ZEW NEWS

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July/August 2015

Opportunity or Threat? Digitalisation Will Transform the Future of Work

What do automation and digitalisation mean for the future of work? Pessimistic projections point to job losses and increasing unemployment. However, a recent ZEW study conducted on behalf of the German Federal Ministry of Labour and Social Affairs (BMAS) concludes that this threat is significantly smaller than previously suggested, although working environments will change.

Industry 4.0, self-driving cars, package-delivery drones, and intelligent robots – how will digitalisation change the labour market? Some participants in today's discussions paint a gloomy picture of the future of work. According to a study conducted by British researchers Frey and Osborne, 47 per cent of today's employees in the US are working in occupations with a high probability (over 70 per cent) of becoming automatable in the next ten to twenty years. A second study transfers this "probability of computerization" to Germany, arguing that as many as 59 per cent of jobs in Germany are threatened by technological advancement.

A new ZEW study paints a very different picture. ZEW researchers examined and analysed job task data from the "Programme for the International Assessment of Adult Competencies" (PIAAC). The advantage of this data set is that the researchers neither have to assume that employees in the same occupational groups perform the same tasks, nor that the task structures of German and US occupations are identical; two assumptions that earlier studies made.

The findings of the ZEW researchers show that employees in occupations that are considered to be easily automated are often also engaged in analytic or interactive tasks that are much more difficult to automate. For example, managers report that they perform 54 per cent of the analytic tasks (among those list-

ed in the PIAAC frequently (see figure). They also report that they perform 65 per cent of the interactive tasks frequently. These tasks are very difficult to automate. Accordingly, Frey and Osborne estimate that managers have a very low probability of computerization (15 per cent). But office workers also perform 30 per cent of the listed analytic and interactive tasks frequently on their jobs. Nevertheless, the British researchers assign a very high probability of computerization (85 per cent) to these workers. Seen from the perspective of actual job tasks, it seems that Frey and Osborne have overestimated the automation potential for many occupations. Furthermore, occupational tasks differ considerably between countries. This had been neglected in the earlier attempts to transfer the findings from the US to Germany.

Overestimation of the automation potential

Based on the job task data, ZEW researchers recalculated the computerization probabilities for German and American occupations. The ZEW figures show that nine per cent of jobs in the US have task profiles that are associated with a relatively high probability of computerization. For Germany, the corresponding figure is twelve per cent. In both countries, the proportion of jobs with a high probability of computerization is significantly lower when calculated applying the task-based approach. The ZEW researchers conclude that the failure to consider different task profiles of employees in the same occupational groups can lead to an overestimation of the automation potential.

However, the findings along this line of research need to be interpreted with caution. There are three reasons why the number of jobs at risk cannot simply be extrapolated from the probability of computerization.

First, the figures are based on the potential for certain tasks to be replaced by new technologies as determined by Frey and Osborne. Their findings rely on assessments of experts who typically tend to overestimate the potential of new technology. In addition, in their determination of technological potential, they often do not take into consideration societal, legal and ethical obstacles to the introduction of new technologies. The actual technological automation potential is therefore presumably smaller.

Second, their findings relate only to the technological potential for automation. This cannot be equated with the potential effects on employment, since machines may change jobs without necessarily replacing them. Employees may use the time freed up by automation to engage in other tasks that are more difficult to automate.

Third, new technologies also create new jobs, for example, in the development process or through increased competitiveness. Even when jobs do become redundant, new ones will be created, so that total employment need not necessarily be jeopardised.

Increased training and education as a response to computerization

The probability of computerization of jobs must thus not be misunderstood as the probability of these jobs to be replaced by machines in future. Rather, the probability of computerization provides indications about which employees predominantly perform tasks that are potentially automatable in the near future. The challenge for these employees will be to adapt to technological change. For them to succeed, employees, firms and policy-makers must invest in training and education. Advanced training measures and support for life-long learning can help prepare employees for more complex tasks and for working with new machines. Ultimately, it is the complementary use of human labour and machines that offers an opportunity for more and better work.

The study can be downloaded in German at:
www.zew.de/en/publications/7937

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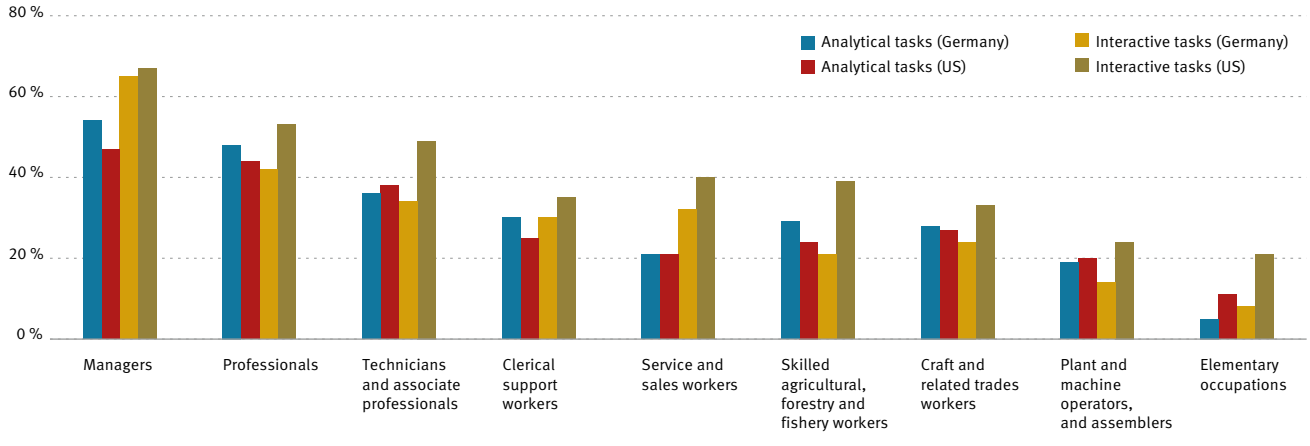
SHARE OF TASKS THAT ARE PERFORMED FREQUENTLY – BY TYPE OF TASK AND OCCUPATIONAL GROUP (COMPARISON GERMANY VS USA)



Source: OECD (2013), ZEW calculations.

Unilateral Environmental Regulations Encourage the Relocation of Production

Globalisation has altered many economic structures. One of the most conspicuous effects is the development of supply chains extending across several nations and continents. These shifts and the relocation of production stages are driven forward by shrinking transport and communications costs, enabling improved utilisation of the comparative advantages of individual countries in the process of producing goods. A new ZEW study examines whether the introduction of unilateral environmental regulations can be the motivation for relocating individual stages of production.

The researchers began by designing an analytical model that depicts decisions on where to geographically locate individual stages of production in relation to wage costs, labour productivity and the costs of environmental regulation. The model made it possible to depict two effects of increased costs from environmental regulations like emissions trading: first, the complete relocation of individual production stages, and second, the increased use of intermediary products purchased abroad accompanied by the reduced use of domestic intermediary products.

Side effects of border carbon taxes

Their analysis shows that border carbon taxes, which would increase the cost of importing intermediary and end products from countries without active climate protection measures, could, in fact, undermine incentives for relocation. However, such measures are also associated with unintended side effects. Corporations that depend upon energy-intensive intermediary products may, for instance, also feel compelled to shift downstream production stages to non-regulated foreign locations in response to the increased cost of the required imports.

However, the analytic model is only capable of depicting linear, one-dimensional value creation chains. But in reality, production networks are complex, interwoven network structures. Therefore, the researchers went on to develop a computable general equilibrium model that describes actual global interconnections and material flows between economic sectors.

To calibrate the computable general equilibrium model, they used data from the World Input Output Database (WIOD). The WIOD is a European research project in which ZEW took part that specifically aimed at describing these broader linkages. Such models are especially conceived with the goal of depicting the economy as a whole, thereby making apparent the macroeconomic effects of different policy measures. Applying this numerical model, researchers first examined a scenario to measure the effects of a unilateral 20 per cent reduction in CO_2 emissions in the European Union. They found that the effects they had previously identified in the analytical model were reproduced, especially with regard to energy-intensive sectors.

Greatest effect observable in energy-intensive sectors

In the theoretical scenario applied, the proportion of non-EU value creation contained in goods produced in the EU rose by an average of three per cent across all sectors, while this effect was far greater in energy-intensive sectors such as the metalworking industry. In the second scenario, in addition to emissions reductions, the economists also included the border carbon taxes described above. The complex numerical model also suggested that border carbon taxes would put a stop to the relocation of production stages. However, this would take place at the price of lost market shares on non-European markets for European industries that are highly dependent on foreign preliminary production steps.

To this day, discussions about the effects of climate policy on industrial competitiveness have focused primarily on the output side. By contrast, this study shows that greater attention in this debate also needs to be directed at the input site in order to estimate effects on production structures and the import of required preliminary production stages.

The study is available for download at:
www.zew.de/en/publications/7751

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IN THIS ISSUE

Only Comprehensive Sustainability Strategies Pay off for Companies

Environmental protection has become an important goal for companies. A recent ZEW study examines whether corporate efforts to operate in a sustainable and environmentally responsible manner affect a firm's market value. It also looks at how long-term investments in sustainable technologies can be signalled to stakeholders in the short run.

Growing environmental awareness among a broad segment of consumers poses new challenges for companies. Some firms that already attach importance to social responsibility are adapting to this trend. By so doing, they can address specific consumer groups and are thus able to distinguish themselves from their competitors. Many companies are therefore engaging in research

and development projects targeted at designing new environmentally friendly products and production processes. The results of these endeavours, however, are neither certain nor available on short call. Moreover, such efforts may be barely perceptible to outsiders such as customers, investors, and other stakeholders. Against this backdrop, ZEW researchers examined whether companies could signal their strategies aimed at long-term sustainability to their stakeholders, thereby boosting their firm's market value.

The ZEW study uses data from the Thompson and Reuters ASSET4 database. This database contains information about the market value of listed corporations in various countries over a course of several years. It also includes data on whether companies have made investments in the research and development (R&D) of environmentally friendly products and processes, and whether they have taken steps in order to certify their efforts in the area of environmental and social responsibility. Various certificates are available in this field. The ZEW economists focused on the specific certificate of the Global Reporting Initiative (GRI) along with a focus on voluntary certification of corporate sustainability by external examiners and the corresponding impact of these certifications.

Firms need a comprehensive strategy for CSR

As a comparison or control group, the researchers use companies that undertook neither environmentally friendly R&D activities nor certifications for voluntary environmental protection measures. The study focuses on large companies listed on the stock market. The findings show that companies only investing in R&D for environmentally friendly products and processes achieve no greater market value than the control group. The same applies to companies only implementing certified voluntary measures. However, those companies combining both strategies (sustainable R&D plus certified environmentally friendly measures) show significantly greater market values than the control group. The firms need to engage in both activities, namely R&D and voluntary certified corporate social responsibility (CSR), in order to enable an increase of their market value. Certification provides a signal for current voluntary environmentally friendly or sustainable conduct, while R&D activities are fundamental for sustainable and environmentally friendly production in the future. Firms thus need a comprehensive strategy for CSR in the realm of sustainability, which both signals their current efforts and emphasises their programmes directed at the future.

It is important to note that the findings of the ZEW study are only valid for the specific quality label of the Global Reporting Initiative. The study did not find any effects for other external certifications. One explanation could be that some quality labels are more familiar than others and thus might have a greater impact on reputation, qualifying them as a more credible signal for voluntary sustainable businesses.

The study is available for download at:
www.zew.de/en/publications/7859

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Eastern European Nations Benefit from EU Climate Policy

With its current climate policy, the European Union hopes to play a leading role in climate and environmental protection. Yet EU climate policy measures also have a redistributive impact on purchasing power between the member states of the EU. A recent study carried out by ZEW indicates that this process of redistribution primarily benefits Eastern European nations.

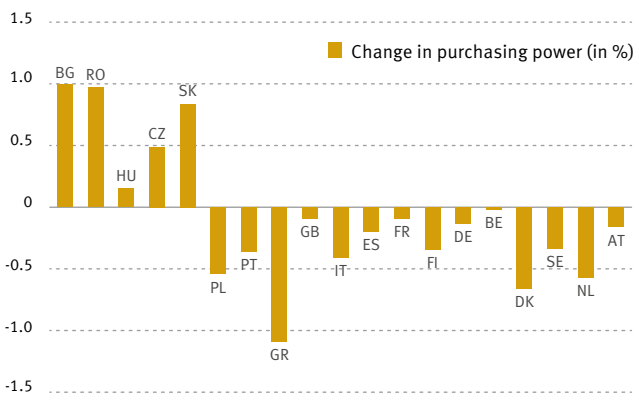
The EU Emissions Trading System (EU ETS) and the targets for increased use of renewable energies constitute two major components of EU climate policy. The aim is to reduce emissions of greenhouse gases by 20 per cent by 2020 in comparison to 1990 emission levels. The latest findings by ZEW researchers show that one result of this policy is the redistribution of purchasing power between EU member states, and also within each nation. In general, such effects tend to be moderate, and above all, it is Eastern European nations that are the primary beneficiaries of the redistributive impacts.

For the poorest EU nations, such as Bulgaria and Romania, researchers expect a comparatively more significant increase in the purchasing power of households by 2020. They also predict positive effects on purchasing power in Hungary, in the Czech Republic, and in Slovakia (see figure).

These effects can be attributed to the EU-wide rules governing the allocation of emissions allowances. Given that Eastern Europe is allocated a greater number of emissions allowances than it requires for its domestic industries, these rules can be said to be quite advantageous for Eastern European nations.

Economists also expect a moderate decrease in the purchasing power of most other EU member states. This is also the case for Germany, although the costs will be relatively low compared to the European average. A number of national climate policy measures were deliberately left out of consideration in the study in order to enable Europe-wide comparison of the distributive effects of the EU Emissions Trading System.

ANTICIPATED EFFECTS ON THE PURCHASING POWER OF HOUSEHOLDS AS A CONSEQUENCE OF EU CLIMATE POLICY AND ALLOCATION RULES FOR EMISSIONS ALLOWANCES



Source: ZEW

The study carried out by ZEW shows the EU Emissions Trading System deserves particular recognition as an efficient and effective environmental policy instrument. The scheme largely enables negative distributive impacts to be avoided. With regard to distributive effects, a scenario in which the EU defines no concrete Europe-wide targets for the increased use of renewable energies must be positively evaluated in view of the distributive impact. This would particularly benefit the poorest EU nations.

Avoiding negative distribution effects

When the anticipated distributive impacts are broken down for each EU nation, it can be shown that policy-makers can very effectively manage the burdens that fall upon different types of households. Essentially, regressive climate policies must be avoided, that is, policies that place a greater burden on households with lower incomes than on affluent households. Policy measures with unequally distributed costs are politically unappealing as they give the impression that particular social strata are being unfairly burdened. A careful allocation of revenues from the sales of emissions allowances may, however, allow such negative distributive impacts to be avoided.

As a general rule, it makes sense to refrain from granting large subsidies and instead to allow populations to share in the revenues gained from selling emissions allowances. Such a process is covered by existing EU law. Revenues from emissions sales could be fed back into the economic cycle through tax and transfer systems as a way of generating positive effects on demand.

Currently, revenues gained from the EU climate policy in Germany are primarily fed into the “Energy and Climate Fund”, a dedicated federal government asset used to finance climate protection measures. EU citizens therefore have not yet directly benefited from the revenues gained from EU climate policy.

As of 2020, the EU aims to redefine its climate policy. For the success of negotiations at the EU level, it is critical that no member state feels it is losing out. The study carried out by ZEW shows that the allocation of emissions allowances is an instrument for distributing policy costs that has already been effectively implemented. At the same time, it is becoming clear that the price of emissions allowances is critical for the effectiveness of this distributive instrument. Interventions that reduce this price could undermine any positive distributive impacts.

The ZEW study is part of the EU-funded ENTRACTE programme: http://entracte-project.eu/research/reportdistributional-impacts-energy-consequences-policy-mixes

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The Chinese government considers strict export restrictions for rare earths to be industrial policy instruments for preventing environmental damage.

The Politics of Raw Materials: Why Is China Restricting Rare Earths Export?

In past years, a growing number of nations have introduced export restrictions for raw materials. In China, such restrictions were, until recently, in place for rare earths – a commodity for which China enjoys a monopoly. ZEW economists have undertaken a closer analysis of the reasons for China's export barriers.

Numerous member states of the World Trade Organization (WTO) have implemented export restrictions on metals and minerals. These metals also include what is known as the "rare earths", which the United States, Japan, and Europe all classify as critical raw materials. Raw materials are termed as "critical" if they are of major economic importance to domestic industry and their supply is dominated by one or only a few nations. Rare earths are the most notorious example of such critical raw materials. They are used in the production of high-performance permanent magnets, ceramic capacitors, and in the defence industry. Future demand for rare earths is expected to increase sharply: estimates project an increase of up to 2,600 per cent over the next 25 years.

China harbours about fifty per cent of global rare earths deposits

The group of rare earth elements includes 17 metals that share similar chemical properties. They are not truly rare in the geological sense. The most common metal in this group occurs just as abundantly in the earth's crust as copper, and even the rarest element in the group is more prevalent than gold. Their rarity reflects the fact that they are extremely infrequently found in economically recoverable concentrations and, as a result, their extraction is extremely costly.

Approximately 50 per cent of global rare earths deposits are located in China. Beginning from the 1990s, the Chinese government declared rare earths as strategic materials. From that time on, foreign firms could only mine rare earths in cooperation with Chinese firms. From the beginning of the 2000s through 2012, the People's Republic accounted for around 95 per cent of the global supply of rare earth elements – this corresponds to a de facto monopoly position. Over time, the Chinese regime implemented further restrictions such as export duties and taxes, while also limiting export quantities. Yet the share of the People's Republic in global rare earths extraction still amounts to 85 per cent.

Industrial policy considerations are key in China's export policy

The ZEW study shows that export restrictions are primarily motivated by industrial policy considerations. The most important objective is to shift the location of production for foreign manufacturers that use rare earths to China. Policy-makers want to turn China into a bastion of rare-earths-intensive production. Since the 1980s, China has also built up a research infrastructure around rare earths and trained an expert labour force.

In addition, China regards export restrictions as an instrument for managing the major environmental problems generated by rare earth extraction. Export restrictions can replace environmental regulations when these cannot be enforced at the level of individual mines. However, the growing share of China's own demand for rare earths is limiting their effectiveness.

In 2014 the WTO ruled that China's export restrictions for rare earths were incompatible with WTO treaties. In response, China eliminated the export duties and quotas. However, market experts worry that the Chinese government may fall back upon other, less transparent export barriers. Thus, future developments remain fluid.

The study is available for download at:
www.zew.de/en/publications/7883

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Q&A: What Is the Cost of Aggressive Corporate Tax Planning for Europe?

"No Truly Reliable Figures Exist for Revenue Losses"

The European Commission has launched another attempt to tackle aggressive tax planning by multinationals. Its June action plan for reforming corporate taxation in the European Union intends to stop practices that, although not illegal, constitute unfair tax avoidance on the part of large corporations. Has the EU Commission found the right instrument to nip profit shifting in the bud and to dry up tax havens? Christoph Spengel, a ZEW Research Associate and corporate taxation expert from the University of Mannheim, argues that the Commission's proposed Common Corporate Tax Base will result in less bureaucracy and a definite increase in transparency.

Aggressive corporate tax planning may not be illegal, but it takes unfair advantage of profitable tax regimes, loopholes, and gaps in national tax law systems. Is it possible to estimate the foregone tax revenues on account of aggressive tax planning by companies?

The answer is no: no truly reliable figures exist for revenue losses from "aggressive" corporate tax planning. The lack of specific understanding about the true dimensions of revenue losses is a serious problem in the on-going debates within the G20, the Organisation for Economic Co-operation and Development (OECD), and the EU. To begin with, it would be important to distinguish between tax planning and tax evasion, and this is possible to some extent. Next, we would have to separate "aggressive" from "normal" tax planning. The latter is to be seen as a consequence of differences in tax levels between individual states. However, making this separation proves difficult. Our studies have found that internationally linked corporations in Germany pay around nine billion euros less in taxes when compared to non-affiliated companies. But this difference is only related to overall tax planning and thus includes "normal" tax planning. Not only is this figure small, but it also fails to provide a true estimation of the extent of "aggressive" tax planning. Given these low numbers, policy-makers should act with greater restraint.

The European Commission hopes that its action plan will make for greater fairness and efficiency in corporate taxation. Is the proposal for a Common Consolidated Corporate Tax Base (CCCTB) a step in the right direction?

The introduction of a CCCTB would place limitations on tax planning in the usual sense by consolidating corporate income within a group of companies. However, for the time being, the Commission has excluded the additional steps of consolidation and formula apportionment of profits. Instead, for good reasons, it is only proposing a Common Corporate Tax Base (CCTB), that is, only harmonising the rules for determining income. This still leaves room for tax planning.

An additional regulation in the EU action plan targets effective taxation at the site of value creation. Can such a regulation prevent fiscal losses from profit shifting?

Compared to existing tax law, a Common Corporate Tax Base alters nothing about the location where corporate profits will be taxed. Today's prevalent corporate structures and business models place little emphasis on the site of value creation. A CCCTB, which would include consolidation of individual profits and a formal breakdown of profits, would come closer to accomplishing such a change.

One obstacle is the heterogeneity of specific provisions in the tax laws of EU member states. Will the Commission's plan generally accommodate national legislation or will it conjure up a bureaucratic monster?

A Common Corporate Tax Base will not create a bureaucratic monster. Quite the contrary: a CCTB will ensure greater transparency for corporations operating across the EU, thereby reducing their tax compliance costs. In addition, the system is meant to be compulsory and could be implemented across all legal forms in Germany. These changes would have major advantages for the common market.

Tax sovereignty in the European Union lies primarily at the level of the national states. Is the European Commission attempting to assume additional competencies through its proposal?

In fact, EU member states would not lose important tax-related competencies as a result of a Common Corporate Tax Base. The proposals have been guided by the prevailing law in the member states so that the CCTB can be introduced in a revenue-neutral way. In addition, the major tax rate sovereignty will continue to rest with the individual member states. Our Mannheim-based research group has long supported such a harmonisation path.

Prof. Dr. Christoph Spengel

chairs the Department of Business Administration and Taxation II at the University of Mannheim and is a ZEW Research Associate. He also sits on the board of the "Mannheim Taxation" (MaTax) Leibniz Science Campus. Professor Spengel is a member of the Academic Advisory Board of the German Federal Ministry of Finance.

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Europe Is Facing Increased Pressure of Competition in the Digitalised World

Policy-makers and business representatives are calling for a consistent European digitalisation strategy. Parliaments and governments have addressed the issue at the national level, but data know no physical borders between countries. How can the EU develop the necessary digital infrastructure and establish a legal framework to make sure Europe is not falling behind? The 2015 ZEW Economic Forum, which took place on June 11, 2015, was devoted to the topic "Europe in Digital Competition".

Our world is becoming increasingly digitalised, with "Industry 4.0" being a catchword across the globe – and expectations are huge, including welfare and productivity gains from integrating cutting-edge information technologies into the value-added chain. But: this year's ZEW Economic Forum showed that the digitalised economy harbours as many challenges as it does opportunities. The event made the audience of around 220 attendants aware that there are still a number of problems to be solved to propel the European economy into a successful 4.0 future.

New developments in the digitalisation process

In her introduction, Professor Irene Bertschek, head of the ZEW Research Department "Information and Communication Technologies" (ICT), pointed to some new developments concerning digitalisation. While the process has been going on since the 1980s, when personal computers started to become popular in firms and households, digitalisation is now reshaping global production chains. According to Bertschek, the importance of the ICT sector for Germany has grown considerably: In 2013 the sector contributed 4.7 per cent, that is, about EUR 88 billion, to German gross value added, thereby drawing level with the German car manufacturing industry.

EU Commissioner calls for single digital market

In his keynote titled "The Digital Future of Europe", Günther H. Oettinger, EU Commissioner for Digital Economy and Society, took the same line. Europe's competitiveness in the digitalised economy primarily depends on a European strategy for a single digital EU market, he said. "If such a single market existed, Europe would be more a powerful player in the competition with US companies." He added: "Infrastructure will be a decisive factor. This means that we have to invest more in modern networks." A European strategy must also include the cultivation of an EU-wide data security environment. "So far, we have been too negligent with respect to data security," said Oettinger.

Professor Thomas Bauernhansl, director of the Fraunhofer Institute for Manufacturing Engineering and Automation in Stuttgart, also warned Europe not to lag behind its competition from the US and Asia. He emphasised that Internet giant Google alone spends the same amount on R&D every year as the entire German engineering industry taken together.

Panel discussion concludes the event

Following presentations on "Ubiquitous Working" and "Opportunities and Challenges Arising from Networked Work Environments" by ZEW researchers Dr. Susanne Steffes and Steffen Viete, a panel discussion concluded the 2015 Economic Forum. The panellists were Professor Irene Bertschek, Professor Martin Przewloka (Senior Vice President of SAP SE), Dr. Peter Adolphs (managing director at Pepperl+Fuchs), and Gerhard Steiger (president of division at Robert Bosch GmbH).

EU Commissioner Günther H. Oettinger spoke about "The Digital Future of Europe" at the 2015 ZEW Economic Forum.

The panellists agreed that Germany has some catching up to do regarding data security and digital infrastructure, and that joint and swift action of EU Member States is required to implement a consistent legal framework. In addition, new societal challenges will result from the increasing use of mobile ICT, which enable ubiquitous working. While the company representatives considered their firms to be on a solid track towards Industry 4.0, Professor Bertschek took a more cautious approach: "The fourth industrial revolution will be slower and less spectacular than widely expected." Yet European policy-makers are under time pressure to set the course – digitalisation calls for quick and courageous decisions to brave the challenges arising from innovative technologies.

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ZEW Lunch Debate in Brussels – Principal Witnesses Key to Combating Cartels in Europe

Kai Hüschelrath addressed EU cartel law at a ZEW Lunch Debate.

Combating cartels has top priority in EU competition policy. The Commission's most powerful weapon in this fight is its leniency programme. It enables cartel members to partly or even entirely dodge heavy fines – that is, to go unpunished. A ZEW Lunch Debate, staged at the Representation of the State of Baden-Württemberg to the European Union in Brussels on July 1, 2015, focused on the actual effectiveness of EU policies to reveal cartels. In a panel discussion, Professor Kai Hüschelrath (research unit head at ZEW), Dr. Stephanie Birmanns (lawyer for European and German cartel law, Schilling, Zutt & Anschütz law firm), and Dr. Gerald Miersch (head of unit, Directorate-General for Competition) tackled the issue of cartel law enforcement in Europe. ZEW President Professor Clemens Fuest chaired the debate in front of a selected group of experts, among them representatives of the European Commission and companies, as well as journalists.

Swiss Economist Receives Heinz König Young Scholar Award at ZEW Summer Workshop

Stefano Carattini from the Haute Ecole de Gestion de Genève, Switzerland, is the 2015 recipient of ZEW's Heinz König Young Scholar Award. The jury recognised the excellent research carried out by Carattini into the effect of pay-per-bag taxation of household waste on the produced amount of waste. By looking at the influence of such taxation, Carattini has made an important contribution to the debate on the impact of fiscal policy on tackling environmental issues and promoting a sustainable economy. The Heinz König Young Scholar Award comes with prize money of EUR 5,000. The recipient is also given the opportunity to spend an extended research stay at ZEW. This year's award was sponsored by Fuchs Petrolub SE, a member of the ZEW Sponsors' Association for Science and Practice. The award was presented to Carattini by ZEW President Clemens Fuest and Fuchs Petrolub representative Dagmar Steinert.

(from left:) Thomas Kohl (ZEW Director of Business and Administration), Dagmar Steinert (Fuchs Petrolub SE), awardee Stefano Carattini, Clemens Fuest (ZEW President)

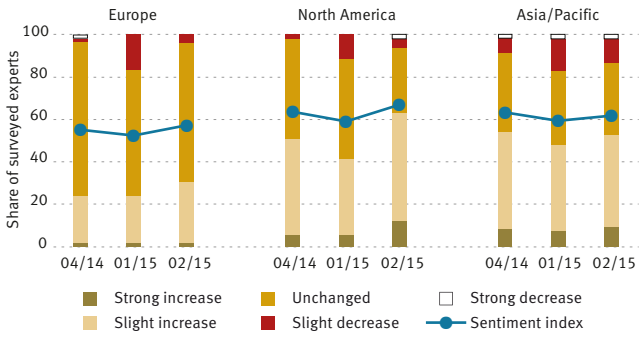
International Conference on the Economics of Innovation and Patenting at ZEW

Professor Reinhilde Veugelers (KU Leuven) spoke about approaches for measuring radical innovation on the basis of patent data at ZEW.

The ZEW Research Department "Industrial Economics and International Management" and the "Mannheim Centre for Competition and Innovation" (MaCCI) hosted the sixth "Conference on the Economics of Innovation and Patenting" in Mannheim on July 2 and 3, 2015.

The event was attended by 70 international participants and featured high-profile keynote speakers including Mike Scherer (Harvard University), Alberto Galasso (University of Toronto), Reinhilde Veugelers (KU Leuven) and Jordi Jaumandreu (Boston University). A special feature of this year's conference were three extra sessions, in which ZEW researchers presented current findings from two large EU-funded projects, WWWforEurope ("Welfare, Wealth, and Work for Europe") and CRE8TV.EU.

Expectations for Rail Freight Worsen Once Again



Source: ZEW

Following a temporary high in the previous quarter, experts involved in the Prognos/ZEW Transport Market Barometer are once again tending toward pessimistic expectations. Only about 20 per cent of experts expect increases in Germany and Western Europe; in the previous quarter this figure was around a third. The proportion of experts who even expect decreases has grown significantly to around 20 per cent. Expectations for Eastern Europe are even worse. The negative expectations for Germany are quite possibly a long-term result of the previous strikes.

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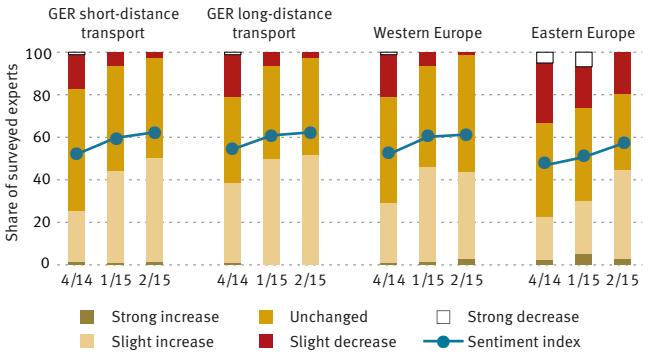
Upward Trend in Road Freight Continues



Source: ZEW

The sentiment index of the Transport Market Barometer has increased for the third consecutive time. Although increases may only be slight, almost none of the experts expect decreases in Germany and Western Europe. For Western Europe, the number of experts expecting increases has fallen slightly. The reserved expectations for certain Western European countries, including France and Italy, play a significant role here. Expectations for Eastern Europe remain largely positive. The threat posed by the Ukraine-Russia crisis has evidently lost its sting.

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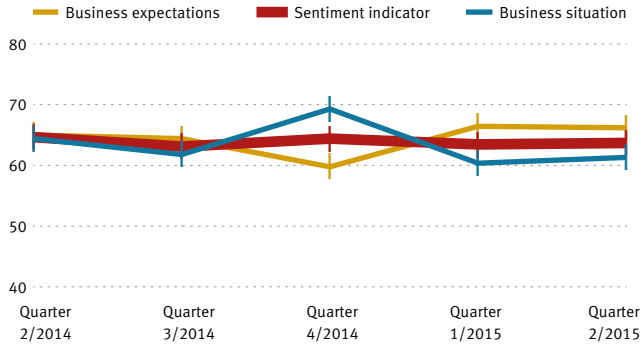
Companies in the German Information Economy Sector Are Optimistic



Source: ZEW

Six months into the year, economic sentiment in the information economy sector continues to be optimistic. This is suggested by the "ZEW Business Survey in the Information Economy". Reading 63.7 points, the sentiment indicator clearly exceeds the critical 50-point mark, signalling a positive climate in the information economy. The sub-indicator for business expectations currently stands at 66.2 points; the sub-indicator for the business situation stands at 61.3 points. Firms positively assess their situation in the second quarter and expect a favourable third quarter.

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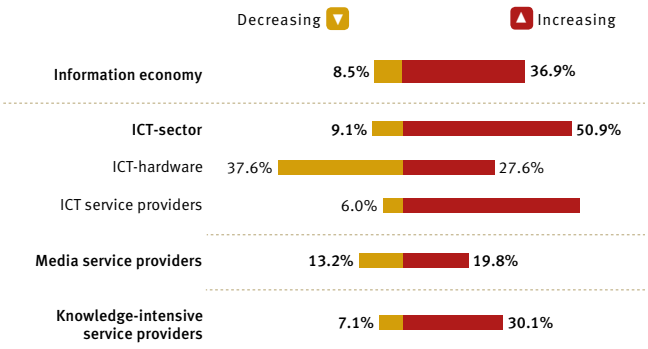
German Information Economy Expects Rise in Employment



Source: ZEW

The second quarter of 2015 saw a positive employment trend in the German information economy, according to the June edition of the "ZEW Business Survey in the Information Economy". New employees were hired by 34.4 per cent of firms, while 10.5 per cent cut staff back. With the exception of ICT hardware firms and other service providers (as part of the knowledge-intensive service providers), all sub-sectors reported a positive employment trend. A total of 28.4 per cent of companies expect employment to increase further in the third quarter.

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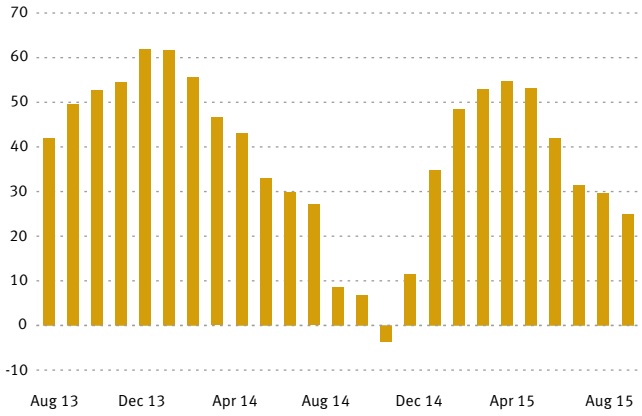
ZEW Financial Market Test August 2015



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

Germany: Economic Sentiment Declines Once Again

The ZEW Indicator of Economic Sentiment for Germany declines again in August 2015. Decreasing by 4.7 points, the index now stands at a level of 25.0 points (long-term average: 24.9 points). The German economic engine is still running smoothly. Yet economic sentiment has declined, because under the current geopolitical and global economic circumstances, substantial improvement is improbable. The assessment of the current situation in Germany has improved slightly. Increasing by 1.8 points, the indicator stands at 65.7 points. The financial market experts' sentiment concerning the economic development of the Eurozone has improved. The indicator has increased by 4.9 points to a reading of 47.6 points. Gaining 4.1 points, the indicator for the current situation in the euro area has reached minus 10.3 points.

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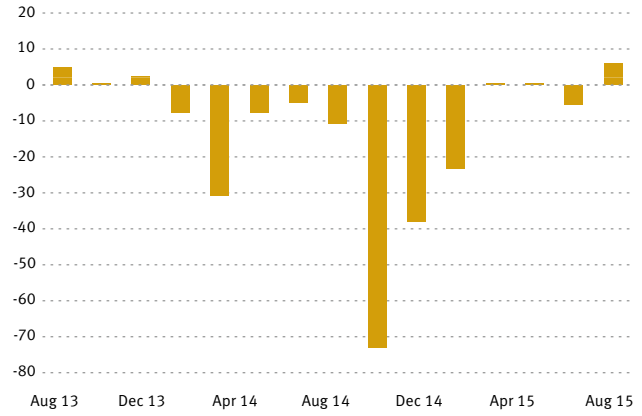

Balance of positive and negative assessments concerning economic development on a six-months horizon in Switzerland.
Source: ZEW, Credit Suisse

Switzerland: Economic Outlook in Positive Territory

The ZEW-CS Indicator for Switzerland has increased by 11.3 points in August 2015 to a reading of 5.9 points. Following significant deterioration as a result of the Swiss Franc shock at the beginning of the year, the indicator has remained around zero points for the last four months. Experts' assessments of the current state of Switzerland's economy have also improved slightly. The respective indicator has risen by 4.0 points to a current reading of minus 17.6 points. Around 70 per cent of the analysts surveyed assessed the current economic situation in Switzerland as "normal", six per cent considered it "good", and only 24 per cent view it as being "poor". The ZEW-CS Indicator reflects the expectations of the surveyed financial market experts regarding the economic development in Switzerland on a six-month horizon.

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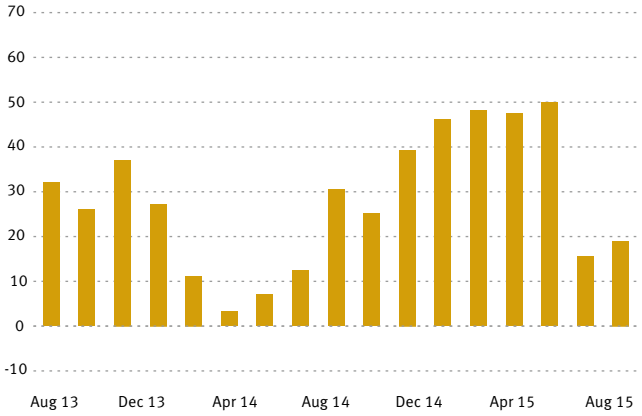

Balance of positive and negative assessments concerning economic development on a six-months horizon in the CEE region.
Source: ZEW

CEE Region: Slight Upturn in Economic Expectations

Economic expectations for Central and Eastern Europe including Turkey (CEE region) have slightly improved in August 2015. In the current survey, the ZEW-Erste Group Bank Economic Sentiment Indicator for the CEE region has increased by 3.5 points to a level of 19.0 points. Experts' assessment of the current economic situation for the CEE region has worsened by 20.1 points in August 2015. Decreasing to a value of minus 4.7, the indicator has entered negative territory.

A large majority of the surveyed experts, 85.7 per cent, consider the current economic situation to be "normal". The ZEW-Erste Group Bank Economic Sentiment Indicator for Central and Eastern Europe reflects the financial market experts' expectations for the CEE region on a six-month time horizon.

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Is the German Minimum Wage a Boon or Bane? Too Soon to Tell

With a minimum wage in effect for Germany since the beginning of the year, it's time to take preliminary stock of its impact. Has the statutory minimum wage led to job cuts, as many critics feared? At first glance, the picture looks positively rosy. The job market is booming, and in June the number of unemployed sunk to 2.71 million. Germany's Minister of Labour, Andrea Nahles, publically declared the naysayers mistaken. A closer look at the situation, however, reveals that the minister may have spoken too soon.

Germany's flourishing job market is part of an upward trend in employment that began years ago and owes its existence mostly to clever collective bargaining policies that have kept wage increases moderate. In addition, the job market has recently benefited from the falling euro exchange rate, the collapse in oil prices, and low interest rates. That legislators introduced the minimum wage in an extremely favourable economic climate explains why employment appears to come away almost unscathed. But it's simply not true that there have been no signs of job cuts.

Certain types of part-time employment, for instance, seem to be on a downward slide. In February the number of marginally employed individuals – people for whom a 400-euro "mini-job" is the only, not an additional, source of income – was 2.8% less than the year before. This translates into 136,000 fewer mini-jobs. Of course it is possible that employers converted some of those mini-jobs into real positions paying into social security insurance. But many retirees and students who rely on mini-jobs are likely among the first who have been hurt in the process.

Opponents of the minimum wage from the business sector have mainly criticised the additional bureaucracy it creates, specifically paperwork for hours worked and liability for subcontractors. It is fairly obvious that if the minimum wage is to work, companies must record employee hours. But I am not convinced that companies must necessarily be held liable when their subcontractors fail to pay the minimum wage. The statutory minimum also brings with it structural problems. To save money companies will try to increase the number of unpaid overtime hours, or force former low-wage employees into self-employment. In turn, politicians will seek to prevent such attempts to skirt regulations, leading to more bureaucracy. But the greatest risk lies neither in short-time employment effects nor in growing monitoring, but in long-term shifts on the job market.

A minimum wage adversely affects the creation of new jobs for the most vulnerable demographics, youth and unskilled workers, in particular. Consider France, where the minimum wage, currently EUR 9.61 an hour, has been a key reason for large unemployment among young adults. Policy-makers have been trying for years to fight unemployment by taking out less for social security with low-wage jobs, costing France around 20 billion euros a year. In the future these government subsidies are projected to increase. If things don't go well, something similar may happen in Germany.

It will take several years before the job market boom runs its course and the erosion of the low-wage sector has advanced to the point that the government must take action – in all likelihood with subsidies. At the end of the day, this will cost state coffers more than supplementing low wages. If future adjustments are moderate, the damage will be limited. If, by contrast, future elections are decided by which candidate campaigns on a higher minimum wage, the "German Wunder" on the labour market could become a thing of the past.

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