLP AG.

The prize was awarded at the closing ceremony for the 19th ZEW Summer Workshop for Young Economists by Professor Kai Hüschelrath, head of the ZEW Research Group "Competition and Regulation", and Professor Vitali Gretschko, head of the ZEW Research Group "Market Design".

ZEW Research Group Heads Kai Hüschelrath (left) and Vitali Gretschko (right) with the winners Jiekai Zhang and Bernhard Kasberger

Chinese Professors Participate in Qualification Programme at ZEW

Members of the supervisory committee of the centrally organised Chinese Master's programme of International Business visited ZEW to pursue a qualification programme. The "MIB Faculty Programme", attended by professors from 14 Chinese universities, featured two weeks of intensive training. The aims of the programme were to foster the exchange of ideas with German researchers, to strengthen their intercultural expertise as well as organisational skills for presentations and seminars, to deepen their knowledge of European markets and associated institutions, and to provide them with an overview of current developments in the field of business administration. The programme also included visits to the European Central Bank and the Deutsche Bundesbank, as well as company visits, which allowed the participants to gain valuable insights into business practice. One such visit included a presentation on R&D activities with a special focus on China, held at German chemical giant BASF.

This was the first time that ZEW has offered the qualification programme to the "China National Master of International Business Education Supervisory Committee", allowing the institute to build on its diverse collaborations with renowned Chinese institutions.

Chinese Students Attend UIBE Summer School at ZEW

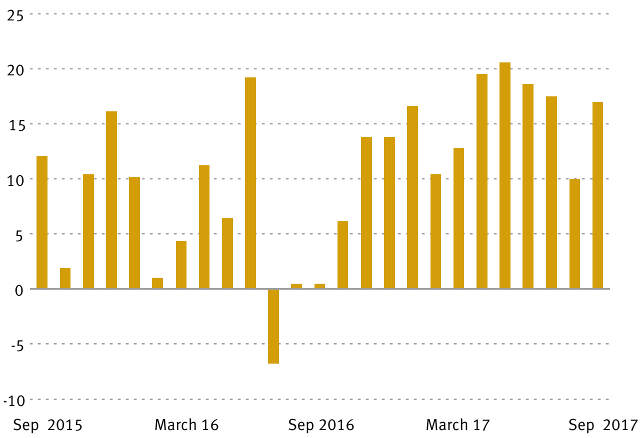
A group of 25 students from the University of International Business and Economics (UIBE) in Beijing spent three weeks at ZEW to learn more about economic activity in Germany and Europe through a number of modular courses. The interactive nature of the programme, along with the varied content and lively debate of the issues discussed, guaranteed the students a unique experience in Europe and will prepare them for an international career in economics or academic research.

Through the different modules, ZEW aims to provide students with a broad range of expertise in business management and economics, management skills, as well as individually tailored soft skills. The participants also went on a number of excursions to both European and German institutions, such as the Deutsche Bundesbank. This is the second time that ZEW hosted the UIBE Summer School, an event which is an important part of the increasingly close cooperation between the two institutions.

In July, ZEW hosted a group of students from China as part of the international UIBE Summer School programme.

ZEW Financial Market Test September 2017

Germany: Economic Outlook Improves Significantly



Balance of positive and negative assessments concerning economic sentiment on a six-month horizon in Germany. Source: ZEW

The ZEW Indicator of Economic Sentiment for Germany improved in September 2017. Climbing 7.0 points compared to August, the indicator now stands at 17.0 points. However, it still remains below the long-term average of 23.8 points. The solid growth figures in the second quarter of 2017, in combination with a steep rise in bank lending and increasing investment activities by both the government and private firms, are likely reasons for the financial market experts' significantly more positive outlook compared to that of last month. Their expectations are further corroborated by stable global economic development. With regard to the current German economic situation, the financial market experts' assessment remains largely unchanged. The indicator currently stands at 87.9 points, which corresponds to an increase of 1.2 points compared with the August result.

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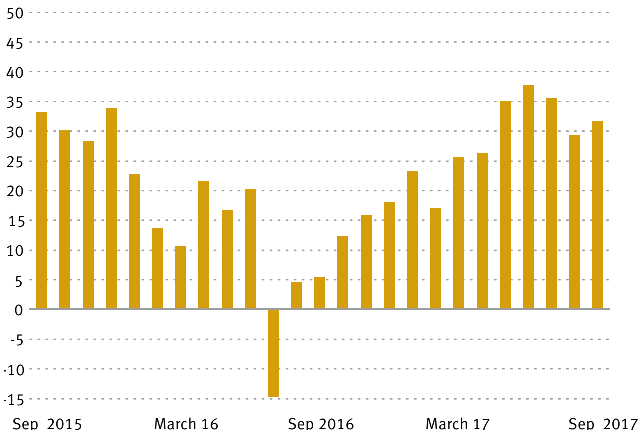
Eurozone: Positive Economic Outlook



Balance of positive and negative assessments concerning economic sentiment on a six-month horizon in the Eurozone. Source: ZEW

After a significant decline in the previous month, the economic expectations for the Eurozone increased slightly in September 2017, climbing 2.4 points to a current reading of 31.7 points. The optimistic outlook is likely to be the result of recent positive growth and labour market figures, as well as the increase in consumption and investment activity. In contrast, the current economic situation in the Eurozone is evaluated less favourably compared to the August reading. With the euro remaining strong and thus putting pressure on exports, the corresponding indicator dropped by 2.9 points and now stands at 35.5 points. Against the backdrop of the persistently low-interest rate environment, the record levels of the leading stock indexes are projected to continue into the near future, with the corresponding indicators remaining stable.

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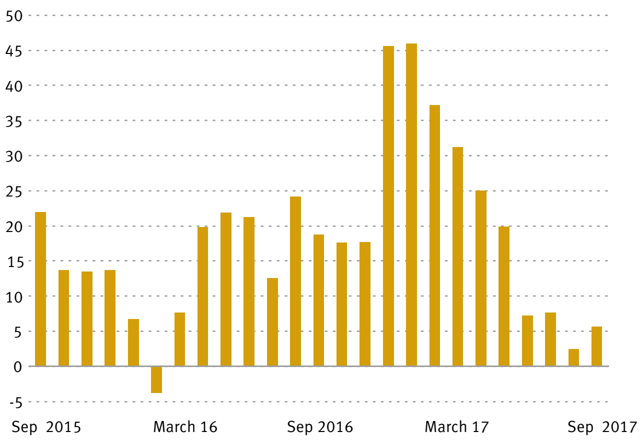
USA: Economic Expectations Are Brightening



Balance of positive and negative assessments concerning economic sentiment on a six-month horizon in the United States. Source: ZEW

According to financial market experts, the US economic outlook for the coming six months is doing better again. The corresponding indicator has recovered compared to that of the previous month, rising by 3.2 points to a current reading of 5.6 points. This increase is likely to be related to the damage caused by the recent string of hurricanes, which are expected to lead to a significant increase in demand, especially in the automotive industry. Their short-term impact on the economy is, however, negative. In addition to the billions worth of losses, hurricanes also caused damage to industrial production. Aside from that, the losses suffered by petroleum refineries have a direct impact on consumers through rising fuel prices. Against this backdrop, the indicator of the current economic situation has decreased slightly by 1.2 points to a reading of 55.9 points.

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Gathering New Data for Efficient Transport Policies

Imagine a family who wants to travel from Frankfurt to Munich. They have several options: They can take a three-hour train trip, an hour-long flight or, for roughly one-third of the price, a five-to-seven-hour bus ride. Their decision will be based on how much time and money they have available.

Now consider the scenario from the state's perspective. How should the government allocate public funding among these options, and how should it steer competition between them? These decisions are included, amongst others, in the Federal Transport Infrastructure Plan. In June of this year, for instance, the Federal Minister of Transport, Alexander Dobrindt, announced a 350-million-euro subsidy for 2018, designed to lower track charges for freight transport and encourage shippers to move from roads to rails.

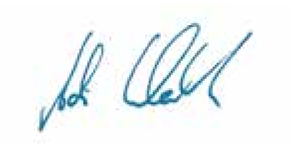
The basic question in this context is: How fair is the competition between trains, buses, planes and the other main mode of transport, cars? In other words, is a euro of public funds better spent for maintaining streets or expanding rails or adding another runway? And will each infrastructure's users contribute equally to its funding, or will there be competitive distortions between them?

In its recent report "Railways 2017: Construction sites in competition policy", the German Monopolies Commission attempts to address these questions. One of its focus areas is how state funding affects competition between road and rail transport. For instance, in 2017 alone, Germany will spend 8.6 billion euros for highway upkeep and expansion, and directly invest 5.8 billion euros in rail infrastructure. 2017 also includes funds for other transport sector projects, such as 150 million euros for noise reduction.

The report also highlights that users contribute to infrastructure funding in various ways. This year, the vehicle tax and the HGV toll are expected to generate 8.8 billion euros and 4.3 billion euros, respectively. The track fees paid by rail companies are estimated to total 4.6 billion euros in 2017. But it is hard to say how government spending and user charges affect competition between roads and rails. Unfortunately, Germany lacks the data for comparing the total costs and benefits of particular modes of transport. Without such a comparison, however, it is impossible to assess how government funding in the transport market affects competition.

The data is much better in Germany's neighbour Switzerland. There, officials specifically gathered statistics on various cost parameters for individual modes of transport, allowing direct comparisons between them. The statistics also consider how the modes of transport pay for the environmental costs they create, such as air pollution, or for costs caused by noise and accidents. The analysis of this data then serves to guide Switzerland's transport policy decisions.

The report from the Monopolies Commission calls on Germany to develop evidence-based transport policies like those in Switzerland. This will require building a comprehensive database for the entire transport sector that can be used to perform a total cost-benefit analysis of the German market. Only then will Germany be able to create a fair system of grid fees, taxes and tolls for trains, road vehicles, planes and maritime ships, and thus create fair competition in the transport market.



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