



Investments in digitalisation and automation will lead to moderate employment growth in Germany.

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Research Findings

Environmental Innovations Boost SME Profits

Research Findings

Fast Broadband Increases Regional GDP

Economic Policy Analysis

Hard Brexit Fuels Tax Competition in Europe

Technological Transformation Causes Divide in German Labour Market

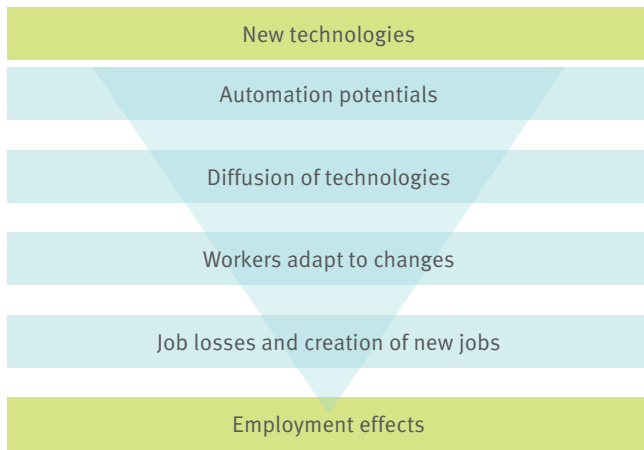
Although digitalisation and automation will lead to moderate employment growth in Germany until 2021, they are also likely to increase income inequality among employees. These are the findings of a research paper produced by researchers of ZEW and the Institute of Labor Economics (IZA) in Bonn.

In their research paper, the authors take a critical look on the most recent findings on automation potentials as well as on the potential negative effects for actual employment. First, they discuss which and how many jobs could theoretically be automated, placing particular emphasis on why previous studies have found mixed results. In addition, the researchers investigate the possible consequences for employment, highlighting the fact that automation potentials should not be equated with potential

employment effects (see figure on the next page). There are three reasons for this: (1) the diffusion of new technologies occurs at a slow pace, (2) workers adapt to changes, and (3) the potential negative employment effects can be offset by the creation of new jobs. High automation potentials do therefore not necessarily lead to job losses and can even result in employment growth.

What is of central importance is thus not so much the number of jobs that are created or lost as the structural change in the labour market, which is taking place as digitalisation and automation progresses. The restructuring of the labour market is posing significant challenges particularly for low-skilled workers, potentially resulting in rising inequality. Policymakers can counter this development by making it easier for companies to provide employees with appropriate training and further edu-

THE PATH FROM NEW TECHNOLOGIES TO THEIR EMPLOYMENT EFFECTS



Automation potentials should not be equated with potential employment effects. There are three reasons for this: (1) the diffusion of new technologies occurs at a slow pace, (2) workers adapt to changes, (3) the potential negative employment effects can be offset by the creation of new jobs. High automation potentials do therefore not necessarily lead to job losses and can even result in employment growth. Source: ZEW

cation, which allow workers to be prepared for the new qualification requirements.

In their paper, the authors have simulated various possible consequences of digitalisation for the German labour market. The analyses are based on the representative IAB-ZEW Working World 4.0 Survey conducted by ZEW in cooperation with the Institute for Employment Research (IAB) among some 2,000 companies in the manufacturing and services sector. The survey includes companies that have already invested in cutting-edge technologies between 2011 and 2016. The ZEW paper has now examined how the German economy and labour market could react to the implementation of these new technologies in the near future.

Mass unemployment is unlikely to occur

The simulations show that companies’ plans to continue investing in digital and automated work processes in the future will have a slightly positive effect on employment in Germany. Said investments will therefore lead to a job increase of 1.8 per cent in total from 2016 to 2021. However, this increase does not result from rising demand for companies’ products exceeding job displacement effects. To the contrary, new technologies in companies tend to have a complementary rather than a substituting effect on the workforce, meaning that as digitalisation and automation progresses, companies are more likely to need and hire additional staff to introduce new technologies.

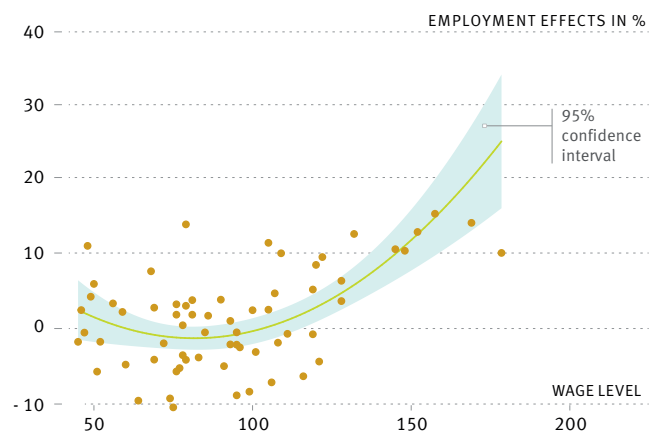
The German economy seems to be in an investment phase, where firms are making investments into new technologies that require additional skilled personnel while, so far, having little job displacement effects. The widely predicted mass unemployment due to technological change is therefore unlikely to occur. Structural change in the labour market will be reflected not so much in the number of jobs that are created or lost as in the individual tasks of workers.

According to the researchers, jobs that require a high level of interactive and analytical skills have less automation potential than jobs that are mainly routine-based. On average, more complex tasks are better paid than routine jobs. Accordingly, the researchers find that workers with very good education and wage levels are more likely to benefit from technological change than workers with medium to low education and wage levels (see figure below). As a consequence, digitalisation and automation exacerbate income inequality on the German labour market.

Cushioning the effects of structural change

The simulated scenarios also indicate that promoting labour mobility, that is, the targeted training and further education of employees, can contribute to cushioning the effects of the forthcoming structural change. According to the authors of the study, companies, workers and policymakers should therefore invest more heavily in further training; firstly, to prepare workers for the changes on the labour market and, secondly, to ensure that companies find sufficient skilled workers. In addition, measures are needed to ensure that small and medium-sized enterprises are not falling behind.

EMPLOYMENT EFFECTS OF NEW TECHNOLOGIES AT DIFFERENT WAGE LEVELS



Source: ZEW
The graph shows a breakdown of the employment effects of new technologies for different labour market segments by wage level. The employment effects are particularly positive for occupations and sectors with high wage levels and consequently also for jobs that entail greater requirements for workers. By contrast, jobs in the middle and at the lower end of wage distribution – i.e. jobs with low and medium qualification requirements – tend to have lower or even negative employment effects. This illustrates that it is particularly high-skilled workers and high income earners who benefit from digitalisation, whereas medium- or lower-skilled workers are likely to fall further behind.

German companies are currently in the process of making investments. A certain amount of time is needed before new technological developments become established and increase productivity. This process is, however, cost-intensive. Policymakers can provide support with targeted measures and help companies to remain competitive in the long run.

The complete study is available to download at: www.zew.de/PU80876

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SMEs Investing in Environmentally Friendly Technologies Yield Higher Profits

Investments in environmentally friendly technologies may not only benefit the environment; eventually, they can also result in cost savings and profit increases for companies. This is particularly the case for small and medium-sized enterprises (SMEs), as a study by ZEW shows.

The study, which is based on data on 6,303 German companies from the Mannheim Innovation Panel (MIP, survey waves 2009 and 2015), is the first to investigate how environmental innovations are linked to SMEs' profitability and whether there are differences to larger enterprises in this regard. Environmental innovations include all innovations within the production process that help to improve the environmental situation – regardless of whether they have been introduced for ecological or economic reasons.

While 55 per cent of SMEs in the 2009 MIP survey wave reported to be active in environment-related fields, this share decreased to 52 per cent in the 2015 survey wave. In the case of large companies, the share of environmentally innovative companies rose slightly from 71 to 73 per cent over the same period.

SMEs benefit more from environmental innovation

Irrespective of the size of the company, the return on sales of a company is always higher when introducing environmental innovations, with the average increase in profitability being 0.72 percentage points for the companies considered in the study. Corporate profits averaged between four and seven per cent, which means that the profits of companies who adopt environmentally friendly innovations are around ten to 20 per cent higher than those of other companies. However, this positive correlation between return on sales and environmental innovations becomes weaker with an increasing number of employees and, in particular in the 2015 MIP survey wave, SMEs seemed to benefit more from environmental innovations than large companies. This effect is particularly pronounced for innovations that increase resource

efficiency and were adopted due to regulatory requirements, that is, innovations that help companies reduce their consumption of energy, water or other materials per unit of output.

According to the author of the study, smaller companies often have less access to information than large corporations. Especially for SMEs, regulatory requirements can be an opportunity to learn about ways to increase resource efficiency in their production process. For this reason, when designing new environmental policy measures, it is important that these measures provide small and medium-sized enterprises with comprehensive information on ways to improve resource efficiency. This would not only benefit our environment, but would also promote small and medium-sized enterprises in Germany.

The study can be downloaded at: www.zew.de/PU81017-1

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The return on sales is on average higher in firms with environmental innovations.

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Q&A: How Do Asylum Seekers Incorporate into the German Labour Market?

“The Ability to Start Over Will Be Important for Labour Market Integration in Germany”

How can asylum seekers be successfully integrated into the Rhine-Neckar region? This question was investigated within the framework of the interdisciplinary project “Real-World Laboratory: Asylum Seekers in the Rhine-Neckar Region”, for which ZEW was a project partner. PD Dr. Friedhelm Pfeiffer, deputy head of the Research Department “Labour Markets and Human Resources” at ZEW, sheds light on the main findings of the project that ZEW recently completed with its partners.

For ZEW, the integration of refugees into the labour market was a central issue in the project. What did you investigate?

We focused on the question of how asylum seekers can be successfully integrated into the labour market, which we work out using information about the refugees collected shortly after their arrival. The integration process takes time, and the duration of the project was limited to three years. We therefore tried to obtain information by building on standardised surveys among refugees. One focus was on analysing the role of education and labour market experience of the refugees in their home countries, and on language acquisition and participation in labour market activities at the end of the first and third year following their arrival in Germany. Secondly, we analysed the significance of refugees’ level of education relative to that of their peers in their home countries, and the educational background of their parents. We also investigated whether participating in football training and coaching session promotes integration.

What did you learn about the refugees in this region?

The group of young male refugees whom we selected for the econometric analysis were, on average, just under 25 years old

by August and September 2016. Based on the information they provided, they spent an average of 8.9 years in school or university, whereas their fathers have 5.9 years of schooling and their mothers 3.8 years. They also reported to have been employed for an average of 5.5 years. Most of the respondents came from Afghanistan, Syria, Gambia and Iraq. We can assume that not all of the asylum seekers were able to finish their education due to civil wars or other reasons for flight. One limitation is that there is no way of knowing what the individuals learned during their time in school. Based on the responses, however, we can conclude that these young refugees received significantly less years of schooling than young adults in the same age group who grew up in Europe. At this age, 60 per cent of individuals in, for instance, Germany have acquired a diploma that acts as an entry qualification for university, and almost 50 per cent of young adults have started or completed their studies.

What do you know about the differences between refugees and their peers in the same age group in their countries of origin?

The group of young men in our samples attended school or university for a longer period of time than their peers in the same age group in their home countries. They therefore seem to have a better education compared to their peers from the countries of origin. 67 per cent of them also have a better education than their parents. Young, educated men seeking asylum in Germany prove to have, 11 months after arrival, more competence in the German language, and they are also more likely to be employed, if only marginally. Work experience acquired in their country of origin, however, does not necessarily bring them any advantages for working in Germany. Most likely, the social and economic differences between the home countries under consideration and Germany are so significant that, apart from education, the professional experience gained there is of little or no help in Germany. For refugees, successful integration into the German labour market therefore means being willing and able to start over.

What does this mean for the integration of refugees into the German labour market?

The results indicate that more schooling in the country of origin also facilitates integration in Germany. Civil society measures such as participating in football training can also work in the same direction. Together with current research results, as well as previous studies on migration processes, important challenges facing the integration of young male refugees from various social backgrounds have become recognisable. They consist of how best to provide these young men with the most individualised and (therefore presumably) cost-intensive education, such that they can successfully integrate into a modern industrial and service-oriented society.



Photo: AnnaLogue

PD Dr. Friedhelm Pfeiffer

is the acting head of the ZEW Research Department “Labour Markets and Human Resources”. In his current research, Friedhelm Pfeiffer analyzes individual and fiscal costs and benefits of educational investments. In addition, he evaluates impacts of labour market and education policies. Since 2002, he has been a lecturer in the Department of Eco-

nomics at the University of Mannheim. Friedhelm Pfeiffer is a member of the Economics of Education committee of the German Economic Association, a steering committee member of the “College for Interdisciplinary Educational Research”, and a member of the board of directors of the Real-World Laboratory: Asylum Seekers.

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Fast Broadband Internet Access Increases Regional GDP in Germany

As part of its Digital Agenda, the German government has made considerable public funds available for nationwide broadband internet coverage in Germany. A study published by ZEW shows how implementing broadband internet can have a positive impact on regional GDP. Particularly the availability of fast internet fosters regional GDP growth in counties. Furthermore, spillover effects across counties are being observed, meaning that the deployment of high-speed broadband in one county also leads to increased GDP growth in counties close by.

For the study, ZEW researchers analysed data sets from all 401 German counties for the years 2010 to 2015. Based on this data, the researchers evaluated for the first time whether different broadband technologies can influence regional GDP growth in counties and their neighbouring counties.

According to the study, the availability of internet with a transfer speed of 50 megabits per second or more (Mbit/s) stimulated regional GDP growth slightly more than broadband internet with lower speed levels did. When the supply of fast broadband internet increases by one per cent in an average rural county, the regional GDP grows by a number between 0.05 and 0.09 per cent. And this effect doubles when external influences are included in the calculations. This means that a rural county's broadband infrastructure has a significantly positive effect on the broadband infrastructure of neighbouring counties.

The researchers also show that the number of houses with broadband internet and a transfer speed of at least 50 Mbit/s more than doubled between the years 2010 and 2015, with the final number being at 82.9 per cent in 2015. The proportion of

households in Germany with access to broadband internet with at least six Mbit/s also rose from a good 80 per cent in 2010 to 99.8 per cent in 2015. Despite these high levels of average household coverage, there is still a huge gap between urban and rural coverage levels (see figure below).

The total economic benefit exceeds the cost of implementation

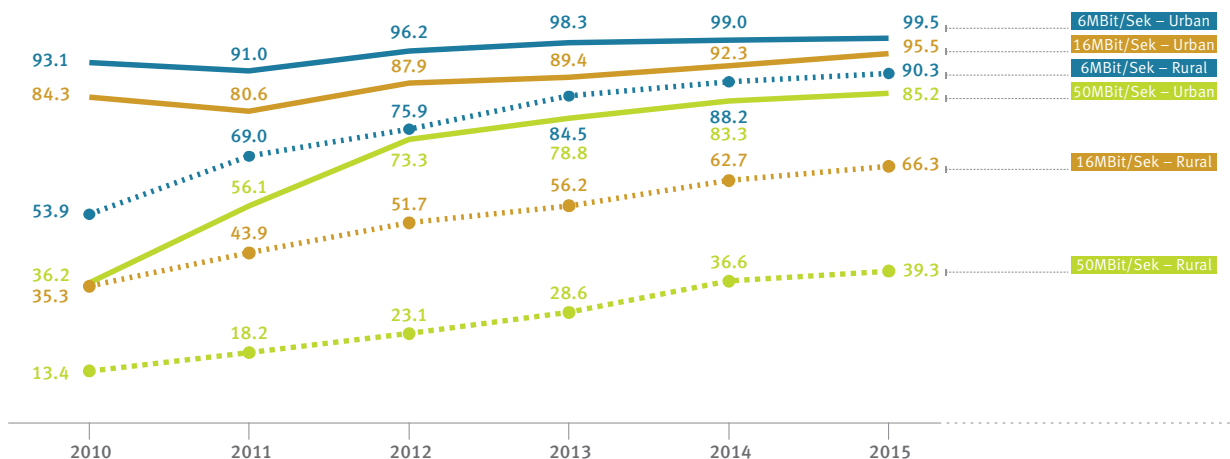
Nationwide high-speed internet coverage for Germany has been de facto achieved. The federal government's goal of providing all households with access to broadband internet with a transmission rate of at least 50 Mbit/s was clearly missed, however, despite millions of euros being invested. Nevertheless, the investment appears to have paid off. Although the government's funding programmes weren't sufficient to equip all households with access to the high-speed internet connections, they did prove economically efficient. The authors' cost-benefit analysis suggests substantial efficiency gains, as the total economic benefits of subsidy programmes to encourage broadband expansion substantially exceeded their associated costs.

The study bases itself in part on data from the Federal Ministry of Transport and Infrastructure's broadband atlas, the Federal Statistical Office's genesis database, as well as the Federal Institute for Building, Urban Affairs and Spatial Development's INKAR database.


The study is available at: www.zew.de/PU80893

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GERMAN HOUSEHOLDS WITH BROADBAND ACCESS (IN %)



Source: ZEW



The German population is critical of the influence of lobby groups on the European Union's policies in general and climate policy in particular.

Photo: ©iStockphoto/James Thew

Majority of the German Population Views Lobbying in Europe in a Critical Light

The majority of German citizens do not only believe that lobbying groups have an enormous influence on German and European politics; they also take a very negative view towards the lobby groups' political influence. The German population is similarly critical of the influence of lobbying on the European Union's climate policy. The majority of Germans also expressed the wish for more transparency with regard to lobbying activities, hoping that this will reduce the influence of lobbyists on politics.

Researchers of ZEW and the University of Mannheim conducted a representative survey in Germany (using the German Internet Panel), which featured a total of 4,266 participants. The key aim of the survey was to find out how people perceive lobbying at national and European level. Lobbying refers to the attempt by interest groups such as businesses and associations to exert an influence on members of parliament or other political decision-makers. The survey results show that 78 per cent of the participants believe that lobbyists have a strong or a very strong influence at EU level. Merely 1.5 per cent of the respondents assume that lobbying has no influence at all on European politics. Moreover, almost 78 per cent of the survey participants who believe that lobbyists have an influence at EU level consider this influence to be negative or rather negative. Only 3.4 per cent consider the effect of lobbying in Europe to be positive or rather positive.

When it comes to the EU's climate policy, almost 70 per cent of the respondents consider the influence of lobbyists in this policy domain to be strong or very strong, with 67 per cent of them considering this influence to be negative or rather negative.

Perception of lobbyism among voters of parties differs

What is remarkable about the survey results is the difference in the perception of lobbyism among the supporters of the parties that are represented in the German Bundestag. While supporters of all parties tend to oppose lobbyism, voters of the more traditional parties CDU/CSU, SPD and FDP are not as sceptical as those of the Greens, the Left Party and the AfD. And while, on average, supporters of all parties assume that lobbying results in less climate protection at EU level, supporters of the SPD, Greens and Left Party view this matter in a far more negative light than voters of the CDU/CSU, FDP and AfD.

When comparing the perceived effects of lobby groups at national and at EU level, it is striking that more than 44 per cent of the respondents consider lobby groups to have a greater influence on German than on European politics. Almost 41 per cent consider this influence to be equal at both levels and only six per cent think that the influence of lobbyists in Germany is lower than at the EU level.

According to the participants, the industrial sector and policymakers benefit most from lobbying activities at EU level. 79 per cent of the respondents consider the industry to be a beneficiary, and almost half of the respondents (48 per cent) believe that politicians benefit from lobbying. In contrast, there is only a small number of survey participants who assume that EU citizens (3.6 per cent) or charity organisations (5.4 per cent) benefit from lobbying activities at EU level. Moreover, almost 75 per cent of the respondents reported to be dissatisfied with the amount of information available on lobbying, meaning that they see a lack of transparency when it comes to dealing with this topic.

Clear problem with the acceptance of lobbying

The authors of the study conclude that there is a clear problem with the acceptance of lobbying among the German population. In part, this is clearly due to the fact that the people in Germany do not feel sufficiently informed about the activities of lobbying groups. The researchers who participated in this expertise therefore recommend an expansion of the European Transparency Register as well as the introduction of such a register in Germany. In this context, the US Lobby Registry could serve as a role model, which was put in place in 1996 and entails more stringent registration requirements than its much newer European counterpart.

The authors of the study conclude that the respondents' wish for more transparency in lobbying activities could be better fulfilled by implementing a mandatory register for lobbying groups with appropriate sanctions for false statements.

The short expertise is available to download (in German only) at: http://ftp.zew.de/pub/zew-docs/gutachten/ZEW_Expertise_Lobbyismus_2019.pdf

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Start-Ups Are Bolstering the Chemical Industry, but Lose out on Venture Capital

Chemical start-ups in Germany are providing the country's chemical industry with innovative products and services, boosting the entire sector. But as far as the provision of venture capital to these companies and the general start-up activity in the chemical industry are concerned, Germany lies considerably behind other European countries. These are the key findings of a study conducted by ZEW and the Leibniz University Hannover's Center for Economic Policy Studies (CWS), on behalf of the German Chemical Industry Association (VCI).

Instead of manufacturing traditional chemical products, many chemical start-ups focus on offering special products for the industrial production sector and dedicated services for established chemical companies. For Germany's chemical industry, the strength of chemical start-ups lies above all in their ability to position themselves at the interface between the traditional chemical sector and new areas of application, for instance by providing digital solutions or platform technologies.

In terms of venture capital, German chemical start-ups are in a relatively weak position compared to their European competitors. While chemical companies across Europe were able to secure venture capital amounting to 54.5 million euros in 2018, chemical companies in Germany acquired merely 2.4 million euros in investments – the lowest value since 2007. With a total of 34.5 million euros, 2011 saw the highest volume ever recorded in terms of venture capital investments for German chemical companies.

In the period between 2015 and 2018, an average of seven per cent of all venture capital investments in the European chemical industry went to German companies. Germany thus ranks seventh behind Great Britain (19 per cent), the Netherlands (16

per cent), Belgium (13 per cent), France (11 per cent), Spain (10 per cent) and Norway (8 per cent). This represents a substantial decline, especially when compared to historical standards: In the period between 2007 and 2010, Germany still ranked second, with a share of 16 per cent. In contrast, the German digital economy (46 per cent) and the biotechnology and healthcare sector (19 per cent) received significantly more venture capital between 2015 and 2018.

When compared to the other two leading chemical-producing countries in Europe, Great Britain and France, Germany's weak development in terms of venture capital investments becomes particularly evident. In most Scandinavian countries as well as in the Netherlands and Belgium, the chemical sector plays also a more important role in the respective national venture capital markets than it does in Germany, concludes the study.

Declining number of start-ups in Germany

Venture capitalists investing in German chemical start-ups are mainly concentrating on young patenting companies. These have so far filed almost 550 patent applications. However, merely 25 per cent of chemical start-ups in Germany have applied for at least one patent. According to the authors of the study, this relatively low share can be attributed to the fact that the majority of chemical start-ups focus on offering services. It is usually not possible to secure patent protection for innovative services. Start-up companies that specialise in research and development (R&D) services are also less likely to file patent applications, as they carry out R&D for third parties and therefore cannot protect the R&D results themselves via patents.

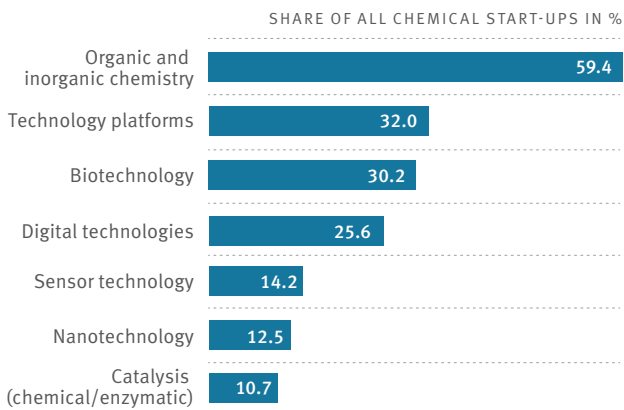
Finally, the study also revealed that the number of start-ups in the German chemical and pharmaceutical industries has developed less favourably than in other major European economies. While the start-up rate in Germany declined from 2008 to 2016, most European countries considered in the study recorded rising start-up rates in the chemical and pharmaceutical industries.

In their study, the researchers defined chemical start-ups as young companies that offer innovative products and services for the chemical industry on the basis of chemistry-specific knowhow or chemical technology. The firm-level data analysed in this study stems from the Mannheim Enterprise Panel of ZEW as well as from a list of chemical start-ups compiled by "Forum Startup Chemie", an initiative to support start-up companies in the chemical industry. The researchers identified a total of 281 chemical start-ups that were active at the beginning of 2019. A central feature of these start-ups is their focus on innovation.

The study can be downloaded (German only) at: www.zew.de/fileadmin/FTP/gutachten/InnoIndi_Chemie_2019.pdf

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TECHNOLOGIES OF START-UPS IN THE GERMAN CHEMICAL INDUSTRY IN 2019



Many chemical start-ups focus on offering special products for the industrial production sector and dedicated services for established chemical companies.
Source: ZEW

If the Brexit negotiations actually result in a “no deal” scenario, this could lead to an increase in international tax competition.



Photo: ©iStockphoto/mells82

Hard Brexit Fuels Tax Competition in Europe

Were a hard Brexit to occur, companies in Europe would be confronted with an unclear legal situation, potentially leading to an intensification of international tax competition. A no-deal (hard Brexit) scenario would give Great Britain more room for national tax legislation manoeuvring, especially due to the elimination of the binding effect of European law and case law of the European Court of Justice. However, both German companies investing in the United Kingdom and British companies investing in Germany would have to face increasing tax disadvantages. As far as being an attractive business location is concerned, Germany could easily feel compelled to introduce some tax reforms.

These are the results of an analysis from ZEW, the University of Mannheim, as well as by Dr. Sven-Eric Bärsch, tax consultant and associate partner at the law firm Flick Gocke Schaumburg, for the trade journal “Der Betrieb”. In addition to the international tax burden differences to the status quo, the analysis also highlights the income tax consequences of a hard Brexit for German companies.

For their part, the researchers assume a no-deal scenario, i.e. that Great Britain and the remaining EU Member States will not be able to agree on a withdrawal agreement by 31 October 2019. As a result of the no-deal, the United Kingdom would have the status of a third-party country without access to the EU internal market and the European customs union.

Changing competitive conditions

In order to determine the tax location conditions in a before-and-after comparison, the development of the effective corporate tax burden between 2009 and 2017 was examined using the simulation model European Tax Analyzer. The researchers concluded that Great Britain, in the case of a hard Brexit, would be exempt from case law of the European Court of Justice and from the ban on restrictions in light of the fundamental freedoms in the EU internal market. On the one hand, this would create a legal vacuum, i.e. new uncertainties for companies. On the other hand, it would give British legislators the opportunity to enact stricter defence laws against foreign companies while promoting national industries and companies in a more individual, targeted manner. The United Kingdom would no longer be bound by minimum standards in the fight against tax evasion and would thus be able to react more flexibly to changing competitive conditions.

Taken together, all of these factors could lead to a significant improvement in the UK’s tax investment conditions after Brexit. The tax rate for companies in the UK, at 19 per cent, is already lower than in Germany, where the combined income tax rate is 32 per cent. If Britain maintains the planned reduction of corporate income tax to 17 per cent by 2020, this could create additional investment incentives for the UK as a business location.

However, the analysis also shows that British companies, as a result of Brexit, would only be covered by free movement of capital protection for their investments in the remaining EU countries, which could entail tax disadvantages. For example, there is considerable risk for British companies that dividends from subsidiaries domiciled in Germany would be subject to a withholding tax under Brexit. In the case of investments by German companies in the United Kingdom, the German controlled foreign corporation (CFC) taxation could again be applied after a hard Brexit, which would lead to additional tax burdens. Finally, if assets are to be transferred from the German headquarters of a company to its British branch, immediate taxation would apply post-Brexit, resulting in interest and liquidity disadvantages. The researchers point out that the tax attractiveness of the United Kingdom for all investment projects by German companies on the island may therefore suffer enormously, even though the British government is planning further tax reductions.

According to the researchers, Brexit might result in Germany, currently a high-tax location, implementing an active tax policy of its own, which would reach beyond internationally coordinated harmonisation measures already in place. Many EU Member States, such as Belgium and France, have recently implemented or announced major tax reforms. Germany last reformed its corporate taxation system in 2008. Should a hard Brexit ensue, tax politics in this country will be under pressure.

One way of increasing the attractiveness of Germany as a business location, according to the researchers, would be to introduce tax incentives for R&D. With the Research Allowance Act (“Forschungszulagegesetz”), the introduction of such incentives were decided in July 2019, but the measures proposed in it were significantly less impactful than, for example, the United Kingdom’s, where immediate write-offs and tax credits for R&D funding became available, among other benefits.

This article was first published in a longer version in September 2019 in “Der Betrieb”.

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ZEW Conference Focuses on Digital Economy

Around 90 international researchers came to ZEW in Mannheim to discuss current scientific questions concerning the digital economy. On 27 and 28 June 2019, ZEW hosted the 17th conference on the “Economics of Information and Communication Technologies” organised by the ZEW Research Department “Digital Economy”. The conference has long been considered one of the most important international scientific conferences in the field of digital economy.

The first keynote was delivered by Professor Catherine Tucker from the MIT Sloan School of Management, who focused on the topic of algorithmic decision-making in the context of digital platforms. In her presentation, she provided possible reasons for statistical discrimination from an economic perspective.

The second keynote speech focused on the question of how the analysis of data from the internet can help generate new insights into market mechanisms, consumer behaviour and competition. Providing an example of this development, Professor Liran Einav of Stanford University presented the findings of a study he conducted on the basis of data from the online market place eBay.

In several parallel sessions, the conference provided many different perspectives on the digital economy. The contributions presented at the conference covered a broad spectrum of topics, ranging from social media and the sharing economy, to on-



Professor Catherine Tucker gave a keynote speech on algorithmic decision making at ZEW.
Photo: © ZEW/Michael Weiland

line advertising and the application of machine learning. This year, the event also focused on user behaviour on the internet, the impact of digitalisation on political mobilisation as well as the change of market structures. In addition, Florian Stahl and Martin Peitz, professors at the University of Mannheim, organised two sessions on strategic behaviour in the context of digital platforms. The conference featured a total of 41 presentations and subsequent discussions, and received funding from the German Research Foundation (DFG).

ZEW Honours Up-and-Coming Researchers for Their Work on Populism

ZEW has presented the Heinz König Young Scholar Award for the 21st time. This year, the research award went to Christian Ochsner from CERGE-EI in Prague and the University of Zurich, and Felix Roesel from the ifo Institute in Dresden. The young researchers were awarded the prize by ZEW for their research on populism. With their study, Ochsner and Roesel contribute towards creating a better understanding of the mechanisms that can lead to the success of populist communication.

The annual Heinz König Young Scholar Award of ZEW comes with an endowment of 5,000 euros and includes the opportunity to spend an extended research visit at ZEW. Every year, the research prize is donated by a member of the ZEW Sponsors' Association for Science and Practice. The donor of this year's prize was the Landesbank Baden-Württemberg (LBBW).

The winning paper investigates how the anti-Islam campaigns of Austria's right-wing Freedom Party (FPÖ) have affected the party's share of the vote since 2005. The findings show that the rhetoric used by the party fell on particularly fertile grounds in regions that experienced acts of violence during the Ottoman sieges of Vienna in the 16th and 17th century.

For the purpose of their study, Christian Ochsner and Felix Roesel compiled and digitised historical data on the sieges to compare the FPÖ's electoral success in municipalities that had been under siege with those that had not been besieged. They were able to establish a causal relationship on the basis of numerous tests. In addition, the authors also found that the electoral campaign of the populist party gave rise to anti-Turkish sentiments, and that Turkish citizens were likely to leave the respective municipalities.



The jurors with the award winner (from left): ZEW economist Friedrich Heinemann, award winner Christian Ochsner, ZEW economist Sebastian Sieglösch, LBBW representative Michael Jung and Doris Brettar, deputy head of the ZEW service department “General Services”
Photo: © ZEW/Dirk Aschemann

Students from China Come to ZEW to Learn About European Economy

As of 29 July 2019, ZEW in Mannheim has been playing host to a group of students from China as part of the international ZEW Summer School programme. A total of 17 students from various degree courses, which are all in some way related to economics, are taking part in a three-week programme at ZEW that prepares them for international careers in the industry or in academia.

For the first time the participants come from two Chinese partner universities of ZEW: the University of International Business and Economics (UIBE) in Beijing and the Shandong University of Finance and Economics in Jinan (SDUFE). The programme will provide the participants with insights into the economic and business environment in Germany and Europe through various modules. The interactive nature of the programme, along with the varied content and lively debate of the issues discussed, guarantee the students a unique experience in Europe and offer them an optimal learning environment.

In the modules, the ZEW team provides the students with a broad range of business and economic knowledge, management skills, and soft skills specifically tailored to the personal development of the participants. For example, the students learn how to conduct negotiations in a business context. In addition, current political developments are discussed, such as Great Britain's withdrawal from the EU. The students also visit both German and



For the third time already, Chinese students visited ZEW to gain valuable insights into the European economy.

European institutions, including the European Central Bank, on several excursions. By visiting companies based in the region, such as BASF, the students will get to see real-world examples of what they have been learning about in the various modules. The ZEW Summer School will be followed by a seven-day study tour, which will take the group to Brussels, Paris and Strasbourg. This is the third time that ZEW is hosting this summer school, an event which is an important part of the increasingly close cooperation between ZEW and its partner universities.

ZEW Strongly Represented at EEA/ESEM 2019

At the 34th Annual Conference of the European Economic Association (EEA) from 26 to 30 August 2019 at the University of Manchester, participating ZEW scientists presented current research results in five lectures, discussing them in various sessions with researchers from all over Europe. The 72nd European Annual Meeting of the Econometric Society (ESEM) took place at the same time as the EEA. The ZEW lectures dealt with topics such as the relationship between gender norms and the resulting erroneous data in surveys on the contribution of men and women to household income, the heterogeneous effects of working from home in terms

of hours worked and remuneration, the conflict between stability and competition in the merging of banks, the relationship between minimum wage and automation in Germany, and the importance of non-monetary determinants in job searches. In addition to the presentations, ZEW hosted an information stand at the congress. Here, participants at the conference could find out about research results, cooperation possibilities, as well as career and further education opportunities at ZEW. The EEA currently has around 3,000 members. Its annual conference offers a regular platform for economic exchange and stimulating discussions.

ZEW Launches Summer Courses in Cooperation with the University of Mannheim

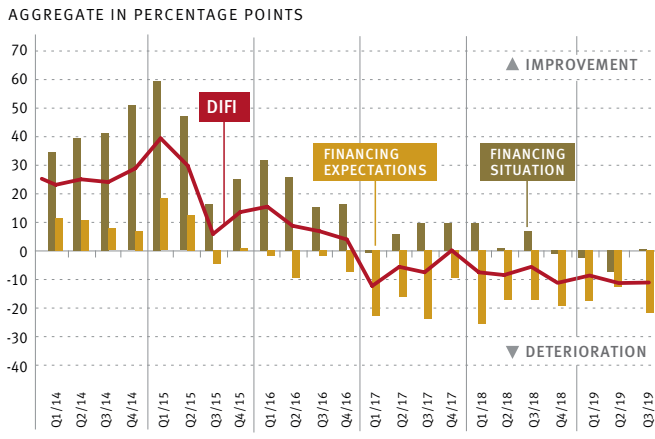
In July and August 2019, four summer courses on qualifications for young academics took place for the first time at ZEW. The ZEW Summer Courses are part of a close cooperation with the University of Mannheim within the framework of the PhD track of the Center for Doctoral Studies in Economics (CDSE) and were made possible thanks to the support of the state of Baden-Württemberg. Around 40 young researchers from ZEW and the University of Mannheim took part in the four courses on current economic issues.

The ZEW Summer Courses are elective courses, which are offered in the form of block courses in order to support doctoral students

with their thesis. A special feature of these courses is that they are held during the period between terms in addition to the comprehensive range of courses offered as part of the CDSE PhD track at the University of Mannheim.

With Professor Albert Banal-Estañol from Pompeu Fabra University in Barcelona, Bernd Fitzenberger, professor at the Humboldt University of Berlin and director of the Institute for Employment Research (IAB), Professor Mike Price from the University of Alabama and Professor Michael Lechner from the University of St. Gallen, ZEW had the privilege to welcome four internationally renowned external professors as lecturers.

Real Estate Financing Index Nearly Unchanged

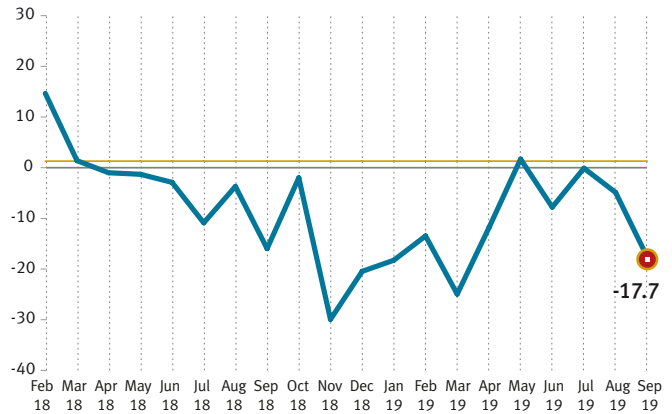


Source: JLL and ZEW

The German Real Estate Financing Index (DIFI) jointly conducted by ZEW and JLL hardly changed at all in the third quarter of 2019, remaining negative at a level of minus 10.8 points (plus 0.3 points compared to the previous quarter). In particular, financing expectations are deteriorating significantly, no longer able to offset by a slightly positive assessment of the financing situation. The main reason for this is the persistently poor assessment of the situation of stationary retail. Concerning the development of the various refinancing instruments, the experts surveyed rated mortgage bonds and real estate shares significantly better. The latter benefit from the persistently low key interest rate but could quickly lose their attractiveness again as a result of the ongoing debate about rent caps. The DIFI reflects survey participants' assessment of the current situation of and expectations for the commercial real estate financing market, and is conducted on a quarterly basis.

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Economic Expectations for China Continue to Fall



Source: ZEW/Fudan University

In the September survey, the expectations regarding the Chinese economy fell for the second time in a row, with the indicator dropping by 12.8 points. In the previous month, expectations had worsened by 4.8 points. The CEP Indicator, which reflects the expectations of international financial market experts regarding China's macroeconomic development over the coming twelve months, is currently at minus 17.7 points. The indicator has been below its long-term average of 1.3 points since March 2018 and has been experiencing an almost uninterrupted series of negative readings since April 2018. Currently almost 55 per cent of the participants expect a (slight) deterioration of the economy over the next twelve months, while only 19.4 per cent expect a (slight) improvement. The assessment of the current economic situation has risen by 3.2 points, and now stands at minus 9.7 points. Around 45 per cent of the experts rate the current situation as normal, 32.3 per cent as poor and 19.4 per cent as good.

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ZEW Lunch Debate in Brussels

ZEW will organise a Lunch Debate entitled “Digitalisation and the Future of Work: Jobs at Risk?” at the Representation of the State of Baden-Württemberg to the EU in Brussels on 23 October 2019. The Lunch Debate will focus on the way digitalisation affects labour markets – including its impact on workers' status, working conditions and needs for further training. In the debate, a special emphasis will be put on the question of changing skill requirements and skills mismatches. Furthermore, the invited panellists will look at how work is going to be organised in the future – and to what extent greater flexibility will affect when, where and how tasks are performed.

Further information is available at: www.zew.de/VA2892-1

Annual MaCCI Conference 2020

The Mannheim Centre for Competition and Innovation (MaCCI), a joint initiative of ZEW and the University of Mannheim, is pleased to announce its Annual Conference on 5–6 March 2020. The aim of the conference is to provide a platform for exchange and discussion on topics in competition- and innovation-related research between academic researchers and practitioners in public authorities, legal counsel, and economic consultancies. Theoretical and empirical papers as well as case studies are welcome. Interested researchers are invited to submit a full paper or extended abstract to macciannual2020@zew.de no later than 15 November 2019.

For further information please visit: www.zew.de/VA2946-1



Photo: ZEW/Erich Dichiser

Creating a Regulatory Framework for the Digital Economy

Joining recent expert forums in Brussels, Canberra, Chicago and London, the German government in September set up the Berlin commission “Competition Law 4.0” to develop proposals

for creating a regulatory framework that meets the challenges posed by the digital economy. Government agencies all around the world, including those in the United States, have ramped up efforts to reign in the leading online digital platforms and pass new competition law for the digital age. In Germany, legislators are currently working on the tenth amendment to the country’s Act Against Restraints of Competition (GWB), which like the previous set of revisions devotes much of its attention to the digital economy.

The central question guiding these efforts is how best to deal with the enduring market dominance of the largest online companies. Previously, governments have been focused on monitoring competition and enforcing antitrust regulations. But the continued dominance of these companies shows that conventional antitrust law has its limits. New ideas are needed for regulating these industries. One promising approach is to prohibit self-benefiting behaviour.

Data doesn’t lose its value when used. This speaks for ensuring access to data. At the same time, data access must be weighed against data protection concerns, the preservation of trade secrets and incentives for generating data. Recent measures have focused more and more on data access. For instance, antitrust authorities have examined whether in cases of abuse data access could lead to more competition. In fact, it would be helpful to require dominant online platforms to provide users with data governed by the GDPR in real time on request. This could create new business models for accessing data when users want it.

The government has an important role for ensuring data access. It needs to develop a strategy for providing public sector data and services. Companies that generate data for public authorities should be required to transfer this data to third parties.

The economy of platforms and data affects not only digital companies but also conventional businesses. To make use of opportunities for technological and market-related changes, these companies must experiment with new approaches, internally and in cooperation with others. But there is little experience with these new forms of cooperation. And it is often difficult to predict how antitrust authorities will view such cooperation on a case-by-case basis. Given this uncertainty, the reluctance of conventional businesses to cooperate with digital companies is understandable – and unfortunate. It would be better if the EU Commission offered a voluntary application procedure for novel forms of cooperation in the digital economy, so that companies could receive immediate input on whether their planned cooperation is legal.

Right now, governments are adjusting the economic regulatory framework to better reflect the concerns raised by the digital economy: the regulation of dominant online platforms, increased access to stored data and the facilitation of new forms of collaboration between companies. But as the digital economy continues its rapid development, the recent spate of expert forums devoted to competition in the digital age will certainly not be the last.

President of the ZEW, Prof. Achim Wambach, PhD

ZEW

ZEWnews English edition – published bimonthly

Publisher: ZEW – Leibniz Centre for European Economic Research
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