

2016

Annual Report

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ifo INSTITUTE

Leibniz Institute for Economic Research
at the University of Munich

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ifo Annual Report 2016

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The ifo Institute 2016

The Goals and Tasks of ifo Institute

Since its foundation in January 1949 ifo has provided both information and research, hence its name ifo = Information and Forschung (research). Its legal form is that of a registered, non-profit association. The ifo Institute is one of Europe's leading economic research institutes and is also the most frequently cited institute in the media. A cooperation agreement links ifo closely with the University of Munich (LMU), and in 2002 ifo was officially proclaimed an "Institute at the University of Munich".

The Center for Economic Studies (CES) of the LMU, the ifo Institute and the Munich Society for the Promotion of Economics – CESifo GmbH pool their resources within the CESifo Group to form an international research alliance. The group aims to enrich the public debate based on excellent theoretical and empirical economics research, to support economic policy-making decisions with high-quality policy advice, and to provide the public with highly-regarded economic information like the ifo Business Climate Index. One of ifo's central tasks is also to promote junior economists. It cooperates closely with the LMU in this area, which involves significant contributions to teaching activities. At the heart of the CESifo Group is the CESifo researcher network, which consists of former CES guest researchers.

As a member of the Leibniz Association the ifo Institute is an institution that receives public funding from the federal and state governments on the basis of Article 91b of the German Constitution. On 1 September 2011 the name of the ifo Institute was modified by means of a change to its Articles of Association. Since then its official name has been: ifo Institute – Leibniz Institute for Economic Research at the University of Munich.

ifo is an independent institution that makes its services available to all groups of society regardless of their political orientation. It is a European think tank that serves as a bridge between academic research and practical politics. It concentrates on **applied, policy-oriented economic research** with the goal of achieving greater stability, growth and societal cohesion. The research of the ifo Institute increasingly deals with European and global issues. It strives to meet the highest academic standards and contributes to policy advice and the economic-policy debate. It is committed to providing services for research and the general public.

Research at the ifo Institute is guided by setting socially recognised goals. These targets include maintaining the performance levels of the social market economy, rising to the demographic challenges ahead, ensuring the stability of the economy and the financial system, surviving global competition against a background of growing technological change and protecting the environment.

Like all other Leibniz institutions, the ifo Institute is subject to tough evaluations that are conducted once every seven years by the Leibniz Association Senate. As in past evaluations, the ifo Institute also performed excellently in its latest evaluation, which was completed with the Statement of the Leibniz Association dated 17 July 2013.

In this statement the Leibniz Senate established that the ifo Institute had very successfully achieved its mandate of conducting: "applied policy-oriented economic research, providing research results, data and information to interested individuals from academia, business, politics and the general public." It found that the ifo Institute makes: "significant research contributions that are internationally recognised and acts as an important bridge between academic research and policy advisory work [...] The amount of research, service and advisory work done has developed excellently. The ifo Institute is now one of Europe's leading economic research institutes."

The Leibniz Senate and the international group of experts commissioned by it attest the institute's excellent performance at all levels and in all fields of work – from research and policy advisory work to services, the promotion of junior researchers and infrastructure. The work done in the ifo Institute's eight research departments was evaluated as very good overall, and as excellent in some cases. The quantity and quality of the institute's publications has improved further since the last evaluation and is now excellent.

ifo's 8 research centers – Public Finance and Political Economy, Labour and Demographic Economics, The Economics of Education, Industrial Organisation and New Technologies, Energy, Climate and Exhaustible Resources, International Economics, International Institutional Comparisons and Migration Research and Business Cycle Analysis and Surveys – cover research topics that are also highly relevant for policy advice.

ifo performs strongly in Leibniz evaluation

ifo's publications described as excellent

The ifo Dresden branch, founded in 1993, works in areas that are of special interest to the Free State of Saxony, from which it receives its funding.

In its international activities the ifo Institute cooperates very closely with CESifo GmbH and the CESifo researcher network supervised by the latter. As the Leibniz Senate confirmed in its Statement of 17 July 2013, CESifo GmbH has an important role to play in the cooperation between the ifo Institute and the Center for Economic Studies (CES) at the LMU. The cooperation with CESifo is an important element in the international profile of the scientific research conducted by ifo and the LMU.

CESifo raises ifo's international profile

ifo's junior research staff also benefit tremendously from the network effects within the CESifo Group. ifo employs more than 50 doctoral students, most of which participate in the institute's graduate programme and are also members of the Munich Graduate School of Economics (MGSE) at the University of Munich. ifo's doctoral programme is particularly attractive thanks to the fact that it combines academic research with the institute's practical, policy-orientation.

The scientific research carried out at the ifo Institute is subject to the "Rules of good scientific practice" drafted by the German Research Foundation (DFG), as well as to the gender equality standards established by it. The ifo Institute is seeking to gradually address the existing under-representation of women among its researchers through its particularly intensive support of young female academics.

ifo addresses under-representation of female academics

Politics and the general public benefit from the close link between the ifo Institute and the university, as this link reinforces the institute's academic performance and first-class research is the foundation for the policy work that the institute sees as its core task. The report (2013) of the Leibniz Senate group of experts states: "As part of its policy advisory work, ifo participates very actively in public debates over the best economic policy ideas and concepts. With its research results and policy recommendations, it is helping to develop reform ideas and make Germany fit for the future." ifo's policy work is also reflected in a large number of expert reports commissioned by public and private sector clients on topical economic policy issues. ifo was among the institutes to submit a successful bid for the joint economic forecast tender, issued for the first time at

a European level in 2007; and bid successfully again in the 2010 and 2013 tenders. The ifo Institute also makes its expertise available to the public sector institutions of other countries – especially in those states that do not belong to the OECD.

In addition to its research and policy advice, the ifo Institute also provides the public with data, information and other services. This takes place especially in connection with its project-related and its regular surveys of national and international business. Every month, the ifo Business Climate Index, an established leading indicator of the business cycle derived from the ifo Business Survey, is awaited with great anticipation by the media, investors, and business leaders. The results of the ifo World Economic Survey, the Institute's quarterly poll of international economic activity in 120 countries, are published in the CESifo World Economic Survey, a journal launched in 2002. Since its launch in 1999, the Database for Institutional Comparisons in Europe (DICE), which currently contains around 3,800 tables, graphs and short reports, has grown significantly and enriched the range of services provided by the ifo Institute. Since the beginning of 2003 the results of these institutionally oriented studies and comparative presentations of institutional regulations have been published in the quarterly journal, *CESifo DICE Report*.

ifo also offers a broad range of information via the internet, which are available in German and English, and publishes several journals and book series. International publications, together with other activities conducted by the CESifo Group, are becoming increasingly important.

Every year the CESifo Group organises a number of international conferences at the ifo Institute, and has become the second largest research network in economics worldwide with over 1,300 researchers in 41 countries. The CESifo Working Papers written by members of this research network again took top places among all economic research institutions in a worldwide comparison of downloads from the website of the Social Science Research Network.

ifo's work is characterised by its cooperation with universities and renowned researchers in Germany and abroad. Its cooperation with the University of Munich occupies a special place in ifo's work. ifo and the LMU jointly created the "Economics & Business Data Center"

(EBDC), whose main task is to supply a continuously updated data set of German companies to feed new areas of research in economics and business administration. The EBDC provides researchers with corporate data, a combination of ifo survey data and other corporate data sources, and is the main contact and coordinator for scientific databases at the enterprise level. In December 2013 a Research Data Center branch of the Bavarian Federal Statistics Office was opened in the EBDC. Researcher can now access federal statistics survey data on the EBDC premises.

Another expression of the close cooperation between ifo and LMU is the joint appointment of department head positions at the ifo Institute. This applies not only to the president, but also to all ifo directors of the research centers. A total of eight endowed professorships are available to this end. In addition to these jointly appointed professors, other ifo Institute researchers are also active in terms of teaching, in some cases as visiting professors with fixed-term tenures.

Close cooperation with the LMU and the joint appointment of ifo's department heads are central aspects of the efforts made by the ifo Institute to provide its researchers with the optimal framework conditions for achieving outstanding results in their research and policy advisory work. To affirm this personnel policy, the ifo Institute has signed up to the "Code of Conduct for the Recruitment of Researchers" featured in the European Commission's "European Charter for Researchers".

Cooperation with other partners – in particular the Universities of Augsburg, Dresden, Konstanz, Münster, Passau, Regensburg – enriches the work of the Institute. In addition, the ifo Institute conducts research in collaboration with a great number of economists from university and non-university entities. This has resulted in informal international research networks in the individual ifo departments and for the Institute as a whole, including CIRET (Centre for International Research on Economic Tendency Surveys), the EENEE (European Expert Network of Educational Economists) and EUROCONSTRUCT.

The ifo Institute cooperates closely with external economists and other established experts to assure the quality of its research. This particularly applies to its 51 research professors and 5 research affiliates, research associates and senior research associates (sta-

tus: 31 December 2016) and to more than 40 guest professors annually from all over the world, with whom ifo researchers collaborate on joint projects. The Scientific Advisory Board and the User Advisory Board play a particularly important role. Both bodies assist the Institute in its planning, as well as evaluating its performance, and therefore help to maintain the scientific quality of the ifo Institute's services. The ifo Institute is very grateful to the external researchers who are involved in the CESifo Group and members of its advisory bodies.

**ifo cooperates
closely with external
economists**

Report of the Executive Board

The major event of 2016 was the change of presidents at the ifo Institute. On 31 March 2016, shortly after his 68th birthday, Professor Hans-Werner Sinn's presidency at the ifo Institute came to an end, as well as his full professorship at the Ludwig Maximilian University of Munich (LMU) and his directorship of the Center for Economic Studies (CES) and CESifo GmbH. He remains closely connected to the ifo Institute, however, as an independent researcher, and the Institute has provided him with an office and personnel support. On 1 April 2016, Prof. Clemens Fuest assumed the presidency, having previously been jointly appointed by the ifo Institute and the LMU as ifo President and to the LMU Professorial Chair for Economics and Public Finance.

Clemens Fuest takes over as ifo President on 1 April 2016

With the departure of Hans-Werner Sinn from the Executive Board, an era ended that was strongly influenced by the ifo Institute and the LMU economics faculty. Sinn was president of the ifo Institute for 17 years and Managing Director of CESifo GmbH for 25 years. He was also a full professor at the Economics Faculty of the LMU for almost 32 years. During his term as ifo President, the ifo Institute, whose very existence was severely threatened after a critical evaluation appraisal by the Wissenschaftsrat in the second half of the 1990s, rose to become one of the leading economic research institutes in Europe; together with CES and CESifo GmbH, a powerful, internationally visible research group was created. Hans-Werner Sinn has enjoyed an unparalleled influence over the economic policy debate of the past 25 years in Germany, while also making economic theory accessible to broad swathes of the general public too.

Hans-Werner Sinn dominated economic policy debate for 25 years

The CESifo Group marked the occasion of Hans-Werner Sinn's retirement to honour his achievements with a special event consisting of an international scientific symposium and a ceremonial act in the Great Hall of the LMU, followed by a state reception and a festive dinner at the Munich Residenz. On the morning of 22 January 2016, over 400 renowned economists from all over the world gathered at the LMU for an International Scientific Symposium to mark Hans-Werner Sinn's retirement and the 25th Anniversary of the Center for Economic Studies. After words of welcome by LMU President Prof. Bernd Huber, conference chairmen Prof. Robin Boadway and Prof. Carsten Eckel, the former chairman of ifo's Advisory Council, Prof. Assaf Razin and Prof. Robert Haveman, as well as by Prof. Rick van der Ploeg

representing the Area Directors of the CESifo Research Network, Prof. Kai Konrad honoured the scientific work of Hans-Werner Sinn in his laudatory speech. The subsequent keynote address by German Bundesbank President Jens Weidmann and four high-profile panels under the direction of the renowned professors Harold James, James R. Markusen, Oliver Hart and Michael P. Devereux provided stimulus for exciting economic-policy discussions.

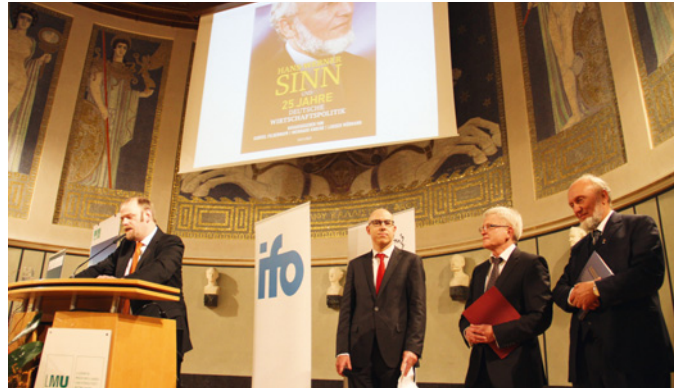
The afternoon was marked by a ceremony attended by leading figures from politics, business, the media and the public administration. The ceremony was opened by LMU President Prof. Bernd Huber and ifo Administrative Council Chairman, Dr. Peter-Alexander Wacker. Keynote speakers were German Federal Minister of Finance Dr. Wolfgang Schäuble and the renowned American economist Prof. Martin Feldstein, Harvard professor and long-time NBER president. The former Bavarian Minister of Economic Affairs, Dr. Otto Wiesheu, the economist Prof. Agnar Sandmo, closely linked to the CESifo Group, and the chairwoman of the Verein für Sozialpolitik, Prof. Monika Schnitzer, paid tribute to the life-time achievements of Hans-Werner Sinn. At the end of the ceremony, the ifo Executive Board member Prof. Meinhard Knoche and the ifo department heads Prof. Gabriel Felbermayr and Prof. Ludger Woessmann presented the departing president with the book *Hans-Werner Sinn and 25 Years of German Economic Policy* published by Hanser Verlag. In this book, 111 authors, including several Nobel laureates and other political, economic, academic and media personalities, explore the economic-policy contributions of Hans-Werner Sinn from their various perspectives.

Following the ceremony, the Bavarian state government held a state reception in the Max Joseph Saal of the Munich Residenz, where Minister of State Ilse Aigner welcomed the guests and acknowledged the achievements of the departing president. The highlight of the farewell ceremony was the festive dinner that followed the state reception. The Bavarian Minister President, Horst Seehofer, took the opportunity to give a whimsical assessment of Hans-Werner Sinn's achievements.

The Friends of the ifo Institute lent support to the ceremony by financing the commemorative book, as well as the festive dinner in the Munich Residenz.



Dr. Peter-Alexander Wacker



Prof. Dr. Ludger Wößmann
Prof. Gabriel Felbermayr, Ph.D.
Prof. Meinhard Knoche
Prof. Dr. Dr. h.c. mult. Hans-Werner Sinn



Dr. Wolfgang Schäuble



Ilse Aigner



Dr. Roland Berger



Prof. Dr. Dr. h.c. mult. Hans-Werner Sinn
Horst Seehofer

ifo band takes to the stage

A further highlight of Hans-Werner Sinn's farewell was organised by the employees of the ifo Institute, CES and CESifo GmbH. On 8 March 2016, they staged a meticulously planned party in the rooms of the ifo Institute entitled: *Servus HWS*. To start off the evening, Meinhard Knoche and his ifo band, with Prof. Larsfeld (German Council of Economic Advisors) on vocals, played two rock classics for the outgoing president: "Walk, Don't Run" and "Learn to Fly". The publications department then presented their video production that took the guests on a fascinating journey through the life of Hans-Werner Sinn.



ifo Band with Guest Vocalist Lars Feld

This was followed by various witty presentations by the staff: the "Sinn-Frage" ("question of meaning") was presented from a business-cycle perspective, an "economist rap" was performed and ifo's two board members, Sinn and Knoche, were tested to determine whether they really were the "ifo Dream Team". The "Family Model Sinn", a "Visual Sinn Story" and a special edition of "The Economist" dedicated to HWS were presented. The ifo infrastructure areas showed their creative talent with a "Small Postal Theatre" and a "Digital Cake", before Hans-Werner Sinn played the game "Germany's Next Top Pensioner". After a musical comedy presented by the CES team, the rock band took over. Hans-Werner Sinn and his wife Gerlinde (along with the other party guests) were given a crash course in rock-and-roll dancing. The guests then danced to twenty selections from over 60-years of rock and roll music history.

Prof. Clemens Fuest began his term in office as ifo President on 1 April 2016 with a video message. The presidency of the ifo Institute is linked to a Chair for Economics and Public Finance at the Economics Faculty of

the LMU, as well as the positions of Director of CES and Managing Director of CESifo GmbH. On 28 April 2017 Clemens Fuest was publicly inaugurated as ifo President at the 67th Annual Meeting of the ifo Institute, which was held under the motto: "The European Union at a Crossroads."



ifo Dream Team

Prof. Bernd Huber, President of the LMU, welcomed Clemens Fuest as the new ifo President and holder of the Chair of Finance and Public Economics at the LMU and wished him every success and good fortune in his new position. Dr. Peter-Alexander Wacker, Chairman of ifo's Administrative Council then welcomed Clemens Fuest as the sixth president of the ifo Institute and his choice of presentation: "The European Union at the Crossroads", as the analysis of current developments within the European Union is at the top of the political and academic agenda. Dr. Wacker wished Clemens Fuest every success in his position so that ifo will remain at the forefront in research performance and continue to participate intensively in policy advice and the policy debate.

Former ifo President Hans-Werner Sinn also expressed his satisfaction with the choice of his successor. He has much in common with Clemens Fuest: both are public-finance economists, they have had many talks together and both hold similar views on economic problems. Sinn stressed that there is no economist in Europe in the field of public finance that combines research strength with economic-policy consulting expertise to the same degree as Clemens Fuest. His research has sound microeconomic foundations, and as a public-finance economist, he is also astute in institutional analysis and is aware of its relevance.

"ifo's Dream Team" put to the test

Clemens Fuest thanked the previous speakers for the introductory words and for their support in his move to Munich. He thanked Hans-Werner Sinn in particular for his promotion of young economists, from which he too benefited in the past. In his inaugural speech, Fuest described the current situation of the European Union as extremely difficult. Growing separatist currents in many countries are aimed at disintegration; the EU has been experiencing a euro crisis for six or seven years, depending on where it is considered to have begun. To overcome the debt crisis in the euro area, Fuest proposed the introduction of a new form of subordinated government bonds: accountability bonds. To prevent the costs of high government debt, in violation of Maastricht, from being passed onto the taxpayers of other countries, he proposed that subordinated government bonds be introduced that cannot be bought by the European Central Bank. As of a cyclically-adjusted new debt of 0.5% of GDP, states should only be able to issue subordinated bonds. If the government debt ratio exceeds 120%, interest payments would not accrue for these bonds, and they would be automatically extended until the debt ratio falls below this threshold again. If a country takes advantage of an ESM programme, the bonds are cancelled completely. As a result, creditors are more liable and not taxpayers, especially taxpayers in other countries.



Prof. Clemens Fuest, President of the ifo Institute

Fuest's presentation was followed by a panel of experts that discussed the current situation of the European Union, particularly with regard to the forthcoming vote on Britain's departure from the EU. The participants were Prof. John Ryan, the London School of Economics and Political Science, Quentin Peel, The Financial Times, Jeromin Zettelmeyer, Ph.D., Head of the Department of Economic Policy at the Federal Ministry of Economics and Energy, and Clemens Fuest.



Panel: John Ryan, Clemens Fuest, Quentin Peel, Jeromin Zettelmeyer

The change in presidency led to a structural change in the year under review. A research group on taxation and fiscal policy was created at the Executive-Board level, to be led by the new President. The aim of this research group is to further sharpen the fiscal-policy profile of the ifo institute and to contribute to research, as well as academically sound policy advice in this area. The research group is to be given the opportunity to tackle current issues in the tax and fiscal policy debate and to react flexibly to new emerging economic policy discussions. In addition, the research group will contribute its tax and fiscal policy expertise to the research projects conducted by the various ifo departments, thereby further strengthening the cooperation between ifo's research departments.

New research group on taxation and fiscal policy

The term of office of Prof. Meinhard Knoche, **Executive Board member responsible for commercial management**, was extended by the Administrative Council in 2015 beyond his retirement age (31 March 2016) to 31 August 2017. To fill this position, the search for a successor was initiated in 2016. To this end, the Administrative Council appointed a selection committee that conducted interviews with several applicants during the course of 2016. The process was successfully completed in March 2017 with the appointment of Stephanie Dittmer, Head of Strategy/Impulse and Networking Fund of the Helmholtz Association. She will join ifo's Executive Board on 1 September 2017.

Meinhard Knoche's term of office extended

In the two preceding years, the filling of two vacant department-head positions, with chairs at the LMU, had been postponed to enable the new president to participate in the joint appointment of the future department heads. The appointment process was initiated after the designation of ifo's new President.

The procedure for appointing a **professor for Empirical Innovation Economics**, a chair financed by the ifo Institute, combined with directorship of the ifo Center for Industrial Economics and New Technologies, was successfully concluded. The appointment of Prof. Oliver Falck to this tenured professorship took effect on 1 October 2016.

The second appointment was for a **foundation professorship for Macroeconomics and Business-cycle Research** combined with directorship of the ifo Center for Business-cycle Analysis and Surveys. It was delayed because of the withdrawal of some candidates, which made it necessary to restart the appointment procedure. Among a strong list of candidates, Prof. Andreas Peichl (Center for European Economic Research and University of Mannheim) was awarded first place by the appointment committees of the LMU and the ifo Institute. Andreas Peichl accepted the call at the end of March 2017 and will start his activity at the ifo Institute on 1 June 2017.

Andreas Peichl
appointed new
department head

There were also changes in the **ifo Official Bodies**: Ms Milagros Caiña-Andree, Member of the Board of Management of BMW AG, and Prof. Anja Tuschke, Full Professor at the LMU Faculty of Business Economics, are new members of the Board of Trustees. Ms Caiña-Andree is also a member of the Board of Directors. Both Prof. Ursula Engelen-Kefer and Heinrich Traublinger have completed their terms on the Administrative Council and the Board of Trustees. After the end of the second and final term, Prof. Robin Boadway, his deputy member Prof. Heinrich Ursprung, Prof. Massimo Bordignon, Prof. Michael Burda and Prof. Monika Schnitzer have left the Advisory Council. The Institute expresses its gratitude for their outstanding commitment to the ifo Institute. Five top international economists were appointed members of the Advisory Council in 2016: Prof. Michael Devereux, Oxford University, Prof. Hans Gersbach, ETH Zurich, Prof. Veronika Grimm, University of Erlangen-Nuremberg, Prof. James Hines, University of Michigan, and Prof. Karen Helene Ulltveit-Moe, University of Oslo. The Advisory Council elected Professor Anthony Venables, Oxford University, as its new Chairman and Prof. Veronika Grimm as his deputy.

Robin Boadway's
second term as
Scientific Advisory
Council Chairman
ends

The following is an overview of the results achieved in research, the promotion of junior economists, policy advisory work and research services:

RESEARCH AND THE PROMOTION OF JUNIOR ECONOMISTS

The output of the research staff at the ifo Institute in the year under review was again remarkable. A total of 100 papers submitted by ifo economists to internationally recognised refereed journals were accepted for publication. 58 of these were published in the year under review. Almost half, i.e. 44 out of a total of 100, were accepted for publication by high-ranking professional journals of the categories A+ to B. In addition, ifo staff presented their research results by delivering 154 papers at international conferences with a referee system.

Table 1: Publications in Peer-Reviewed Journals from 2006 to 2016

	2006 ¹⁾	2007 ¹⁾	2008 ¹⁾	2009 ¹⁾	2010 ¹⁾	2011 ¹⁾	2012 ¹⁾	2013 ¹⁾	2014 ¹⁾	2015 ¹⁾	2016 ²⁾
Articles in peer-reviewed journals	33	60	81	53	44	55	68	63	57	56	100 (58)
Of which those in categories A+ to B (as of 2009)				15	19	24	31	32	22	28	44 (24)

¹⁾Articles published in the particular year. ²⁾Articles published or accepted for publication in 2016 (published articles in brackets).

The following researchers succeeded in published articles in category A+/A journals:

- Hans-Werner Sinn (with John Hassler), “The Fossil Episode”, *Journal of Monetary Economics* 83, 2016, 14–26;
- Philipp Lergetporer (with Silvia Angerer, Daniela Glätzle-Rützler and Matthias Sutter), “Cooperation and discrimination within and across language borders: Evidence from children in a bilingual city”, *European Economic Review* 90, 2016, 254–264;
- Christa Hainz and Ludger Wößmann (with Sascha Becker and Katrin Boeckh), “The Empire is Dead, Long Live the Empire! Long-Run Persistence of Trust and Corruption in the Bureaucracy”, *Economic Journal* 126(590), 2016, 40–74;
- Natalia Danzer (with Alexander M. Danzer), “The Long-Run Consequences of Chernobyl: Evidence on Subjective Well-Being, Mental Health and Welfare”, *Journal of Public Economics* 135, 2016, 47–60;
- Timo Hener and Helmut Rainer (with Stefan Bauernschuster), “Children of a (Policy) Revolution: The Introduction of Universal Child Care and its Effect on Fertility”, *Journal of the European Economic Association* 14(4), 2016, 975–1005;

- Helmut Rainer (with Dan Anderberg, Jonathan Wadsworth and Tanya Wilson), “Unemployment and Domestic Violence: Theory and Evidence”, *Economic Journal*, forthcoming;
- Ludger Wößmann (with Eric A. Hanushek), “Knowledge Capital, Growth, and the East Asian Miracle”, *Science* 351(6271), 2016, 344–345.

ifo’s flagship publications also include monographs published by renowned international publishers and subject to a rigorous review process. Alexander Steiner published the book *Global Imbalances, Financial Crises, and Central Bank Policies* at Elsevier, one of the world’s leading publishers of scientific literature. The author deals with the question of the extent to which current account balances and deficits in public budgets are linked to the reserve policy of central banks. He has also developed a new approach for determining the optimal demand for currency reserves.

In the CESifo Seminar Series published by MIT Press, three books were released in 2016: *The Economics and Political Economy of Energy Subsidies*, *Public Sector Economics and the Need for Reforms* and *The Economics of Language Policy*. This series features the results of joint projects by CESifo researchers and acknowledged external experts. The aim is to offer an overview of the latest developments in research in areas that are relevant to the current policy debate.

The publication successes enjoyed by ifo researchers are also reflected in the **scientific rankings of the RePEc network** (RePEc – Research Papers in Economics). In the RePEc ranking of international scientific citations of institutes based in Germany, Munich-based economists once again occupied top rankings at the end of 2016: ifo Institute (3), CESifo (4) and LMU (6). The IZA Network (Institute of Labor Economics, Bonn), which comprises well over a thousand researchers from all over the world, and the European Central Bank (based in Frankfurt am Main) received the top rankings.

In the corresponding RePEc ranking of scientific citations of individual researchers, ifo researchers also placed very high. Hans-Werner Sinn was ranked second among German economists and Ludger Woessmann was in fifth place. ifo President Clemens Fuest was ranked 38th. Four other ifo department heads also feature

in the top 100 economists in this rating (see Table 3) namely Gabriel Felbermayr (32), Niklas Potrafke (56), Panu Poutvaara (88) und Oliver Falck (97).

Table 2: Economic Research Institutes and Economics Faculties in the RePEc-Ranking in December 2016

Rang	Institution	Average Ranking
1	IZA, Bonn	1.6
2	EZB, Frankfurt/Main	1.62
3	ifo Institute, Munich	3.67
4	CESifo, Munich	3.95
5	DIW, Berlin	4.17
6	LMU, Munich	6.5
7	University of Frankfurt/Main	7.47
8	University of Mannheim	8.86
9	University of Bonn	9.18
10	ZEW, Mannheim	9.23
14	IfW, Kiel	12.76
20	RWI, Essen	22.4
29	IWH, Halle	31.74

Table 3: Individual Researchers in the RePEc Ranking of December 2016 (up to rank 251)

Rang	Person*	Institution	Average Ranking
1	Luc Laeven	ECB, Frankfurt/Main	2.61
2	Hans-Werner Sinn	ifo Institute	4.05
3	Urs Fischbacher	University of Konstanz	4.86
4	Armin Falk	University of Bonn	5.26
5	<i>Ludger Wößmann</i>	<i>ifo Institute</i>	6.36
6	Marcel Fratzscher	DIW, Berlin	7.19
7	Martin F. Hellwig	MPI, Bonn	7.69
8	Klaus M. Schmidt	LMU	7.76
9	Axel Dreher	IZA, Bonn	13.16
10	Wolfgang Karl Härdle	University of Berlin	17.25
25	Dennis Snower	IfW, Kiel	27.86
32	<i>Gabriel J. Felbermayr</i>	<i>ifo Institute</i>	35.21
35	Christoph M. Schmidt	RWI, Essen	36.96
38	Clemens Fuest	ifo Institute	39.95
56	<i>Niklas Potrafke</i>	<i>ifo Institute</i>	60.3
64	Reint E. Gropp	IWH, Halle	68.38
88	<i>Panu Poutvaara</i>	<i>ifo Institute</i>	90.97
97	<i>Oliver Falck</i>	<i>ifo Institute</i>	99.42
174	<i>Timo Wollmershäuser</i>	<i>ifo Institute</i>	175.43
251	Achim Wambach	ZEW, Mannheim	240.54

* **Bold:** Presidents of the respective economics institutes. *Italics:* Department heads at the ifo Institute (status: 2016).

As a part of its research activity, the promotion of young economists has become a core task of the ifo Institute. As of December 2016, the ifo Institute had 56 doctoral students. Including the doctoral students who were ei-

ther on parental leave as of this date or were on leave for a longer-term stay abroad, their numbers would be well over 60 doctoral students. In the previous year, the figure was 46. This increase was made possible by the fact that the ifo Institute was successful in its **acquisition of research projects awarded by competitive tender** in 2016. These include the project Quantitative Tools for the Analysis of Global Governance Issues (QUANTAGG) of the ifo Center for International Economics, which was part of a Leibniz competition. A total of 13 doctoral students received their PhDs in 2016: Wolfgang Auer, Julian Dieler, Inga Heiland, Kai Jäger, Jan Kluge, Sybille Lehwald, Till Nikolka, Johannes Pfeiffer, Marina Riem, Christoph Schinke, Felix Schröter Ruth Maria Schüler and Michael Weber.

13 doctoral
students obtained
PhDs in 2016

ifo's researchers also contribute to the promotion of young economists by **holding lectures and seminars**. In the year under review, ifo staff took on 79 teaching assignments and supervised 67 bachelor's and master's theses, 64 dissertations and 19 habilitations.

The ideal framework conditions for research and further education of ifo staff include international cooperation and networking. This is primarily achieved by **involving guest researchers and research professors** in the ifo Institute's work. In 2016, there were 44 guest researcher stays at the ifo Institute. Prof. Marc-Andreas Mündler, University of California, San Diego, Prof. Wolfgang Keller, University of Colorado and Prof. Johannes Becker, University of Münster joined as new research professors, meaning that a total of 51 external researchers were linked to the ifo Institute as research professors as of 31 December 2016. In addition, the environmental economist and decision theorist Prof. Christian Traeger (University of Oslo) was named Research Director for the ifo Center for Energy, Climate and Exhaustible Resources. He will support the department in its research and in its promotion of young economists. Prof. Christina Fong, Carnegie Mellon University, and Prof. Geoffrey J. Blandford, Electric Power Research Institute, were added as new Senior Research Associates; while Prof. Steffen Henzel, Munich University of Applied Sciences, was appointed Research Associate.

44 guest researcher
stays in 2016

A particularly important element of international networking is the **support for research stays by ifo researchers**, especially at foreign universities. A total of 27 research stays took place at the following top universities in the US: University of California, Berkeley (2),

University of Chicago (2), Harvard University (1), New York University (1), University of California, San Diego (1), Carnegie Mellon University, Pittsburgh (1), and Fordham University, New York (1). Research stays also took place at some European universities such as the University of Cambridge, Katholieke Universiteit Leuven or Tilburg University. Further research stays were at the Institute for Economic Research, Helsinki, and at the Center for Research & Analysis of Migration, University College London.

Every year, the CESifo Group organises numerous conferences, workshops and seminars that create the ideal conditions for promoting the exchange of ideas and networking between researchers. Particularly noteworthy are the Area Conferences, as well as the CESifo Venice Summer Institute. In total, the CESifo Group held 22 international scientific conferences during the reporting year, most of which took place at the ifo Institute's conference rooms. At the CESifo Venice Summer Institute, the following five workshops were held: "The Economics of Philanthropy", "Disrupted Economic Relationships: Disasters, Sanctions, Dissolutions", "Political Economy Aspects of Income (Re-) Distribution", "The Economics of Peace and War" and "Climate Change and Migration". These conferences and workshops mainly aim to promote scientific exchanges between the members of the CESifo Research Network, but they also offer ifo researchers the opportunity to exchange their ideas, especially with members of the CESifo Research Network. This network expanded to include to 1,328 members from 41 countries by the end of 2016.

In addition to these scientific exchanges, the ifo Institute launched the seminar series "**SEEM – Seminar on Energy and Environmental Economics Munich**" in the winter semester 2016/17 in cooperation with the Technical University of Munich (TUM). The major challenges for policy and research include global climate change and combating its causes and effects. One of the most important prerequisites for compliance with the 2-degree target is the decarbonisation of the energy supply. Achieving this goal is complex and will depend on economic development and on the future structure of the energy sector. The new seminar series organised by the ifo Institute and TUM is intended to enhance both national and international discourse on research in these important areas. It will provide a platform for young and established researchers to exchange their latest research results and to strengthen their national and international networking.

Several prizes were awarded at the 67th Annual General Meeting of the ifo Institute. The Society for the Promotion of Economic Research (Friends of the ifo Institute) awarded a prize for outstanding academic achievement in the field of empirical economic research to Suphi Şen, PhD, for the article “Corporate Governance, Environmental Regulations, and Technological Change”, *European Economic Review* 80, 2015, 36–61. The prize for special achievements in commissioned projects in 2015 went to the team led by Professor Oliver Falck, which had successfully worked on a consulting project commissioned by the Croatian Statehood Foundation. The researchers identified the short- and long-term policy requirements needed to achieve sustainable economic growth and employment in Croatia. The project team included staff from several ifo research departments and from the ifo Dresden branch (Teresa Buchen, Marcus Drometer, Nadine Fabritz, Katrin Oesingmann, Prof. Joachim Ragnitz, Markus Reischmann, Marina Riem, Johannes Steinbrecher, Thomas Steinwachs, Michael Weber, Prof. Timo Wollmershäuser and Erdal Yalcin) and several external experts (Rigmar Osterkamp, Julio Saavedra, Prof. Siegfried Schönherr and Prof. Martin Werding). They were supported by ifo department assistants Dagmar Bach and Franziska Hartinger.

In addition, the ifo Institute awarded a special price in 2015 for outstanding services to Gitta Mortasawi, acknowledging her for work on the *Branchen special* reports. She was assigned to this project for over 20 years and ensured that all reports were delivered on time and with impeccable graphic quality.

In 2016, senior ifo researchers were again appointed to high-level advisory committees. On 10 November 2016, the German Federal Cabinet re-appointed the members of the **Scientific Advisory Board of the Federal Government on Global Environmental Change** (WBGU). Karen Pittel, Director of the ifo Center for Energy, Climate and Exhaustible Resources, is one of the nine members of this high-level advisory body. At the end of December, Federal Minister Sigmar Gabriel appointed the Director of the ifo Center for International Economics, Prof. Gabriel Felbermayr, as member of the **Scientific Advisory Board at the Federal Ministry of Economics and Energy**. In addition to Gabriel Felbermayr, former ifo President Hans-Werner Sinn and ifo department head Ludger Woessmann are also members of this board.

Niklas Potrafke, Director of the ifo Center for Public Finance and Political Economy and Professor of Economics and Public Finance at the LMU, was placed by the magazine *Capital* in their group “**Young Elite – the top 40 under 40**” for the third time in succession. The 36-year-old was included among young experts in the area of “State and Society”.

CONTRIBUTIONS TO POLICY ADVICE AND THE POLICY DEBATE

The ifo Institute is a think tank for economic policy and uses its research competence and data to participate actively in the public debate on the best economic policy ideas and concepts. It aims at communicating its theoretical and empirical findings in economics to policy-makers, and in turn it derives its research topics from the policy debate. In 2016, the ifo Institute was once again heavily involved in policy advice and the policy debate.

It pursued this goal both via the periodicals of the ifo Institute, as well as through an abundance of press releases, interviews, press articles and public events. The ifo Viewpoints launched by Hans-Werner Sinn – brief commentaries on topical issues – were continued by Clemens Fuest. In the year under review, ifo Viewpoints dealt with the topics of “Accountability Bonds”, “Preparing for Crisis – a ‘Legacy’ for states”, “Brexit and its Economic Implications”, “Refugees Will not Lighten Germany’s Load but Deserve its Support”, “How to Deal with Brexit”, “Italian Banks Should not be Allowed to Sidestep Investor Bail-in”, “Income Tax Relief can be Financed”, “Impact of Globalisation on Taxation”, “EU Budget Reform: How to Spend it”, “The Economic Consequences of Mr. Trump”.

In its annual report entitled “What Next?” the **European Economic Advisory Group** at CESifo (EEAG), a body of experts supported by CESifo that assesses economic developments in Europe, dealt with intergenerational fairness, education policy in European countries, an analysis of Denmark and the question of a potential EU membership of Balkan states. In 2016, Hans-Werner Sinn left the EEAG; and was replaced by Clemens Fuest.

The articles published in the **ifo Institute’s periodica** are regularly cited in the public debate. In the year under review, ifo published 24 publications of the *ifo Schnelldienst*, 12 issues of *ifo Konjunkturperspektiven*, six issues of *ifo Dresden berichtet*, four issues and a spe-

ifo takes active role
in policy debate

Clemens Fuest’s
viewpoints in 2016

cial issues of *CESifo Forum*, as well as four issues each of *CESifo DICE Report* and the *CESifo World Economic Survey*. Eight ifo Forschungsberichte and one *ifo Dresden Studien* as well as ten *ifo Beiträge zur Wirtschaftsforschung* were published as monographs, while 25 issues appeared in the *ifo Working Papers* series. Moreover, the ifo Institute also produces the scientific quarterly *CESifo Economic Studies*, which is published by Oxford University Press. In addition, 601 issues appeared in the CESifo-supervised series *CESifo Working Papers*. This series features articles by members of the CESifo Research Network.

Event highlights

The ifo Institute contributed to the economic policy debate with its events in 2016. Special highlights were the above-mentioned **scientific symposium followed by a ceremony** in honour of Hans-Werner Sinn in January 2016 and the **ifo Annual Meeting**, in which Clemens Fuest was officially introduced as ifo President. The ifo Annual Meeting, which – as in previous years – was organised in cooperation with the University of Munich in its Great Hall, was devoted to the topic of “The European Union at the Crossroads”.

15th Munich Economic Summit on migration

Another highlight was the **15th Munich Economic Summit (MES)**, organised jointly with the BMW Foundation Herbert Quandt. The Summit is conceived as a political platform for intensive dialogue on key issues of economic development in Europe and the world. It provides a forum for dialogue between high-ranking politicians, leading international representatives from business and academia as well as the European media world. The focus of the 15th Munich Economic Summit – entitled “Migration – Challenge or Opportunity?” – was an analysis of the consequences of the largest migration wave since the end of the Second World War, which is putting the European Community to a severe test. After the rift between southern and northern Europe caused by the recent financial crisis, the refugee crisis is now threatening to further split the EU. The causes of the current migration wave were examined, but the main question was how to create a win-win situation for migrants and for the ageing population of Europe, which is suffering from a lack of skilled workers. Among the speakers were Cardinal Reinhard Marx and Elmar Brok, Chairman of the Committee on Foreign Affairs of the European Parliament.

The cooperation with the BMW Stiftung Herbert Quandt in organising the Munich Economic Summit ended with 15th MES in 2016. By mutual agreement, both partners

decided to plan their own series of events devoted to cohesion within Europe with different content and target groups and to support each other in organising these activities. In future, the ifo Institute and CESifo GmbH will be solely responsible for the organisation of the MES with the aim of enhancing the image of this important event even further by emphasising the economic and economic policy character of the Summit. The decision was made to not hold an MES in 2017, but to take a break and rethink the concept of the event. The next MES is planned for the early summer of 2018.

The eleven **Munich Seminars** organised by CESifo together with the *Süddeutsche Zeitung* were also very well-received in 2016. This series offers renowned speakers from business, academia and politics an opportunity to speak on topical economic issues. Particularly noteworthy was the now traditional **pre-Christmas lecture** by Hans-Werner Sinn, at the LMU, which took place for the first time as part of the Munich Seminars. Hans-Werner Sinn’s lecture was entitled: “Black June: Brexit, the Wave of Refugees, the Euro Disaster – How the New Founding of Europe can Succeed”. The event was supported by the Association of the Bavarian Economy, whose President Alfred Gaffal gave an introductory welcome speech.

At the Bavarian Representation in Berlin, there were two more “**parliamentary breakfasts**” in 2016. At the beginning of the year, Hans-Werner Sinn discussed questions of energy development together with parliamentarians. Clemens Fuest continued the series in the autumn with a talk on the development of the economy with a view to the euro crisis and the topic of tax policy.

The “**ifo Industry Colloquium**”, organised in cooperation with the Chamber of Commerce and Industry for Munich and Upper Bavaria, which focuses on analysing current economic trends, was continued in 2016. Further details of the colloquium are available in the section on the ifo Center for Industrial Organisation and New Technologies.

In addition to the self-initiated contributions to the policy debate, the ifo Institute also contributed to policy advice by producing a number of **commissioned expert reports**. The projects are documented in the department sections of this annual report. The following is a selection of commissioned reports that were part of the policy advisory work for 2016:

- Determination of Key Economic Figures and Indicators for Monitoring the Advance of the Bio-economy (Federal Ministry of Economics and Energy)
- Improving Public Debt Management in the OIC Member Countries (Ministry of Development of the Republic of Turkey – COMCEC Coordination Office)
- Costs of Municipal Services in Light of Demographic Change and Urbanisation (KfW Bank Group Frankfurt am Main)
- Expert Opinion on Sector-Specific Regulation in the Retail Market for Access to the Fixed Telephone Network (Deutsche Telekom AG)
- Germany 2017 (2019) – Study on Attitudes and Behaviour of Citizens in United Germany (Federal Ministry of Economics and Energy)
- Evaluation of the Implementation of the Free Trade Agreement between the EU and its Member States and the Republic of Korea (Civic Consulting GmbH)
- Comparative Study on the Economic Effects of Legislation Applicable to Companies in France and Germany (French Senate)
- Practical Experience with the Exemption Regulations Introduced by the Law on the Protection of Small Investments of 3 July 2015, in Sec. 2a to Sec. 2c of the Investment Services Act (Federal Ministry of Finance)
- Impact of Demographic Trends on the Eastern German Housing Market (Federal Ministry of Economics)
- Possibilities and Limits of a Task-related Benchmarking of Staff at the Regional Level (Saxon State Chancellery)
- Options for a Further Development of the Indicator System for the EU-delimited Regional Funding Areas after 2020 (Federal Ministry of Economics and Energy)

In 2016 the foundations were also laid for a research and consulting project that will be particularly important to the international work of the ifo Institute and CESifo GmbH. In 2016 the Federal Ministry of Finance (BMF) issued a Europe-wide call for tenders to **construct a European research network for cross-border cooperation in fiscal and economic issues**. The commissioned services are extremely interesting for the ifo Institute because they enable the Institute to carry out the bridge function in its mission statement:

making the results of its research available to political practitioners. The project will also expand ifo's presence on the European stage.

In the award documentation, the BMF described the project's aims as follows: *“Given the diverse economic and fiscal policy challenges facing the European Union now and in the coming years, governments and European institutions are increasingly in need of scientific support in the form of analyses and innovative reform proposals ... The research and consultancy work carried out by numerous national and Brussels-based institutes and researchers already provides a solid foundation. What is missing, however, is a strong network of researchers from the European Member States to lend an audible voice to the debates conducted in Brussels. ... Such a network can contribute to anchoring the European idea even more strongly in the member countries, while at the same time taking account of the various national interests and needs in the elaboration of more efficient and sustainable European problem-solving approaches. It is therefore the aim of this project to intensify and deepen cross-border research and scientific cooperation in Europe.”*

Since the project aims fit so well with the ifo Institute's mission statement, considerable effort went into preparing the tender. After a successful expression of interest, the tender was formulated and submitted to the BMF in the last week of September. The BMF awarded the ifo Institute the contract at the beginning of March 2017.

To realise this project, the ifo Institute set up a network of nine European research institutes, consisting of:

Six economic research institutes

- ifo Institute (as the sole responsible coordinator of the network)
- Center for European Policy Studies (CEPS, Brussels),
- Center for European Economic Research (ZEW, Mannheim),
- Valtion Taloudellinen Tutkimuskeskus (VATT, Helsinki),
- Center d'Études Prospectives et d'Information Internationales (CEPII, Paris),
- Institute for Advanced Studies (IHS, Vienna)

and three universities:

- Toulouse School of Economics,
- University of Oxford (with representatives from three faculties) and
- University of Trento.

BMF funds European economics research network

ifo submits successful bid for tender

The research and advisory activities will take place in four research areas:

- Sustainable growth and best practice
- Reform of EU policies and the EU budget
- Capital markets and regulation of the financial sector
- Governance and macroeconomic policy in the EMU

Network will supply broad range of publications

The research output will mainly consist of working papers, policy reports, short studies and external publications. To convey the research results to a wider audience, there will be a special focus on online tools, including publication alerts, policy letters, newsletters and press releases, as well as the network's own website. In addition, there will be several types of events ranging from workshops to large international conferences.



ifo founds EconPol

The research network, managed and organised by the ifo Institute, will be presented to the public in June 2017 under the name **EconPol Europe – European Network for Economic and Fiscal Policy Research**.

Media resonance is important proof of the relevance of the Institute's work for politics and society. According to Media Tenor, the ifo Institute was again the most frequently cited economic research institute in the German media. In a year marked by the presidential change, both presidents – Hans-Werner Sinn until March 31 and Clemens Fuest from 1 April onwards – contributed to the enormously high media presence of the ifo Institute. In the course of the expansion of

research and policy advice at the European level, the media analysis in 2016 was extended to include selected European countries. Now the ifo Institute's presence is analysed for the media in France, Italy, Spain, the UK, Belgium, Austria, Switzerland and Poland. This analysis considers the leading economic research institutes in the respective country, their central banks, and also compares the most media-oriented German economic institute to the ifo Institute. The analysis carried out by Media Tenor for 2016 suggests that the ifo Institute is also the most frequently cited economic research institute at the European level.

The very good results achieved by ifo economists in research and the public policy debate were reflected in the third FAZ ranking of the most influential economists working at universities or research institutes: Hans-Werner Sinn placed second in the **FAZ ranking of the most influential economists** in Germany in 2016, followed in third place by Clemens Fuest. Other ifo researchers also did well in the 2016 FAZ ranking.

Table 4: ifo Researchers in the FAZ Ranking for 2015 (out of 100)

Ranking	Name	Points
2	Hans-Werner Sinn	496
3	Clemens Fuest	472
11	Ludger Wößmann	94
26	Gabriel Felbermayr	53
41	Niklas Potrafke	37
63	Klaus Wohlrabe	22
96	Timo Wollmershäuser	10

SCIENTIFIC SERVICES

The ifo Institute offers a wide range of services to all groups in society interested in economic issues. The services include the collection, preparation and delivery of economic data and information, the compilation of materials for international institutional comparison and the collection and preparation of additional macroeconomic data. In 2016 the range of services was extended by the following:

In the **Economists Survey conducted by ifo and the Frankfurter Allgemeine Zeitung**, a representative group of economics professors at German universities is polled on current economic questions on a month-

ly basis. The aim is to present to the public a more nuanced presentation of the views of economists on relevant topics in Germany. The survey results are published in the *Frankfurter Allgemeine Zeitung*, a leading national daily newspaper.

In the category **Topical Terms** in Economics, readers find explanations of terms from the world of economics that play a role in current public discussion. With these clearly formulated and theoretically sound explanations, the ifo Institute seeks to help especially non-economists to gain a better understanding of economic contexts and to follow the economic-policy discussion. In 2016, a new key word on Brexit was introduced.

The ifo Institute, in cooperation with *Messe Frankfurt*, has developed a new economic indicator for firms participating in German trade fairs in the area of consumer and investment goods. The **Trade Fair Index**, consisting of the Trade Fair Index for Consumption and the Trade Fair Index for Investment displays the economic condition of companies that exhibit their products at international consumer and investment goods trade fairs in Germany. The trade fair indices are based on data from the ifo Business Survey. The initial results show that exhibiting companies have a better economic constitution. Small and medium-sized companies in particular benefit from participation in trade fairs.

The ifo Business Climate is one of the most important indices for the German economy. The results of the ifo Business Survey have been published for more than 60 years: for the manufacturing industry since 1949, for the wholesale and retail trade since 1950 and for the construction industry since 1956. Based on the tables in earlier editions of the *ifo Schnelldienst* and *ifo Konjunkturperspektiven*, **historical time series for business conditions, expectations and the business climate** were digitised up to the 1960s and made available in the form of Excel tables.

The series of events entitled “**ifo Workshops for Quality Journalism**”, which were introduced in 2015, continued in the year under review. Fifteen young journalists from the German School of Journalism and nine editors of the Bavarian Rundfunk (radio and television) took part in 2016. Details can be found in the section of Press, Publications, Conferences. In addition, a seminar of the German School of Journalists visited the ifo Institute in March for half a day.

As in previous years, the **ifo Education Survey** was continued in 2016. The third ifo Education Survey was conducted between the end of April and the beginning of June 2016 among 4,015 respondents that comprise a representative sample of the adult population in Germany.

The **Database for Institutional Comparisons in Europe** – in short “DICE” – provides cross-country information on institutions, regulations and policies: in other words, on “the rules of the game in a given country”. DICE not only compares European countries; it also includes information on other major industrial economies, as well as on the BRIC countries. Currently, the database has almost 3,800 entries on the following topics: Banking and Financial Markets; Business; Education and Innovation; Energy, Resources, Natural Environment; Infrastructure; Labour Market; Migration; Public Sector; Social Policy; Values; and Country Characteristics. The information is in the form of tables (text or data), diagrams and short reports. Users can choose between current information, regulations from previous years and time series that document developments over several years.

- *DICE Tables* provide detailed information on a variety of topics. Descriptive, qualitative information on regulations and institutions is provided, as well as quantitative indicators in a time-series format.
- *DICE Visual Storytelling* provides an interactive and individual graphical analysis of relationships and developments using maps and diagrams
- *DICE Short Reports* are a combination of short texts, graphics and tables that highlight current institutional economic developments. They are published regularly in the quarterly *CESifo DICE Report*.

DICE has almost
3,800 entries

DICE Visual
Storytelling

The importance of social media to ifo’s information services continues to grow. The ifo Center for the Economics of Education has its own **Twitter channel (@ifo_bildung)** with information about educational research results, press contributions, videos, events etc. As of August 2016, the ifo Institute is on **Flickr**, where it supplies photographs of important events.

DEVELOPMENT OF THE IFO INSTITUTE AS AN ORGANISATION

The project: “The Development, Implementation and Professionalisation of **Knowledge-Transfer Concepts** in Non-university Economic Research” mentioned in

the last annual report and funded by the Federal Ministry of Education and Research for the period 2015–2018 is tremendously important to the ifo Institute. The goal of the project is to achieve an even better fit between the Institute's services and the needs of the relevant social target groups; and to open up new exploitation potentials and communication channels.

Usage of ifo's information by target groups analysed

One focus in 2016 was the systematic registration of the already implemented transfer services and a comprehensive **analysis of the use of the information services** of the ifo Institute by the respective target groups. This focused on the publications and events of the ifo Institute, the press and public relations work, the dissemination of research results of the ifo departments and other economic information, ifo's internet presence and the use of social media. After the inventory, a strength-weakness analysis of the existing exploitation services took place. On the basis of this stocktaking, a strength/weakness analysis of the transfer services was carried out. The **additional information needs** of the socially relevant groups and the **potential for improvement** were identified. In the course of these usage and demand analyses, representatives of the Bavarian State Parliament and their staff were also consulted. The utilisation analyses included interviews with different target groups, especially on the use and assessment of the potential of the DICE database. Based on the results of these surveys, a concept for a **fundamental reorientation of DICE** as a particularly important information service was developed, to be implemented from the second quarter of 2017 onwards. This will be a particularly important element of the project activities during the rest of the project period. Part of the utilisation analyses was also surveys of the recipients of individual periodicals of the ifo Institute. The goal is to increase the **efficiency of the publication activities** by reducing the number of printed copies and greatly expanding the number of online recipients, especially at European level. The first surveys show that a large number of recipients of the periodicals support this strategy.

Reorientation of DICE as key information service

Building on the project activities launched in 2015, new transfer services were developed for important target groups: **schools and the mass media**. One example is a **European media map**, with the help of which a press mailing list was constructed. In order to transfer knowledge to the important target group of teachers (and pupils), a **DVD on "Economic Activity"** was pro-

duced in cooperation with Fachverlag MedienLB for use in schools, and ifo also supported the production of additional DVDs. In cooperation with teachers in the *Wirtschaftsphilologen Verband Bayern*, a concept was also developed for a training course specifically tailored to the needs of teachers of economics in secondary schools in 2016. The **ifo Workshop for Modern Instruction in Economics** took place in the first quarter of 2017. This pilot event was so successful that it was expanded into a series of events. In order to provide teachers of economics with current economic information for their lessons, a special **newsletter for teachers** has been designed, which will be distributed from the second quarter of 2017 onwards.

The needs and utilisation analyses showed that the latest developments in policy-oriented empirical economic research combined with the increasing mass of data in all areas of society have created new challenges for the collection, management and provision of data. At the same time, this offers considerable potential to significantly expand the position of the ifo Institute as a provider of data for research and for the general public.

These developments have been driven by the digital revolution, which has rapidly changed society and economic activity, and which has led to explosive growth in raw data that have flooded the economy and society. Businesses have long since recognised the value-added potential of **developments in the area of big data** and began to use pragmatic methods and approaches to cope with the flood of data years ago. In empirical economic research, however, big-data approaches are not as widespread as in the business world or in the natural sciences or engineering sciences. The extension of the methodology to include big-data approaches, e.g. the techniques of data mining or machine learning, can lead empirical economic research into new terrain.

In order to systematically exploit the potential and challenges of the use of big-data approaches for empirical economic research, an internal workshop was conducted in the summer of 2016 with external support, which involved an intensive survey of all research areas at the ifo Institute. On the basis of this preliminary work, a position paper was prepared in which the potential, the existing gaps and the need for action are described. The need for action was identified above all in the following fields:

- Development of a data strategy for economic research and the promotion of pilot projects,
- Establishment and expansion of ifo researchers' competences in dealing with big data,
- Standardisation and centralisation of archiving research data,
- Adaptation of data protection and trust in data handling
- Enabling the IT infrastructure to create and support the necessary platforms for big-data research.

Based on this work, initial implications were drawn for the further development of the **Economic & Business Data Center (EBDC)**, jointly established and operated by the LMU and the ifo Institute. Since the ifo Center for Industrial Economics and New Technologies works intensively with the company data provided by the EBDC, the EBDC has been assigned to this research area. At the same time, the managing body of the EBDC was strengthened. Prof. Ralf Elsas, co-founder of the EBDC, continues to represent the Faculty for Business Economics at the LMU in the EBDC managing body. New members are Prof. Oliver Falck and Prof. Andreas Peichl for the ifo Institute, as well as Prof. Joachim Winter for the LMU Economics Faculty. In addition, the EBDC received additional staff, and measures were taken to develop or expand the competence of ifo researchers in the area of big data methods (e.g. programming using the methods of machine learning and the programming language Python). Seminars in these areas began in 2017.

Corporate identity and digital communication tools are of great importance for the public perception of the Institute and the provision of its information services. The previous **corporate design** of the ifo Institute was developed in 1996–1999 and was no longer up-to-date. The decision was thus made to revamp the entire image of the ifo Institute (and the CESifo Group as a whole). After a contract award procedure, a media agency was commissioned to remake the corporate design of the CESifo Group. The requirements the new design had to meet represent a compromise between the public image of the Institute and its reputation, the high recognition value of the new design, in particular the logo, the durability of the new design, the homogeneity of the layout of print and online media, as well as efficiency aspects. The media agency completed its work at the end of the year and the new corporate design was in-

troduced at the beginning of April 2017. At this time, the website of the CESifo Group also underwent a facelift. Preparations for a complete re-launch of the website started in the year under review. The very extensive conceptual, technical and graphic re-launch will take place in 2017 and 2018.

One result of the aforementioned knowledge-transfer project is that in addition to providing information on the ifo website, the **transmission of digital information** to the members of the relevant target groups will be increasingly important, especially in light of the further internationalisation of ifo's activities. A basic prerequisite for the efficient utilisation of digital communication channels is a user-friendly database that can be used for all information services and event management by means of special applications. In preparation for the purchase of such a system for **customer relationship management (CRM)**, a market analysis and a procurement procedure was carried out; the order for the delivery and adaptation of a CRM system was issued at the beginning of 2017.

Due to the increasing shift of research activities to the European level, ifo's Executive Board decided to join the European Commission's research policy initiative, **The European Charter for Researchers** and to apply their **Code of Conduct for Recruitment of Researchers** to staffing at the ifo Institute. Firstly, the Board formally declared its intention to join the Charter to the EU Commission, which the Commission accepted, posting the accession to its website. The second step is to develop a plan to implement the requirements of the Code of Conduct. EURAXESS is used to provide information on funding opportunities, job offers, social insurance and tax questions, as well as and other topics related to the mobility of researchers.

In creating ideal conditions for top research, the **further qualification of researchers** is important. Numerous visits by ifo researchers, especially to top American universities, were particularly important in 2016. ifo researchers also once again presented papers at international, refereed conferences (154), and numerous ifo doctoral students expanded their expertise at summer schools. In addition, ifo doctoral students are given the opportunity to attend training courses. ifo's **non-academic staff** is also offered on-going training: a total of 67 measures for these staff members were carried out in the year under review.

User-friendly
database planned

ifo joins European
Charter for
Researchers

In terms of further qualification for researchers, it was especially gratifying that in 2016 the **Bernt Rohrer Foundation**, a part of the *Stifterverband für die deutsche Wissenschaft*, set up an international scholarship to promote doctoral students at the ifo Institute as of October 2017 with an international and a publication scholarship. The international scholarship supports longer research stays by doctoral students at top international universities. The publication scholarship supports doctoral students in the publication of an outstanding article written in sole authorship. Both scholarships are worth 6,000 euros respectively.

ifo aims for all-round excellence

The concentration of the whole organisation of the ifo Institute on excellence in all areas is the basic philosophy of **ifo's management system**, which is certified according to DIN ISO 9001 and whose functionality is audited annually by external auditors. In the recertification audit carried out in January 2016, the external auditors once again confirmed the excellent functioning of ifo's management system, which they again described as exemplary for a non-university research institution. The professional subsystems, and particularly target management and the incentive system, personnel development and the personnel and financial management, make a decisive contribution to stabilising the ifo Institute's performance at a very high level.

ifo pursues gender equality policy

A special feature of the certified quality management system is that it includes the **gender equality policy** of the ifo Institute and the rules of this policy. Compliance with these rules was examined and confirmed in all external audits. In 2016, efforts to shape working conditions at the ifo Institute with a view to achieving a more balanced gender structure among academic staff paid off. The share of female doctoral students rose to 48.2% as of 31 December 2016. The doctoral students who were on parental leave as of the cut-off date or who were on leave for studying abroad are not included. If they are included in this figure, the proportion of women among the doctoral students as of 31 December 2016 was over 50%. As a result, an important goal of the Executive Board was reached. The ifo Institute's equality policy aims to increase the number of female doctoral students that remain at the Institute as post-docs in order to achieve a more balanced gender relationship among the academic staff.

Personnel capacity expanded compared to the previous year. As of 31 December 2016, the total number of staff employed by ifo rose by 13 to 210. The total number of academic staff employed in the research departments (researchers, doctoral students and area experts) rose by nine: the number of researchers decreased by two, while the number of doctoral students increased by ten and the area experts by one. The number of non-academic employees rose by a total of four people. Details are presented in the section on Personnel Development.

Developments in **finances** in the reporting year are presented in detail in the section on Financial Development. Here are the key points: the financial situation of the ifo Institute remains solid. The Institute posted an annual surplus of 125 thousand euros in 2016. This sum will be channelled into earmarked reserves, increasing the reserves to 2,194 thousand euros of 31 December 2016.

As part of joint research funding by the German federal government and the Länder according to Article 91b of German constitutional law, the ifo Institute received public funding of 10,541 thousand euros in 2016. Of this sum, 10,226 thousand euros was spent on ongoing costs and 315 thousand euros for investments. In the year under review, the funds for ongoing operations included under "special circumstances" 517 thousand euros for the temporary, four-year expansion of research in the area of energy, climate and resource economics. In addition, the ifo Institute had carried-forward reserves of 850 thousand euros, which was accumulated in the previous year. This sum was spent in the first quarter of 2016. Of the institutional funding granted by the federal government and the Länder (10,941 thousand euros) to the ifo Institute for 2016, 1,250 thousand euros was not used. This was due to savings, especially in personnel costs, and the healthy development of income from commissioned studies. This amount was carried forward to the following years.

CESifo GmbH, which was founded jointly by the ifo Institute and the LMU, also showed positive development in the year under review. Its core mission is the organisation of the CESifo Research Network, which has dedicated itself to deepening the international collaboration of economists, particularly by bringing together economists with similar research interests, and by promoting co-operation and networking between the network members and CESifo researchers through events

and publications. The network is mainly comprised of economists who have excelled in their respective fields and who have been guest researchers at CES or the ifo Institute as a result of a refereed selection procedure. The Research Network continued to grow in 2016, numbering 1,328 members at the end of the year.

The members of the CESifo Research Network are grouped in a total of eight areas of expertise, led by internationally renowned economists – the area directors. In the second quarter of 2016, Prof. Markus Brunnermeier, a prominent international macroeconomist, became area director of the Macro, Money and International Finance area. In addition, the foundations for the creation of a ninth area were laid in 2016. In view of the revolutionary importance of digitisation, this additional area will devote itself to the Economics of Digitisation from 2017 onwards. It will be headed by Stephen P. Ryan, a professor at Olin Business School at Washington University in St. Louis, as of 1 March 2017. A separate chapter in this annual report is devoted to the activities of CESifo GmbH.

Further improvements in the already very high level of performance in research and the promotion of young economists, in policy advice and the provision of sound economic data to the public, as well as the further strengthening of the Institute's finances and its organisational framework – all this was achieved in 2016, the year marked by a change in the presidency. This also means that the Institute is optimally prepared for the year 2017, when the changeover from the old to the new Executive Board will be completed.

The achievements of the staff of the ifo Institute and the entire CESifo Group in this exceptional year deserve great respect. We express our gratitude to them, the members of our official bodies and the Friends of the ifo Institute.

Munich, May 2017

The Executive Board



Clemens Fuest

Prof. Dr. Dr. h.c. Clemens Fuest (President)



Meinhard Knoche

Prof. Meinhard Knoche

Research and Service Departments

ifo Center for Public Finance and Political Economy

The research activities of the ifo Center for Public Finance and Political Economy focus on fiscal policy, the development of public budgets under conditions of high mobility at national and local levels and political economy. Its research includes model-based and empirical analyses, including an examination of international experiences. More specifically, the department's activities focus on public debt in Germany and Europe, the assessment of fiscal and taxation policy, fiscal federalism and local finances. There is a special focus on the motives behind policy decision-makers' actions from a public choice and political economics point of view.

The federal budget is analysed within the framework of short-term developments, as well as with regard to its long-term sustainability and trends in public debt. In the wake of the global public debt crisis, the department is increasingly involved in sustainability analyses. Against this background the department contributes to the public debate over the reform of the German taxation and transfer system with commentary and scientific analyses.

The ifo Center for Public Finance and Political Economy also conducts the economists panel jointly published in cooperation with ifo and the *Frankfurter Allgemeine Zeitung* (FAZ), which surveys a representative group of economics professors at German universities on current economic policy issues on a monthly basis. The panel's aim is to offer the public a differentiated perspective on economists' views on key challenges facing Germany.

earners, which is why the middle classes are often seen in the public debate as the part of society that finances a particularly large share of state expenditure. The study reveals concrete reform options and public budgets and quantifies their impact on taxpayers and state budgets using the ifo income tax simulation model. Possible approaches to flattening the middle-class bulge are to gradually shift the income benchmark that marks the beginning of the second bracket (reform option I), to shift the income threshold for the top tax rate (reform option II) and a combination of both of these options with a parallel shift in both thresholds (reform option III).

For reform option I the calculations of a "moderate" flattening in the middle class bulge (a benchmark shift of 5,000 euros) would result in tax relief totalling 15.7 billion euros. A complete flattening of the middle-income bulge (a shift of 11,011 euros in the bracket benchmark) would generate tax relief of 31.4 billion euros. Although all taxpayers would be better off, the high-earning middle class in the seventh income decile with a gross income of between 31,993 euros and 62,447 euros would stand to benefit the most in relative terms. The relief effect of reform option II for a "medium" shift in the income threshold by 5,000 euros for the top tax rate amounts to 3.7 billion euros. A "stronger" shift in this figure (of 25,000 euros) would result in tax relief of 14.7 billion euros. The individual relief effect of reform option II shifts slightly to the benefit of higher income earners and is relatively strongest in the eighth income decile for individuals with gross earnings of 62,448 euros to 113,532 euros.

Flattening the middle-income bulge

Reform option II benefits higher income earners

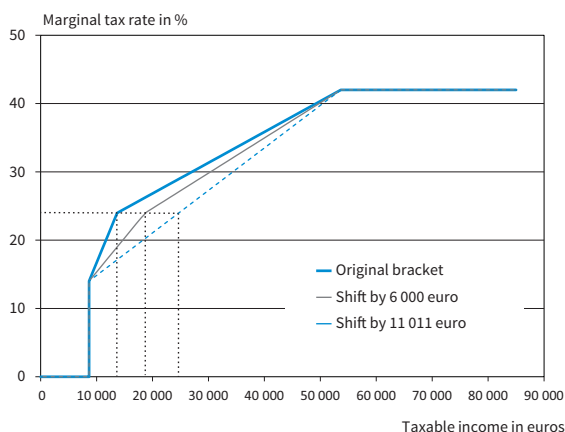
Projects Completed in 2016

The Removal of the Middle Class Bulge – Models and Costs

F. Dorn, C. Fuest, B. Kauder, L. Lorenz, M. Mosler for INSM – Initiative Neue Soziale Marktwirtschaft GmbH, July 2016 to November 2016, publication as *ifo Forschungsbericht* No. 77, ifo Institute Munich 2016; and in *ifo Schnelldienst* 70(9), 2017.

The New Social Market Economy Initiative commissioned the ifo Institute to conduct a study on the so-called middle class bulge in the German income tax rate. The middle-class bulge is responsible for a rapidly rising marginal tax rate for low and middle-income

Flattening the Real Middle Class Bulge: Tax Rate Adjustment



Source: ifo Institute calculations.

The combination of both shifts in reform option III featuring a “moderate” shift in both figures of 5,000 euros would generate tax relief of 19.0 billion euros, which would mean that the tax ratio could remain at around the level of 2014. A “strong” shift in both figures of 11,011 euros would result in tax relief of 37.0 billion euros. Under the third reform option individual relief effects are far greater than in the previous scenarios. It is nevertheless not the top earners, but individuals in the eighth income decile with a gross income of 62,448 euros to 113,532 euros who stand to benefit the most from the tariff reform.

Hidden Tax Increases – the Extra Tax Burden of the Bracket Creep and the Expected Impact of “Rolling” Income Tax Rates on Tax Reliefs

F. Dorn, C. Fuest, B. Kauder, L. Lorenz, M. Mosler, N. Potrafke for FDP-Fraktionsvorsitzendenkonferenz, June 2016 to October 2016, publication as *ifo Forschungsbericht* No. 76, ifo Institute, Munich 2016; in *ifo Schnelldienst* 70(2), 2017, and 70(3), 2017.

Hidden tax increases

Bracket creep is weakening the distribution effects of the taxation system and leading to a rise in the tax ratio that is beyond democratic control. The elimination of bracket creep is therefore advisable. The public debate mostly focuses on bracket creep in the narrower sense of the term, which only takes into account the effect of rising prices. This bracket creep in the narrow sense of the term alone led to additional tax revenues of 33.5 billion euros from 2011 to 2016. If the effect of rising real wages (bracket creep in the larger sense of the term) is also taken into consideration, the additional tax revenues during this period total 70.1 billion euros.

Eliminating bracket creep

The impact of the burden caused by bracket creep is not equally distributed among income tax payers. Income tax payers in the low and medium income tax brackets are particularly negatively affected by bracket creep.

Bracket creep in the narrower sense of the term will lead to a total increase in income tax revenues of 314.9 billion euros during the period of 2017 to 2030. If the tax ratio is to be kept constant, or if bracket creep is considered in the wider sense of the term, cumulative “hidden” additional tax revenues will be as high as 433.6 billion euros.

A “rolling rate” is proposed whereby a tax rate parameter and creep areas are coupled with inflation and growth in real income (bracket creep in the broader sense), in order to keep the tax ratio constant *ceteris paribus*.

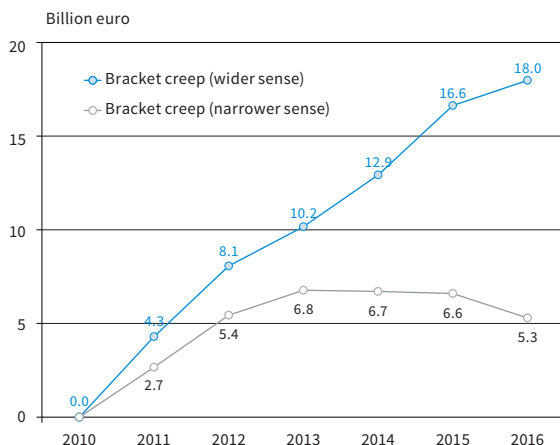
State revenues continue to grow even with a “rolling rate”: Even if bracket creep in the wider sense is taken into account, public income continues to rise in line with growth in price levels and real wages.

Economic Effectiveness of Economic Stimulus Packages in 2008 and 2009

T.O. Berg, A. Hristov, B. Kauder, N. Potrafke, M. Reischmann, M. Riem, Ch. Schinke for the Fritz Thyssen Stiftung, July 2013 to July 2016.

This study begins by providing evidence of the time varying impact of government spending shocks on output in Germany. Firstly, a vector autoregressive model with time varying parameters is used to show that fiscal multipliers vary across time periods. Secondly, the chapter discusses which factors determine the magnitude of fiscal multipliers and explain the observed variation. The study comes to the conclusion that policy recommendations based on average multipliers are misleading; and that determinants such as business uncertainty should be taken into account. The second chapter explores how business uncertainty affects the effectiveness of fiscal policy in greater detail. Measures of business uncertainty are derived from the firm-level data of the ifo Business Climate Survey. The uncertainty measures are subsequently interacted with the parameters of a structural vector auto regression to produce state-dependent spending multipliers. The results show that fiscal policy – in contrast to monetary

Annual Growth in Bracket Creep



Source: ifo Institute calculations.

policy – is most effective when uncertainty is high and hence is a better tool to stimulate the economy during volatile episodes.

The third chapter investigates fiscal forecasts at the German state level. The research question was how election cycles influence forecasts of public spending, tax revenues and net lending. The results show that Eastern German state governments systematically underestimated the size of government in pre-election years. Chapter four examines the allocation of fiscal resources from the stimulus package “Konjunkturpaket II”. We investigate whether politicians allocated fiscal resources for investment projects to their home towns. The results show that the home towns of German state MPs did indeed obtain more fiscal resources.

Tax Incentives for Private Investment to Promote Economic Development in Developing Countries: A Public Finance View Based on a Tax Law Analysis

B. Kauder, M. Krause, N. Potrafke, M. Riem for the Federal Ministry for Economic Cooperation and Development, January 2016 to June 2016.

This project describes options for tax incentives conducive to the economic development of German corporate investments in developing countries. The main focus of this study is the economic and financial evaluation of these options.

Studies on Issues in Political Economy since the Global Financial Crisis

K. Jäger, completed doctoral project, publication as *ifo Beiträge zur Wirtschaftsforschung* No. 71, ifo Institute, Munich, 2016.

This dissertation includes four studies broadly connected to the causes and consequences of the Global Financial Crisis of 2007-8 from a political economy perspective.

Following on from the introduction, Chapter 2 analyses the political roots of the massive accumulation of foreign reserves, which contributed to the American credit boom prior to the financial crisis. The study shows that elections tend to explain why democracies have acquired less foreign reserves than authoritarian regimes. Basel III was a regulatory consequence of the Global Financial Crisis, which is scheduled to impose liquidity requirements as a prudential measure for commercial banks.

Chapter 3 examines whether these liquidity requirements could have an unintended negative effect on monetary stability. Based on a new dataset of reserve and liquidity requirements, the results show that inflation is more robust to changes in the velocity of money if reserve and liquidity requirements are low. Increases in the velocity of money are associated with higher inflation rates if reserve and liquidity requirements are high. The ability of partisan politics to shape economic policies according to ideological goals has been regularly questioned in an era of globalization and austerity.

Chapter 4 suggests that government ideology still has a pronounced impact on economic policy-making based on a sample of OECD and new EU member states. Chapter 5 analyses why major business leaders in France and Germany publicly supported the euro in the weeks before a bailout program was enacted by the European Council in July 2011.

The study shows that direct corporate interest did not appear to matter. Instead, business leaders appeared to be more likely to join the campaign if they were well-connected in business and political networks. The findings suggest that managers disregarded their short-term economic interests to improve their long-term ties with political decision-makers.

Essays on the Behaviour of Firms and Politicians

M. Riem, completed doctoral project, publication as *ifo Beiträge zur Wirtschaftsforschung* No. 73, ifo Institute, Munich, 2016.

The doctoral project consists of six self-contained chapters that are related to the behaviour of firms and politicians in a broader sense. After an introduction to the topic, the first part of the dissertation elaborates on how institutional and political framework conditions influence the behaviour of firms. Chapter 2 examines the determinants of inter vivos transfers of ownership in German family firms. Survey evidence indicates that owners of larger firms, and firms with strong current business conditions, transfer ownership at higher rates than others. Chapter 3 investigates how political uncertainty influences corporate investment decisions employing data on firms' self-reported investment realizations, plans and revisions. The results show that realized investment ratios decreased in years when state elections occurred relative to the average investment ratio in years with

Government ideology heavily impacts economic policy-making

The impact of institutional and political frameworks

no state election. Firms, however, already seem to anticipate electoral uncertainty when making investment plans and hardly revise their plans. Chapter 4 examines whether political uncertainty influences how firm owners perceive their present state and future development of business. The results show that firm owners expect their business to develop more favourably before state elections and more poorly in their aftermath.

How self-interest shapes politicians' behaviour

The second part of this dissertation investigates how partisanship and self-interest of politicians shape their ethos and behaviour. Chapter 5 describes how partisanship shapes the attitudes and actions of politicians in Germany. The results show that German state politicians' and governments' words differed from their actions regarding budget consolidation and the German debt brake. Chapter 6 examines whether parties punish politicians who vote against the party line in roll-call votes. The results do not show that parties account for the voting behaviour by punishing politicians who have voted against the party line. Chapter 7 investigates how the ideological positions of German economic research institutes influenced policy advice in the Joint Economic Forecast.

Wealth and Politics – Studies on Inter Vivos Transfers and Partisan Effects

C. Schinke, completed doctoral project, publication as *ifo Beiträge zur Wirtschaftsforschung* No. 67, ifo Institute, Munich, 2016.

Focus on wealth transfers and ideologies

The dissertation elaborates on topics that are related to (i) intergenerational transfers of wealth and to (ii) how government ideology and elections influence outcomes (income inequality and budget consolidation) and political processes (fiscal planning and policy advice). The dissertation consists of six studies. The first study investigates the determinants of inter vivos transfers of firm ownership. The results show that owners of larger firms, and firms with strong current business conditions, transferred ownership at higher rates than others. Inter vivos transfer rates also rose following a 2009 tax reduction on transfers of business assets. The second study delves into how the 2009 transfer tax reform influenced individual inter vivos transfers in Germany. The results do not show that the reform influenced transfers within the nuclear family, whereas transfers to close relatives and to unrelated recipients increased by about 30 percent. The third study describes how government ideology

and globalization were associated with top income shares in OECD countries. The fourth study shows that German state politicians' and governments' words differed from their actions regarding budget consolidation and the German debt brake. The fifth study describes how government ideology and upcoming elections influenced fiscal planning in German states. The results show that East German state governments underestimated the size of government in pre-election years.

Current Projects

Improving Public Debt Management in the OIC Member Countries

B. Kauder, M. Mosler, N. Potrafke, M. Reischmann, M. Riem, S. Schönherr, G. Schulze, A. Steiner, T. Wollmershäuser, M. Mosler for the Ministry of Development of the Republic of Turkey (COMCEC Coordination Office), July 2016 to March 2017.

The main purpose of the project is to examine public debt developments and public debt management practices in the member countries of the Organisation of Islamic Cooperation (OIC) and to develop appropriate recommendations for improving public debt management.

Duration of Legal Proceedings in Germany

C. Schinke, N. Potrafke, M. Reischmann M. Riem for Dr. Lutz Helmig, January 2016 to March 2017.

This project focuses on how German codes of legal proceedings give rise to potentially long delays in concluding legal proceedings.

Public Finance, Political Economy and Fiscal Federalism

M. Krause, ongoing doctoral project

This doctoral project combines research topics from the areas of public finance and political economy. Its key focus is to analyse the fiscal federalism schemes on local and municipal levels and possible reforms of the current regulations. It also examines political determinants that influence the budget composition of the German states.

**Fiscal Sustainability and Distributional Issues:
Studies in Public Finance and Political Economy**

F. Dorn, ongoing doctoral project.

In this ongoing doctoral project various topics at the interface of public finance and political economy are examined. The project focuses on the analysis of the impact of policies and institutions as well as globalisation and European integration on the sustainability of public finance and the distribution of income and assets.

Fiscal Sustainability in Public Finance.

M. Mosler, ongoing doctoral project.

This ongoing doctoral project examines the fiscal sustainability of public budgets using quantitative methods, primarily from times series and panel data econometry. There is a special focus on public debt management in developing countries and the development of tax simulation models.

**Studies on Taxation, Public Finances and
Regional Economics**

S. Gäbler, ongoing doctoral project.

This PhD thesis addresses various topics in the field of the public sector's taxation and expenditure structure, including regional interrelations at a state and municipal level.

Studies on Taxation and Political Economy

L. Lorenz, ongoing doctoral project.

This doctoral thesis looks at several different topics at the interface between public finance and political economy. One of its focal points is the analysis of the economic burden effects of taxes in view of the institutional and political framework conditions in both a national and international context.

ifo Center for Labour Market Research and Family Economics

The Center's research agenda comprises a spectrum of four large-scale, policy-oriented projects in labour and family economics. The projects have in common that all four address pressing, yet under-researched, societal issues, combine theoretical analyses with state-of-the-art causal inference methods, and draw upon unique data sources.

ECONOMIC UNCERTAINTY AND THE FAMILY

Can changes in the fertility decisions of couples be attributed to demand-induced changes in labour market opportunities? Are people more likely to marry in recessions or in booms? Does youth unemployment affect intergenerational relations? To improve our understanding of the relationship between business cycles and family-related decisions in Europe, the Center has set up the working group EcUFam (Economic Uncertainty and the Family). Deploying a variety of methods and datasets, the group conducts research into the extent and importance of economic uncertainty as induced by poor macroeconomic conditions for key family outcomes including fertility, marriage and divorce, intergenerational relationships, gender-role attitudes and infant health. The working group is located at the ifo Institute, but both the scope of its research and its scientific network are European, with project partners and supporting institutions in Italy, Sweden and the United Kingdom.

IMMIGRANT INTEGRATION

Immigrant children constitute the fastest-growing segment of the population in many European countries, thus shaping the future of these societies. The successful integration of immigrant children into host societies is therefore an issue of paramount social importance. In 2015, the Center together with external collaborators collected data on over 4,500 15-year-old pupils at almost 60 secondary schools in Germany. Respondents participated in both a classical survey and a behavioural experiment (a trust game). This data collection represents the first attempt to combine a large-scale survey with a behavioural experiment. In the years ahead, it will allow the Center to provide a comprehensive picture of immigrant children's integration into the host society including traditional outcomes, such as their educational achievements, aspirations and expectations, ethnic identity, social network, civic and social engagement, and political interest, as well as novel experimental measures such as trust and

trustworthiness. The newly-collected data will also allow for a first application of causal inference methods to experimental data on social behaviour, thus unearthing policy interventions that foster or hinder immigrant children's integration.

PUBLIC POLICY AND DOMESTIC VIOLENCE

Studies estimating the global cost of violence come to the conclusion that domestic violence is more costly than warfare or homicide, both in terms of lives lost and money spent. The main reason is that the prevalence of domestic violence is very high: possibly as many as 16 percent of all children are punished using violent methods and about 30 percent of all partnered women experience intimate partner violence during their lifetime. How a reduction in domestic violence can be achieved is not very well understood. Against this background, and from both a developed and developing countries perspective, the Center conducts research into the role of public policy in preventing violence against women and children. A focus lies on policy interventions that influence two critical determinants of domestic violence: the time allocation within families and employment opportunities of women. Drawing upon administrative as well as survey data, the research uses quasi-experimental designs and exploits recent reforms in the public child care sector, parental leave interventions and tax-benefit changes.

SOCIAL IMPACT OF ENVIRONMENTAL POLLUTION

One of the most pressing issues in agglomerated areas around the world is pollution. As one of the main externalities of economic activity, the effects of pollution on health, productivity and human interaction are highly relevant for policy makers, but not yet fully understood. The Center analyses the impact of man-made environmental pollution, and focuses on empirically establishing causal links from air, soil and noise pollution to population health, education, early child development, productivity and behaviour. The research uses survey, administrative and big data in novel ways.

The ifo department previously known as the ifo Center for Labour Market Research and Family Economics changed its name on 1 February 2017 to the ifo Center for Labour and Demographic Economics. The new name was chosen as a more accurate expression of the department's key long-term research areas.

Youth unemployment and intergenerational relations

Number of immigrant children increasing fast

Projects Completed in 2016

Optimal Immigration Policies in Europe: From Conflicting Interests to Mutual Gains

H. Rainer, J. Saurer, supported by the Leibniz Association, January 2012 to December 2015, publication of partial results as *CESifo Working Paper* No. 4959, 2014.

The ifo Center of Excellence for Migration and Integration Research (CEMIR) combines expert and specialist knowledge from various research institutes, several countries and different economic fields (see chapter on International Institutional Comparisons and Migration Research). In the framework of CEMIR, the ifo Center for Labour Market Research and Family Economics mainly focuses on the impact of immigration on employment and investigates the determinants of the successful economic and social integration of immigrants.

Monetary and Non-Monetary Benefits of a Doctoral Degree

H. Rainer, W. Auer, A. Fichtl, T. Hener, M. Piopiunik, funded by Institute for Innovation and Technology, Berlin, June 2015 to January 2016.

Education pays off. Higher education entails higher income and a lower unemployment risk for individuals. Moreover, non-monetary benefits like higher life or job satisfaction, as well as positive returns for society may be generated by investments in postgraduate education. Benefits for society consist of increases in the level of welfare, in terms of stronger social cohesion or greater political participation, for instance. The study focuses on doctoral students and analyses their monetary and non-monetary returns on an individual basis and for society as a whole.

Firstly, this feasibility study delivers a literature review of the research findings of both, international and national empirical studies on the returns associated with a doctoral degree. It analyses the empirical methods applied and the data sources exploited. Secondly, the available German datasets are evaluated in terms of their information, sample sizes, and representativeness. Finally, we outline a modelling approach to quantifying the monetary and non-monetary returns on a doctoral degree for individuals and for society.

Empirical Essays on the Socioeconomic Consequences of Economic Uncertainty

W. Auer, completed doctoral project, publication of partial results in *CESifo Economic Studies* 62(4), 2016.

German fertility rates are far below the replacement level, meaning that its population is projected to shrink. This implies a threat to sustainable economic growth and the stability of the social security system. Thus, fertility behaviour is of great interest to policymakers. Economic research has identified several reasons for the low fertility level, including changes in preferences and values, socioeconomic factors, and institutional settings. As pointed out by Garry Becker in a very simple theoretical model, economic circumstances and, especially labour market conditions, are of major importance to fertility decisions since they determine the opportunity costs of childbearing. This dissertation contributes by empirically investigating the socioeconomic consequences arising from economic uncertainty in the labour market in four stand-alone research papers. At the aggregate level, Chapter 1 focuses on the short-run effects of local labour market conditions on period fertility measures. The long-run effects on cohort fertility are presented in Chapter 2. At the individual level, Chapter 3 empirically investigates the effects of starting a career with a fixed-term contract on the quantum and timing of fertility, whereas Chapter 4 turns its attention to the health consequences of economic uncertainty in early career years. The main findings suggest that economic uncertainty at the individual and aggregate level has a major influence on fertility decisions, as well as on the mental health status of the younger generation (below age 40). However, there is strong evidence for gender-specific effects on both the individual and aggregate levels, meaning that women react differently to economic uncertainty during their early career years than men. This has important implications for policy recommendations: firstly, a well-designed family-oriented labour market policy should minimise the gender-specific negative consequences of economic uncertainty. Secondly, it should strive for a more equal distribution of the individual costs associated with flexible labour markets.

What are the reasons for low fertility levels

Economic uncertainty affects fertility decisions

Current Projects

Economic Uncertainty and the Family (EcUFam)

N. Danzer, H. Rainer, B. Schulz, W. Auer, T. Hener, P. Reich, F. Siuda, M. Fabel, supported by the Leibniz Association, July 2015 to June 2018.

The research group newly set-up at the ifo Institute, EcUFam (Economic Uncertainty and the Family), looks at issues in the topic area of “Economic uncertainty and the family“. As part of the project three doctoral projects are being funded by the Leibniz Association and conducted by F. Siuda (ongoing doctoral project, as of October 2015), P. Reich (ongoing doctoral project, as of September 2015) and M. Fabel (ongoing doctoral project, as of October 2016).

Leibniz funds
3 doctoral projects

Germany 2017

H. Rainer, T. Hener, A. Fichtl, J. Ragnitz, in cooperation with ifo research professor S. Bauernschuster, University of Passau, for the German Federal Ministry for Economic Affairs and Energy, March 2016 to December 2017.

The main goal of the study is to investigate the current attitudes and behaviours of unified Germany's citizens. The preceding study “Germany 2014” described the development of attitudes and behaviours of German citizens in the East and West over a long period, from the time of separation up to the first 25 years after unification. Building on this, we extend the analysis to include the most recently available data. Apart from a purely descriptive analysis of attitudes towards politics, the economy, values, norms and identities, as well as the challenges currently faced by society, we also examine their determinants with a view to formulating policy recommendations.

Attitudes of unified
German citizens

The study consists of two major parts. In the first part, a literature review summarises and evaluates existing results and findings on the topic. To this end, we review the preceding study “Germany 2014”, as well as leading scientific papers from the intersecting areas of economics, sociology, psychology and political sciences. In the second part, we conduct our own empirical analysis, examining existing datasets.

Essays on Family and Labour Economics

N. Danzer, ongoing habilitation project, publication of partial results as *Ifo Working Paper* No. 169, 2013; No. 190, 2014; *CESifo Working Paper* No. 4488, 2013 and No. 4855, 2014.

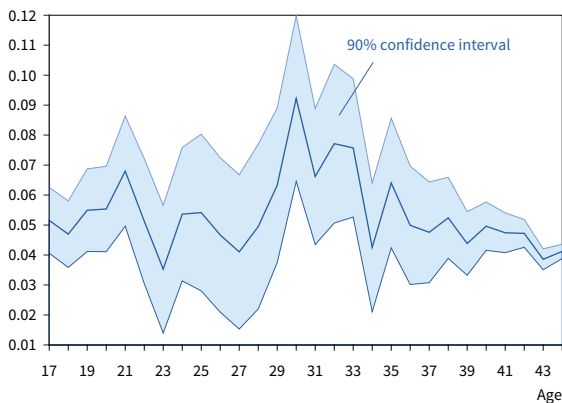
Demographic change constitutes a major challenge for the labour market and the social security system. This habilitation project explores the interactions between labour market and demographic developments. On the one hand, the project investigates the importance of different forms of economic uncertainty (atypical employment, unemployment and the risk of unemployment over the course of an economic cycle) in couples' decisions regarding the size of their family. In this context different potential impact channels are also analysed more closely. On the other hand the project also looks at the question of how far policy reforms designed to support the compatibility of a family and a career and to reduce job insecurities directly impact not only labour market decisions by parents, but also indirectly influence the development of children.

The Economics of Labour Markets and the Family

T. Hener, ongoing habilitation project, publication of partial results as *CESifo Working Paper* No. 4776, 2014; No. 5313, 2015; *ifo Schnelldienst* 67(10), 2014; 67(24), 2014; *CESifo DICE Report* 12(1), 2014; and in *Journal of the European Economic Association* 14(4), 2016; *Journal of the Royal Statistical Society: Series A* 179(3), 2016; *Review of Economics of the Household*, forthcoming.

Pivotal to demographic development issues – ageing societies and low birth rates – are the decisions of households, families and individuals. This habilitation project is concerned with the interplay of family and labour market policies, macroeconomic development and microeconomic decisions. The project uses a life-cycle perspective to create a complete picture. Sub-projects investigate the interplay of assortative matching in marriage markets and education using international micro data. The importance of family and labour market policies in the decision to start a family is also examined. The early life circumstances of children form the focus of studies on the impact of macroeconomic shocks and early childhood education.

Effects of Day Nursery Rates on Birth Rates Per Year of Mother's Age



Regression results from fixed-effects model per year of mother's age, taking into account the control variables in the base regression.

Source: German State Statistics Offices; German Federal Statistics Office; calculations by the ifo Institute.

Public Finance, Globalization and Labour Markets

C. Holzner, ongoing habilitation project, publication of partial results in *Journal of Macroeconomics*, 2010; *CESifo Economic Studies*, 2010; *Zeitschrift für ArbeitsmarktForschung* 46(2), 2013; *CESifo Working Paper* No. 3597, 2011; No. 3522, 2011; No. 3472, 2011; No. 5275, 2015; No. 5245, 2015.

Labour markets are not perfectly competitive, but are governed by all kinds of frictions. Search and matching theory therefore concentrates on information imperfections and associated mobility frictions. This habilitation project aims to understand the freedom enjoyed by firms in designing labour contracts, the influence of different wage mechanisms, and the impact of trade liberalization in an imperfect labour market. The existence of frictions can also justify government intervention in the labour market. The project therefore also looks at how far the current income tax system can be justified by labour market frictions.

Essays on the Economics of Migration

J. Saurer, ongoing doctoral project, publication of partial results as *CESifo Working Paper* No. 4959, 2014.

In the framework of a doctoral project two different aspects of migration are investigated at a microeconomic level. On the one hand, the project investigates the effect of the sudden growth in an ethnic group on both the labour market situation of local inhabitants

and on their electoral behaviour. On the other hand, the doctoral project looks at the integration behaviour of migrants. The use of almost experimental identification strategies should make it possible to reveal real causal relations. The analyses are based on micro data sets like Mikrozensus, SOEP, ALLBUS and NEPS.

Essays on Assortative Matching in Labour and Marriage Markets

B. Schulz, ongoing doctoral project, publication of partial results as *Ifo Working Paper* No. 199, 2015.

This dissertation project analyses labour and marriage market models with search frictions and two sided heterogeneity both theoretically and empirically. The focus lies on assortative matching, that is, the existence of an optimal matching partner driven by complementarities in production, which has important implications both for the stationary equilibrium and the model's dynamics. A labour market model with assortative matching is better able to explain certain empirical regularities of the labour market than models with representative agents. The empirical part of the dissertation examines the prevalence of complementarities and assortative matching in the labour market using structural econometrics and register data. Additionally, a comparable model with heterogeneous agents is constructed for the marriage market. It allows for the analysis of fluctuating marriage and divorce rates in the light of economic uncertainty.

Globalization, Female Empowerment, and Domestic Violence

E. Guarnieri, ongoing doctoral project, since September 2016.

Labour and marriage markets models

Economic uncertainty, marriage and divorce rates

ifo Center for the Economics of Education

Education and global competitiveness

Modern growth economics identifies the generation of knowledge as a primary determinant of long-term economic growth. Knowledge generation includes both the development of individual competencies and the generation of new knowledge that advances the world technological frontier. However, little can be learned from such general macroeconomic insights for concrete policy-making at the micro level. The research programme of the ifo Center for the Economics of Education therefore asks which kind of knowledge matters most for prosperity, what determines knowledge generation, and which kind of policy can contribute to promoting it. To understand which policies work, the center primarily employs microeconomic methods that allow for quasi-experimental evaluation.

Education systems generate the human capital of a highly educated workforce that is of crucial importance for the global competitiveness of modern economies in an ever changing world. In the long run, only continuous advances in knowledge make it possible to escape worldwide low-wage competition. Moreover, education is a crucial determinant of equity, participation and cohesion in society. Specifically, the center's research is structured into four areas that address political and other determinants of education on the one hand, and its effects on individual and societal prosperity on the other:

EDUCATION AND INDIVIDUAL OUTCOMES: LABOUR MARKETS AND LIFECYCLES

Education as determinant of individual opportunity

The first research area analyses the importance of education for individual opportunities in the labour market and in everyday life, focusing on individuals and their employment lifecycles. It studies the role of competencies and skills for individual employability and social participation in a society that changes ever more rapidly. In 2016 one of the center's research projects calculates the returns to education for several educational degrees in Germany and compares them to each other. Another project documents potential differences in labour-market outcomes between graduates of universities of applied sciences (Fachhochschulen) and graduates of universities. Moreover, the center runs a research project on the importance of school-leaving grades for the hiring decisions of firms based on a survey of human resource managers. An additional focus is on the dual vocational education system, an important pillar of human capital formation in German-speak-

ing countries. In this context, a 2016 study shows that the initial employment advantage of individuals with a vocational compared to a general education turns into a disadvantage over the life-cycle. Furthermore, the center investigates the labour-market effects of ICT skills and the opportunities and limitations of life-long learning.

EDUCATION AND LONG-TERM DEVELOPMENT: ECONOMIC GROWTH AND PROSPERITY

Education is also decisively important to the prosperity of society at large and to economic development in the long run. One focus in this area is on the role played by education as measured by the results of international achievement tests for economic growth and social cohesion today. An additional focus is on a historical perspective, and questions such as how the diffusion of education before and during industrialization changed historical development. In this context the center's work in 2016 investigated the effects of cultural diversity on education and innovation in 19th century Prussia. Moreover, a dissertation project on the economics of education from a historical perspective was completed in 2016, examining among others the effects of educational spending on economic development in Prussia. The historical perspective was also combined with a modern view through an assessment of the long-term effects of historical circumstances on economic development today.

DETERMINANTS OF EDUCATION: CULTURE, RESOURCES AND INSTITUTIONS

Given the central importance of education for the prosperity of individuals and societies, the third research area studies the determinants of educational performance. A particular focus is placed on three groups of determinants: families, values, and norms (culture); resources spent on education; and the institutional framework of the education system. The center's research analysing these determinants often draws on rich micro data from various international student achievement tests. This year, the center started a research project that analyses the effects of school accountability on student achievement from a cross-country perspective. Further research topics studied this year include the determinants of teacher effectiveness, the impact of parental separation on children's cognitive skills, and the integration of immigrant children.

GOVERNANCE OF EDUCATION: EFFICIENCY AND EQUITY

The fourth research area focusses on how the political governance of education systems affects educational success and equity. Central elements of the governance of education systems studied in this area include exam systems, autonomy, competition, and tracking. The area also studies the feasibility of governance reforms and their acceptability in the population. In 2016, the results of the third ifo Education Survey were presented, which is a survey on education policy in Germany conducted by the center and funded through the Leibniz tendering procedure. This year's survey has two special features: an oversampling of teachers and a section on refugee integration through education. The center also coordinates the European Expert Network on Economics of Education (EENEE), a Europe-wide think tank funded by the European Commission. Ultimately, the evaluation of policies with (quasi-) experimental methods aims to bring evidence-based policy advice into the political decision-making process. The center recently started to evaluate a mentoring programme for disadvantaged students.

Projects Completed in 2016

Career Paths of College Graduates

M. Piopiunik, A. Fichtl, funded by the Expert Commission for Research and Innovation (EFI), February 2016 to August 2016, publication of results in: "Comparing graduates of universities of applied sciences with graduates of universities: R&D activities, labour-market outcomes, competencies and mobility", Studies on the German Innovation System No. 14-2017, EFI, 2017.

This project compared graduates of universities of applied sciences (Fachhochschulen) to graduates of universities with respect to their research and development activities. Furthermore, potential differences in labour-market outcomes such as income, cognitive competencies, and regional mobility were considered. Several micro datasets were used to investigate these differences: the Linked Employer-Employee Data (LIAB) from the Institute for Employment Research (IAB), the German Microcensus, the Programme for the International Assessment of Adult Competencies (PIAAC), and the student and adult cohorts of the German National Educational Panel Study (NEPS).

The results indicate that graduates of universities of applied sciences and university graduates are broadly similar in terms of their R&D activities; but for some occupations and fields of study, university graduates report higher R&D activities, particularly in engineering, the group with the highest R&D intensity. In the economics and social occupations in which R&D activities are less common, there are no differences with respect to R&D activities between the two groups of graduates.

University graduates on average have higher incomes than graduates of universities of applied sciences. This is mostly also true when comparing graduates within the same field of study or within the same occupation. Large income advantages are present particularly in the field of economics and in some engineering fields, as well as for bankers, directors of a company, and managers. In general, the income gap between the two groups tends to be lower in occupations with low average income. University graduates are more likely to occupy leading positions in a company than graduates of universities of applied sciences. In line with higher incomes, university graduates have higher skills in math and reading than graduates of universities of applied sciences. The differences in math skills explain some fraction of the income gap. A comparison between students in their first college year indicates that the skill gap already existed at the beginning of college and did not arise during their college or working life.

University graduates live farther from their hometown when working than graduates of universities of applied sciences. The larger regional mobility arises mainly after finishing high school (Abitur) when switching to a college. Nevertheless, a roughly similar share of graduates of universities of applied sciences and university graduates starts their college career at the closest respective educational institution. There are large differences with respect to family background between the two groups of college graduates: students at universities are more likely to have two parents with a tertiary degree and are also more likely to have parents with a highly-qualified occupation.

National Education Panel Study (NEPS)

L. Wößmann, N. Obergruber in cooperation with the NEPS Consortium, funded by the Leibniz Institute of Educational Trajectories e.V. (LifBi) at the University of Bamberg, January 2014 to December 2016.

University graduates have higher incomes

University graduates move further from home

NEPS data

The objective of the National Education Panel Study (NEPS) was to collect longitudinal data for Germany on the development of skills, education processes, education decisions, and returns on education in formal, non-formal, and informal contexts over the entire life-span. The NEPS data was made available to the national and international scientific community in the form of an anonymous Scientific Use File. The data offer rich analysis potential for various disciplines that examine education and training processes, such as education, psychology, sociology, economics, and demographics, and create the basis for improved reporting and policy consulting in Germany.

The ifo Center for the Economics of Education had co-responsibility for item development in the pillar of ‘returns to education across the life course’. Among others, the development study for items for the transition of children from elementary to lower secondary schools was analysed in 2016 and these items were prepared for the main survey. Additionally, new items on re-paying student loans and credits were developed. In 2016, the progress of all cohorts reached a point where the recording of teacher characteristics for the school cohorts was repealed. As this had been the main focus of the ifo Center for the Economics of Education, the involvement of the ifo Institute in NEPS ended in December 2016.

Education Economics from a Historical Perspective

R. Schüler, completed doctoral project, publication of results as *Ifo Working Paper* No. 227, 2016; *CESifo Working Paper* 6103 and 5894, 2016; *ifo Beiträge zur Wirtschaftsforschung*, forthcoming.

Educational economics in 19th century Prussia

This dissertation analysed topics in educational economics in Prussia at the end of the 19th century. The project thus examined an era of German school history that still affects the contemporary educational system in Germany. Two of the dissertation’s subprojects investigated the consequences of educational inputs and two subprojects examined the determinants of educational provision and performance in 19th-century Prussia. The econometric analyses are based on census data, originally collected by the Royal Statistical Office of Prussia and partly digitised for this thesis. The thesis analyses how education funding emerges in a federal system and how it affects prosperity and nation-building in a setting of religious and ethno-linguistic heterogeneity.

The first study provided evidence that educational spending accelerated economic development in the industrializing western regions of Prussia, although not in Prussia’s agricultural East, suggesting that primary education instilled knowledge that permitted a shift to higher-skilled and higher-paid occupations in those regions that faced a sectoral change of the economy. The second subproject showed that a higher share of central state contributions in education increased pro-nationalist attitudes and, to a smaller extent, voter turnout. This indoctrination was especially successful in constituencies that were populated by a high share of either religious or linguistic minorities. The third subproject investigated the effects of linguistically polarised societies on educational provision in decentralised systems. Evidence of a negative effect of polarization on educational spending is found. Further analysis exploiting increased centralization showed that centralization can increase educational provision in polarised regions. The fourth study made use of a natural experiment introducing centralised school monitoring against the background of the *Kulturkampf*, a cultural struggle between the Prussian state authorities and the Catholic Church. While the reform increased school performance overall, resistance from the targeted Catholic population was found.

Current Projects

The Political Economy of Education Policy: Insights from a Public Opinion Survey

L. Wößmann, P. Lergetporer, E. Grewenig, F. Kugler, K. Werner, in cooperation with ifo research professor M.R. West, Harvard University, funded through the Leibniz Competition, January 2014 to December 2017, publication of first results in: *ifo Schnelldienst* 67(18), 2014; 68(17), 2015; 17/2016; *Harvard Kennedy School PEPG Working Papers* 15-02, 2015; *schulmanagement* (6), 2016; *CESifo Working Papers* No. 5938, 2016; No. 6192, 2016.

Empirical research has produced many insights into how education policies could be altered to improve educational outcomes. But political actors are frequently reluctant to carry out reforms supported by high-quality research. One important reason for this discrepancy between evidence and action could be that political actors

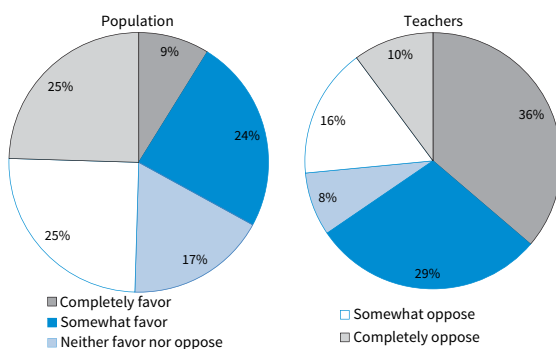
are responsive to the opinions of voters and of well-organised interest groups. A sound grasp of the electorate's opinions on education policy and its malleability through information campaigns, for example, is therefore crucial to understanding education policies and outcomes.

The aim of this project is to better understand public opinion on a broad range of topics in education policy. We therefore conducted three waves of a representative opinion survey of the adult German population on education policy each year from 2014 to 2016. In order to study the causal effect of information provision on public opinion, we administered survey experiments in which a randomly selected subgroup of respondents was provided with certain pieces of information before answering a question common to all respondents. Comparing the answers of both subgroups allowed us to quantify the causal effect of the respective information on public opinion.

The third survey wave was conducted from April to June 2016 and focused on the opinions of teachers and education policies for integrating refugees. In order to make statements about the opinion of teachers, we also sampled over 700 school teachers on top of the representative master sample of over 3,300 respondents. In order to capture public opinion on various education policies that aim to foster refugee integration, we dedicated a whole section of the 2016 survey to this topic.

Should Teachers Have Tenured Civil Servant Status?

Question:
In most German states, most teachers have the status of tenured civil servants (Beamte), whereas in other states most teachers are standard employees (Angestellte). Do you favor or oppose that teachers are tenured civil servants?



Source: ifo Education Survey 2016. For more details see ifo Schnelldienst 69(17), 2016.

A comparison between the opinions of the general public and school teachers reveals that many poli-

cies find majority support among both groups. For instance, majorities of the full population and teachers favour the introduction of entrance exams for teacher training programmes, compulsory continued education for teachers, and nationwide comparison tests in schools. Opinions differ, however, in areas that affect teachers directly like, for example, their salary or working conditions. For instance, about two thirds of teachers advocate that teachers should generally get tenure. Among the general population, only one third favours this proposal.

The German population is not optimistic about the educational background of refugees: three quarters of survey participants estimate that the average education level of refugees is low. At the same time, several education policies for refugees have majority appeal, such as publically funded, compulsory language courses, an extension of the compulsory schooling age to 21 years, an equal regional distribution of refugee children across schools and tax-financed compulsory preschool for refugee children.

Close cooperation with colleagues at the Program on Education Policy and Governance (PEPG) at Harvard University, who conduct similar surveys in the US, constitutes another key aspect of this project. In 2016, a second study on the comparison between public opinion in the US and Germany was published. Furthermore, an international workshop on “The Politics of Education Policy: An International Perspective” was held jointly with PEPG on May 5–6, 2016, at Harvard University.

Little optimism over refugee education

ifo co-organises international workshop at Harvard

European Expert Network on Economics of Education (EENEE)

L. Wößmann, A.B. Bergbauer, R. Schueler, F. Kugler, U. Baldi-Cohrs in cooperation with senior experts from leading European universities, research institutes and international organisations on behalf of the European Commission, Directorate General Education and Culture, 2013 to 2016, current extension 2017 to 2020.

The European Expert Network on Economics of Education (EENEE) is a network of leading European centres and experts on the economics of education. As an EU think tank, the network is sponsored by the European Commission, Directorate-General for Education and Culture (DG EAC) and coordinated by the ifo Institute. EENEE aims to contribute to improving decision-making and policy development in educa-

tion and training in Europe by advising the European Commission in the analysis of economic aspects of educational policies and reforms and supporting the dissemination of knowledge on the economics of education in Europe.

EENEE runs website

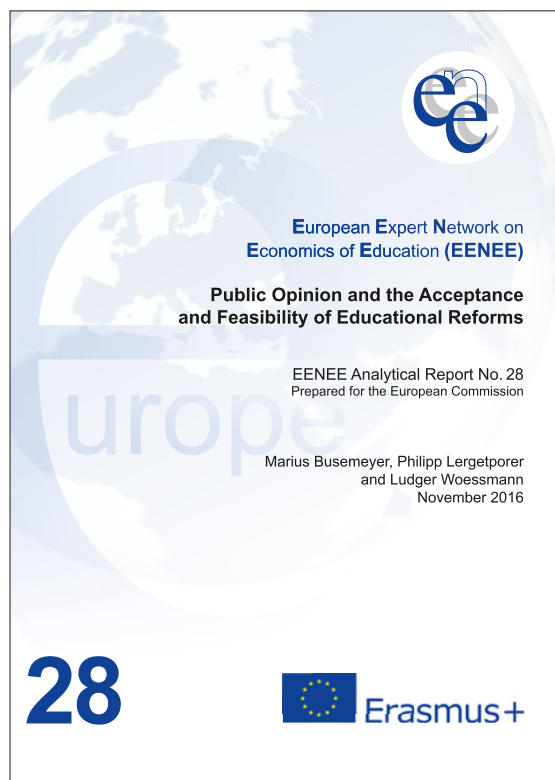
EENEE performs the following tasks: preparing analytical reports, writing policy briefs, providing guidance and advice on concrete questions raised by the Commission in the field of the economics of education that emerge occasionally on an ad-hoc basis, offering support with conferences and meetings on the economics of education, maintaining a website on Economics of Education in Europe (www.educationeconomics.org), mapping experts and organisations in this area, and providing references to key topics in the economics of education.

In 2016, EENEE published two analytical reports and prepared three further reports that will be published soon. Analytical Report 27 examines how education can be used as a tool to integrate migrants. Analytical Report 28 analyses the importance of the public opinion for the acceptance and the feasibility of educational reforms. Analytical Report 29 elaborates on the use of nudges and other behavioural approaches in education. Analytical Report 30 looks at the implications of integrating immigrant children in European education systems. Analytical Report 31 examines the potential of education in economic cost-benefit analysis of migrants in the EU.

Three policy briefs on student debt

Three policy briefs on student debt in selected countries, incentives to raise the quality of instruction, and education as a tool for the economic integration of migrants were also published. In further pieces of evidence-based policy advice, the EENEE network answered four ad-hoc questions by the European Commission on educational poverty, first and second generation immigrants, special educational needs, and relevant topics in current economics of education discussions.

In the pursuit of meeting the network's goal to better connect academic research and policy making, EENEE and its social sciences partner network NESET II hosted a Conference in Brussel on November 23, 2016. The topic "Socially Inclusive Education" was discussed by high-level policy makers and renowned researchers from EU member states.



Exit Exams as a Governance Instrument in the School System: The Importance of School-Leaving Grades for the Hiring Decisions of Firms

L. Wößmann, M. Piopiunik, L. Simon, A. Jacob-Puchalska, F. Kugler with ifo research professor G. Schwerdt, University of Konstanz, funded by the Federal Ministry of Education and Research, March 2014 to February 2017.

This project examines the effects of high-school and college graduation grades and other productivity signals such as language, IT, and social skills on the employment decisions of firms. Around 600 human resource managers taken from a representative sample of firms in Germany participated in an online decision experiment. During the experiment, the human resource managers were presented with two fictitious CVs with randomised characteristics and were asked which candidate they would rather invite for an interview in their company.

Results suggest that high-school graduation grades are important when a candidate enters the labour market directly after school. The high-school gradu-

ation grade of apprenticeship candidates has a statistically significant positive effect on the probability of being invited for an interview, while it is insignificant for college graduates, who have acquired a further productivity signal. The college graduation grades are the most important CV element for the latter, followed by the length of their labour-market experience acquired through internships. For apprenticeship applicants, IT skills and social skills shown through voluntary work also have major effects on the probability of being invited for an interview.

Calculation of Returns on Education in Germany

F. Kugler, M. Piopiunik, L. Wößmann, funded by Union Investment Privatfonds GmbH, December 2015 to March 2017.

Investment in education pays off. A large body of literature dealing with the returns to education estimates that the average yield of an additional year of schooling is around 10% higher income. But what are the returns on education for people with different educational pathways?

In order to answer this question, the project applies a standard net present value method to calculate differences in lifetime earnings by educational degrees from current age-earnings profiles in Germany. To enable detailed subgroup analyses, we use data for over a million individuals in the German Microcensus 2011–2013, combined with information on the duration of and net income and cost associated with different educational degrees. We calculate differences in monthly income, unemployment rates, and lifetime income between individuals without a professional educational degree, with an apprenticeship degree, with a master degree, with different types of college degrees, as well as separately for the standard and the second-chance route. The rich data allow analysis of heterogeneity in these measures by gender, region, field of study, and for alternative assumptions as to the duration, income, and cost associated with the different educational phases. We also calculate descriptive internal rates of return on different educational degrees based on the algebraic (rather than Mincer) method. Finally, the project documents changes in the educational composition of the population and in unemployment rates by educational degrees since 1976.

Acquisition and Utilisation of Adult Skills – A Network for Analysing, Developing and Disseminating PIAAC

L. Wößmann, S. Wiederhold, F. Hampf with ifo research professors E.A. Hanushek, Stanford University, and G. Schwerdt, University of Konstanz, part of a consortium headed by GESIS, funded through the Leibniz Competition, February 2015 to December 2018, results are published in *Economics Letters* 153, 2017; *CESifo Working Papers* No. 5720, 2016; No. 6116, 2016; *NBER Working Paper* No. 22657, 2016; *Economic Letters*, 153, 2017.

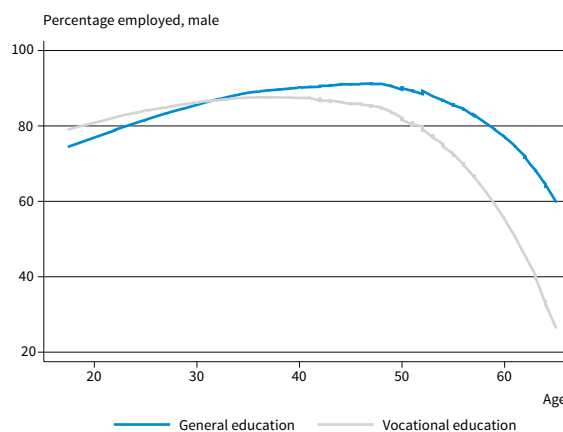
The Programme for the International Assessment of Adult Competencies (PIAAC) provides up-to-date information on key adult skills in 33 countries. We use the PIAAC data to carry out research on the acquisition and utilisation of skills. In particular, in collaboration with other Leibniz institutes, we aim to improve the understanding of causal effects of skills on labour-market outcomes using improved identification methods. The PIAAC data and the project results will be communicated to the scientific community and to stakeholders from politics and industry.

PIAAC provides data on key adult skills

A first study estimates the employment effects of vocational vs. general education over the life-cycle. Results suggest that an initial employment advantage of individuals with vocational compared to general education turns into a disadvantage later in life. This trade-off is strongest in countries like Austria, Denmark, and Germany, which are characterised by a strong apprenticeship system.

Estimations of employment effects

Employment with Vocational vs. General Education over the Life-Cycle



Notes: Countries with apprenticeship systems (Austria, Denmark, and Germany).

Source: Hampf and Wößmann, *CESifo Working Paper* No. 6116, 2016.

A second study analyses the reasons for large differences in returns to skills across countries in the PIAAC data that have been extended by nine countries in the second wave. Singapore and Chile, two of the newly added countries, have the highest returns to skills and Greece the lowest. The results also suggest that returns on skills are systematically larger in countries that have grown faster, consistent with models where skills are particularly important for adaptation to dynamic economic change.

**Broadband
availability increases
ICT skills**

Another study shows that higher ICT skills lead to higher wages in the labour market. For the analysis, the authors use the fact that, regardless of their other skills, people in some areas of Germany have more ICT skills due to the increased availability of broadband internet. An international analysis of 19 countries also exploits the fact that the expansion of broadband infrastructure builds on existing infrastructure technologies.

Teacher Effectiveness and its Determinants in Germany: A Deepened Analysis

B. Enzi, L. Wößmann, ongoing doctoral project, supported by the German Research Foundation (DFG), October 2015 to September 2018, publication of first results as *Ifo Working Paper* No. 225, 2016.

**Value-added
models of student
achievement**

The project aims to analyse the effectiveness of teachers and its determinants based on student-level achievement data from the German National Educational Panel Study (NEPS). A first key goal of the project is to exploit the longitudinal structure of the NEPS data to estimate value-added models of student achievement that include teacher fixed effects. Based on the estimated distribution of teacher quality, we can quantify the effects of having an “effective” teacher on student achievement. A second key goal of the project is to study the determinants of teacher quality. The NEPS survey information exceeds the information on teacher characteristics typically available in large-scale linked student-teacher datasets. Furthermore, multiple estimation strategies are used to boost the reliability of the results on teacher effectiveness in Germany. Preliminary findings suggest a lower teacher quality variance in Germany than in the US, as well as the predictive power of teachers’ grades in the second state examination and in their high-school leaving exam. The previously found positive effect of a teacher’s initial years of experience holds in Germany too.

The Effects of Cultural Diversity on Innovation and Public Provision of Schooling: Evidence from 19th-century Prussia

F. Cinnirella, funded by the German Research Foundation (DFG), February 2015 to January 2017.

There is a growing body of literature that studies the costs and benefits of cultural diversity. On the one hand, cultural diversity may increase productivity due to complementarities in the specialization of different ethnic, linguistic, and religious groups. On the other hand, diversity may lead to lower redistribution and under-provision of public goods due to divergent preferences. This project aims to provide new empirical evidence on the topic in the specific setting of 19th-century Prussia.

The first subproject investigates the role of cultural diversity in innovation. More specifically, we aim to identify the effect of religious diversity on patenting activity. This is the first project that explores this relationship for a period of intense technological progress like the German industrial revolution. In fact, Prussia constitutes an ideal laboratory for studying the effect of religious diversity on innovative activity. For historical reasons like the Reformation in the 16th century and the Partitions of Poland at the end of the 18th century, Prussia was characterised by a pronounced religious and ethnic heterogeneity due to the cohabitation of Protestants, Catholics, and Jews (plus other smaller religious groups). Using census data at the county level on the religious composition of the population in 1816, we can identify exogenous variation in religious diversity in 1871, and thus estimate its causal effect on innovative activity. Innovative activity is measured by the number of valuable patents granted to firms and individuals between 1877 and 1890.

The second subproject sheds light on the mechanisms behind the effect of diversity on innovative activity. This is possible by using data on the religious composition of dozens of industries reported in the Prussian occupational census of 1882. This allows us to understand whether the complementarities between different cultures only have a positive effect on innovative activity for specific industrial sectors. In addition, we will also investigate whether cultural diversity functioned as a channel for spillovers of technological knowledge, and to what extent diversity helped the diffusion of technology across technologically and geographically related industries.

Evaluating the Effectiveness of a Mentoring Programme

L. Wößmann, S. Wiederhold, S. Resnjanskij, F. Hampf, J. Ruhose, F. Kugler, funded by the Commissioner of the Federal Government for Migration, Refugees and Integration and a consortium of non-profit foundations, June 2015 to March 2020.

Social mobility in Germany is relatively low. This is reflected in the fact that children with disadvantaged or migration backgrounds are most likely to follow the lowest academic school track in secondary school. Often, these children do not make the leap from the *Hauptschulabschluss* to qualified work or further schooling; and thus have only very reduced chances of upward mobility. Reasons for the lack of perspective may include inadequate assistance for parents with low income or education levels in school-related work, low school quality, a resulting lack of training maturity, only vague ideas about potential jobs, and lack of detailed knowledge about the German educational system.

Given these problems, mentoring and coaching programmes can be an effective way of improving the future prospects of disadvantaged students. This project investigates whether one of the largest 1:1 mentoring programmes in Germany has a positive impact on school grades, social competencies, and the labour-market success of disadvantaged students. The evaluation aims to investigate both the short-term and long-term effects of the programme; and to uncover concrete mechanisms behind them to provide generalizable recommendations for the design of mentoring programmes.

Accountability and School Institutions in Cross-Country Perspective

L. Wößmann, A.B. Bergbauer in cooperation with ifo research professor E.A. Hanushek, Stanford University, funded by the Smith Richardson Foundation, October 2016 to September 2018.

This project investigates the impact of educational institutions on student outcomes from a cross-country perspective. For this research, the micro data of all six waves of the Programme for International Student Assessment (PISA) since 2000 are linked in a panel dataset. By using country fixed effects, the analysis will account for cultural and economic differences across

nations. Intertemporal changes in student performance for each country will be related to how the institutional structure of each country evolved. In addition to the achievement data, PISA also provides a rich array of background information on each student and her school. Students are asked to provide information on personal characteristics and their family background. School principals provide information on the schools' resource endowment and institutional settings. As PISA does not cover a range of important institutions, including exam and accountability systems, we will also refer to external sources. Thus, a primary task during the first year of the project is the development of a matrix of institutional features of the school systems for the participating countries covering a range of institutions for the period 2000–2015.

Empirical Studies in the Economics of Education

L. Wößmann, various ongoing research projects, recent publications, among others, in: *Science* 351 (6271), 2016; *Economic Journal* 126(590), 2016; *Journal of Economic Perspectives* 30(3), 2016; *Education Economics* 24(1), 2016; *Education Next* 16(3), 2016; *Journal of Human Resources* 52(1), 2017; *Economics of Education Review* 56, 2017; *Economics Letters* 153, 2017; *American Economic Journal: Macroeconomics*, forthcoming; *Journal of Economic Growth*, forthcoming; *NBER Working Paper* No. 22808, 2016; *CESifo Working Papers* No. 5938, 2016; No. 6116, 2016; *Handbook of the Economics of Education*, Vol. 5, 2016; *Forschung & Lehre* 23(1), 2016; *Wirtschaftsdienst* 96 (7), 2016; reports of the Aktionsrat Bildung and of the Academic Advisory Council of the Federal Ministry of Economics and Energy, as well as contributions in several daily and weekly newspapers.

Numerous ongoing projects deal with different topics in the economics of education. One study conducted together with ifo Research Professor Eric A. Hanushek of Stanford University shows that the “knowledge capital” of nations as measured by the competencies of the population can account both for the East Asian growth miracle and for the Latin American growth puzzle. A further recent study confirms the importance of knowledge capital to income differences across US states.

Several projects use microeconomic techniques to analyse the extensive micro datasets of various international student achievement tests such as PISA and TIMSS, as well as the international test of adult competencies PIAAC. The goal is to determine what les-

Matrix of school system features developed

Joint study on knowledge capital of nations

sons can be drawn from international student tests for educational policies aimed at efficiency and equity, and how adult competencies affect employment and income on the labour market. Current studies investigate, among others, the role of the institutional frameworks of the school system, the information value of central exit exams on the labour market, the role of vocational education over the life-cycle, and the economic case for education.

**Effects
of educational
expansion
on secularization**

A historical research project analyses the effects of educational expansion on secularization at the end of the 19th and the start of the 20th century. Mechanisms of persistence in economic history are also studied, such as the effect of the long-gone Habsburg Empire on trust and corruption in current local bureaucracy in Eastern Europe.

Recent studies investigate the impact of information provision on preferences for public spending, and particularly in the field of education. Further contributions address the opportunities and challenges of integrating refugees via education and the importance of transparency in education policy. Furthermore, the fifth volume of the Handbook of the Economics of Education was edited this year together with Eric A. Hanushek (Stanford) and Stephen Machin (University College London).

The Accumulation of Human Capital and the Transition from Malthusian Stagnation to Modern Economic Growth

F. Cinnirella, ongoing habilitation project, publication of results in *Journal of Economic Growth*, 2010; *Cliometrica*, 2012; *European Review of Economic History*, 2013; *Historical Methods*, 2014; *Journal of Development Economics*, 2016; *Demography*, 2017; *Journal of Economic Growth*, forthcoming, *CESifo Working Papers* No. 5894, 2016; No. 6072, 2016; No. 6103, 2016.

**Key determinants and
political economy of
public education**

The habilitation project examines the main determinants and the political economy of public education from a historical perspective on the one hand, and the impact of education on economic growth on the other. One project analyses the interaction between land distribution and labour-market institutions and its effect on the accumulation of human capital. A companion project studies the economic incentives behind the emancipation of labour both theoretically and empirically. The project analyses to what extent the complementarity between physical capital and skills created

the incentives to abolish serfdom; which, in turn, triggered sustainable investments in human capital. An additional project analyses the relationship between the abolishment of serfdom, the accumulation of human capital and marriage.

Further studies analyse the relationship between human capital, innovation, and economic growth using data on patenting activity in Prussia in the 19th century. In particular, one study shows that average human capital and the human capital of a highly-skilled minority have different effects on innovation. We show that average formal education measured in terms of literacy is more related to innovation by large firms and innovation in technologically advanced industrial sectors, whereas the skills of master craftsmen are more related to independent innovation and innovation in more traditional industrial sectors. We also show that human capital and innovation have separate effects on income and economic growth.

Another part of the habilitation project analyses the relationship between ethnic-linguistic polarization and public education expenditures. The study shows that in counties with divergent preferences on the content of public education, decentralization of education policy led to lower education expenditure. Finally, the habilitation project studies the effect of human capital on the fertility transition at the end of the 19th century, which marked the transition from a Malthusian stagnation to modern economic growth. In this respect, a study investigates how couples in England between 1540 and 1800 adjusted age at marriage and birth intervals to changes in economic conditions. This part of the project will be complemented by a study on France, which was the first country in Europe to experience the fertility transition.

Human Capital Production and Migration

M. Piopiunik, ongoing habilitation project, publication of results in, among others, *European Economic Review* 92, 2017; *Economics Letters* 139, 2016; *NBER Working Papers* No. 20727, 2014; No. 21393, 2015, *CESifo Working Paper* No. 5470, 2015.

One focus of this habilitation project is in the domain of education economics and investigating how new knowledge is created. One study shows that differences in the cognitive skills of teachers are an important determinant of the international differences in student

performance. For this investigation, country-specific cognitive skills measures of teachers, derived from the individual-level PIAAC data, are combined with student-level PISA data. It also turns out that the cognitive skills of teachers differ tremendously across industrialised countries. Another study analyses the importance of teachers' subject knowledge to student performance in several countries in Sub-Saharan Africa. This project also investigates whether alternative employment opportunities affect the quality of individuals entering the teaching profession. To this end, business-cycle fluctuations at career start are exploited. Based on administrative micro data from the US state of Florida, the results indicate that teachers who entered the profession during a recession are considerably more effective in raising their students' test scores. The results suggest that the relative economic attractiveness of a teaching job plays an important role in bringing effective teachers into the profession. To answer these research questions, modern microeconomic evaluation methods such as instrumental-variable and differences-in-differences approaches are used.

Another focus of the habilitation project is on migration economics. One subproject investigates whether a high concentration of immigrants in a region hampers the integration chances of the migrants' children. Using a survey experiment, another sub-project investigates the attitudes of Germans towards refugees and whether their attitudes depend on the perceived education level of the refugees. A further study finds that immigration increases crime, with a greater impact in regions with poorer labour market conditions.

Understanding the Relationship between Skills and Labour-Market Outcomes

S. Wiederhold, ongoing habilitation project; publication of results in, among others, *American Economic Journal: Macroeconomics* 8(2), 2016; *Journal of Economic Behavior & Organization* 123, 2016; *European Economic Review* 73(C), 2015; *methods data analyses – Journal for Quantitative Methods and Survey Methodology* 8(2), 2014; *NBER Working Papers* No. 20727, 2014; No. 22657; 2016; *CESifo Working Papers* No. 5470, 2015; No. 5720, 2016.

This habilitation thesis analyses the relationship between education and success in modern labour markets. A first project uses PIAAC data on adult skills that make it possible to quantify how different modern

economies value skills. Results show that higher cognitive skills are systematically related to higher wages in all 32 countries surveyed in PIAAC. But there are considerable differences across countries. It turns out that returns on skills are systematically larger in countries that have grown faster in the recent past, consistent with models where skills are particularly important for adaptation to dynamic economic change.

Moreover, the habilitation project attempts to contribute to the investigation of causal effects of skills on labour-market outcomes. For instance, one project on the effects of ICT skills on labour-market outcomes exploits the extent of the traditional voice-telephony networks that were upgraded in most countries to provide fast internet access by means of the so-called DSL technology. Another part deals with the skill mismatch, addressing the questions of whether displaced workers are matched worse than voluntary job switchers and whether skill mismatches can explain part of the earnings losses of displaced people. We find that displacement increases occupational switching and skill mismatch, primarily because displaced workers move to less skill-demanding occupations.

The Effects of Information Provision on Policy Preferences – Evidence from Survey Experiments

P. Lergepöcher, ongoing habilitation project, publication of results in, among others, *CESifo Working Papers* No. 5938, 2016; No.2016.

Empirical research has produced many insights into how education policies could be altered to improve student outcomes. But political actors are frequently reluctant to carry out reforms supported by high-quality research. One important reason for this discrepancy between evidence and action could be that political actors are responsive to the opinions of voters and of well-organised interest groups, which might diverge from the public interest more generally. This habilitation project aims to empirically analyse the determinants of public support for education policies. Public opinion is studied by means of representative survey experiments with a particular focus on interest groups and the effects of information provision on public preferences.

Effects of ICT skills on labour market outcomes

Education reforms and voter behaviour

Economics of Education Policy

K. Werner, ongoing doctoral project.

The aim of this doctoral project is to empirically analyse questions concerning the political economics of education policy. The main question of interest is the effect of political processes on the education system. A first research project, conducted in cooperation with the Program on Education Policy and Governance (PEPG) at Harvard University, collected data to document the similarities and differences in opinion of the American and German public. As it turns out, respondents in both countries hold very different views on a variety of issues, but react to information in very similar ways. This suggests that the difference in policy outcomes across the US and Germany is largely driven by institutional differences, rather than divergent preferences. A second research project focuses on the relationship between public opinion on state spending and the information status of the voting-age population in Germany. This shows that a major part of the population underestimates the current levels of spending on education. It follows that providing information on current spending levels leads to a significant decrease in support for future spending increases. Similarly, the optimal allocation of funds across different education levels is susceptible to misconceptions. Providing respondents with the information that according to numerous studies, pre-school education has larger beneficial effects than other types of education spending shifts a majority in favour of increases in spending for pre-schools. Additional analyses suggest that these information effects are driven by the underestimation of rates of return for investment in early education. Future work will provide additional insights into the interdependencies of public opinion and the political economy of education policy.

Difference in policy outcomes driven by institutional differences

Understanding interrelation between skills and labour-market outcomes

Empirical Analysis of Structural Change and the Economics of Education

N. Obergruber, ongoing doctoral project.

This doctoral project uses microeconomic methods, historical data, and data from the national educational panel study (NEPS) to investigate questions of equality of opportunities in the field of economics of education. The first part investigates the influence of parental separation on the development of skills in reading and math of 5th-grade students. The analysis indicates econometric problems in previous studies that cannot

take into account the timing of testing and separation. It is shown that the time parents support their children in developing skills is important for mitigating the negative effects of separation. Another part of this project studies the role of the equal splitting inheritance rule in agriculture on structural change in the German Empire. There is a robust effect of equal splitting on land distribution in the late 19th century. This higher equality among siblings also holds for height, as soldiers in equal splitting areas are smaller, but their height distribution is narrower. The transition from agricultural to industrial society occurs earlier in equal splitting areas, particularly in innovative sectors like the chemical industry. There are also more patents applied for in equal splitting areas. Today, mean income is higher in former equal splitting areas and the service sector is larger.

Microeconomic Analyses in the Economics of Education and Labour

L. Simon, ongoing doctoral project.

This doctoral project analyses the impact of education and other determinants on labour-market outcomes using microeconomic methods. A first paper looks at how school and college grades and other CV characteristics such as IT, language, and social skills impact employment probabilities. The data used were collected in a randomised field experiment among a representative sample of human resource managers. Our results suggest that high-school grades are important when the candidate enters the labour market directly after school. A second project analyses the effect of a labour-market deregulation on the demand and supply side of the labour market. The deregulation was an amendment to the Trade and Crafts code of Germany regarding the requirement to become a self-employed craftsman. We use three distinct datasets, namely individual social security data, firm-level data, and micro-census data, in order to shed light on the impact of the reform for firms, employees, and the self-employed. A third project sheds light on the public opinion about refugee policy and the level of education of refugees.

International Student Achievement

A. B. Bergbauer, ongoing doctoral project

The dissertation project analyses topics in the economics of education from an international perspective. Exploiting the panel structure of PISA's six survey waves, a first part of the project examines how a coun-

try's school system influences student achievement. In another part of the dissertation project, student achievement in Sub-Saharan Africa will be linked to economic growth. Education outcomes are measured by the Southern Africa Consortium for Monitoring Educational Quality (SACMEQ) data in reading and maths. Economic activity is depicted by night light luminosity. For the analysis, the panel structure on district level based on the three waves of SACMEQ is used.

Microeconomic Analysis of Individual Skills and Labour Market Success

F. Hampf, ongoing doctoral project.

The aim of the doctoral project is to gain a better understanding of the interrelation between skills and labour-market outcomes. The first part analyses data from the international PIAAC Survey of Adult Skills ("PISA for adults") to identify the effect of business cycles on an individual's educational decision at the time when that person graduates from high school. The aim is to identify the effect of tertiary education on cognitive skills, exploiting exogenous variation in college enrolment in an instrumental variable approach. The second part of the doctoral project also uses PIAAC data to compare employment probabilities over the working life-cycle for individuals with vocational and general education. It can be shown that an initial employment advantage of vocational education relative to general education turns into a disadvantage later in life. In a third project, a randomised controlled trial is conducted to estimate the causal effect of a German mentoring program for students in high schools on the formation of cognitive and non-cognitive skills, as well as later employability and educational attainment.

ifo Center for Industrial Organisation and New Technologies

The Center focuses on four main areas:

- Industrial organisation and industry-level analysis
- New technologies
- Collection of firm-level and industry-level data,
- LMU-ifo Economics & Business Data Center (EBDC).

Research areas: IO, innovation and new technologies

The Center's research programme focuses on the analysis of the determinants and effects of firm behaviour, including organisational structures and processes. The following questions are of particular interest: how successful are different industries, especially with regard to their innovation capabilities? How important are the institutional framework and public policies, such as direct state aid, in fostering economic success of key industries? Are public policies effective in supporting the development and diffusion of new technologies? To answer these and related questions the Center's research applies state-of-the-art micro-econometric methods to firm and industry-level data, and provides cutting-edge analysis that is of high value to practitioners and policy makers.

INDUSTRIAL ORGANISATION AND INDUSTRY-LEVEL ANALYSIS

In the area of industrial organisation, the Center analyses, for example, the effects of industry-specific regulation or the competitive environment, especially in industries, on firm behaviour. One study, carried out for Deutsche Telekom in 2016, aimed at evaluating whether retail markets for accessing fixed-line public telephone network in Germany are still required to be subject to regulation. Another project looked at market power and cartels in Kazakhstan. Besides the analysis of policy effects on firm behaviour, the Center also focuses on topics of firm organization, such as management practices, employee diversity or personnel strategies. Additionally, the Center regularly studies the competitiveness and macroeconomic importance of diverse key industries.

Another focus of the Center is industry analysis. Since 1993, a major outlet for this analysis is the biannual publication of 160 industry reports commissioned by DG publishers (Deutscher Genossenschafts-Verlag eG). Beyond this "Branchen special" information system, in 2016, the Center conducted studies on the economic effects of fairs and on the construction sector within the framework of the EUROCONSTRUCT

Analysis of regulation in network industries

project. These industry reports provide the Center with a unique institutional knowledge base that complements its quantitative micro-econometric studies. The Center's industry sector experts also maintain close contacts with firms and industry associations and organise a yearly conference (ifo Industry Colloquium) to enhance exchanges with practitioners and policy makers. The ifo Industry Colloquium was also organised in 2016 in cooperation with the Chamber of Industry and Commerce for Munich and Upper Bavaria and with the support of the Bavarian State Ministry for Economic Affairs and Media, Energy and Technology. Furthermore, the institutional knowledge of the Center's industry experts is continuously archived in an industry-institution database to encourage and facilitate future research based on key information about industry-level institutional changes.

NEW TECHNOLOGIES

In the area of new technologies the Center identifies, describes and analyses technologies of high importance to the various German industries. In particular, the Center analyses technologies with high spill-over effects (so-called general-purpose technologies) and the ways in which public policy may support their development and application to enhance the technological base for German industry. The Center particularly focuses on information and communication technologies (ICT). Within the framework of a long-term cooperation, Deutsche Telekom AG sponsors two doctoral positions at the Center. The sponsored students perform research in the field of the economics of innovation in telecommunications. The Center also investigates the effects of the institutional framework (e.g. patent laws) and public policy (e.g. innovation policy in East Germany, R&D tax credits) on the innovation activities of firms. This expertise is applicable to assess the effectiveness of various policies. In this respect, the Center is engaged in an international consortium preparing an evaluation and monitoring system for the DG Enterprise of the European Commission.

COLLECTION OF FIRM-LEVEL DATA

The Center's research and policy advice relies on high-quality data, a need that underlies its significant commitment to the collection of original data. Examples are the personnel manager survey (supported by Randstad Germany) aimed at gathering data on the

personnel strategies of firms, or the innovation survey that the Center has carried out for the past 30 years. The innovation survey asks firms about their innovation activities, their drivers for innovation, and the constraints affecting them.

LMU-ifo Economics & Business Data Center (EBDC)

Due to the importance of company-based data to the Center's research, the Center hosts the LMU-ifo Economics & Business Data Center (EBDC). The data gathered by the ifo Institute through its business surveys are a valuable foundation for empirical economic research. The ifo Datapool was created to service internal and external researchers, and was further developed into a research data center accredited by the Council for Social and Economic Data (2011). The Economics & Business Data Center (EBDC) is jointly run by the Ludwig Maximilian University of Munich (LMU) and the ifo Institute and constitutes a platform that aims to access new fields of empirical research in economics and business administration.

To this end, it offers innovative data sets on German companies featuring both the ifo Institute's survey data, as well as external balance sheet data from the Amadeus and Hoppenstedt company databases. The EBDC's tasks include the creation and administration of key data sources for research and teaching, the centralised provision, updating and documentation of external providers' databases, as well as the purchase of corresponding support tools.

As of 2014, data from the Bavarian State Office of Statistics and Data Processing can also be accessed on the EBDC's premises. In addition, the center offers external researchers the opportunity to store data sets used in research to make them accessible to the academic community through the EBDC.

Moreover, the center is the main contact and coordination point for the scientific company databases of the LMU's economics and business administration faculties and, as a service provider, supports researchers and guest researchers from the LMU and the ifo Institute. The EBDC's methodological knowledge in the econometric analysis firm-level data is made available to third parties in the form of advisory projects.

Projects Completed in 2016

ifo Industry Colloquium 2016

L. Dorffmeister, M. Ebnet, O. Falck, G. Nerb, G. Orhan, J. Schricker, S. Schüller, A. Städtler, P. Wojciechowski, H.-G. Vieweg in cooperation with the Chamber of Commerce and Industry for Munich and Upper Bavaria and financially supported by the Bavarian Ministry of Economic Affairs and Media, Energy and Technology, report available in *ifo Schnelldienst* 23(69), 2016.

This year's ifo Industry Colloquium took place on November 9, 2016. Around 200 representatives from business and politics took part. After a welcome speech by Peter Driessen, managing director of the Chamber of Commerce and Industry for Munich and Upper Bavaria, Clemens Fuest, President of the ifo Institute, gave a presentation on "The Economic Situation in Germany and the World".

Afterwards, parallel sessions on "Manufacturing" and "Commerce", as well as on "Construction" and "Services" were held. In each session, the respective sector analysis and forecasts were presented by ifo industry experts, followed by a discussion of major industry-related structural changes. This year's focus was on the structural changes triggered by increased asylum seeker immigration to Germany.

Ludger Wößmann, Director of the ifo Center for the Economics of Education, closed the ifo Industry Colloquium 2016 with his talk on: "Integration through Qualification – Chances and Challenges of Immigration."

The speakers participating in the forums were:

Forum 1 – Industry: introduction and chair: H.-G. Vieweg, ifo Institute; experts: M. Ebnet, ifo Institute, and H. Schöffmann, Chamber of Commerce and Industry for Munich and Upper Bavaria.

Forum 2 – Commerce: introduction: A. Städtler and G. Orhan, both ifo Institute; chair: W. Fischer, CityPartner München e.V.; experts: M. Jahn, GfK GeoMarketing GmbH, and R. Waloßek, Betten Rid GmbH.

Forum 3 – Construction: introduction: L. Dorffmeister, ifo Institute; chair: R. Scholl, Ministerialdirektor a.D., BMVBS; experts: L. Weiden, empirica ag, and H. Joosten, BPD Immobilienentwicklung.

About 200 participants at ifo industry colloquium

"Integration through Qualification"

Discussion of structural changes in four forums

Forum 4 – Services: introduction: G. Nerb and P. Wojciechowski, both ifo Institute; chair: R. Obermeier, Chamber of Commerce and Industry for Munich and Upper Bavaria; experts: P. Eisen, Eisen Personal-Service, E. Ebert, Paketzentrum der Deutschen Post AG Feucht/Nürnberg, and E. Brenner, LBS-Landesverband Bayerischer Spediteure.

The next ifo Industry Colloquium will once again take place in the conference center of the Chamber of Commerce and Industry for Munich and Upper Bavaria, Munich, on November 8, 2017.



Michael Ebnet, ifo Center for Industrial Organisation and New Technologies



Prof. Dr. Dr. h.c. Clemens Fuest, president of the ifo Institute.

Policy advice in the context of “Leibniz at Bundestag” and expert contributions

With its format “Leibniz at Bundestag” the Leibniz Association gives members of the German Bundestag (MPs) the opportunity to meet scientists for individual conversations. In 2016, the ifo Center for Industrial Organisation and New Technologies offered seven discussion topics, which attracted significant interest. A total of eleven appointments with MPs resulted. The

“Leibniz im Bundestag”

conversations were scheduled for 45 minutes each and took place in the members’ offices in Berlin on 31 May and 1 June.

ifo contributor	Topic	Conversation partner
Ludwig Dorffmeister	Affordable rents in emerging regions	Bettina Kudla (CDU/CSU)
Ludwig Dorffmeister	Municipal construction activity as a matter of concern	Ewald Schurer (SPD)
Michael Ebnet	Efforts to improve transparency along the textile supply chain	Renate Künast (BÜNDNIS 90/DIE GRÜNEN)
Michael Ebnet	Efforts to improve transparency along the textile supply chain	Uwe Kekeritz (BÜNDNIS 90/DIE GRÜNEN)
Michael Ebnet	Bestrebungen zu mehr Transparenz in der textilen Wertschöpfungskette	Karin Binder (DIE LINKE)
Michael Ebnet	Edeka’s acquisition of Kaiser’s Tengelmann and its consequences for suppliers and producers	Katharina Landgraf (CDU/CSU)
Julia Schricker	How to address the crisis in the dairy market	Mark Helfrich (CDU/CSU)
Simone Schüller	Broadband and regional development	Astrid Grotelüschen (CDU/CSU)
Simone Schüller	The internet mobilises voters	Margaret Horb (CDU/CSU)
Simone Schüller	The internet mobilises voters	Xaver Jung (CDU/CSU)
Simone Schüller	The internet mobilises voters	Michael Vietz (CDU/CSU)



Expert discussion “Powerful supermarkets”, 4 July 2016, Paul-Löbe-House, Berlin.

The Members of Parliament emphasised their interest in continuing the exchange of information. In one case an immediate follow-up emerged from the conversation. The parliamentary group DIE LINKE invited Michael Ebnet as a speaker to the public expert discussion entitled: “Powerful supermarkets – consequences for producers, consumers and employees,” which took place at the Paul-Löbe-Haus in Berlin on July 4, 2016. His contribution highlighted the impact of Edeka’s acquisition of Kaiser’s Tengelmann on suppliers and

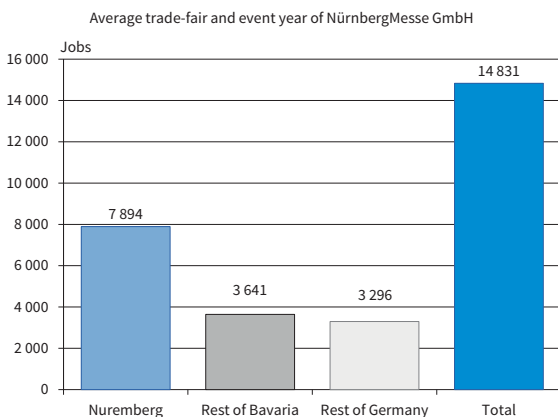
producers. Besides the ifo Institute, representatives of the German Farmers' Federation, the Federation of German Consumer Organisations and Oxfam Germany were present on the podium. The expert discussion was chaired by Karin Binder (MP), spokesperson for nutrition and consumer policy of the parliamentary group DIE LINKE.

The Economic Impact of the Nuremberg Trade Fairs and Events

H. Penzkofer for the NürnbergMesse GmbH, January 2014 to August 2016, publication in *ifo Schnelldienst* 69(2), 2016.

The total aggregate result (i.e. direct and indirect impact) of a typical trade-fair and event year in Nuremberg amounts to approximately EUR 1.65 billion, or roughly 14,800 gainfully employed persons. Furthermore, the resulting tax revenues derived by the various authorities (City of Nuremberg, Bavaria and Germany) from trade fairs was also estimated. For a trade-fair and event related output of EUR 656 million, the concomitant tax revenue is about EUR 302 million.

The Economic Impact of the Nuremberg Trade Fairs and Events



Source: Calculations of the ifo Institute.

The Trade Fair Index

H. Penzkofer in cooperation with Messe Frankfurt GmbH, January 2015 to December 2016, publication in *ifo Schnelldienst* 69(4), 2016.

The results of analysis by H. Penzkofer clearly show that trade fairs are a mirror of the markets. Key figures for international trade fairs in Germany such as develop-

ments in visitor and exhibitor numbers are very closely linked to trends in Germany's overall economic output, which, in turn, also impacts several countries in Europe. The "Messe Index" (Trade Fair Index) describes both the business developments and business expectations of German companies at international consumer and capital goods trade fairs in Germany. It provides an up-to-date evaluation of the trade fair activities of these companies, as well as the six-month trade fair outlook based on their business expectations. These evaluations are facilitated by the fact that the business climate calculated for the "Messe Index" very effectively signals the direction in which the economy is developing.

The new "Trade fair index"

Development of Methods to Determine Market Power and to Detect Cartels in Kazakhstan

O. Falck, S. Schönherr for the Association for Development of Competition and Product Markets in Kazakhstan, in cooperation with DICE Consult, J. Haucap, University of Düsseldorf, November 2016.

The goal of this pilot project was to advise the competition authorities in Kazakhstan on developing methods to determine market power and to detect cartels. Within this pilot project, a roundtable conference for stakeholders from business and politics was held in Astana, on 4 November, 2016. It is intended to continue this cooperation within a long-run agreement.

Investigation of cartels in Kazakhstan

Economic Trends in the Amusement Machines Industry in 2015 and Outlook for 2016

H.-G. Vieweg, A. Jacob-Puchalska for the Deutsche Automatenwirtschaft, December 2015 to March 2016.

The latest in a series of studies carried out on an annual basis focuses on the regulation of the German gambling and gaming market. The rationale was set out by legislative initiatives drafted by the German States to protect their gambling monopoly, but failed in court (Federal Constitutional Court, European Court of Justice). The initiatives turned out to be inappropriate to prevent illegal gambling. The growing online gambling offerings and mushrooming sports betting shops – operating in a legal grey area – gain market shares to the detriment of legal supply. In short, the gambling and gaming market requires a coherent form of regulation covering all market segments. Moreover, the legal competences and responsibilities of the federal, state and other regional authorities have to be clearly defined and delineated to reduce regulatory deficiencies.

European Consortium for Sustainable Industrial Policy (ECSIP) – EU Sectoral Competitiveness Studies

H.-G. Vieweg, J. Koenen in cooperation with ECORYS, the Netherlands, IDEA Consult, Belgium, Cambridge Econometrics (CE), England, Danish Technological Institute (DTI), Denmark, The Vienna Institute for International Economic Studies (WIIW), Austria and Euromonitor, England commissioned by the Directorate General Enterprise and Industry of the European Commission, 2012 to 2016.

European policy advice is gaining importance

In 2012, ifo, together with ECORYS, IDEA, CE, DTI, WIW and Euromonitor, launched a European consortium for sustainable industry policy to execute sectoral competitiveness studies, namely the European Competitiveness and Sustainable Industrial Policy Consortium (ECSIP). After a successful open tendering procedure, the European Commission awarded the consortium a framework contract covering a time period of four years. The assessment of sectoral competitiveness lays the foundation for further economic analysis. The consortium identifies determinants, traces the long-term perspectives for European industries, and recommends measures for strengthening competitiveness. The framework contract is a follow-up to a previous framework contract with the European Commission covering the period of 2007–2011.

The Energy Policy Turnaround Caught Between Regionalisation and Centralisation (ENERGIO)

T. Triebs for the German Federal Ministry of Education and Research (“Environmentally and Socially Compatible Transformation of the Energy System” subsidies), September 2013 to November 2016, publication in *EN-ERGIEWIRTSCHAFTLICHE TAGESFRAGEN* 65(10), 2015.

The part of the ENERGIO project that was covered by the ifo Center for Industrial Organisation and New Technologies analyses the behaviour of electric utilities by firms. Firms’ strategic behaviour is an important determinant of the success of the government’s energy policy.

Survey of German energy utilities

The results from a survey of German energy utilities show that firms are satisfied with current and expected sales. However, they express concern about expected changes in the regulatory environment. Utilities responded that they will have to adopt their business strategies to the new environment. In particular, utilities are considering co-operations with other utilities and expansion into new markets.

Current Projects

Information System “Branchen special”

M. Ebnet, H. Hofmann in cross-departmental cooperation with over 20 other ifo researchers for the DG-Verlag, Wiesbaden. Biannual publication in Bundesverband der Deutschen Volksbanken und Raiffeisenbanken (BVR), DG-Verlag, Wiesbaden.

“Branchen special” reports on the 160 most important branches covered by Germany’s medium-sized companies. Biannually updated industry reports are published on the following economic sectors: services, agriculture, construction and development, retail and wholesale, manufacturing and skilled crafts and trades. The reports contain in-depth analyses and forecasts of branch structure and the current economic situation in a clear, standardised format. More specifically, the reports offer information on supply and demand structures in the consumer goods and services markets, company size and trends towards concentration. Turnover and production forecasts, as well as capacity utilisation and price development monitoring are conducted to evaluate the economic outlook. The economic condition of the branch is assessed using the results from company comparisons, official statistics and an analysis of trends in prices and costs. Moreover, the reports highlight the company policy options, as well as the market positioning and competitiveness of medium-sized companies in a branch. In this context the reports focus on (industry-specific) institutional changes and on the way different market participants react to them. To take economic transformations into account, the selection of industries surveyed is occasionally adjusted to correspond to the changed importance of individual economic segments.

Data from official statistics, as well as from primary and secondary sources, are used as an information base, especially association statistics and the results of surveys conducted by different institutions. The results of the ifo Business Survey are particularly important, as they enable a well-grounded assessment of the current and future development. One example is the assessment of earnings development by survey participants, which turned out to be a reliable indicator of current profitability in many manufacturing industries. The total information base is integrated in a condensed preparation of information in text and tabular form, as well as

in graphics. The industry rating featured in every report offers key information on current and future trends in turnover and profits in the industry, as well as the intensity of competition in the industry and its vulnerability to economic cycles at a glance. A list of all of the reports available and their publication dates can be consulted on the ifo website (www.cesifo-group.de/branchenspecial). Individual reports can be obtained from the Volksbanken und Raiffeisenbanken, while subscriptions are available from the DG-Verlag in Wiesbaden.

Types of Institutional Change

Institutional changes	Description
Modification of the regulatory framework	Legislative amendments and changes in legal regulations, principles, guidelines, duties, prohibitions, regulatory and deregulatory measures such as the limitation/permission of certain business models, the termination/determination of market entry barriers, remuneration systems, minimum wage levels etc.
Trade restrictions/ agreements	Tariff/non-tariff trade barriers, free-trade areas/agreements etc.
Subsidy programmes	Provision of state subsidies to achieve a political objective (grants, low-cost loans, premiums etc.)
Change in the market structure	Large-scale mergers and acquisitions, insolvencies, new entrants from other sectors, appearance of multi-branch operations, shift of business towards online retailing etc.
Market launch of an innovation	Market introduction of technical innovations (e.g. e-bike), approval of technical aids (e.g. implementation of electronic health card) etc.
General technological change	Technological mega trends such as digitisation, online re-tailing, internet of things, industry/logistics 4.0 etc.

Source: ifo Institute.

LMU-ifo Economics & Business Data Center (EBDC)

O. Falck, H. Mittelmeier, S. Yang.

In 2016, the EBDC further expanded its role as a single point of contact for handling micro data purchase contracts for all ifo Centers and for storing those contracts. The EBDC also cooperated in the committee “Harmonisation and Meta-Structures” of the Council for Social and Economic Data’s Research Data Infrastructure Committee, which promotes exchanges between research data centers at a working level. The main themes are user involvement/support, the organisation of work flows, data protection, IT developments, data management and legal issues. Forthcoming Research Data Infrastructure meetings will focus on the field of me-

ta-data standards (DDI) and long-term storage. There are plans to create a joint marketing platform in the future than will enable research data centres and their data users to publicise their data and publications.

In addition, the links between the EBDC and the LMU economics faculties were further strengthened in 2016. As part of the doctoral student event “Workshop on Good Scientific Practice & Data Management”, the EBDC, together with the research data center of the Bavarian State Statistics Office, presented its data offering at the LMU. This presentation also demonstrated how the EBDC supports long-term scientific work with the help of DOIs and data storage. The close ties between the EBDC and the LMU are reflected in its new leadership structure: Professor Elsas (Business Administration Faculty), Professor Winter (Economics Faculty) and Professor Falck (ifo Institute) now share leadership of the EBDC.

The EBDC Panel was also further developed in 2016. In the 2014/15 version, the aim was to merge the procedures for the ifo data pool and the EBDC Panel, and to increase the coverage rate with a new selection procedure to merge balance sheet data and ifo survey data.

The EBDC also worked on a feasibility study for the Foundation for Family Businesses in 2016.

New structure of EBDC shows strong relationship between ifo and LMU



Demand-Oriented Innovation Policy

O. Falck, J. Koenen, S. Wiederhold in cooperation with Ernst & Young, Italy, Cambridge Econometrics, England, Capgemini, Netherlands, and SQW, England, for the European Commission, Directorate General Enterprise and Industry, since February 2014.

The goal of this project is to develop a methodological toolbox and present it to the European Commission to enable the evaluation of demand-oriented innovation policies according to state-of-the-art methodology. In an independent work package, ifo conducted a meta-study analysing existing evaluation studies to determine the various types of policies that are effective under certain conditions. As a basis for this study, a typology of policy measures derived from the literature was applied. In the further course of this project, an actual demand-oriented innovation policy evaluation toolbox will be developed.

ifo Innovation Survey

O. Falck, H. Penzkofer, ongoing project.

ifo Innovation Survey offers a long panel of firms' innovation activities

Long-term economic growth and competitiveness are characterised by high-tech innovations. True technological breakthroughs, however, are the exception, and progress generally occurs in a series of very small steps. For this reason, it is important to adopt a broad definition of innovation. Technical progress can only be explained if both "radical" and "marginal" innovations are taken into account. This is the approach followed by the ifo Innovation Survey, which has been conducted on a yearly basis since 1979. The innovation surveys in other OECD countries are carried out on the same conceptual basis.

Based on data from the ifo Innovation Survey, the ifo Institute is able to capture the industry- and product-specific innovation activities of companies. The survey results also supply information on the aggregate level for sector, structural and growth analyses. Data on the economic and technological conditions that affect the innovation activities of German industry are also collected.

Randstad ifo Personnel Manager Survey

A. Jacob-Puchalska, O. Falck, K. Wohlrabe, P. Wojciechowski for Randstad Deutschland GmbH & Co.KG, ongoing project, publication on the company's website, the website of the ifo Institute and in *ifo Schnelldienst*.

Randstad ifo Personnel Manager Survey with special policy-relevant questions

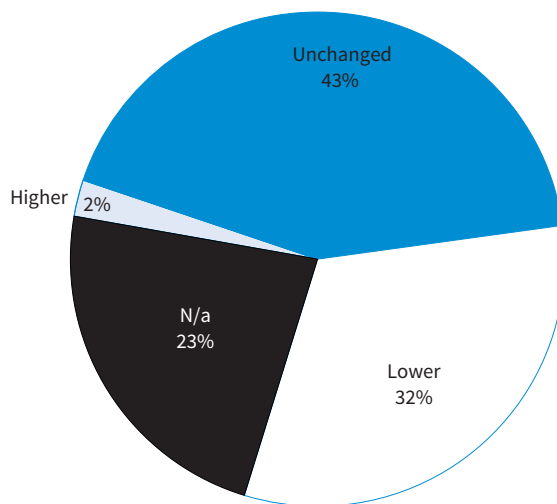
Four times a year the ifo Institute surveys personnel managers in manufacturing, whole-saling and retailing, as well as in the service sector on the importance of flexibility in personnel placement. The participating managers provide a general assessment of flexibility and an assessment with respect to specific measures

(overtime, limited contracts, "mini-jobs", temporary workers, freelancers, outsourcing, internal transfers, working-time accounts).

The aim of the project is to provide insights into the role of flexibility measures in business cycles on a long-term basis. The survey has been conducted on a quarterly basis since the first quarter of 2008. A special, changing question deals with the current personnel policy. An evaluation of the special questions can be found on the ifo Institute's website and in *ifo Schnelldienst*. In 2016, special questions were asked on the effects of retirement at 63, the Bologna-Reform, the influence of minimum wage when hiring for internships, as well as the possibility of working from home.

Change in Company Satisfaction with Graduate Education over the Last Decade

Among companies that generally recruit graduates



Source: Randstad ifo Personnel Manager Survey, 3rd quarter 2016.

The Economic Impact of the Hamburg Trade Fairs

H. Penzkofer for the Hamburg Messe GmbH, January 2015 to August 2017.

The objective of this project is to calculate the direct and indirect production and income effects, as well as the resulting tax revenue of the Hamburg trade fairs. Based on surveys of visitors and exhibitors at selected Hamburg trade fairs conducted for the project, the total number of visitors and exhibitors and their expendi-

ture are determined. The calculations of the direct and indirect effects are derived from an estimation model that primarily uses the characteristics of the visitors and exhibitors and individual expenditure (e.g. accommodation, stand construction).

The Economic Impact of the Dusseldorf Trade Fairs

H. Penzkofer for the Messe Düsseldorf GmbH, January 2016 to March 2018.

Based on surveys conducted for the project among visitors and exhibitors at selected Dusseldorf trade fairs, the total number of visitors and exhibitors and their expenditure are determined. The calculations of the direct and indirect effects are derived from an estimation model that primarily uses the characteristics of the visitors and exhibitors and individual expenditure.

Building Equipment Sector in Germany and Selected European Countries

M. Kocijan for the Vereinigung der deutschen Zentralheizungswirtschaft e.V., Vereinigung Deutsche Sanitärwirtschaft e.V. and Messe Frankfurt Exhibition GmbH.

In continuation of a past project, the present development of the German building equipment sector was studied. To this end, key market data such as number of enterprises, turnover, employees, investments, was collected. The economic prospects of the building equipment sector improved in the study period, supported by moderate growth in the German economy. Positive effects are expected from the assistance measures for energy saving and the use of renewable energy, as well as the numerous programmes of the Kreditanstalt für Wiederaufbau (reconstruction loan corporation) and the subsidies granted by the Federal Office of Economics and Export Control for renewable energies. Furthermore, the turnover of the German building equipment sector was compared with corresponding data from Belgium, Denmark, France, United Kingdom, Italy, the Netherlands, Austria, Spain and Switzerland. The project will be continued in 2017.

Building Equipment Sector (Sanitary Heating Air-Conditioning)

M. Kocijan, Financing institutions: Vereinigung der deutschen Zentralheizungswirtschaft, Vereinigung Deutsche Sanitärwirtschaft and Messe Frankfurt Exhibition GmbH.

With the help of the ifo business barometer for the building equipment sector, the cyclical situation and further development of the industry was analysed. To this end, following the practice of the ifo Business Survey, information on the present state of the companies, their business expectations and additional factors like demand, prices, employment, exports etc. was collected in an enterprise survey. Considering the three industry stages of the building equipment sector, surveys were carried out in the manufacturing industry (heating techniques, building fittings), wholesaling and larger retail trade firms. The data for the current business situation and the business expectations for several stages were combined to form the business climate index for the whole sector. The project will be continued in 2017.

Economic Situation and Structure of Europe's Construction Sector (EUROCONSTRUCT network)

L. Dorffmeister, E. Gluch, M. Kocijan for the EC-Partner institutes, the organisers and participants in the EUROCONSTRUCT conferences, as well as recipients of the conference proceedings and for presentations at specialist conferences, publication in *ifo Schnelldienst* 69(2), 2016; 69(13), 2016; 69(14), 2016; as well as in various specialist journals.

The European research and advisory network EUROCONSTRUCT consists of 19 European member institutes (15 from Western Europe and four from Central and Eastern Europe). At conferences held twice a year in different locations, current forecasts for all partner countries – as well as for Europe as a whole – are presented. The forecasts not only feature figures (in euros) differentiated by construction type, but also present the physical variables of construction (number of dwellings). The conferences in 2016 (held in Dublin in June, and in Barcelona in November) also looked at European construction prospects in a low interest rate environment, as well as the impact of the new EU procurement directives in the construction market. The summer conference 2017 will be held in Amsterdam.

Construction in Germany by Segment

L. Dorffmeister, E. Gluch, M. Kocijan, for federal and state ministries, local authorities, research and advisory institutes, companies and associations, ongoing project, work tables (on request), as well as publications in *ifo Schnelldienst* and external publications.

ifo business
barometer for the
building equipment
sector

Analysis of
the European
construction
sector

Reports in “Branchen Special”

In the framework of this research and advisory project, figures, in terms of values and quantities, illustrating the German construction activities are forecast on a quarterly basis. These figures are broken down into residential construction, commercial building construction and civil engineering, and public-sector building construction and civil engineering. The forecasts are presented for debate in the construction and housing forecasting group, as well as at the ifo Industry Colloquium (ifo Branchen-Dialog). They are also integrated in the Joint Economic Forecast prepared by five major German research institutes, as well as in the ifo Institute’s forecasts. Moreover, they are used for a series of reports in “Branchen special” and as the basis for the German contribution to forecasts of European construction (EUROCONSTRUCT).

Economic Trends in Amusement Machines Industry in 2016 and Outlook for 2017

H.-G. Vieweg for the Deutsche Automatenwirtschaft, December 2016 to January 2017.

The current study focuses on the impact of regulation of the German gambling and gaming market on the perspectives of amusement arcades and their operators. The legislative initiatives drafted by the German Länder have aimed at protecting their gambling monopoly and simultaneously at pushing back the supply of amusement arcade operators. The corresponding provisions of the Interstate Treaty on Gambling will take effect as of 1 July 2017 and over half of companies are likely exit the market.

Expert Report on Sector Specific Regulation of the Market for Access to the Public Telephone Network at a Fixed Location

O. Falck, A. Heimisch, J. Koenen, A. Mazat for Deutsche Telekom AG, October 2016 to April 2017.

This report aims at evaluating the regulation requirement for the retail market for access to the fixed-line public telephone network in Germany, with a focus on the recommendation regarding ex ante regulation in the electronic communication sector, published by the European Commission on 4 October 2014. The recommendation sheds serious doubt on the need for sector-specific regulation and animates national authorities to re-evaluate national regulatory regimes.

The report evaluates arguments put forward by the regulation authority during the last market-evaluation-procedure. We then empirically analyse the substitution behaviour between fixed-line telephone access and alternative technologies, e.g., mobile telephony and “Voice-over-Internet”, to define the relevant markets. We particularly focus on whether higher/better availability of alternative technologies at a fine-grained regional level leads to stronger substitution away from fixed-line telephony, thereby estimating a “cross-technology elasticity”.

Economics of Innovation in Telecommunications

A. Heimisch, A. Mazat, ongoing doctoral projects, supported by Deutsche Telekom AG, since October 2014.

These doctoral projects deal with determinants of innovation in telecommunications and investigate their underlying mechanisms. The dissertations also consider the overall economic impact of these innovations. To answer these questions, individual-, regional- and firm-level data are used.

In one of a set of projects the doctoral project by Andreas Mazat investigates the effect of high-speed internet availability on entrepreneurs’ decisions to start a business, as well as on firm location. An instrumental variables strategy, exploiting the technological peculiarities of the public switched telephone network that influence the employability of DSL, is applied to identify a causal relationship. The analysis shows that company start-ups in the knowledge intensive service sector increases with high-speed internet availability. Furthermore, company start-up as a result of improved broadband internet availability is fostered in an environment that is generally conducive to entrepreneurship.

A first study of Alexandra Heimisch’s doctoral project investigates the labour market returns on specialized skills in information and telecommunication technologies (ICT) (e.g. writing emails or searching for information online). Such skills partly emerge from being exposed to broadband internet (learning-by-doing). By employing two different instrumental variable approaches, ICT skills can be shown to have a causal, positive effect on wages. One mechanism driving the positive wage returns is the selection of individuals with high ICT skills into occupations with a high abstract task content that pay wage premia. This study is published as *CESifo Working Paper* No. 5720.

Legal changes in the German gambling market

In a joint study A. Heimisch and A. Mazat look at a regulatory topic: although the market for fixed-line telephony is shrinking, the market for fixed-line-access is still regulated in some European countries. In these countries, regulation authorities question that the substitution between mobiles and fixed lines is strong enough for deregulation. Instead of classically estimating cross-price elasticities, Heimisch, Mazat and co-authors introduce the new method of estimating a “cross technological elasticity” between fixed-lines and mobile on the basis of unique regional fine grained data in Austria. To overcome endogeneity concerns in the local availability of mobile infrastructure, they employ an IV strategy that relies on the idea that the availability of mobile infrastructure is lower in more rugged areas, as roll out is more costly. Initial results indicate a significant negative effect of 3G mobile coverage on the rate of change in fixed-line usage.

What Works in Innovation Policy?

T. Lohse, ongoing doctoral project.

Conceptually, this dissertation is located at the intersection of evidence-based economic research and the evaluation of publicly-funded innovation policies, as well as empirical innovation economics in general. The first part of this project aims to review the aspects of innovation policies that have been evaluated in a causal sense to date, and to draw conclusions that are relevant for policymakers. The second part deals with the evaluation of an innovation policy in eastern Germany. The remaining parts of the project will investigate the various determinants and mechanisms of innovation-enhancing policies.

New Technologies and Innovative Industries

K. Candel Haug, ongoing doctoral project.

This dissertation project focuses on the creation and diffusion of innovation, as well as on the resulting market and industry structures. An initial paper revisits the established measures of ICT in economic literature and develops a new indicator that reflects recent technological developments. The initial results of a firm-level analysis suggest that recent technologies have significant effects on firm employment. Notably, small firms shrink and large firms grow. A second paper analyses the innovation contribution of migrant inventors in Germany and potential spillover effects on the productivity of German inventors. This project uses a unique dataset of patent and migration data at the regional level.

Essays in International Economics

S. Yang, ongoing doctoral project.

This project focuses on manpower constraints and firm performance. By leveraging the EBDC's unique data sets that combine financial data and firm surveys, it is possible to observe German firms' self-reported manpower constraints. The initial results show that constrained firms have higher capacity utilisation, lower inventories, more unsatisfied orders, and want to invest more in capital expenditure. This project proceeds to use German reunification as an exogenous shock to identify the effect of relaxation in manpower constraints faced by firms in West Germany. The future research plans are to investigate domestic and exporting firms and their heterogeneous constraints and corresponding performance.

Evaluation of
innovation policies

Innovation Incentives, Innovation Policy and New Technologies

J. Koenen, ongoing habilitation project, publication in *International Journal of Industrial Organization* 43 (November), 2015.

The incentives of firms and individuals to invest in innovative fields and technologies depend on their economic environment, which is directly shaped by innovation policies. The patent system plays a central role in this context: three projects focus on this nexus and explore how different components of the patent system (litigation, patents as property rights in vertical industry relationships and reputational mechanisms) are related to the incentives of firms and individuals to carry out innovation investments. Complementary to this, a fourth project analyses both theoretically and empirically (using data from the German automotive industry) how bilateral bargaining power and trust affect investments in innovative technologies.

Analysis of the patent
system

Socioeconomic Impact of Broadband Internet

S. Schüller, habilitation project, publication as *CESifo Working Paper* No. 6129, 2016; and in *Wirtschaftsdienst*, 96(8), 2016.

The ongoing processes of digitization in economy and society certainly have important implications, not only for economic growth, but also for labour markets and political systems. The diffusion of broadband infrastructures enabling firms and households to access high-speed internet plays a crucial role in this “Digital

Revolution”. Two initial projects focus on the causal impact of ADSL2+ broadband availability on voting behaviour and on firm performance, both exploiting a local public broadband infrastructure delivery programme in the Province of Trento, Italy.

Management in Production

T. Triebs, ongoing habilitation project, publication as *Ifo Working Paper* No. 129, 2012.

The association between management practices and productivity

This project focuses on firm performance and its drivers. Performance is measured by production-function-based estimates of efficiency, productivity, or technical change. One part of the project investigates the impact of regulatory change on productivity for energy utilities. Technical and institutional changes enable regulatory change. It is important to assess the success of regulatory change in terms of firm performance. Another part of the project looks at the importance of management practices on firm performance, as well as the nature of management. It is widely believed that better management leads to better performance. Is this always the case? Does management affect labour productivity more than capital productivity? Does better management also increase the rate of technical change? This research on management also helps us to understand how firms react to changing regulatory incentives.

Economics of Teamwork

J. Tumlinson, various ongoing research projects, publication in *Management Science* 60(9), 2014.

The impact of teamwork

This project explores the economics of teams, how they form and when they do not, the incentives of team mates and loners, together with teamwork’s impact on public and private welfare. This project spans the behaviour of entrepreneurs, partners and shareholders, together with the interplay of culture and societal norms. Methodologically, it marries game theory and empirics.

ifo Center for Energy, Climate and Exhaustible Resources

The Center's research activities are determined by the main challenges arising from the protection of the environment, climate change, the scarcity of natural resources and sustainable energy supply. In accordance with its name, the Center is especially active in research and policy advice on climate and energy policy and the efficient utilisation of exhaustible resources. However, it also addresses questions regarding the provision of environmental goods and services.

The focus of the Center's research in the field **Climate and Exhaustible Resources** is on empirical and theoretical analyses of the efficiency and effectiveness of climate policies and the allocation of exhaustible energy resources. Its research particularly explores incentives to reduce emissions and for technological development. Impediments to adapting to climate change and mitigating it, which take the form of international feedback effects, path dependencies and uncertainty, are also taken into account. In this research area, the Center cooperates in a perennial research project on the analysis of green transformations with researchers from different disciplines and institutions in Germany. In previous years, another core area of the Center's research was the theoretical analysis of climate and resource policy measures under special consideration of resource supply. Its work in this field has now been extended to include empirical studies.

The Center also maintains and continuously expands an internet-based information platform on resource and energy-related topics. It also contributes to the existing database for the international comparison of economic institutions (DICE) with indicators from the areas of climate change and energy policy.

The research area **Energy** is closely related to the Climate and Exhaustible Resources research area, as anthropogenic emissions mainly result from the burning of fossil energy sources. At the core of the Center's research in this field is the analysis of the transformation of energy systems, energy markets and the energy industry, as well as the efficient design of energy policy. While the main focus of research is on electricity markets, developments and policies in other sectors like the transport sector, for instance, are also considered. The Center's research also acknowledges that the success of energy policy is not only determined by the reduction of CO₂-emissions, but also by economic feasibility, acceptance, environmental compatibility in general, and energy supply security.

During the transformation of energy systems, the characteristics of energy generation combined with behavioural and acceptance aspects induce trade-offs and conflicts, which are analysed with varying thematic foci on the regional, national and European scale. A project concluded in 2016, for example, focused specifically on the question of the regionalisation versus centralisation of the 'Energiewende', the German transformation of its energy system. Another ongoing inter- and transdisciplinary project analyses the transformation of energy supply in a specific region south of Munich.

German energy policy and its impact must also be understood in the context of European developments. As a result, another research focus of the department is the interaction between national and international policies and CO₂ reduction targets on the European level. In this analysis, the Center employs a model of the European power market whereby renewable energy generation from wind and sun is integrated in a very detailed manner. In order to improve the depiction of transformation processes in the power system, the model is continuously refined and improved. Over the course of perennial research cooperation with other universities and research institutes, the current focus is on improving the modelling of energy technologies and making energy demand more flexible. This work is complemented by comparative scenario analyses, which enhance our understanding of transformation processes in power markets and thus make an important contribution to policy advisory work.

In the area of **Environmental Economics**, the Center's research mainly focuses on current topics from the environmental sector. It has long-standing experience in the analysis of the environmental sector and its recent studies have focused on the suppliers of equipment and services in the field of renewable energies, the improvement of energy efficiency and energy saving, which provides a good example of the interrelatedness of this research area with the 'Energy' area. The Center's research in environmental economics traditionally also includes research into water use and water management. In a new project, these research activities have been expanded to include the development of methods and indicators aimed at an improved monitoring of the bioeconomy.

In its research, the Center employs control theoretic and numerical methods, as well as econometric approaches. Its research results form the scientific basis

German energy policy in the context of European developments

Comparative scenario analyses

for providing policy makers with sound information on the efficiency and effectiveness of climate, energy and environmental policy measures.

Projects Completed in 2016

ENERGIO – The Energy Turnaround and the Trade-Off between Regionalisation and Centralisation

K. Pittel, T. Rave, J. Albrecht-Saavedra, Th. Triebs in cooperation with A. Ziegler, University of Kassel, A. Lange, University of Hamburg, and ewi Energy Research & Scenarios GmbH, Cologne, on behalf of the German Federal Ministry for Education and Research, September 2013 to November 2016.

Focus on regional aspects of the energy turnaround

This project aimed to shed empirical light on regional aspects of the planning and implementation of the energy turnaround in Germany and to explain the interaction between cost efficiency and preference equality/acceptance. Different methods were used to analyse the degree to which the acceptance and participation of the players involved differed at a regional level and how energy policy measures could be designed in a regionally differentiated and/or more cost-effective way. It also explored whether energy policy measures can be implemented in areas where it is least expensive to do so and/or where the greatest untapped potential for avoiding CO₂ emissions and innovation can be expected. As part of the research, different definitions of the concept of “region” (political-administrative, functional, socially constructed, the region as an intermediate level in a multi-level system) were examined.

Defining “region”

The ifo Institute contributed to several of the research project’s working packages and gathered specific results in the field mentioned above. For working package 1 the Center worked on a longer report exploring the relations between federalism, multi-level systems and energy supply and/or energy policy. The report mainly focuses on Germany and the expansion of renewable energies in the field of electricity supply, where the multi-level issue is more prominent than in heating supply, for example, and several empirical working modules deal with this issue. The report helps to place the different aspects of empirical research in a wider context and to clarify theoretical reference points.

The first part of the report describes the status quo in terms of the characteristics of power and renewable

energies and by reviewing policies and governance in this field. The second part of the report compares two theoretical approaches and classifies them according to chiefly normative theories: the neoclassical theories of federalism on the one hand, and the polycentric and multi-level governance approached related to Elenor Ostrom on the other. Both approaches had to be adapted and modified for this topic.

In working package 2 a research paper on inequality in the spatial distribution of wind power capacities in Germany was produced. This is particularly interesting because in addition to physiographical-geographical and federal policy influences (EEG), political and civil society influences are also important at a local and regional level. Several panel regressions were carried out that can be used to explain the determinants of growth in wind power capacities at a district level between 2001 and 2012. A constraining factor is that several regional policies and initiatives cannot be compared with each other consistently over time in terms of their expansion effects. In addition to the other factors cited above (surface area availability, wind conditions etc.), our basis regression showed, however, the significant influence of several variables, which represent incentives for regional policies and/or at least roughly and indirectly approximate them, namely the district unemployment rate, the share of Bündnis 90/Die Grünen (The Green Party’s) seats in the federal state parliament and the presence of a left-wing leaning federal state government (which respectively positively influence the expansion of wind power).

In the broader sense this research paper illustrates that the energy turnaround with its nationally announced expansion targets clashes with different regional situations, incentives and interests. The expansion of renewable energy locally and nationally obviously seems to be linked with labour market policy goals to varying degrees. This makes it harder to coordinate energy policy goals and measures at a national level. The improved coordination of energy-policy measures between national and sub-national units would also make it less expensive to implement the energy turnaround. It is also clear that ambitious regional expansion goals have primarily been set in areas where exogenous, and in some cases endogenous, local conditions are favourable.

In working package 5 the formation of institutions and the interaction between local players was analysed as a methodical counterpoint to the survey and

model-based working packages. Munich, Regensburg and Schönau in the Black Forest were selected as case studies. Central to this working package was the question of the extent to which, reason for and ways in which innovative policy measures and concepts, or certain parts of them, spread in the energy sector under the local authorities and their public utilities.

The three case studies show typical special features. In the case of Schönau policy innovations interact more strongly with social innovations than in Munich and/or can be understood as part of them (so-called grassroots innovation). In Munich there is evidence of diffusion processes related to financial and structural framework conditions (rich, growing city; strong position of the public utilities).

In view of the diversity of local conditions and municipal player and power structures, it is not easy to influence innovation and diffusion processes. As a result, the diversity in local conditions and constellations (such as the presence of funding programmes for municipal climate protection) cannot be fully taken into consideration on the one hand; too openly or arbitrarily formulated funding conditions also have their limits on the other. It may be possible, however, to reinforce bridgeheads for a greater institutionalised diffusion of policy innovations (for example, climate protection manager, twinning and/or coaching projects between cities, networking between regional energy agencies).

A Fund Based Stabilisation Mechanism for the EEG Surcharge

K. Pittel, C. Weissbart for the Bavarian Ministry for Economics und Media, Energy and Transport, September 2016.

In this report, the financial payment flows were investigated that would result from fixing the Renewable Energy Act (EEG) surcharge at a nominal level of 6.5€ct/kWh as of 2017 and covering temporary financing gaps between EEG differential costs and EEG surcharge revenues via borrowing. It was assumed that all expenditure from EEG differential costs and all revenues from the fixed surcharge are managed via a fund. If expenditure exceeds revenues, a loan is taken out to cover the residual net payments. Should expenditure drop below the capped revenues, excess funds can be used to repay outstanding debt. The development of the volume and the repayment of the fund, as well as the financing costs, were examined for three different wholesale electricity

price paths (MAX, TREND, MIN). In the moderate TREND scenario, electricity prices rise, for example, from their current level of 3.18 €ct/kWh to 6 €ct/kWh by 20150 (MAX: 9.31 €ct/kWh; MIN: 3.18 €ct/kWh).

The results show that, after a brief upturn, the annual EEG differential costs in the TREND scenario fall again. Through 2028, a financing gap would arise that would have to be covered by loans. Cumulative borrowing would peak in 2029 at a maximum volume of EUR 29.13 billion. In the following year surcharge revenues can be expected to exceed differential costs for the first time; enabling funds to be fully repaid by 2038. If the EEG surcharge were to remain at a fixed level until the end of the repayment period, it could subsequently be decreased to 3.2 €ct/kWh, the level necessary to cover ongoing differential costs. Through 2050, the steady rise in electricity prices combined with a slight drop in investment costs would make it possible to reduce the surcharge continuously to a level of 2.4 €ct/kWh, despite continued capacity expansion. Financing costs, i.e. the sum of interest and compound interest payments, would total EUR 2.58 billion in this scenario.

EEG differential costs

Overview of financing costs

	Maximum	Trend	Minimum
Year fund reaches max. volume	2023	2029	> 2100
Max. fund volume in billions of EUR	5.83	29.13	2100: 699
Redemption date	2026	2038	> 2100
Funding costs in billions of EUR	0.10	2.58	By 2100: 183

A sensitivity analysis of main input parameters showed that the wholesale electricity price and the market value factors of wind and solar energy influence the results significantly, while assumptions regarding developments in electricity demand and real interest rates have less of an impact on the maximum fund volume and the repayment date.

Current Projects

Determination of Economic Indicators for Monitoring the Progress of the Bioeconomy

J. Wackerbauer, T. Rave in cooperation with the Leibniz Institute for Bioeconomy (ATB), the Fraunhofer Institute for Systems and Innovation Research ISI at Karlsruhe and the nova-Institut, Hürth, for the German Federal Ministry for Economic Affairs and Energy, April 2016 to March 2019.

Monitoring the bioeconomy

This study aims to contribute to the development of the scientific basis for a long-term monitoring of the bioeconomy. Thanks to continuous monitoring, a knowledge base for political action and a public debate over the bioeconomy will be created. To achieve the objectives of the National Policy Strategy Bioeconomy, indicators will be developed based on scientific criteria. Methods of data collection will be established that make all dimensions of the bioeconomy measurable. The progress in the transformation process towards a bioeconomy, as well as potential barriers or trade-offs will be visualised to enable decision-makers to draw any necessary conclusions.

Transformation factors

During the three-year project span the following factors will be analysed:

- Requirements for statistical data and indicators and inventory
- Biomass flows and utilisation of by-products
- Methodological development of a bio-based indicator system under economic aspects with strong links to the NACE classification
 - Methodological literature review
 - Assessment of bioeconomic activities below the NACE classifications
 - Development of indicators
- Quantification of cascade and coupling usages
- Innovations, patents, education
- Combination of economic indicators and ecological accounting
- Pilot project for the chemical and plastics industries
- Drivers and restraints in the transition to the bioeconomy
- Further development of the NACE classification

INOLA – Innovations for a Sustainable Land and Energy Management at the Regional Level

J. Lippelt, A.M. Montoya, K. Pittel, M. v. Schickfus, M. Zimmer in cooperation with A. v. Streit, W. Mauser, University of Munich, W. Mayer, Kempten University of Applied Sciences, the communal civil society “Energiewende Oberland” and the municipal utility company of Bad Tölz for the German Federal Ministry of Education and Research, October 2014 to September 2019.

The objective of the INOLA project is the interdisciplinary and transdisciplinary development of system solutions for sustainable land use and energy management of the model region “Energiewende Oberland” (“Oberland Energy Transition”). The Energiewende Oberland region covers three administrative districts south of Munich. The central question of the project is which social and technical innovations are required to establish sustainable regional land use jointly with an adequate energy system. The cooperation between municipalities and districts, as well as the reflexive design of the innovation process, are crucial in achieving these objectives. The primary contribution of the project is an innovation concept providing the region with the necessary process knowledge to successfully shape the transition towards a sustainable land use and energy system.

The ifo Institute’s task within INOLA is to determine the economic impact of different scenarios for the regional energy and land use systems. An input-output model is used to identify the effects on value added, employment and sectoral output at the regional level, and to determine innovation strategies.

The results from the ifo Institute’s analysis will be used in the decision-making process at a local and regional level: INOLA will give civil society actors and decision-makers the necessary insights and tools to enable them to assess the economic sustainability of different land use and energy management options, and thus accelerate the joint development of innovation strategies.

Trends and Perspectives in Energy Research, Project Part B: Development and Application of Methods for the Prioritization of Topics and Measures in Energy Research in the Context of the “Energiewende” (EnFo-2030)

K. Pittel, J. Pfeiffer, C. Weissbart, M. Zimmer in cooperation with the Technical University of Munich, German Aerospace Center, Research Center for Energy Economy and the University of Münster for the German Federal Ministry of Economic Affairs and Energy, December 2016 to April 2018.

The 6th Energy Research Programme of the German federal government from 2011 characterises the guidelines for public policies to support the development and deployment of new and innovative energy technologies. The main target of the program is to successfully realise the various energy- and climate-policy goals of

the so called Energiekonzept and the accompanying fundamental transformation of the energy system in Germany. However, the technical, economic, political and social assumptions and conditions, which the Energy Research Programme builds upon, are necessarily subject to changes over time, which can only partly be foreseen and taken into account. The focus and guidelines of publicly-financed energy research as defined by the research programme therefore have to be evaluated and, if necessary, revised regularly. EnFo-2030 contributes to exactly this process of evaluation and to re-designing the Energy Research Programme more than five years after the announcement of the Energiewende.

Parallel to the complementary project part A “Technologies for the Energiewende”, EnFo-2030 uses a top-down approach to identify and define potential guidelines and central issues for future state-funded energy research. To derive the need for energy research, the project surveys the current status of the Energiewende on the one hand and the contributions of the 6th Energy Research Programme to the implementation of the Energiewende on the other. It contrasts these observations with the energy and climate policy goals of the Energiewende, particularly with respect to de facto prioritisations of specific goals implicitly given by current legislation or other framework conditions of the Energiewende. On the other hand, the future need for energy research arises from changes that have already occurred and are foreseeable in the overall environment of the energy sector, i.e. from changes in the technical, economic, social or political framework conditions. Such changes pose new requirements for energy research, for example as they shift the role of the various areas of energy research in the implementation of the Energiewende. In EnFo-2030, the objective is to identify these existing and foreseeable changes in the overall environment of the transformation of the energy system and, building upon these observations, to develop recommendations for the future direction and focus of state funded energy research.

The ifo Institute in cooperation with Prof. Löschel and TU München, in particular, takes an economic perspective and considers societal and systemic aspects throughout this derivation and discusses the need for future state-funded energy research. There is also a focus on the question of the economic impact, as well as the efficiency and effectiveness of energy policy measures, and whether and to what extent socio-economic conditions like, for example, the social acceptance of

technologies or the system transformation, influence the overall development of the energy system and the role of specific areas of energy research. Further central aspects with respect to the future need for energy research, which are examined by the ifo Institute, include the development of new business models in the course of the Energiewende; and the role that regulation in the energy sector plays in the implementation of innovative business models and technologies.

Integrated Analysis of a Green Transformation (InTrans)

K. Pittel, A. Schmitt, A. Ciesielski in cooperation with the Centre for European Economic Research (ZEW), Mannheim, the University of Munich and the University of Bayreuth for the German Federal Ministry of Education and Research, June 2015 to May 2018.

The reduction in fossil fuel use in order to stabilise greenhouse gas emissions is an important element of a green transformation. In its contribution to the project, the ifo Center for Energy, Climate and Exhaustible Resources focuses on technological change and the provision of environmentally-friendly technologies, which are an important prerequisite for a green transformation to succeed. Feasible growth and technology paths are compared with respect to their economic and climate impact taking into account different forms of uncertainty. The process of technical change lies at the heart of the analysis that aims to take potential path dependencies, irreversibilities and technological barriers into account. The macroeconomic perspective on long-run growth, investment and technology paths allows us to draw conclusions about the distribution of welfare gains and losses in an intergenerational context.

A second focus of the research is on the analysis of suitable long-run policies to foster clean technologies. In the modelling, technology paths are considered an endogenous component for identifying, in a first step, potential barriers to the adaptation of new technologies and their path dependencies, as well as for deriving optimal policies. Another important goal of this research is to analyse endogenous technological change under the consideration of structural breaks and transition processes that are inevitable in the course of long-run development. In this context it will be interesting to see whether and to what extent the regulator might be able to create investment incentives by reducing regulatory and political uncertainties.

Reducing fossil fuels drives green transformation

Focus on technical change

The Center's contribution to this project part will result in a macroeconomic growth model that is soundly-based on empirical observations. The model will help in the design of policies that promote technological change under uncertainty and also allow an assessment of the impact of different policies. The explicit integration of uncertainty in a dynamic context constitutes a substantial scientific contribution.

Research Network for the Development of New Methods in Energy System Modelling (4NEMO)

K. Pittel, C. Weissbart for the German Federal Ministry for Economic Affairs and Energy, November 2016 to October 2019

Energy system
undergoing dynamic
transformation

The envisioned goals of the 'Energiewende' of increasing the market share of renewable energy and the reduction of greenhouse gas emissions have led to a dynamic transformation of the energy system. Closely connected to the increased share of renewable energy is the advancing regionalisation of the energy system. The increasing market penetration of intermittent generation technologies and the higher spatial dispersion of production structures and networks demand improvements in the coordination of the energy system and by all actors of society. This implies that besides technical feasibility and economic viability, social acceptance becomes an increasingly important aspect in the development of energy systems. The dynamic environment of energy systems is also visible in the variety of energy system models that are only partly capable to reflect the aforementioned challenges. On the one hand, there is a multitude of models for both the German and European energy market producing a large variety of results. This, in turn, means that the practical relevance of the results is hard to assess, due to differences in assumptions over underlying conditions, data sources and model structures. Economic, technological and social factors, on the other hand, are only partly integrated into the existing models.

Diverse range
of energy system
models

Against this background, the ifo Institute coordinates nine renowned research facilities and institutes of higher education to pursue the two main goals of 4NEMO:

1. Coherence, comparability and transparency of energy models should be improved. This concerns not only modelling and publications regarding model structures, but also the consistency of datasets and technology assumptions

2. Integration of economic and social factors and the affiliated uncertainty in energy models should be improved.

Integrated scenarios are developed, that include a detailed reflection of economic, social and technological conditions. Systematic model comparisons and analyses generate a sample space that furthers the understanding of strengths, weaknesses and the comparative advantages of the respective models and allows for a better understanding of the results. The energy models of the project partners are also improved through coordinated development. The envisioned stronger incorporation of economic and social factors improves the general validity of the models. An implicit sensitivity analysis of the model structures adds to the high relevance of the joint research project. The project will add to the overall validity, comprehensibility and comparability of policy analyses inside energy models. The coordination of future research projects and consulting activities will be improved by creating a common database and linking up models. This will also improve the speed and efficiency of collaboration on future joint projects. Moreover, all project partners are seeking a transparent use of models and scenarios and better socio-political interpretation.

The research effort comprises of five work packages. Work package 1 defines a list of requirements reflecting the changed conditions of the energy markets. Work package 2 has the goal of improving the existing models along four clusters (technology, acceptance, regions and uncertainty). At the same time consistent socio-technological scenarios and a concrete data framework are developed in work packages 3 and 4. In work package 5 established scenarios are used as the basis for a comparative model analysis.

The ifo Institute is working on work packages 1, 2, 4 and 5 and is also coordinating the entire research effort. In work package 2 the EU-REGEN model will be extended to incorporate the concept of social acceptance into the model structure. The improved model will be used in work package 4 as the basis for generating scenarios. These scenarios will, in turn, be implemented in the model and compared to the results of the other project partners in work package 5.

ifo Center for International Economics

There were no major changes to the department structure the ifo Center for International Economics in 2016, which is expected to remain in its present form in the future. However, there was some turnover at the level of doctoral students and post-docs. Sybille Lehwald took on a position at the German Federal Ministry for Economics and Energy. Inga Heiland also defended her dissertation in November and is currently a visiting researcher at Yale University. Marina Steininger and Martin Braml joined the center as new PhD students in May and September respectively, while Florent Baarsch joined the department as an external PhD student.

In December 2016, the department's director was appointed a member of the scientific council of the German Federal Ministry for Economics and Energy by Federal Minister Gabriel.

The Center for International Economics also made use of and expanded its international networks in 2016. As in previous years, these networks were drawn upon to organise conferences. The annual conference of the Economic Geography and International Trade Group took place on 19 and 20 February in Frankfurt. In April 2016 the department organised the annual meeting of the Committee for International Economic Theory and Policy of the German Economic Association at the ifo Institute in Munich. In April 2016 the department, together with the Istanbul Policy Center, jointly organised a conference called "Germany and Turkey in Europe: Economic and Political Challenges and Possible Options" where the reform of the 20 year old customs union between the EU and Turkey was discussed.

The department reached an agreement with Utrecht University to jointly process and use satellite-based mass data at a highly disaggregated spatial level. Several other international contacts for the preparation and processing of mass data for research were established.

The Center for International Economics also used its international network in its project work and continued to make new strides in this area. In spring 2016 the Center head started consulting work with the IMF on the Transpacific Trade Partnership agreement. The center also cooperated with the Norwegian Institute for International Affairs (NUPI) to prepare a study on the effects of a transatlantic trade agreement between the EU and the US on Norway. The center is part of an international consortium that has won a framework contract with

the EU Commission (Directorate General Trade). 2016 marked the beginning of a comprehensive ex post evaluation of the Free Trade Agreement between the EU and Korea. This research project also involves co-operation partners in the US and Korea.

The center is part of a large international research network, which is financed by the European Union through the Horizon 2020 Program. It is concerned with the trade policy challenges in the transatlantic context. Within this project, ifo, PSE Paris and ETH Zurich are jointly responsible for the economic policy aspects. The project is scheduled to run for three years.

The Center for International Economics has intensified its cooperation with its research professors: Marc-Andreas Mündler, University of California, San Diego, cooperates with the center in understanding the labour markets of globalization and is planning a number of research stays in Munich in the years ahead. Wolfgang Keller, University of Colorado, is working together with Erdal Yalcin on the role of uncertainty in the export behaviour of companies. Together with Devashish Mitra, Maxwell School, Syracuse, the department produced a study on the planned free trade agreement between the EU and India. Ongoing co-operation in several research projects between members of the center and Wilhelm Kohler, University of Tübingen, and Mario Larch, University of Bayreuth, will continue.

Cooperation with national partners was also expanded in the center's project work. It has further developed its successful cooperation with the Institute for Applied Economic Research at the University of Tübingen (IAW). IAW and the center collaborated on a project for the German Federal Ministry for Economics and Energy on the effects of market opening from 1990 to 2014. In December, the Ministry of Economics in Baden-Württemberg commissioned a study, primarily overseen by the IAW, in which the ifo Center for International Economics will quantify the effects of protectionist measures on the local economy. As of autumn 2016, the center's director is participating for the second time in the "Global Economy and Social Ethics" group of experts of the German Bishops Conference. Following work on TTIP in 2015, the current topic is sustainable growth.

Since the beginning of 2016 – under the lead of Rahel Aichele – the Center has been working on the project QUANTAGG: "Quantitative Analysis of Global Gover-

**Closer links
with research
professors**

**International
cooperation
expanded**

nance”, funded by the Leibniz Association. The project aims to further develop quantitative methods for the analysis of trade policy and international agreements. These methods are of central importance for the center’s ongoing economic policy consulting.

Economic change and climate growth

The center is also involved in the project ENGAGE – Economic Growth Impacts of Climate Change, which was launched in early 2016 and is led by the Potsdam Institute for Climate Impact Research (PIK). Together with PIK, the center investigates the role of international goods- and financial markets in adaptation to climate change and the institutional frameworks required. For this project, the department is also working together with researchers at the World Bank among others.

The center also continued its long-lasting cooperation with the Bertelsmann Foundation. In 2016, the Foundation commissioned a study on the possible effects of a free trade agreement between the EU and the Eurasian Economic Union. Back in 2010 Vladimir Putin proposed the idea of an economic zone from “Lisbon to Vladivostok”. This idea, however, was not actively pursued by the Europeans and abandoned as totally unrealistic in the aftermath of the Russian Annexation of Crimea. It is nevertheless interesting to quantify the lost welfare gains stemming from the ongoing trade barriers between the EU and former Soviet states. Indeed, there are a great many economic arguments favouring free trade between the two blocs: Their economic structure is complementary, which should yield high gains; and the improved political relations resulting from closer economic integration would be very advantageous given the geographic proximity.

Free trade between EU and former Soviet states

Another study for the Bertelsmann Foundation consisted of an evaluation of the cooperation between the EU and Turkey. Furthermore, the center evaluated the effects of a free trade agreement between the EU and India. A project on the transpacific partnership, already concluded in 2016, was summarised in an article for the ifo Schnelldienst to reach a broader audience.

For the Foundation of family businesses, the center conducted a study on the development of inequality in Germany, which received a lot of attention. At the request of the German Federal Ministry for Economics and Energy, the center also investigated the effects of re-introducing border controls in the Schengen area.

The Center’s head is involved in the preparation of a research proposal in a special research area together with colleagues from the universities of Munich and Berlin. This proposal, led by Klaus Schmidt from the University of Munich, was evaluated and approved in autumn 2016. Work started on 1 January 2017. The project attempts to make new findings in behavioural economic research that can be used for applied economic policy. Together with the Seminar for International Economic Theory and Policy at the University of Munich, the Center is pursuing several different ideas. On the one hand, its research aims to find out how behavioural economic modelling of wage setting can improve the relationship between increasing international competition and the labour market. On the other hand, there are many topics in trade policy that have to be re-evaluated in light of the new findings. This is especially true for the economic analysis of the precautionary principle in international trade agreements; and the question of why resistance to free trade agreements is so strong in countries with a high degree of openness like Germany.

The Center for International Economics hosted a total of 13 guest researchers from abroad in 2016. The number of guests received was comparable to the number hosted in previous years. Following positive experiences in previous years, foreign researchers remain involved in several of the department’s projects and in its acquisition of additional projects. The choice of visitors is regularly motivated by the Center’s strategic objective to develop new competences or new partnerships with the aim of acquiring interesting project work.

The Center’s research primarily focuses on the following areas:

1. Globalization and labour markets,
2. Trade costs and trade potential,
3. Trade and environmental policy.

In the first area, the Center is supported by the ifo research professors Devashish Mitra and Marc-Andreas Münder. In the second area, it is supported by the ifo research professors Wolfgang Keller, Mario Larch and Wilhelm Kohler. Peter Egger, ETH Zurich, provides advice in all research areas of the Center.

The analysis of the effects of **globalisation on labour markets** has always been a major part of the department's work in the past. This research attempts to incorporate various types of labour market imperfections into models of international trade, outsourcing and international migration; and to numerically or empirically quantify their effects. In 2016, key insights from this research were used in a recent consulting project for the European Parliament, which was presented on the occasion of a hearing in the socio-political committee.

The department continued its work in the area of **trade costs and trade potential**. This strand of research looks at how high the natural and policy-induced trade costs are, what measures can be taken to reduce them and the trade potential that can be realised in this manner.

As in the last two years, there continued to be great interest in the analysis of a potential free trade agreement between the EU and the USA. There has been a great deal of media interest in this topic over the course of the entire year and the Center's Head gave a series of interviews in the national and international press and presentations on the economic effects of the agreement at a wide range of conferences. In addition, the second half of 2016 saw a great deal of activity regarding Brexit. The Center had already concluded a study on Brexit in 2015, which provided the basis for several comments and presentations. The Center will continue to accompany the UK's exit from the EU with its analyses.

As part of the Center's basic research, Erdal Yalcin and ifo research professor Wilhelm Kohler, University of Tübingen, successfully completed the project "Dynamic aspects of Offshoring", funded over four years by the German Research Foundation (DFG), at the end of 2016. This project aimed to contribute to the existing body of literature on this subject by analysing research questions in terms of dynamic aspects and economic uncertainty. Several research papers have sprung up during the course of this project. The project leaders have produced an academic volume on this research topic entitled: "New Developments in Global Sourcing" (MIT Press), which is scheduled to be published in 2017.

A new DFG funded project was approved at the end of the year entitled: "International market interactions,

institutions and the costs of natural disasters". Natural disasters can have fatal impacts on human and economic development. As a result, analyses of the impact of past natural disasters on economic growth and their conditioning through institutions, trade openness and capital flows can offer key insights into the handling of the expected consequences of climate change. This project aims to develop an extended database on the intensity of natural disasters and its use to answer a range of research questions at the intersection of environmental economics, development economics and international trade. Firstly, the effect of natural disasters on a country's specialisation pattern is to be examined. This will be followed by an analysis of the welfare losses imposed by natural disasters at the local level and the relationship between natural disasters and the determinants of adaptability. This will be done using unique data at the coordinate-grid-cell level. The question of how trade openness and geography influence the macroeconomic impact of natural disasters at the local level will be examined through a spatial investigation for China. In addition, the project will analyse how disasters influence the behaviour of firms.

Finally, the department continued and intensified its activities in the field of **trade and environmental policy**. This research mainly highlights the question of the role of international trade flows in making economies more resistant to global climate change. The impact of climate shocks can be lessened by strong participation in the international division of labour. At the same time, however, there is the danger of an outflow of capital and skilled labour. The Center has put together and published online the ifo GAME database, a database that contains Geological And Meteorological Events covering the entire world on an extremely disaggregated regional scale from 1970 to 2014. It is a key information source for the Center's participation in the PIK-led research project ENGAGE, which was officially launched in March 2016.

How natural disasters impact national specialisation patterns

Climate shocks and international division of labour

Projects Completed in 2016

In-Depth Analysis of TTIP and Jobs

G. Felbermayr for the European Parliament, October 2015 to April 2016.

Labour market effects of TTIP

This study aimed to analyse existing literature on the labour market effects of European foreign trade policy in general, and the transatlantic trade and investment partnership that is currently being discussed in particular. The result of the critical discussion of scholarly literature was a realistic evaluation of possible effects. To a large extent, this was based on preceding studies by the Center of International Economics. In a break with tradition, more recent literature refers to the systematic labour market effects of increased international integration of the goods and services markets. This must be seen in relation to other product market reforms with domestic effects in the short run. If market entry barriers are removed and competition and specialisation in competitive sectors continue to increase, this generates a further incentive to create new jobs. This is especially true in the long run, whereas adjustment costs in the form of temporarily higher unemployment rates occur in the short run.

Structure and Dynamic of Income and Wealth Inequality in Germany since the Agenda 2010

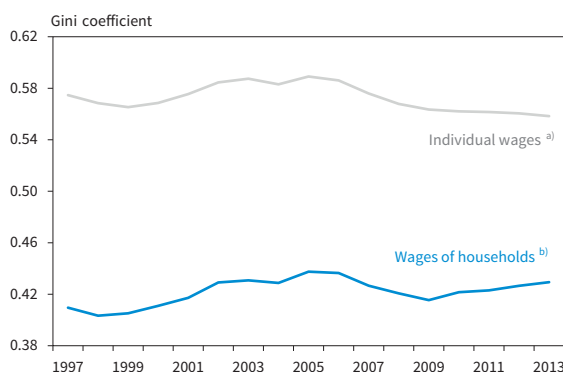
G. Felbermayr, S. Lehwald, M. Battisti for the Stiftung Familienunternehmen, October 2015 to May 2016, publication as *Ifo Working Paper* No. 217, 2016, and in *ifo Schnelldienst* 69(13), 2016; 69(14), 2016.

Post-2010 wealth inequality in Germany

The redistribution of wealth and income has been under discussion in Germany for some time. The basic tenor of the debate seems to be that income and wealth inequality is growing steadily. The empirical evidence behind this assertion, however, has not received enough scrutiny. Interactions between the reduction of unemployment among low-skilled workers and gross wage distribution, for example, are not taken into account and the changing composition of labour force potential is also ignored. Too little attention is paid to differences in the dynamic of net and gross variables (in income distribution, for instance), which is significant in Germany; while the role played by public goods, as well as the size and composition of households is also neglected. Based on the seemingly dramatic increase in economic inequality, there are calls for radical economic measures like, for ex-

ample, interventions in primary income distribution or changes to tax policy. The introduction of the minimum wage on 1 January 2015 and calls for a swift increase in the wage to 10 euros are examples of such measures. There is a danger that the Agenda 2010 reforms will be scaled back even further. This research project analyses the structure and dynamic of income and wealth inequality in Germany since Agenda 2010 using data from the Socio-Economic Panel and wage and employment data from the Institute for Labour Employment Market And Career Research. A superficial consideration of the data available suggests that the assertion that the German average earner's real gross wages are falling steadily must be qualified, as the average earner's socioeconomic characteristics have changed over time. The assertion that the Hartz reforms were unfair because they increased inequality also merits closer consideration. Thanks to higher levels of employment and higher participation in the labour market, the reforms have made the distribution of wages among households more even. Ultimately, the frequent assumption that the redistribution system through taxes, transfers and public goods is no longer working turns out to be false. Redistribution in Germany is very high and extremely effective by international comparison.

Inequality in Gross Wages: Individuals vs. Households



Based on persons aged 16-65. Figures adjusted for inflation.

^{a)} Group featuring all persons in employment. The unemployed are attributed zero wages.

^{b)} Gross wages of households.

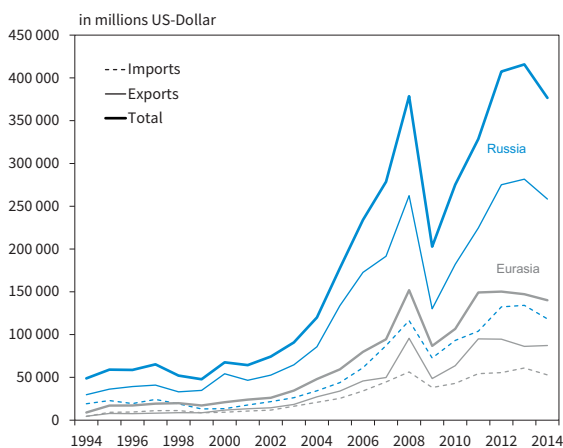
Source: GSOEPv31; calculations of the ifo Institute.

Free Trade from Lisbon to Vladivostok: Who gains, who loses from a Eurasian Trade Agreement?

R. Aichele, G. Felbermayr, J. Gröschl, for the Bertelsmann Foundation, November 2015 to January 2016, publication in *ifo Schnelldienst* 70(2), 2017.

Trade relations between the EU and Russia are currently severely impacted by Western sanctions against Russia and mutual embargo measures. This, however, has not led to a visible change in the geostrategic orientation of Russia. An adjustment of interests may perhaps require less punishment, but rather the prospect of closer economic cooperation. Both the EU and the successor states of the Soviet Union should have a strong interest in a free trade area “from Lisbon to Vladivostok” because the structures of their comparative advantages are highly complementary. For Russia, a deep agreement between the EU and the Eurasian Economic Community could lead to a 3% increase in real per capita income; for Germany this would lead to an increase of 0.2%. This translates into an income increase of 235 euros per capita and year for Russia and 91 euros for Germany. Hence, Russia and the other countries of the former Soviet Union could be interesting partners for deeper economic cooperation with the EU. The EU should have a strong interest in stable economic development in its immediate neighbourhood. In addition, the complementary specialisation structures of these countries promise substantial economic benefits for the EU as well.

Europe's Trade Volumes with Eurasia and Russia



Source: IMF, DoTs; ifo Institute graphics.

EU Integration of Turkey at a Crossroads

E. Yalcin, G. Felbermayr, R. Aichele for the Bertelsmann Foundation, November 2015 to April 2016, publication by the Bertelsmann Foundation and in *ifo Schnelldienst* 69(21), 2016.

In May 2015 Turkey's government, together with European Union (EU) representatives, announced a declaration of intent that aims to update and deepen the existing customs union between the two parties. This desire to deepen economic policy relations between the EU and Turkey independently of the stagnating EU acquis is surprising, but represents a potential step away from the threat of a breakdown in economic trade relations between the two regions. While there has been a stagnation in Turkey's EU accession negotiations, the bilateral economic relationship is developing very positively, even despite the fact that Turkey's membership in the EU customs union is restricted to industrial goods and processed agricultural products.

This economic integration success, however, has been threatened for some time by institutional weaknesses in the design of the European customs union, which are accompanied, in Turkey's case, by increasingly negative implications for Turkish industry. The EU Commission's focus on signing new regional trade agreements with, for example, the USA (Transatlantic Trade and Investment Partnership, TTIP) or Japan and/or Canada, has highlighted institutional weaknesses in the customs union between the EU and Turkey that has been successful to date.

The aim of this study was firstly to present the institutional framework conditions between the EU and Turkey, taking Europe's new trade policy into consideration, and to work out growing institutional incompatibilities. Building on this, the potential economic effects to be expected in the EU and Turkey in the absence of adjustments to the bilateral economic agreements between the EU and Turkey were quantified. This analysis not only covered the potential mid-term effects of a transatlantic trade and investment agreement, but also looked at further trade agreements with third-party states negotiated by the EU that could also have a long-term impact on the Turkish economy and European-Turkish relations.

In other words, this study quantified the positive economic aspects of deeper economic integration of Turkey within the EU in view of international regionalisation. It also took into account the cession of political sovereignty to European institutions that accompanies deeper integration. Normative economic policy integration goals for EU-Turkey relations were derived from their economic-institutional cooperation.

Turkey's bilateral economic relations with the EU

Working out institutional incompatibilities

Coping with shocks via international fragmentation of production

Dynamic Aspects of Offshoring

E. Yalcin, I. Heiland in cooperation with ifo research professor Wilhelm Kohler, University of Tübingen, for the Deutsche Forschungsgemeinschaft (DFG), January 2013 to December 2016.

The aim of this project was to make an essential contribution to the existing literature on the relocation of production stages to foreign countries (“offshoring”) by adding a dynamic perspective and taking uncertainties into account. Dynamic models enabled the analysis of long-term effects resulting from the accumulation of capital equipment and human capital (education, research and development). Considering the international fragmentation of production made it possible to explain it as an essential element of a strategy for coping with shocks or volatility (in production or demand). This also explained the empirical characteristics of fluctuation in employment in different countries. Although this approach seems viable in practice, it had rarely been considered in the previous literature on this topic. Expanding the perspective by dynamic relationships and elements of uncertainty raised new normative questions. For this reason, the project also discussed optimal policies in the trade and foreign direct investment sectors.

The Trade Effects of Border Controls

G. Felbermayr, J. Gröschl, Th. Steinwachs for the Federal Ministry for Economic Affairs and Energy, February 2016, publication as *Ifo Working Paper* No. 231, 2016; *ifo Forschungsbericht* No. 73, ifo Institut, München, and in *ifo Schnelldienst* 69(5), 2016.

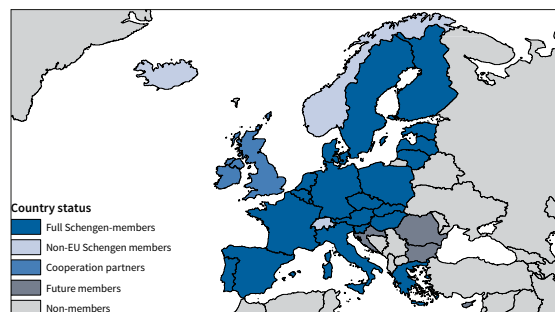
The Schengen Agreement that came into force on 26 March 1995 created freedom of movement within the European domestic area and thus achieved the unprecedented goal of continental integration. The Schengen Agreement was seen as a perfect complement to the free flows of capital and goods, which had already been made possible by previous agreements.

The threat of global terrorism, as well as a sharp rise in refugee figures in Europe since summer 2015, have recently given rise to a fundamental debate in the Schengen area over the extent to which keeping internal borders open is politically and economically tenable. This study addressed the following three issues: how heavily is the travel time between cities affected by border controls? Does the elimination of border controls by

the Schengen Agreement influence cross-border trade in goods and services within Europe; and if so, to what extent? What prosperity effects can be expected to arise for Germany from a change in international trade volumes following a reintroduction of border controls in the Schengen Area?

We showed that crossing country borders within the Schengen area is on average around 20 minutes quicker than crossing borders between two countries in cases where at least one country doesn’t belong to the Schengen area. We found that a reintroduction of border controls in the Schengen area would reduce bilateral exports of goods and services and thus lead to GDP falls compared to the status quo. The effects were analysed for four different scenarios for Germany, Bavaria, Austria and the European Union as a whole.

Overview of the Schengen Area (Status: February 2016)



Source: ifo Institute graphic

Europe and India – Relaunching a Troubled Trade Relationship

G. Felbermayr, R. Aichele, J. Gröschl in cooperation with ifo research professor Devashish Mitra, Syracuse University, for the Bertelsmann Foundation, April 2016 to September 2016.

Since June 2007, the EU and India have been negotiating a comprehensive free trade agreement, but negotiations broke down in 2013. Nevertheless, both sides have expressed their desire to revive talks on the Broad-based Trade and Investment Agreement (BTIA). To quantify potential economic consequences, we used a multi-country, multi-industry Ricardian trade model with national and international input-output linkages. Based on the assumption that the FTA would eliminate all tariffs between the EU and India and re-

Is it tenable to keep internal borders open?

duce non-tariff barriers, we simulated trade, the value added, and the welfare effects of the BTIA. The long-run level of real per capita income would change by 1.30% in India and by 0.14% in the EU. We found that outsiders to the agreement remain largely unaffected relative to the status quo. However, substantial regional heterogeneity exists across the 134 geographical, investigated entities. Due to an agreement, EU-Indian trade could approximately double particularly in business services. We found a small amount of trade diversion due to tightly integrated value chains, but a clear effect on structural change in India. So, at a first glance, both parties should have an interest in forming a FTA.

The Economic Consequences of a TTIP Agreement for Norway

G. Felbermayr, J. Gröschl, R. Aichele, M. Steininger for the Norwegian Ministry for Agriculture and Fishery, as part of a consortium lead by the Norwegian Institute of International Affairs (NUPI), March 2016 to November 2016, publication as *Ifo Working Paper* No. 228, 2016.

This project intended to evaluate the possible effects of a transatlantic trade and investment partnership on Norway. This is interesting not only from a political, but also from a scientific point of view since Norway is part of the European Economic Area but, as a non-member of the EU Customs Union, it does not participate in the negotiations and it will not be affected directly by any concessions or regulations of the negotiating partners.

One aim of the project was to evaluate how much the country of Norway would be affected by trade diversion or demand effects within international value added chains. The other aim was to quantify the economic effects of alternative policy options like an accession of Norway to the trade agreement as a full member.

Within the consortium ifo was in charge of implementing the ifo trade model. For this purpose different scenarios had to be elaborated, implemented and described. ifo was also responsible for a comparative analysis of different models and their results. The quantification of non-tariff trade barriers proved to be a special challenge. Here, top-down and bottom-up approaches were combined to receive robust evidence. Our analysis proved that trade diversion and trade creation effects of TTIP are more or less bal-

anced for Norway. A deep trade agreement between the EU and the USA would slightly increase the Norwegian GDP by 0.05%. However, this increase almost totally depends on positive creation of value effects in the energy sector. If these effects are absent, a negative aggregated effect of -0.11 of the Norwegian GDP is expected.

Current Projects

Economic Growth Impacts of Climate Change (ENGAGE)

G. Felbermayr, T. Steinwachs for the Leibniz Association (SAW), led by the Potsdam Institute for Climate Impact Research (PIK), March 2016 to December 2018.

The IPCC 5th Assessment Report reveals large knowledge gaps regarding the socio-economic impact of climate change, especially changes in economic growth. This prevents the integrated assessment of impacts, mitigation and adaptation. ENGAGE aims to move towards closing these gaps by a) developing a sound conceptual and empirical understanding of the channels through which climate impacts affect growth, b) estimating economic damages from selected impacts in a changing climate and socio-economic environment, particularly with regard to long-term growth effects, c) exploring how the inclusion of growth effects changes the integrated assessment of selected impacts and mitigation strategies. This comprehensive approach will contribute to the next generation of integrated assessments for climate policy advice.

ENGAGE addresses three challenges: a) to develop a sound theoretical understanding and empirical quantification of the channels through which climate impacts may affect long-term growth and development patterns b) to develop new approaches for a bottom-up economic valuation of biophysical impacts bridging the gap between impact and economic models c) the integration of impacts and mitigation in a global dynamic growth framework.

ifo conducts econometric analyses of the impact of natural hazards on economic out-comes to explore potential mechanisms at the hazard/growth nexus. Since most existing studies use outcome-based disaster data, which suffer severe reporting, endogeneity,

Economic growth and climate change

ENGAGE: a comprehensive approach

and aggregation issues, ifo is building a new database of geological and meteorological events comprising exogenous data on physical intensities collected from primary sources, geographically disaggregated at country, region, and grid cell level.

Quantitative Tools for the Analysis of Global Governance Issues (QUANTAGG)

R. Aichele, F. Teti, M. Steininger, M. Braml for the Leibniz-Association (SAW), January 2016 to December 2019.

Quantifying welfare effects of trade agreements

Globalisation is going on and countries are increasingly linked by trade and international value added chains. The WTO has not yet managed to adapt its regulations to the 21st century, and thus many countries are negotiating deep regional free trade agreements, such as the Transatlantic Trade and Investment Partnership (TTIP). This development raises questions regarding international cooperation. Which welfare effects can be expected from future free trade agreements like TTIP? Is a bilateral investment agreement with the USA beneficial for the EU? Is it possible to implement regional climate policy successfully if trade cost decrease and investors are mobile? To better understand these backgrounds, the QUANTAGG research group has been created. This group uses quantitative models and empirical data sets to analyse the effects of various international trade, investment and climate policies. The data used is from the World Input Output Database, Global Trade Analysis Project, UN Comtrade and BACI.

er and to what degree the agreement has stimulated trade in goods and services between the EU and Korea; and to assess its impact on income, prices, employment structure, CO₂ emissions and further variables.

The analysis will be conducted in three stages: firstly, a descriptive data analysis will be carried out. This will anticipate the econometric design of the study by comparing developments in trade prior to and after the agreement was implemented in terms of affected (EU-Korea) and unaffected (e.g. EU-Japan) bilateral relations. In a second step disaggregated trade data will be formally analysed using a gravity model. Other influence factors and the effect of the agreement on exports and imports can be calculated individually using this model. In the third and final step the econometric results will be used to identify reductions in trade costs due to the agreement with the help of the ifo trade model; and to calculate its effects on overall trade, and general equilibrium outcomes such as GDP, CO₂ emissions, and labour reallocation. The simulation is important because it is the only way to investigate trade diversion effects.

Evaluation of the Implementation of the Free Trade Agreement between the EU and its Member States and the Republic of Korea

Gabriel Felbermayr, Jasmin Gröschl, Inga Heiland, Chang Woon Nam in cooperation with Yoto Yotov and ifo research professor Mario Larch for Directorate General for Trade, led by Civic Consulting, July 2016 – December 2017.

How has EU-Korea agreement stimulated trade?

This project conducts an evaluation of the EU's free trade agreement with Korea that took effect in July 2011. The agreement is seen as the most modern and deepest agreement currently in existence. In addition to reductions in tariffs, it covers a broad range of non-tariff trade constraints and features settlements covering environmental, social and labour-law related rules. As part of a consortium, the ifo Institute is responsible for quantitative economic analyses over a total period of 14 months. The goal is to clarify wheth-

ifo Center for Business Cycle Analysis and Surveys

The ifo Center for Business Cycle Analysis and Surveys comprises the two main areas of economic forecasting and business surveys. Joining these two areas emphasises the importance of business surveys for the analysis of economic activity and differentiates the ifo Institute from other economic research institutes. The key activities of the department include the surveying, evaluation and interpretation of business data, as well as survey-based business-cycle analyses and forecasts for Germany, the European Union and other major countries.

A key service function of the ifo Institute is conducting and interpreting **business surveys**. The regularly collected data not only constitute an integral part of the Institute's economic forecasts; they also form the basis of industry and aggregate economic forecasts of businesses, industry associations and government agencies. The survey results are extensively discussed and interpreted in the media. In economic research, micro data derived from ifo business surveys play an important role in testing economic behavioural patterns – for example investment and employment behaviour, labour market trends or pricing policies. The excellent reputation of the ifo Institute in the area of business surveys is also confirmed by the fact that the surveying techniques of the Institute are currently used in over fifty countries throughout the world.

ifo business surveys again stood at the centre of public interest in 2016. To meet the demand for information on the international business cycle, ifo conducts the ifo World Economic Survey (WES). In contrast to the national ifo business surveys that query firms on their own situation and prospects, WES is a poll of experts who assess the economic situation of the countries in which they are based.

The **economic forecasts** are based on the systematic collection and methodical processing and analysis of ifo's own survey data and official statistics. Particular weight is given to the results of the ifo Business Survey, the ifo Investment Survey and the ifo World Economic Survey (WES). The economic indicators derived from the ifo surveys and official statistics are constantly examined for their usefulness in macroeconomic analysis and forecasting. This also applies to the forecasting instruments developed by the ifo Institute itself, such as econometric approaches to estimating business cycles and growth trends,

time-series models for various economic variables, and model analyses of the macroeconomic effects of alternative economic policy measures.

In order to quantify macroeconomic production gaps as a measure for cyclical swings, the production potential of key countries is also estimated. The main focus is on the German economy for which development trends in the supply-side determinants of production potential like productivity, labour market participation and capital accumulation are documented and analysed. Moreover, key figures on economic development and the special circumstances of individual countries – currently, for example, public debt levels, budget deficits, current account balances, measures of competitiveness and fiscal policy reform – are also systematically compared to identify possible economic policy options for Germany and Europe.

Key economic development figures systematically compared

Service Projects

The Center for Business Cycle Analyses and Surveys regularly carries out a number of service projects, based on its own research work and continuously monitored by scientific criteria. The most important projects are the ifo business surveys and the economic forecasts.

IFO BUSINESS SURVEY IN INDUSTRY AND TRADE

The business survey introduced by the ifo Institute in 1949 was an innovation in business-cycle and market observation. Today it is one of the most important sources for assessing the current economic situation in Germany. In 1990, shortly after the German Economic and Currency Union took effect, the Business Survey was expanded to include eastern Germany.

ifo Business Survey launched in 1949

The monthly survey is based on roughly 7,000 responses from firms throughout Germany on how they see their business situation and related aspects of operational activities. The standard questions require firms to appraise their current situation and assess their business expectations and plans in the three to six months ahead. Survey participants are asked to exclude seasonal fluctuations from their assessments. As this is only partially possible, the results undergo an additional seasonal adjustment. The survey results, which are subject to a complex evaluation procedure,

provide information on some 500 individual sub-sectors, the manufacturing industry, construction, as well as the wholesaling and retail industry.

The objective of the ifo Business Survey is to capture the business-cycle component of macroeconomic developments. It does not predict long-term growth trends. The ifo Business Survey is designed to supplement official statistics. It provides information on economic phenomena that are not ascertained by official statistics, and is published in a timely manner.

Long time-series used to derive business cycle indicators

The long time-series of the ifo Business Survey is used to derive informative business-cycle indicators. The ifo Business Climate Index, combined with quarterly questions on capacity utilisation and order stocks, provides a reliable picture of the current business situation and short-term developments. A key advantage of ifo's economic indicators vis-à-vis the official statistics are their early availability. Official German production and new-order indicators are generally not published until four weeks after the end of the reporting period, and are often subject to major revisions. The results of the ifo Business Survey are released between the 22nd and 27th day of the survey month. Furthermore, participants give their appraisal of and expectations for their firms, thereby offering supplemental information to the quantitative information provided by the official statistics.

Access to time-series data

External individuals interested in the time series of the ifo Business Survey can obtain data from the ifo Institute's database service. The data offered also include time series from other sources.

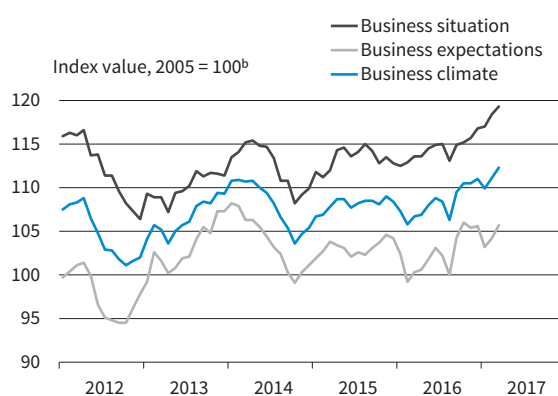
IFO BUSINESS CLIMATE IN GERMAN TRADE AND INDUSTRY

The ifo Business Climate, which is calculated as the transformed mean of the balances of the business situation and expectations for the next six months, has been published regularly by the ifo Institute since 1972. It has proven to be a reliable early indicator of economic development in Germany. Compared to the production index for the manufacturing industry provided by official statistics, it leads, on average, by two to three months. As a result, it has become an integral part of German economic forecasts. The national and international importance of the ifo Business Climate can be seen in the reactions to the publication of the new forecast on the part of the financial markets, which eagerly

await its results every month. Special monthly evaluations and commentaries of the ifo Business Survey are provided by the ifo Institute for Bavaria, Baden-Württemberg, North Rhine-Westphalia and Saxony.

ifo Business Climate in Germany

ifo Business Survey March 2017



^a Manufacturing, construction, wholesaling and retailing.
^b Seasonally adjusted by X-13ARIMA-SEATS.

Source: ifo Business Climate.

MONTHLY IFO BUSINESS SURVEY OF THE SERVICE SECTOR

The ifo Business Survey of the Service Sector is the most comprehensive monthly survey of the German service sector. Over 2,500 firms participate on a regular basis. The ifo Business Climate in the Service Sector indicator, which has been published since 2005, is based on important, and particularly on business-oriented segments of the tertiary sector (excluding distribution and government). Financial services (banking and insurance) are not included in the indicator. The ifo Institute carries out separate surveys in these areas, including its monthly business climate in leasing. These results are used, among other things, to assess investments in plants and equipment.

Information on sales, employment and the economic sector, as well as structural data from official statistics, are used in the calculation and projection of the indicator. The survey methods and calculations are similar to those of the ifo Business Survey of industry and trade (manufacturing, construction, wholesaling and retailing).

The ifo Business Survey of the Service Sector meets the current standards of harmonised business surveys in EU member states. The results are published on a

monthly basis together with the ifo Business Survey of manufacturing, construction, as well as wholesaling and retailing.

IFO INVESTMENT SURVEY MANUFACTURING INDUSTRY

The ifo Investment Survey was the forerunner of all of the Federal Statistics Office’s investment surveys. Today it supplements official ex-post data with timely information on projections based on company plans. This makes the ifo Institute the only source for quantified estimates of current developments in investment prior to the publication of official ex-post data. As a voluntary survey – the ifo Investment Survey is like all non-official surveys and is not grounded in law – it cannot essentially replace a comprehensive survey. This is especially true with respect to the desired sub-division of the branches. The forecasting horizon covers roughly one year. The surveys were conducted on an annual basis in most of the sectors mentioned above; and only manufacturers were surveyed twice a year.

In addition to data on past developments in investment, the ifo Institute’s investment survey of manufacturing and mining also collects data on investment plans for the ongoing and forthcoming year and the setting of investment goals, as well as the relevant factors influencing them. According to the latest results, investments in manufacturing increased nominally by around 7% in 2016.

IFO INVESTMENT SURVEY IN LEASING

With its business survey of the leasing sector the ifo Institute closes a statistical gap. Unlike in other areas of the investment survey, this is a comprehensive survey, as there are no official statistics for the extrapolation of sample results. The test results for last year show a 3.5% upturn in new business versus last year to 52.4 billion euros. Movable leasing rose by 5.1%, while real-estate leasing – after a strong increase in 2015 – declined by 43.5%. The overall leasing rate slightly increased to 15.3% from 15.2%; while leasing as a share of total investment in movables increased from 22.6% to 22.8%.

For over a decade the ifo Institute, in cooperation with the German Association of Leasing Companies based in Berlin, has conducted a regular economic survey of German leasing companies. The survey was initially conducted on a quarterly basis, but became monthly as of 2003. The assessments by leasing companies of their current business developments are particularly useful in forecasting overall investment in equipment.

IFO INSURANCE SURVEY

In close collaboration with the Federation of the German Insurance Industry, the ifo Institute has been conducting a quarterly business survey for the insurance sector since the end of 1999. Included in the survey are insurance companies in the areas of life, health and property/casualty. In terms of gross premiums, the insurance companies participating in the survey cover over 80% of the premium income.

IFO INNOVATION SURVEY

The ifo Institute has conducted the ifo Innovation Survey since 1979. The innovation surveys in other OECD countries are carried out on the same conceptual basis. For details, see the chapter on the ifo Center for Industrial Organisation and New Technologies.

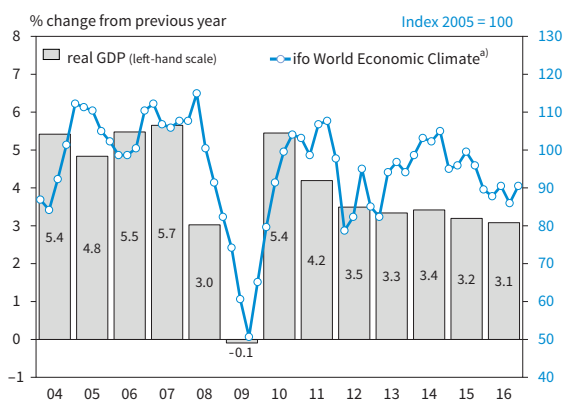
Innovation Survey launched in 1979

IFO WORLD ECONOMIC SURVEY (WES)

For over 30 years the objective of the ifo World Economic Survey (WES) has been to depict the current economic situation and outlook in numerous industrial and transformation countries as accurately as possible. The survey results are characterised by their timely information and international comparability. The assessments and expectations of on-site experts are particularly valuable in countries where the official statistics remain unreliable. The figure below shows the high correlation of the survey results with actual growth in the world economy.

WES results correlate strongly with actual growth

World Economic Outlook and ifo World Economic Climate



^{a)} Arithmetic mean of judgement of present and expected economic situation. Sources: IMF, World Economic Outlook, October 2015; ifo World Economic Survey (WES) IV/2015.

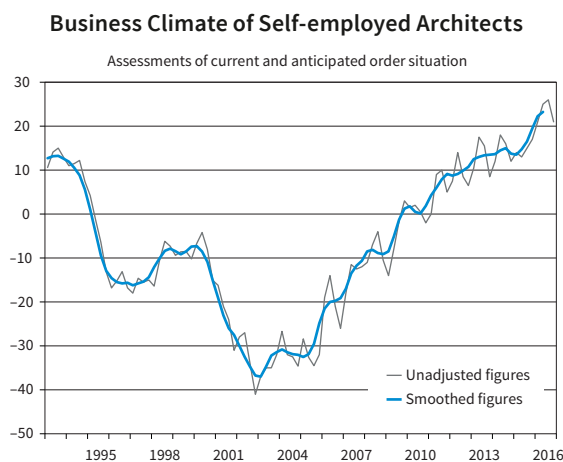
In 2016, the ifo Institute also polled over 1,000 international business experts at institutes or multinational enterprises on the economic situation and outlook in some 120 industrial, emerging and developing economies. In return, participants received detailed survey results. The WES results are also published in the quarterly English language journal *CESifo World Economic Survey*, and in a condensed form in German in the *ifo Schnelldienst*. In Latin America the ifo Institute has cooperated with Fundacao Getulio Vargas/Instituto Brasileiro de Economia (FGB/IBRE) since 2007, which publishes the WES results for this region.

IFO ARCHITECTS SURVEY

The ifo Architects Survey, which began in 1980 in only four federal states, has been conducted nationwide in Germany since 1996. Some 1,200 freelance architects across all 16 German states are surveyed on a quarterly basis. The survey results produce the following indicators: business climate, new contracts – and hence estimated construction volume – as well as order stocks. The data are supplemented by annually surveyed information on the legal form and size of the architects’ offices and their fees. State-specific survey results are sent to participating architect chambers in various German states; and participants receive the survey results along with the next quarterly survey questionnaire. The results for Germany are published every three months in *ifo Schnelldienst*.

ifo Architects Survey conducted nationwide since 1996

Business climate for freelance architects



Source: ifo Architects Survey

IFO ECONOMIC FORECASTS

At mid-year and year-end, the department publishes a detailed report on the German economy that includes

forecasts of gross domestic product (sector origin, use and distribution), the labour market, inflation, as well as public expenditure and revenues. Thanks to the German economy’s strong links with the world economy, and in particular the European economy, a forecast is also made for the European Union and other important countries. A well-founded analysis of the economic situation is the basis of the forecast. Special attention is paid to quantifying the dynamics of economic activity, and to identifying business-cycle turning points. Since 2010, the department has also provided annual sector accounts for institutional sectors, the economy as a whole, non-financial and financial corporations, private households (including non-profit organisations), the government sector, as well as for the rest of the world. The accounts provide a systematic overview of important transactions between sectors that are included in the overall economic figures.

The department frequently makes statements to the media on the current economic outlook and the economic policy problems related to it. The economic implications of fiscal and monetary policy decisions are also analysed and commented upon. Particularly interesting issues in 2016 included the European Central Bank’s asset purchase programme, the British referendum on its membership in the European Union, as well as the economic implications of refugee migration. Overall, the department enjoyed extensive media coverage in 2016.

JOINT ECONOMIC FORECAST

In spring and autumn the department participates together with the department for business cycle research of the ETH (Swiss Federal Institute of Technology) Zurich (KOF) at the Joint Economic Forecast (Gemeinschaftsdiagnose). In July 2016 a new two-year contract was awarded to the ifo Institute by the Federal Ministry for Economic Affairs and Energy. The other four successful consortia were the German Institute for Economic Research (DIW), together with the Austrian Institute of Economic Research (WIFO), the Halle Leibniz Institute for Economic Research (IWH), the RWI – Leibniz Institute for Economic Research, Essen, together with the Institute for Advanced Studies in Vienna (IHS), as well as the Kiel Institute for the World Economy (IfW). The Joint Economic Forecast comprises forecasts for Germany, the European Union and other major countries, as well as an evaluation of those economic poli-

cies that affect Germany's economic activity. It is presented at the facilities of the federal press conference (Bundespressekonferenz) in Berlin and subsequently submitted to the Federal Ministry for Economic Affairs and Energy.

EUROZONE ECONOMIC OUTLOOK

The Eurozone Economic Outlook is a European joint initiative of the ifo Institute, INSEE in Paris and Istat in Rome. It provides an estimate (for the past quarter) and a forecast (for the current and following quarters) of real GDP, private consumption, industrial output and inflation in the euro-zone. Forecasting is conducted primarily by applying econometric forecasting methods. The projections are then rounded off using the personal appraisals of the project team. The Eurozone Economic Outlook is published quarterly – in January, April, July and October – as a two-page press release in German and English.

EUROPEAN ECONOMIC ADVISORY GROUP (EEAG)

The European Economic Advisory Group at CESifo (EEAG) is a European expert advisory board consisting of seven well-known economists from seven countries and currently chaired by John Driffill, Birkbeck College. It was launched in 2001 by CESifo. The group writes detailed reports on specific economic policy issues. The ifo Center for Business Cycle Analyses and Surveys provides a forecast and analysis of economic activity in Europe and the world for the EEAG Report. Special matters are also treated on a regular basis. The forecast is part of the "Economic Outlook" chapter.

ECONOMIC ANALYSES, PREPARATION OF INDICATORS AND FORECASTS

The project aims to compute monthly survey-based electricity indicators to forecast the electricity consumption in Germany and in the ENBW customer base and to build an appropriate econometric model to predict the target time series over a forecast horizon of up to 12 months. The electricity indicators will be generated from the disaggregated results of the ifo business surveys in the manufacturing industry and reflect the cyclical variations in power demand. The forecasting model is based on the idea of improving predictive accuracy by combining a larger number of individual forecasts and models not only of business cycle fluctuations, but also the medium term trend, seasonal-

ty, temperature and structural effects of electricity demand. Additionally, this project includes consulting services connected with the current state of the business cycle and economic policy issues.

Service Projects in Detail

ifo Business Survey

K. Wohlrabe, P. Wojciechowski, L. Dorffmeister, S. Sauer, S. Rumscheidt, S. Litsche, A. Bauer, monthly publication in *ifo Schnelldienst* and *ifo Konjunkturperspektiven*.

ifo World Economic Survey (WES)

K. Wohlrabe, J. Garnitz, D. Boumans, J. Nothhaft, quarterly publication in *CESifo World Economic Survey* and *ifo Schnelldienst*.

ifo Investment Survey in Leasing

A. Städtler, S. Sauer, S. Rumscheidt, regular publication in *ifo Schnelldienst*.

ifo Business Survey of the Insurance Sector

S. Litsche for the Association of German Insurance Companies, information for clients and participants.

Profit situation and trend

S. Litsche, quarterly determination of profit situation and trend in the metal and electric industry.

ifo Business Survey for Bavaria

P. Jäckel, F. Leiss for the Bavarian Ministry of Economic Affairs and Media, Energy and Technology, regular publication in *Konjunktur in Bayern* as well as on the client's website.

ifo Business Survey for Baden-Württemberg

S. Litsche for Landeskreditbank Baden-Württemberg – Förderbank, regular publication in the series *L-Bank-ifo-Konjunkturtest* and on the internet.

ifo Business Survey for Saxony

M. Weber, regular publication in *ifo Dresden berichtet*.

ifo Business Survey for North-Rhine Westphalia

A. Weichselberger for NRW Bank, regular publication in the series *NRW.Bank.ifo-Index* and on the internet.

ifo Investment Survey Manufacturing Industry

P. Jäckel, A. Weichselberger, regular publication in *ifo Schnelldienst*.

ifo-KfW Business Cycle Barometer for Medium-sized Businesses

S. Sauer, for the KfW Bank Group, regularly published by the client.

ifo Employment Barometer

K. Wohlrabe, A. Bauer, monthly publication in *Handelsblatt*, *ifo Konjunkturperspektiven* and on the CESifo website.

Credit Constraint Indicator

K. Wohlrabe, A. Marjenko, monthly publication as a press release, in *ifo Konjunkturperspektiven* and on the ifo Institute's website.

ifo Export Expectations

K. Wohlrabe, monthly publication as a press release, in *ifo Schnelldienst* and on the CESifo website.

ifo Architects Survey

L. Dorffmeister, E. Gluch, M. Kocijan, regular publication in *ifo Schnelldienst* and *Deutsches Architektenblatt*.

ifo Managers Survey

K. Wohlrabe, J. Garnitz for *WirtschaftsWoche*, regular publication in *WirtschaftsWoche* and on the ifo website.

Upper Interest Rate Ceiling/Average Interest Rates for Consumer Credit Average Interest Rates for Consumer Loans

K. Wohlrabe, P. Wojciechowski, T. Wollmershäuser, Survey for the Bankenfachverband.

Joint Economic Forecast

T. Wollmershäuser, T.O. Berg, Chr. Breuer, J. Garnitz, Chr. Grimme, A. Hristov, N. Hristov, R. Lehmann, W. Meister, W. Nierhaus, M. Reif, F. Schröter, A. Steiner, K. Wohlrabe, A. Wolf together with the Konjunkturforschungsstelle (KOF) of the ETH Zurich and in cooperation with four other consortia, for the Federal Ministry of Economic Affairs and Energy, published in *ifo Schnelldienst* 69(8), 2016; 69(19), 2016.

The Joint Economic Forecast was conducted at the ifo Institute in Munich in spring 2016, and was hosted by the DIW in Berlin in autumn.

ifo Economic Forecasts

T. Wollmershäuser, T.O. Berg, Chr. Breuer, J. Garnitz, Chr. Grimme, A. Hristov, N. Hristov, R. Lehmann, W. Meister, W. Nierhaus, M. Reif, F. Schröter, A. Steiner, K. Wohlrabe, A. Wolf, ongoing analyses and forecasts of economic activity in Germany, Europe and the world, published in *ifo Schnelldienst* 69(12), 2016; 69(24), 2016.

Eurozone Economic Outlook

A. Hristov in co-operation with INSEE, Paris, and Istat, Rome.

The Eurozone Economic Outlook is published on a quarterly basis – in January, April, July and October – as a two-page press release in German and English.

European Economic Advisory Group (EEAG)

T.O. Berg, N. Hristov, regular publication in the *EEAG Report on the European Economy*.

Economic Analyses, Preparation of Indicators and Forecasts

T.O. Berg, P. Wojciechowski for EnBW Trading GmbH.

ifo Export Climate

C. Grimme for *Wirtschaftswoche*.

The ifo Export Climate consists of company and consumer confidence indicators and an indicator for the price competitiveness of German companies. Indicators from 41 countries, weighted by Germany's export shares, are used to assess company and consumer confidence. The countries surveyed account for 90 percent of Germany's export markets and seasonally-adjusted figures are used to calculate the ifo Export Climate.

National Income Accounting for Saxony

W. Nierhaus in cooperation with the State Statistics Office of Saxony, ongoing project, published in *ifo Dresden berichtet*.

The working group "National Income Accounting (NIA) of the German States" regularly publishes annual regional statistics on gross domestic product and gross value added by economic sector. In contrast to national income accounts, no quarterly statistics are made available on a regional basis. Quarterly NIA statistics constitute an important link, however, between the monthly cyclical indicators of the special statistics and the annual NIA results. The objective of this project is

to provide additional information for economic monitoring and forecasting in Saxony with aggregate data for periods of less than a year. The focus is on the origin of the price-adjusted gross domestic product. Using the method of temporal disaggregation, a quarterly regional dataset is generated that is largely consistent with the annual results of the Working Group NIA of the German States for Saxony in the estimating period. Annual aggregates are transformed into quarterly aggregates by using higher-frequency reference indicators. Since 2013 the quarterly results have been presented according to the new breakdown of the branches of the economy (WZ 2008).

Research Projects

The Center's research is divided into two major interdependent areas: forecasting and survey methods, macroeconomics.

Projects of the Forecasting and Survey Methods Research Group

In view of the huge quantities of data available to the forecasters, partly stemming from the results of ifo's own surveys, the department focuses on processes of information compression and selection in the field of forecasting methodology. In the area of survey methods, efforts are made to safeguard the high quality of surveys on the one hand, and to improve surveying techniques on the other. The results of these research projects are directly incorporated into the practical analysis and design of the business surveys. The range of topics includes the analysis of response spectrums, the graphic representation of survey results, as well as the analysis of the questionnaire and response behaviour of the companies participating in the business survey.

Two research projects focus on forecasting labour market variables. The article "Forecasting employment in Europe: Are survey results helpful?" by R. Lehmann and A. Weyh, Institute for Employment Research, Regional IAB Office Saxony, Chemnitz, evaluate the forecasting performance of employment expectations to forecast employment growth for a multitude of European countries (Journal of Business Cycle Research 12(1), 2016). It turns out that for most of the considered countries the survey-based employment indicator generates more accurate employment forecasts compared to simple

benchmark models. The second research project is an indepth analysis of the German case. R. Lehmann and K. Wohlrabe investigate the forecasting performance of the ifo Employment Barometer for employment growth and compare it with indicators gained from other surveys (for example, the labour market indicator of the German Federal Employment Agency) or published by official statistics (for example, the number of vacancies). For a horizon up to 6 months, forecasts based on the ifo Employment Barometer are the most accurate ones (*Applied Economics Letters* 24(4), 2017).

Another project analyses whether survey data can help in forecasting imports. In the literature to date, forecasting experiments for this component of GDP are relatively scarce. C. Grimme, R. Lehmann and M. Nöller find that for the current quarter hard indicators are better, however, for the next quarter indicators extracted from survey data lead to significantly better forecasts.

In the project "Predicting German Business Cycle Turning Points" by M. Reif together with ifo research professor K. Carstensen, M. Heinrich and M.H. Wolters, all University of Kiel, a model to date business cycle turning points is developed. To this end, a variety of so-called large-data methods (LARS, LASSO, elastic-net) are applied to select the optimal set of indicators for each period. It is demonstrated that applying this automatic variable selection provides superior results compared to the case of a fixed set of indicators.

Moreover, R. Lehmann and K. Wohlrabe evaluate the performance of boosting to forecast GDP for three German regional entities (Baden-Württemberg, the Free State of Saxony and Eastern Germany). Since boosting is a so called 'large-dataset-method', the two authors also answer the question of which indicators frequently get selected by the boosting algorithm. The study reveals two major results. Firstly, boosting outperforms simple benchmark models in terms of forecasting accuracy up to a horizon of two quarters. Secondly, the algorithm frequently selects indicators that mirror the regional economic structure. As a result, in assessing the future economic developments of their region, regional decision-makers should focus instead on local information instead of German indicators.

A research project related to the previous one is the study: "Looking into the black box of boosting: the case of Germany" by R. Lehmann and K. Wohlrabe. This

Using survey data to forecast imports

Performance of boosting to forecast GDP

study also focuses on boosting, but investigates its performance in forecasting German industrial production (Applied Economics Letters 23(17), 2016). Again, the authors find that boosting outperforms simple benchmark models. In addition, the study underpins the outstanding position of the ifo indicators in forecasting German macroeconomic variables. A large set of indicators such as, for example, the assessment of the business situation of capital goods producers, get frequently selected by the boosting algorithm to forecast industrial production.

Projects of the Macroeconomics Research Group

Analysing causes and effects of macroeconomic disturbances

The research group “Macroeconomics” investigates the cause and effect of macroeconomic disturbances and derives implications for applied business cycle analyses from them. Thematically the Group’s work focuses on the influence of financial market frictions and uncertainties, as well as the impact of monetary and fiscal policy measures on real and financial variables. In terms of methods, theoretical model approaches like dynamic stochastic general equilibrium (DSGE) models, as well as empirical time series procedures like, for example, vector autoregressive models, are both used. Moreover, the Group’s empirical research frequently also draws upon the ifo Institute’s survey data. Credit constraints and corporate uncertainty, for example, are identified at a company level with the help of microdata from the ifo Business Survey. The Group also cooperates with the center’s research professors and research associates.

Financial market flaws and price setting by firms

The project “Financial Market Imperfections and the Pricing Decision of Firms: Evidence, Theory, and Macroeconomic Implications” (N. Hristov together with A. Balleer, RWTH Aachen, and D. Menno, University of Michigan) is financed by the German Research Foundation (DFG) for 2015–2017. Drawing on microdata from the ifo Business Survey, it examines why and in what way flaws in the financial market influence the price-setting behaviour of companies. The theoretical part of the project models an explicit interaction of financing restrictions and price adjustments. Initial results suggest that financially-constrained companies in Germany adjust their prices far more frequently. This means that price adjustments are more flexible, and thus monetary policy is less effective, when companies only have restricted access to funding. The theoretical model is in a position to qualitatively reproduce these empirical facts.

The project “Unexpected Loan Losses and Bank Capital in an Estimated DSGE Model of the Euro Area” (N. Hristov and O. Hülsewig, Munich University of Applied Sciences) seeks to quantify the role of the ‘bank capital channel’ for the transmission of macroeconomic shocks in the European Monetary Union (EMU). In particular, the paper develops a stylized DSGE model in which banks face unexpected losses in their loan portfolios and are subject to capital regulation. The framework is used to explore the aggregate consequences of the interaction between macroeconomic conditions, credit default and bank capitalization. The model is estimated based on macroeconomic time series for the Euro Area. Impulse response analysis shows that the aforementioned interaction substantially magnifies the responsiveness of the economy to demand side and monetary disturbances. The amplification is especially strong with respect to government spending shocks. The model is also capable of replicating two financial market characteristics that are documented in the empirical literature, i.e. the pro-cyclicality of bank profitability and the counter-cyclical response of firm default rates and credit spreads to monetary policy shocks. Alternative specifications of our model in which loan contracts are contingent upon the aggregate state of the economy fail to replicate at least one of these characteristics or even both (*CESifo Working Paper No. 6160, 2016.*).

In the project “Uncertainty Shocks, Bank Lending Rates, and Corporate Bond Yields” C. Grimme analyses the impact of an increase in economic uncertainty on the costs of corporate bonds and bank loans in Germany and the USA. The paper shows that bond yields rise during periods of volatility, while bank loan rates fall. This difference is due to the fact that banks, in contrast to the capital market, collect borrower-specific information, because they are interested in long-term customer relationships. In volatile times information becomes more valuable, and banks acquire more information. On the one hand, this lowers uncertainty. On the other hand, the information monopoly of banks rises, making long-term relations with customers become more important to banks. Therefore, banks try to prevent fluctuations in the probability of default by corporate clients by lowering interest rates.

In another project, C. Grimme (together with S. Henzel, Munich University of Applied Sciences) analyse whether the link between uncertainty and real activity is

non-linear. The question is tackled both at the firm-level with the ifo micro data and at the macro level with the help of non-linear vector-autoregressive models. It is shown that at the firm-level major changes in uncertainty, in particular, have effects on production decisions. At the macro level, changes in uncertainty have real effects, particularly when the economy is already in a volatile environment.

The project “Price Setting of Firms – Evidence from Survey Data” (C. Grimme together with H. Dixon, Cardiff Business School) analyses the determinants of changes in the frequency of price changes. The frequency of price adjustments fluctuates strongly along the business cycle. This has effects on the inflation rate and the effectiveness of monetary policy. Preliminary results show that both aggregate factors, as well as firm-specific variables play a role. In the theoretical literature these results are well-known; empirically, however, they have yet to be confirmed.

Another research project examines the causes and outcomes of international capital flows (A. Steiner, “Does the Accumulation of International Reserves Spur Inflation? A Reappraisal” and “A Tale of Two Deficits: Public Budget Balance of Reserve Currency Countries”). This project focuses on the difference between private and official capital flows. While private capital flows are based on investment decisions taken by private investors, development aid and the currency reserves held by central banks count as official forms of capital movements. This is used as a basis to develop a new benchmark for measuring the private financial openness of countries. A panel study of over 100 countries shows that private financial openness has a significantly positive impact on economic growth. In a subsequent step the project examines the impact of a world reserve currency on the economy in question. Our empirical analysis over a historical period from 1890 to 2009 shows that demand for currency reserves leads to lower fiscal balances in the budgets of world currency countries. In economic policy terms, this highlights the instability of the world currency system, since the world reserve countries are accumulating a rising level of debt.

Financial instabilities have real repercussions and may affect economic growth and business cycles. A research project (A. Steiner joint with X. Qian, State University of New York, Ifo Working Paper No. 211, 2016.) studies how central banks’ reserve policies affect

the maturity structure of external debt and how they reinforce financial stability through this more crisis-resilient maturity structure. Based on a theoretical model it is shown that reserves lengthen the optimal maturity of external debt via a flattening of the yield curve. Using panel data for emerging and developing countries and applying different econometric approaches, there is evidence that reserves increase the ratio of long-term to short-term external debt. Results hold for private and public external debt individually. A longer average maturity of external debt, in turn, is conducive to financial stability.

The topic of Target 2 balances also remains on the department’s research agenda. The option of accumulating potentially unlimited Target 2 claims vis-à-vis other member countries primarily enabled the crisis-afflicted countries in the euro area to largely compensate for dwindling, or even reversing, flows in foreign capital. The study: “Capital Inflow Shocks in the Euro Area and the Effects of Target-2-Balances” (N. Hristov and T. Wollmershäuser) examines the effects of the Target 2 system on economic developments in key core and crisis-afflicted countries in the euro area. The results suggest that the Target 2 system significantly reduced the negative economic impact of dwindling private capital flows.

Based on national tax revenue forecasts for 18 OECD countries, R. Lehmann and B. Jochimsen, Berlin School of Economics and Law, asked in a joint research project whether these figures are biased due to political manipulation. Three major results can be drawn. Firstly, left-wing governments produce more optimistic tax revenue forecasts compared to right-wing ones. Secondly, they find that more fragmented governments and parliaments tend to produce more pessimistic forecasts. And finally, political business cycles or biases due to upcoming elections cannot be confirmed. The article entitled: “On the political economy of national tax revenue forecasts: evidence from OECD countries” has been accepted for publication in *Public Choice*.

A joint research project by R. Lehmann and X. Frei, F. Rösel, both ifo Dresden, and S. Langer, Leibniz Institute of Ecological Urban and Regional Development, Dresden, investigate whether election externalities exist between different layers of government. To this end, the authors can rely on voting polls for Germany in total and Berlin in particular for the four main parties (CDU, SPD, the Greens and the Left). The results suggest that

Target 2 balances

National tax revenue forecasts and political manipulation

shocks in federal parliament voting intention impact state parliament voting intentions, but – as a new finding – the reverse also applies to the same extent. The effects also differ across parties. Electoral externalities are lower for the CDU, but increase in times of government. The opposite holds true for the SPD and the Left. Detailed results will be published at the beginning of 2017 as a *CESifo Working Paper*.

duces a similar, but not identical ranking compared to its standard counterparts. The ranking order for ‘middle-class’ journals in particular can change tremendously.

Regional representation of foreign employees

Another project entitled “Explaining Spatial Patterns of Foreign Employment in Germany”, which is joint work by R. Lehmann and W. Nagl, Institute for Advanced Studies, Vienna, and will be published as *CESifo Working Paper* in the first quarter of 2017, explores the main determinants for the regional representation of foreign employees in Germany. Since migration determinants are not exclusively the same between workers with different nationalities, the paper explains spatial patterns not only for total foreign employment, but rather for the 35 most important migration countries to Germany. Based on a total census for all 402 districts in Germany, the study documents a large heterogeneity in migration determinants between nationalities. It turns out that cultural factors and amenities correlate in more cases with the nationality-specific representation of foreign employment compared to labour market and economic conditions. The authors identify three groups of countries for which different determinants are more important than others. Geographical distance also plays a major role in location decisions. This finding is especially pronounced for workers from Germany’s neighbouring countries.

Geographical distance and location decisions

For some time, the ifo Center for Business Cycle Analysis and Surveys has also focused on the discipline of bibliometrics in general and journal rankings in particular. The article “Who is the ‘Journal Grand Master’? A new ranking based on the Elo rating system” (*CESifo Working Paper* No. 6259, 2016) by R. Lehmann and K. Wohlrabe can be attributed to this research area. In this paper, the authors transfer the Elo rating system, which is widely accepted in chess, sports and other disciplines, to rank scientific journals. The advantage of the Elo system is the explicit consideration of the factor time or the history of a journal’s performance. Most other rankings that are commonly applied neglect this fact. The authors illustrate the Elo approach using a panel of 7,748 journals from many scientific fields. It turns out that the Elo system pro-

ifo Center for International Institutional Comparisons and Migration Research

The main research areas of the ifo Center for International Institutional Comparisons and Migration Research are international migration and institutional analyses in the fields of banking and political economics. The center also offers key services for academics and the general public by maintaining, developing and distributing DICE, an internationally comparative database of economically relevant regulations and institutions, and by publishing the journals *CESifo DICE Report* and *CESifo Forum*.

DICE DATABASE AND THE JOURNAL *CESIFO DICE REPORT*

The institutional framework of an economy and its implied incentive structure are central to any analysis of a nation's welfare. At a time of globalisation when people, businesses and production factors are becoming increasingly mobile internationally, countries are also compelled to compete via their respective institutional rules and regulations. International institutional data allow countries to assess their own situation and to initiate necessary reforms. In this context, the DICE Database (Database for Institutional Comparisons in Europe) provides comparable and analytically designed information on institutional regulations in the member states of the European Union and in selected other countries.

The English-language database contains systematic descriptions of the institutional set-up and legal regulations of the economic policy framework, enabling inter-country and benchmark comparisons. The DICE database is available free-of-charge via the internet. DICE currently includes the following areas: banking and financial markets, business, education and innovation, energy, resources, natural environment, infrastructure, labour market, migration, public sector, social policy and values. At present, the database contains around 3,800 entries.

The quarterly journal, *CESifo DICE Report – Journal for Institutional Comparisons*, was launched in 2003. The journal is dedicated to the analysis of institutions, regulations and economic policy design from a country-comparative perspective. Its editors are Marcus Drometer and Christa Hainz. Each issue of the journal considers a special topic, presented in the "Forum" section, which is approached by different authors from various perspectives. The journal also features the following sections: "Research Reports", "Reform Models", "Database" and "News".

THE JOURNAL *CESIFO FORUM*

CESifo Forum focuses on current economic topics of worldwide interest and features contributions by internationally renowned authors. The English language journal is published quarterly. It comprises the rubrics "Focus", "Special", "Spotlight" and "Trends". *CESifo Forum* is edited by Chang Woon Nam.

INSTITUTIONAL AND MIGRATION RESEARCH

The institutional research deals with the impact of institutional regulations on economic development and on political decision-making. One important question investigated is the extent to which voting behaviour in referenda can be explained by financial self-interest or social preferences. Another focus is the analysis of interactions between political institutions and migration. This research examines whether naturalisations are used strategically by the government to increase the likelihood of re-election. Furthermore, institutional research explores the relationship between elections, party ideologies and migration.

Two research projects combine economic analysis with insights from psychology. One project analyses how bitterness in life affects concerns over immigration, a question of increasing importance due to the economic crisis, and highlighted by unexpected political events, such as Brexit and the election of Donald Trump as the US President. Another project, combining political economics and insights from psychology, to investigate what extent the role of candidate appearance in elections affects the electoral success of political parties on the left and on the right. While previous research has already established that there is a beauty premium in politics, no work had been done on whether this premium can be expected to have systematic political consequences.

Both immigration and emigration may pose key challenges for European welfare states. One of the ongoing projects analyses the welfare effects of immigration in OECD countries, when both labour market effects and the effects of taxes and transfers in a redistributing welfare state are taken into account. Another project analyses the self-selection of emigrants from Denmark, in terms of their observable and unobservable abilities, measured by education, earnings and residual earnings. Yet another question is to what extent international migrants are self-

How regulation impacts policy decisions and economic development

Beauty and voting behaviour

lected and sorted into different destinations based on their attitudes towards redistribution, or, in case of family migration, based on their preferences for a dual-earner model in which both partners work versus a male breadwinner model. A related question is how couples decide on their emigration. These questions are studied by combining Danish register and survey data. A further project uses Danish register data to investigate the determinants for return migration of immigrant families from Denmark. From the institutional perspective, the effects of a family reunification reform on return patterns are of particular interest in this context.

Breaking down Brexit

Another research project analyses the Brexit referendum in the United Kingdom in June 2016 both from the theoretical, as well as from the empirical perspective. It particularly refers to the relationship between socio-demographic characteristics and the election results at the district level.

The research field of banking investigates whether well-protected property rights reduce the lending rate and the role played by bank competition. It also examines the real effects of the abolition of state guarantees for banks. Further research in the field of institutional economics looks at the impact of aid flows on the quality of institutions in recipient countries. Another project analyses the rules underlying the European Central Bank's monetary policy decisions.

Rules governing ECB's policy decisions

INTERNATIONAL ADVISORY AND RESEARCH PROJECTS

The ifo Institute conducts various international advisory and research projects that are coordinated by the ifo Center for International Institutional Comparisons and Migration Research. The focus is on economic risk assessment and analysis, as well as on institutional reforms.

Projects Completed in 2016

Practical Experiences with the Exemption Provisions § 2a– §2c VermAnlG of the Small Investor Protection Act (adopted on 3 July 2015)

C. Hainz, L. Hornuf, University of Trier, G. Engelmann, University of Trier, L. Klöhn, Humboldt-University of Berlin, B. Brauer, Humboldt-University of Berlin, F. Ehrenfried, LMU Munich, for the German Federal Ministry of Finance, June 2016 to September 2016, publication as *ifo Forschungsbericht 78*, ifo Institute, Munich 2017, and in *ifo Schnelldienst 70(6)*, 2017.

What are the experiences of crowd investment portals, issuers and investors with the exemption provisions for small investors that were introduced in July 2015? On behalf of the German Federal Ministry of Finance project team members with backgrounds in economics and law conducted an empirical investigation to analyse experiences to date with the Small Investor Protection Act. To this end they used existing databases, developed questionnaires and conducted structured interviews with the interest groups and experts concerned.

Ahead of the introduction of the Small Investor Protection Act (Kleinanlegerschutzgesetz), experts were concerned about the possible negative effects of this act, namely negative effects on growth in the German crowdfunding market and restrictions on the funding possibilities of social and charitable projects. To date there is no evidence that the introduction of the Small Investor Protection Act led to a reduction in the growth of the market for crowdfundings. German crowdfunding platforms mediated funding amounting to 110 million euros up until 1 June 2016. This represents a reduction in market growth compared to 2015. However, this reduction in market growth was already observed in 2015 compared to 2014. One reason for this tendency could be the negative returns on naïve portfolio diversification (Hornuf and Schmitt, 2016). It seems unlikely that these negative returns can be turned into positive returns for investors in the future, despite fixed interest rates with payouts in the end and higher exit-payouts. According to the authors' our data analysis, the introduction of a self-disclosure obligation for the respective investment-product did not induce a change in invest-

ment behaviour. However, the preferred instrument for financing in the crowdfundering market seems to have changed in recent years from silent partnerships to profit-participating-loans and subordinated loans. The survey on the Small Investor Protection Act amongst social and charitable organisations delivers a first systematic insight into the funding behaviour of respective organisations. The data clearly shows that virtually no social or charitable organisation would be covered by the prescriptions of the Small Investor Protection Act. The financing instruments of most projects and organisations would be captured by the exemptions in § 2 VermAnlG. Therefore, the newly introduced exemptions in §§ 2b, 2c VermAnlG are practically of no relevance.

Essays on International Family Migration

T. Nikola, completed doctoral project, May 2012 to October 2016.

There is little evidence on the role of family ties in international migration decisions. This dissertation contributes both theoretically and empirically to closing this knowledge gap in research. The work presented provides new results in the context of emigration and the return migration decisions of families. It summarises three research projects carried out within CEMIR using a Danish register, as well as survey data for the empirical analysis.

The first project analysed the labour force participation of emigrant couples in the light of their individual motivations to emigrate and their preferences towards the division of household labour. The empirical analysis used survey data on Danish partners that have emigrated together. Answers to the respondents' main motivation to emigrate show that own job was most important for male partners, while family reasons were the dominant incentive to emigrate among female partners. Migration outside the Nordic countries is predominantly associated with reduced female labour force participation among couples, particularly in cases where a couple has children. Among couples migrating to one of the other Nordic countries, the dual-earner model dominates. The empirical results confirm the hypotheses from a household labour supply model that rationalises reduced labour supply in many non-Nordic countries with high prices and lower availability of childcare services.

The second project analysed the decision-making process on joint migration in a family. It extended a unitary theoretical framework on migration decisions to a bargaining model addressing the fact that partners might have conflicting emigration preferences because one partner has to sacrifice career opportunities to stay with the family. The hypotheses derived from the model were tested empirically using survey data on the preferences of partners who jointly emigrated from Denmark. In line with theoretical model presented, it can be shown that higher earnings by the male partner are associated with stronger male preferences for joint emigration.

The third project studied the return migration decisions of immigrant families in Denmark, with a focus on the role of children in this context. The empirical analysis exploited exogenous variation in the gender of the children to identify a causal effect of children on return migration by families. The analysis also showed that families are more likely to return when their oldest child is below school age and to return to countries where schooling quality is better. Higher return propensities of couples with children from non-Western countries after a family reunification reform in 2002 indicate that marriage considerations for the children might play a role for family return migration. Furthermore, the project studies self-selection into family return migration on the income of the primary earner. The primary earners' incomes of those returning to the home country are higher than among those who stay in Denmark, and particularly for immigrant couples from non-Western countries. This selection pattern is weaker among dual-earner couples and families with children.

Comparative Studies on the Economic Effects of Legislation Applicable to Companies in France and Germany

D. Leithold, T. Nikolka, K. Oesingmann, P. Poutvaara, D. Wech for the French Senate, Paris, January 2016 to December 2016.

This project presented comparative analyses of the regulations that French and German companies are subject to. The project began by presenting the differences and similarities between the legislation applicable in France and in Germany. It then analysed the economic effects of regulations on companies in France and Germany. Finally, potential reforms for France were evaluated from an economic perspective.

Migration decisions in Denmark

Returnees tend to earn more

Evaluation of French reform proposals

The first part of the study on the powers and the representativeness of employee representatives in French and German enterprises compared the institutional settings of employee representation and collective bargaining in France and Germany. One important difference is that in France, many aspects of collective agreements are defined by labour law, whereas in Germany, collective bargaining partners are given far greater scope for negotiations. Another big difference between Germany and France is the extension of collective agreements by the state which is common in France. In Germany, this is possible only under certain circumstances and rarely used.

The second part of the study analysed the economic effects of different institutional settings. Greater wage flexibility has positive effects on competitiveness and employment. In the last part of the study, reform proposals made by Jean-Denis Combrexelle, President of the Department of Social Affairs of the government council, were evaluated. His proposals to enlarge the scope of collective bargaining and also allow firm-level bargaining were evaluated positively. Moving from the indeterminate duration of firm agreements to well-defined contract periods would reduce uncertainty for both firms and workers. The implementation of these reform proposals would be most effective if they were combined with a peace obligation, meaning that no strikes would be allowed for an agreed period of time. The proposal to maintain extensions of industrial agreements by the Labour Minister is counterproductive and would partly eliminate gains from other proposals.

DICE: Database for Institutional Comparisons in Europe

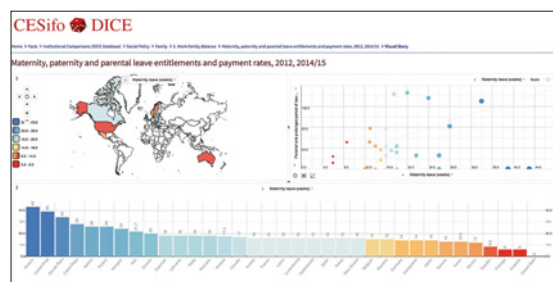
M. Drometer, C. Hainz, D. Leithold, T. Nikolka, P. Poutvaara, D. Wech, H. Arnold-Rothmaier, J. Dieler, A. Fichtl, J. Lippelt, W. Marz, M. Piopunik, J. Wackerbauer, S. Wiederhold.

Making DICE more user-friendly

The user-friendliness of the DICE Database was improved in 2016. Two video short-clips illustrate the use of the DICE Database and the interactive graphic tool Visual Storytelling. Short abstracts were added to further DICE themes in order to explain their respective institutional background. The DICE Database currently comprises around 3,800 entries (tables, graphs and short reports), which have been thematically summarised in a more user-friendly format and a range of

visual stories have been added. DICE is used by economists for research and teaching purposes, but is also visited by economic policy-makers and journalists. Free access to DICE is provided at www.cesifo-group.de/DICE. Some data are available as Excel files, facilitating econometric research. Data sets were compiled from numerous sources. The combination of qualitative descriptions and quantitative judgements in one database makes DICE a “one-stop service” for interested researchers, journalists and policy-makers.

Visual Storytelling



CESifo DICE Report

M. Drometer, Chr. Hainz, R. Méango, K. Oesingmann, D. Wech.

In 2016 the topics featured in the “Forum” category of the CESifo DICE Report were: taxation of pensions, crowdfunding, entrepreneurship in a post-crisis era and asylum policy. The “Research Reports” and “Reform Models” rubrics are not thematically fixed, but constantly provide national comparisons of the set-up of relevant institutions in terms of the economy and economic policy. The “Database” rubric highlights and interprets new entries in the DICE database. The articles featured in the CESifo DICE Report can also be downloaded from the CESifo homepage.

CESifo Forum

C.W. Nam.

In 2016 the following “Focus” themes were discussed: An Economic Agenda for Croatia; Germany and Turkey in Europe: Strategic Outlook; Migration: Challenge or Opportunity?; and Collapse of Ruble Zone and Its Lessons. In addition, a special issue on Hans-Werner Sinn’s retirement was published in May. The CESifo Forum can also be downloaded from the CESifo homepage.



DICE Database for Institutional Comparisons in Europe and CESifo DICE Report – Journal for Institutional Comparisons

M. Drometer, Chr. Hainz, D. Leithold, T. Nikolka, K. Oesingmann, P. Poutvaara, D. Wech, H. Arnold-Rothmaier, J. Dieler, A. Fichtl, J. Lippelt, W. Marz, M. Piopunik, J. Wackerbauer, S. Wiederhold.

The updating of the DICE database and the publication of the CESifo DICE Report series will continue. Moreover, for illustrative purposes, parts of central Visual Stories have been integrated into the homepage.

[Visual stories integrated into DICE homepage](#)

CESifo Forum

C.W. Nam.

The publication of the CESifo Forum series will continue.

Current Projects

ifo Center of Excellence for Migration and Integration Research (CEMIR)

P. Poutvaara, G. Felbermayr, H. Rainer, L. Wößmann, M. Drometer, M. Burmann, R. Méango, T. Nikolka, M. Valeyathepillay, M. Battisti, J. Saurer, M. Piopunik, in cooperation with the ifo research professors G. Borjas, Harvard University, Cambridge MA., and G. Peri, University of California, Davis.

CEMIR continues to bring together migration research within the ifo Institute, and to serve as a forum for migration research more widely. In 2016 CEMIR once again organised a junior economist conference, as well as lunchtime seminars, providing a venue for ifo post docs, doctoral students and external guests to present their ongoing research. CEMIR researchers played an active role in the public debate in 2016 by participating in the Munich Economic Summit and other events, by giving television interviews, and by writing newspaper articles.

ifo Center of Excellence for Migration and Integration Research – CEMIR

Unlocking mutual benefits of migration

The ifo Center of Excellence for Migration and Integration Research (CEMIR) was set up in January 2012 as a centre of competence at the ifo Institute. It combines expertise from four ifo research departments – the ifo Center for International Institutional Comparisons and Migration Research, which is responsible for coordinating CEMIR, the ifo Center for the Economics of Education, the ifo Center for International Economics, and the ifo Center for Labour Market Research and Family Economics. Input from these centers enables CEMIR to analyse migration and integration from the different perspectives of labour economics, international economics, public economics, and education economics. CEMIR's research is informed by the question of how receiving countries' welfare state and labour market institutions, as well as their immigration policies, should ideally be designed so that migration can unlock mutual benefits for all parties involved. Through research, scientific conferences and discussion events, CEMIR aims to enrich the debate over migration in Germany and Europe with scientific information.

Optimal immigration policies

CEMIR's main focus up until December 2015 was the project entitled "Optimal Immigration Policies in Europe: From Conflicting Interests to Mutual Gains (SAW-2012-ifo-3)" funded by the Leibniz Association. The heads of the four ifo Centers, Panu Poutvaara, Ludger Wößmann, Gabriel Felbermayr and Helmut Rainer worked on the project in 2016 along with the ifo researchers Marcus Drometer, Till Nikolka (ifo Center for International Institutional Comparisons and Migration Research), Marc Piopiunik (ifo Center for the Economics of Education), Michele Battisti (ifo Center for International Economics), and Judith Saurer (ifo Center for Labour Market Research and Family Economics). They worked in cooperation with a range of external researchers including, Yvonne Giesing, Ludwig Maximilian University Munich, Ilpo Kauppinen, VATT Institute for Economic Research, Helsinki, Romuald Méango, Munich Center for the Economics of Aging, Martin David Munk, Aalborg University and the ifo research professors George Borjas, Harvard University, Cambridge MA., Erik A. Hanushek, Stanford University, and Giovanni Peri, University of California, Davis. With his dissertation on family migration, Till Nikolka completed his PhD studies within CEMIR in 2016.

In 2016, CEMIR continued to bring together expertise from ifo centres and external collaborators within the

different modules of CEMIR. As in previous years, CEMIR organised a junior economist workshop and a lunch-time seminar series, where ifo researchers and external guests presented their work in 2016.

A new CEMIR research project focuses on the labour market integration of refugees in Germany. It involves a field experiment designed to evaluate the role of matching frictions in the labour market integration of refugees. During CV writing sessions in Munich, information is collected from around 300 refugees who have recently arrived in Munich and possess a work permit. All of the participants leave the sessions with a complete CV in German. Half of the refugees are subsequently allocated randomly to the treatment group, which is added to the database of an NGO that matches job candidates to suitable employers. This treatment can isolate the effect of matching and information frictions, while having no effect on the underlying skill set of refugees. The experimental setting makes it possible to track both control and treatment groups over time. The survey data collected includes new information on the background characteristics of refugees, their existing job-search strategies and perceptions of integration.

Research Group Taxation and Fiscal Policy

The taxation and fiscal policy research group headed by ifo President Clemens Fuest was set up in October 2016 and focuses on taxation and fiscal policy issues. Its main areas of research include the taxation of multinational companies, the role of taxation and fiscal policy in the distribution of income and wealth and the governance of fiscal policy in the European Monetary Union. The team assembled by Fuest consists of four researchers.

CORPORATE TAXATION

Growing global economic integration along with the further liberalization of international capital flows have aggravated international tax competition. Reports of multinational enterprises that reduce their tax burden drastically by shifting profits from high-tax to low-tax countries have triggered an intense public debate. In many cases, these enterprises exploit gaps in the interaction of different national tax systems. Consequently, there are calls for the international coordination of corporate tax legislation and a harmonization of the corporate tax base. The research group contributes to the ongoing discussion by analysing the tax avoidance strategies of multinational enterprises, studying the consequences of differences in national tax legislation on multinational firms' activities and evaluating instruments to coordinate international corporate taxation like, for instance, bilateral tax treaties.

TAXATION, FISCAL POLICY AND INEQUALITY

The distribution of income in an economy is an important indicator of citizens' share in its wealth, as well as social equity. Personal income distribution in particular is a key concern. Since the distribution of income has become increasingly unequal in recent decades in many developed countries, the sources and consequences of income inequality are currently being closely scrutinized and fiercely debated. The unequal distribution of income has also attracted public attention in Germany.

This research group contributes to the ongoing debate by studying the development of important measures of inequality over time and analysing the regional distribution of income and its determinants in Germany. In this context, it examines the impact of globalization on the income distribution, as well as the effects of economic policy reforms like the Hartz reforms, for example. In addition, the research group studies the economic and social consequences of inequality.

FISCAL POLICY GOVERNANCE IN THE EUROPEAN MONETARY UNION

The recent economic and financial crisis has put public finances in several EU member states under tremendous pressure and raised concerns about the solvency of sovereigns. The resulting sovereign debt crisis has constrained fiscal capacity substantially and triggered heated debates about the common fiscal roadmap for the future. The question of how to improve fiscal governance in the EU is therefore taking center stage in discussions over the future of the European integration process. The prerequisite for any successful reform of European fiscal policy, however, is a thorough understanding of the interactions between fiscal policy decision-making and existing institutional and legal frameworks. This research group aims to evaluate the effectiveness of various policy instruments for fiscal and economic governance. In this context, special consideration is given to the analysis of the European Fiscal Compact, as well as the European Semester. Another research question is concerned with the design of fiscal rules as to strengthen commitment and increase fiscal stability in the longer run. The research group also analyses persistent differences across EU member states with respect to structural economic characteristics and their importance for the future economic integration process.

Building a basis
for successful fiscal
policy reform

Library

The library of the ifo Institute is primarily a service provider for ifo and CESifo, visiting researchers and students of the Munich universities. With over 137,000 bibliographical units, around 400 periodicals and 30 statistical reports, ifo's library is one of the largest libraries for economics in southern Germany.

The Institute's electronic catalogue uses various descriptors, PTS country codes, and abstracts, as well as the classification system of the Journal of Economic Literature (JEL).

Thanks to its literature and database research, along with its procurement of data and information on selected economic and economic-political areas, the library

fulfils an important service function. Its services were used a total of around 5,100 times in 2016.

The ifo Institute's library is a member of the library association of the Northern German Länder, GBV. This allows users to access ifo's library via the internet and means that ifo holdings are harmonised with those of other large libraries in economics. The ifo online public access catalogue (OPAC) is a component of the ifo website (under Publication Series/ Database Search).

The library of the ifo Institute co-operates closely with the German National Library of Economics (ZBW) in Kiel and Hamburg.

Press, Publications, Conferences

The ifo Institute is a European think-tank that forms a bridge between academic research and politics. The applied, scientific economic research carried out by the ifo Institute aims to intensively contribute to policy advice and the economic policy debate, as well as to provide services to researchers and the general public. Successfully transferring information to the public realm is the key task of the Press, Publications, Conferences department. It prepares and conveys the results of ifo's research to its target audience of political and business decision-makers, public administrators, members of the academic community and the media. Providing schools and the general public with economic information is another area of growing importance. The department also offers services for ifo's Executive Board and its research departments, as well as supporting them in their publications, organising major events and by taking responsibility for the public image of the ifo Institute. This particularly includes the layout of ifo's print and online media, as well as the design and editorial maintenance of its website. In addition, the department is responsible for the numerous video projects and the social media activities of the entire CESifo Group.

RELAUNCH OF THE CESIFO GROUP'S CORPORATE DESIGN

A special focal point of the department's activities in 2016 was the complete relaunch of the CESifo Group's corporate design. The ifo Institute's previous corporate design was developed between 1996 and 1999 and was looking outdated. So it was decided to give the ifo Institute (and the CESifo Group as a whole) an entirely new look. To this end, a bid for tenders was issued and advertising agencies were invited to make pitches.

All of the ifo Institute's graphic elements were redesigned as part of this project. To facilitate the process, specifications for the new design were drafted, which the contractor then had to implement. These specifications particularly related to harmonising ifo's public image with its outstanding reputation, while maintaining a high degree of brand recognition in the new design (especially in terms of the logo, the perennity of the new design, the homogeneity of print and online media layouts and their efficient implementation).

After the pitch process, the media agency selected to carry out the relaunch completed its work within the deadline set as the end of 2016. ifo's in-house graphic

designers subsequently assumed responsibility for implementing the concept. The new design was launched on schedule on 1 April 2017.

The CESifo Group's website was given a facelift at the beginning of April 2017 too. Preparations for a complete relaunch of the website also began in 2016. The bulk of the work, however, will take place in 2017 and 2018. As part of this project, the website's current technology, including the software used to operate it, will be updated, its structure will be optimised and its layout will be changed.

DEVELOPMENT, IMPLEMENTATION AND PROFESSIONALISATION OF KNOWLEDGE TRANSFER CONCEPTS

To enhance the benefits of its work for society, the ifo Institute wishes to further develop the conceptual and methodological bases for the transfer of knowledge available in the ifo Institute and its working results to relevant social groups, and to tap fresh knowledge transfer potential. With communication technologies and behaviour undergoing rapid changes, the ifo Institute also wishes to align its expertise and the results of its work with these new framework conditions.

In view of this aim, a knowledge transfer concept oriented towards the future needs of the ifo Institute, which can also be used as a prototype for other research institutes, is under development as part of the project entitled: "The development, implementation and professionalisation of knowledge transfer concepts" funded by the German Federal Ministry for Education and Research from June 2015 to May 2018.

With the support of external partners, who will bring their complementary expertise to the project, the effectiveness and efficiency of knowledge transfer by the ifo Institute will be systematically lifted to a new level. Prof. Hans-Bernd Brosius, Director of the Institute Communications and Media Research at the University of Munich, and Dr. Alexander Haas will contribute their expertise in communications.

In 2016 institutional goals and target groups were also derived from ifo's mission and subsequently attributed to its existing information service. Actual product usage by target groups was analysed using databases and web statistics and, building on this information, the need for action relating to the various target groups

Developing knowledge transfer concepts

ifo develops prototype for other institutes

was identified. A comparison between actual and targeted use of ifo products by the respective user groups revealed that a needs analysis should be carried out primarily for political decision-makers, the public administration, as well as for teachers and users in the education sector. The products that will feature in user surveys were selected using the criteria “diffusion and importance.”

Survey of Bavarian state parliament members

In 2016 members of the Bavarian federal state parliament and workers in the districts and political parties were surveyed first. This survey covered demand for information mainly on economic topics on the one hand, and media usage, as well as an analysis on the ifo institute’s position compared to that of its competitors on the other.

At the same time, and in coordination with the product heads and in cooperation with IfKW experts, two print surveys were developed for readers of the ifo Konjunkturperspektiven and the ifo Schnelldienst. The surveys were designed to measure satisfaction with both publications and highlight any need for improvement.

To expand knowledge transfer to the important target group of teachers (and their pupils), a first needs analysis of teachers for scientifically-based information was carried out in cooperation and a DVD on the topic of “Economic activity – how the economy fluctuates” was produced with the specialist publisher. The ifo Institute was also played a supporting role in the production of other DVDs for schools (like, for example, “Capitalism”, “25 Years of German Unification” and “Bavaria as a High-Tech Location”), with ifo staff sharing their expertise and giving interviews.

ifo produces DVDs for schools

In cooperation with the Association for Economics Teachers in Bavaria, the ifo Institute also developed a concept for further training to specially cater for the needs of economics teachers. The “ifo Best Practice Days for Modern Economics Teaching” took place in the first quarter of 2017. The DVD on economic activity was also premiered at this event.

This pilot event proved so successful that it is to be developed into a series of events as of 2017. To continuously supply economics teachers with up-to-date information on economics, a special newsletter has been designed for this target group that will be sent out as of the second quarter of 2017.

The further development of the DICE institutional database is a core component of the entire project. It aims to draw up and implement a needs-based concept for the further development of DICE. To this end four workshops were held in 2016 with a view to analysing the respective needs of DICE’s various user groups and outlining potential approaches to meeting them. In addition, representatives from various target groups – students, doctoral students, researchers, as well as lecturers and association members – were also interviewed. The resulting were prioritised and implemented in initial prototypes.

Another of the project’s focal points is the expansion of instruments to provide society with economic information. Here the ifo Institute focuses on two approaches: promoting young journalists, especially in the area of economic reporting, as well as the intensified use of mass media to evaluate the results of the ifo Institute’s work. The ifo offering related to the professional qualification of journalists launched in 2015 in cooperation with the Bayerischen Rundfunk and the German School of Journalism was continued in 2016. This activity was complemented by a half-day further training event with similar focal points during which the 54th cohort of the German School of Journalism visited the ifo Institute. The highlight of the event was a lecture given by ifo department head Professor Gabriel Felbermayr on the refugee crisis. At an international level contacts to key media in all European countries were further developed.

Another of the project’s planned focal points is the compilation of a comprehensive database based on research data. The background is that, thanks to a higher volume of research using big data, the ifo Institute faces far higher requirements of its technical and organisational infrastructure. As part of this project the staff working on it, together with experts from the consultancy firm p3 performed an analysis of both the status quo and current trends in the field of research with mass data in the reporting year. Over the course of this review it emerged that, due to the foreseeable extension of empirical economic research to include the analysis of big data, the importance, scope and complexity of big data will grow significantly and exceed the limits of this project. It is therefore the ifo Institute’s primary objective to separate this working area out into a separate project. Please consult the passages in the report on the activities of the ifo-LMU Economics and Business Data Center (EBDC) for further information.

PRESS RELATIONS

The task of the press office is to present the institute's research results to the media and the general public in an understandable, non-technical form. Around 200 press releases in 2016 offered information on research results, current survey results, new publications and events. As an intermediary between journalists and the ifo Institute, the press office coordinates press interviews with institute staff, organises press conferences and answers queries. It also provides the general public with relevant information and material.

Its continuous and active PR work is one of the reasons why the ifo Institute has a very high media profile. In 2016 the ifo Institute improved upon its leading position as Germany's most frequently-cited economic research. This is partly due to the monthly publication of the ifo Business Climate Index, the ifo Export Expectations, the ifo Employment Barometer and other ifo survey results. ifo's forecasts of the economic outlook, and above all ifo's economic policy statements, also attract a great deal of media attention.

In the reporting year dominated by the changeover in president, both presidents – Hans-Werner Sinn up until 31 March and Clemens Fuest as of 1 April – contributed to the very high media presence of the ifo Institute. With numerous interviews and op-eds in national print media, on television and on the radio, both presidents repeatedly generated fresh momentum for the economic policy debate. As regular columnists for the German economics magazine *WirtschaftsWoche*, both Hans-Werner Sinn, ifo's former president, and Clemens Fuest, ifo's current president, have contributed regularly to current economic policy topics. Their regular contributions to Project Syndicate are placed in important national daily newspapers across the world. As interview partners in the radio, television and daily newspapers Hans-Werner Sinn and Clemens Fuest are in high demand across Europe. Clemens Fuest's statements on the European Central Bank's monetary policy, taxation policy and Brexit, as well as his proposals on how to overcome the euro crisis in particular attracted a great deal of media attention. Hans-Werner Sinn's new book "The Black June", which was presented at several events, also received a great deal of interest in 2016. Other ifo researchers, and especially the heads of ifo's research departments, were also actively involved in the ifo Institute's media work in 2016 via interviews and press articles.

24 young journalists (15 from the German School of Journalism and 9 from BR) took part in the ifo Practical Experience Days for High-Quality Journalism mentioned above, which were chaired by BR editor Jürgen Seitz and ifo press officer Harald Schultz. Jörg Sadrozinski, Head of the German School of Journalism, and Wilfried Rütten, former Head of the European Journalism Centre in Maastricht, participated as the guest experts in the event. It aims to deepen participants' understanding of economic relations through the practice-oriented communication of economic and journalistic knowledge. Leading scientists from all of ifo's departments presented their work and their research results, while the statements made by Clemens Fuest on Europe's future were one of the event's highlights.

ifo promotes
high-quality
journalism

PUBLICATIONS

Another of the department's responsibilities is the conception, production and distribution of ifo's print and digital publications. This includes developing topics of general current interest, editing and translating (German/English or English/German). The pre-printing work is also done in the department, including the preparation of graphs and tables, as well as type-setting and layout, interfacing with the printers and address management. The press relations, publications and conferences team assists other departments in the professional presentation of their publications and lectures.

ifo produces a broad
range of publications

The ifo Institute publishes the following series of publications:

- *ifo Schnelldienst*: a bi-monthly journal containing discussions of current policy issues and ifo research findings;
- *ifo Konjunkturperspektiven*: a monthly journal presenting the current results of the ifo Business Survey in graphs, tables and descriptive analyses;
- *ifo-GfK-Konsumreport*: a monthly journal reporting on the results of the ifo Business Survey, *GfK Wirtschaftsdienst Konsum- und Sparklima* and on consumer confidence in the EU (joint publication with *GfK Marktforschung*, Nürnberg); which was phased-out with the December 2016 issue.
- *ifo Dresden berichtet*: a journal of the ifo Dresden branch on economic policy and structural change in east Germany that appears six times a year;

- *CESifo World Economic Survey*: a quarterly publication in English containing the results of an ifo expert poll on the world economy in graphs and tables with a detailed analysis; as of 2017 the publication's name was changed to ifo World Economic Survey;
- *CESifo Forum*: a quarterly English-language journal published by CESifo GmbH focusing on current economic topics of worldwide interest with contributions by internationally renowned authors;
- *CESifo DICE Report*: a quarterly English-language journal with articles on institutional regulations and economic policy measures using a country-comparative approach; as of 2017 the publication's name was changed to the ifo DICE Report;
- *CESifo Economic Studies*: a quarterly, refereed academic journal in English. Articles present the results of economic research and address policy-relevant issues. *CESifo Economic Studies* is published by Oxford University Press. Its managing editor is Panu Poutvaara, who has been director of ifo's Center for International Institutions Comparisons and Migration Research since 2010;
- *ifo Beiträge zur Wirtschaftsforschung*: a book series in which important research projects of the ifo Institute are published.

CESifo publications in English

epub introduced in 2014

Since 2014 selected journals have also been available in epub format.

In addition to the standard issues of the CESifo Forum, a special issue was published in 2016 entitled "Retirement of Hans-Werner Sinn".

The ifo Institute also publishes the results of expert reports that do not appear in book form in the *ifo Forschungsberichte* and research conducted by the ifo Dresden branch in *ifo Dresden Studien*, which deals primarily with topics affecting the new German federal states and their eastern neighbours

The *ifo Newsletter*, a free electronic information service, is distributed at the end of each month by email. It reports, in German, on the latest research findings, key publications, selected events, personnel particulars, important dates and a range of other news from the ifo Institute. The **ifo Dresden Newsletter** is a service offered by the Dresden Branch of the ifo Institute that

regularly reports on the latest publications and events organised by the branch. In addition, the publication of new issues of CESifo Forum, CESifo DICE Report and CESifo World Economic Survey is accompanied by a summary of contents and download options.

The CESifo Group also provides news via **Twitter** on its website in German (@ifo_Institut) and English (@CESifoGroup). ifo President Clemens Fuest and former ifo President Hans-Werner Sinn also have Twitter accounts. Users can obtain further information on the latest news from the ifo Institute and the CESifo Group via its RSS feeds. Job vacancies at the ifo Institute are advertised via Xing and LinkedIn.

Some ifo publications are distributed by international, online service providers. A complete overview of the publications and ordering information is available at <http://www.cesifo-group.de/publications>.

CONFERENCES

The Press, Publications, Conferences department is responsible for the organisation and realisation of the ifo Institute's major conferences, presenting the institute at external conventions and conferences like, for instance, the Annual General Meeting of the Verein für Socialpolitik (Association for Social Politics), and for taking care of groups of visitors to the institute. Key events in 2016 were the ceremony to mark Hans-Werner Sinn's retirement and the 25th anniversary of the founding of the Center for Economic Studies and ifo's Annual Meeting. Public events are mostly livestreamed on the internet to make them accessible to members of the public who are unable to attend in person.

Professor Hans-Werner Sinn's presidency at the ifo Institute came to an end at the same time as his chair at the Ludwig Maximilians University of Munich (LMU), as well as his directorship of the Center for Economic Studies (CES) and CESifo GmbH on 31 March 2016, shortly after he turned 68. His retirement was marked by an international scientific symposium and a ceremony in the Great Hall of the LMU, as well as a festive gala in the Munich Residenz Palace on 22 January 2016. Speakers at the event included German Federal Finance Minister Wolfgang Schäuble, Bavarian Minister President Horst Seehofer, Bavarian State Minister for Economic Affairs and the Media, Energy and Technology Ilse Aigner, Bundesbank President Jens Weidmann, as well as academics from Israel, the USA and Europe.

Around 400 renowned academics from across the world gathered on the morning of the event in the Great Hall of the LMU to participate in an illustrious academic symposium. In addition to welcome speeches, a scientific laudatory address by Kai Konrad and a speech by Jens Weidmann, four panels on European Monetary Union, trade liberalisation and multilateral trade agreements, microeconomic lessons for policy measures, and on public finances and state debt gave rise to interesting discussions.



Flyer for the ceremony



Dr. Jens Weidmann, President of the German Bundesbank

The symposium ended in the afternoon only to be followed by a ceremony attended by leading personalities from politics, business, the media and the public administration. At the end of the ceremony Gabriel Felbermayr, Director of the ifo Center for International Economics, Meinhard Knoche, ifo Executive Board Member and Ludger Wößmann, Director of the ifo Center for the Economics of Education, presented Hans-Werner Sinn with a commemorative publication: "Hans-Werner Sinn and 25 Years of German Economic Policy," in which several Nobel prize winners and other of Hans-Werner Sinn's contemporaries from politics and academia present their perspectives on his economic policy ideas. The event ended in a festive evening gala in the Munich Residenz. A state reception at the invitation of the Bavarian State government was followed by a gala dinner in the Kaisersaal of the Residenz.

High profile public figures attend retirement event for Hans-Werner Sinn



Dr. Wolfgang Schäuble, German Federal Minister of Finance

A detailed report on the event featuring contributions from several speakers was published in the ifo Schnelldienst 69(9), 2016.

Detailed event report published in ifo Schnelldienst

Since 2014 the ifo Institute has invited German federal politicians from all parties to a "Parliamentary breakfast" in the Bavarian Representation in Berlin. Two events took place in 2016. In March Hans-Werner Sinn, Ludwig Stiegler and the members of parliament discussed the energy turnaround. In September Clemens Fuest continued this series of events with topical questions on taxation and European policy.

On 28 April 2016 the ifo Institute's 67 General Meeting took place in the Great Hall of the Ludwig Maximilian University of Munich (LMU). In the non-public part of the meeting held in the morning ifo's new President

Clemens Fuest introduced himself and Hans-Werner Sinn, ifo's former President, reported on the institute's activities in 2015. The annual accounts for the year ending on 31 December 2015, which were presented by Executive Board Member Meinhard Knoche, were unanimously approved and the Board was unanimously discharged. At the end of the non-public part of the meeting the annual prize sponsored by the Society for the Promotion of Economic Research (Friends of the ifo Institute) was awarded. More detailed information on this prize can be found in the section on Personnel developments and in the ifo Schnelldienst 69(10), 2016.

**ifo General Meeting:
"The European Union
at a Crossroads"**

The public part of ifo's General Meeting, under the motto "The European Union at a Crossroads," Prof. Bernd Huber, President of the LMU, welcomed Clemens Fuest as ifo's new President and holder of the Chair for Public Finance and Economics at the LMU and wished him great success and good fortune in his new position. Bernd Huber subsequently expressed his thanks to Hans-Werner Sinn for all of his hard work for the ifo Institute and the economics faculty of the LMU and wished him all the best for the future. Peter-Alexander Wacker, Chairman of the ifo Institute's Administrative Council reiterated these good wishes. Hans-Werner also took the opportunity to express his pleasure at the appointment of Clemens Fuest as his successor.



Prof. Clemens Fuest, President of the ifo Institute

**Clemens Fuest
addresses the General
Meeting**

Clemens Fuest thanked the speakers preceding him for their introductory words and for their support. He thanked Hans-Werner Sinn in particular for his commitment to supporting young economists, from which Fuest personally benefited. Fuest described the current situation in the European Union as difficult.

Growing separatist movements in most countries are targeting disintegration and the EU has been in the euro crisis for six or seven years – depending on when it is considered to have begun. Clemens Fuest suggested the introduction of a new form of subordinate government bonds – accountability bonds – in order to overcome the euro crisis. To bring an end to taxpayers footing the bill to the costs of financing excessively high state debt, Fuest suggested introducing subordinate government bonds that cannot be purchased by the European Central Bank.

The debate over the European Union's future under the motto "The European Union at a Crossroads" continued in an expert panel discussion with Prof. John Ryan, London School of Economics and Political Science, Quentin Peel, Financial Times, Jeromin Zettelmeyer, Head of the Economic Policy Department in the German Federal Ministry for Economic Affairs and Energy, and Clemens Fuest.



Panel: John Ryan, Clemens Fuest, Quentin Peel and Jeromin Zettelmeyer

On 9 November 2016 the ifo Institute organised the **16th ifo Branchen-Dialog** (ifo Industry Colloquium) in cooperation with the Chamber for Commerce and Industry for Munich and Upper Bavaria and with the support of the Bavarian Federal State Ministry for Economic Affairs and the Media, Energy and Technology. The aim of this working conference is to analyse the economy as a whole and developments in industry, construction, wholesaling and retailing, as well as in selected service sectors. More detailed information on the conference is available in the section on the Center for Industrial Organisation and New Technologies as well as in the ifo Schnelldienst 68(23), 2016.

Due to the change in president the conference series “ifo Brussels International Economic Forum (ifo BriEF)” held in Brussels on an annual basis did not take place in 2016.

Internet

The ifo Institute has digitalised most of its activities in research, policy advice and service and made this information available online. This applies not only to internal and external communication, to searches and to knowledge management, but also to business surveys, research projects and data provision to users worldwide. The ifo Institute’s activities are linked with those of its other partners in the CESifo Group. For this reason, the CESifo Group has a joint internet portal (www.cesifo-group.de) that combines the information offered by the ifo Institute, CESifo GmbH and the Center for Economic Studies (CES).

The internet portal aims to provide the public with comprehensive information from the working areas of the CESifo Group and to improve the general level of knowledge in economics. It also has the goal of quality assurance, by enabling complete transparency regarding the resources and output of the members of the CESifo Group, so that a control function can be exerted by its users.

The CESifo Group website: <http://www.cesifo-group.de>

On the internet portal of the CESifo Group, the ifo Institute presents timely information on the institute, its services, its research topics, its economic-policy advice based on this research, and its future plans. This also includes comprehensive information on the

theoretical and policy-oriented output of ifo’s research centers and its staff, as well as the media resonance of this output.

On the start page information from the institute is prepared editorially in the form of ifo News and is complemented by images. In addition to topical press releases, these news pieces feature other research results, events, personnel changes, references to TV appearances and much more. This gives rise to a flow of news that can be directed by the institute in a targeted manner. Every news is also published on Twitter, creating a direct connection with the ifo Institute’s social media activities.

ifo News published on Twitter

The range of services for the transfer of knowledge is being continuously expanded. In internet databases, publications can be easily searched and ordered and some can be retrieved in full-text form. Several ifo journals have also been offered as downloads in the epub format as of 2014, which is particularly suitable for viewing on mobile devices like tablets and E-Readers. The library of the ifo Institute also makes its electronic catalogue available to external users. The DICE database (Database for Institutional Comparisons in Europe) offers information in a systematic and comparable form on institutional regulations, especially within the European Union. The offering of “Visual Stories”, which offer a comprehensive graphic representation of data, was also expanded in 2016. The ifo Resources Database, which was developed and is regularly updated by the ifo Center for Energy, Climate and Exhaustible Resources, is also frequently accessed by users. Based on tables and documents from several data suppliers, it provides a comprehensive overview of energy reserves and resources. Special service offerings for researchers include the databases iPEHD and GAME. The ifo Prussian Economic History Database (iPEHD) – ifo’s historical economics database on Prussia – offers interested researchers a systematic collection of digitalised Prussian data available via ifo’s website. ifo GAME collects information on geological and meteorological events worldwide from 1979 to 2010 and summarises them in a structured and aggregated manner at a national level. ifo GAME thus offers a unique dataset for economic analysis.

ifo Resources Database

Numerous lectures given by guest researchers at the Center for Economic Studies (CES), as well as selected lectures at ifo events, are made available in a video format to an international audience in the CESifo Group’s media library. The internet platform is also used to

conduct ifo's business surveys and to provide the media with information. CESifo GmbH and CES provide a wide range of information on their work in the joint internet portal, especially with regard to the CESifo Research Network and the scientific conferences organised by CESifo.

VIDEOS

Video contributions are becoming an increasingly important instrument for conveying information. Recordings of speeches, lectures, panel discussions and other events document the CESifo Group's work. CES and ifo began recording events and producing video films back in the 1990s, meaning that the CESifo Group now has a vast pool of video recordings, some of which have now acquired scientific importance. Users have central access to its entire offering of videos via the user-friendly media library. A well-established focus of ifo's use of video is livestreaming, or the live broadcast of events via the internet, which are subsequently made available in its media library. This technology has significantly raised the public profile of CESifo events.

CESifo Group recordings date back to 1990s

CESifo's Media Library also serves as a virtual auditorium: lectures and presentations are often viewed in their entirety. The CESifo Lectures, which can be accessed via the CESifo website, are recordings of lectures given by international academics at CES and ifo. In 2016 a recording was made of the lecture "Money Markets and Financial Intermediation" given by Bengt Holmstrom, who a short time previously (together with Oliver Hart) received the Nobel Prize for Economics. The lecture series "Motivating Prosocial Behavior: Economic Incentives and Moral Constraints" by Nicola Lacetera is also available in the media center.

2016 video highlights: Bengt Holstrom's lecture

In addition to livestreams via the internet, a growing number of self-produced video clips will also be added to the media library in the future. The key findings of conferences organised by the ifo Institute are also presented in short event reports. Recordings of selected events have also been supplemented by short interviews with the panellists. To reach a greater number of users, recordings of events were also made available on the video platform YouTube.

ifo Dresden

ifo Dresden Branch

The Dresden Branch, established by the ifo Institute in 1993, conducts empirical economic research that focuses on the special conditions in the New Laender, especially in the Free State of Saxony. ifo Dresden Branch prepares economic analyses that deal with economic developments in Eastern Germany and the Free State of Saxony. It offers policy advice and information to the public. The branch receives financial support from the Free State of Saxony and draws on the experience of the ifo Institute, its parent institute in Munich.

ifo Dresden currently works in the following **research areas**:

- Business-cycle and growth in Saxony and the New Länder,
- Human capital, structural change and the position of Saxony and the New Laender in locational competition,
- Labour market and social policy in Saxony and the New Länder,
- Integration of Saxony and the other New Länder into the international division of labour (especially with Central and Eastern Europe) and
- Public finance and support of economic development in Saxony and the New Länder.

The Dresden Branch of the ifo Institute is also working on the general topic of the “implications of demographic change for economic development”. The shrinking and ageing of the population will have a significant impact on nearly all fields of social and economic development and thereby pose new challenges to economic policy.

In addition to economic research, the Dresden Branch offers an **extensive range of services**. Economic-policy oriented analyses are published in the journal *ifo Dresden berichtet* and in the book series, *ifo Dresden Studien*. ifo Dresden provides information and advice on current economic-policy issues to policy-makers, companies and business organisations. It also organises workshops and conferences.

The journal *ifo Dresden berichtet* has been published every two months since its launch in 1994. In this journal, ifo Dresden researchers and external authors publish their current research findings on the economic situation in the New Laender for a wider public in politics,

business and academia. The results of more comprehensive research projects are published in the series *ifo Dresden Studien*. In 2016 study No. 77 entitled: “Auswirkungen des flächendeckenden Mindestlohns auf die gewerbliche Wirtschaft im Freistaat Sachsen” (“The impact of the national minimum wage on trade and industry in the Free State of Saxony”) was published.

Conferences and workshops, such as the working group for economic forecasts, regularly take place on the premises of Dresden Branch. Workshops in 2016 included the 10th workshop on “Political Economy” (25 and 26 November 2016) together with CESifo, TU Dresden and TU Braunschweig, 6th workshop on “Labour Markets and Social Policy” in co-operation with TU Dresden (10 and 11 March 2016) and the 6th workshop on “Regional Economics and Structural Change” also together with TU Dresden and TU Braunschweig (15 and 16 September 2016).

In the series *Dresdner Vorträge zur Wirtschaftspolitik*, prominent economists present their latest research findings in economics and finance. In 2016 three lectures were held in this series. Peter Hampe, former head of the section “Wirtschafts- und Sozialpolitik” at the Akademie für Politische Bildung Tutzing, Michael Voigtländer, head of the research unit “Financial and Real Estate Markets” at the Institut der deutschen Wirtschaft Köln and Michael Heise, chief economist Allianz SE, discussed their views on current policy issues with the audience from science, policy and public administration.

Under the management of Marcel Thum and Joachim Ragnitz, 14 economists currently engage in research at the branch, of which 12 are doctoral candidates. The **team** is completed by two non-scientific staff members and a number of student research assistants. ifo Dresden Branch closely **cooperates** with TU Dresden and the Statistical Office of the Free State of Saxony. Cooperation agreements particularly cover visiting fellowships of researchers, joint activities and presentations. Additionally the ifo Dresden Branch extends project-related work experience to interested students of economics.

ECONOMIC ACTIVITY AND GROWTH IN SAXONY AND THE NEW LÄNDER

The observation and forecast of the business cycle of the Free State of Saxony and of Eastern Germany as a whole is a specific focus of the Dresden Branch. ifo

6th “Labour markets and Social Policy” workshop

ifo Dresden staffed by 14 economists staff

Dresden publishes the ifo Business Survey on a monthly basis, as well as business cycle forecasts twice a year. Researchers in this area also work on projects regarding the influences of growth policies.

In a project together with the Institute for Financial and Regional Analyses on behalf of the German Federal Ministry for Economic Affairs and Energy, “Opportunities for the further development of the indicators for the EU’s regional development areas after 2020” are developed. Moreover, the Dresden Branch is involved in a project on the “Continuous evaluation of the operational program of the Free State of Saxony for the European Regional Development Fund in the funding period from 2014 to 2020” on behalf of the Saxon State Ministry for Economic Affairs, Labour and Transport. This project is conducted together with the Institute for Financial and Regional Analyses, the Joanneum Research Forschungsgesellschaft mbH and Kovalis.

In addition, ifo Dresden is continuously developing methods to describe and forecast economic activity in the course of the year at the regional level, where much less information is available compared to the national level. The Dresden Branch was given responsibility for carrying out the project entitled “Quarterly Business Cycle Report for Saxony-Anhalt” on behalf of the Ministry of Economy, Science and Digitalisation in Saxony-Anhalt.

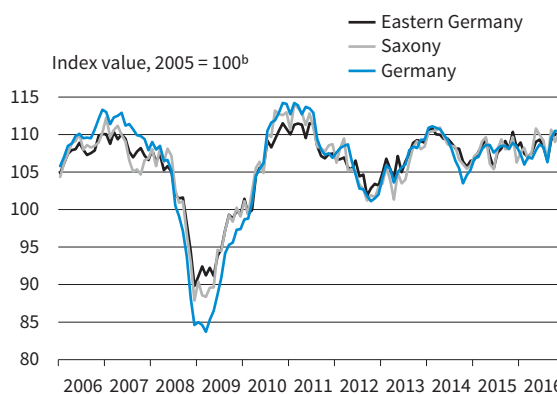
ifo Dresden publishes monthly regional reports featuring the results of the ifo Business Survey for Eastern German and the Free State of Saxony. The results for Eastern Germany are disseminated via monthly press releases and as articles in the journal *Wirtschaft + Markt*. The ifo Business Survey for the Free State of Saxony is published on a monthly basis as “Sachsenbarometer” in the daily newspaper *Sächsische Zeitung*. Since 2015, the results have also been published in the quarterly magazine *“WIRTSCHAFT in Sachsen – das Entscheidermagazin der Sächsischen Zeitung”*.

ifo Dresden prepares business cycle forecasts for Eastern Germany and the Free State of Saxony. The forecasts are presented twice a year, in June and December, at a press conference and at the: “ifo Working Group on Economic Forecasts for the Free State of Saxony workshop. The workshop takes place at the ifo Dresden Branch and brings together representatives from the ifo Institute in Munich, the Federal Employ-

ment Agency, the Regional Office of the Institute of Employment Research in Saxony, various Saxon ministries, the credit reporting agency Creditreform, the Chamber of Crafts Dresden, the Chamber of Industry and Commerce Dresden and others. The 37th and 38th workshops took place in 2016, with the latter posting a new record in participation.

ifo Business Climate for Industry and Trade

ifo Business Survey December 2016



^a Manufacturing, construction, wholesaling and retailing.
^b Seasonally adjusted by X-13ARIMA-SEATS.

Source: ifo Business Survey.

The results of the business cycle forecasts are continuously evaluated, with R. Lehmann and M. Weber publishing an article entitled: “Mehr als Kaffeesatzleserei: Eine Evaluation der ifo Prognosen zur Erwerbstätigkeit in Ostdeutschland und Sachsen“ in *ifo Dresden berichtet* in 2016. The forecast accuracy of the employment results for the years from 2005 to 2015 was quite high (with a small tendency to underestimate the employment growth). As expected, the average forecast accuracy increased with the decreasing forecast horizon.

HUMAN CAPITAL, STRUCTURAL CHANGE AND THE POSITION OF SAXONY AND THE NEW LÄNDER IN LOCATIONAL COMPETITION

In this field of work, regional and sectoral disaggregated growth processes are analysed with a focus on comparative analyses of Eastern and Western Germany, as well as rural and urban areas. This research group’s aim is to explore policy options for adjusting living conditions in those regions lagging behind others in the country. Moreover, modern economic tools are used

EU regional development indicators

Monthly Business Survey for Eastern Germany and Saxony

to analyse the extent to which historic events have a longrun impact on current economic and social differences between regions.

ifo Dresden is involved in the research project “Homes-uP – Single-Family Homes under Pressure“, which was funded by the Leibniz Association. C. Fritzsche and L. Vandrei investigated whether and to what extent changes in the real-estate transfer tax lead to adjustment processes in the real estate market. Hikes in the tax rate not only generate short-term anticipatory effects, but also lead to significantly fewer transactions in the long run. The article is available as *Ifo Working Paper* No. 232. Its key findings were published in issue 6/2016 of *ifo Dresden berichtet*.

As part of the Homes-uP project, L. Vandrei and J. Lohse, Leibniz Institute of Ecological Urban and Regional Development, also analysed whether the vacancy rates of single-family homes are determined by regional characteristics. Rural structures and peripheral locations are accompanied by significantly higher vacancy rates. High vacancy rates are also correlated with average age and the size of a region’s single-family home stock. The article is published in *ifo Dresden berichtet* 6/2016.

The Eastern German housing market was also been analysed in a project conducted on behalf of the German Federal Ministry for Economic Affairs and Energy. The project “Impact of Demographic Developments on the Eastern German Housing Markets” is being carried out in cooperation with the Leibniz Institute of Ecological Urban and Regional Development and G. Marquardt, TU Dresden, and will be completed at the beginning of 2017.

On behalf of the German Federal Ministry for Economic Affairs and Energy, the project “Growth Strategies of Firms in East German States” was also initiated. ifo Dresden also cooperates with Rambøll Management Consulting and Creditreform Rating AG to analyse the growth determinants and strategies of Eastern German firms. The study will be completed by June 2017.

In November 2016, J. A. Nauwerth and J. Ragnitz began working on a case study on structural change in the Lusatian coal mining area in cooperation with the Wuppertal Institute and G. Markwardt from the TU Dresden and conducted on behalf of the Umweltbundesamt.

The study outlines the causes and consequences of the structural change, as well as governmental measures and tools for shaping it. The project will be completed by August 2019.

ifo Dresden is involved in the evaluation of differences in social attitudes between Eastern and Western Germany. The evaluation is commissioned by the German Federal Ministry for Economic Affairs and Energy and conducted under the leadership of the ifo Institute and the University of Passau.

In *ifo Dresden berichtet*, issue 4/2016, J. Kluge analysed the economic development of Saxony’s capital city Dresden. Since the early 1990s, the city’s specialisation in high technology sectors has led to remarkable growth rates. However, high-tech industries are strongly dependent on global market conditions, which in turn makes the economic situation in Dresden highly volatile.

Another article in *ifo Dresden berichtet*, issue 5/2016, examined the former intra-German border regions in detail. C. Ochsner and M. Weber analysed the formation of new establishments since the mid-1990s. The regional dynamics in the manufacturing sector are remarkable: Eastern German regions with a geographic proximity to Western Germany show significantly higher start-up activities than regions further away from the former border. In Western Germany, however, the opposite is the case: foundation activity in a region becomes weaker the closer it is located to the former border. The authors conclude that border adjacent Eastern German regions benefited from the Western German supply and output markets.

C. Ochsner and F. Rösel published a paper entitled “Migrating Extremists” (*CESifo Working Paper* No. 5799), which analyses the impact of the unexpected last-minute zoning of Austria after the Second World War on changes in the regional voting behaviour of residents. Zoning prompted large-scale Nazi migration from Soviet to US occupied regions. Regions that witnessed a Nazi influx (US occupation zone) show significantly higher shares of votes for extreme right-wing parties throughout the entire post-WWII period compared to direct adjacent Soviet-occupied regions. Thus, the paper indicates that extreme political ideologists are able to shape political landscapes and gain support in the long run.

Economic development of Saxony’s capital

Remarkable regional dynamics in manufacturing

Impact of territorial reform on voting

In the issue 6/2016 of *ifo Dresden berichtet*, F. Rösel and J. Sonnenburg analysed the impact of the territorial reform in 2011 in Mecklenburg-West Pomerania on voting behaviour. Municipalities that were more strongly affected by the reform exhibit a four percentage point higher voting share for the German right-wing populist party “Alternative for Germany” (AfD) than directly neighbouring, less affected communities. The AfD recorded a higher share of votes, especially in those municipalities that lost influence at the-state level due to the reform of 2011. By contrast, increased geographic distances (distance to district office) play a minor role. Therefore, the sole strengthening of district administration’s external offices should only have a limited influence on electoral behaviour in future elections.

The 6th ifo Dresden Workshop “Regional Economics” took place on the 15th and 16th of September 2016. The workshop was jointly organised by J. Kluge and C. Ochsner in cooperation with C. Leßmann from the TU Braunschweig.

LABOUR MARKETS AND SOCIAL POLICY IN SAXONY AND THE NEW LÄNDER

In this area, ifo Dresden’s research focuses on how labour market, social and educational policy affect labour market outcomes. ifo Dresden contributed to the policy debates on the statutory minimum wage and the reform of the German pension system. ifo Dresden organizes an annual workshop on Labour Economics and Social Policy.

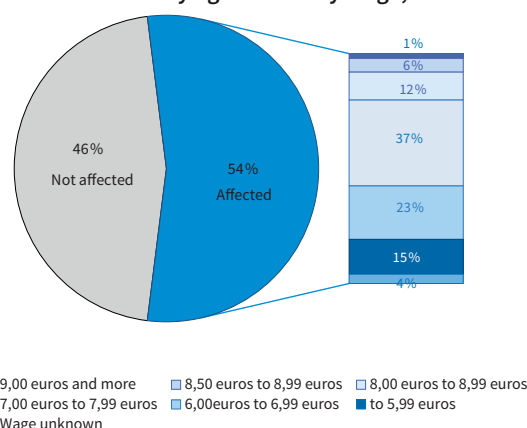
Short-term effects of minimum wage

On behalf of the Chamber of Commerce and Industry Chemnitz, ifo Dresden analysed the short-term effects of the German statutory minimum wage on the Saxon trade and industry sector. The analysis is based on an establishment survey of members of the Chambers of Commerce and Industry in Chemnitz, Leipzig, and Dresden, as well as of the Chamber of Crafts Chemnitz. The results indicate that the Saxon trade and industry sector has been particularly affected by the German statutory minimum wage. Establishments affected by the minimum wage reacted to it in many different ways. Apparently they aimed to avoid minimum wage-related layoffs in the short run. The results were published as ifo Dresden Studie No. 77, as well as in issue 3/2016 of *ifo Dresden berichtet*.

The same edition featured another two articles concerning the statutory minimum wage were published. Michael Weber analysed the self-assessment of German firms by their managers prior to and after the in-

roduction of the statutory minimum wage using two survey waves of the ifo Business Survey. He concludes that numerous managers in Eastern and Western Germany underestimate whether or not their business is affected, yet overestimate adjustment requirements, especially in terms of employment. However, the results do not preclude negative employment effects. A. Knabe, R. Schöb, M. Thum and M. Weber emphasize the diverging development of fulltime and marginal employment in Eastern and Western Germany since the introduction of the statutory minimum wage. Prior to the introduction of the wage floor, employment figures in both regions developed in a similar fashion.

Companies according to degree impacted and lowest contractually agreed hourly wage, 2014



Source: Company survey conducted in Saxony (February 2016); ifo Institute calculations.

M. Weber published his research findings on “The Short-run and Long-run Effects of Decentralizing Public Employment Services” as *Ifo Working Paper* No. 209. He shows that decentralization had significant negative effects on job placements in the short run, but not in the long run. Decentralization also had a persistent negative effect on the number of sanctions imposed on welfare recipients.

The German government proposed an equalization of the Eastern and Western German pension systems by 2019. J. Ragnitz and A. Fanghänel evaluate how this reform would affect employees and pensioners in Eastern and Western Germany. The researchers recommend following the proposal made by the Council of Economic Experts: equalizing the basis of computation in Eastern and Western German rules while protecting

the acquired pension claims. A. Fanghänel published an article in *ifo Dresden berichtet* 3/2016 and a second article in collaboration with J. Ragnitz in *Wirtschaftsdienst* 3/2016.

Furthermore, A. Fanghänel analysed the labour market success of second generation migrants in Germany. She shows that the higher unemployment rate of second generation migrants compared to natives, can be fully explained by their lower human capital endowment. Thus discrimination plays only a minor role. The article was published in issue 6/2016 of *ifo Dresden berichtet*.

INTEGRATION OF SAXONY AND EASTERN GERMANY IN THE INTERNATIONAL DIVISION OF LABOUR

Saxony's companies and inhabitants interact with their neighbours in Poland and the Czech Republic. These interactions have become increasingly important over the last two decades and were facilitated by the eastern enlargement of the European Union in 2004.

C. Ochsner and P. Wassmann use the eastern enlargement of the European Union in 2004 to analyse the economic effects on former EU-border regions in the EU15. The authors show that former border regions benefited from the eastern enlargement. Regions with a strong industrial sector and a well-developed infrastructure network benefitted the most, whereas the spatial economic effects are small or even irrelevant for regions with a weak industrial sector. In eastern Germany, Saxon regions benefitted the most due to their strong industrial structure. No economic effects, by contrast, were found for regions in Brandenburg or Mecklenburg-Western Pomerania. The results of this study were published in issue 5/2016 of *ifo Dresden berichtet*.

PUBLIC FINANCE AND THE SUPPORT OF ECONOMIC DEVELOPMENT IN SAXONY

The research area of public finance and economic development mainly focuses on local-level and state-level public finance in 2016.

Several studies focus on fiscal distress in German local governments. Inequalities in local government debt are a key topic in the public debate. X. Frei and F. Rösel use a unique and novel micro-dataset of debt data for all German local governments. The dataset covers debt in core budgets, as well as the debt of publicly-owned enterprises. Their findings show that debt is more equally distributed across German local governments

than generally presumed. The study was published in the *Jahrbuch für öffentliche Finanzen*. Felix Rösel also presented a study entitled "The Persistency of Public Debt" at the annual meeting of the German Economic Society in Augsburg. He shows that in 1932 and in 2012 local government debt resulted from personnel continuities in German cities. F. Rösel also published a study entitled: "The Political Economy of Fiscal Supervision and Budget Deficits – Evidence from Germany" in *Fiscal Studies*. This study indicates that fiscal supervision matters to the fiscal performance of municipalities.

The small size of German local governments is widely assumed to be one of the main determinants of fiscal distress. Thus, states merge municipalities in order to increase efficiency and consolidate public finances. In 2016, F. Rösel produced several surveys and analyses that challenge this view. Mergers do not tend to enhance efficiency or reduce expenditure. Mergers of county administrations in the federal state of Saxony in 2008, for example, were not accompanied by cost reductions, as is shown in the study "Do Mergers of Large Local Governments Reduce Expenditures? Evidence from Germany Using the Synthetic Control Method" (*ifo Working Paper* No. 224). Mergers, however, may induce substantial "political costs". F. Rösel and J. Sonnenburg analyse mergers in Germany and Austria that led to lower voter turnout and increased right-wing populism in merged municipalities.

State-level finances were also addressed in a number of studies and papers. D. Bauer, X. Frei, J. Ragnitz, F. Rösel and J. Steinbrecher, as well as T. Lenk and P. Glinka, University of Leipzig, analysed the reform proposal by German state prime ministers for a new fiscal equalization scheme. The study shows that the proposed scheme would not reduce inequalities across German states. Moreover, the reform would shift fiscal burdens to the federal level.

The projection for the public revenues of Saxony, drawn up for the Saxon State Ministry of Finance, was extended to the year 2030 by D. Bauer, C. Fritzsche and J. Steinbrecher. Revenue development in Saxony in particular is determined by its declining population and the expiry of the Solidarpakt II in 2019. Even if the projected development of revenues is better than in previous years, real revenues are still expected to stagnate until 2025. The study's results were published in *ifo Dresden berichtet* 2/2016.

Small municipalities and fiscal stress

State-level finances

In 2016, Germany imposed new rules on refugees, requiring them to reside within the state of their first admission to the country for a duration of three years. The fiscal implications of this settlement policy were discussed in the article “Die Wohnsitzauflage als kostspielige Integrationsbremse für Flüchtlinge” (“The settlement regulation as an expensive integration constraint on refugees”). This policy reform will lead to a more equal sharing of the costs of integration between states. However, due to these stricter settlement requirements, unemployment among refugees is very likely to increase. Rising unemployment will lead to increasing expenditure at the federal level.

Benchmarking public staff

In October 2016, D. Bauer and J. Ragnitz started to examine the possibilities and limitations of benchmarking public staff at the level of federal states. On behalf of the Saxon State Chancellery, the authors evaluate the suitability of statistics on public staff for comparisons between states. If statistical information from different federal states were of the same quality, this could be used to identify inefficiencies in public staff expenditure. However, initial results show that institutional differences counteract comparisons. The project will be completed in January 2017.

Finally, several papers addressed the fiscal performance of state administrations. F. Rösel and A. Karmann, TU Dresden, show that state-level public funding of hospital investments does not affect hospital productivity (“Hospital Policy and Productivity: Evidence from German States”, forthcoming in *Health Economics*). Expenditure on keeping polling stations open for longer, however, may pay off because it increases voter turnout. This is the key finding of the study “Opening Hours of Polling Stations and Voter Turnout: Evidence from a Natural Experiment” (*CESifo Working Paper* No. 6036) by N. Potrafke and F. Rösel.

Keeping polling stations open longer pays off

Projects Completed in 2016

Research Area Public Finance and Support of Economic Development in Saxony and the New Länder

Commission for the Comprehensive Evaluation of Public Services and Public Staff in Saxony

J. Ragnitz for the Saxon State Chancellery, April 2015 to March 2016, publication by the Saxon state Chancellery and in *ifo Dresden berichtet* 23(3), 2016.

The Free State of Saxony set up a commission to evaluate public services and staff in 2016. The tasks of this commission were twofold: firstly, to propose an effective down-sizing plan for public staff in Saxony, where the number of employees in public administration in Saxony is still higher than in many other German federal states. Secondly, since around half of the state’s current personnel will retire by 2030, the commission was tasked with defining strategies to recruit qualified employees despite qualitative and quantitative decreases in the labour supply due to demographic change.

Evaluating the Effects of the Proposed Fiscal Equalization Scheme of the German State Prime Ministers

D. Bauer, X. Frei, J. Ragnitz, F. Rösel, J. Steinbrecher for the Social Democratic Group in the Deutsche Bundestag, February 2016 to March 2016.

In 2015, the prime ministers of the sixteen German states proposed a new fiscal equalization scheme. This project evaluated the differential impact of the proposed equalization scheme in comparison to the existing scheme. The study featured projections of the fiscal consequences for the period 2020 to 2030 at a state and federal level. The proposed equalization scheme would reduce financial equalization between states, and would increase the responsibility borne by the federal government.

Research Area Labour Market and Social Policy in Saxony and the New Länder

The Impact of the Statutory Minimum Wage Act in Saxony

A. Fanghänel, J. Steinbrecher, M. Thum and M. Weber for the Chamber of Commerce and Industry Chemnitz, January 2016 to April 2016, publication as *ifo Dresden Studie* 77, ifo Institute, Munich, Dresden, and in *ifo Dresden berichtet* 23(3), 2016.

On January 1, 2015, Germany implemented a statutory minimum wage of 8.50 euros per hour. The minimum wage was adjusted for the first time on January 1, 2017. The impact of the minimum wage is likely to be especially high in the Free State of Saxony, where a large share of workers and firms were affected by it.

On behalf of the Chamber of Commerce and Industry Chemnitz, ifo Dresden analysed the short-term effects of the German statutory minimum wage on the Saxon trade and industry sector.

The analysis was based on a survey of members of the Chambers of Commerce and Industry in Chemnitz, Leipzig, and Dresden, as well as of the Chamber of Crafts Chemnitz. A total of 2,668 companies participated in the survey. These are its key findings:

- The Saxon trade and industry sector was particularly heavily affected by the German statutory minimum wage. A total of 54% of all participating establishments had to raise wages due to the new minimum wage.
- The impact of the minimum wage goes far beyond the minimum wage of 8.50 euros per hour. One third of the affected establishments raised wages that were initially above the minimum wage level to preserve the skilled wage premium. This even applied to organisations that did not pay wages below the minimum level in 2014, i.e. before the minimum wage was introduced.
- Companies affected by the minimum wage reacted to it in a variety of ways. Most notably, they raised the prices of their goods and services (58%), hired fewer employees (39%), postponed or cancelled investments (39%), reduced special payments (33%) or shortened working hours (32%). They aimed to avoid minimum wage-related layoffs in the short run.
- Partly due to these alternative adjustment measures and partly because of the employment-friendly business cycle, the German statutory minimum wage did not significantly reduce average total employment growth in affected establishments within the first half year of its introduction. Significant employment effects, however, were observed in establishments and branches with very low wage levels. Low-skilled workers were hit particularly hard by layoffs and by the reluctance to hire new workers.

Current Projects

Research Area Business-Cycle and Growth in Saxony and the New Länder

Quarterly Business Cycle Report for Saxony-Anhalt

J.A. Nauerth, J. Ragnitz, M. Weber for the Ministry of Science, Economics and Digitalisation of Saxony-Anhalt, January 2016 to March 2017.

The German official statistics provide data on the development of gross domestic product (GDP) and gross value added (GVA) for Germany and each of the 16 states. German data is published on a quarterly basis, but state-level time series are released only once a year. The ifo Institute, Dresden Branch, calculates quarterly GDP and GVA data for the state of Saxony-Anhalt on behalf of the Ministry of Science and Economics of Saxony-Anhalt for the year 2016. The accounting combines official GVA data with quarterly and monthly time series using the Chow-Lin method. The same method is employed by Eurostat for GDP data in European regions and by the ifo Institute to generate quarterly GDP and GVA data for the Free State of Saxony.

GDP and GVA data

Research Area Human Capital, Structural Change and the Position of Saxony and the New Länder in Locational Competition

Homes-uP – Single-Family Homes under Pressure

C. Fritzsche, M. Thum, L. Vandrei in cooperation with the Leibniz Institute of Ecological Urban and Regional Development, Dresden, the Research Institute for Regional and Urban Development, Dortmund, the Institute for Social-Ecological Research, Frankfurt/Main, and the Centre for European Economic Research, Mannheim, for the Leibniz Association, January 2015 to December 2017, publication of first results as *Ifo Working Paper* No. 232, 2016, and in *ifo Dresden berichtet* 23(3), 2016.

Single-Family homes face fresh pressure

In many countries, single-family homes constitute the majority of residential buildings. Economic and financial crises, demographic and social structural change, and changes in user preferences, are creating new challenges for this housing stock segment. Out-side core regions of economic growth, stagnating or dropping prices, difficulties in selling, and even vacancies, are no longer a rarity in this segment in many regions.

None-theless, these developments, and their possible implications, have hardly been investigated. Studies from a number of relevant perspectives are needed that include economics, ecology, settlement-structure and social situations.

Possible developments scenarios

The project pursues three key objectives:

- A description of trends and changes in the development of traditional and novel single-family homes user groups and their housing preferences and the characteristics of current single-family homes building stocks.
- An understanding of the effects of these changes. We are interested in the consequences for the market outcome, particularly in terms of prices and vacancies, and we study the implications for the use of natural resources.
- The identification of possible development scenarios and approaches to action.

The investigations of the situation in Germany will be supplemented by comparative studies inside Europe, as well as in Japan and the United States. The international perspective is underpinned by several international cooperating partners and an international advisory board.

Interim results presented at workshops

The interim results are regularly presented at conferences and workshops. An internal workshop was held on the premises of ifo Dresden in March 2016.

Impact of the Demographic Development on the Eastern German Housing Market

J. Ragnitz, C. Fritzsche, J. Kluge, M. Thum, L. Vandrei in cooperation with the Leibniz Institute of Ecological Urban and Regional Development, Dresden, and G. Marquardt, TU Dresden, for the German Federal Ministry for Economic Affairs and Energy, November 2015 to January 2017.

On behalf of the German Federal Ministry for Economic Affairs and Energy, the project analyses the extent to which the Eastern German housing market is prepared for current and future demographic developments like a shrinking and ageing society. The present situation of the Eastern German housing market and the socio-economic characteristics that are specifically relevant for the housing market are analysed. The study also pres-

ent trends and possible challenges for the Eastern German housing market, especially with respect to the care sector, as well as surveying the current system of funding instruments and regulatory measures and discussing reform options.

Germany 2017 (Deutschland 2017)

J. Ragnitz, ifo Center for Labour Market Research and Family Economics for the German Federal Ministry for Economic Affairs and Energy, March 2016 to December 2017.

The main goal of this study is to investigate the current attitudes and behaviours of unified Germany's citizens. The preceding study "Germany 2014" described the development of the attitudes and behaviours of German citizens in the East and West over a long period, from the time of separation up to the first 25 years of unification. Building on this, we extend the analysis to include the most recently available data. Apart from a purely descriptive analysis of attitudes towards politics, the economy, values, norms and identities as well as current challenges faced by society, we also examine their determinants and derive policy recommendations.

The study consists of two major parts: in the first part, a literature review summarises and evaluates existing results and findings on the topic. To this end, we review the preceding study "Germany 2014", as well as leading scientific papers from the intersecting areas of economics, sociology, psychology and political sciences. In the second part, which involves ifo Dresden, we conduct our own empirical analysis, examining existing datasets.

Structural Change in Coal Regions as a Process of Economic and Socioeconomic Transitions – Opportunities for a Socially Compatible Structural Change in the Light of Climate Policy Goals

J.A. Nauwerth, J. Ragnitz for the Wuppertal Institut on behalf of the Umweltbundesamt, November 2016 to August 2019.

The economic and industrial structure of Lusatia, a region that crosses Länder borders in Südbrandenburg and Eastern Saxony, is characterised by the mining and energy sectors. Until German reunification, over half of the employees of Lusatia worked in these sectors. With the breakdown of the former GDR, employment in this region dropped sharply. Structural change in

Lusatia is an ongoing process. Climate policy measures have speeded up the phase-out of power generation through brown coal, thus triggering further structural changes. On behalf of the Umweltbundesamt (UBA), the Dresden Branch of the ifo Institute – together with the Wuppertal Institut für Klima, Umwelt, Energie gGmbH – is working on a case study on the historical structural change of Lausitz. This case study examines the causes and effects of structural change processes. Previously implemented measures, which aim to mitigate/foster the structural change of Lusatia, will also be evaluated.

Growth Strategies of Firms in East German States

C. Ochsner, J. Ragnitz in cooperation with Rambøll Management Consulting GmbH and Creditreform Rating AG for the German Federal Ministry for Economic Affairs and Energy, November 2016 to June 2017.

Fast growing firms are crucial for regional employment growth. International studies show that only a small share of all firms accounts for almost the entire increase in regional employment. This study thus aims to analyse the growth dynamics of firms in Eastern Germany. ifo Dresden in cooperation with Rambøll Management Consulting and Creditreform Rating AG, investigate both determinants and strategies for firm growth in Eastern Germany. The study is commissioned by the Federal Ministry for Economic Affairs and Energy. It provides an overview of the current literature, a quantitative analysis of fast-growing firms in Eastern Germany and a description of successful firms. The purpose of the study is to identify a typology of effective growth strategies for firms.

Industry Reports

C. Boede, U. Mandalka for the Volks- und Raiffeisenbanken, since 2006 on-going.

As part of ifo project “*Branchen special*”, ifo Dresden Branch produces reports for 15 selected branches twice a year. Analyses and forecasts are provided for the structure of these branches, their business prospects, profits and competitiveness. The information of these special reports can indicate intermediate-term prospects for respective branches, as well as chances and risks within structural transformation. The “*Branchen special*” reports are employed primarily by cooperative banks in their lending and consult-

ing business. Company consultants are provided with a survey of prospects and risk profiles of individual branches.

Research Area Public Finance and Support of Economic Development in Saxony and the New Länder

Evaluating the Economic Eligibility of Subsidy Applications on Behalf of the Federal State of Brandenburg

D. Bauer, J. Ragnitz, F. Rösel for the Ministry for Economic Affairs and Energy of the Federal State Brandenburg, January 2016 to March 2018.

On behalf of the Ministry for Economic Affairs and Energy of the federal state of Brandenburg, the Dresden Branch of the ifo Institute evaluates the economic eligibility of applications for financial support. The relevance of the applicant company is evaluated in terms of gross value added, local labour market relevance and productivity.

Demographic Change, Urbanisation, and the Costs of Public Services in Municipalities

X. Frei, J. Ragnitz, F. Rösel for the KfW Group, September 2016 to March 2017.

Demographic change in Germany will affect the society and the public sector in many ways. This project for the KfW group examines the relationship of demographic change, urbanisation, and the costs of public service provision. The Dresden Branch of the ifo Institute investigates whether increases and decreases in population size affect public expenditure asymmetrically.

Possibilities and Limits of Task-Oriented Comparison of Public Staff at the Federal State Level

D. Bauer, J. Ragnitz for the State Chancellery of Saxony, November 2016 to January 2017.

The major task for federal states is the provision of public services. As the demand for public services predominantly depends on population size, the size of the public sector (measured by the per capita-number of public servants) should be approximately the same in all states. Differences in the size of the public sector may therefore be interpreted as a measure of inefficiencies in the production of public goods. On behalf of the State Chancellery of Saxony, the Dresden Branch

Analysing applications for financial support

KfW project: demographic change in Germany

of the ifo Institute is to analyse this question, and especially whether there are limitations in the underlying statistical measures of the public sector.

Evaluation of the Operational Program of the Free State of Saxony for the European Regional Development Fund in the Funding Period from 2014 to 2020

J. Ragnitz for the GEFRA for the Saxon State Ministry for Economic Affairs, Labour and Transport, November 2016 to August 2019.

Saxony to receive 2.1 billion euros from ERDF by 2020

From 2014 to 2020, the Free State of Saxony will receive 2.1 billion euros from the European Regional Development Fund (ERDF). According to the European Union’s guide-lines, the programme has to be evaluated with regard to its effectiveness, efficiency and impact. This evaluation is the subject of the project at hand. Additionally, the project provides ad-hoc assessments of proposed amendments to the so-called operational programme. The project is carried out jointly by ifo, the Institute for Financial and Regional Analyses (GEFRA), the Joanneum Research Forschungsgesellschaft, and Stefan Meyer from Kovalis.

Opportunities for the Further Development of the Indicators for the EU’s Regional Development Areas after 2020

J. Ragnitz, M. Weber for the Federal Ministry for Economic Affairs and Energy, November 2016 to May 2017.

German economic policy targets equal living conditions

German economic policy aims to develop equal living conditions in all German regions. Its central instrument is the joint Federal Government/Länder scheme for ‘Improving regional economic structures’: The Federal Government and the German Länder jointly fund the erection and extension of production sites, as well as the cooperation activities of enterprises in economically lagging regions. They also fund the development of infrastructure that fosters economic activity in such regions.

The programme ‘Improving regional economic structures’ has to obey the regulations of the European Union, and particularly state aid rules. Regional aid measures are permitted for eligible regions only. The number of German regions that will be eligible for regional aid measures after 2020 is yet to be determined. In recent years Germany experienced robust economic growth compared to other member states, and the

UK’s pending exit from the European Union will decrease the EU’s average employment level and living standards even further.

In this project, we develop opportunities to adjust the criteria that define which regions in the European Union are eligible for regional aid measures. This concerns, among others:

- Alternatives to the concept of a population ceiling to define the upper limit of eligible regions at the European and the national level
- Alternatives to the concept of NUTS regions to determine geographical entities
- Indicators for eligibility of regions
- Transitional arrangements for regions that will no longer be eligible after 2020

Munich Society for the Promotion of Economic Research – CESifo GmbH

The CESifo Group, which consists of the Center for Economic Studies (CES) of the University of Munich (LMU), the ifo Institute and CESifo GmbH, bundles its resources into an internationally active research alliance and enhances the public economic policy debate with contributions based on excellent theoretical and empirical scientific research, supports the economic policy decision-making process with high quality policy advisory work and supplies the public with highly acclaimed economic information. Its research activities are closely linked to the intensive promotion of junior economists and extensive teaching activities.

CESifo GmbH (co-founded in 1999 by the University of Munich and the ifo Institute), provides a platform for joint activities, promoting the internationalisation of research and co-ordinating an international research network.

The main tasks of CESifo GmbH, which were actively pursued in 2016, include the:

- Support of exchanges between the LMU and the ifo Institute and the promotion of junior economists,
- Administration of the worldwide CESifo Research Network,
- Analysis of economic events in the European Union and the provision of impulses in the debate over European economic policy,
- Publication of economic research,
- Organisation of conferences and seminars.

2016 was the first calendar year that CESifo GmbH was led by its new managing director Prof Clemens Fuest. The CESifo team supported the organisation of the international scientific symposium to mark the retirement of Hans-Werner Sinn, the founding father of CESifo.

EXCHANGES BETWEEN THE LMU AND THE IFO INSTITUTE

CESifo GmbH supports the active participation of researchers from the LMU and the ifo Institute in various academic conferences.

The joint appointment of professors who work both at the ifo Institute and also have a chair at the LMU remains particularly important. These endowed professorships are a central means of attracting outstanding researchers to become center directors at the ifo Institute and

to take up chairs at the LMU. These joint appointments not only strengthen the links between the ifo Institute and the LMU in research, but also in the teaching and promotion of PhD students. A total of eight endowed professorships have been jointly established by the ifo Institute and the LMU to date, with CESifo GmbH contributing to the financing of two of them.

RESEARCH NETWORK

The CESifo Research Network aims to bring researchers with common research interests into contact with one another and to promote cooperation between network members and CESifo Group staff via events and publications. The network is primarily composed of economists with a proven track record in their respective field and who have been invited to visit CES or the ifo Institute as a guest researcher on the basis of a refereed selection procedure. The *CESifo Research Network* continued to expand in 2016 and totalled 1,328 members by 31 December, 2016, making it the second biggest network of its kind in the world.

The CESifo Research Network’s members consist of 999 fellows and 328 affiliates. Fellows are senior researchers who typically hold a full professorship at a university, while affiliates are ambitious young researchers who wish to join the network at the early stages of their career. In 2016, CESifo modified its admission rules making it easier to admit promising young researchers from emerging research areas and economic regions that are gaining importance (especially Central and Eastern Europe).

CESifo Research Network members by region:

Region	in %	Number
North Amerika	30.50	405
Germany	19.95	265
Rest of Europe (total)	45.48	604
– Western and Southern Europe	34.34	456
– Central and Eastern Europe	1.20	16
– Scandinavia	9.94	132
Others	4.07	54

Most of the fellows come from Europe and North America. However, the network also has members in a large number of countries, which ensures that the CESifo Group’s products are well-known and used worldwide. The network members come from 41 countries and their fields of expertise span most

More than 1,300 internationally renowned researchers in the CESifo Research Network

CESifo Research Network members come from all over the world

areas of economics. To guarantee the internationality of the network, the network has a strict quota for German members, who account for a maximum of 20%.

To guarantee an intensive exchange of ideas between its members and to strengthen cooperation between the CESifo Research Network and the corresponding ifo Centers, the network is subdivided into several areas. These are headed by internationally renowned economists, or so-called “Area Directors”, who contribute to the network with their international standing and expertise. In the second quarter of 2016, Prof. Markus Brunnermeier took over leadership of the Macro, Money and Finance Area. As of the second quarter Peter Egger, one of the highest performing researcher in the German-speaking world, according to the Handelsblatt ranking, also become sole director of the Global Economy area.

Markus Brunnermeier
new Area Director
for “Macro, Money
and International
Finance”

The network’s area directors are:

- Christian Gollier, University of Toulouse, Area Director of Applied Microeconomics
- Ernst Fehr, University of Zurich, and Klaus Schmidt, LMU, Area Directors of Behavioural Economics
- Eric Hanushek, Stanford University, Area Director of the Economics of Education
- Kai A. Konrad, Max Planck Institute for Tax Law and Public Finance, Munich, Area Director of Employment and Social Protection
- Michael Hoel, University of Oslo, Area Director of Energy and Climate Economics
- Peter Egger, ETH Zurich, Area Directors of Global Economy
- Markus Brunnermeier, Princeton University, Area Director of Macro, Money and International Finance
- Rick van der Ploeg, University of Oxford, Area Director of Public Sector Economics

The foundations for the creation of a ninth area were also laid in the reporting year. In view of the revolutionary importance of digitization a new area will focus on the “Economics of Digitization”. The Director of this area as of 1 March 2017 will be Stephen P. Ryan, Professor at the Olin Business School in St. Louis, USA.

New area of “Economics of Digitization” led by Stephen Ryan

The international reputation of the area directors has boosted the attractiveness of the CESifo Research Network, which is reflected in its growing number of members.

CESifo Research Network members by research area:

Research area	in %	Number
Applied Microeconomics	13.70	182
Behavioural Economics	7.68	102
Economics of Education	6.55	87
Employment and Social Protection	10.24	136
Energy and Climate Economics	6.33	84
Global Economy	12.50	166
Macro, Money and International Finance	18.07	240
Public Sector Economics	24.93	331

CESifo GmbH provides network members with the English-language publications of the CESifo Group. Together with the ifo Institute, it organises numerous international conferences. The annual Area Conferences provide a platform for lively discussions among network members. As part of each of the Area Conferences, the “CESifo Distinguished Affiliate” prize has annually been awarded to a young economist since 2008. The aim of this prize is to identify promising young researchers and to establish early links to the CESifo Network.

The CESifo Distinguished Affiliates of 2016 are:

- Applied Microeconomics:
Suehyun Kwon, University College London (UCL)
- Behavioural Economics:
Gautam Rao, Harvard University
- Economics of Education:
Sarah R. Cohodes, Harvard University
- Employment and Social Protection:
Anna Christina Raute, University of Mannheim
- Energy and Climate Economics:
Maria Elisa Belfiori, Colorado State University
- Global Economy:
Arevik Gnutzmann-Mkrtchyan, University of Hannover,
- Macro, Money and International Finance:
Eddie Gerba, London School of Economics (LSE)
- Public Sector Economics:
Nicolas Werquin, University of Toulouse

The close links between the members of the CESifo Group and external researchers are further strengthened by the CESifo Visitor Programme. In 2016, 37 international researchers were welcomed to Munich in order to initiate or continue joint projects with members of the CESifo Group, and especially with ifo Institute staff as part of the Visitor Programme. The Programme is closely linked to the evolution of the research network, as a successful visit is typically a prerequisite for any invitation to join the network.

ANALYSIS OF ECONOMIC DEVELOPMENTS IN THE EUROPEAN UNION AND PARTICIPATION IN THE DEBATE ON EUROPEAN ECONOMIC POLICY

EU topics are becoming increasingly important to the future of Europe's citizens. The discourse at the European level, which centres on Brussels, is leading to a new political reality that is changing Europe. It is important that economists participate in this discourse, as much of what happens has an economic dimension, costs a lot of money and leads to fiscal redistribution in Europe. CESifo GmbH was founded to provide economic-policy impulses at the European level and the latter's importance is growing steadily.

As part of CESifo's activities, numerous documents have already been released in past years that engage critically with possible developments in the EU, and especially in the euro area. Network members, as well as CES and ifo staff, have engaged intensively in the European debate, which is gradually shaping a new form of state.

A particularly important role in this debate has been played by the European Economic Advisory Group at CESifo. The EEAG is a European council of economic experts that provides policymakers and the general public with an independent and scientifically-based assessment of current economic developments in the EU. The EEAG is unique in both its composition and its focus. This year's council members are outstanding economists from several European countries and the USA, namely:

- Torben Andersen, Aarhus University
- Giuseppe Bertola (Vice-Chairman), EDHEC Business School, University of Turin
- John Driffill (Chairman), Birkbeck College, University of London

- Harold James, Princeton University
- Clemens Fuest, LMU Munich – ifo Institute
- Jan-Egbert Sturm, KOF, ETH Zurich
- Branko Urošević, University of Belgrade

The EEAG releases an annual report in which it not only analyses the current state of the European economy, but also provides an in-depth evaluation of several other economic-policy issues of topical importance for Europe.

The 2017 EEAG report explains what the populist economic agenda is, why it is misleading and how national governments and the EU can respond. It also analyses how Brexit could be a bridge to EU reform and considers the economic implications of immigration by weighing up the “More versus Less Europe” policy approaches to dealing with it. Released on 1 March 2017, it also provides a thorough analysis of, and forecast for, the world's major economies.

EEAG Report released
on 1 March 2017



As in previous years, the EEAG Report was presented at press conferences in a number of European cities (Brussels, London, Zurich, Turin, Prague, Stockholm and Par-

is). Detailed articles in leading European newspapers and interviews on major TV channels reflect the need for scientifically-based economic policy analyses. The report was also once again sent to policymakers and experts in science, economics, and politics across Europe.

Various ifo research centers contribute to the report with background research, as well as editing and typesetting. The European economic forecast is prepared almost entirely by the ifo Institute.

Munich Economic Summit on migration

The **Munich Economic Summit** is a joint initiative of the BMW Foundation Herbert Quandt and the CESifo Group Munich, held in cooperation with *The Times* and with the support of leading European institutions and businesses. Aimed at bringing together academic scholars and decision-makers in politics, business and finance, as well as media representatives, to discuss vital European topics, the Summit is a widely acknowledged forum for the substantive discussion of European policy issues.

The 2016 Summit was devoted to the opportunities and challenges of the latest wave of migration. Europe's immigration conundrum has two distinct strands: the refugees it is obliged to help and those migrants it wants to attract. While it is Europe's legal duty to welcome the first group, by accepting the latter group it helps itself: they are economic migrants keen to work, and Europe needs them in large numbers. When it comes to economic migrants Europe would rather choose the newcomers, and not the other way around: the ageing continent needs skilled, well-educated immigrants, benefiting both the European economies and the migrants themselves. But do these skilled migrants really prefer Europe to, say, the US or Australia? Are the source countries being deprived of their best brains? How can Europe balance all these competing interests? How can it turn the challenge into an opportunity? The 2016 Summit was made possible by the generous support of Infineon, PWC, Swiss Re, Fabricius Vermögensverwaltung, KCG Krass Capital Group, Norton Rose Fulbright, and Brähler ICS.

Next MES in the first half of 2018

With the 2016 Munich Economic Summit the ifo Institute and the BMW Foundation Herbert Quandt mutually agreed to end their successful cooperation and both partners will organise their own European policy events in the future. The ifo Institute and CESifo GmbH will rethink the concept of the Munich Economic Summit over the course of 2017 and plan to hold the next summit in the first half of 2018.

The Munich Seminars, jointly organised by CESifo and the *Süddeutsche Zeitung*, one of Germany's leading dailies, are also part of the regular event calendar. Their popularity among invited guests from business, public administration, academia and the press demonstrates the great demand for accessible discussion of economic problems and solutions. In 2016 a total of 11 Munich Seminars were organised. Full reports on all Munich Seminar lectures are published in the *Süddeutsche Zeitung*, making their findings accessible to a wide readership. This, in turn, enhances the standing of the Munich Seminars and helps attract renowned personalities for future presentations.



Dame Helen Sarah Wallace, Lady Wallace of Saltaire, British Academy, London

CONFERENCES AND EVENTS

As in past years, a major focus of the activities of CESifo GmbH was the organisation and administration of academic conferences. With the goal of strengthening Munich's standing as a science and research location and supporting empirical and theoretical research in economics, CESifo organised 22 scientific conferences and events in 2016.

CESifo hosts two categories of conferences. In addition to the established annual area conferences relating to the individual areas of the CESifo Research Network, CESifo also hosts conferences that are initiated and supported by network members and deal with topical issues in the field of economic research. These include, for example, the CESifo Venice Summer Institute.

The Musgrave Lecture in honour of Richard Musgrave was a special highlight in 2016. The associated prize is awarded to an internationally renowned econo-

mist working in the area of public finance, following a selection by the President of the ifo Institute and the President and Vice-Presidents of the International Institute of Public Finance (IIPF). Professor Kai Konrad (Max-Planck-Institute) was awarded the prize in 2016 and delivered a lecture on “Brothers in Arms – Theory and Experimental Evidence on Alliances”.

The CESifo Venice Summer Institute has become a tradition in the CESifo event calendar and has earned a solid reputation among international economists. In 2016, the Venice Summer Institute comprised of five workshops, dealing with the following topics:

- “The Economics of Philanthropy”, organized by Kimberley Scharf and Mirco Tonin
- “Disrupted Economic Relationships: Disasters, Sanctions, Dissolutions“, organized by Tibor Besedes and Volker Nitsch
- “Political Economy Aspects of Income (Re-)Distribution”, organized by Jan-Egbert Sturm
- “The Economics of Peace and War”, organized by Vesa Kannianen and Panu Poutvaara
- “Climate Change and Migration”, organized by Michael Berlemann and Max Steinhardt

In 2016, CESifo also organised eight area conferences:

- CESifo Area Conference “Public Sector Economics”, January 2016
- CESifo Area Conference “Macro, Money and International Finance”, February 2016
- CESifo Area Conference “Applied Microeconomics”, March 2016
- CESifo Area Conference “Employment and Social Protection”, April 2016
- CESifo Area Conference “Global Economy”, May 2016
- CESifo Area Conference “Economics of Education”, September 2016
- CESifo Area Conference “Energy and Climate Economics”, October 2016
- CESifo Area Conference “Behavioural Economics”, October 2016

In addition, CESifo organized or assisted partner organisations with several of their scientific events including:

- “International Scientific Symposium to Mark Hans-Werner Sinn’s Retirement and the 25th Anniversary of the Center for Economic Studies (CES)”, together with CES and ifo Institute, January 2016
- „Germany and Turkey in Europe: Economic and Political Challenges and Possible Options“, together with ifo Institute, April 2016
- “Meeting of the International Trade Committee”, together with German Economic Association, April 2016
- “CEMIR Junior Economist Workshop on Migration Research”, together with ifo Institute, June 2016
- “CESifo Delphi Conference on Innovation: A Patent Approach”, together with University of Athens, July 2016
- “CESifo Economic Studies Conference”, November 2016
- “ifo Dresden Political Economy Workshop”, together with Technical University of Dresden and the ifo’s Dresden Branch, November 2016
- „ifo Survey Data“, together with ifo Institute, December 2016

These international conferences benefit the CESifo Group in two ways: firstly, they offer CESifo Group researchers an opportunity to interact with researchers from all over the world and establish co-operations; and secondly, the events promote the international reputation of the CESifo Group.

PUBLICATIONS

CESifo has developed a number of publications aimed at contributing to the discussion of economic issues in Europe. An important role is played by the **CESifo Working Paper Series**, which disseminates the early-phase findings of academic research conducted by network members, making them available for professional discussion.

In 2016, a total of 601 papers were published in this series. All papers are distributed electronically to a large number of libraries throughout the world. More importantly, they are distributed worldwide via the CESifo Group’s website and various online databases. This

Five Workshops at the Venice Summer Institute

601 working papers published in the CESifo Working Paper Series in 2016

year the CESifo Working Paper series clocked 106,316 downloads through SSRN (Social Sciences Research Network), 35,893 downloads through RePEc, the world's largest online repository of economics publications, and nearly 82,576 downloads through Econstor, the Open Access server of the German National Library of Economics – Leibniz Information Centre for Economics by mid-October.

The CESifo Newsletter, distributed electronically, provides up-to-date information and commentary for a wide spectrum of readers, ranging from academics to members of the European Commission and the media. It also reports on CESifo events and provides articles on selected CESifo Working Papers in a form that is easily accessible to the non-specialist reader.

Two CESifo book series with MIT Press

CESifo has two book series with MIT Press: the CESifo Seminar Series and the CESifo Book Series. All books cover a topical policy issue in economics and are subjected to a careful, multi-stage refereeing process. In 2016, three new books were published on “The Economics of Language Policy”, “The Economics and Political Economy of Energy Subsidies” and “Public Sector Economics and the Need for Reforms”.

CESifo Group website contains a wealth of information

The CESifo Group website contains a wealth of information on the entire range of products and activities of the CESifo Group in German and English, documents the combined research output of CES, ifo and CESifo as far as conferences, seminars and publications are concerned, and offers a wide spectrum of further topics that are of interest to economists, politicians and the business community. More detailed information on the website is provided in the Press, Publications, Conferences section.

In short, the research cooperation between the ifo Institute, the LMU and the international scientific community has continued to flourish very successfully in 2016. The CESifo Group provides a unique platform in Europe for exchange among economists and for public discourse. It has now secured an outstanding international reputation that extends well beyond European borders. In light of the epochal changes that are taking place in the EU, this kind of platform is now more important than ever before.

Further details of CESifo's activities can be found in the German online version of the Annual Report on pages 217–232 (<http://www.cesifo-group.de/Jahresbericht>).

Conferences, Publications and External Relations of the ifo Institute

Information on the ifo Institute's events, publications, teaching activities and links to institutions/individuals, as well as further details of CESifo's activities can be found in the German online version of the Annual Report on pages 157–232 (<http://www.cesifo-group.de/Jahresbericht>).

CONFERENCES

Besides regular events, like the Annual Meeting, Euroconstruct, ifo Industry Colloquium (ifo Branchen-Dialog), a number of special conferences, workshops and press conferences were held during 2016. These included:

- ifo CEMIR seminar on “Does Exposure to Asylum Seekers Reduce the Support for Anti-Immigration Parties?”
- International Scientific Symposium and Official Ceremony to Mark Hans-Werner Sinn's Retirement and the 25th Anniversary of the Center for Economic Studies (CES)
- Workshop on “Labour Market and Social Policy”
- Conference on “Germany and Turkey in Europe: Economic and Political Challenges and Possible Options”
- Conference on “The Politics of Education Policy: An International Perspective”
- ifo CEMIR seminar on “Growing up in Ethnic Enclaves: The Effects on Education and Language Proficiency”
- CEMIR junior economist workshop on “Migration Research”
- ifo CEMIR seminar on “Job Changes and Interregional Migration of Graduates”
- Workshop on “Regional Economics”
- ifo CEMIR seminar on “The Drowning-Refugee Effect: Media Salience and Xenophobic Attitudes”
- SEEM – Seminar on Energy and Environmental Economics “Smart Cap”
- SEEM – E Seminar on Energy and Environmental Economics “Nuclear Power in the 21st Century – An Assessment and Some Research Ideas”
- ifo CEMIR seminar on “Deportation of Refugees and Government Ideology: Evidence from the German States”

- SEEM – Seminar on Energy and Environmental Economics Seminar on “Environmental and Energy Economics”
- Workshop on “Political Economy”
- ifo CEMIR seminar on “The Impact of Xenophobic Violence on the Integration of Immigrants”
- Conference on “Macroeconomics and Survey Data”

Lunchtime Seminars are held on a weekly basis. They serve the purpose of putting current research and new economic developments up for discussion. Participants are researchers from the ifo Institute, CES, the University of Munich and CES visitors.

In 2016 a large number of ifo staff members 154 papers and presentations at external conferences.

PUBLICATIONS

ifo publications include:

- *ifo Schnelldienst* – a journal on policy issues, research results and forecasts; twice monthly
- *ifo Konjunkturperspektiven* – a monthly publication presenting in detail the results of the ifo Business Survey
- *ifo Dresden berichtet* – a bi-monthly report on the economy, structure and economic policy in the State of Saxony
- *CESifo Forum* – a quarterly English-language magazine focusing on major current topics of international interest, including European policy issues and economic trends
- *CESifo DICE Report* – a quarterly English-language journal for institutional comparisons
- *CESifo World Economic Survey* – a quarterly English-language journal publishing the results of the ifo Institute's quarterly poll of international economic activity
- *CESifo Economic Studies* – a quarterly refereed journal in economics
- *ifo Beiträge zur Wirtschaftsforschung* – a series in which important research projects of the ifo Institute are published

- *ifo Forschungsberichte* – other studies of the Institute are documented in this series and made available to the public
- *ifo Dresden Studien* – studies of the ifo Dresden branch which deals primarily with topics affecting the new German federal states and their eastern neighbours
- *Ifo Working Papers*

TEACHING AND EXTERNAL RELATIONS

A number of ifo staff taught or presented lectures at universities in 2016:

- David Bauer (Dresden University of Technology)
- Francesco Cinnirella (University of Munich)
- Natalia Danzer (University of Munich)
- Marcus Drometer (University of Munich)
- Oliver Falck (University of Munich)
- Gabriel Felbermayr, (University of Munich)
- Clemens Fuest (University of Munich)
- Jasmin Gröschl (University of Munich)
- Franziska Hampf (University of Munich)
- Timo Hener (University of Munich)
- Christian Holzner (University of Munich)
- Björn Kauder (University of Munich)
- Meinhard Knoche (University of Applied Sciences, Weihenstephan-Triesdorf)
- Waldemar Marz (University of Munich)
- Volker Meier (University of Munich)
- Chang Woon Nam (University of Applied Sciences, Erding)
- Till Nikolka (University of Munich)
- Natalie Obergruber (University of Munich)
- Christian Ochsner (Dresden University of Technology)
- Marc Piopiunik (University of Munich)
- Karen Pittel, University of Munich)
- Niklas Potrafke (University of Munich and University of California, San Diego)

- Panu Poutvaara (University of Munich)
- Joachim Ragnitz (Dresden University of Technology)
- Helmut Rainer (University of Munich)
- Sven Resnjanskij (University of Munich)
- Felix Rösel (Dresden University of Technology)
- Alex Schmitt (University of Munich)
- Felix Schröter (University of Munich)
- Marcel Thum (Dresden University of Technology)
- Justin Tumlinson (University of Munich and EM Grande Ecole Lyon)
- Michael Weber (Dresden University of Technology)
- Simon Wiederhold (University of Eichstätt/Ingolstadt)
- Ludger Wößmann (University of Munich)
- Klaus Wohlrabe (University of Bayreuth)
- Timo Wollmershäuser (University of Munich)

The ifo Institute was host to visiting researchers from a variety of countries. 60 students in Munich and nine students in Dresden were able to gather initial experience in empirical economic research.

Personnel, Finances and Organisational Bodies

Personnel Development

The ifo Institute's most important personnel issue in 2016 was its change in President. On 1 April 2016 Prof. Clemens Fuest took over as President, after being jointly appointed to the position – and the Chair in Public Finance and Economics linked to the post – by the ifo Institute and the Ludwig Maximilian University of Munich (LMU). The outgoing President, Prof. Hans-Werner Sinn, remains closely linked to the ifo Institute in retirement as an honorary scientist. He retains an office and a personal assistant at ifo. To enable Clemens Fuest to continue to work on his own research, a taxation and fiscal policy research group has been set up within the Executive Board department, which is currently staffed by one and a full-time post-doc, a part-time post-doc and two full-time doctoral students.

ifo's eight research centers are also headed by professors who are jointly appointed by the Ludwig Maximilian University of Munich (LMU) and hold a chair at the LMU parallel to their position as head of an ifo Research Center. After the departure of two center directors in 2014, the ifo Center for Industrial Organisation and New Technologies, as well as the ifo Center for Business Cycle Analysis and Surveys were managed by interim heads, to give the new President a say in the appointment of new directors. In 2016 Prof. Oliver Falck was appointed Director of the ifo Center for Industrial Organisation and New Technologies and as Professor for Empirical Innovation Economics at the LMU, after leading the department on an interim basis. The appointment procedure jointly conducted with the LMU to fill the position of Head of the ifo Center for Business Cycle Analysis and Surveys, which is linked to a Professorship in Macroeconomics and Business Cycle Analysis, was launched in the reporting year and successfully concluded in spring 2017: Prof. Andreas Peichl (Zentrum für Europäische Wirtschaftsforschung, Mannheim, and University of Mannheim) will take up his position in Munich on 1 June 2017.

In 2016 a member of the ifo Institute's staff once again received an offer from a university. Andreas Steiner, a researcher the ifo Center for Business Cycle Analysis and Surveys, was offered an assistant professorship position at the University of Groningen, which he accepted.

TRENDS IN EMPLOYEE NUMBERS

The total number of staff employed at the ifo Institute on the reference date of 31 December 2016 rose by 13 persons versus the previous year to 210. Doctoral

students (10) accounted for a large share of these new employees. The number of researchers, by contrast, fell by two persons, while one additional specialist and one technical staff/assistant joined the Institute. Specialists are academically-trained staff who are appointed to central positions at the interface between research and services that require a high degree of staff continuity. The number of non-scientific staff increased by three, with one person holds management responsibilities. The number of trainees remained unchanged at three.

The number of part-time staff increased by 5 to 89 persons. This increase can be attributed to growth in the number of doctoral students, as the number of part-time staff remained unchanged in all other staff groups.

The doctoral students and researchers (post-docs) employed by the ifo Institute are given fixed-term contracts in line with Academic Fixed-Term Contract Law. They can only be given indefinite contracts for really outstanding scientific achievements and if further requirements are satisfied. In 2016 no such contracts were awarded.

The increase in the number of doctoral students was mainly due to the rise in the number of employees with limited contracts (which increased by 10 to 95 persons). The total share of persons employed by the Institute rose slightly (2014: 42.6%; 2015: 43.1%, 2016: 45.2%).

The number of women at the ifo Institute rose by eight to 110. This means that the number of women as a share of total employees remained over the 50% marker at 52.2% (2015: 51.2%). The largest increase in the share of women was mainly due to the higher number of female doctoral students at the Institute, which increased by 5 to 27. This means that ifo has almost achieved its long-term goal of striking a gender balance among doctoral students. This represented a small increase in the share of women in this department from 47.8% in 2015 to 48.2% in 2016. If the male and female doctoral students who were on maternity/parental leave or on extended unpaid leave abroad on the reporting date (31 December 2016) were to be included in this figure, it would exceed the 50% marker. This means that the long-term goal of ifo's Executive Board, namely to achieve a balanced gender representation among doctoral students, was achieved in 2016. This trend increases ifo's chances of continuing to employ female doctoral students as researchers once they have successfully obtained their PhD; and to boost the share of

Increase in part-time staff driven by doctoral students

Women accounted for over 50% of ifo's staff

female post-docs at the Institute. Unfortunately, this figure declined slightly from 18.5% to 17.3% in 2016. Among specialists, by contrast, the share of women rose from 52.4% to 59.1% last year. Among non-scientific staff the number of women increased by one, but since the total number of staff rose by three, the very high share of women employed edged downwards.

ifo aims to gradually increase number of post-docs

Another of the ifo Institute's personnel policy goals is to gradually increase the number of post-docs as a share of total academic staff to 100%. In the reporting year this share was 84.7%. If doctoral students are included in the figure, a total of 92.6% of academic employees either held a doctorate, or were working on their doctoral thesis on the reference date of 31 December 2016. The share of professors and researchers with their habilitation was 28.8%.

The international orientation of the ifo Institute is also reflected in the fact that a growing share of scientific staff are either foreigners, or Germans who have previously held a position or studied abroad and have returned to take up a position at the ifo Institute. On the reference date of 31 December 2016 this figure rose by six persons to 30. Four of the heads of ifo's research centers are foreign (3) or held positions in foreign universities before being appointed by the ifo Institute (1). Moreover, there were also eight foreigners (2015: nine) and four "returnees" (2015: three). Eight doctoral students are foreign (2015: five) and another six (2015: three) studied abroad before being appointed by the ifo Institute. This means that 27.8% (2015: 24%) of ifo's academic staff were foreigners or Germans who had previously held a position or were studying abroad prior to joining the Institute.

Number of Staff at Year-End of 2016 and 2015 (without staff on leave)

	Total staff		Women	
	2016	2015	2016	2015
Research and service				
Scientific staff	52	54	9	10
Doctoral students*	56	46	27	22
Specialists	22	21	13	11
Technical staff/assistants	21	20	20	19
Infrastructure				
Non-scientific staff	56	53	38	37
Of which staff with management responsibilities**	13	12	8	8
Trainees	3	3	3	3
Total	210	197	110	102
	Part-time workers		Limited duration contracts	
	2016	2015	2016	2015
Research and service				
Scientific staff	12	13	30	31
Doctoral students*	55	45	56	46
Specialists	5	4	2	1
Technical staff/assistants	13	12	1	0
Infrastructure				
Non-scientific staff	18	15	3	4
Of which staff with management responsibilities**	3	3	2	1
Trainees	0	0	3	3
Total	103	89	95	85
	Post-docs/habilitations, professors		of which women	
	2016	2015	2016	2015
Scientific staff	44/15	47/13	5/1	6/1

*Without guest doctoral students. - **Non-scientific staff compensated according to TV-L E 13 and upwards.

FURTHER EDUCATION FOR RESEARCHERS

The ifo Institute is a very attractive employer for policy-oriented research economists. It does everything in its power to attract excellent researchers by providing the ideal conditions for excellent performance. Creating a productive environment for top researchers is a comprehensive strategic task that goes beyond personnel policies and instruments. This applies, for example, to the close cooperation with universities, which is a precondition for the joint appointment of ifo department heads as mentioned initially, to international orientation and cooperation, as well as to the recognition of special achievements through bonuses. Meanwhile, the central sphere of activity is the consistent support of scientific profile formation of the researchers employed in the Institute at all levels, which includes making contacts with other researchers from around the world, and, above all, promoting a culture of discussion at a very high scientific level within the Institute. The foundations for this comprehensive strategy for scientific and professional further qualification in the ifo Institute are laid by a works agreement.

To highlight the orientation of its personnel policy towards providing excellent framework conditions for attracting researchers from Germany and abroad and supporting their further qualification the ifo Institute signed up to the "European Charter for Researchers" passed by the European Commission in 2016, which is linked to the "Code of Conduct for the Recruitment of Researchers." The personnel policy and organisational conditions for the activities of researchers at the ifo

Institute are continuously being further developed in line with the targets set out in the “European Charter for Researchers.”

Another important element of further education is the promotion of young academics. ifo’s programme for junior economists aims to promote the next generation of young scientists in the field of empirical economic research. This training lays the foundations for both an academic career and for a practice-oriented role in business or public administration. Only a small percentage of doctoral students have the opportunity to continue their professional career at the ifo Institute. ifo’s Executive Board continued to offer strong support with their next career move to doctoral students who complete their PhD at the ifo Institute in 2016.

The high level of the graduate training now offered by the ifo Institute is shown by the huge range of peer-refereed scientific publications that ifo doctorates contribute to year after year. The high number of doctoral students active at the ifo Institute, which ifo will strive to maintain high, was financially possible thanks to a series of DFG projects, successful bids in the competitive tendering process of the Leibniz Association (SAW projects) and projects financed by private foundations (including Deutsche Telekom Foundation, Thyssen Foundation). Doctoral students receive support not only from their respective department heads and post docs, but also from “doctoral student officers” with cross-department responsibilities. Marc Piopiunik and Timo Hener, both former doctoral students at the ifo Institute, are highly dedicated to this task.

Integrating doctoral students in empirical research and in work on policy-oriented projects strengthens the empirical side of their economic education. As a rule, they complete their doctorates at the Economics Faculty of the University of Munich, become members of the Munich Graduate School of Economics and also attend graduate school courses there. In addition to many other interested members of ifo staff, its doctoral students all attend the lunchtime seminars run by the Center for Economic Studies and the ifo Institute. The regular research seminars held within each department also play an important role for doctoral students.

The joint appointment of all departmental heads as professors at the University of Munich has made it possible for almost all ifo doctoral students’ work to be

supervised by their department heads. The situation is similar at the Dresden branch of the ifo Institute since its Director holds a chair at the Technical University of Dresden (TUD) and his Deputy Director, Joachim Ragnitz, has an honorary professorship there.

Supported by department heads and experienced post-docs, the students are introduced early on to presenting research findings at international forums. Presentations at high-level economic conferences with selection procedures prepare the young academics at an early stage of their career to publish articles in internationally renowned refereed journals. Despite a limited travel budget, ifo researchers gave 154 presentations at top conferences. The further qualification of doctoral students is also supported by internal training seminars, professional editing of English-language papers and participation in external summer schools and workshops. Doctoral students can also take advantage of supplementary training measures. Courses on academic writing, for example, were offered in the reporting year. Of course, ifo also organised customised training measures. Fourteen male ifo researchers and five female researchers are currently working on their habilitation.

Several researchers at the ifo Institute teach at universities with which ifo cooperates closely, which gives them the opportunity to constantly revise and expand their own expert knowledge base. In the summer semester 2016 and in the winter semester 2016/2017 79 university lectures were given by ifo staff. This is particularly advantageous for the subjects that are empirically oriented. Additionally, all researchers at the Institute are given the opportunity to keep abreast of research developments by attending the appropriate lectures and seminars at the University of Munich. An important contribution to the exchange of new research ideas is provided by the weekly lunchtime seminars – a forum for the discussion of current research and research findings as well as new developments in economics. Speakers and attendees are primarily from the ifo staff and the University of Munich. Workshops lasting several days at which ifo research teams can exchange information on current projects are also organised outside the Institute and make a significant contribution to further scientific training.

Academic competence is developed primarily in research projects. Here, internal ifo competence is extended in cooperation with external experts. Guest

ifo researchers gave
154 presentations at
top conferences

ifo researchers gave
79 lectures

**Research stays pave
the way for joint
projects**

researchers play a special role in this respect. The number of guest researcher stays totalled 44 in 2016 (2015: 43). The number of ifo researchers spending several months on research leave abroad rose sharply in 2016. The total figure was 29 guest stays, with seven of these stays lasting several months and taking place exclusively at top universities in the USA, Britain and the Netherlands. Research stays at top universities benefit the academic performance of ifo's research departments, since the academics on leave can further deepen their academic expertise during their research stays abroad, can pave the way for new joint projects with foreign co-authors and, at the same, continue to work on their ongoing projects.

The promotion of junior economists begins in the ifo Institute with the employment of interns. Their importance for the Institute should not be underestimated, since former interns often apply successfully for posts as doctoral students. A total of 60 interns gained their first experiences of empirical economic research in 2016 (2015: 67). Unfortunately, demand for internships from female students fell during the reporting period, meaning that only 36.7% of interns were women (2015: 49.3). The Institute's goal is to push the share of female interns back up to 50% in 2016.

FURTHER EDUCATION FOR NON-RESEARCHERS

The further education of staff working in the non-research areas also has a high priority for the Institute. The above-mentioned agreement with the Works' Council regulates all aspects of the professional education of non-research personnel. The further education of non-research staff is aimed at providing them with the optimal qualifications for managing their current tasks and preparing them for future ones, thereby insuring that their individual qualifications keep pace with the demands of their respective positions.

To this end the qualification requirements of all staff members are systematically surveyed at the beginning of each year. Overall, 145 further training measures were approved in 2016, of which 67 were also conducted in that year. An unusually high share of training courses were approved in 2016, but not completed for two main reasons. Firstly, a significant share of measures was postponed to the following year; and secondly, overlaps with research stays meant that the staff members in question cancelled their requests for training as a result. A large share of the training

measures requested are usually in the field of computers, whereby the focus lies on schooling for the specific IT requirements of individual employees. These measures were complemented by further training for doctoral students and junior economists cited above. Customised courses were also organised to deal with challenges encountered in individual roles. Further qualification related to innovation and problem solving and can be directly integrated into professional activities, is becoming increasingly important. This takes place both individually (in the form of individual coaching, for example) and in teams (in the form of workshops or group training). The use of workshops has been expanded considerably over the last two years. The aim of the majority of these workshops was to link the further development of products, instruments and processes with the further development of individual competences. This is a key feature of a learning organisation. In 2016, for example, five workshops took place on the needs-oriented further development of the DICE Database by applying "user-oriented design thinking methods". In the "Intrapreneurship" workshop, ifo staff were able to learn how entrepreneurial behaviour and thinking can be encouraged in academic institutions.

The Institute also endeavours to promote young staff in the non-academic area. It regularly offers an Office Communication Trainee Programme. One young trainee successfully completed this course in January 2017. Both of the other young trainees currently at ifo are also following the newly-introduced "Office Management Trainee Programme." At least one young trainee will begin this programme in September 2017.

AWARDS

The Society run by the Friends of the ifo Institute awards prizes to researchers at the Institute who have attracted attention thanks to their outstanding scientific achievements. A prize can only be awarded if a scientific article was published in an internationally renowned peer-reviewed journal. In 2016 this prize was awarded to Suphi Şen, a post-doc at the ifo Center for Energy, Climate and Exhaustible Resources, for his article published in 2015 in the European Economic Review entitled: "Corporate Governance, Environmental Regulations, and Technological Change", in which he describes the influence of regulation on innovative behaviour and the economic growth of companies.

**ifo supports
continuous learning
for non-research
staff**



Clemens Fuest, Rolf Tschernig, Suphi Şen, Roland Berger

In 2016 the annual prize for outstanding achievement in third-party research was awarded to the project team Prof. Oliver Falck, Marcus Drometer, Katrin Oesingmann, Prof. Joachim Ragnitz, Markus Reichmann, Marina Riem, Thomas Steinwachs, Michael Weber, Prof. Timo Wollmershäuser and Erdal Yalcin – supported by Dagmar Bach and Franziska Hartinger – for their successful work on a consulting project commissioned by the Croatian Statehood Foundation entitled: “Short- und long-term policy requirements to strengthen sustainable growth and employment in Croatia.” A special prize for outstanding achievement was awarded to Gitta Mortasawi, who was responsible for the layout of the “Branchen-special” reports for over 20 years and ensured that the reports were always published on time and in outstanding graphical quality as of their launch.



Clemens Fuest, Timo Wollmershäuser

EQUAL OPPORTUNITIES AT THE IFO INSTITUTE

The ifo Institute has actively promoted equal opportunities for men and women for many years. In this area the Executive Board is supported by an equal oppor-

tunity officer in Munich and a woman’s representative at the Dresden Branch. The current equal opportunities plan, which is valid until autumn 2017, is primarily aimed at gradually reducing the under-representation of women at all levels of the scientific career ladder. Improving the working conditions and the advancement, especially of female researchers with young children, and generally improving the chances for professional development by means of further qualifications are intended to make work at the ifo Institute more attractive and to increase the share of women on the research staff. ifo’s internal rules on equality also form part of its certified management system, which is annually audited by external auditors. This means that the continued certification of ifo’s management system depends on the monitoring and continued further development of rules on equality.

The ifo Institute is particularly keen to qualify female researchers for management positions in academia. It expressly supports the application for projects in the Leibniz tendering process that serve to promote women to leadership positions in academia. This Leibniz line of funding aims to particularly increase the likelihood of the respective female project/working group heads being appointed as W2 or W3 positions. The ifo Institute was successful with such project applications in the Leibniz tendering procedure of 2015 and 2016. Unfortunately, the Leibniz Association phased out this initiative in 2016 and replaced it with the Leibniz female professor programme.

The promotion of equal opportunities for men and women with scientific positions also supports the setting of flexible target quotas along the lines of the cascade principle of research oriented equality standards established by the Deutschen Forschungsgemeinschaft (DFG). At the recommendation of the Leibniz Association, the ifo Institute anchored this kind of flexible target quota for the compensation levels of senior scientific staff in its programme budget, which forms the basis of its institutional support by the federal government and the Länder. The time frame for these target quotas extends until 2017.

As already mentioned above, the share of female researchers at ifo decreased marginally in 2016. The number of male and female doctoral students, by contrast, rose and a gender balance was almost achieved in 2016. Dr. Christa Hainz, an experienced researcher

ifo’s certified
management system
gets annual audit

Flexible equality
quotas follow cascade
principle

from the ifo Center for International Institutional Comparisons and Migration Research, helps ifo's Executive Board to improve the general conditions for female doctoral students' activities in her role as mentor for female doctoral students. She is their contact person and deals with the special issues of young female economists like for example, qualification events that are exclusively aimed at female doctoral students. Overall, the share of female scientific staff, including doctoral students, rose slightly from 32% to 35.2% in 2016.

The availability of part-time positions remains a key component of the family-friendly organisation of work at the ifo Institute. The number of part-time positions did not rise quite as strongly as the total number of staff (part-time staff: +14, total staff: +13). The number of women as a share of part-time employees was 66.9% (2015: 65.2%). If doctoral students are excluded from the number of part-time positions, then this figure was as high as 87.5% (2015: 81.8%). The ifo Institute will also continue to offer part-time employment so that its employees are given the opportunity to combine a career with having a family more effectively.

**Almost 67%
of women at ifo have
part-time jobs**

The option of tele-working is also part of the family-friendly organisation of work at the ifo Institute. The framework conditions for tele-working are laid out in a works agreement, which also covers its offer to staff on parental leave to continue to use the opportunities provided by the Institute for further training. To enable parents to resume their careers swiftly, the ifo Institute signed a cooperation agreement in 2013 with a municipal operator of child care facilities on corporate childcare. The Institute finances the prospective entitlement to three places for children that are offered to its employees. At the moment three ifo staff members enjoy a nursery place at a reasonable municipal price.

**ifo finances 3 nursery
places**

An important contribution to equal opportunity at the Institute is that women are increasingly being appointed to the various boards. In the Administrative Board, the supervisory body of the ifo Institute, this is not determined by the Institute as the majority of seats are linked to an external function. Nevertheless, 33.3% of the Administrative Board members, who are chosen at the Annual Meeting, are women. There is currently one vacant seat on the Administrative Board, which will be filled by 1 July 2017. The Scientific Advisory Council also has three respected female academics among its members. Three of the nine

members of the ifo User Advisory Council are women and 14 members of the ifo Institute's Board of Trustees (total: 72) are now women.

The Institute's cooperation with the Dual Career Offices of the Munich universities is also important for both sexes. This service is becoming increasingly significant in terms of attracting renowned researchers to the Institute. Moreover, support from the Dual Career Office of the Technical University of Munich has already met with success.

Financial Development

The ifo Institute is a non-profit institution that aims to serve academia and research. The ifo Institute's objective is to provide research and services as public goods, and not to generate financial profits. This also applies to contract research conducted on behalf of state or private institutions. ifo's findings are also made public, which strengthens the foundations of all of the Institute's work. The Institute's financial strategy aims to achieve a balanced long-term cost and earnings structure that permits a large service and research output that benefits the general public. Sufficient financial reserves help offset income fluctuations and allow a flexible reaction to special demands.

SUMMARY OF KEY DEVELOPMENTS

The Institute's financial statement for 2016 shows a surplus of 125 thousand euros. This was channelled into reserves, increasing the Institute's assets to a total of 2,194 thousand euros as of 31 December 2016.

In 2016 the ifo Institute received public funds totalling 10,541 thousand euros as part of research promotion based on Art. 91b Basic Law (German constitution). Of this amount 10,226 thousand euros was used for current operations and 315 thousand euros was used for investment. The funds for current operations include 517 thousand euros in special funding for a four-year limited period to build up the Energy, Climate and Exhaustible Resources research area. A cash balance of 850 thousand euros, which was accumulated in 2015 and carried over into 2016, also remained at the disposal of the ifo Institute. This cash balance was spent in the first quarter of 2016. The sum of 10,941 thousand euros in institutional funding was granted to the ifo Institute in 2016, of which 1,250 thousand euros was not used thanks to savings, particularly in terms of personnel expenditure, and to high income from commissioned activities. This sum was accumulated in a cash balance that will be carried forward to next year.

ASSETS AND FINANCES

The balance sheet total rose by 1,263 thousand euros (+18.4%) versus last year to 8,118 thousand euros. On the asset side, this was due to the fact, that within the floating assets, inventory and liquid funds rose by 3,626 thousand euros, while short-term receivables and accruals and deferred income fell by –2,313 thousand euros.

On the liabilities side, an increase was seen in the Institute's assets (+125 thousand euros), provisions

(+691 thousand euros) and down-payments received (+652 thousand euros). There was, by contrast, a decline in liabilities vis-à-vis banks (–10 thousand euros) and other liabilities (–195 thousand euros).

From the annual surplus of 125 thousand euros cited above, 111 thousand euros was channelled off into research reserves, bringing the latter up to a total of 1,392 thousand euros by 31.12.2016. Voluntary payments beyond membership fees, which are managed by the ifo Institute's Administrative Council, amounted to 14 thousand euros. This sum was added, in accordance with the ifo statutes (Art. 4. Sec. 2), to the earmarked reserves, which totalled 802 thousand euros. This increased the Institute's assets to a total of 2,194 thousand euros by 31.12.2016.

Liquid funds were available at all times throughout 2016. The stock of liquid assets increased compared to 2015 by 3,359 thousand euros to 6,639 thousand euros. Cash flow from current operations amounted to 3,672 thousand euros in 2016. Cash flow from investment activity (–313 thousand euros) was negative in 2016.

ifo's total assets
totalled
2,194 thousand
euros

Balance Sheet of the ifo Institute for 2016 in
Thousand Euros (abridged version)

	31.12.2016	31.12.2015
Assets		
<i>Fixed assets</i>	113	163
<i>Current assets</i>		
Inventory	867	590
Receivables and accruals	499	2,812
Liquid funds	6,639	3,290
Total assets	8,118	6,855
Liabilities		
<i>Net worth</i>		
Earmarked funds	802	788
withdrawals/	0	0
additions	14	16
Research reserves	1,392	1,281
withdrawals/	0	0
additions	111	171
<i>Short-term debt</i>		
Reserves	4,136	3,445
Liabilities vis-à-vis banks	0	10
Down payments received	1,468	816
Other liabilities	320	515
Total liabilities	8,118	6,855

INCOME

Operating income grew by 664 thousand euros in 2016 to reach a total of 17,402 thousand euros. The upturn was due to a small extent to an increase in public financial support consisting of the institutional support of the ifo Institute as part of the collective research funding received from the federal government and the Free State of Bavaria according to Art. 91b Basic Law on the one hand, and the support of the Dresden Branch by the Free State of Saxony on the other. This support increased by 13 thousand euros to 11,226 thousand euros. The cash balance mentioned at the beginning of this report is not included in this sum. It will only enter the annual financial statement when and to the extent that it is used.

Income from third-party activities, comprising of earmarked subsidies, revenue from publications, database services and events, other revenues and revenues from third-party work (contract-based research), as well as the corresponding changes in inventory, rose from 5,366 thousand euros in 2015 to 6,022 thousand euros in 2016 (12.2%).

Third-party revenues up 12%

The number of Association members fell from 354 in 2015 to 341 on 31 December 2016. Income from membership fees (obligatory and voluntary) therefore decreased slightly from 149 thousand euros to 144 thousand euros.

Despite the significant increase in revenues from commissioned activities, the cost of materials and related services was only 21 thousand euros higher than in 2015.

Costs only 21 thousand euros higher in 2016

Personnel expenses, by contrast, rose more sharply by 769 thousand euros (6.5%) to 12,424 thousand euros. This development in personnel costs was primarily due to an increase in collective compensation (2.3% as of March 2016) and growth in the Institute's staff base. The number of staff rose by 15 versus 2015 to 219 on the reporting date (2015: 204).

Regular depreciations (49 thousand euros) refer to fixed assets financed out of the Institute's own funds, while unscheduled depreciations (228 thousand euros) correspond to the investment subsidies received in the reporting year from public research funding bodies. Other operating expenses (balanced by other operating income) rose by 501 thousand euros to 3,194 thousand euros.

This means that income exceeded costs by 46 thousand euros (income from on-going business). This was offset by 136 thousand euros in negative neutral and out-of-period results due to a change in provisions. The Institute also had to pay taxes of 57 thousand euros, giving it an annual result of 125 thousand euros.

Profit and Loss Statement of the ifo Institute for 2016 in Thousand Euros (abridged version)

	31.12.2016	31.12.2015
Institutional support	11,236	11,223
Earmarked financial support	2,239	1,866
Obligatory membership fees	130	133
Voluntary membership fees	14	16
Income from publications and data bank services, conferences	289	229
Income from commissioned activities	3,050	3,651
Other income	164	0
Change in stocks of non-invoiced services	280	-380
Operating income	17,402	16,738
Expenditure for material and purchased services	1,461	1,440
Personnel expenditure	12,424	11,655
Regular depreciation	49	54
Unplanned depreciation	228	184
Other operating expenses minus income	3,194	2,693
Operating expenses	17,356	16,026
Operating profit	46	712
Financial profit	0	0
Taxes on income and profit	-57	-22
Neutral income and income unrelated to the accounting period	136	-503
Profit for the year	125	187
Withdrawals from research reserves	0	0
Additions to research reserves	111	171
Withdrawals from statutory reserves	0	0
Additions to statutory reserves	14	16
Profit brought forward	0	0

For the output that the ifo Institute produces in research, policy consulting and services as an institution of the Leibniz Association, it receives institutional support from the federal government and the federal states as part of the collective research support according to Art. 91b Basic Law. Institutional support from the Bavarian State Ministry for Economic Affairs, Transport and Technology as well as from the Bavarian State Ministry for Finance and Energy amounted to 10,941 thousand euros. It also had reserves of 850 thousand euros from 2015. The sum of 10,124 thousand euros of available funds was used for day-to-day operations and 417 thousand euros was spent on in-

vestments and maintenance. As already mentioned, the funds granted totalling 1,250 thousand euros were not used, as permitted by the funding guidelines. This sum was accumulated as a cash balance that will be carried forward to next year.

In addition to this basic public support, the Dresden Branch receives separate institutional support from the Free State of Saxony according to Art. 91b Basic Law. After deduction of the surplus, the institutional support of the Dresden Branch by the Saxon Ministry for Economic Affairs and Labour amounted to 695 thousand euros. Of the 730 thousand euros in funding originally granted, around 10 thousand euros were not used and were repaid to the funding bodies. Another 25 thousand euros from the previous year's surplus were offset against 2016 funding.

The Institute's financial statements were audited by KPMG Deutsche Treuhand-Gesellschaft AG, Munich, and received unreserved certification.

Executive Board

Prof. Dr. Dr. h.c. Clemens Fuest (President)
 Prof. Meinhard Knoche

ifo Centers for

Business Cycle Analysis and Surveys
 Prof. Dr. Timo Wollmershäuser (interim director)

- National and international economic activity forecasts
- Business surveys
- Research in the areas of macroeconomics, forecast methods and survey methodology

Public Finance and Political Economy

Prof. Dr. Niklas Potrafke

- Fiscal federalism and local finances
- Evaluation of fiscal and taxation policy
- Government debt in Germany and Europe
- Political economy

Labour and Demographic Economics

Prof. Helmut Rainer, Ph.D.

- Labour Economics: Time Allocation, Labour Supply, Search and Matching, Migration and Integration
- Demographic Economics: Marriage, Fertility, Family Structure, Domestic Abuse, Health

The Economics of Education

Prof. Dr. Ludger Wößmann

- Education and individual outcomes: labour markets and lifecycles
- Education and long-term development: economic growth and prosperity
- Determinants of education: culture, resources and institutions
- Governance of education: efficiency and equity

Industrial Organisation and New Technologies

Prof. Dr. Oliver Falck

- Industrial organisation and industry-level analysis
- New technologies
- Collection of firm-level and industry-level data
- LMU-ifo Economics and Business Data Center (EBDC)

Energy, Climate and Exhaustible Resources

Prof. Dr. Karen Pittel

- Climate and exhaustible resources
- Environment
- Energy

Research Director

Prof. Dr. Christian Traeger

International Economics

Prof. Gabriel Felbermayr, Ph.D.

- Globalisation and labour markets
- Trade costs and trade policy
- Trade and environmental policy

International Institutional Comparisons and Migration Research

Prof. Panu Poutvaara, Ph.D.

- Research on institutions and international comparisons
- Research on migration and coordination of the Center of Excellence for Migration and Integration Research
- Database for Institutional Comparisons in Europe (DICE)
- Publication of the *ifo DICE Report* and the *CESifo Forum*

Executive Departments

Executive Support Staff

Susanne Crefeld
 Franca Fogli-Götz
 Barbara Hebele
 Anja Hülsewig
 Juliane Neumeier
 Caroline Schiller

Quality Management

Johanna Garnitz
 Stefan Sauer

Controlling/Equal Opportunity AGG

Dr. Dorothea Pohlmann

Data Protection

Angela Wagner

Research Group Taxation and Fiscal Policy

Leader: Prof. Dr. h.c. Clemens Fuest

International Advisory Projects

Prof. Dr. Siegfried Schönherr

Dresden Branch

Prof. Dr. Marcel Thum (Director)
 Prof. Dr. Joachim Ragnitz (Managing Director)

Central Departments

Human Resources

Prof. Meinhard Knoche

Finances and Centralised Services

Sabine Dehof

Information Technology

Christian Pitsch

Library

Petra Braitacher

Press, Publications, Conferences

Prof. Meinhard Knoche

Ombudsman

Prof. Dr. Heinrich Ursprung