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Redistributing tasks between the EU and the Member States could make the public sector in Europe more efficient. Photo: © iStockphoto/AntiMartina

How Europe Can Deliver: New Division of Tasks Would Result in Considerable Savings

In 2018, the new German government should start pushing for the EU to redistribute responsibilities between Brussels and the Member States. For example, EU institutions should be assuming far greater responsibility for development aid, defence and asylum policy. On the other hand, responsibilities such as safeguarding farmers' incomes should return to the remit of the individual countries. These are the main findings of a study initiated by the Bertelsmann Stiftung and conducted in cooperation with ZEW.

The EU needs to regain the trust of its citizens by proving its added value. The fact that at least one third of the Brussels budget is still being used to finance agricultural subsidies which, to a great extent, benefit large agricultural enterprises can no longer be justified. On the other hand, more EU resources being spent on development or migration policy could save the Member States a lot of money. In these policy areas, pursuing a common EU policy is more cost-effective than each of the individual countries implementing their own slightly different policies.

The current division of responsibilities between the European Union and the Member States is the result of political compromises rather than careful consideration of which level of government would actually be most effective at fulfilling each of the tasks in question. The Bertelsmann Stiftung-ZEW study has looked at the main areas of EU policy and found that shifting competencies in certain areas either to the Member States or to Brussels could make the public sector in Europe more efficient, whilst also save money.

The study applies a uniform, data-based algorithm to eight different areas of policy: agriculture, unemployment insurance, asylum and refugee policy, education, development aid, rail and

In a spirited debate, the panellists of the ZEW Lunch Debate discussed what the future framework of responsibilities within the EU might look like.

ZEW Lunch Debate Presents Key Findings of the Study by the Bertelsmann Stiftung and ZEW

The study and its findings were presented at a ZEW Lunch Debate held in Brussels on 24 January, where key insights on what the future framework of responsibilities within the EU might look like were outlined. The panellists also discussed how the budget should be adjusted to meet the emerging challenges facing Europe, and touched upon potential sources of political resistance to these plans. Speakers at the Lunch Debate included Friedrich Heinemann (ZEW), Aart De Geus (Bertelsmann Stiftung), Günther H. Oettinger (EU Commission), Stefan Lehner (EU Commission), Petri Sarvamaa MEP, and ZEW President Achim Wambach.

freight transport, corporate taxation, and defence. In doing so, the study aims to identify which features of each policy area indicate whether it can be tackled most effectively at the national or European level. The results vary greatly depending on the policy area.

The study found evidence that greater powers at the EU level would lead to increased efficiency, particularly in the areas of defence, asylum and refugee policy, development policy as well as corporate tax base setting. In many of these policy areas, uncoordinated parallel efforts from the Member States would be counter-productive since these issues often require the European Union to present a united front to external forces or to respond as one to external developments such as migration or security threats.

One example is corporate taxation: The fact that the EU currently has 28 different tax bases makes it easier for international companies to play EU Member States off against each other in a competition to create the most business-friendly tax environment. These companies then shift their profits to the country with the lowest corporation tax using mechanisms such as transfer pricing or financing optimisation.

Another example is asylum policy. In theory, responsibilities in this area of policy should be divided between Brussels and the individual Member States. In reality, however, the Member States largely decide on their own policies. The study compares this setting with a hypothetical situation with a truly European provision of harmonised asylum services. The findings of the study suggest that the latter scenario is by far superior; not only would it reduce the massive free-rider issue of certain Member States piggybacking off the refugee efforts of others, but would also likely bring about substantial annual savings through returns to scale.

Policies	Optimal allocation
Asylum and refugee policy	EU
Defence policy (European army)	EU
Corporate taxation (harmonised tax base)	EU
Development aid	EU
Unemployment insurance	EU
Railway freight transport	indifferent
Agricultural policy (income protection)	national
Post-secondary and tertiary education	national

Source: ZEW and Bertelsmann Stiftung

Member States should assume primary responsibility for agricultural policy

Meanwhile, the study shows that in the case of agricultural policy a shift in the opposite direction is necessary. The results indicate that subsidising farming at the European level is highly imprecise and, as a result, unnecessarily costly since it does not specifically help those farmers most in need of protection.

One of the problems with the current discussion surrounding EU reform, however, is that many of the suggestions boil down to giving the EU more money without considering where this money is actually creating added value. This is where the study's findings can serve as a guide.

The complete study is available to download at:
http://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/EZ_Kompetenzstudie_2017_ENG.pdf

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Use of Big Data in Firms Linked to Greater Market Success for Corporate Innovations

Companies that use vast amounts of data undertake more product innovations and display a higher innovation intensity. These innovations achieved through the use of big data can bring companies market success – but only if these companies make sufficient investments in the IT skills of their employees. These are the findings of an empirical study conducted by ZEW.

This investigation of the relationship between the use of big data at the firm level and company innovation activity is based on data from a large-scale survey of 2,706 companies in the manufacturing and service sectors in Germany. It is the first study of its kind to look at the impact of big data in Germany on such a grand scale.

The availability of big data has led to lasting changes in how companies make decisions with regard to their customers and customer information as well as their final products. For example, companies can benefit from taking feedback provided by customers via social media into account when innovating their products. Big data can be distinguished from conventional data and technologies in three key ways: the enormous volume of data that is available for use; the great variety of information that can be gleaned from the data; and the speed with which data can be processed at the firm level. With that said, this surge in big data technologies would not have been possible without enormous progress in computing power, storage capacity, and software.

Big data as a catalyst in the innovation process

For firms, the innovation process is often associated with great uncertainty and high research and development costs. Due to the new types of information being made available, big data opens up new possibilities for companies in terms of how they make decisions, which can be of great benefit to the innovation process. Of the companies observed in the study, 22 per cent across all sectors said that they used big data analytics as a means of systematically analysing vast amounts of data to support their business activities. According to the study, companies that make use of big data are on average 6.7 per cent more likely to undertake a product innovation.

Companies using big data can also attribute a significantly higher percentage of their turnover to innovations, with firms that promote the IT skills of their employees through specific training seeing particular benefit.

The manufacturing and service sectors rely on different digital applications

The ZEW analysis reveals that big data plays a significant role in the success of innovations in companies in both the manufacturing and service sectors in Germany. However, the two sectors differ in the type of digital applications that companies use as data sources for big data analytics. For example, companies in the manufacturing sector tend to offer their customers the option of reviewing products online and often use technologies that integrate the internal and external exchange of data. Firms in the service sector that use big data, meanwhile, are usually more active in online advertising and in offering apps and digital services to their customers.

The findings of the ZEW study underline the highly significant role that gathering and systematically analysing large amounts of data may play in whether a firm's innovations are successful or not. Another important factor identified by the researchers was whether a company's employees have the necessary level of IT skills to be able to use systematic data analytics to their full potential.

The study can be downloaded at: *www.zew.de/PU79572-1*

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IN THIS ISSUE

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A recent ZEW study on the effects of tax credits in the United States shows that, while welfare programmes help to reduce poverty, at the same time they create incentives for recipients to maximise the amount they receive by either reducing their working hours or manipulating their taxable income.

Self-Employed Workers More Likely to Adjust Their Income if There Are Strong Incentives

Self-employed workers in the United States adjust their income if government welfare and aid programmes provide the incentive to do so. Though some make this adjustment legally by working either more or fewer hours, other self-employed workers choose to illegally misreport their taxable income. These are the findings of an analysis conducted by ZEW, Mannheim, in cooperation with the ifo Institute, Munich, and the Institute of Labor Economics (IZA), Bonn.

While welfare programmes play an important role in reducing poverty, at the same time they create incentives for recipients to maximise the amount they receive by either changing their working hours or manipulating their taxable income. Using the example of tax credits in the US, which function similarly to wage subsidies or the German combination wage, the study shows that self-employed workers are more likely to engage in tax avoidance or tax evasion if the incentives to do so are particularly high due to the tax credits programme in their state of residence. Dependent employees, meanwhile, barely respond to such incentives.

Taxpayers in different US states receive different amounts in tax rebates

For the analysis, researchers used data on US "earned income tax credit" (EITC) on both the county and state level between the years 1996 and 2009. Covering around 26.7 million workers claiming a total of 63 billion dollars annually in benefits, the EITC is currently the largest anti-poverty programme in the United States. The programme serves to supplement workers' wages and to reduce the income tax burden primarily on low-wage earners, while also providing incentives to work. Whether someone is entitled to this form of subsidy is determined on the basis of their taxable income, as well as the number of children they have.

The size of the EITC subsidy that is granted varies greatly from state to state, with workers with the same taxable income but living in different US states receiving different amounts in tax rebates from the programme. As a result, the top tax rate for the EITC also fluctuates considerably in the individual states and over the course of the observation period for the study. Remarkably, the higher the top tax rate is, the higher the number of self-employed workers claiming these subsidies.

The more generous the incentive, the stronger the workers' response

It has been shown that when a state raises the EITC top tax rate, this is followed by a disproportionate number of claims from self-employed workers who report their taxable income in such a way as to receive the highest possible tax credit they can. The more generous the incentives from the government programme, the more strongly self-employed workers responded in their use of strategies to get as high a subsidy from the programme as possible.

Though the results of the study can be tracked over the entire observation period, there is a significant drop between the years 2007 and 2009, which the researchers attribute to the onset of the financial crisis in the US. This is because during this period in general there was a higher number of self-employed workers applying for subsidies.

The study can be downloaded at: *www.zew.de/PU79586-1*

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How Big Data Generated by Companies Can Be Used to Protect the Environment

With the Paris climate agreement and the UN's sustainable development goals (SDGs), the international community has set itself some ambitious environmental targets. In many cases, however, there is no empirical basis for measuring our progress towards meeting these targets. For example, there is no existing data on two thirds of the UN's 232 SDG indicators. As a result, our best hope lies with data generated in the private sector. Forming partnerships between public bodies and private companies in order to access big data could play a decisive role in tackling global issues such as reducing CO_2 emissions.

Political decision-makers are showing an increasing interest in big data analytics. Data on user activity and movement information from mobile networks, social media, sensors or geodata have enormous potential to complement and expand upon conventional statistics. A solid basis of data for making policy decisions can thus be generated in real time and in completely new fields of application.

At this year's Climate Change Conference in Bonn, the UN presented its initiative "Data for Climate Action" (D4CA), a pioneering partnership in which private companies make their anonymised data available to selected groups of scientists to help fight climate change. Its great potential is illustrated by the various projects launched as part of the D4CA Challenge, whose participants include the ZEW Research Group "Market Design".

For instance, the winning project selected by the D4CA jury made use of movement data from mobile users to simulate the effects of various e-mobility concepts on air pollution in Mexico City. Based on detailed user data provided by the GPS navigation app Waze, researchers analysed movement patterns in order to estimate, for example, how the routes of new e-buses could be optimised to reduce greenhouse gas emissions.

Creating incentives for companies to provide their data

There are various incentives for private companies to share their data as part of projects like this. For one, exchanging data with public authorities allows companies to see a statistically representative analysis of their customer data. Secondly, collaborating with researchers helps companies to broaden their methods of analysis. Other significant incentives include regulatory conditions that require companies to share their data as well as corporate social responsibility. Many companies have also come to recognise the competitive advantages of sharing data.

On the whole, however, progress in the use of company data is still rather slow. One thing holding companies back are the legal restrictions they face regarding the confidentiality of customer data. More often than not, researchers are unable to access data due to the high costs associated with training employees for a task unrelated to the company's core business as well as setting up the necessary IT infrastructure.

Conditions for the sustainable exchange of data still need to be created

In a joint study conducted by the Organisation for Economic Cooperation and Development (OECD) and PARIS21 – a global partnership for data and statistics – researchers documented and analysed business models for partnerships between the public and private sector which have already proven successful in practice. In many cases, data is either exchanged directly between companies and researchers, or access to data is provided via a trusted third party. However, there are also more promising IT approaches that are scalable and therefore more sustainable. One example is the "Open Algorithms" (OPAL) project, in which calculations using certified, open algorithms are carried out completely anonymously behind the company's firewall.

The findings of the OECD/PARIS21 study point to a number of recommendations for creating and maintaining a successful data partnership. For one, companies should appoint data stewards to act as a central point of contact for external data queries. Furthermore, governments can encourage data partnerships by announcing more competitions, documenting innovations and providing a secure IT infrastructure for the transfer of data.

The study can be downloaded at: *www.zew.de/PU79462-1*

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Forming partnerships between public institutions and private companies in order to access big data could play a decisive role in tackling global issues such as reducing CO_2 emissions.

US Tax Reform: Anti-Abuse Law Fuels Inter-European Tax Competition

The United States have enacted the "Tax Cuts and Jobs Act", lowering corporation tax – known as the federal tax rate – from a rate of 35 per cent to 21 per cent. The bill will also make future profits earned overseas exempt from taxation in the US. The reactions from EU countries have unfortunately been somewhat half-hearted and misguided.

In its entire history, the EU has never been more decisive in its tax policy than it has in recent years. In line with the action plan template for fair and efficient corporate taxation set out in 2015, the EU passed its Anti-Tax Avoidance Directive in a record time of just six months in 2016. The same year also saw the passage of guidelines for country-by-country reporting, and the EU has plans for further legislation in the pipeline.

Increasingly frequently, Brussels has been creating legislation in response to public pressure to tackle tax competition seen by many as unfair. This is remarkable given that tax legislation requires unanimity among the Member States. Public outrage over the tax practices of the Googles and Amazons of the digital age is clearly so great that any objections or resistance have gone largely unheard. Outrage is never the best source of policy advice and often leads to regret later on over actions taken based on emotion rather than reason. There is a growing risk of all too hasty decisions being made in current EU tax policy that could have extremely negative consequences.

Collateral damages and the risk of double taxation

As a result, the confusion of various EU and national anti-abuse measures is increasing the risk of substantial double taxation. While prohibiting the deduction of financing costs or cross-border royalties may indeed limit aggressive tax avoidance in the digital economy, this could also affect companies in the real-world economy, for whom cross-border payments are merely the result of the actual division of their business across different countries. Though the EU's Anti-Tax Avoidance Directive is aimed at preventing double non-taxation, it provides no protection against double taxation resulting from the uncoordinated anti-abuse measures of different countries.

Moreover, lawmakers are ignoring the fact that profit shifting strategies ultimately act as a valve that protects jobs and real value added in high-tax countries. Thus, as long as companies are able to reduce their tax burden in a high-tax location through international tax planning, tax considerations will play a relatively insignificant role in where companies decide to establish their next business location.

Though it may at first seem paradoxical, the current laws being passed at both the EU and national level to restrict profit shifting could actually be stoking tax competition for real investment. If the option of profit shifting through tax planning is closed off to companies, their only option left in the European Single Market is to shift profits by relocating their means of production.

Furthermore, the latest US tax reform will further fuel inter-European tax competition for real settlements. The US's decision to stop taxing companies' global income means that US companies no longer have to pay taxes on their European profits back in the United States where the tax rate has long been much higher. As a result, the differences in the levels of taxation in different European countries will become more significant to US multinationals since the tax they pay on their earnings in that country will be the only tax they have to pay.

The US Congress has decided to lower the federal tax rate.

Will Germany lose out in this new tax competition?

As a result, high-tax locations in the European Single Market will become less attractive to direct investors. As a high-tax country, Germany could therefore lose out in this new tax competition. Once Emmanuel Macron enacts his announced tax cuts in France, Germany will move up into fourth place in the list of EU Member States with the highest effective tax burden, with only Malta, Spain and Belgium imposing higher taxes on corporations. The next German government should, as a matter of urgency, widen the political discussion beyond just the solidarity surcharge and redistribution, and finally put some serious thought into how to improve Germany's competitiveness as a business location with respect to taxation.

A longer version of this article first appeared in the blog-based journal "Steuerboard" on 20 December 2017.

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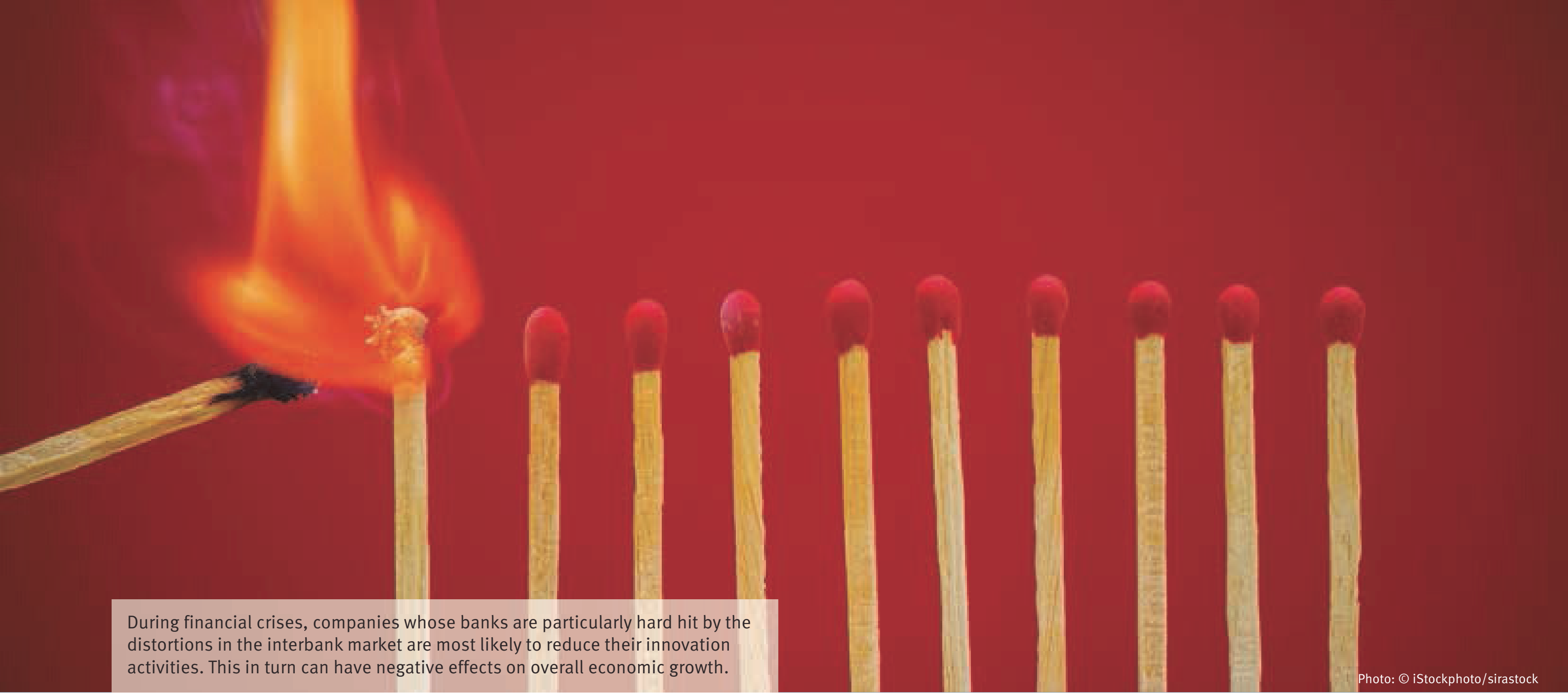

During financial crises, companies whose banks are particularly hard hit by the distortions in the interbank market are most likely to reduce their innovation activities. This in turn can have negative effects on overall economic growth.

Photo: © iStockphoto/sirastock

Financial Crises Slow Down Innovation Activities in German Businesses

How much corporate customers of banks invest in innovations largely depends on the financing opportunities provided to them. Banks experiencing financial trouble as a result of macroeconomic shocks, however, can have an impact on the innovation performance of their corporate clients. During periods of tension on financial markets, businesses are most likely to reduce their innovation activities if "their" banks are particularly hard hit by the distortions in the interbank market. These are the findings of a recent ZEW study.

Innovation activity is a key determinant of both technological progress and economic growth. This activity depends, however, on the availability of financial resources. Financing constraints may seriously hamper corporate innovation activities and, consequently, technological progress and growth. While the capital and employment effects of financial crises have been extensively examined in economic research, there has yet to be found any causal evidence on the interaction between the banking system and innovation at the firm level during a financial crisis.

The ZEW analysis fills this gap in the economic literature by identifying the causal impact of the ailing banking sector on innovation activity in businesses during the global financial crisis of 2007/08. When the US investment bank Lehman Brothers filed for bankruptcy in 2008, the financing conditions in the interbank market worsened dramatically. The trading volume between financial institutions decreased, creating a tough lending climate for companies.

Identifying mechanisms for how banks transmit external shocks to corporate clients

The ZEW analysis is based on data from the Mannheim Innovation Panel (MIP), a survey which has been conducted by ZEW on an annual basis since 1993. The MIP comprises data on more than 20,000 German businesses, including information on the companies' respective primary bank. As part of the study, a sample of almost 2,200 companies was matched with information on the refinancing structure of individual banks and on the business activity of their corporate clients. The data on banks stem from the Bankscope database, which is compiled by Bureau van Dijk. The matching process allowed researchers to identify possible mechanisms to explain how external shocks banks were exposed to were then transmitted to their corporate clients.

On the basis of a cross-sectional analysis, ZEW researchers found that the corporate clients of banks which were particularly active in the interbank market reduced their innovation activity to a far greater extent than other businesses during the financial crisis. From the companies' point of view, crises affect investment in innovation to a greater extent than current innovation expenditure. The cross-sectional analysis has further shown that less technology-intensive activities, such as marketing expenses, are less likely to be affected by this phenomenon.

The refinancing structure of banks must be stable, even in times of crisis

The empirical results of the study imply that a company's external financing constraints have a significant influence on its innovation activities, especially in times of crisis. This in turn can have negative effects on overall economic growth. Two main policy recommendations can be derived from these findings. Firstly, the refinancing structure of banks has to be designed in a way that guarantees unconstrained credit supply to their corporate customers, even in the event of an economic crisis. Secondly, policy-makers should implement subsidy programmes that make it attractive for businesses to invest in R&D even during economic downturns when other sources of financing are scarce.

The study can be downloaded at: *www.zew.de/PU79615-1*

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Q&A: Could Artificial Intelligence Soon Take Over Customer Service?

“There Is Still a Real Reluctance to Use Service Robots in the Business Sector”

Discussions on automation have so far tended to focus heavily on the use of robotics in the production sector. Yet service robots endowed with artificial intelligence also allow for automation in more complex settings, such as customer service. In this Q&A, ZEW economist Irene Bertschek discusses descriptive evidence on the use of service robots in Germany’s information industry. The evidence was gathered in a collaborative study carried out by ZEW researchers and Professor Martin Przewloka from the University of Marburg.

Robots are now a familiar sight on the production line. But what about in the service industry?

Discussions on automation have generally focussed on the manufacturing sector rather than the service sector. Yet many aspects of the latter are now becoming susceptible to automation thanks to service robots and digital assistants, which can independently and intelligently carry out tasks such as answering customer enquiries, transporting orders and ensuring the security of business facilities. In order to perform these tasks, robots do not always need to be endowed with humanoid features; a voice-operated computer programme, for example, might be all that is required to respond to customer enquiries.

The technological basis for such robots is artificial intelligence, which allows the robot to learn through experience. By harnessing new information, such systems can become ever more intelligent while carrying out tasks more efficiently and reliably.

In what sectors have service robots been used so far?

In our study, we carried out a survey on the use of service robots in the information industry, which includes the branches of information and communications technologies (ICT), media services, and knowledge-intensive services. The survey revealed that, at present, just under two per cent of businesses in the information industry use service robots. A further five per cent were planning either to introduce robots or to expand their current usage in the next five years.

As might be expected, the trailblazers in this area are the tech-savvy ICT businesses, over five per cent of which already use service robots, while over twelve per cent plan to do so within the next five years. Companies in the ICT branch also regard the use of service robots as most necessary in the future.

What can be achieved with the use of service robotics?

Such systems can be used for a wide range of purposes, including marketing and image development, enhancing quality levels, as well as boosting efficiency, productivity and flexibility. In the production sector, however, the key question is whether service robots generally supplement human labour or replace it. Where automation and computerisation are concerned, it has been shown that technological devices tend to replace human labour in carrying out routine tasks, while supplementing it in more complex processes. Furthermore, businesses in the ICT sector can much better imagine human labour being replaced by service robots than businesses across the information industry as a whole. On average, around 30 per cent of the latter stated they could imagine such a scenario, compared to over 40 per cent of ICT businesses.

What about attitudes across society as a whole? Are particular businesses or branches shying away from the use of such systems?

Digital assistants such as Google Home and Amazon Alexa have already made their way into many private households. The extent to which customers want to be served by such assistants largely depends on what they are looking for. The majority of businesses in the information industry believe their customers expect to be served exclusively by human beings. A further 16 per cent of businesses would only use service robots if their customers were unable to tell whether they were being served by a human or a robot.

The businesses which are least likely to consider the use of digital assistants for customer service are those operating in knowledge-intensive fields. Tasks involved in the practice of law, architecture, advertising, and market research, for example, are simply too complex to be automated.

In Germany, there is still a real reluctance to use service robots in the business sector. Nevertheless, technological advances on the one hand and demographic changes on the other are likely to contribute to greater acceptance of such technologies in the future. In Asia, by contrast, there is already a much greater openness toward the use of service robots, even in areas such as healthcare.

Photo: ZEW

Prof. Dr. Irene Bertschek

Irene Bertschek is head of the ZEW Research Department “Digital Economy” and Professor of the Economics of Digitalisation at Justus Liebig University Giessen. She studied economics at the University of Mannheim and the Université catholique de Louvain, Belgium, focussing on industrial economics and econometrics. She obtained a doctoral degree in economics from the Université catholique de Louvain. Her current research interests include the impact of digitalisation on firms’ labour productivity, innovation activity, and workplace organisation.

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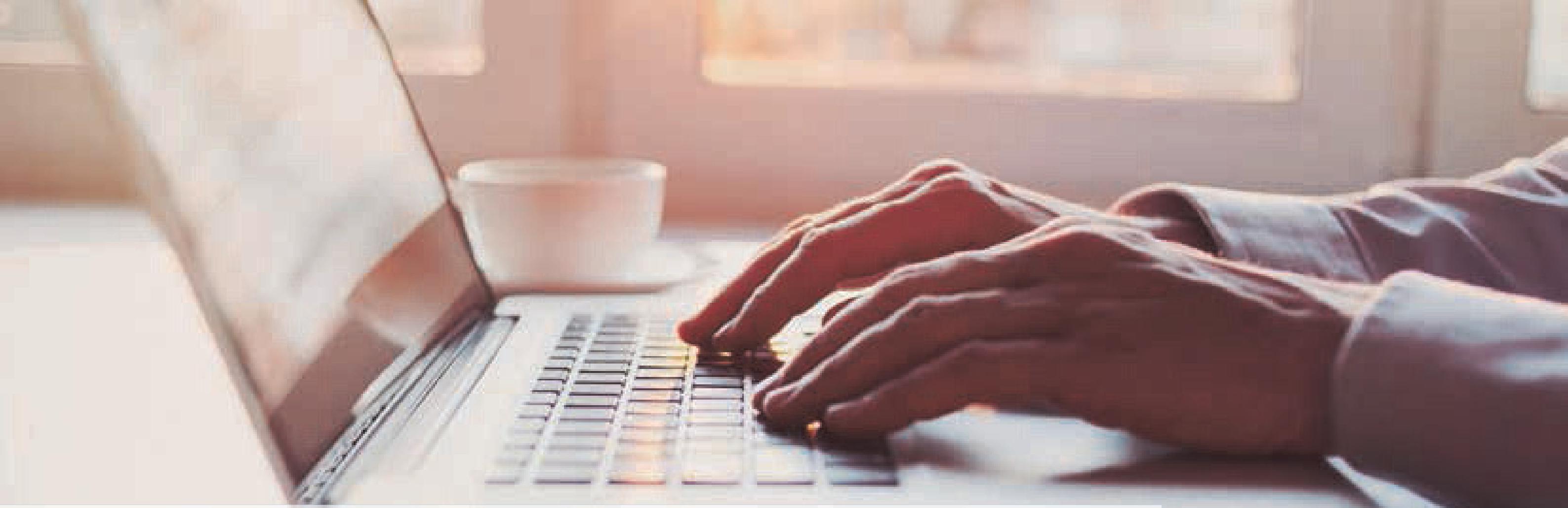

A comprehensive characterisation of platform-based employment is quite difficult at present, as official statistics do not yet exist. ZEW has closed this gap with a meta analysis, examining the findings of more than 100 German and international research papers.

Photo: ©iStockphoto/Polke

Working via Internet Platforms Presents Opportunities and Risks for Employees

Often referred to with buzzwords like "crowdworking" or the "gig economy", working via internet platforms is currently a subject of public debate. Examples include the ride service app Uber or the tagging of images on a platform like Amazon Mechanical Turk. A recent ZEW study summarises the current state of empirical economic research on contract work offered on online platforms by providing a systematic overview of existing literature in the field.

A comprehensive characterisation of platform-based employment is quite difficult at present, as official statistics do not yet exist. In an analysis carried out on behalf of the German Federal Ministry of Labour and Social Affairs, ZEW researchers therefore examined the findings of more than 100 German and international research papers in order to build a picture of current research and insights on platform-based employment. In addition to the prevalence and working conditions of this type of employment, the study also looked at methodical aspects to evaluate existing research on the subject.

The prevalence of this type of employment, where services are commissioned and in some cases carried out via online platforms, is currently extremely low. The majority of the studies conducted in the US and in Germany suggest that at present, less than one per cent of the working population are working via online platforms.

Crowdworking not the primary source of income

The findings of the ZEW study also showed that the majority of crowd workers only occasionally offer their services via online platforms, implying that this does not represent their primary source of income. In all countries considered in the study, it was found that between 33 and 58 per cent of crowd workers earned less than ten per cent of their total income through platform-based work (Germany: 44 per cent), and only between three and eleven per cent said that it was their only source of income (Germany: three per cent). However, a number of papers also found that some workers expressed a desire to work online more frequently. That being said, rating systems used by some platforms can make it hard for newcomers to get a foot in the door, with clients giving preference to more established workers.

People who work via internet platforms differ from the general working population in that they are comparatively young and highly educated. They are also more likely to be unemployed – the unemployment rate among crowd workers on platforms offering relatively simple tasks is up to one third. According to existing research, the average pay for work on these platforms can fluctuate considerably. Pay is also linked to the type of work offered, which is extremely varied and can range from rather simple tasks that can be completed in a matter of seconds to highly complex IT or design projects.

Experts are also debating whether the greater flexibility offered by platform-based working outweighs the associated risks. Crowd workers are essentially self-employed since they are not employed by the platform and in some cases have to compete with workers from all over the world for assignments. However, being self-employed does offer workers the possibility of being more flexible in terms of what time of day or which days of the week they work, and sometimes even where they work.

Comprehensive public data sources on crowdworking are still hard to come by

The papers considered in the study used different datasets and analytical methods, meaning that existing research into working via internet platforms can still only be described as fragmented. This is primarily due to the fact that there is currently very little information on platform-based employment available in comprehensive, publicly accessible data sources. As a result, many of the research papers included in the study only consider data from a single platform operator, making it difficult to compare the results to those of other studies. In some cases, access to this data, which is usually gained with the platform operator's consent, may come with the condition that only results that coincide with the interests of the operator may be published. Nevertheless, the ZEW study suggests that the steady increase of research on this topic shows a continuing advancement towards more concrete findings.

The study can be downloaded at: *www.zew.de/PU79648-1*

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MaCCI Conference Focuses on Big Data

The seventh MaCCI Law and Economics Conference by the Leibniz ScienceCampus "Mannheim Centre for Competition and Innovation" (MaCCI) featured roughly 65 participants from academia, governmental organisations and private companies, who discussed recent developments relating to big data and other topics in the field of law and economics.

In his keynote speech Professor Josef Drexl from the Max Planck Institute for Innovation and Competition (MPI) in Munich presented his view on the future legal framework of the data economy, emphasising the aims of competition and innovation. Alice Hutchings, PhD, Senior Research Associate at the Computer Laboratory of the University of Cambridge, who established and maintains a database of computer crime events in the United Kingdom, provided insights into how criminals displace and abuse big data. Furthermore, four panels with established experts in the field engaged in a spirited debate on a number of topics, including the future of data markets, privacy and the protection of personal data, sector-specific regulation and personal data, as well as competition policy and big data.


Photo: ZEW

Professor Drexl delivering his keynote speech on the future legal framework of the data economy

ZEW Represented at 2018 ASSA Annual Meeting

ZEW's attendance at the Annual Meeting of the Allied Social Science Associations (ASSA) in Philadelphia proved a great success. The world's most important conference in economics offered plenty of opportunities for ZEW researchers to engage in scientific discussions and to present their research findings, while also providing new impulses for future research projects. In particular the presentations by Dr. Oliver Lerbs, acting head of the ZEW Research Department "International Finance and Financial Management", and Lea Steinrücke from the same department were met with great approval. The three-day conference also featured poster sessions from various ZEW researchers, allowing them to share and discuss their latest research findings with fellow scientists. As in previous years, ZEW had its own information stand at the conference, which served as a contact point for researchers of all career levels who wanted to find out about ZEW, its research areas and potential cooperation opportunities. The ASSA conference is organised each year in January by the American Economic Association (AEA). The event provided an opportunity for both renowned professors, including several Nobel laureates, and young researchers to present their research.

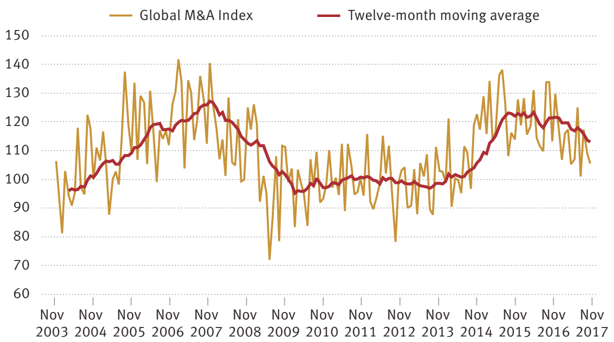
Delegation from Fudan University Visits ZEW

In mid-December 2017, a delegation of researchers from Fudan University, Shanghai, visited ZEW in Mannheim to discuss the China Economic Panel (CEP), a survey which has been conducted by ZEW and Fudan University on a monthly basis since May 2013. During their visit, Professor Chen Yizhang, Professor Sun Lijian, Associate Professor Xu Xian and Assistant Policy Analyst Shen Chen met with Dr. Michael Schröder, project leader of the CEP survey at ZEW, and Dr. Oliver Lerbs, acting head of ZEW's Research Department "International Finance and Financial Management", to address the further development of the CEP and to discuss plans to extend the survey to include the Eurozone. The CEP plays an important role for both financial markets and policy makers, and receives extensive media coverage in China. The visit not only provided an excellent opportunity to exchange ideas on the CEP, but also allowed the delegates to discuss possibilities of an even closer cooperation in the future.

Photo: ZEW

Delegation from Fudan University with ZEW researchers Dr. Michael Schröder and Dr. Oliver Lerbs at ZEW in Mannheim

Global Mega Deals Experience Considerable Drop



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

Following two record years for mergers and acquisitions (M&A) worldwide in 2015 and 2016, this trend appears to have reversed in 2017. In November 2017, the ZEW-ZEPHYR M&A Volume per Deal Index's twelve-month moving average was at 113 points, its lowest level since April 2015. November was the eleventh month in a row that the twelve-month moving average continued to fall, a trend that was last seen during the later stages of the financial crisis in 2009. While the number of transactions remained almost constant in 2017, there was a significant reduction in the average transaction volume per deal. Particularly striking was the reduction in the number of very large acquisitions. While there were 244 transactions recorded in 2017 with a volume of more than one billion euros, and eighteen with a volume of more than ten billion euros, by comparison there were 315 transactions in 2016 and 350 in 2015 with a volume of over a billion euros, as well as 34 (2016) and 37 (2015) deals with a volume of over ten billion euros. The biggest deal observed in 2017 was the merger of the US chemical giants Dow Chemical and EI DuPont, which ran to a total of 51 billion euros and which would have made it only the fourth largest if it had taken place in 2016.

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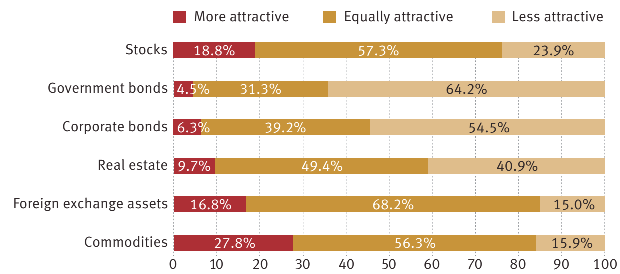
Stocks Significantly More Attractive than Bonds and Real Estate in 2018

Please assess the attractiveness of the following asset classes in 2018 compared to 2017. (Percentage of participants)



Financial market experts consider stocks to be equally attractive in 2018 as in 2017. Government and corporate bonds, as well as real estate, by contrast, are considered to be significantly less profitable investment options than in the previous year.
Source: ZEW

Despite the fast growth witnessed in the past few months, stocks are considered to be just as attractive for investors in 2018 as in 2017, according to the vast majority of participants (57.3 per cent) in the ZEW Financial Market Survey. While 23.9 per cent of the financial experts believe that stocks could experience a negative development, this negative assessment is offset by those experts who expect stock market performance to improve over the course of the year (18.8 per cent). The development of "traditional" types of investment in 2018, such as government and corporate bonds or real estate, was assessed far less favourably, with around 64.2 per cent of the survey participants expecting this year's government bond yields to be lower than those in 2017. This may be due to the fact that long-term interest rates are currently extremely low and there is little chance of rates falling further and share prices rising in the foreseeable future. Foreign exchange assets and commodities – rather exotic asset classes for private investors – were assessed more positively, with the majority of the financial experts rating them as "equally attractive" or even "more attractive" for 2018.

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Seventh Mannheim Energy Conference

ZEW and the Mannheim Centre for Competition and Innovation (MaCCI) are pleased to announce the seventh Mannheim Energy Conference on 14 and 15 May 2018. International scholars and practitioners in the field of energy economics are invited to discuss latest insights, new opportunities and future challenges. Advanced theoretical, empirical, and policy-oriented contributions on all aspects of the economics of energy markets are welcome. Both full papers and extended abstracts will be accepted. Submissions should be sent as a PDF file no later than 11 February 2018 to energy2018@zew.de .
For further information please visit *www.zew.de/energy2018*

Conference on the Economics of ICT

ZEW is pleased to announce the 16th Conference on the Economics of Information and Communication Technologies (ICT), which will take place in Mannheim on 21 and 22 June 2018. The objective of the conference is to discuss recent scientific contributions to the economics of ICT and the economics of ICT industries. Keynote lectures will be provided by Ginger Zhe Jin of the University of Maryland and Feng Zhu of Harvard Business School. Theoretical, empirical and policy-oriented contributions are welcome. Please submit papers in PDF or Word format to ict-conference@zew.de no later than 1 March 2018.
For further information please visit *www.zew.de/VA2452-1*


Photo: ZEW

A Budget for European Added Value

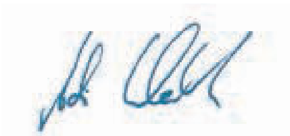
Alongside the Brexit negotiations, Brussels and the EU Member States have another important issue on their minds this year, namely the proposal for the next Multiannual Financial Framework (MFF), which is set to be presented by EU Commissioner for Budget and Human Resources Günther Oettinger by the end of May. The MFF will set the volume and areas of expenditure for the EU budget for the next seven years and ideally should be approved before the European elections in 2019. The MFF will reveal the areas in which the EU wishes to focus its attention in the years following 2020.

Reconciling the various interests and desires of the EU and its Member States with limited funds is always a challenge, but the current negotiations are taking place under particularly strained circumstances. The gap in the budget that will be left by the United Kingdom – the fourth largest contributor to the EU budget after Germany, France and Italy – when it leaves the EU amounts to some 13 billion euros a year. This is equivalent to around ten per cent of the EU's total budget of 135 billion euros in 2017. Of course, when the UK leaves the EU, the payments the United Kingdom receives from the Union, which run to around 7 billion euros, will also stop. There are, however, a great many ideas and requests for areas in which the EU should be spending more of its money, including defence, border security and investment.

With his demand that any future area of EU expenditure deliver "European added value", EU Commissioner Günther Oettinger has given the negotiations a crucial stimulus which, if used correctly, can serve as a guide for any pending decisions. The term "European added value" also shifts the focus onto truly communal missions. As part of a study carried out in cooperation with the Bertelsmann Stiftung, we at ZEW have attempted to define this European added value. According to our definition, one reason to shift certain tasks to the EU level would be resulting in returns to scale, as one could imagine would be the case for armaments orders. For instance, it makes more financial sense for the EU as a whole to pay for the development of new military helicopters than for each individual country to develop its own helicopter. Another significant reason is the provision of cross-border public goods, such as in the case of shared border security. Currently all the Member States benefit from border security, but the costs are borne exclusively by those Member States on the EU's external borders. The responsibility for tasks that do not fulfil these criteria should, according to the principle of subsidiarity enshrined in Article 5 of the Lisbon Treaty, remain at the national level.

Applying these criteria for "European added value" consistently to spending proposals would help to strengthen the legitimacy of the EU. If policy-makers take this concept to heart, they will soon find it hard to justify why so many funds – almost 40 per cent of the entire EU budget – still go to the common agricultural policy (CAP). This expenditure brings neither returns to scale nor a cross-border public good.

The Commissioner has proposed a 10 to 20 per cent increase in Member State contributions to the EU, which currently amount to roughly one per cent of each country's GDP, with the aim of expanding the EU budget by at least 16 billion euros a year. During coalition talks in Germany, the CDU, CSU and SPD have agreed in principle to increase Germany's contributions to the EU budget. Though increased contributions may be inevitable, making such a hasty agreement reduces Germany's incentive to push back on questionable positions in the EU budget. Furthermore, if the EU does not begin to cut back on agricultural subsidies, it will be difficult for Brussels to claim to be presenting a budget with a clear focus on "European added value".



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