



Q&A

Do Minority Shareholdings Damage EU Competition?

Research Findings

Europe May Benefit from Trump's Presidency

Opinion

The Value of a Clean Environment

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An “Energy Brexit” Would Hurt Britain More Than the European Union

Brexit is happening. Just over a year ago, in June 2016, the majority of the British population voted in favour of leaving the European Union. While the UK is scheduled to leave the EU in March 2019, many of the details still have to be worked out. The UK parliamentary election held in June this year has increased uncertainty in this matter. Among other issues, it remains unclear whether the UK will also leave the European Single Market and what form of future market integration may emerge.

Looking at European energy markets offers an interesting perspective on this hot topic of debate as they are a showcase for how Brexit may threaten market integration between the United Kingdom and the continental EU. On the one hand, electricity and gas markets on the continent and the British Isles are tightly interwoven as the marketplaces decided to link up their

individual national auctions. On the other hand, grid-bound energy sources in particular require a sound legal foundation. If Britain were to leave the European Single Market with no regulations in place, this legal foundation for the current linking of European energy markets would be stripped away in under two years, with nothing to replace it. This raises the question of what consequences Brexit will have for energy markets on continental Europe.

According to the assessments of energy experts in both France and Germany, the effects on the French and German energy markets will be limited. When asked about the effects of Britain leaving the Single Market, the majority believed that an “Energy Brexit” would have virtually no effect on electricity prices (81 per cent in Germany; 68 per cent in France) or the security of electricity supply (90 per cent in Germany; 72 per cent in

The ZEW Energy Market Barometer and the GEM Baromètre du Marché de l'Énergie

The ZEW Energy Market Barometer is the only panel of its kind in Germany made up of experts in the energy industry. The survey has been conducted every six months since 2002 and reflects the participants' assessments regarding current issues in the energy industry and in energy policy. The Grenoble École de Management (GEM) set up a similar panel in 2013, the GEM-Baromètre du Marché de l'Énergie, which gathers French experts' opinions on current issues affecting the French energy industry and, like the ZEW panel, is conducted on a biannual basis. The current survey (May 2017) is based on 151 responses from German participants (ZEW) and 83 responses from French participants (GEM). Both barometers closely coordinated their questions on the effects of Brexit in their respective surveys.

France). The results were similar for natural gas, with more than two-thirds of the surveyed experts in both countries not anticipating any noticeable effect on security of supply or prices. It was only a considerable minority of the German experts (21 per cent) who saw the potential for natural gas prices to rise as a result of Brexit.

Likewise, the majority of experts in both countries did not expect Brexit to lead to changes in EU climate targets. This is particularly relevant since the UK climate target is more ambitious than the EU average. Without Britain, either the European Union as a whole will have to set less ambitious emissions targets or the other Member States will have to compensate for

Britain's absence with greater reductions. The vast majority in both France (80 per cent) and in Germany (71 per cent) see the latter as the more likely scenario.

An "Energy Brexit" may, however, also lead to a partial divestment of French and German energy companies. More than half of the experts in Germany believed this would be the case for German energy companies, which have significant stakes in the UK electricity and gas market. In France, more than three quarters of the experts expected a partial divestment on the part of French companies. Electricité de France (EdF) is not only directly active in the UK electricity market, but also leads the consortium that is scheduled to build the Hinkley Point C nuclear power plant.

Overall, both the German and French experts believed that leaving the European internal energy market would bring a greater risk for Britain, with 60 per cent of the Germans and 71 per cent of the French experts predicting that an "Energy Brexit" as described above would hurt Britain more than it would hurt the EU. Perhaps this can explain why the majority of experts believed the UK will ultimately remain in the European internal energy market. The survey, however, also showed that there was a great deal of uncertainty among the experts over this particular question. While more than 30 per cent of the experts in both countries still thought the UK was likely to leave the market, 16 per cent of the German experts insisted this was not yet possible to determine. The recent parliamentary election, which took place after the expert survey was conducted, is likely to have only increased uncertainty in this matter.

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How Cum-Ex and Cum-Cum Deals Led to Billions of Euros in Lost Tax Revenue

In recent months, so-called cum-ex or cum-cum dividend-stripping schemes have increasingly been described as a tax scandal the likes of which Germany has never seen before. The damage: multibillion-euro losses in tax revenue. So far, it has been proven that more than 40 German banks, including many regional state banks, were involved in these highly complex and controversial dividend-stripping schemes. In order to prevent such practices being used in the future and to protect the taxpayer, we need to implement a functioning safeguard system.

The mechanism forming the basis of both cum-ex or cum-cum deals is known in the stock market as dividend stripping. This involves divesting shares with dividends (cum-dividend) and delivering those with (cum) or without (ex) dividends on or around the dividend ex-date. Transactions like these have been

carried out in Germany since the late 1970s. Up to and including 2011, cum-ex deals together with short selling have led to refunds on the withheld capital gains tax from one transaction being claimed and received multiple times. This was possible as the result of a failure in the system regarding the withholding and refunding of capital gains tax. Taxes would be withheld and paid to the German tax office by the stock company, while the custodian bank would claim the tax refund multiple times – once for the stockholder and the second or even more times for the short sellers. According to conservative estimates, the loss in tax revenue resulting from these tactics amounts to at least ten billion euros.

Up until at least 2016, cum-cum deals led to dividend withheld capital gains tax being wrongfully refunded in Germany. Non-German residents transfer their German shares, usually



Photo: © Ilja C. Hendel for BMF

More than 40 German banks were involved in highly complex cum-ex and cum-cum dividend-stripping schemes, causing a billion-euro loss in tax revenue. In order to prevent these schemes being used in the future and to protect the tax payer, a functioning safeguard system needs to be implemented.

tax-exempt pension or sovereign wealth funds in their countries of residence, just before the dividend ex-date either through selling transactions or through security loans to German financial institutions. These institutions then collect the dividends and request a refund on the withheld capital gains tax. The shares are then transferred back to the original foreign shareholder shortly afterwards. This is how – from the perspective of non-resident taxpayers – dividends that are subject to tax in Germany can be turned into either tax-exempt capital gains or a tax-exempt security lending fee. The profits made from capital gains tax refunds were shared among those involved in the scheme on a regular basis through the determination of the selling price or security lending fee. According to estimates, tax revenue losses in Germany resulting from cum-cum deals since 2001 amount to somewhere between 50 and 89 billion euros, depending on the amount of capital gains tax due.

Illegal cum-ex deals: billion-euro tax revenue losses

Unlike cum-ex deals involving short selling, cum-cum deals are not illegal per se. Depending on the form they take, they can, however, in individual cases violate applicable laws. According to the German Federal Fiscal Court, withheld capital gains tax cannot be refunded to German financial institutions if economic ownership of the shares has not been transferred as well. Aside from this, it has also been a requirement at least since 2001 that deals be checked for any signs of attempted misuse of the system. In the overwhelming majority of cases in which regional state banks were found to have been deeply involved in dividend-stripping schemes, this is likely to be the case.

Claiming tax refunds multiple times through cum-ex deals involving short selling was illegal, with no legal loophole ever in existence in German law. This legal position has since been backed up by a number of relevant rulings from the fiscal courts. Despite clear indications of the resulting tax revenue losses reaching into the billions back in the 1990s, the political leadership of the German Federal Ministry of Finance did not take action. Aside from that, the Ministry of Finance lacks the kind of governance that has long been common practice in private businesses.

A safeguard system to protect the taxpayer and an early-warning system for tax fraud are necessary

The German Bundestag created an inquiry committee in order to investigate the scandal. What is particularly shocking about the committee’s final report produced in 2017, is that the majority of the committee members from the CDU, CSU and SPD parties came to the conclusion that the inquiry committee was unnecessary because the whole scandal had in fact been the work of a criminal network of banks, tax advisers and lawyers. According to their conclusion, the investigation should be handed over to tax investigators, public prosecutors and the law courts. In fact, we should much rather be demanding a functioning safeguard system to protect the taxpayer and begin to develop an early-warning system for tax fraud, as well as creating far-reaching roles responsible for organisation and human resources, and establishing cooperation between federal and regional tax administrations.

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How Can German Cities Handle the Mad Dash for Nursery School Places?

In many German cities, the allocation of available nursery school places is not transparent and carries considerable costs for both parents and nursery staff. Alongside the current shortage of nursery places, inefficient allocation procedures are making the shortage seem more acute than it actually is. A central allocation system would deliver good market design through the use of tried and tested algorithms.

In May 2017, some 450 parents queued up to register their children for the 45 crèche and 120 nursery places at a new nursery school in Leipzig. The police intermittently had to intervene to prevent the queue from blocking traffic. This situation was the result of a miscommunication from the nursery school management, but it made the true extent of a problem, which otherwise occurs behind closed doors, directly visible. Parents are often forced to apply for a number of nurseries directly after their child is born. These applications keep nursery school staff busy, who might instead provide higher-quality childcare. In the case of parents, the drawn-out application process leads to long waiting times and uncertainty over when they can return to work.

Centralised admissions systems are part of the solution

Even though there are online platforms to register for nursery school places, only very few of them actually contain a system which uses ranking lists of nursery schools and parents to calculate which nursery should offer places to which families. In practice, problems arise when parents accept more than one offer and thus block places for other families, or accept an early unattractive offer for security. In other countries the allocation of limited school places is faster, more transparent and more efficient. In New York, for example, in the year before the introduction of a new, centralised application system more than

30,000 children did not receive a place at any of their preferred schools. The new system reduced this number by 90 per cent to 3,000 children whose preferences could not be accommodated. In the case of the other 27,000, the previously perceived shortage of places was resolved due to an efficient allocation system.

When putting a centralised allocation system into practice, it often comes down to the details. For example, in some systems it makes strategic sense for parents to only include schools on their ranking list where they have a good chance of getting a place. This means, however, that parents who think less strategically or who are less informed are at a disadvantage. This is where the need for expert advice arises.

The ZEW Research Group “Market Design” offers several solutions for implementing centralised allocation procedures: Firstly, the Group provides advice in designing rules, such as quotas, to ensure a particular gender distribution or age structure for nursery classes or to guarantee that siblings are accepted to the same nursery. Secondly, it uses algorithms which are based on tried and tested solutions and which can be adjusted according to the needs of the nursery schools. The Research Group grants free online access to these algorithms. They also offer advice in implementing these algorithms or can implement them as an independent third party using the completely anonymous ranking lists. Thirdly, the Group specialises in the analysis of the demand for certain nursery school models and districts among parents in order to allow cities and child services to plan according to the parents’ needs. This analysis can also help to evaluate the impact of the allocation rules on young parents returning to work as well as on the composition of nursery classes.

A longer version of this piece initially appeared in German in the online portal “Ökonomenstimme” on 30 June 2017.

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No more queuing up: new allocation systems could greatly increase the efficiency of application processes.



Q&A: Do Minority Shareholdings Damage EU Competition?

“Companies Use Minority Shareholdings as a Means of Stabilising Cartels”

Minority shareholdings were long seen as fairly harmless to industry competition because they do not provide these shareholders with any formal control of the company – a view that economists have recently begun to question. ZEW competition economist Sven Heim answers questions on the consequences of minority shareholdings for competition and how the issue should be handled by authorities.

What are the economic effects of minority shareholdings?

Minority shareholdings can indeed have negative effects on competition, in particular horizontal minority shareholdings whereby companies in the same sector hold minority stakes in competitors. There are unilateral anti-competitive effects that damage competition because the shareholder has less interest in gaining a competitive advantage over said competitor because the company directly participates in the competitor's profits and losses in terms of potential dividends. A minority stake in a competitor can also be used to hamper that company's strategic decisions in cases where the stake constitutes a blocking minority. Moreover, coordinated effects can also damage competition. For instance, cartel agreements are more easily enforced when companies have financial stakes in each other. Minority shareholdings give companies a privileged view into the commercial activities of their rivals, making it easier to identify when a company is not adhering to cartel agreements. Companies also have fewer incentives to violate cartel agreements since doing so would lead to lower dividends.

How relevant is this problem in the European Union?

On the political side of things, the European Commission is currently assessing whether it makes sense to extend merger control to include minority shareholdings. Current trends seem to clearly point in this direction. In some countries, including Germany and the US, minority shareholdings already fall within the remit of competition authorities. In practice, however, this rarely means that minority shareholdings are subject to the same intensive auditing as full acquisitions. Up until this point, research into the effects of minority shareholdings has been almost entirely theoretical. However, some empirical results show that minority shareholdings in the US have led to higher prices, and a recent ZEW paper finds evidence that minority shareholdings in practice are in fact used to stabilise cartels. Companies within the same sector are significantly more likely to have minority stakes in one another when cartel leniency programmes which undermine the stability of cartels are introduced. Large companies in particular then take shares in each other in order to re-stabilise the cartel.

Is a reform of the EU merger control regime necessary?

A reform of merger controls at the European level has been a subject of discussion for a number of years. One argument

against potential reform was that expanding regulations to cover minority shareholdings would be extremely costly for both companies and public authorities. Furthermore, the true extent to which minority shareholdings can damage competition was for a long time not entirely clear. Only recently have we had access to empirical research results which clearly show that a reform of merger control involving greater oversight of minority shareholdings appears necessary.

How does German competition law address minority shareholdings?

What the findings of our recent study really bring home is that more can definitely be done. An increase in the number of horizontal minority shareholdings from around 30 to 50 per cent following the introduction of a leniency programme is clearly an indication that companies are making more intensive use of minority shareholdings as a means of stabilising cartels than previously thought. With this in mind, the German Federal Cartel Office ought to make greater use of its legal expertise to investigate minority shareholdings and in particular those among large companies.

What effects do minority shareholdings have on the pricing and investment decisions of the companies involved?

Minority shareholdings can lead to a decline in pricing competition even when no explicit pricing agreements have been made. This is because a company's profit function is influenced by that of its competitor that it has a minority stake in. It is now rather unambiguous that this is what is happening in practice. Investment decisions can also be influenced by minority shareholdings if these policing or strategic decisions require a majority vote, usually around 75 per cent. This means that a larger minority interest can lead to invested companies influencing planned investment decisions, increases in capital or changes in the firm's direction in terms of location or new products, in order to keep competitive pressures minimal.



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Cuts in EU Agricultural Budget Long Overdue

Fifty-five years after Europe established its Common Agricultural Policy (CAP), this policy still consumes more than one third of the EU budget: the total CAP budget in the 2014–2020 Multiannual Financial Framework (MFF) amounts to 408 billion euros. A recent study conducted by ZEW in cooperation with the Bertelsmann Stiftung argues that this large budgetary focus on agriculture is an anachronism which should be corrected with the next MFF.

The study stresses the increasingly high opportunity costs of this policy field. Given the tight EU budget constraints, the large budgetary share earmarked for the CAP prohibits the financing of policies which have a much clearer European added value than farming subsidies. The allocation of spending within the EU budget is obviously well out of proportion with the relative importance of policies on the European level. For example, the ratio of CAP spending relative to EU spending on the Asylum, Migration and Integration Fund in 2015 was 134 to 1. Alternatively, 15 to 20 per cent of the annual CAP budget would be sufficient to compensate for the loss of the UK's net contribution to the Union.

A particularly obvious case for substantial cuts can be made with respect to the direct payments made to farmers, which is referred to as the “first pillar” of the CAP. These direct payments account for roughly 70 per cent of total CAP spending and almost one-third of total EU spending. Most of the remaining CAP spending falls under the “second pillar”, which is used to finance development in rural areas.

Direct payments had been introduced to protect the income of farmers who had lost out as a result of the liberalisation of agricultural markets – an argument that may have had some plausibility decades ago. The ZEW-Bertelsmann study has analysed the extent to which first-pillar spending provides effectively targeted income protection for farmers in need. Results indicate that the CAP is very imprecise, and to a great extent benefits farmers earning market incomes far above national minimum income levels as defined by the respective welfare state.

Defenders of the CAP point out that today the policy has many more objectives than just protecting farmers' income support. These include animal protection, climate protection, the preservation of clean soil and water and the provision of public good

through well-kept landscapes and the preservation of cultural heritage. According to the study's findings, these objectives do not convincingly legitimise a continuation of CAP spending at current levels. Cultural heritage and well-preserved landscapes are a local or national public good and should therefore not be supported by European funding. In the case of other environmental targets or animal welfare, straightforward regulation should be able to do the job. In this context, the study points to the astonishing privilege of the agricultural sector, which expects compensation for using environmentally-friendly methods of production. Hardly any other sector in the European economy receives this kind of generous treatment.

National co-financing of CAP would be a breakthrough

All in all, the CAP in general and its first pillar in particular are among the most obvious candidates for cuts in the urgently required rebalancing of the EU budget in favour of true European public goods. The study recommends a gradual strategy shifting part of the responsibility for providing farmers' income support back to the Member States. Such a national “co-financing” has also recently been proposed by the European Commission in its reflection paper on the future of EU finances. Co-financing allows for a substantial reduction in agricultural spending within the EU budget. The greater burden on national budgets is highly appropriate given that many of the common justifications for the CAP relate to local or national public goods.

Finally, the analysis rejects a frequently used but unconvincing counter-argument against co-financing. According to this argument, a “renationalisation” of CAP would threaten to kick-off a destructive subsidies race between the Member States. However, co-financing does not imply a full renationalisation of CAP rules and is fully consistent with the continuation of a single market for agricultural products. Co-financing is merely a financing tool and does not involve any changes to the rules of the European agricultural market.

The study is available to download at:

www.bertelsmann-stiftung.de/fileadmin/files/user_upload/EZ_Reflection_Paper_1_Heinemann_2017_ENG.pdf

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As the ZEW-Bertelsmann study points out, the CAP in general and its first pillar in particular are among the most obvious candidates for cuts in the urgently required rebalancing of the EU budget in favour of true European public goods.



Photo: © iStockphoto.com/Olya Steckel

Change in Sentiment – Europe May Benefit from Donald Trump’s Presidency

Instead of boosting economic growth in the United States, Donald Trump’s presidency rather seems to be having a positive impact on growth in the European Union. This is the result of a special question in the ZEW Financial Market Survey, a survey among financial market experts conducted regularly by ZEW.

According to the results, 32 per cent of the respondents expect Trump’s presidency to have a positive impact on economic growth in the EU. Around 71 per cent of the survey participants expect EU Member States to increase their spending. In contrast, 73 per cent of the financial market experts expect Trump’s presidency to have neither positive nor negative effects on US economic growth.

The results show that there has been a significant change in expectations in recent months regarding the Trump administration’s impact on the EU economy. In December 2016, merely 24 per cent of the survey participants anticipated positive effects on EU GDP, and only 15 per cent expected public spending to rise in EU countries.

At the same time, there is also a conspicuous increase in interest rate expectations. In the case of short-term interest rates, 46 per cent of those surveyed anticipated higher rates (compared to around 17 per cent in the previous survey), while more than 51 per cent (compared to around 35 per cent) expected long-term interest rates to go up. As in December 2016, 46.6 per cent of the financial market experts expected a negative impact on EU im-

ports. A possible explanation for this and the previously mentioned negative effects on US exports could be the expectation of a strong appreciation of the US dollar in relation to the euro.

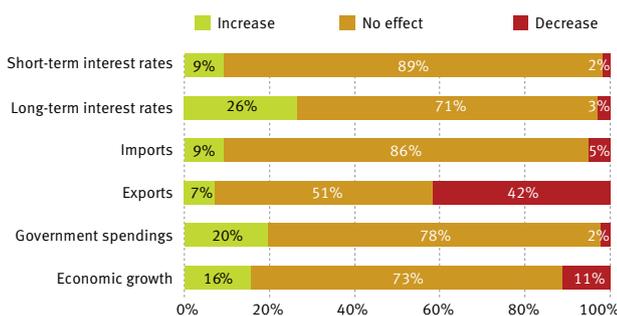
According to the current survey, 41.7 per cent of the financial market experts expect US exports to decrease over the course of Trump’s presidency. At the same time, 85.5 per cent of the respondents do not anticipate any changes with regard to imports into the US. At least 26.4 per cent of the participants believe that Trump’s policies will lead to an increase in long-term interest rates. Furthermore, 78.1 per cent of the financial market experts expect US government expenditure to stagnate under the Trump administration.

These findings are in stark contrast to the survey results of December 2016. Back then, an overwhelming majority of 86 per cent expected the US economy to experience stronger economic growth, and 77 per cent predicted increases in US public spending. This sentiment has changed drastically, as reflected in the responses to the most recent special question.

The experts were also asked how likely they thought it would be that someone else would be sitting in the Oval Office by the end of 2017. The majority – almost 61 per cent of survey participants – assessed the likelihood of this happening at less than 20 per cent. The vast majority of the experts thus do not expect Trump’s presidency to come to a premature end.

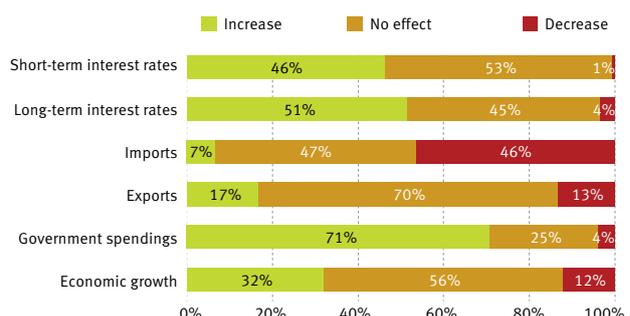
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THE EFFECTS OF TRUMP’S POLICIES ON THE US ECONOMY



Source: ZEW Financial Market Report July 2017

THE EFFECTS OF TRUMP’S POLICIES ON THE EU ECONOMY



Source: ZEW Financial Market Report July 2017



Photo: ©Thomas Hörner

ZEW President Professor Achim Wambach discussed growth projections for the Chinese economy in his keynote speech.

ZEW President Wambach on Economic Growth in China: Too Stable to Be True?

What kind of growth might we see in China's economy in the short to medium term? What reforms are necessary to cushion the effects of social upheaval? These were just two of the questions addressed by prominent experts from the worlds of politics, economics and research in a podium discussion on 26 June 2017. ZEW welcomed more than 100 guests to the event, which was held in collaboration with the state of Baden-Württemberg's Ministry of Economic Affairs, Labour and Housing in Stuttgart.

Whether the Chinese economy booms or falters, the effects can undoubtedly be felt not only in Europe and in Germany, but in the state of Baden-Württemberg as well. In her opening address, Dr. Nicole Hoffmeister-Kraut MdL, Minister of Economic Affairs, Labour and Housing in Baden-Württemberg, underlined the far-reaching significance of China for companies based in Baden-Württemberg. China has become the fifth most important trading partner for the federal state and, thanks to the nation's increased focus on investment in innovation as part of its economic policy, Baden-Württemberg-based companies are expected to continue to expand their commercial activities in China.

China needs long-term economic growth through innovation policy

ZEW President Professor Achim Wambach used his keynote speech to address current developments in the Chinese economy, in particular medium and long-term growth projections, as well as trade relations and the nation's focus on innovation. Though China is still one of the fastest growing economies worldwide, the weakening of this growth in recent years has not only had a negative impact on the Chinese economy itself but on foreign economies as well, including Germany. This makes the current realignment of the Chinese economy as well as of innovation activities of Chinese companies so important for companies in Germany. While China's recovery has been primarily driven by the uptake of well-known technologies, stable economic growth demands at the same time a continual increase in efficiency and innovations.

In the podium discussion that followed, ZEW President Wambach was joined on stage by Minister Dr. Nicole Hoffmeister-

Kraut, Dr. Thomas Hueck, chief economist at Robert Bosch, Bettina Schön-Behanzin, regional president of the Freudenberg Group in Asia and president of AHK Shanghai, and Dr. Volker Treier, foreign business chief at the German Industry and Trade Association (DIHK). The debate was moderated by Peter Heilbrunner, head of SWR1 radio.

The panellists discussed the opportunities and risks associated with economic growth in China, as well as on a number of reform measures necessary to cushion the effects of social upheaval and ensure long-term economic growth and stability. Further topics the debate dealt with were the investment strategies of Chinese firms, which have been buying up large numbers of innovative overseas firms, including firms in Germany. Chinese restrictions on market access for foreign companies as well as other forms of regulation in the Chinese market were also discussed, as were ways for small and medium-sized German companies to gain a foothold in China.

Summarising, it is all a question of future developments in China's economy, such as the country's recent initiative to open a "new silk road" and the opportunities this could bring for both China and Germany, as well as the rest of the world.

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In her opening address, Dr. Nicole Hoffmeister-Kraut underlined the significance of China for companies based in Baden-Württemberg.



Photo: © Thomas Hörner



Left: Professor Hal Varian discussed threats and opportunities of the data economy in a speech at ZEW. Right: Varian then discussed the major challenges of digitalisation with Professor Steven Tadelis (left) and Professor Achim Wambach (right). Professor Martin Peitz (second to right) moderated the panel discussion.

First-Hand Information on Economic Policy – Automation Is Changing the Way We Work

“Over the past 200 years working conditions have changed dramatically and machines have made the daily grind more bearable,” said Professor Hal Varian, chief economist at internet giant Google and professor emeritus at the University of California at Berkeley. He gave a speech, entitled “The Data Economy: Threats and Opportunities”, at ZEW on 23 June 2017 as part of the institute’s lecture series First-Hand Information on Economic Policy. Varian explained how labour markets should deal with increasing automation now and in years to come. In a subsequent debate with renowned researchers and Internet economy experts, he discussed the opportunities, challenges and risks that come with the phenomenon of the data economy.

“The idea that robots are going to take our jobs away is an exaggeration. In the past, robots have primarily taken over individual tasks, not entire job profiles,” Varian told an audience of around 120 guests at ZEW. While the purpose of individual professions remained the same, their tasks differed. Furthermore, we are still a long way away from being able to automate certain processes and tasks in a practical way. “Technology needs time to reach market maturity. Complete automation is just not possible in the near future,” said Google’s chief economist.

“We need stronger growth in productivity worldwide”

The right way to deal with the changes would be to expand the range of tasks falling under each profession while also widening access to a better education for everyone. With the situation in the labour market set to become ever more strained in the future because of an ageing population or a decline in the labour force participation rate, we should exploit the possibilities of a digitalised work environment. “The key to economic growth is the time savings that come with automation. Until now, we have underestimated how robots and other forms of automation can improve our productivity,” said Varian as he concluded his speech. “What we need above all is stronger growth in productivity worldwide.”

Varian was joined on the podium by ZEW President Achim Wambach and Professor Steven Tadelis, Vice-President of Economics and Market Design at the US online retail giant Amazon and professor at the University of California at Berkeley. The pan-

el discussion was moderated by Professor Martin Peitz, University of Mannheim. At the beginning of the discussion, Peitz asked the panellists about the major challenges we as a society will have to overcome in the coming years if data comes to play an increasingly important role in value-added processes.

“Data is a growth factor,” said Tadelis, emphasising the importance of digital transformation, “above all, the healthcare sector is likely to undergo significant changes.” He went on to explain that despite recent controversial debates, there is no justification to create panic over the collection of patient information in the healthcare sector. “Thanks to the process of modernisation over the past one hundred to two hundred years, our standard of living has reached a very high level by historical standards,” emphasised Tadelis.

Digitalisation is changing job descriptions without destroying jobs

Wambach pointed out that the informative value of digitalisation greatly depends upon the time period in question. ZEW research came to the conclusion that digitalisation is in fact changing job descriptions, which does not necessarily mean that digitalisation will destroy jobs, explained Wambach. “On the positive side, however, this change is likely to provide more room for creativity at the workplace,” he added. At this point in the discussion, Varian intervened. “Even the simplest tasks carried out by workers are almost impossible for robots to perform,” he said. In robotics, haptic technology continues to represent a challenge. In the medium or long term, it is likely that employees in the low-wage sector will even experience income increases.

The audience contributed their own questions after the panel discussion, such as: Do we need some form of data taxation in the new data economy? Is it necessary to introduce a universal basic income in light of the automation of the working world? And if technological change does in fact destroy jobs, how can we address future challenges associated with declining productivity growth? The panel discussion proved that the new data economy raises many questions that are yet to be discussed.

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ZEW Joins New Research Network EconPol Europe

ZEW has become one of the nine founding institutions of the European Network for Economic and Fiscal Policy Research (EconPol for short). As an international and independent network bringing together several hundred researchers, EconPol Europe is establishing a new voice for research in the discussion surrounding the future of economic and fiscal policy in the EU. Headed by the ifo Institute, the founding charter for EconPol Europe was signed on 22 June 2017. Within the framework of EconPol, researchers from seven different countries will soon be looking into how cross-border cooperation can be used to deal with financial and economic issues facing Europe. The combined

expertise of the partner institutions will be used to introduce new ideas and solutions into the most pressing debates over the future of the EU. The collaborative nature of the research carried out by European researchers thanks to this network will bolster Europe-wide acceptance of the findings obtained. The specific tasks of EconPol Europe include interdisciplinary research in the fields of sustainable growth and best practice, EU policy and budget reform, capital markets and regulation of the financial sector, governance and macroeconomic policy in the European Economic and Monetary Union, as well as the transfer of new knowledge and insights gained in this research.

International Conference on the Economics of Innovation and Patenting at ZEW

On 15 and 16 May 2017, ZEW and the Leibniz ScienceCampus “Mannheim Centre for Competition and Innovation” (MaCCI) jointly hosted the seventh Conference on the Economics of Innovation and Patenting. Over the course of two conference days, around 100 international researchers discussed recent research findings on various topics, such as patent systems, incentives for R&D, knowledge production and migration. The sessions featured, for instance, presentations on the strategic use of patents and the influence of patent systems on innovation activity.

In her plenary lecture, Professor Bronwyn H. Hall of the University of California at Berkeley, US, discussed whether the introduction of patent boxes as a fiscal instrument has a stimulating effect on the innovation activity in the respective country. Her research findings indicate that patent boxes should be viewed in a critical light, as many companies use them to defer taxes. Professor Andrew W. Torrance of the University of Kansas School of Law, US, presented a new approach to valuating patents. As a patent lawyer, he offered new insights and explained how big data can be used to assess the value of patents. Professor Francesco Lissoni of the University of Bordeaux in France analysed the connection



Professor Bronwyn H. Hall of the University of California at Berkeley gave a plenary lecture on the impact of introducing patent boxes as a fiscal instrument.

between migration and knowledge diffusion. Using the US as an example, he investigates whether the work of researchers with an immigration background influences the production of knowledge in the respective countries of origin.

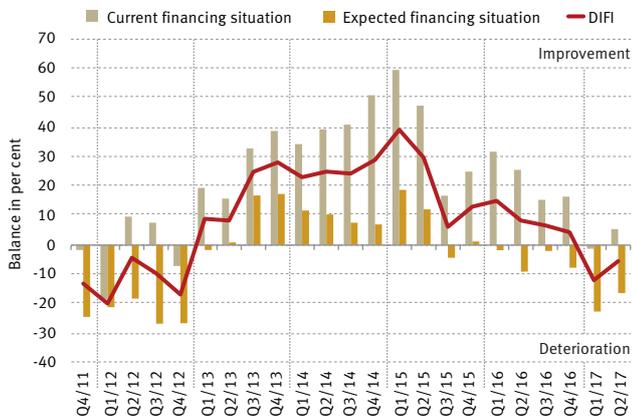
CEPR Public Economics Annual Symposium at ZEW

In June, ZEW and the University of Mannheim jointly organised the CEPR Public Economics Annual Symposium, one of the most important European conferences in the field of public finance. Around 30 international researchers attended the event to discuss their latest research findings on topics such as public procurement, taxation and wealth distribution. Among the presenters was Professor Dina Pomeranz of the University of Zurich, who had been investigating public procurement in Chile. She revealed that audits conducted by public authorities, contrary to their initial intentions, actually lead to less transparent and less efficient procurement mechanisms. ZEW Research Associate Professor Andreas Peichl, ifo Institute, presented a study produced in cooperation with ZEW on how pension information letters affect people’s savings behaviour for retirement. He showed that these pension statements provide people with considerable motivation to invest more money in private pension funds.



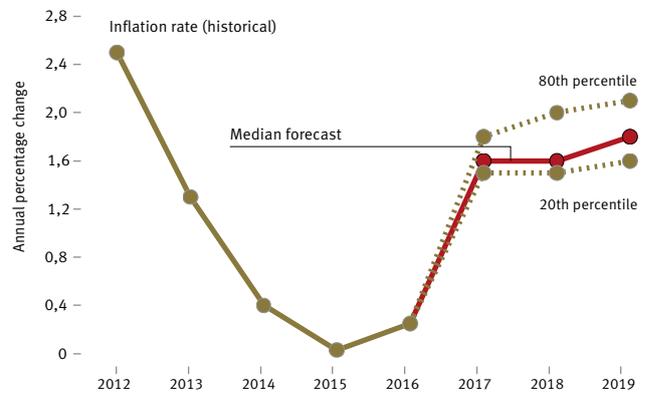
Among those presenting their research was Professor Dina Pomeranz of the University of Zurich, who discussed public procurement in Chile.

Downward Trend in Real Estate Financing Market Continues



Mean value of the respondents' assessment regarding the current situation of and the expectations for the four real estate market segments (offices, retail, logistics, housing) Source: JLL and ZEW

European Central Bank Still Far Off Meeting Inflation Target



The figure shows the forecast of the annual growth rates regarding inflation in the eurozone.

Source: ZEW Financial Market Report June 2017

The German Real Estate Finance Index (DIFI) run by ZEW and JLL reached a level of minus 5.5 points in the second quarter of 2017, an increase of 6.5 points compared to the previous quarter (minus 12 points). This is the first time the financing barometer has shown any sign of growth for more than a year. Despite this increase, the index now finds itself below zero for the second quarter in a row – the first time this has happened since 2012. This shows that the mood in the commercial real estate market remains fairly pessimistic, and the downward trend that began following the largely positive mood in 2015 has still not come to an end. The current financing situation received a tentatively positive assessment, the sum of positive and negative assessments climbing 6.7 points to 5.4 points. However, survey participants expect the financing situation to worsen over the next six months: Though the indicator for expectations also saw an increase of 6.3 points, it still remains far below zero at minus 16.3 points.

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The eurozone's economic prospects over the coming six months have improved considerably. However, an end to the ECB's expansive monetary policy is still not in sight. In the view of the majority of the 350 financial market experts surveyed regularly by ZEW on this issue, the ECB will not reach its inflation target of two per cent for at least the next two years. Only a small fraction of those surveyed thought the ECB was likely to succeed in meeting its target. The experts raised their predictions regarding inflation for the current year on average to 1.6 per cent. Meanwhile, they anticipate a similar level of inflation in 2018 and an increase to 1.8 per cent in 2019. According to the majority of experts, the most significant reason for the slight upwards correction in their predictions for 2017 was the improved economic data. The price of raw materials and imports, wage development and monetary policy, meanwhile, played only a minor role.

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ZEW Lunch Debate in Brussels

ZEW is pleased to announce its next Lunch Debate, entitled "Brexit and its Implications for the Financial Markets", at the Representation of the Federal State of Baden-Württemberg to the European Union in Brussels on 27 September 2017. The event aims to shed light on the effects of the Brexit referendum on European capital markets and the development of financial centres. Will London survive as a financial centre after Brexit? Will the financial markets across Europe continue to be stable? And what are the long-term effects on competitiveness, employment and investment in the EU? These are just some of the questions that will be addressed in what promises to be a thought-provoking debate. If you are interested in attending the event, please contact us at LunchDebates@zew.de. For further information please visit: www.zew.de/WS130-1

Workshop: Economics of Insolvency Laws

On 25 and 26 September 2017, ZEW and the University of Mannheim jointly organise a workshop on the "Economics of Insolvency Laws", funded by the Fritz Thyssen Stiftung. The main motivation for the workshop is to shed more light on insolvencies, which as the dark side of firm dynamics have so far received little scientific attention despite their important role for a functioning economy. The insolvency law should set the selection framework that liquidates inefficient companies to reallocate resources and protect creditors. By contrast, companies which are actually efficient and are only suffering a temporary crisis should have the option to restructure and continue their business. This workshop will focus on the economic effects of different insolvency laws and their reforms. For further information please visit: www.zew.de/VA2225-1



Measuring the Unmeasurable – The Value of a Clean Environment

World Environment Day took place on 5 June; this year's theme was "Connecting People to Nature". Critics of environmental protection policies such as US President Donald Trump,

who recently announced the US's withdrawal from the Paris Climate Agreement, are often sceptical as to whether the benefits we receive from a clean environment can outweigh the costs of environmentally friendly policies on the economy. Nature's gifts are often hard to value in monetary terms. What we can, however, measure is how much we appreciate and value a clean environment, and efforts to do so have already produced some surprising results.

A "clean environment" includes the natural world's many potential uses and amenities. On the one hand, we use the environment to absorb our emissions such as carbon dioxide, but it also serves as a rich source of natural resources. Using forests as recreational areas, natural flood plains as flood defences, rainforests as a treasure trove of unresearched medicinal plants are just further ways we benefit from nature. The direct use of a resource is usually easy to evaluate; when it comes to other elements of nature we use both directly and indirectly, however, we also use the terms option value and existence value. As individuals we support the preservation of a forest, even if we have never been there, either because we profit from the mere knowledge that the forest exists, or because we would like to have the option to use the forest in the future.

Economists use a number of different methods to measure our appreciation of natural amenities such as clean air, clean water or biodiversity. One of these methods is the use of indirect data. Together with the University of Copenhagen, ZEW recently investigated the value of urban green spaces within the housing market in the Danish capital. Housing prices were higher in areas close to green spaces. In the example of one specific park, households situated in the surrounding area would be prepared to spend a total of two million euros a year for the upkeep of the park.

Another approach to assessing people's willingness to pay for natural amenities is to conduct surveys. The oil spill caused by the explosion of the BP oil rig Deep Water Horizon in 2010 offers a recent example. With the equivalent of 3.2 million barrels of oil leaking into the ocean, the spill was the largest of its kind recorded in US history. The spill did severe damage to the local ecosystem as well as tourism and the fishing industry. According to the results of a survey conducted by economists, the average US household would be willing to pay \$153 to prevent such a disaster from happening again. If we project this amount for the entire US population, this comes to an impressive total of \$17.2 billion that US Americans would be willing to pay.

Finally, economists have also observed direct payments made by consumers to compensate for their carbon footprint. Through cooperation with a German long-distance bus company, ZEW researchers have been gathering data on how customers decide whether to offset their individual CO₂ emissions from the bus journey through an additional fee. A third of customers were willing to fully offset the emissions produced by their journey, even if this meant paying an additional fee. Many customers were also in favour of the bus company showing greater commitment to environmental protection.

The value of the environment is not something we can only imagine in our heads, but rather a measurable quantity. We can weigh up the costs of implementing environmental protection policies against concrete, quantifiable valuations of the benefits of a clean environment. As humans, we are always connected to nature, and now it is also possible for us to determine the value of this connection.

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