

Annual Report 2008



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Economic Research

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- Investments and Financial Services
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- Real Estate and Financial Markets

Research Department Human Capital

- Employment and Labour Markets
- Social Welfare and Public Policy
- Personnel Economics
- Education Economics

Research Department Industrial Economics and International Management

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- Innovation Behaviour and Innovation Strategies
- Research, Technology and Innovation Policies
- Market Development and Firm Dynamics
- Empirical Competition Policy
- Firm Level Databases

Research Department Corporate Taxation

- Corporate Taxation
- Empirical Effects of Taxation
- Decision Making and Taxation
- Fiscal Competition

Research Department Environmental Resource Economics, Environmental Management

PD Dr. Andreas Löschel

- Innovation and Sustainable Development
- Energy Economics
- Transport and Mobility
- International Environmental and Resource Policies
- Macroeconomic Analysis of Environmentally Relevant Activities

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- ICT and the Labour Market
- ICT, Firm Strategies and Competition

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- Analysis of Short-Run Growth
- Development Economics

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Dr. Holger Bonin

and Wages
Research Institutions
Economics
Economics

Research Department Corporate Taxation and Public Finance

Dr. Friedrich Heinemann

Research and Analyses of Tax Locations
Aspects of Corporate Taxation
Research in Tax and Financial Policy
Research on Taxation and Federalism

Research Department Economic and Management

Research
Policies

Research Group Economic and Business Cycle Analyses

Prof. Dr. Dr. h.c. mult. Wolfgang Franz

Long-Term Macroeconomic Interrelations
Short-Term Macroeconomic Interrelations
Development of Analytic Tools and Methods

S E R V I C E

Information and Communication

- Public Relations
- Editing
- Events
- New Media
- Special Library
- International Coordination

Knowledge Transfer and Qualification Programmes

- Expert Seminars
- Specific Training Programmes for Enterprises and Institutions
- Symposia

General Services

- IT
- Purchase, Organisation
- Finance and Accounting/Controlling
- Media Design and Distribution
- Human Resources



ZEW

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Wirtschaftsforschung GmbH

Centre for European
Economic Research



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Annual Report 2008

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LETTER FROM

The President of the Leibniz Association, Prof. Dr. Dr. h.c. Ernst T. Rietschel



Grand Challenges and Great Ideas

“European collaboration and competition should represent the fundamental ingredients of Europe’s path to global scientific and industrial excellence during the coming decades.” This is one of the visions developed by an international expert group that I was honoured to chair in its assessment of the EU’s 6th Framework Programme for Research. In its assessment report, the group also wrote: “A future Europe, able to take on a confident, outward-facing role in the world, will focus on two new lines of action: Grand Challenges and Great Ideas.” The institutions of the Leibniz Association can contribute on both of these fronts: they are addressing the grand challenges of the present while also developing pioneering ideas for the future.

A strong example of this fact is the Centre for European Economic Research (ZEW), which has as its guiding mission to study the “optimal performance of markets and institutions in Europe”. The environment, industrial economics, financial markets, as well as information and communication technologies represent grand challenges. In the EU’s 7th Framework Programme for Research alone, ZEW is participating in twelve projects in these fields. ZEW is also acting to address grand challenges with its groundbreaking research in the fields of educational economics, competition, regulation, as well as climate and energy policy.

From another perspective, as well, ZEW is prototypical of a Leibniz institution. The Centre for European Economic Research combines scientific excellence with a practice-oriented – or, one might say, “practitioner”-oriented – approach. The Institute’s clients are often political decision makers who require well-grounded economic analysis.

Policy advising that is based on outstanding research is the trademark of the Leibniz Association. The president of ZEW, Prof. Dr. Dr. h.c. mult. Wolfgang Franz, embodies this in his person: Professor Franz has been the chairman of the German Council of Economic Experts since March 2009 and has advised the German government in economic policy questions as one of the Council’s five expert consultants for six years. Professor Franz was previously a member of this body from 1994 to 1999. He is a member of the Heidelberg Academy of Sciences and Humanities as well as the Leopoldina National Academy, where he chairs the Department of Economics and Empirical Social Sciences.

Network-based research and close collaboration with universities are of key importance for Leibniz institutions. This is exemplified by ZEW with its partnerships in Germany and abroad, the ZEW Visiting Researchers Programme, as well as the ZEW DocNet, a doctoral studies programme offered in partnership with the Universities of Mannheim, Leuven, Konstanz, and St. Gallen. Interdisciplinary exchange within the Leibniz Association is also promoted at ZEW; one example of this is the Leibniz network “Non-Cognitive Skills: Acquisition and Economic Consequences”.

The Leibniz Association is proud of ZEW. I wish ZEW continued outstanding success in its work.

Prof. Dr. Dr. h.c. Ernst T. Rietschel
President of the Leibniz Association

The Executive Directors of the ZEW, Prof. Dr. Dr. h.c. mult. Wolfgang Franz and Thomas Kohl



Expanding National and International Ties

In 2008, ZEW was able to increase its scientific output even beyond the high level attained in the previous year. The fact that we again fulfilled our founding mission over the period covered by this report is amply demonstrated by the high number of research projects, scientific conferences, and professional development courses that took place, as well as by the number of publications released in refereed journals. In 2008, we also increased the size of our staff and volume of third-party funding.

In the time period covered by this report, ZEW worked on over 240 research projects for national and international clients, successfully completed over 100 projects, and also acquired numerous new projects in competitive selection procedures. ZEW's research findings primarily serve the provisioning of scientifically rigorous economic policy advising and are also released in renowned scientific journals and ZEW's publication series. Over the past three years, we have had 240 articles accepted for publication in refereed journals. In addition, during 2008 a total of 136 ZEW Discussion Papers were released.

ZEW economists attended a large number of high-ranking conferences and symposia, and presented their research work in over 350 presentations before largely international professional audiences. In addition, ZEW researchers won international prizes in recognition for the excellence of their scientific work. ZEW bestowed this year's Heinz König Young Scholar Award to Carlos D. Santos of Portugal. The 2008 sponsor of this prize was the MLP Group.

ZEW is constantly expanding its national and international ties. In 2008 we invited a number of

recognised international researchers from different nations to scientific events at ZEW. We also promoted knowledge exchange within the academic community by having ZEW researchers participate in research residencies at other institutions. At the same time, we invited outside researchers to spend time at ZEW, where they were able to take advantage of ZEW's unique data resources.

In order to support and expand knowledge transfer to the realms of business and politics, many ZEW economists acted as instructors in training and qualification seminars organised by the ZEW "Knowledge Transfer & Qualification Programmes" service department. ZEW successfully expanded its range of professional development offerings in 2008. Our high-quality seminars attracted a total of more than 700 participants from businesses and institutions in Germany and abroad.

ZEW caters to professional audiences and the general public alike with numerous publications, information services, and events, including the ZEW Economic Forum and the lecture series "Wirtschaftspolitik aus erster Hand". Of particular interest in 2008 were lectures given by Dr. Jürgen Hambrecht, the managing director of BASF SE, and by the winner of the 2000 Nobel Prize in Economics, Prof. James J. Heckman, PhD, of the University of Chicago. Another notable event in 2008 was Chancellor Angela Merkel's personal visit to ZEW. She lauded the Institute's achievements in the realms of economic research and policy advising. As in the previous year, the president of ZEW, Prof. Dr. Dr. h.c. mult. Wolfgang Franz, presented the new 2008/2009 annual report of the German Council of Economic Experts in a

series of lectures that took place at the offices of the KfW Banking Group in Berlin, the Baden-Württemberg delegation in Brussels, the BW Bank in Stuttgart, and the EnBW Energie Baden-Württemberg AG in Karlsruhe.


The ZEW attaches great importance to the professional competence and international competitiveness of its staff. For this reason, the Institute supports the ongoing professional development of its staff in a variety of ways. Staff members are granted sabbaticals to pursue pre- and post-doctoral work or write journal articles. During 2008, a total of nine ZEW researchers successfully completed their doctoral dissertations and one researcher completed her habilitation. In this connection, it is important to mention ZEW's enhanced involvement in doctoral programmes as well as the further expansion of the ZEW Doctoral Studies Network in collaboration with the Universities of Mannheim, Konstanz and St. Gallen, as well as the Catholic University of Leuven. Finally, in 2008 ZEW established the Visiting Researchers Programme for longer guest-research residencies, particularly for foreign researchers.

Furthermore, over the past year, one of our trainees joined our regular staff with the successful completion of her training.

In 2009 ZEW will be evaluated by an international commission appointed by the Leibniz Association. This represents one of the most significant challenges faced by ZEW in the present year. The commission's mandate is to evaluate the scientific quality of research and service at institutions affiliated with the Leibniz Association, and to determine if ZEW should receive further Association funding. Building upon the findings and recommendations of an evaluation conducted by ZEW's Scientific Advisory Council in 2008 as well as our previous achievements, we are committed to addressing the challenges of 2009 with dedication and enthusiasm.

This year-end review provides us with the opportunity to express gratitude to the many individuals and institutions who have supported ZEW. We are grateful for the financial support received from the State of Baden-Württemberg and from the federal government, as well as from the ZEW Sponsors' Association for Science and Practice. We also owe our thanks to our many clients, to the members of the Supervisory Board and Scientific Advisory Council, to our research associates and research fellows, as well as to the entire staff of ZEW, who have contributed so much to the success of our research institute with their extraordinary dedication.

Mannheim, September 2009



Prof. Dr. Dr. h.c. mult. Wolfgang Franz,
President,
Director of Science and Research



Thomas Kohl,
Director of Business
and Administration

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ABOUT US

▶ THE ZEW

The Centre for European Economic Research (ZEW) in Mannheim is an economic research institute and a member of the Leibniz Association (WGL). Under the leadership of Prof. Dr. Dr. h.c. mult. Wolfgang Franz, the president of the Institute, and Thomas Kohl, the director of business and administration, the ZEW employs a staff of 165 in five research departments, two research groups, and three service departments. The ZEW is one of Germany's leading economic research institutes and enjoys a strong reputation throughout Europe.

Mission and Research Objectives

The ZEW pursues four key objectives:

- To conduct research of the highest quality
- To provide exceptional economic policy advising
- To train young economists
- To inform the professional and lay public

These objectives are interconnected and can only be accomplished as a whole. The quality of the Institute's policy advising is founded on academic excellence. First-class research depends on the ongoing development of our staff. Staying in close contact with the professional and lay public enables us to constantly keep our research and advice up to date. This ensures that our work is highly relevant for the economic challenges of our time.

ZEW's guiding mission is to study the "optimal performance of markets and institutions in Europe". Our research helps to elucidate how the political and institutional environment for market activities should be best organised in order to promote the sustainable and efficient development of Europe's knowledge-based national economies.

This mission directs the research activities pursued at ZEW, e.g.:

- The integration of the European domestic financial market
- Sustainable and efficient strategies for international climate policy
- Goal-directed national and European tax policy in the face of increased factor mobility
- Employment and income security in the face of higher demand for skilled labour
- Economic development via business start-ups

and innovation against the backdrop of global competition

- The efficient use of new information technology
- Institutions and functional income distribution

From a methodological perspective, the Institute's research profile is shaped by theory-based approaches to empirical economic research. Our expertise lies particularly in the area of applied micro-econometrics and in computable general equilibrium models.

A key feature of research conducted at ZEW is its combination of macro- and microeconomic methods. When required by the problem at hand, we adopt an interdisciplinary approach.

Funding

The ZEW's total budget in 2008 was 16 million euros. The Institute's most important financial source from 2006 to 2008 with 55 per cent was the basic funding received from a partnership between the state and federal governments. These funds are used predominantly for economic research that is not tied to an order and for infrastructure.

Another financial source for the ZEW is the third-party funding. More than 40 per cent of the Institute's financial resources are obtained from research projects for third parties, including the European Commission, ministries and institutions of the federal and state governments, as well as companies, associations, and local authorities.

From 2006 to 2008, the ZEW received a total of 4.1 million euros from the German Research Association (DFG) and other scientific foundations. This amount provides us with an excellent financial scope for basic research.

Organisation

The ZEW is subdivided into the areas "Research" and "Service". Five research departments and two research groups are responsible for research, advice, and qualification at the ZEW. Research groups are smaller units with a strong cross-sectional character.

The research units are supported by three service departments. The service department "Information

and Communication” is responsible for public relations. The unit “Knowledge Transfer and Qualification Programmes” carries out an extensive seminar programme. The service department “General Services” takes over cross-departmental tasks in the fields of human resources, finance and accounting, IT, purchase, media design, and sales.

There are several committees which influence ZEW’s strategic development. The Supervisory Board consists of eleven members from the worlds of politics, business, and academia and has a monitoring as well as advising function. The Scientific Advisory Council, consisting of representatives from the worlds of academia and business, actively follows and evaluates the ZEW’s work. The ZEW Sponsors’ Association for Science and Practice (Registered Society) is conceptually and financially supporting ZEW’s work. The firms belonging to this association facilitate a constant exchange between the domains of research and practice.

Human Resources

The ZEW relies on a flexible staffing concept; nine out of ten researchers are employed on a temporary basis. The Institute places a strong emphasis on promoting young researchers: the average researcher’s age is 32.

In order to ensure a high standard of excellence in research and economic policy advising, the ZEW promotes the ongoing development of its staff by granting periods of paid release from normal project work. These sabbaticals can be used for postgraduate doctorates, postdoctoral theses, or fellowships at renowned universities and research institutions. Typically, graduates work at the ZEW for a period of five years, earn their doctoral degree, and then pursue a career mostly in the private sector or at government institutions. This turnover facilitates the direct transfer of knowledge to the private sector and economic-policy institutions. At the same time, this encourages the continuous flow of new knowledge from universities to the ZEW, which prevents stagnation.

On the other hand, the ZEW is also highly reliant on the knowledge and experience of its long-term staff. Senior researchers are responsible for supervising their younger counterparts, and are also in

charge of research and advising projects in collaboration with the heads of the Institute’s research units.

The Institute’s research associates support the ZEW’s work with a great deal of dedication and function as academic advisors to young researchers. Numerous visiting scholars also play a vital role at the ZEW.

Networking with University Partners

Networking in the areas of research and advising between ZEW and universities rests on three pillars: permanent structures, collaborative projects, and individuals.

Permanent structures are the centrepiece of ZEW’s university network. The Institute collaborates closely with colleges in the region. Contracts with the Universities of Mannheim and Heidelberg facilitate the common use of resources and collaboration in the area of doctoral programmes. The joint appointment of junior professors will also soon take place. We have already implemented the first junior professorship with the WHU – Otto Beisheim School of Management. The University of Mannheim is actively involved in the staffing of research units heads at ZEW; the University sends faculty members to serve on ZEW’s search committee. ZEW has also developed the ZEW Doctoral Studies Network, which provides professional development opportunities for doctoral students. This programme integrates young researchers into a variety of domestic and international doctoral programmes.

ZEW actively seeks the support of its university partners for advising projects as the need arises. These partners are integrated into projects under contractual agreements. ZEW frequently collaborates with universities within the scope of projects funded by research foundations and institutions. The Institute is involved in a Collaborative Research Centre titled “Governance and the Efficiency of Economic Systems”, a research group, and a priority programme of the German Research Foundation (DFG).

ZEW is highly networked to universities through individuals. The Institute is currently collaborating with more than 40 research associates. These associates, who are for the most part professors at Ger-

man and international universities, play a regular part in the work of the research units. Conversely, many ZEW researchers are engaged as lecturers at universities. The ZEW Visiting Researchers Programme promotes scholarly exchange by bringing academics to the Institute for extended research residencies.

Outstanding Characteristics of the Institute

Although ZEW is closely networked with universities and applies university level standards in its research activities, our work is clearly differentiated from economics research conducted at universities.

- ZEW sets broader goals than economics faculties. Policy advising and knowledge transfer have considerably higher significance for us.
- The size of ZEW and the broad spectrum of topics studied by our research units permit us to take on comprehensive and complex economics advising projects – including, for example, an evaluation of the effects of recent reforms to Germany’s unemployment benefit system (the so-called Hartz IV reforms).
- ZEW’s infrastructure and resources make it possible to develop, maintain, and offer complex analytical models, such as the European Tax Analyzer or the PACE computable general equilibrium model. By the same token, we are able to undertake long-term surveys which university faculties

would not be in a position to sustain, such as the ZEW Financial Market Test and the Mannheim Innovation Panel.

On account of the Institute’s close integration of policy advising and economic research as well as its highly flexible staff model, ZEW has set a unique precedent among German economic research institutes. ZEW has also attained a special status thanks to its fields of study and research objectives.

No other economics research institute engages in the study of the following research subjects with the same degree of comprehensiveness:

- International financial markets
- European research and innovation policy
- International comparisons of corporate taxation
- Economic outcomes of early childhood education and non-cognitive abilities
- Business start-ups
- Use of information and communication technology by employees and companies

No other economics research institute in Germany:

- systematically integrates macro- and micro-economic perspectives in all of its research units;
- offers a comprehensive seminar programme for the advanced education of specialised and managerial staff, as well as the general public, in order to promote knowledge transfer;
- receives more support from the German Research Foundation.

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ABOUT US

► RESEARCH UNITS IN PROFILE

International Finance and Financial Management



Head of Department

Dr. Michael Schröder

Deputy

Dr. Peter Westerheide

This research department analyses the development and efficiency of international financial markets using empirical methods. The department is the largest of its kind at any German economics research institute. It views itself as a primary resource for economic policy advising and analysis related to financial markets. The ZEW Indicator of Economic Sentiment is a source of great public interest every month.

Research Areas

- International Financial Markets and European Integration
- Financial Market Analysis
- Investments and Financial Services
- Corporate Finance
- Real Estate and Financial Markets

At the microeconomic level, the department researches the behaviour of financial market agents: private households, financial intermediaries, institutional investors, and businesses. At the level of market processes, a key focus of the department is the analysis of price formation on financial markets. This is closely linked to the issue of expectations and the expectation formation process. The inclusion of macroeconomic considerations and the institutional environment – i.e. monetary policy, financial market and banking supervision, tax laws – enables a comprehensive analysis of financial markets.

Central Projects

- Impact of venture capital and private equity funding on innovation activities, growth, employment, and the competitiveness of young European high-tech companies on behalf of the EU (7th Framework Programme)
- Network “Real Estate and Capital Markets” under the “Pact for Research and Innovation” of the Leibniz Association
- Consequences of regulation differentials in the European banking market for market integration and systemic stability, funded by the German Research Foundation

Perspectives

The empirical analysis of expectation formation processes will be strengthened in the future. To this end, a unique resource is the extensive database compiled by the Institute since 1991 in its monthly survey of financial market experts. An additional line of research is currently being developed by the department regarding relationships between real estate and financial markets. Processes currently unfolding in the financial crisis will also play an important role in determining the future direction of research.

Selected Clients

- European Commission
- Federal Ministry of Finance
- Federal Ministry of Economics and Technology
- Federal Ministry of Labour and Social Affairs
- German Research Foundation (DFG)

Selected Cooperation Partners

- Prof. Richard Deaves, PhD, McMaster University
- Reint Gropp, PhD, European Business School
- Prof. Ernst Maug, PhD, University of Mannheim
- Prof. Dr. Lukas Menkhoff, Leibniz University of Hannover
- Prof. Dr. Henry Schäfer, University of Stuttgart
- Prof. Dr. Uwe Walz, Johann Wolfgang Goethe University Frankfurt am Main

Labour Markets, Human Resources and Social Policy



Head of Department

Dr. Holger Bonin

Deputies

Dr. Melanie Arntz

PD Dr. Friedhelm Pfeiffer

This research department investigates how to best organise institutions in the labour market and manage working conditions in firms so as to achieve high levels of employment and satisfying distribution of income in the knowledge-based European economy. The department is one of the large research centres to study labour economics in Germany.

Research Areas

- Employment and Wages
- Social Welfare Institutions
- Personnel Economics
- Education Economics

The department approaches labour market issues from a microeconomic perspective. One area of expertise are microeconomic methods, and, in particular techniques for the programme evaluation. Another special area of expertise are the techniques for programme evaluation. The department has played a central role in evaluating the fundamental reforms to the German labour market in recent years. The research department is the home of ZEW's linked micro-macro-simulation model, an advanced tool for evaluating the impact of government intervention in the labour market, regularly applied in policy advising. A unifying topic in the department's work is the impact of demographic change on labour markets.

Central Projects

- Impact evaluation of several parts of the Hartz labour market reforms for German federal ministries
- Analysis of the deregulation potentials in heterogeneous labour markets within a priority programme of the German Research Foundation (DFG)
- Enquiries to internal staff policy in the context of technological and organisational changes

Perspectives

At present, the expansion of expertise in the field of educational economics is a key area of growth in the department. The international and multidisciplinary Leibniz network for the study of "Non-Cognitive Abilities" gives us a research focus unique in Germany. We are further expanding the scope of research and policy advising activities to include impact assessment of family policies and youth labour market programmes. In the face of demographic change and technological progress, an increasingly important subject of study is how to combat skill shortages in the knowledge-based European economies.

Selected Clients

- European Parliament
- German Research Foundation
- Federal Ministry of Labour and Social Affairs
- Ministry of Economic Affairs Baden-Württemberg
- Ernst & Young AG

Selected Cooperation Partners

- Institute for Employment Research
- Central Institute of Mental Health
- SOEP
- Research Network of the German Research Foundation "Flexibility in Heterogeneous Labour Markets"
- Prof. James J. Heckman, PhD, University of Chicago

Industrial Economics and International Management



Head of Department

Dr. Georg Licht

Deputies

Jürgen Egel

Dr. Christian Rammer

This research department studies the behaviour of companies under dynamic market conditions. A key focus lies on the determinants and effects of market entry and innovation activities. Empirical research is conducted on the basis of the Institute's own firm databases, such as the Mannheim Innovation Panel and the Mannheim Enterprise Panel. The research department is considered one of the leading centres in Europe for the empirical study of innovation and business start-ups.

Research Areas

- Innovation Behaviour and Innovation Strategies
- Research, Technology and Innovation Policies
- Market Development and Firm Dynamics
- Empirical Competition Policy
- Firm Level Databases

The department's research focuses on the functional efficiency of markets for goods, knowledge, and technology. The key question is whether and how government regulation and market intervention raise the general welfare in national economies. Considerable attention is devoted to innovation and research policy intervention and the regulation of network-based industries. From the perspective of business management, the department analyses how enterprises can use innovation strategies to respond to a dynamic market environment and changing international frameworks.

Central Projects

- The Mannheim Innovation Panel analyses the innovation behaviour of companies and the effects on innovation on behalf of the Federal Ministry for Education and Research
- Changes in the use of patents in companies and the efficiency of the patent system within the special research field Transregio
- Business formation in research and knowledge intensive sectors and the role of science as incubator for international and national ministries

Perspectives

Given the observed changes in corporate innovation strategies, more attention will need to be paid in the future to the consequences of the increasing international fragmentation of research and innovation activities. The department also intends to place greater emphasis on the relationships between technological and organisational innovations and their influence upon competitiveness in different enterprises. Alongside the development of the KfW/ZEW Start-Up Panel, the role of established companies as incubators will be explored. Questions regarding the effects of regulation on innovation and investment incentives in "essential facilities" are also the subject of increasing study.

Selected Clients

- Federal Ministry of Education and Research
- European Commission
- German Research Foundation (DFG)
- Anglo-German Foundation
- Federal Ministry of Economics and Technology

Selected Cooperation Partners

- Ludwig Maximilian University Munich
- University of Mannheim
- Catholic University Leuven
- University of Maastricht/UNU-Merit
- KfW Banking Group

Corporate Taxation and Public Finance



Head of Department
Dr. Friedrich Heinemann

This research department examines the consequences of factor mobility for taxation and financial policy, as well as the size, structure, and role of the public sector. The European dimension of the integration processes is an important topic of study, particularly with regard to the analysis of EU tax harmonisation and EU's fiscal constitution. The department is also a leader in Europe in the comparison of international tax burdens thanks to its European Tax Analyzer.

Research Areas

- Corporate Taxation and Analyses of Tax Locations
- Empirical Effects of Corporate Taxation
- Decision Making in Tax and Financial Policy
- Fiscal Competition and Federalism

Perspectives native to business administration, particularly that of business taxation, are closely integrated by the department with methods used in public finance. In its empirical research the department makes use of advanced econometric techniques as well as simulation models grounded in microeconomics in order to compare effective tax burdens internationally. The department has a growing interest in the use of experimental methods; to this end, it collaborates with partners from the fields of behavioural economics and psychology.

Central Projects

- Impacts of a common consolidated corporate tax base using the European Tax Analyzer on behalf of the EU Commission
- Options for the EU's own resource system on behalf of the Federal Ministry of Finance
- Efficiency of providing public services in German municipalities and federal states in the scope of the priority programme "Federalism" of the German Research Foundation (DFG)

Perspectives

Future developments in the department's tax burden research include the geographic expansion of analysis to include Asia, as well as the addition of a microanalytic simulation model. The department plans to undertake an empirical examination of different approaches to the analysis of decision-making behaviour in tax policy. This research will include models of rational resistance to reform, the distortion of information held by voters and politicians, and phenomena of limited rationality. In our research on federalism, we plan to take a closer look at the reciprocal effects between the EU budget and national fiscal policy.

Selected Clients

- European Commission
- German Research Foundation
- Federal Ministry of Finance

Selected Cooperation Partners

- Prof. Dr. Christoph Spengel, University of Mannheim
- Prof. Dr. Lars Feld, University of Heidelberg
- Prof. Dr. Eckhard Janeba, University of Mannheim

Environmental and Resource Economics, Environmental Management



Head of Department
PD Dr. Andreas Löschel

Deputy
Dr. Klaus Rennings

This research department performs economic analyses of policies relevant to the environment as well as of environmental policy instruments. A guiding topic of research is the cost efficiency of environmental regulation. The department plays a leading role in environmental economic policy advising in Europe, in part due to its computable general equilibrium models.

Research Areas

- Innovation and Sustainable Development
- Energy Economics
- Transport and Mobility
- International Environmental and Resource Policies
- Macroeconomic Analysis of Environmentally Relevant Policies

In analysing the optimal function of markets with respect to environmental protection and resource scarcity, the department utilises both qualitative and quantitative analytic methods based on modern microeconomic theory. A preeminent quantitative analytic instrument used by the department is a modular system of computable general equilibrium models known as PACE. Partial market models are also used to analyse individual environmental markets more disaggregated. Survey methods and economic experiments round out the spectrum of methodological techniques employed by the department's researchers.

Central Projects

- European Competitiveness Report: the impact of the EU energy and climate change package on international competitiveness in energy intensive industries on behalf of the Directorate-General Enterprise and Industry of the European Commission
- The explanatory power of fairness theories and the relevance of fairness preferences in international climate change policy, funded by the German Research Foundation (DFG)
- Environmental conservation as a decisive factor when buying a new car, on behalf of the Federal Ministry for Education and Research

Perspectives

Due to the urgent need for action, energy and climate policy will remain the focus of research in the department for the foreseeable future. The effects of energy and climate policy on international competitiveness and trade need to be investigated more deeply. The department is interested in the impact of innovation, technological progress, and green products on the fulfilment of energy and climate policy objectives. Research is additionally focused on the chances of achieving international agreements in climate protection. In this regard, factors that promote voluntary cooperation are being examined.

Selected Clients

- European Commission
- Federal Ministry of Education and Research
- Federal Ministry of Economics and Technology
- German Research Foundation

Selected Cooperation Partners

- Prof. Dr. Christoph Böhringer, Carl of Ossiety University of Oldenburg
- Prof. Dr. Andreas Lange, University of Maryland
- Massachusetts Institute of Technology
- Resources for the Future
- Fondazione Eni Enrico Mattei

Information and Communication Technologies



Head of Research Group

Dr. Irene Bertschek

Deputy

Dr. Marianne Saam

This research group studies the economic aspects of the production and use of information and communication technologies (ICT). It analyses how firms, markets, and human capital development should be organised in order to exploit the potential of ICT for growth and employment to the best advantage of national economies. In Europe, the research group belongs to the leading empirically oriented research units in its field.

Research Areas

- ICT Sector and Diffusion of ICT
- ICT and the Labour Market
- ICT, Firm Strategies and Competition

The research group engages in the microeconomic analysis of individual and firm data, some of which are collected by the group. The methodological focus on microeconometrics is complemented by applied theory, model simulation, and empirical macroeconomics. The uniqueness of the group's approach consists in the cross-sectional investigation of the sustained changes in production, economic transactions, as well as information and knowledge exchange that are associated with the adoption and diffusion of ICT. For this reason, the research group works at the intersection with the ZEW's other research units.

Central Projects

- ICT usage in companies and the calculation of a sentiment indicator for the service providers of the information society
- Employability of older workers in the context of technological and demographic changes
- Outsourcing and counselling as business strategies to safeguard competitiveness

Perspectives

In the future, the group will focus on the combination of microeconomic and macroeconomic research to investigate the growth potential of the service sector as well as the impact of inter-sectoral ties on the productivity effects of ICT. A further new field of research is concerned with analysing the usage of Web 2.0 applications by businesses and employees. An interdisciplinary research network will investigate knowledge-building and networking processes and their effects upon workplace organisation and productivity.

Selected Clients

- Landesstiftung Baden-Württemberg Foundation
- Volkswagen Foundation
- German Research Foundation (DFG)
- Federal Ministry of Education and Research
- Anglo-German Foundation

Selected Cooperation Partners

- Prof. Dr. Martin Peitz, University of Mannheim
- Prof. Dr. Ulrich Kaiser, University of Zurich
- Fraunhofer ISI – Institute for Systems and Innovation Research
- MFG Foundation
- CEBR Copenhagen

Growth and Business Cycle Analyses



Head of Research Group

Prof. Dr. Dr. h.c. mult.
Wolfgang Franz

Deputy

Dr. Marcus Kappler

Macroeconomic questions are the focus of this research group. It investigates political, institutional, and global economic factors that strengthen the economy and promote economic growth in Germany and Europe. Research is primarily concerned with medium- and long-term macroeconomic growth. This specialisation distinguishes the group from the business-cycle research units housed at other German economic institutes.

Research Areas

- Analysis of Long-Term Macroeconomic Interrelations
- Analysis of Short-Term Macroeconomic Interrelations
- Development of Analytic Tools and Methods

The research group utilises advanced methods in macroeconometrics and theoretical macroeconomics. Its special areas of expertise include the analysis of panel data, cointegration models, and structural vector autoregressive models. The latest estimation procedures are tailor-fit for each application. Dynamic equilibrium models are also used by the group to analyse the economic consequences and general welfare impacts of changes to fundamental factors.

Central Projects

- Study on economic integration and business cycle synchronisation
- Analysis and estimation of the structural unemployment in Germany to improve the methods for evaluation of the structural deficit and potential output
- Investigating the shift in the factor income distribution in Germany

Perspectives

The research group's strategy is to integrate long- and short-term growth concepts in a consistent empirical and theoretical approach, as well as to macroeconometric and macro-theoretical analytic tools. The global economic recession which began in 2008 will become an important subject of research. The role of the institutional environment and economic policy reforms will also be studied under the group's research plan. The group additionally intends to develop custom datasets for analysing the effects of structural reforms over time.

Selected Clients

- European Commission
- Federal Ministry of Finance

Selected Cooperation Partners

- Prof. Tom Krebs, PhD,
University of Mannheim
- Institute for Advanced Studies, Vienna

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ABOUT US

► QUALIFICATION OF STAFF

Encouraging the development of young academics is a core aim of ZEW. The Institute supports the professional growth of its staff at all levels with a broad range of educational measures.

Professional development is firmly anchored in our goal system as well as in our organisational processes. The ZEW qualification programme is based on both internal and external educational offerings.

Essential instruments for qualifying our young scientific staff are:

- Participation in doctoral programmes and courses provided by universities
- ZEW qualification programme “Econometrics”
- Periods of paid release – “Sabbaticals”
- Seminars on scientific working methods and project management
- Mentoring by head of unit, senior researchers, and research associates

Doctoral Education

Graduate education is the key area in which young academics are encouraged and supported at ZEW. Two-thirds of ZEW’s scientific employees are working on their doctoral dissertations. We currently employ 72 doctoral candidates. In order to accommodate a wide range of research topics and personalities, doctoral education is carried out in an open framework.

University graduates who begin their research career at ZEW can attain their doctoral degree by following one of two pathways (see Figure next page):

- by working as a full-time staff member in a ZEW research unit (ZEW’s in-house PhD programme)
- by participating in the ZEW Doctoral Studies Network (ZEW DocNet)

Regardless of the path chosen, clear milestones help to insure that our doctoral candidates make steady and rapid progress. Successful completion of a doctoral degree does not take longer at ZEW than at most German universities. Our doctoral candidates require on average less than five years to obtain a PhD.

The *classic doctoral path* at ZEW involves the writing of a doctoral dissertation based on collaborative projects. In tandem with experienced

economists and the heads of the research units, young researchers develop a topic for their doctoral dissertation based on ongoing project work.

Once doctoral students are matched with a research topic, a dissertation mentor is sought out at a German or foreign university. The ongoing development of the dissertation is based on the regulations for doctoral studies at the university in question. The candidate also has the opportunity to enrol in doctoral courses at the university.

In 2006 the Institute launched a second pathway for PhD students: *ZEW DocNet*. This international network links ZEW with graduate programmes that are ambitious in their content and scope. Collaboration with outstanding doctoral programmes also helps the Institute to attract promising academic talents.

Those who chose the ZEW DocNet pathway must first apply for admission to the graduate school of a participating university. After having completed the entire graduate curriculum, they may then pursue their project work either in part or entirely at ZEW. The collaboration with the Institute is implemented in a flexible fashion.

ZEW DocNet is still being developed, but already accounts for one in seven of the Institute’s doctoral candidates. Over the next few years it will take on even greater importance in ZEW’s doctoral education programme.

Qualification Programme

ZEW helps to advance careers of its staff with a qualification programme. This programme, which is financed through a special qualification fund, supports superior scientific work in a number of ways. The research sabbaticals funded under the programme, for example, free up time for researchers to pursue work independent of their project responsibilities at ZEW. Individual progress on a researcher’s dissertation is a key criterion for obtaining financial support from the qualification fund.

Activities supported by the qualification fund include:

- Release from project responsibilities at ZEW to complete one’s own research
- Longer residencies at German and foreign research institutions

Two Ways of Doctoral Education at ZEW

<p>ZEW DocNet</p> <p>Application for admission to the graduate school of a participating university</p>	<p>ZEW's In-House PhD Programme</p> <p>Application for admission directly to ZEW</p>
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PhD- Specific Activities

<p>Phase 1 1st – 2nd year</p>	<ul style="list-style-type: none"> ■ Doctoral courses and mentorship from professors at the respective university ■ Development of first paper/ doctoral dissertation topic ■ University regulations apply 	<ul style="list-style-type: none"> ■ Mentorship at ZEW from the heads of research units, senior researchers, and research associates ■ Development of first paper/ dissertation topic ■ Participation in selected courses of a doctoral programme in coordination with the mentor
	<ul style="list-style-type: none"> ■ Application to ZEW ■ Matching of ZEW projects and university topics ■ Agreement about workload at ZEW 	
<p>Phase 2 1st – 2nd year</p>	<ul style="list-style-type: none"> ■ First draft of a discussion paper ■ Presentation of draft paper at a ZEW seminar ■ Search for a PhD supervisor 	
<p>Phase 3 2nd – 4th year</p>	<ul style="list-style-type: none"> ■ Development of further papers ■ Active participation in international conferences ■ Sabbaticals/periods of paid release 	
<p>Phase 4 3rd – 5th year</p>	<ul style="list-style-type: none"> ■ Completion of further papers ■ Sabbaticals/periods of paid release ■ Residencies at research institutions ■ Completion of the doctoral dissertation 	

- Participation in seminars, doctoral colloquia, and summer schools

All research staff have access to ZEW's internal professional development programmes. There are courses in econometrics, in the areas of computing, foreign languages, and communications, as well as leadership skills.

ZEW familiarises students with empirical research methods. It employs a large number of interns and research assistants from nearby universities. The Institute offers assistants and interns a first opportunity to apply theoretical and methodological knowl-

edge acquired in school to actual research practice. Often, bachelor's and master's diploma projects emerge from such work, which may be supervised by ZEW research staff members.

Professional Development for Non-Scientific Employees

ZEW takes the professional development of its non-scientific employees just as seriously as the training of its young researchers. We offer numerous opportunities for continuing education, primarily

in the form of educational programmes related to an employee's current area of work.

Popular training programmes involve the fields of law, accounting, bookkeeping, management, and computer skills. There is also an ongoing continuing education programme in English language skills.

As an employer, ZEW always maintains up to five trainee positions in the areas of administration and service. Personal advisors guide trainees during their professional training period.



The participants of our Summer School "Labour Economics – Theory, Empirical Methods, Current Research" that was taking place from the 15th until the 19th of September 2008.

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ABOUT US

© ECONOMIC POLICY ADVISING

One of ZEW’s guiding objectives is to provide economic policy advising based on rigorous economic research. We advise actors from the worlds of politics and administration at the European level as well as in Germany at the federal and state level. We also advise associations and international organisations.

Channels for Policy Advising

We are using different channels for economic policy advising:

- Scientific studies and reports on behalf of public authorities
- Participation of our researchers in parliamentary hearings, formal consultations with parliaments, ministries, and the EU Commission, as well as memberships in political advisory boards
- Informal consultations with representatives of the EU Commission, ministers and staff of various administrations, as well as parliamentarians
- Participation in public debates on economic policy issues in the media

Clients

Over the past years the ZEW managed to extend its importance in the field of economic policy advising. The German government and international ministries are ZEW’s most important clients for advising

services, followed by the European Commission, and companies and associations (see Figure).

Quality Management

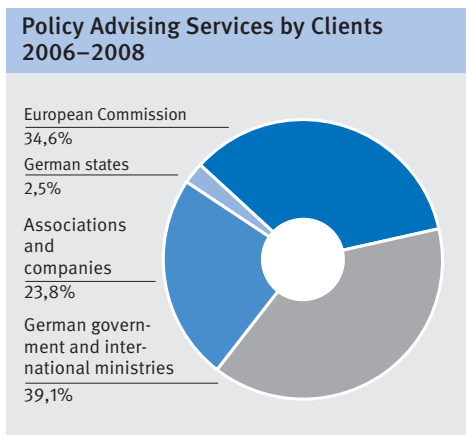
Our integrative personnel policy guarantees the scientific rigor and quality of our advising services: at ZEW, policy advising is not the purview of a specialised team of “advisors”, but is instead the responsibility of every researcher.

The same individuals at the Institute are responsible for the implementation of studies for policy advising and the drafting of papers for publication in refereed scientific journals. The reciprocal ties between policy advising and economic research are guaranteed by our staff organisation. The success of this approach at ZEW is amply demonstrated by the high percentage of researchers who publish in refereed journals. This approach also ensures the high scientific quality of the studies and assessments undertaken for economic actors.

Most research projects financed by third-parties are acquired through competitive bidding. From the very beginning, this facilitates the external assessment of the quality of the research questions, methodological approach, and the expected results. In many cases, there is a rigorous acceptance process at the end of a project. Frequently, project findings must be presented at scientific workshops.

Experienced and recognised researchers direct and support ZEW’s project teams. ZEW’s senior researchers often take on this role. Those responsible for leading a project are actively involved in practical research work and can thus ensure the quality of research being performed. Young researchers receive competent mentoring while conducting their work.

The research director and research unit heads are directly involved in project work. They are available to researchers and project directors for consultation. Often research associates and other external researchers participate in projects. In this way, our own research work is continuously evaluated and challenged from outside the Institute.



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ABOUT US

◉ KNOWLEDGE TRANSFER

At ZEW, we view knowledge transfer as a reciprocal process of communication at the national and European level. On the one hand, we contribute to the discussion of economic issues and policy. On the other hand, the research, advising, and educational activities at ZEW are enriched by our engagement in the worlds of academia, business, and politics. In our view, knowledge transfer is not a one-way street.

Excellence in economics has a number of dimensions at ZEW, including: the publication of research findings in leading scientific journals; national and international networking with cutting-edge research establishments; ongoing knowledge exchange through conferences and workshops, as well as the creation and maintenance of unique databases.

The knowledge provided by ZEW is informative, timely, and geared for specific target groups. Our primary target groups are: economists and researchers at universities and research institutes worldwide, the media, specialised employees and managers in the private sector, government agencies and associations, as well as citizens with an interest in economics and the social sciences.

ZEW Publications

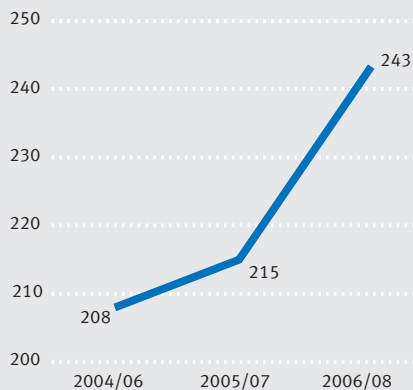
The publication of research findings in recognised international *journals* that have an external referee process remains the core indicator of the scientific output of a research institution. For this reason, success in publication is a fixed component of ZEW's goal system. In the future, researchers whose work is accepted for publication in economics and business management journals of the A and B category will also be rewarded monetarily at ZEW. For publications of 2008 see pages 65–67.

In terms of publications, ZEW is a leading economic research institute in Germany:

- Between 2006 and 2008 a total of 243 papers written by ZEW researchers were accepted for publication in refereed journals (see Figure 1).
- In recent years ZEW has secured an average of 0.85 acceptances per full-time researcher per year.

ZEW has significantly increased its publication output in recent years. According to quality-weighted independent assessments, the number of refereed articles published by ZEW researchers rose by

1 Growing Number of Publications



Reading aid: Number of accepted articles and papers in refereed journals in periods of 3 years.

73 per cent between 1997/1999 and 2003/2005. Since 2000, the Institute has doubled its annual publication output per researcher.

Our publication success is the result of the work of many researchers, not just a few leaders in the field. In 2006, for example, one of every three ZEW researchers published a paper in an SSCI journal. The Institute thereby achieved a second place rank among the economic research institutions affiliated with the Leibniz Association.

Every year ZEW publishes more than 100 *ZEW Discussion Papers*, which represent the central medium for the dissemination of our research findings. Our discussion papers undergo a thorough review process prior to publication. They are released at our homepage and at leading scientific databases. ZEW Discussion Papers attract wide attention in the economics community, as demonstrated by high download numbers at RePEc, a leading international database of economic publications.

To make ZEW Discussion Papers understandable to the general public, non-technical summaries in German and English are a standard part of the publication process. These summaries often serve as the basis for press releases and news items published by ZEW and in external media channels.

ZEW maintains two *book series* for the publication of its research work: ZEW Economic Studies (publisher: Physica/Springer) appears in the English language, while ZEW Wirtschaftsanalysen – Schriften-

reihe des ZEW (publisher: Nomos) is published in German. For publications of 2008 see pages 67–68.

The Institute's *periodic publications and research reports* have a wide readership, including academics and students from many disciplines, specialists, and managers in a variety of economic sectors, as well as citizens with a general interest in economic policy. The publications and research reports contain selected findings from our research and policy advising activities, discuss survey results and our database analyses, as well as provide information concerning conferences, meetings, and ZEW seminars.

Selected periodic publications and research reports are:

- ZEWnews (English edition)
- ZEW Wachstums- und Konjunkturanalysen
- ZEW Finanzmarktreport
- Financial Market Report Switzerland
- Financial Market Report CEE
- ZEW Branchenreport Dienstleister der Informationsgesellschaft
- ZEW Gründungsreport
- IKT Report
- M&A Report
- ZEW Energiemarktbarometer
- TransportmarktBarometer
- ZEW Branchenreport Innovationen
- Innovationsverhalten der deutschen Wirtschaft

Databases

In most cases, individual level data form the basis for empirically oriented research work at ZEW. The Institute improves opportunities for empirical research in three ways:

- with data collected in-house
- with data gathered in conjunction with other research institutions
- through the exploitation of existing datasets for economics research

ZEW maintains the necessary infrastructure for the collection, processing, and in-house assessment of data according to recognised scientific standards. After processing data sets to be user-friendly, we make them available to the professional public whenever possible.

An example of data collection at ZEW is the KfW/ZEW Start-Up Panel. This recurrent survey is the basis for a unique database in Germany regarding start-up activities and business dynamics. Initiated in 2008, the panel is configured to continue through 2013.

Another example of data collection is the TransportmarktBarometer. Over 300 selected experts in the freight shipment and transportation industries in Germany participate in this panel survey. It gathers expert opinion on a quarterly basis regarding transportation cost trends as well as specialised topics with relevance for research at the Institute.

ZEW is also participating in the ongoing development of large data sets that are assembled in collaboration with other research institutions. A few examples:

- We are collaborating with the Socio-Economic Panel Study (SOEP) in Berlin in order to measure the development of cognitive and non-cognitive skills over an individual's life.
- We are developing questionnaire items for the National Educational Panel Study (NEPS) for research in the areas of secondary and tertiary education.

Existing microdata sets are also exploited for the Institute's research. In close collaboration with the Research Data Centre (FDZ) at the Institute for Employment Research (IAB) in Nuremberg, ZEW has undertaken pioneering work that investigates linked business and employee data. In the course of research conducted by ZEW to evaluate the effects of recent reforms to Germany's unemployment benefit system (the so-called Hartz reforms), administrative data maintained by the German Federal Employment Agency were systematically utilised for research purposes for the very first time.

The ZEW provides researchers at academic and non-academic research institutions with access to some databases maintained by its research units. The data are only provided for research purposes and to ensure the protection of privacy, are encoded and anonymised. A data-sharing fee is charged to cover the ZEW's expenses. Access to the following databases is offered:

- **Mannheim Innovation Panel (MIP)**

The Mannheim Innovation Panel is a database with information on the innovative activities of compa-

nies in Germany, collected on the basis of an annual company survey. Contact: Dr. Sandra Gottschalk (gottschalk@zew.de)

■ Mannheim Enterprise Panel (MUP)

The Mannheim Enterprise Panel covers firm-level data for analysing business start-ups, growth, and insolvencies including data from some 5.9 million West German and 1.4 million East German enterprises. Contact: Dr. Georg Metzger (metzger@zew.de)

■ Business Survey in the ICT-Related Services Sector

The Business Survey in the ICT-Related Services Sector is a quarterly survey of ICT-intensive and knowledge-intensive service providers on their current and expected economic situation. Contact: Jenny Meyer (meyer@zew.de)

■ ZEW Financial Market Survey

The ZEW Financial Market Survey is a monthly survey of experts on expectations regarding economic as well as international and national financial market trends. The survey is conducted in Germany, Switzerland, Austria, as well as Central and Eastern Europe. Contact: Dr. Michael Schröder (schroeder@zew.de)

■ KfW/ZEW CO₂-Panel

The KfW/ZEW CO₂-Panel is a survey of companies, experts, and researchers regarding the current situation and expected developments in the EU emissions trading market. The survey is conducted in cooperation with the KfW Banking Group. Contact: PD Dr. Andreas Löschel (loeschel@zew.de)

Cooperation Partners and Visiting Researchers Programme

Intense cooperation with research institutions in Germany and abroad is a decisive factor in the success of our economic research. Network relations are often a prerequisite for the successful completion of advising projects for international clients.

We cultivate our ties both nationally and internationally with universities, research institutes, and organisations. We place great value upon the interdis-

ciplinary nature of our network as well as its international scope. ZEW has distinguished international collaborative partners, primarily in Western Europe, but increasingly in Eastern Europe as well as overseas (see Figure 2).

2 Cooperation Partners in Europe



One example is the collaboration between ZEW and the University of Chicago. Economics Nobel Prize winner Prof. James J. Heckman, PhD, provides young researchers at ZEW with the opportunity to work on his research team in the field of educational economics. In Asia, we are in the process of establishing a partnership with Xiamen University, which houses one of China's leading economics faculties.

ZEW engages in particularly close cooperation with universities in the region. We have a collaborative agreement with the University of Mannheim for the shared use of resources, as well as with the University of Heidelberg for the joint appointment of junior professors (the University of Mannheim will also soon join in this agreement). Furthermore, we have jointly appointed a research unit head together with the University of Heidelberg.

Our collaborative network is decentralised in its organisation. It is guided by the specific needs of our researchers. International collaboration frequently arises in the case of research questions that involve international comparisons. Additional cooperative arrangements serve the purpose of professional development and scholarly exchange. The ZEW Visiting Researchers Programme is especially significant in this regard.

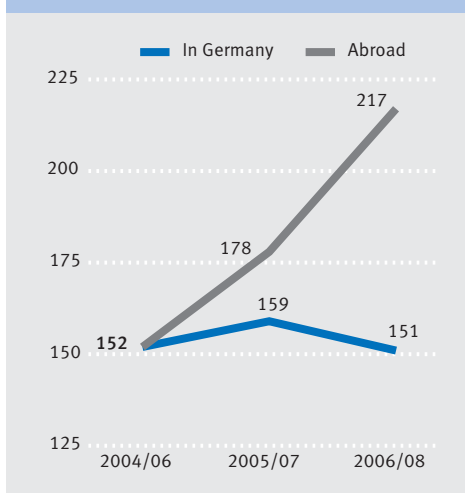
Participation in Scientific Conferences

Another important means of establishing cooperative ties is scientific exchange through conferences and workshops. In order to effectively communicate its specific expertise, ZEW organises numerous internationally recognised events (see pages 68–69). Our researchers regularly present their work for discussion to the professional public at national and international conferences.

ZEW's high level of prominence at national and international conferences is equalled by hardly any other German economics research institute. Currently, our researchers make more than 350 presentations every year at scientific conferences. Participation in international conferences rose significantly in recent years (see Figure 3). The Institute promotes the success of its staff at conferences by subsidising costs and freeing up time for attendance. In addition, ZEW holds specialised seminars for its staff to teach effective presentation techniques and rules of conduct for participating in international events.

International conferences also present an opportunity for ZEW to make itself better known as an institution. For this reason, we maintain an information booth at important national and international meetings. At the ASSA meetings in the US, for example, we actively recruit young research talents.

3 Participation of ZEW-Researchers in Conferences



Events at ZEW

ZEW promotes dialogue with research institutions, businesses, government agencies, organisations, and the general public through the organisation of numerous events. ZEW's research units stage 20 to 25 scientific conferences and workshops every year. These events, alongside the participation of ZEW researchers in conferences around the world, are important instruments for promoting exchange and collaboration between ZEW's professional staff and researchers throughout Germany and the world.

Beside scientific events, the ZEW is regularly organising events for the interested public. This includes particularly:

- The First-Hand Information on the Current Economic Policy (Wirtschaftspolitik aus erster Hand)
- The Mannheim Discussions on Economic and Currency Issues (Mannheimer Wirtschafts- und Währungsgespräche)
- The ZEW Economic Forum (ZEW Wirtschaftsforum)

Speakers at "First-Hand Information on the Current Economic Policy" 2006–2008:

- Dr. Angela Merkel, German Chancellor
- Dr. Jürgen Hambrecht, Chairman of the Management Board, BASF SE
- Dr.-Ing. Ekkehard D. Schulz, Chairman of the Management Board, ThyssenKrupp AG
- Franz Müntefering, Minister of Labour and Social Affairs
- Ulla Schmidt, Minister of Health
- Peer Steinbrück, Minister of Finance
- Hartmut Mehdorn, Chairman of the Management Board, Deutsche Bahn AG
- Prof. Dr. Dr. h.c. Hans-Jürgen Papier, President of the Federal Constitutional Court

Public Relations

ZEW caters to the media and general public with a comprehensive range of regularly updated online resources. Visitors can read current news items and download a large number of research papers at the Institute's website. Our electronic newsletter is sent to 4,300 subscribers each month. It provides a

concise report of new research findings, projects, publications, events, and staff news.

Our special web platforms are a particularly useful service. They are arranged by topic and organise projects, publications, reports, press releases, and contact information concerning current issues in one place. This makes researching information on a specific topic much easier. Separate web platforms exist for ZEW's core research topics, e.g. climate policy, education, innovation, and business taxation.

We respond promptly to the numerous inquiries addressed to the Institute every day. Similarly, we approach a number of actors – particularly in the media – in order to obtain a multiplier effect for the Institute's expertise. In addition, we release some 100 press releases and hold twelve press conferences every year in order to keep the media abreast of the Institute's latest research findings and to participate in the ongoing economic policy debate.

In the area of knowledge transfer, ZEW caters to the interests of particular target groups. Well-maintained contact lists facilitate targeted communications. Professionally designed documents based on ZEW's corporate design promote the recognition value of ZEW's informational media. A reader-friendly layout, attractive illustrations, and informative graphics strengthen the acceptance of ZEW's media by our target groups.

High Quality Seminars for External Participants

The Knowledge Transfer and Qualification Programmes service department develops and organ-

ises high-quality seminars. It is a unique entity in the German research landscape. Every year our seminars attract over 700 participants. ZEW seminars provide practical and scientifically rigorous professional development. ZEW researchers and experts from organisations and businesses collaborate closely in order to insure that the seminars fulfil the highest quality standards. Our range of seminar events clearly sets itself apart from that of other German providers of continuing education.

The department offers programmes in four different formats:

- Annually, some 50 expert seminars are offered to participants from the worlds of academia, business, and politics. Alongside the strong demand for seminars on macro- and microeconomic topics (e.g. real estate and financial markets), ZEW's methodological expertise (e.g. in econometrics; the application process for the EU's Framework Programme for Research) is also highly sought after.
- Some 15 seminars are directed each year at businesses and public institutions who wish to offer their employees individualised professional development training.
- The symposia for practitioners serve to promote dialogue between economists and professionals in the worlds of business and politics. One example is the annual Mannheim Corporate Tax Day, where tax experts meet with business representatives.
- Seminars for in-house professional development are provided to ZEW researchers. These seminars teach techniques for scientific work, such as how to write for the press and make effective presentations.

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ZEW IN 2008

◉ ACTIVITIES OF RESEARCH UNITS

International Finance and Financial Management



From left: Sandra Schmidt, Tereza Tykiová, Mariela Borell, Peter Westerheide, Felix Schindler, Matthias Köhler, Michael Schröder, Sabine Adler, Gunnar Lang, Heidi Schielke, Andreas Schrimpf, Christian Dick, Rüdiger Meng, Waldemar Rotfuß, Qingwei Wang

Research Areas

- **International Financial Markets and European Integration**
Contact: Dr. Michael Schröder
 - European financial market integration
 - Regulation and supervision
 - Globalisation of venture capital and private equity
 - International comparison of financial centres
- **Financial Market Analysis**
Contact: Dr. Michael Schröder
 - ZEW Financial Market Survey
 - Expectation and price formation in financial markets
 - Analysis of international capital markets
 - Socially responsible investments
- **Investments and Financial Services**
Contact: Dr. Peter Westerheide
 - Wealth formation and savings behaviour
 - Financing of old-age provisions
 - Banks, insurances, mutual funds
- **Corporate Finance**
Contact: Dr. Tereza Tykiová
 - SME financing
 - Venture capital, private equity
 - Mergers and acquisitions
- **Real Estate and Financial Markets**
Contact: Dr. Peter Westerheide
 - Real estate as an asset class
 - Spillover effects
 - New types of investors

The department's key areas of research are international and, in particular, European financial markets. The studies conducted by the department are concerned with the behaviour of important economic groups in these markets, e.g. banks, institutional investors, private households, and firms. In analysing these economic agents, factors arising from the institutional environment – such as the oversight and regulation of the banking sector – are taken into account.

Research Area “International Financial Markets and European Integration”

The dominant topics in this research area are concerned with capital market integration in Europe, and, in particular, with those elements of the banking and insurance sectors in which integration still shows marked deficiencies (i.e. primarily the retail market segments for private and business customers). Another focus is the comparative analysis of financial centres in Europe, including research on the ways in which the current financial crisis will affect the relative importance and future potential of various international financial centres.

Consolidation in the private equity sector is being investigated in the context of a project funded by the EU. A key area of study pertains to fiscal regulations for private equity funds and how such regulations have played a significant role in the international integration of the private equity sector.

Of particular importance toward the stronger integration of financial markets is the nature and intensity of cross-border competition between financial service providers. Discrepancies in supervision and regulation that may lead financial service providers to conduct regulatory arbitrage are an important factor influencing the strength of such competition. Two German Research Foundation (DFG) projects have already been completed during the past years on this topic, and the results of these studies can serve as a basis for further research. Future projects will investigate competitive processes for financial services in European markets. Questions regarding the systemic stability of the banking sector and regulatory practices that can serve to insure stability will also be explored.

Research Area “Financial Market Analysis”

This research area is concerned with the theoretical and empirical investigation of asset pricing and the analysis of expectations. Money and currency markets are – like the equity and bond markets – analysed particularly from a microeconomic perspective. Macroeconomic aspects, by contrast, enter into the analysis of financial markets first and foremost as framework conditions. Of special importance is the analysis of changes that have occurred in international asset markets over the course of the financial crisis.

The monthly ZEW Financial Market Test is a survey that provides an important foundation for studies on the topic of expectation formation, as it delivers primary data about expectations regarding international financial market trends as well as expectations on important fundamental factors, such as the business cycle and inflation. This survey also forms the basis for a well-known German economic indicator, the ZEW Indicator of Economic Sentiment. The data gathered in this survey are being used to an increasing extent in our own research projects as well as by outside researchers. The expansion of the financial market survey to include Switzerland as well as Eastern Europe and Austria represents an important step towards the further enlargement of the share of international participants in the survey.

Econometric studies concerning the characteristics of returns from securities stand at the foreground of the analysis of asset pricing. The projects are primarily concerned with examining the cross-section of expected stock returns, as well as stock index trends and the relationship between stock prices and other financial market factors. Event studies that evaluate the influence of various exogenous events on stock prices (such as bank mergers) play a particularly important role in this area of research.

The investigation of relationships between corporate social responsibility, corporate success, and capital market valuation has constituted the focus of a longstanding collaboration with the Environment and Resource Economics, Environmental Management research department. Ongoing projects in this area of research are concerned with a variety

of topics. Within the context of a project funded by the Swiss National Fund, for example, event studies are being used to investigate the effects of special environmental incidents on stock prices. An additional project is currently underway in cooperation with the Environmental Economics department and is examining the relatively new market for CO₂ emission certificates. Key subjects of study in this project are the microstructure of the emissions trading market as well as the characteristics of certificate prices and the effects of new information.

Research Area “Investments and Financial Services”

The Investments and Financial Services as well as Corporate Finance research areas are focused on the investigation of financial-market decisions made by corporations, financial service companies, institutional investors, and private households. Both areas of research have a largely microeconomic orientation.

The key subjects of interest in the Investments and Financial Services research area are the savings and investment behaviour of households and new developments in the market for financial services. Studies are frequently carried out on the basis of micro-datasets (for example, income and consumption surveys from the Federal Statistical Office or the Socio-Economic Panel Study). Issues related to real estate previously investigated within this research area are being examined with additional intensity within the framework of the new research area Real Estate and Financial Markets.

An additional focus lies with the products and behaviour of financial service providers, such as banks, insurance companies, and investment funds. Projects in this area have previously dealt with retirement provisions and real estate. In the future – while considering the consequences of the financial crisis, among other factors – additional focal points of research will be financial product trends and provider behaviour in mortgage markets as well as European integration in the market for real estate financing and retirement planning products.

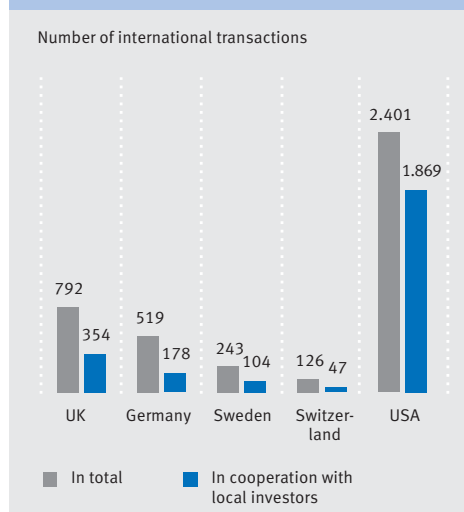
The dot-com bubble that burst in 2001/2002 as well as the current financial crisis have increased the awareness of risk of private and institutional in-

vestors, as market risks for specific investment products such as stocks, but also for products related to money markets and real estate funds, have turned out to be far higher than anticipated. Likewise, banks and other financial service companies have been forced to substantially augment the assessed risk of default on their investments. Will this have a significant impact on the aggregate savings behaviour of households? How will the portfolio structures of private and institutional investors change in response to this new risk assessment? These are a few of the questions that will be the focus of future projects in this research area.

Research Area “Corporate Finance”

This area of research is primarily concerned with different aspects of equity and debt financing as well as corporate governance. Projects in the area of venture capital (VC) and private equity (PE) play a particularly prominent role. Research activities planned for the future can build upon the findings of a wide range of completed studies undertaken for basic research (for example, German Research Foundation projects) or for the purpose of economic policy advising.

1 Transactions of Foreign Private-Equity-Investors in Selected Countries 2000–2006



Building upon recently completed projects regarding the behaviour of VC and PE investors, a new project financed by the EU under its 7th Framework Programme will study internationalisation as well as the role of international syndicates within the PE sector in Europe (see Figure 1). The study will make use of a comprehensive database created in earlier projects on global private equity deals.

Additional current projects are concerned with evaluating strategies employed by VC and PE investors. In this connection, the significance of so-called buy-and-build strategies will be the main topic of study in a German Research Foundation project. In addition, the active role played by VC investors in the firms contained in their portfolios will be more closely examined.

Questions related to mergers and acquisitions are also explored within the scope of VC and PE projects; the aforementioned study of buy-and-build strategies is an example here. One project is concerned with M&A in the European banking sector. In the project, event studies are being used to evaluate various hypotheses concerning the effects of corporate mergers. Cooperation with the Industrial Economics research department takes place on a regular basis for the drafting of the M&A Report.

Regarding the topic of SME financing a project for the German Federal Ministry of Economics and Technology (BMWi) was recently completed on fam-

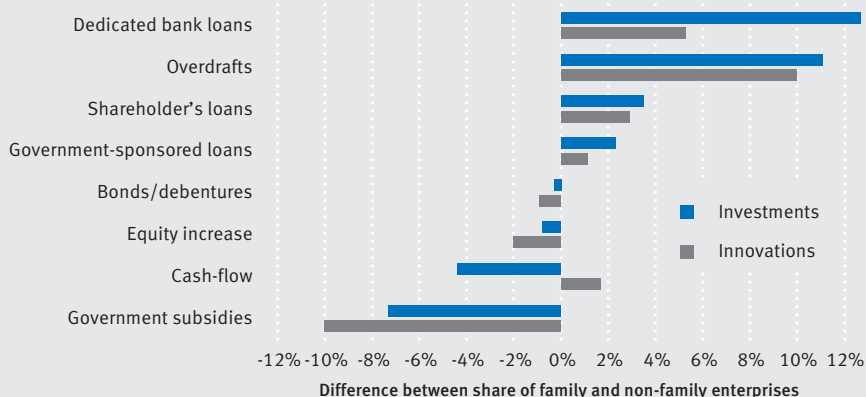
ily businesses. The analysis of special features exhibited by family-run enterprises was a key focus in the portion of the project devoted to financing (see Figure 2). Another project is currently investigating financing options offered by hybrid capital. An overview of the various forms of hybrid capital has already been developed. The task now is to develop appropriate models for the assessment of selected hybrid financial instruments.

In all likelihood, the financial crisis will not only have a negative impact on international VC and PE markets. It will also change the financing structures employed by companies on the whole. In particular, a greater emphasis on equity financing is likely to be witnessed, as the financing conditions on capital markets (for corporate bonds and stocks) as well as those offered by banks have deteriorated. The current environment poses a number of wide-ranging questions related to corporate finance, the number of new start-ups as well as the consequences for the growth potential of the overall economy.

Research Area “Real Estate and Financial Markets”

The new research area of Real Estate and Financial Markets can fall back on a range of earlier and ongoing projects related to, on the one hand, the real estate investment market (for example, REITs and portfolio transactions on the German real es-

2 Forms of Financing Used by Family Businesses and Other Enterprises in Germany, 2004–2006



Reading aid: The share of family enterprises using dedicated bank loans was 12.7 per cent higher than the share of non-family enterprises.

tate market), and, on the other hand, private real estate investment and financing (for example, with a view to retirement planning and reverse mortgages). Projects in this area have also dealt with fundamental questions regarding real estate market activity, including the significance of real estate markets for the overall economy, factors impacting real estate price trends, and the performance of real estate investments.

The initial catalyst for the establishment of an independent area of research on real estate markets was the approval of the network project "Real Estate and Capital Markets" within the scope of the Leibniz Association's Pact for Research and Innovation. Over the next years, this project will intensify its study of relationships between financial and real estate markets. Important starting points for research include: spillover effects between real estate and capital markets (which

stand at the epicentre of the current financial crisis); the increased capital market financing of real estate markets; as well as new developments in the market for indirect real estate investment. These topics will be examined from the perspective of real estate markets, capital markets, as well as from the perspective of investors.

Of special significance are future developments in real estate financing. The financial crisis poses questions regarding the role played by mortgage securitisation in the changing structure of real estate finance witnessed in recent years in many countries. Recent events have raised numerous questions concerning the future of the market for securitised products and the repercussions this will have on the financing of commercial and private real estate.

For detailed information on current and finished research projects please check our website:
<http://www.zew.de/en/forschung>

Labour Markets, Human Resources and Social Policy



From left: Maresa Spietsma, Benedikt Lang, Andrea Altenrenger, Karsten Reuß, Andrea Mühlenweg, Bodo Aretz, Alisher Aldashev, Johannes Gernandt, Terry Gregory, Christian Göbel, Stephan Dlugosz, Verena Niepel, Melanie Arntz, Thomas Walter, Pia Pinger, Nicole Gürtzgen, Grit Mühler, Julia Horstschräer, Jan Fries, Holger Stichnoth, Holger Bonin

Research Areas

- **Employment and Wages**
Contact: PD Dr. Nicole Gürtzgen
- Wage formation and income inequality
- Employment dynamics
- **Social Welfare Institutions**
Contact: Dr. Christian Göbel
- Evaluation of labour market policies
- Behavioural microsimulation
- **Personnel Economics**
Contact: Prof. Dr. Thomas Zwick, Susanne Steffes
- Insider econometrics
- Firms and demographic change
- **Education Economics**
Contact: PD Dr. Friedhelm Pfeiffer

- Formal education
- Informal education

The Labour Markets, Human Resources and Social Policy research department investigates how to best organise institutions in the labour market and manage working conditions in firms so as to achieve high levels of employment and satisfying distribution of income in the knowledge-based European economy. The department hosts a Priority Programme of the German Research Foundation (DFG) dedicated to the analysis of income and employment trends in heterogeneous labour markets, as well as the multidisciplinary “Non-Cognitive Skills” project funded by the Leibniz Association. Yet alongside its basic research activities, the department also provides scientifically rigorous policy advising services, particularly to federal ministries. The department plays an important role in efforts to evalu-

ate the effects of the German tax and transfer system as well as the fundamental labour market reforms enacted in recent years.

A unifying element in the department's work is the examination of the impacts of demographic change on the performance of labour markets. Last year, for example, the department developed a strategy for the German state of Baden-Württemberg to address its skill shortages. We looked at economic policies that best promote skill formation, labour supply incentives, and targeted immigration through an international benchmarking study.

Noteworthy is the department's research area Education Economics. To use economic methods for analysing the acquisition of cognitive and non-cognitive skills in early childhood and its long-term economic consequences gives us a research focus unique in Germany. In this area of research the close collaboration with Nobel Laureate Prof. James J. Heckman, PhD, of the University of Chicago intensified in 2008.

Research Area "Employment and Wages"

The Employment and Wages research area is concerned with the core themes of labour market research. By analysing imperfections in the labour market caused by institutions as well as structural frictional rigidities, it assists in the determination of options for political action that would promote a better functioning labour market.

The research area primarily deals with the dynamics of individual employment histories and questions of wage formation and income inequality. Of particular interest are the specific outcomes in sectoral, regional, occupational, and firm labour markets.

Research on the dynamics of individual employment histories conducted in 2008 investigated, for example, the impact of language capacity and earnings of foreigners. Using an empirical model controlling for multiple forms of self-selection, the study shows that foreigners with a good mastery of German attain higher participation and employment rates. Language skills do not have a direct impact on earnings, however.

The research regarding wage formation and income inequality focuses primarily on wage setting

institutions, their impact on the firm level, and the determinants of wage inequality between groups of workers. A project that was initiated in 2008 aims at analysing the development of the factor income distribution in Germany and other industrialised countries. In particular, it investigates the role of wage moderation, globalisation, demography, employment structure, trade union power, and other factors characterising the institutional framework of an economy. Furthermore, it explores the importance of employees' profit-sharing

In order to better integrate labour market research between universities and research institutions, the research department coordinates the German Research Foundation Priority Programme titled "Flexibility in Heterogeneous Labour Markets", the third phase of which was launched in 2008. The programme investigates the effects of existing institutional frameworks on the adaptability of labour markets. Theoretical and empirical research concerning the relationship between wage agreements and wage levels is one example of the work performed thus far. One project initiated last year aims at disaggregating company-specific shocks in order to identify how individual wages respond to temporary and permanent shocks.

Research Area "Social Welfare Institutions"

The Social Policy research area analyses the economic effects of social welfare institutions on the labour market. Our understanding of such institutions includes any political, juridical, and societal rules and organisations that serve to support the material and social safety of citizens.

The research area is distinguished by a well-developed spectrum of methods for both ex ante and ex post evaluation. It has a strong record of policy advising projects and provides political decision-makers with empirical evidence to design social protection institutions in an effective and efficient manner.

For the assessment of ex ante effects, the research department employs a comprehensive behavioural simulation model that was developed over many years. The model is built upon a microeconomic model of the German tax and transfer system. The link of

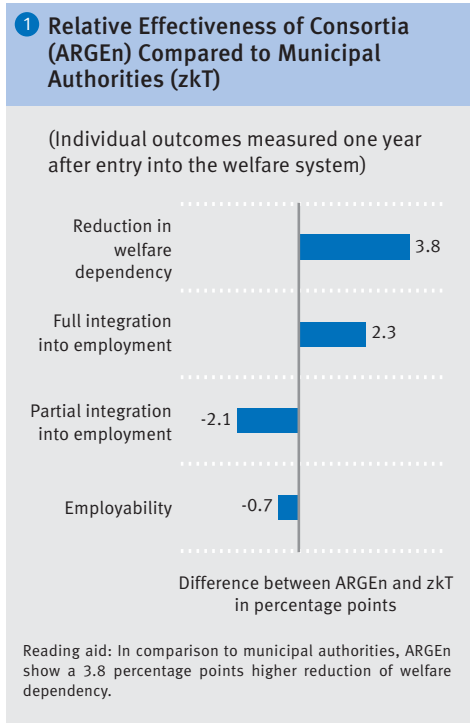
this microsimulation model to a macroeconomic general equilibrium model is unique in Germany.

The model was further developed over the course of last year. A newly installed welfare module enables reforms in the tax and transfer system to be assessed in terms of optimal taxation theory. In addition, the microeconomic labour supply model now takes the phenomenon of involuntary unemployment into account. This has improved the integration of the micro- and macroeconomic modules. Researchers also worked on a better econometric representation of bargaining behaviour that depicts decision-making within families in a more realistic manner. This expansion improves the possibilities for impact assessment in the realm of family policies.

Additional projects were devoted to the assessment of parental leave benefits and a proposed day-care allowance for children under three years of age. In a feasibility study, ZEW researchers also developed a comprehensive concept for systematic evaluation of the effects of the more than 150 different family and marriage related government transfers in Germany.

The research area has a leading role in ex post control group evaluation of active and passive labour market policies. The experience gained from many years of work in the sorting and analysis of administrative data maintained by the Federal Employment Office has become an indispensable element of these studies. Economists in this research area were extensively involved in the evaluation of the effects of recent reforms to Germany’s unemployment benefit system (the so-called Hartz reforms).

Last year the key focus in this area of research was on the optimal organisation of services for those in need of social assistance. Research showed that the recipients of long-term unemployment aid who receive assistance from joint entities of the Federal Employment Agency and municipal institutions (so-called “ARGEn”) have a greater chance of escaping unemployment and securing a job that meets their financial needs. At the individual level, the estimated difference to benefit recipients covered solely by the municipalities is 3.8 percentage points (see Figure 1). In improving long-term employability, however, municipalities operating alone appear more effective. The findings of the study represent an important decision-making aid for the upcoming institutional re-organisation in this field.

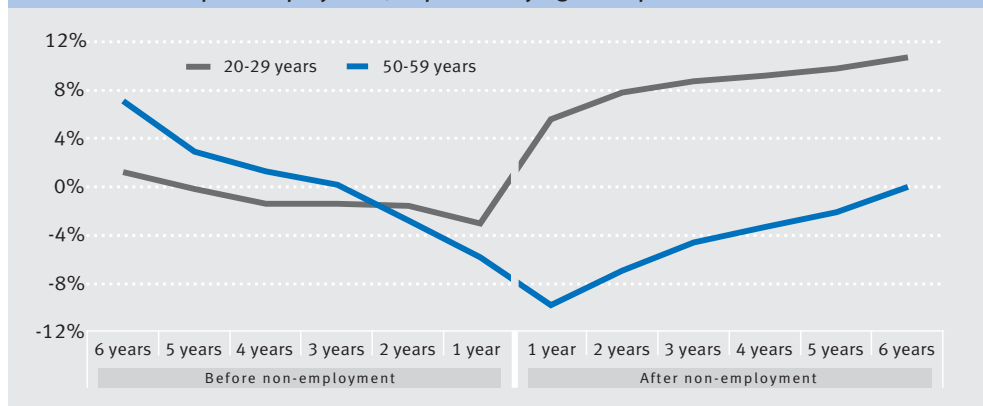


Research Area “Personnel Economics”

The Personnel Economics research area focuses on companies and their employees. ZEW is the only German economic research institute which addresses personnel management issues both across and within firms with quantitative methods, the so-called “insider econometrics”. The research area is distinguished by coupling the more practical perspective of business administration with rigid economic and econometric methods. Its research findings provide valuable guidance for economic policy makers, e.g. to design non-distortionary pathways into retirement or employment-friendly family policies.

The core subjects of research in this area are the organisation, impact, and problems of corporate personnel management. To this end, we increasingly employ firm-specific data in addition to representative employer data. The insights achieved through our research may contribute to strengthen firms

2 Earnings Before and After a Non-Employment Spell Compared to Wages of Employees with Uninterrupted Employment, Separated by Age Group



competitiveness. Specific topics under study include firm demography, personnel development, and the reconciliation of family life and work.

In a long-term project sponsored by the German Research Foundation, the research area employs representative firm-level data to investigate the effects of an age-friendly work practice on employment and productivity. It is important for economic policy to determine how individuals can be best employed according to their age in order to promote later retirement.

In an empirical analysis of seniority-based wages, it was revealed that wage increases for seniority are unusually high in Germany in an international comparison. While firms with higher wages for seniority are able to achieve longer tenure, they hire fewer new employees of advanced age. Another study showed that when hurdles to re-employment for older individuals are higher, gaps in employment lead to larger wage reductions for older employees than for younger ones (see Figure 2).

In 2008 access was also obtained to the administrative human-resources data of a large German company. Current theories in personnel economics will be empirically tested using these data. Researchers have begun to analyse the participation of older employees in professional development programmes as well as the employment behaviour of young mothers following parental leave.

Also in 2008, economists in this focal area conducted a study of regional demographic trends for a German automotive supplier. On the basis of this

study, trend scenarios were developed and concrete human-resource policy proposals were provided to the company.

Research Area “Education Economics”

The research area examines the acquisition of cognitive and non-cognitive skills and their returns over the life cycle, particularly the labour market returns through higher salaries and better employment opportunities. A deeper understanding of skills acquisition processes is helpful towards improving the productivity of workers in the knowledge-based economy and the efficiency of government investment in education. A key focus of interest is the phase of early childhood, in which the fundamental skills and capacities for life-long learning are acquired.

The research area investigates the acquisition of skills in various institutions of education, especially in kindergartens, schools, and universities. It is thus concerned with classic themes in education economics, such as change and heterogeneity in returns to education, and determinants of achievement in schools. A project in 2008 undertaken together with the German Institute for International Pedagogical Research, for example, estimated the returns to tertiary education depending on the field of study. The results were used in Germany’s national education report.

Numerous research activities were undertaken in 2008 concerning education in institutional con-

texts. For example, researchers began a qualitative and quantitative investigation of the recent reconfiguration of Germany's university curricula. In addition, they conducted an empirical analysis of study careers in engineering and the social sciences.

Researchers also examine educational processes in non-institutional contexts, such as the family. Examples of innovative questions in education economics addressed by the research area include the analysis of non-cognitive skills and pre-school learning processes. Of key importance in this work is a multidisciplinary research network supported by the Leibniz Association, titled "Non-Cognitive Abilities: Acquisition and Economic Consequences". Educational researchers at the London School of Economics as well as psychologists at the Universities of Konstanz and Mannheim belong to this network. ZEW's activities in the network are concerned first and foremost with the measurement of non-cognitive abilities and their significance for achievement in schools and labour markets.

A study used data from the Mannheim Study of Children AT-Risk (MARS), which follows children from

birth to adolescence, to estimate the relationship between the quality of parenting, family resources, and the development of basic skills. The study generated empirical evidence that the fundamental abilities acquired in early childhood have a strong impact on future social skills and educational success, which supports the theory of the technology of skill formation.

The research area works on improving the database for empirical research on education economics. It helps, for example, in the creation of the National Education Panel, the first systematic survey undertaken in Germany of the acquisition of education at all levels. Unique data is also generated in accompanying evaluation research of the large-scale model project "Learning Centre 3 – 10". The goal of the research, which is being conducted in cooperation with the Transfer Centre for Neuroscience and Learning (ZNL) and the Institute for Epidemiology at the University of Ulm, is to measure the individual and overall social benefits of the concept.

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Industrial Economics and International Management



From left: Thorsten Doherr, Kai Hüschelrath, Nina Leheyda, Hannes Ullrich, Anja Schmiele, Bettina Peters, Christian Köhler, Heidrun Förster, Tobias Veith, Kathrin Müller, Thomas Eckert, Elisabeth Müller, Mark O. Sellenthin, Georg Metzger, Katrin Creemers, Sandra Gottschalk, Dirk Crass, Franz Schwiebacher, Birgit Aschhoff, Jürgen Moka, Michaela Niefert, Christian Rammer, Diana Heger, Daniel Höwer, Georg Licht, Christoph Grimpe

Research Areas

- **Innovation Behaviour and Innovation Strategies**
Contact: Dr. Bettina Peters,
Dr. Christoph Grimpe
- Determinants of innovation activities at the firm level
- Innovation indicators
- Internationalisation of R&D and innovation activities
- Intellectual property rights and innovation incentives
- **Research, Technology and Innovation Policies**
Contact: Dr. Christian Rammer, Dr. Georg Licht
- Research infrastructure and technology transfer
- Evaluation of instruments of research, technology and innovation policies
- International trends in research and innovation policy
- **Market Development and Firm Dynamics**
Contact: Jürgen Egel, Dr. Helmut Fryges
- Start-ups
- Firm mortality and survival
- Determinants of firm growth
- Evaluation of start-up funding
- Start-up financing and venture capital
- **Empirical Competition Policy**
Contact: Dr. Patrick Beschorner,
Dr. Kai Hüschelrath
- Analysis of mergers and M&A market trends
- Corporate integration and market performance
- Regulation and competition of network-based industries

■ **Firm Level Databases**

Contact: Dr. Sandra Gottschalk, Dr. Georg Licht

- Mannheim Innovation Panel (MIP)
- Mannheim Enterprise Panel (MUP)
- KfW/ZEW Start-Up Panel
- ZEW Start-Up Panel Austria

The research department Industrial Economics and International Management is devoted to the analysis of business competition and its economic effects. Against the backdrop of ongoing globalisation as well as rapidly changing technologies and market conditions, the study of the technological competitiveness of firms plays a key role. This dynamic perspective is reflected in the four focal areas of the department’s research. These research areas were reconceptualised in 2008.

In terms of methods, most of the department’s work takes the form of microeconomic analyses of firm data using microtheoretical techniques. To this end, the department primarily draws on its own extensive database of firm-level data.

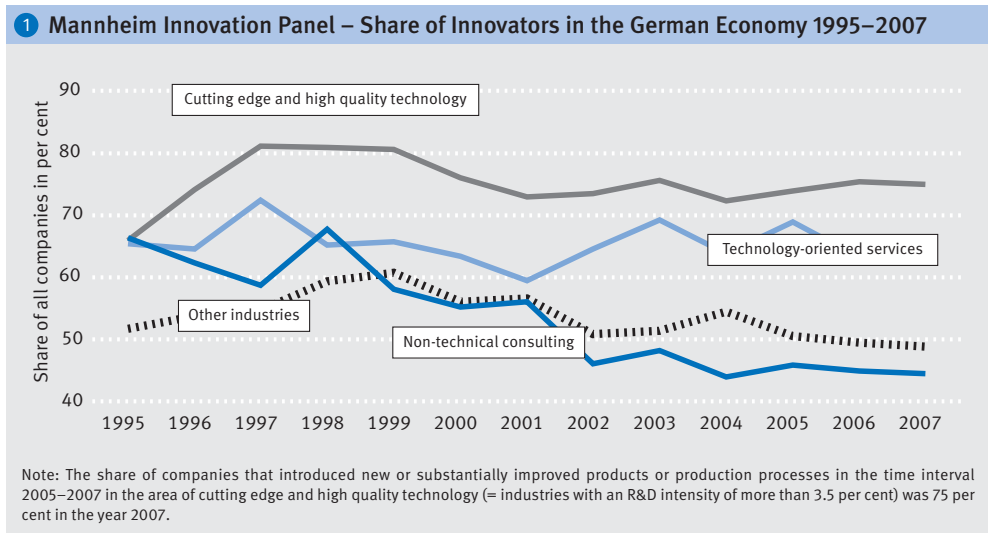
Research Area “Innovation Behaviour and Innovation Strategies”

ZEW has been collecting data on the innovation behaviour of the German economy on an annual

basis since 1993. Data are gathered within the scope of the Mannheim Innovation Panel (MIP), a survey that enables the ongoing observation of the innovation activities of German firms. The MIP provides important information about innovation expenditures as well as the introduction and success of new products, services, and production methods (see Figure 1). It also provides insight into the factors that promote or hinder business investment in innovation. The MIP is the most comprehensive study of innovation in Germany and represents the German contribution to the European Commission’s Community Innovation Survey (CIS).

“SME Innovation Success in Baden-Württemberg” is a research project aimed at evaluating the components of successful SME innovation in the German state of Baden-Württemberg. Using econometric analysis techniques, researchers are investigating whether SMEs in Baden-Württemberg have been more successful in developing innovations than a comparison group and whether differences can be attributed to any of five investigated factors.

In the project “Intellectual Property Rights, the Appropriation of Innovation Returns and Innovation Competition”, researchers are investigating the function of patents and other intellectual property rights in the firm. The focus of the project – which is part of the first transregional collaborative centre for economics established by the German Research Founda-



tion – is to conduct a theoretical and empirical analysis of the reasons for the observed changes in the use of patents.

A central question in innovation policy concerns the social benefits of private-sector research, as this spillover effect represents the main argument for justifying government subsidy of private R&D activities. This question is currently being investigated with regard to Germany using empirical methods in a project funded by the Federal Ministry of Education and Research. A new database is being compiled for this project in cooperation with “Wissenschaftsstatistik GmbH”, a subsidiary of the German scientific organisation “Stifterverband”, in order to assess the private and social rate of return on R&D investment.

The STRIKE network, which is composed of researchers from 21 different countries, is another example of international cooperation in innovation research based on microdata. The goal of the network – which is funded by COST, an intergovernmental framework for Cooperation in Science and Technology – is to advance our understanding of growth processes driven by innovation. The network is coordinated by ZEW in collaboration with partners.

Another project, “Productivity Growth in Europe, the US and Asia”, is investigating the causes of slower productivity growth in Asia and Europe since the mid-1990s in comparison to the US, as well as the effects of productivity growth on social and ecological goals. In this project, researchers are also analysing the feedback effects of growth on environmental policy.

Research Area “Research, Technology and Innovation Policies”

Data collected by the MIP also serve as the basis for the ex post evaluation of innovation subsidy programmes implemented by the EU as well as at the federal and state level within Germany. The investigation of the effectiveness and efficiency of innovation subsidies is embedded in an analysis of the determinants of the innovation activities of firms.

Research has revealed that there are considerable barriers to SME participation in public R&D subsidy programmes. Against this backdrop, a project is currently being conducted by the department

to formally evaluate “KMU-innovativ”, a SME research initiative enacted by the Federal Ministry of Research and Education.

The EU-funded “Policy Mix” project has three goals: to identify and describe the political approaches and measures currently being used in the EU, US, Japan, Canada, and South Korea to increase R&D investment; to evaluate the effectiveness of the interaction between individual political measures implemented to increase private and public R&D expenditures; as well as to design and deploy an internet-based information system for individuals who develop political approaches and measures in the area of research policy.

Within the scope of the “Implore” project, researchers conducted a comparative analysis of national and international public subsidies and their effects on the innovation activities of firms and research institutes in Europe. The project was undertaken on behalf of the European Commission.

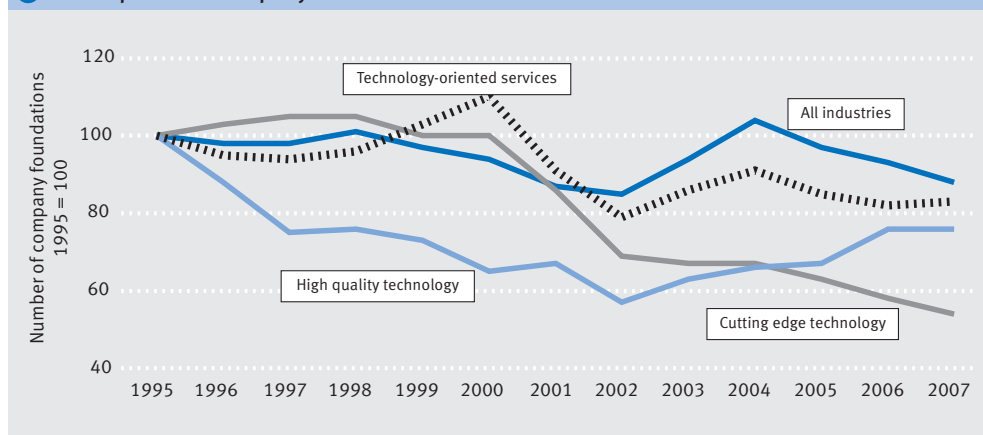
The “Innovation Watch – SYSTEMATIC” project aimed to develop a comprehensive and integrated understanding of innovation output on a sector-by-sector basis as well as the specific problems faced in the EU-25 member states in order to equip decision makers and stakeholders with relevant knowledge resources. The fundamental question was: Why and to what extent does innovation output vary between sectors? The project was financed by the European Commission’s Directorate-General for Enterprise and Industry.

Within the timeframe of this annual report, the department completed a “Study on the evaluation of the German contribution to the 6th Framework Programme for Research”, that sought to analyse the strengths and weaknesses of the German institutions participating in the 6th FPR as well as to evaluate the German contribution.

Research Area “Market Development and Firm Dynamics”

The development path and growth dynamics of a national economy are determined by the growth rates and changes that take place in individual economic sectors and branches. In this connection, there are often large differences between individual

2 Development of Company Foundations Overall and for Selected Industries



economic sectors. Growth in one sector might be attributable to the expansion of existing firms, while growth in another might be caused by rapid start-up activity in conjunction with the closure of existing firms. The research area of Market Development and Firm Dynamics examines various aspects of this development process.

Many studies concerned with start-up activity, business growth and business closures are based on data compiled in a long-standing partnership between ZEW and Creditreform. The Mannheim Enterprise Panel (MUP) uses Creditreform's various longitudinal datasets to compile a systematic database of firm-level data. This database is systematically evaluated within the scope of the department's projects, subjected to comprehensive quality checks, and adapted to new research questions. The MUP has been used for a number of years to document start-up activities in Germany. Figure 2 displays the annual rate of start-ups in Germany as a whole and in selected economic branches. Start-up activities are not only documented by sector, but also in detail at the regional level. Data on Austrian companies collected by Creditreform have also been part of the database since 1996.

In 2008 the first phase of data collection took place for the creation of a new database: the KfW/ZEW Start-Up Panel. The Panel monitors start-up activities in the high-technology sectors as well as young companies in other branches of the economy. The Panel

provides an empirical basis for the exploration of a broad spectrum of questions related to the financing of high-tech start-ups, their market entry, and innovation strategies, as well as the employment effects generated by young companies, among other issues. Projects concerned with start-up activities as well as the development and commercialisation of new technologies are also closely connected to research questions explored in the Innovation Behaviour and Innovation Strategies research area.

University spin-offs are recognised as an important channel for the commercial exploitation of scientific findings and competencies. In Germany, the "Exist" programme is aimed at improving the climate at universities and research institutes for the formation of new spin-offs. A research project carried out on behalf of the Federal Ministry of Economics and Technology is conducting a comprehensive ex post evaluation of the third level of the programme.

A study that made use of a microsimulation model of firms forecasted that, if current structures persist, demographic trends in Germany will lead to a reduction in the rate of start-up activities, provided nothing is done to compensate for the country's diminished start-up potential. The study showed that policies to encourage women to set up companies would be expedient, as even a small measure of success on this front could lead to a significantly higher start-up rate.

Research Area “Empirical Competition Policy”

This research area encompasses the study of corporate consolidation and mergers as well as the regulation of grid-bound industries. Projects concerned with identifying and analysing the cross-ownership of German companies as well as the effects of this cross-ownership on firm behaviour, market results, and traditional measures of consolidation are carried out in this research area. Additional areas of activity include the identification and elucidation of trends in the national and international merger of companies as well as the comparative analysis of competition in selected economic branches at the international level. Work concerning the regulation of grid-bound industries is carried out from a static perspective (to evaluate efficient prices and supply structures in a given network) as well as from a dynamic perspective (that focuses on the impacts to investment and innovation behaviour resulting from the incentives and effects of regulation).

The “Competition and Innovation” research network, which was approved under the “Pact for Research and Innovation”, is concerned first and foremost with the “new, economic approach” in competition policy that has gained increasing importance in recent years, particularly in the EU’s handling of corporate mergers and anti-competitive practices. The resilience of this approach is currently being investigated within the scope of an international and interdisciplinary network coordinated by ZEW. In addition, researchers are exploring to what extent issues related to innovation can be taken into account in cartel proceedings.

This research area is also concerned with the competitive situation in the automotive industry. The potential introduction of regulations in the European automotive sector aimed at reducing the CO₂ emissions of new vehicles is currently being studied within the scope of a project titled “Competition in the Automotive Market”. Researchers are exploring the possible repercussions to competition as well as impacts to consumers resulting from the introduction of such regulations in a consolidated market.

New information and communication technologies were key drivers of productivity growth over the

last twenty years, both in industries that produce ICT goods as well as in user industries. Potential spillovers in innovation and investment behaviour in telecommunications markets are being investigated in a project titled “Investment Behaviour in the Telecommunications Sector”.

ZEW researchers are also studying the economic effects of Swiss anti-trust law in a project for the Swiss State Secretariat for Economic Affairs.

The M&A Report is drafted by ZEW in cooperation with Bureau van Dijk Electronic Publishing (BvDEP). The bi-annual report provides information on current topics and developments related to corporate mergers across the globe on the basis of the ZEPHYR database.

“Firm Level Databases”

Research activities on innovation and corporate growth would be unthinkable without the firm-level databases compiled by ZEW researchers over the past years. Thanks to the MUP and the MIP, ZEW possesses an inventory of firm-level survey data unique in Germany. In addition, thanks to its partnership with Bureau van Dijk, ZEW has exclusive access to the world’s largest M&A database. Additional sources of data available to ZEW include: Patent data from the European Patent Office; the patent and trademark data maintained by the German Patent and Trademark Office; as well as microdata on the federal government’s direct R&D subsidy projects. The Institute’s data resources for the investigation of start-up activities were decisively improved in 2008 with the establishment of the KfW/ZEW Start-Up Panel.

Data collected by the department is made available to other research units at ZEW as well as to external researchers both within Germany and abroad.

For detailed information on current and finished research projects please check our website:

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Corporate Taxation and Public Finance



From left: Daniel Dreßler, Sabine Adler, Katharina Finke, Alexander Kalb, Benedikt Zinn, Michael Overesch, Jost H. Heckemeyer, Philipp Mohl, Michael Grünewald, Sarah Borgloh, Friedrich Heinemann, Timo Reister, Tanja Hennighausen, Steffen Osterloh, Christof Ernst

Research Areas

■ Corporate Taxation and Analyses of Tax

Locations

Contact: Prof. Dr. Christoph Spengel,
Christof Ernst

- International comparisons of effective tax burdens
- Harmonisation of company taxation in Europe
- Reform of company taxation in Germany
- Tax burden on high-skilled labour
- Tax databases

■ Empirical Effects of Corporate Taxation

Contact: Prof. Dr. Christoph Spengel,
Jost Heckemeyer

- Taxation rules and decision behaviour of multinational enterprises
- Taxation rules and R&D activity

- Taxation rules and locational choice
- Microsimulation

■ Decision Making in Tax and Financial Policy

Contact: Dr. Friedrich Heinemann

- Positive analysis of tax policy
- Determinants of structural ability to undertake reforms
- Determinants of public debt

■ Fiscal Competition and Federalism

Contact: Dr. Friedrich Heinemann

- Fiscal policy in regional competition
- Incentive effects of German fiscal equalisation
- EU fiscal constitution
- Nonprofit sector
- Efficiency of public service production

This research department investigates questions related to corporate taxation and empirical public economics within the context of economic integration. The department’s key line of research concerns the consequences of increasing mobility for tax and financial policy as well as for the scope, structure, and responsibilities of the public sector. Special attention is devoted to the European dimension of integration processes through the analysis of EU tax harmonisation and the EU fiscal constitution. In such analyses, important changes are taken into account, such as new developments in European law and demographic changes. In this way, the department’s research agenda corresponds closely with ZEW’s mission to investigate the “optimal performance of markets and institutions in Europe”, and applies this mission to the study of fiscal issues.

These research questions are explored within four research areas. The first two areas of research are strongly shaped by methods of business administration; the latter two by public economics approaches. The borders between all four research areas, however, are increasingly fluid due to the strong integration of both disciplines.

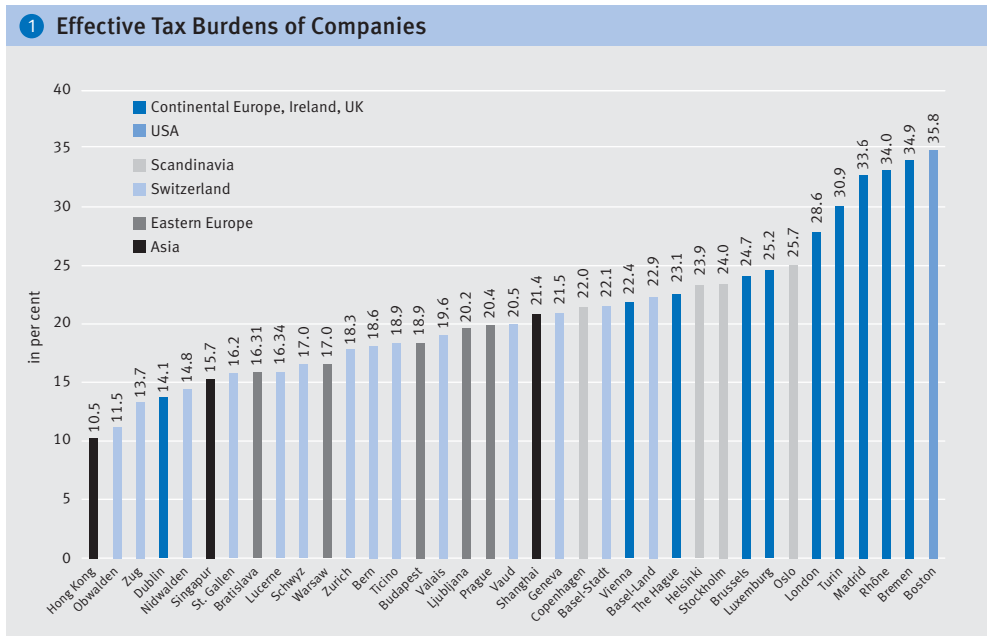
The department has acquired Prof. Dr. Eckhard Janeba of the University of Mannheim as a third re-

search associate in 2008. In this way, the department now cooperates closely with Prof. Dr. Christoph Spengel of the University of Mannheim in the field of corporate taxation as well as with Prof. Dr. Eckhard Janeba, and Prof. Dr. Lars Feld of the University of Heidelberg in the field of public economics.

Research Area “Corporate Taxation and Analyses of Tax Locations”

In this research area, ZEW economists use a toolbox of independently developed analytic methods to investigate corporate tax burdens. A primary tool of analysis is the European Tax Analyzer, a computer-based model that enables the evaluation of national and international policy proposals in the area of tax reform and harmonisation.

At the beginning of 2008 a two-year project cycle for the updating and further development of the BAK Taxation Index came to a close. Alongside the gathering of fresh data for locations previously surveyed by the Index, data collection was expanded geographically to the Asian economic metropolises of Peking, Shanghai, Hong Kong, and Singapore.



ZEW has calculated effective tax burdens on corporations (based on a method developed by Devereux and Griffith) as well as on highly educated employees (using a model called the Human Resource Tax Analyzer) since 2001 within the scope of a partnership with the Swiss institute BAK Basel Economics. Based on the calculated tax burdens, an international ranking of locations is created. One of the newly surveyed Asian cities topped the most recent list: Hong Kong. With an average effective corporate tax burden of 10.5 per cent, Hong Kong was by far the leading location in the BAK Taxation Index. The Swiss cantons of Obwalden and Zug as well as the Irish capital of Dublin again ranked among the leading locations. Another interesting finding was that the surveyed Eastern European cities have only maintained their policy of continuous tax cuts to a limited extent. While corporate tax burdens fell in the Czech Republic (Prague) and Slovenia (Ljubljana), they rose elsewhere due to the introduction of a so-called solidarity tax, particularly in Hungary (Budapest) (see Figure 1).

The approach developed by Devereux and Griffith – which is regularly adjusted and refined by ZEW – was also used in a project conducted on behalf of the European Commission. In the project, the effective tax burdens on domestic and transnational investments in member states of the expanded EU and numerous non-EU countries were investigated in cooperation with the auditing and consulting firm PricewaterhouseCoopers as well as the Oxford University Centre for Business Taxation.

On behalf of the EU Commission, the European Tax Analyzer was used to assess the tax-base effects of proposals for the introduction of a Common Corporate Tax Base (CCTB) in the EU-27 member countries. The study revealed that the CCTB regulations proposed by the EU Commission would lead to a tax-base expansion in all member countries aside from Cyprus and Ireland. The extent to which the tax base would expand in each country would vary considerably, however, due to divergent national regulations concerning the determination of taxable income. The study also identified that new rules concerning depreciation would have the most significant impact on tax-base enlargement.

The department's economists also participated in a working group on R&D tax incentives coordinated by the "Forschungsunion Wirtschaft – Wissenschaft"

(Research Alliance of Industry and Research). In its study, the working group investigated potential options for the introduction of tax breaks to directly promote R&D investment in Germany.

A cross-country comparison of tax burdens was also undertaken in the second computation of the "Country Index for Family-Run Companies", a survey conducted on behalf of "Stiftung Familienunternehmen" (a foundation for family-owned businesses) in collaboration with Calculus Consult. The Index seeks to compare the quality of various nations as a location for business from the perspective of family-run companies. Of the 18 countries surveyed by the Index, Germany now ranks 12th. In the area of taxation, the reform of Germany's corporate tax code in 2008 did in fact reduce the burden on corporations at the firm level. This is counterbalanced, however, by the increased taxation of dividend payments to shareholders. At a certain level of personal income the reform's benefits for partnerships have also been neutralised by recently introduced legislation that increased the income tax rate on the wealthy (the so-called "Reichensteuer").

Research Area "Empirical Effects of Corporate Taxation"

The second focal area of the department's research is closely interconnected with the first. The findings obtained in this area of research concerning the behaviour of tax payers – particularly that of firms – are utilised in the first research area for the further development of tax-burden measurement tools and reform policy proposals. Conversely, the reliable and quantitative tax burden estimates obtained in the first area of research are used here to analyse the effects of corporate taxation.

An ongoing German Research Foundation project applies microeconomic techniques to data on direct investment from the Bundesbank in an effort to identify behavioural reactions to tax legislation in multinational corporations. Research has shown that regulations limiting the ability of corporations to deduct interest payments lead to considerably lower debt ratios in multinational corporations and thus to higher taxable profits. At the same time, however, negative investment effects can be

identified when the ability of corporations to deduct interest payments for tax purposes is limited. As the tax deductibility of interest payments was further restricted in Germany within the context of recent reforms to the corporate tax code, this finding indicates that the reform could have negative effects on the investment activities of domestic firms.

Another study is concerned with the tax sensitivity of decisions made by German companies concerning where to base their European subsidiaries. The analysis elucidates that company-specific factors influence the tax elasticity of location decisions. Tax elasticity is much higher in the case of German companies establishing their first international subsidiary. This can be taken as an indication that local taxation – insofar as its impacts location decisions – is not that important for companies that already operate internationally because of the increased opportunities for profit shifting within international concerns.

The department's researchers are also currently investigating the effects of a location's tax burden on foreign direct investment within the scope of an ongoing meta-study. The research undertaken thus far indicates that existing empirical studies have found that rates of taxation have a significant effect on transnational investment decisions. However, the intensity of the effect identified in the primary literature varies depending on the characteristics of the model and study approach chosen.

Research Area “Decision Making in Tax and Financial Policy”

The third research area is concerned with the positive analysis of political decision making. ZEW economists attempt to account for actual tax and fiscal policy as well as for the sharp discrepancies between real tax policy and the normative insights of public economics. In the process, they integrate the perspectives offered by behavioural economics and psychology.

A research project completed in 2008 on behalf of the Federal Ministry of Finance investigated resistance to tax and other reforms. The study's findings were published in a series of journal articles. The project generated numerous empirical insights with rele-

vance for economic policy advising, e.g. concerning the effects of reforms on investor and consumer confidence. According to the results of the study, political advisors should communicate the fact that voters often suffer from informational deficits that can lead them to support policies at odds with their actual interests. In this way, political advisors should make efforts to remedy distorted perceptions when dealing with the media or politicians.

Following the successful completion of a survey of EU parliamentary representatives, attitudes towards the possible introduction of an EU-wide tax were analysed using microeconomic techniques. The survey results show that the preference for a common tax does not only depend on the representatives' individual ideological positions and party affiliations, but also on the interests of their home countries.

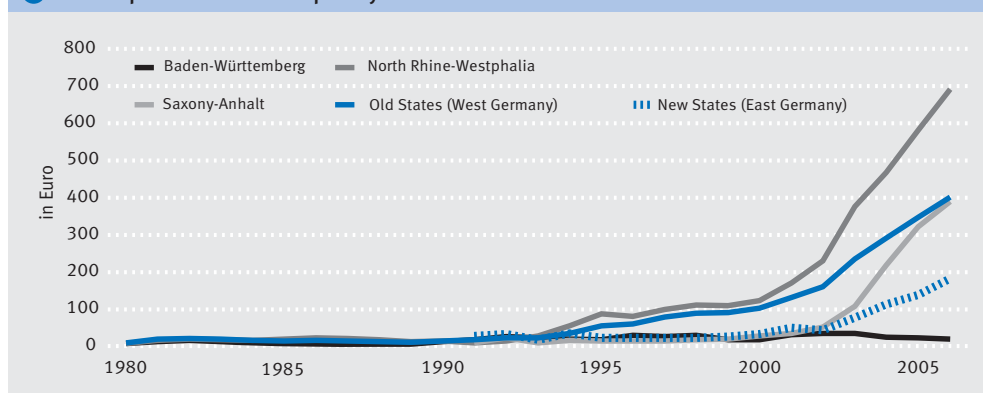
In another survey conducted by the department's researchers, perceptions concerning tax competition held by members of the German Bundestag were illuminated. The survey revealed that the ideology of each politician has a clear influence on the perceived relevance of mobility phenomena. For example, representatives from the left-wing of the political spectrum tend to estimate the tax elasticity of companies as much lower than their right-wing colleagues in the Bundestag. This finding stands in sharp contrast to numerous existing theoretical studies on tax competition that presuppose an undistorted perception of mobility phenomena.

Research Area “Fiscal Competition and Federalism”

The department's fourth area of research is dedicated to the investigation of government structures – particularly federal systems – under the conditions of rising factor mobility. Alongside Germany's federal system, the division of responsibilities between the EU and its member states is a key focus of research. Questions related to the increasingly prominent role of the nonprofit sector in areas of activity that formerly fell under the purview of the government are also investigated in this research area.

Researchers in the department have carried out a study on behalf of the Federal Ministry of Finance

2 Municipal Short-Term Liquidity Credit



concerning the EU's own-resources system and have developed a detailed reform proposal. The proposal foresees the introduction of a modified rebate system that would help to overcome the disadvantages of the current UK rebate while also allowing necessary corrections to be made to undesired distributional effects in an efficient manner. ZEW's reform model had a recognisable effect on the German government's ongoing general review of the EU budget; indeed, substantial elements of the model were integrated into the government's proposal.

This work was further elaborated in several scientific papers. For example, it was demonstrated that an EU tax – irrespective of the selected tax base – would invariably be associated with considerable redistributive effects between member countries. As a consequence, rebate systems would not be rendered superfluous – as many EU tax advocates claim – but would in fact become all the more necessary. In this way, the simplification of the own-resources system cannot be achieved with an EU tax, as many have hoped.

A research project on the problems associated with municipal short-term liquidity credit in Germany was also completed in 2008. The volume of this type of credit has expanded considerably in recent years (see Figure 2). Questions concerning the causes of this use of credit, its assessment, and possible strategies to minimise its prevalence were explored in cooperation with the chair of a law faculty. The study revealed that this type of credit – which is meant to be an instrument for assuring short-term liquidity – has been alienated from its original purpose and is now used to cover permanent budgetary needs. From a legal perspective this practice must be classified as unlawful. International comparisons with Belgian, Swiss, and Austrian municipalities as well as the institutional regulations in these countries have also shown that an absence of measures to sanction illegitimate types of municipal credits plays a key role in their abuse.

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Environmental and Resource Economics, Environmental Management



From left: Victoria Alexeeva-Talebi, Sebastian Voigt, Niels Anger, Astrid Dannenberg, Claudia Hermeling, Nikolas Wölfing, Bodo Sturm, Andreas Löschel, Kornelia Peter, Tim Mennel, Martin Achtnicht, Klaus Rennings, Georg Bühler, Tim Hoffmann

Research Areas

- **Innovation and Sustainable Development**
Contact: Dr. Klaus Rennings
- Specification of rules, indicators, and strategies for sustainable economic activities
- Determinants and economic impacts of environmental innovations
- Environmental innovation systems

- **Energy Economics**
Contact: Dr. Tim Mennel
- National and European regulatory framework for energy markets
- Regulation of grid-bound energy industries
- Renewable energy and external costs of energy

- **Transport and Mobility**
Contact: Dr. Claudia Hermeling
- Ecological and socio-economic effects of transport systems
- Concepts for sustainable development in transport sectors
- Traffic volume and transportation means used in freight traffic

- **International Environmental and Resource Policies**
Contact: PD Dr. Andreas Löschel, Astrid Dannenberg
- Analysis of institutions for international environmental and resource policies
- Analysis of trade-offs between international trade and environmental policies
- International climate and resource policy

■ Macroeconomic Analysis of Environmentally Relevant Policies

Contact: PD Dr. Andreas Löschel,
Victoria Alexeeva-Talebi

- Design of environmental and economic policy instruments
- Macroeconomic and sectoral effects of national and international environmental policies – analysis of efficiency and distribution, competition effects
- Impact analysis of national, international and global policy measures

This research department investigates the functional performance of markets from the perspective of the environment and resource scarcity. A key focus of research is the economic analysis of environmental policy instruments as well as legislation with relevance for the environment. In this context, the assessment of energy and climate change policies plays a central role.

Through its analysis of regulatory measures, the research department supports political decision making in nearly all areas of government policy with relevance for the environment. To this end, the impacts of alternative economic and environmental strategies are modelled and – to the extent possible – quantified. In this way, conflicts between economic, ecological, and distributive policy goals can be identified and carefully considered. Of particular relevance in this economic modelling are the effects of environmental policies on the broader economy, individual economic sectors, households, and the public sector. In terms of methodologies, the research department uses simulation models, particularly computable general equilibrium models (CGE), to assess policy effects. In addition, the department employs partial market models in order to conduct a more disaggregated analysis of markets with relevance for the environment, such as the energy market. Additional methodologies used in empirical research are econometric estimation methods, survey techniques, and economic experiments.

Research Area “Innovation and Sustainable Development”

This research area is devoted to the analysis of the determinants and economic effects of environmental innovations, as well as the development and evaluation of indicators and strategies for sustainable economies.

Economists in this research area explore various issues, such as the assessment of policy impacts in the areas of competitiveness, innovation, and environmental protection. With the help of ex ante impact assessments (IA), the European Commission is attempting to consider the economic, ecological, and social impacts of new regulations from the outset, as an integrated part of the planning process. ZEW economists have been actively supporting this effort by developing specific environmental economic models that assist in the evaluation of policy impacts. In 2008 we successfully concluded an interdisciplinary EU project titled “Evaluating Integrated Impact Assessment” (EVIA), which carried out a survey of ministries and interest groups regarding their experience with existing IA systems in Germany, UK, and the Netherlands. The findings from this project have led to the revision of the European Commission’s internal guidelines for policy impact assessment, among other things.

A project funded by the Swiss National Science Foundation titled “The Effects of Corporate Social Responsibility as well as Environmental and Social Policy on Stock Returns” investigated the effects on stock returns of environmental policy measures and corporate behaviour that is harmful or beneficial to the environment. The relationships between environmental policy, sustainability, and competitiveness are also being investigated using modern econometric panel techniques and instrumental variable procedures. An example of work being conducted in this area was an analysis of productivity growth in Europe, the US, and Asia in the 2008 project “Productivity Growth in Europe, the USA and Asia”, which was sponsored by the Anglo-German Foundation for the Study of Industrial Society.

A project funded by the Federal Ministry of Education and Research titled “Social, Ecological and Economic Dimensions of Sustainable Energy

Consumption in Residential Housing” (SECO@home) is investigating the determinants and effects of middle- and long-term energy consumption decisions in residential housing by means of stated preference choice experiments.

Research Area “Energy Economics”

Economists in this research area study national and European energy policy and economics. The guideline in the assessment of policy instruments is the “Energy policy triangle”, consisting of cost-effectiveness, environmental sustainability, and security of supply. The research focuses on regulation with environmental goals – including ecotaxation, European emissions trading, and instruments for the promotion of renewable energy, such as quota regulations and feed-in-tariffs – applying the standards of welfare economics.

A study commissioned by the Federal Ministry of Economics and Technology titled “Energy Forecast 2009: The Development of Energy Markets Until 2030”, conducted together with two other German research institutes and due to be published in October 2009, takes a broad look into the future. Based upon an analysis of the current state of affairs in energy markets and their regulation, the study presents a forecast of prices, demand, and supply of energy and market regulation in Germany and the rest of the world.

The future of markets of technologies for coal-based power generation was the topic of a project conducted on behalf of the Volkswagen Foundation. The key research question was whether the development and introduction of clean coal technologies creates novel export opportunities for lead-market countries. Econometric methods were used to identify the factors that influence diffusion rates for clean coal technologies.

The research area has also begun to develop an energy system model which – in conjunction with a representation of the macro-economy in a computable general equilibrium model – can model specific characteristics of energy markets with greater accuracy. The conceptual development of a real option model to study investment decisions in renewable energy also advanced further.

The “ZEW Energiemarktbarometer” remains an important part of the department’s work for the wider public. The Barometer is a semi-annual opinion survey of market participants and experts regarding current issues in energy policy. It is regularly quoted in the German press.

Research Area “Transport and Mobility”

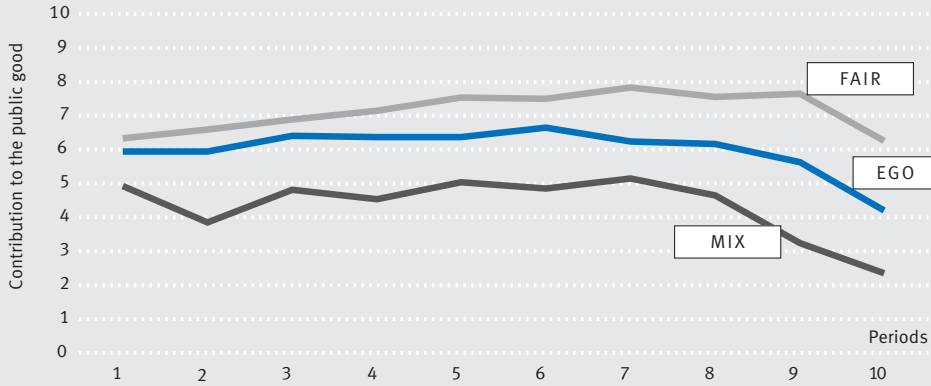
Growing demand for transport is the reason for rising demand for fossil fuels and for increasing CO₂ emissions in the transport sector. Strategies which are pursued by the European Union to reduce the demand for fossil fuels therefore have to influence the decisions made by households and firms. They can encourage the purchase of more energy efficient technologies, change the mode of transportation used, and influence the volume of transportation activities demanded.

An ongoing project being undertaken on behalf of the Federal Ministry of Education and Research concerning the behaviour of potential car buyers was again a focus of activities in 2008. The project, which is part of the research subfield of “sustainable consumption”, is aimed at identifying the determinants of car buying decisions. In keeping with ZEW’s core competencies, microeconomic methods are used in the decision-making analysis. The coupling of these microeconomic methods with partial simulation models is aimed at analysing the macroeconomic consequences of transportation policy measures. The macroeconomic analysis is extended to network and environmental externalities as well as to research and development spillovers.

In a recently initiated project concerning the competitiveness of rail transport in intermodal competition, ZEW researchers are investigating the ecological, fiscal, and economic situation of various forms of transport. Research is focused on the asymmetric taxation of different fuel types and the resulting strategic options for actors in the transport sector.

The ProgTrans/ZEW TransportmarktBarometer has been released on a quarterly basis since 1998 in collaboration with ProgTrans AG. It forecasts trends in the transport and cargo.

1 International Climate Policy and Fairness Preferences: An Experimental Analysis



Reading aid: Figure 1 shows the results of an economic laboratory experiment. In the first phase of the experiment, fairness preferences were identified by means of modified ultimatum and dictator games. In a second phase, participants played a public good game over ten periods in pairs. In all periods, particularly in the last one, pairs with pronounced fairness preferences (“FAIR”) contributed more to the public good than pairs with less pronounced fairness preferences (“EGO”) and mixed pairs (“MIX”).

Research Area “International Environmental and Resource Policies”

The key concern of this research area in 2008 was the analysis of international climate policy. Climate change and discussions concerning abatement targets and measures have assumed a new level of prominence in the political debate and their importance will probably continue to rise. Negotiations on the further development of the Kyoto Protocol have been a central topic in this regard.

Against this backdrop and in view of the problems raised by a unilateral climate policy, the identification of the determinants of voluntary cooperation between sovereign nations has been an important aspect of the work conducted in this research area. Of special interest is the question of how notions of equity and rules for burden sharing affect the chances for reaching international agreements. In this analysis, game theory and behavioural economics including experiments are important methods used to model fairness preferences and their relevance for cooperation and the voluntary provision of public goods. Previous research results from a project supported by the German Research Foundation show that fairness motives can have a positive influence on the cooperative behaviour of involved actors. In the future, a more detailed

analysis of the theoretical implications of fairness preferences will be conducted, and economic laboratory experiments will be used to explore their empirical relevance and robustness (see Figure 1). Beside climate change mitigation, adaptation to climate change becomes increasingly important in the research area as two projects started in 2008 about the economics of adaptation and the fiscal implications of adaptation.

Additional activities in this research area include numerical simulation analyses of the economic effects of international climate protection policies using microeconomic partial and total models. Here, the European Union’s Emission Trading Scheme (EU ETS) is in the focus of interest.

Particularly in light of plans for the extensive auctioning of emissions certificates, it is of key importance for the future development of climate policy to explore the ability of sectors to pass along both direct and indirect costs of the EU ETS through pricing. In a project for the British Department for Business, Enterprise & Regulatory Reform (BERR), ZEW economists were able to show strong evidence for this ability using econometric analytic methods. The project focused on the British industrial sector.

Economists in this research area are also exploring environmental problems that are primarily of significance for regional economies, but are

nevertheless connected to global environmental problems such as climate change. In an EU project titled “Peri-urban Land Use Relationships: Strategies and Sustainability Assessment Tools for Urban-Rural Linkages” (PLURAL), researchers are studying proposals for land use and innovative instruments for the planning of peri-urbanisation processes. In addition, project work is concerned with identifying and analysing the relationships between land use and the production of bio-fuels as well as between urban growth and biodiversity.

An important forum for the exchange of ideas with significance for the entire research department is the Climate Policy Network (CPN, <http://cpn.zew.de>). In collaboration with the Massachusetts Institute of Technology (MIT), Resources for the Future (RFF), and Fondazione Eni Enrico Mattei (FEEM), this network provides the department with a forum for ongoing transatlantic dialogue about the design of future climate protection policies.

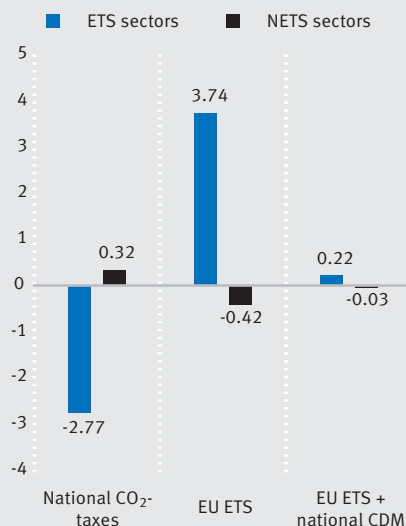
Research Area “Macroeconomic Analysis of Environmentally Relevant Policies”

The research area is concerned with quantitative analysis of economic policy regulations from a macroeconomic point of view, particularly in the field of environmental, energy, transport, and climate change policy. Within this context, simulation studies analyse efficiency and distribution implications of national and European policies as well as international agreements. Besides the macroeconomic impact, the implication of induced structural change on the sectoral level is taken into account.

The core instrument is constituted by a modular system of applied general equilibrium models (CGE). Due to the wide-ranging potentials for application and development of the macroeconomic modelling framework, the research area occupies a resourceful function across the department, often complementing partial analytic research by quantitative assessment of the macroeconomic effects.

One example of current development efforts of the research area is the combination of top-down economy and bottom-up energy systems models into a hybrid analytical instrument that allows the evaluation of the macroeconomic impact of discrete

2 Revealed Comparative Advantage for EU-15 Regions



Reading aid: Quantitative simulation calculations show that, depending on the sector, emissions trading has different effects on the international competitiveness of the EU. Due to the generous allocation of emission permits in the first trading period (2005–2007), the international competitiveness of energy intensive industries (ETS sectors) increases significantly compared to other sectors. Sectors not participating in emissions trading (NETS sectors) consequently have to bear a greater mitigation burden in order to achieve national climate protection goals. They thus suffer a loss of competitiveness.

technology policies. Within the project commissioned by the EC’s Directorate-General for Enterprise and Industry, this tool was used to quantitatively assess the macroeconomic and environmental effects of EU climate change and renewable energy policies (see Figure 2).

Another example is the study carried out for the EC’s Research Directorate-General on unilateral EU climate change policy and the design of appropriate offsetting measures such as Border Tax Adjustments (BTA) to neutralise the potentially adverse impacts of such policies on the EU energy-intensive sectors. Moreover, within the project titled “Interactions between the Supply of Credits from REDD and Carbon Markets” commissioned by the New Zealand Ministry of Agriculture and Forestry, the modelling tool was employed to explore the macroeconomic implications of integrating deforestation activities into international emission trading schemes. Finally – within an

internal project – the current development efforts of the research area are aimed at combining the CGE model with a microsimulation model for Germany to better represent the socio-economic behavioural patterns of households. Using this framework, the distributional effects of environmental measures – such as energy taxation – can be assessed at the household level in a very disaggregated way.

On the international level the research area is involved in various networks on model-based analysis

of energy and climate policies. Particularly, the coordinating role with respect to the activities of the “Energy Modelling Forum” (EMF 22) on the design and evaluation of short- and mid-term global climate protection strategies as well as the participation in a research association on hybrid energy-economy modelling should be highlighted.

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<http://www.zew.de/en/forschung>

Information and Communication Technologies



From left: Irene Bertschek, Bettina Müller, Gordon J. Klein, Ulrike Merkel, Katrin Schleife, Benjamin Engelstätter, Jenny Meyer, Jörg Ohnemus, Daniel Cerquera, Katja Coneus

Research Areas

- **ICT Sector and Diffusion of ICT**
Contact: Jörg Ohnemus
- IT and media sector
- Service providers of the information society
- Diffusion of ICT

- **ICT and the Labour Market**
Contact: Dr. Marianne Saam
- Workplace organisation
- Qualification and wage structure
- Age structure of employees
- Training and further education
- Preprofessional education

- **ICT, Firm Strategies and Competition**
Contact: Dr. Irene Bertschek
- Productivity and innovation
- Outsourcing and IT consulting
- Internationalisation
- Competition economic aspects
- Macroeconomic effects of ICT use in firms

The ZEW research group Information and Communication Technologies studies the economic aspects of the production and use of information and communication technologies (ICT). The group investigates how human capital, firms, and markets should be optimally organised in order to fully exploit the potentials offered by ICT for growth and employment in a national economy. In particular, the ICT research group is concerned with how economic processes are changed on a sustained basis due to the diffusion and adoption of ICT. While empirical and microeconomic methods are dominant in the group's work, applied theoretical techniques and simulation models, as well as empirical macroeconomics are

used on a supplementary basis. The group’s cooperation with selected interdisciplinary partners in the fields of business management, business informatics, sociology, and psychology has also proven fruitful. The common feature of the group’s broad-based approach to research is its investigation of the key role played by ICT as a tool, as a medium for the transmission of information and knowledge, as a market platform, as an infrastructure element and as an enabling factor for business management and innovation in knowledge-based economic sectors.

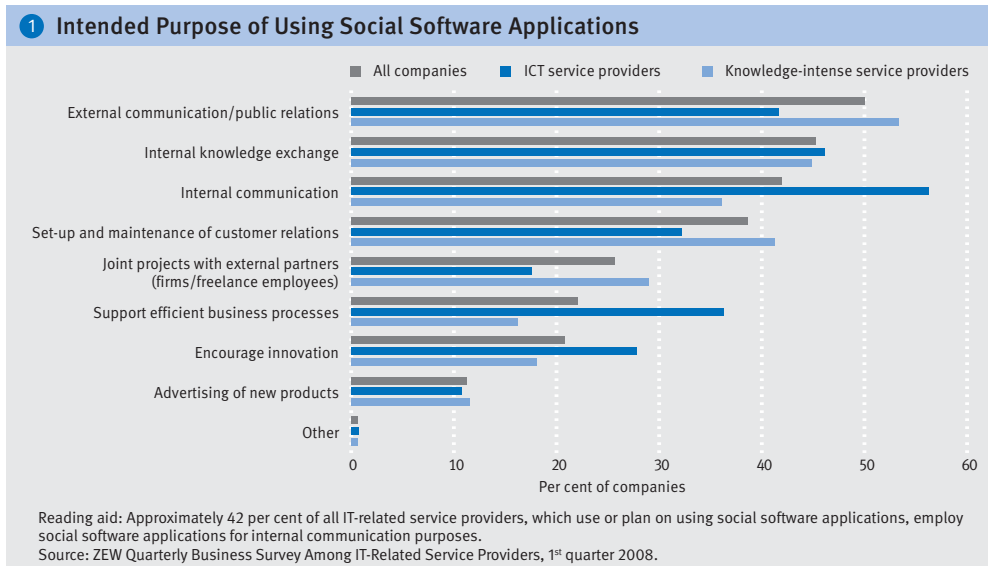
The close integration of the research group with the ZEW’s other research units, particularly the research departments Labour Markets, Human Resources and Social Policy as well as Industrial Economics and International Management, allows the group to realise synergies between its individual research areas. The group’s researchers, for instance, have access to an extensive pool of knowledge in terms of specific methods and data sets for the investigation of issues in the fields of industrial and labour-market economics. Ongoing cooperation also takes place within the context of project work.

Research Area “ICT Sector and Diffusion of ICT”

This research area follows the diffusion of ICT and the performance of firms, both within the ICT sector as well as in ICT-intensive industries and other user branches. Research activities are particularly concerned with identifying how widespread ICT applications are in certain firms, the goals that firms pursue with the use of ICT, as well as the obstacles they perceive. Moreover, companies are surveyed concerning strategies potentially related to the use of ICT, such as outsourcing and internationalisation.

By its surveys, the research group addresses questions with relevance for the practical use of ICT. The findings of these surveys are communicated in press releases, articles, and presentations that are intelligible also to the lay public. At the same time, such surveys provide a basis for rigorous quantitative research.

In 2008 members of the research group worked on the continuation of two survey-based projects. The business survey “Service Providers of the Information Society” encompasses Germany’s IT intensive service branches (software and IT services, ICT dealers, telecommunications service providers) and knowledge-intensive service branches (advertising, business consulting, tax advising and auditing, research and development, architects, technical con-



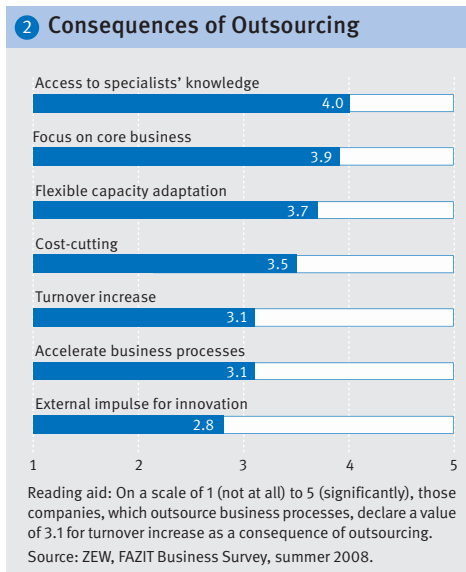
sulting and planning). Since 2002 the survey has been carried out on a quarterly basis, and, since 2003, has been used to release the ZEW business sentiment indicator “Service Providers of the Information Society” (ZEW-IDI). The survey is additionally used to collect data on current ICT issues. In 2008, for instance, topics such as the shortage of qualified employees, social software, and the exportation of ICT services were addressed. With regard to social software, the participating service providers of the information society were asked which applications they used and for which purposes. Just under one-third of the surveyed companies used at least one social software application; of the applications used, the most common were blogs, wikis, discussion forums, online communities, and collaborative platforms for group work. Generally, the IT-intensive service providers used social software more frequently than the knowledge-intensive service providers (with the exception of marketing agencies, 51 per cent of which used social software, the highest of all surveyed branches). The companies in the surveyed branches used social software primarily for external and internal communication as well as for internal knowledge exchange (see Figure 1).

Also in 2008 the research group conducted the final FAZIT business survey. From 2005 to 2009 the FAZIT project followed current and future trends in

information and media technologies in the German state of Baden-Württemberg. In bi-annual surveys, the study compares the IT and media sectors to selected IT-using industries and seeks to identify the determinants and obstacles associated with the deployment of ICT in firms. In 2008 the topics of business software, embedded systems, and business process outsourcing were explored. The results revealed that, in the industries covered by the survey, almost half of the firms in Baden-Württemberg outsource business processes. The vast majority of these firms make use of service providers based in the state of Baden-Württemberg for their outsourcing needs. Large companies outsource more often than small ones and also work with service providers out of state and internationally with somewhat greater frequency. Business processes are most often outsourced in the areas of accounting, IT, and human resources. The survey also investigated the factors and obstacles that influence outsourcing decisions as well as the consequences of outsourcing for the firm (see Figure 2). The companies viewed access to specialised knowledge as the most important potential benefit of outsourcing; the catalysing effects of outsourcing for innovation, by contrast, were seen as least important.

Research Area “ICT and the Labour Market”

The subject of study in this research area is the diffusion of ICT and its effects on the workforce. In the investigation of labour force effects, primary and secondary school education as well as occupational training are taken into account. In cooperation with the ZEW research department Labour Markets, Human Resources and Social Policy, the ICT research group addresses these topics with large individual data sets such as the Socio-Economic Panel Study and the BIBB/IAB survey. Additional data are derived from the surveys conducted within the first research area, which include data concerning company staffing and manpower needs as well as the professional development programmes offered by firms. Research on the effects of the diffusion of ICT on older employees was continued in 2008. The findings obtained in a series of projects are now available. Older employees (generally defined as those above 55 years of age) make



use of computers less frequently. Likewise, firms with a higher level of ICT intensity have fewer older employees. This correlation remains constant even when one examines various individual and company characteristics. However, the diffusion of ICT cannot be held responsible for the tendency of older employees to leave full-time employment early. The productivity effect of ICT is also not diminished when a larger percentage of a firm's employees are older. Additionally, the studies show that when a larger percentage of a firm's older employees take part in IT training courses, that firm tends to have more older employees. This finding is particularly true of IT-intensive companies. Future studies will explore how the diffusion of ICT and the employment of older individuals impact the capacity of firms to innovate.

A further project studied whether the diffusion of ICT has had different effects on the wage levels of women and men. As the ratio of males to females varies depending on industry and occupation, the study investigated the wage increases associated with ICT use for multiple industries and occupations. A model averaging analysis conducted using data from the BIBB and IAB on education and wage development revealed that the wage difference between ICT users and non-users in the 1980s and 1990s was 2 per cent to 5per cent higher on average for women than it was for men when demographic features, occupational groups, and economic sectors were kept

constant. However, it could not be demonstrated that occupations traditionally held by women (e.g. office workers) have profited more than average from the use of ICT.

Research Area “ICT, Firm Strategies and Competition”

In this research area we examine strategic trends pursued by firms in connection with the use of ICT. We also study competition and regulation policy in the ICT sector and IT-user industries.

With regard to the analysis of firm strategies, in 2008 the group completed a project funded by the Volkswagen Foundation concerning the role played by IT consultants in firm innovation. The central goal of the project was to provide a comprehensive account of why firms use IT consulting services and how these affect firm performance. In three different modules, the interdisciplinary project studied aspects of the consulting process from the perspectives of sociology, organisational theory, and economics. The economics module was carried out on the basis of the research group's ZEW ICT survey, which is representative of Germany.

To start with, the determinants underlying the use of IT consulting services were investigated. Next, the relationship between IT consulting and company performance was analysed. In order to evaluate company performance, productivity and various measures of innovation activity were examined. The use of appropriate econometric techniques enabled the identification of the causal effects of consulting services. In the analysis, a number of influencing factors were taken into account, including company size, human capital, IT intensity, and industry classification.

Several insights – some of them surprising – were corroborated by the results obtained in all three project modules. For example, it was revealed that IT consultants are primarily sought out for their technical know-how and that their significance for the innovation processes in a firm was ultimately lower than expected by researchers at the beginning of the project (see Figure 3). Software manufacturers tend to play a greater role in setting new IT trends than IT consultants. IT consultants do, however, have a positive effect on labour productivity within a firm.



In the area of competition analysis, the regulatory framework for the European telecommunications sector was evaluated. The project discussed normative justifications for regulation from the perspective of two economic approaches and analysed their practical implementation. A comparison of EU telecommunications regulation with the conclusions of the normative analysis showed that the regulation of telecommunications markets can be justified on the basis of economic reasoning and that the given framework for regulation in telecommunications could be applied to pursue the goal of minimal regu-

lation. In practice, however, the criteria for the determination of “significant market power” are interpreted so broadly that over-regulation has resulted.

The projects initiated in 2008 are concerned with the reciprocal relationship between outsourcing and IT consulting as well as with methodological aspects of the analysis of ICT productivity effects at the micro- and macroeconomic level.

For detailed information on current and finished research projects please check our website:
<http://www.zew.de/en/forschung>

Growth and Business Cycle Analyses



From left: Claudia Busl, Heidi Schielke, Atılım Seymen, Martin Scheffel, Jan Hogrefe, Marcus Kappler, Andreas Sachs

Research Areas

■ Analysis of Long-Term Macroeconomic Interrelations

Contact: Dr. Marcus Kappler

- Determinants of the potential output of industrial countries
- Growth empirics
- Quantitative analysis of long-term unemployment
- Methods for the measurement of the non-cyclical unemployment rate
- Impact of institutional reforms on growth and employment

■ Analysis of Short-Term Macroeconomic Interrelations

Contact: Dr. Marcus Kappler, Atılım Seymen

- Synchronisation and convergence of international business cycles
- Total economic effects of EMU enlargement
- Global macroeconomic models

- Business cycle analysis
- Forecast evaluation

■ Development of Analytic Tools and Methods

Contact: Martin Scheffel

- Business cycles and growth in a unified theoretical and empirical framework
- Macro-theoretical DSGE (dynamic stochastic general equilibrium) model
- Macroeconometric multi-country model

In macroeconomic analysis, key indicators such as GDP and the unemployment rate are normally subdivided into long-term and short-term components, each of which require their own theoretical approaches, and, in particular, special empirical methods of analysis. For this reason, while the primary field of study of the Business Cycle and Growth Analyses research group has a long-term perspective, research is also conducted with a short-term focus (i.e. to investigate phenomena related to the business cycle). The research group, which is still being

developed, strives to unite long- and short-term macroeconomic concepts in a consistent empirical and theoretical framework.

The analysis of factors that influence growth and long-term unemployment is the main subject of studies concerned with long-term interrelationships. One aim of the research group is to use cross-country comparisons to draw important conclusions regarding the impacts of efficient institutional frameworks on growth, as well as to extend and improve existing empirical tools for the analysis of the production potential of economies. An additional goal is to develop empirically based macroeconomic models that enable the quantitative analysis of the effects of reforms on economic growth and long-term unemployment in Germany and Europe.

Questions concerning the synchronisation and convergence of business cycles in the European Economic and Monetary Union stand at the centre of the study of short-term, cyclical fluctuations in macroeconomic capacity utilisation. The convergence of business cycles between countries plays a key role in the debate concerning the optimal size of a currency union. A description of the interconnectivity of national business cycles in Europe can provide important insights concerning the forecasting of macroeconomic impacts to new members of the euro area, particularly against the backdrop of its forthcoming expansion.

The research group regularly evaluates the accuracy of growth forecasts made by external sources in order to inform the broader public of their reliability and usefulness. The research group also publishes the quarterly ZEW Business Cycle and Growth Analysis report, which facilitates the targeted transfer of knowledge as well as the communication of macroeconomic insights to the broader public. Alongside current findings concerning growth in Germany and Europe, the publication also provides information about theoretical and methodological developments in macroeconomics on a periodic basis.

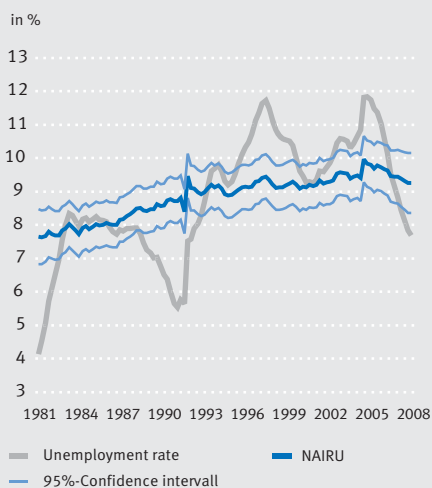
Research Area “Analysis of Long-Term Macroeconomic Interrelations”

An area of emphasis in coming years will be the empirical analysis of factors relevant to economic

growth. Additional empirical investigations will build upon the preliminary work of past years, in which new econometric panel methods were adapted within the scope of model estimates in order to distinguish between long-term growth paths and short-term adjustments. The investigation of the effects of structural reforms is closely tied to the approach of the empirical analysis of growth. In recent years, structural reforms in the EU have been a key concern in economic policy debates. The quantification and assessment of economic policy measures which are aimed at achieving long-term changes in the institutional environment (in the broadest sense of the term) is a challenge that must be met if rigorous economic policy advising is to be provided. The Business Cycle and Growth Analyses research group intends to engage in this field of research with the development of suitable data sets and, in particular, with the empirical analysis of the timing and the mode of action of structural reforms.

In concrete terms, next year the research group will apply for funding from the German Research Foundation (DFG) to conduct a study aimed at the analysis of the optimal level of regulation in work and product markets for maximising growth and employment in Europe’s economies. With rigorous

1 Long-Term Analysis – Estimation of the Non-Accelerating Inflation Rate of Unemployment (NAIRU) in Germany



analysis in this area of study, the group aims to provide ongoing scientific support to the European reform process.

In autumn of 2008 a project undertaken on behalf of the Federal Ministry of Finance was successfully completed. The project was concerned with the analysis and estimation of the Non-Accelerating Inflation Rate of Unemployment (NAIRU) in Germany in order to improve the methodological foundation for debt sustainability analysis and the calculation of the structural deficit (see Figure 1). The project was conducted in cooperation with the Labour Markets, Human Resources and Social Policy research department. The NAIRU is a key parameter for the estimation and projection of a country's macroeconomic production potential. The special macroeconomic concept of the production potential is bound with this parameter, the various facets of which were investigated in two previous expert reports drafted on behalf of the Federal Ministry for Economics and Technology. As the perspectives and determinants of Germany's production potential will remain a key item on the research agenda, the findings of this third-party funded project will contribute to the further development of existing methods and explanatory models.

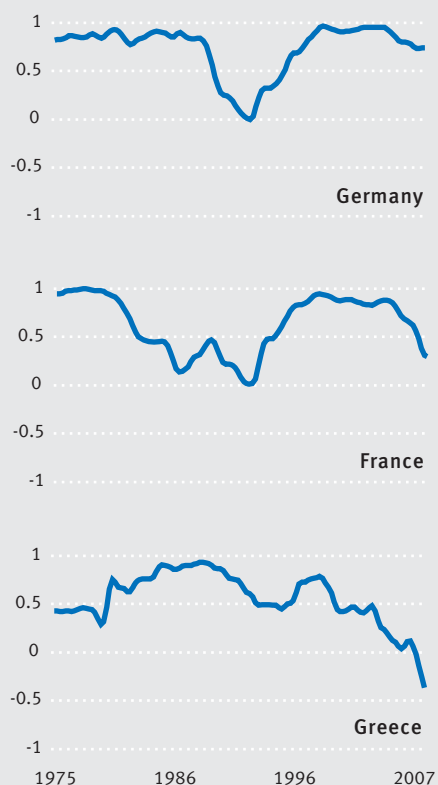
A further area of emphasis is the development of empirically based macroeconomic models with which the quantitative effects of structural reforms on economic growth and long-term unemployment can be broadly analysed. In particular, the research group intends to investigate how fundamental reforms in the labour market and the tax system affect the long-term development of the country's production potential and unemployment rate. A further focus will be the analysis of these reforms from the perspective of welfare theory in consideration of various labour market risks. This analysis will be founded on the latest techniques of modern macroeconomics, techniques that permit the quantitative macroeconomic assessment of economic policy questions on the basis of microeconomic models (i.e. in order to take the behaviour of individual economic actors into account on a consistent basis).

Research Area "Analysis of Short-Term Macroeconomic Interrelations"

The following questions stand at the forefront of the analysis of macroeconomic relationships: Which shocks influence the business cycle? How and to what extent do shocks affect macroeconomic parameters in the short term? Which common factors underlie movements in the business cycle and how strongly synchronised are the economic cycles of industrialised nations? These questions have been and will continue to be approached by means of multi-country models using modern methods of time-series econometric analysis.

In November 2008 an important reference project in this research area was completed. The project was

2 Business Cycle Correlations vis-à-vis the Euro Area



undertaken on behalf of a Group of Policy Advisors of the European Commission and was concerned with the investigation of the correlation between economic cycles in Europe, as well as European economic integration. The synchronisation and convergence of economic cycles among member states is a decisive criterion for a successful monetary union. In the case of severely asynchronous economic cycles and in the absence of harmonised cyclical patterns, there is a risk that a common monetary policy will not equitably meet the respective needs of participating economies, and could possibly lead to the further divergence of economic cycles. Particularly against the backdrop of the forthcoming expansion of the euro area, there is a need for a thorough survey of cyclical interrelationships between member states, especially with regard to the effects of the euro's introduction in new member countries. One finding of the project that appears to be particularly revealing in light of the current global crisis is that the business cycles of Europe's national economies tend to converge in times of recession, whereas country-specific features tend to be most pronounced in times of positive growth. Recessions thus normally have a considerable international component. Furthermore, the international harmonisation of business cycles is more distinct in a global downturn than in times of robust growth (see Figure 2).

Research Area “Development of Analytic Tools and Methods”

The medium-term goal of the research group is to integrate long- and short-term concepts into a consistent empirical and theoretical explanatory framework. A significant insight of modern macroeconomics is that the conceptual division between long- and short-term phenomena, in other words, between “growth” and the “business cycle” – a division regularly invoked in textbooks and economic policy debates – merely represents a didactic oversimplification and is scarcely adequate for describing actual reality. Examples of how the business cycle impacts growth are provided by hysteresis in

labour markets (as determined by the rapid devaluation of human capital during long-term unemployment) as well as the clear relationship between investment activity (and, in turn, capacity growth) and the business cycle.

Next year the group will begin with the development of appropriate analytic tools for the evaluation of the short- and long-term effects of political measures. The group considers the methodological combination of a macroeconomic and macro-theoretical model as the best approach for this research aim. The planned macroeconomic model should allow the integration of theoretically based, long-term relationships as an auxiliary condition without producing any constraints with regard to short-term dynamics, thereby enabling the economic cycle and growth to be modelled in a single unified framework.

The macro-theoretical model (DSGE), by contrast, will seek to explicitly formulate fundamental economic relationships, thereby permitting an analysis even when parameters change due to altered preferences or institutional reforms. The DSGE model will have the additional advantage of enabling the evaluation of the effects that economic policy measures have on the general welfare. This important step for the evaluation of policy reform is only possible with a theoretical model which – in contrast to econometric models – is based on individual optimisation with an underlying utility function.

Since each approach has distinct strengths and weaknesses, they should be employed together in a complementary fashion. In the future, both tools of analysis will play a key role in the group's project work for economic research and policy advising.

In the summer 2008 the group was awarded a project by the Federal Ministry of Finance. In the project, which is focused on the interface between short- and long-term trends, researchers will engage in an in-depth analysis of the reasons for the observed shift in the functional distribution of income.

For detailed information on current and finished research projects please check our website:
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ZEW IN 2008

⊙ SCIENTIFIC OUTPUT

Excellence in economics has a number of dimensions at ZEW, including: the publication of research findings in leading scientific journals, national and international networking with cutting-edge research establishments, ongoing knowledge exchange through conferences and workshops, as well as the creation and maintenance of unique databases.

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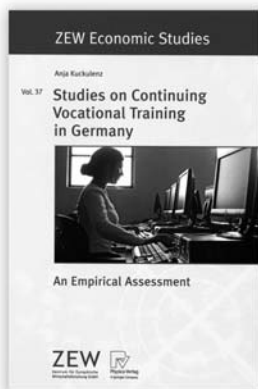
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ZEW Discussion Papers

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Conferences

Every year ZEW's research units organise some 20 conferences and workshops. These events attract several hundred scientific guests to the Institute. Some ZEW conferences take place regularly at the ZEW, particularly those on the topics of innovation, competition, taxation, and programme assessment.

Scientific events in 2008:

- ZEW Workshop on Web 2.0 and Its Implications for Firms and Private Users (11.–12.12.2008)
- EU-CONSENT Workshop “First Lessons from the Budgetary Review” (24.–25.11.2008)
- Annual Conference of the Society for Experimental Economics (GfEW) (30.10.–1.11.08)
- ZEW Conference “Real Options in Energy Economics” (27.–28.10.2008)
- Conference “What Drives Asset and Housing Markets?” (20.–21.10.2008)
- Conference “Die globale Finanzkrise – Ursachen, Lehren und Prognosen” (15.10.2008)
- Workshop “Efficiency of the Public Sector” (2.10.2008)
- Conference “Regulierung und ihr Einfluss auf Investitions- und Innovationsanreize” (1.–2.10.2008)
- Workshop Praxisbeirat “SECO@home – Soziale, ökologische und ökonomische Dimensionen eines nachhaltigen Energiekonsums in Wohngebäuden” (30.9.2008)
- Workshop “Energieprognose 2009” (22.9.2008)
- Summer School “Labour Economics – Theory, Empirical Methods, Current Research” (15.–19.9.2008)
- Seminar “Das 7. EU-Forschungsrahmenprogramm – Erfolgreich von der Antragstellung bis zur Projektdurchführung” (15.9.2008)

- Mannheim Competition Policy Forum (11.9./9.10./6.11./4.12.2008)
- 6th ZEW Conference on the Economics of Information and Communication Technologies (4.–5.7.2008)
- 3rd ZEW Conference on Industrial Economics and Patent Research (13.–14.6.2008)
- 10th ZEW Summer Workshop for Young Economists “The Economics and Econometrics of Innovation” (9.–12.6.2008)
- Inaugural Conference on Non-Cognitive Skills: Acquisition and Economic Consequences (15.–17.5.2008)
- 16th PhD Workshop on International Climate Policy (1.–2.5.2008)
- ZEW Symposium “Realloptionen – eine sinnvolle Bewertungsmethode im Energiebereich?” (14.4.2008)
- AEI Conference “Ökonomik, Politische Ökonomie und Psychologie staatlicher Reformen in Europa” (10.–11.4.2008)
- ZEW Seminar “Rekursive Methoden und deren numerische Anwendung in der Makroökonomik” (31.3.–2.4.2008)
- Workshop “Gender and the Labour Market” (28.–29.3.2008)
- RNIC Workshop “Structural Models in Industrial Organization” (25.–26.1.2008)



The 3rd conference on industrial economics and patent research was taking place on the 13th and 14th of June 2008 at the ZEW.

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ZEW IN 2008

© STAFF REPORT AND
FINANCIAL STATEMENT

Staff Report and Financial Statement

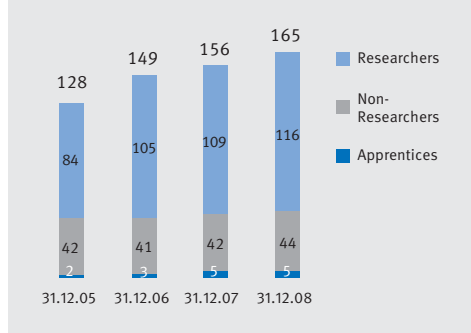
In 2008 – as in years prior – ZEW witnessed further growth in the activities of its service and research units. ZEW continues to maintain its position as a leading international institution for applied empirical economics research on both a national and international level.

At the end of 2008, ZEW had a staff of 165 employees (2007: 156), of whom 116 were engaged in scientific work. In the time period of the report, 18 staff members left ZEW following the successful qualification and completion of their work. More than 60 per cent of departing staff members went on to colleges, research institutions, and public institutions and some 28 per cent to businesses and associations. Figure 1 displays ZEW's staff development over time.

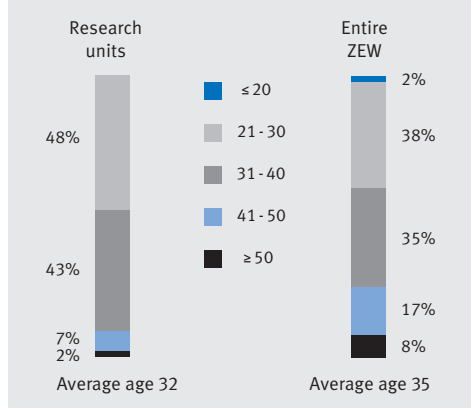
Staff members with degrees in economics – particularly macroeconomics – have traditionally been predominant in the research units. ZEW possesses a high number of young researchers: The average age in the research units is 32 years, and in the entire institute, 35 years (see Figure 2). In accordance with ZEW policy, the vast majority (90 per cent) of scientific staff engaged in research activities has a fixed-term contract. A similar situation prevails in the service departments. The overall percentage of fixed-term labour arrangements is around 70 per cent.

At the end of 2008, five service department trainees were employed by the Institute; these trainees were studying in the following fields: Office Administration; Office Communications with Additional Qualifications in English and Multimedia; Informatics with Specialisation in Systems Integration; and Bachelor of Science in Business Information Technology. ZEW makes additional educational contributions through the hiring of interns as well as student and research assistants. Interns receive significant support and mentorship prior to embarking on a career. Over the past year, 88 interns (2007: 64) were engaged at ZEW (see Figure 3). Student and research assistants primarily come from the Universities of Mannheim and Heidelberg as well as other colleges in the Rhine-Neckar metropolitan region. At ZEW they have the opportunity to obtain their first professional experience by working

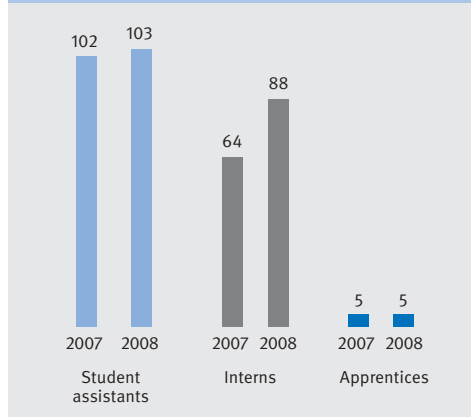
1 Staff Development



2 Age Structure



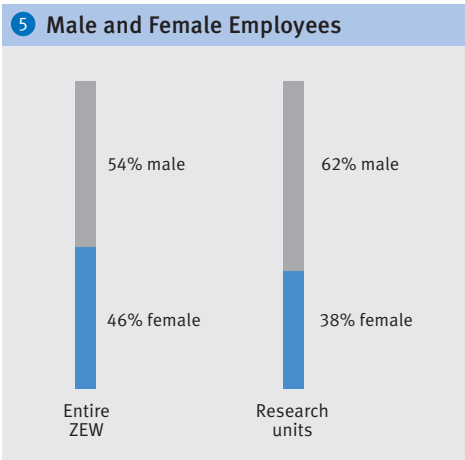
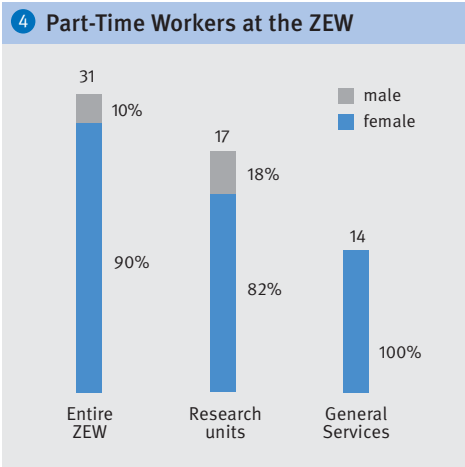
3 Staff in Training



in the research or service units. In this way, ZEW also makes initial contact with promising young academics. In December 2008 103 students (2007: 102) were engaged as assistants at ZEW. About 17 per cent (2007: 12 per cent) were of foreign nationality.

On the basis of positive experiences, the Institute has intensified the involvement of independent collaborators in project work. A large number of research associates from a wide range of domestic and foreign universities support ZEW's research with a great deal of commitment. These research associates play a critical role in the education and mentorship of research staff; the creation and development of ZEW's research areas; the establishment of contact with national and international partners; as well as the procurement of third-party funding. Over the period covered by this report, a number of research fellows, both from Germany and abroad, were engaged for varying lengths of time in ZEW research projects. The goal of research and work residency is collaboration on projects, as well as the exchange of information and experience. The ZEW Visiting Researchers Programme was established to strengthen and expand international networking, and it has been very well received. At the same time, the ZEW Doctoral Studies Programme was developed. This Programme supports collaborative relations with university doctoral programmes, offers young doctoral candidates a chance to obtain a rigorous understanding of applied empirical economics research, and also presents opportunities for collaboration with ZEW's experienced research staff on international projects with national and international partners. In 2008, three participants from the doctoral programme at the University of Mannheim took part in scientific research work at ZEW through the ZEW DocNet Programme. Three doctoral candidates from the Catholic University of Leuven are integrated in the Industrial Economics and International Management department. An additional form of international collaboration is the participation of external partners in research projects and partnerships. Within the scope of such project work, ZEW has been able to expand its network of international ties to include new contacts in China, India, Australia, and New Zealand, among other countries.

In order to insure that the Institute's scientific work and economic policy advising fulfils the highest international standards, ZEW actively supports the ongoing professional development of its staff by means of its own educational programme. Under this programme, staff may be temporarily released from their commitments to project work. Staff members use the sabbaticals to complete their doctoral or habilitation dissertations, or for research residencies at renowned foreign institutions. In 2008, nine researchers completed their doctoral dissertations, some of them *summa cum laude*. One habilitation was also successfully completed. At this time, there are 72 doctoral dissertations and 11 habilitations in progress.



6 ZEW – Profit-and-Loss Statement				
(in TEUR)	2005	2006	2007	2008*
Institutional funds Funds of Joint Initiative for Research and Innovation	6.520	7.060	7.120 261	7.430 566
Third-party funds (Turnover, inventory changes, subsidies)	5.163	6.191	6.366	6.422
Other business revenues, financial profit	489	476	629	761
Income from the reversal of the special item for contributions to fixed assets	285	419	347	303
Total revenues	12.457	14.146	14.723	15.482
Staff costs	7.011	7.815	8.795	8.695
Third-party services	776	1.664	1.585	1.573
Other operating charges	3.459	3.476	4.004	4.202
Write-offs of assets	315	444	351	303
Allocations to special items for contributions to fixed assets	395	491	355	198
Other taxes			2	3
Total expenses	11.956	13.890	15.092	14.974
Profit/Loss for the financial year	501	256	-369	508
Withdrawal from appropriated reserves	727	657	889	806
Withdrawal from other retained earnings	30	25	4	–
Net income	1.258	938	524	1.314
* Tentative				

An advantage of working at ZEW that especially attracts younger researchers is the flexible arrangement of working hours. A total of 31 employees (2007: 27) at year's end were taking advantage of a personalised part-time schedule, a figure that represents 19 per cent (2007: 17 per cent) of the overall staff (see Figure 4). These flexible working hours help to promote a balance between professional and family life. The personnel policy has contributed to a rise in the percentage of women engaged in scientific work to 38 per cent. Institute-wide, 46 per cent of staff is female (see Figure 5).

The balance sheet for ZEW's endowment, finances, and revenues also shows an overall positive picture for the fiscal year of 2008. This is especially remarkable given the heightened degree of competition in 2008 for third-party funding in the national and international research market. The percentage of third-party funding (including other revenues) remained constantly over 40 per cent, as in previous years.

ZEW's flexible financial charter, which foresees the receipt of third-party funding in fixed amounts, enables the Institute to designate surplus revenues from increases in third-party funding and cost savings as "appropriated reserves". These funds are annually budgeted and employed for the creation of new research areas (such as "Educational Economics"); the formation of new research units (such as "Growth and Business Cycle Analyses"); the exploration of current research topics (such as climate and energy policy); and for in-house scientific training programmes and joint research projects.

The net income arises from the profit in the profit-and-loss statement, corrected by withdrawals for "appropriated reserves" and write-offs for self-financed assets, which are shown under the entry "withdrawal from other retained earnings". For the fiscal year of 2008, the Institute thus registered a profit of 0.51 million euros and a net income of 1.31 million euros (see Figure 6). The management recommended to the Supervisory Board that these

7 ZEW – Balance Sheet per 31.12.2008*

	31.12.2007	31.12.2008		31.12.2007	31.12.2008
	in TEUR	in TEUR		in TEUR	in TEUR
ASSETS			LIABILITIES AND EQUITY		
Intangible assets	66	46	Share capital	26	26
Land	2.234	2.230	Appropriated reserves	2.564	2.282
Tools and equipment	688	602	Other reserves	2.170	2.170
			Net income	524	1.314
Fixed assets	2.988	2.878	Shareholders' equity	5.284	5.792
			Untaxed reserves	793	683
Stocks	5.199	6.943	Reserves	2.671	2.940
Receivables	831	1.009	Advances	4.978	6.135
Investment/ cash at banks	5.338	5.545	Liabilities	664	871
Current assets	11.368	13.497			
Prepaid expenses	34	46	Outside capital	8.313	9.946
Total	14.390	16.421			
			Total	14.390	16.421

* Tentative balance sheet

earnings be placed into “appropriated reserves” to be predominantly used for the further qualification of staff members and the establishment of new research areas.

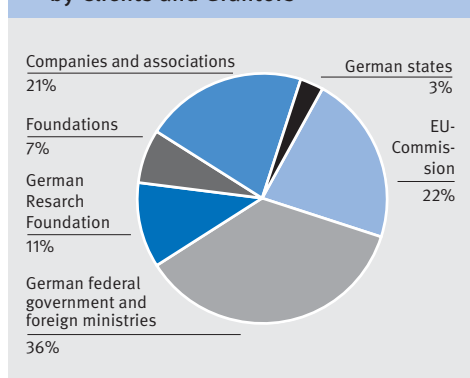
As shown in Figure 7, the total capital is currently 16.42 million euros, which is significantly higher than last year's figure of 14.39 million euros. The

causes of this change are primarily the increase in the inventory of ongoing and not yet settled projects under “provisions”, as well as an increased account balance at the Institute's credit institutions. On the liabilities side, this growth in assets is counterbalanced by higher reserves, additional advances received, and a higher net income. The cash and equivalents balance demonstrates good liquidity.

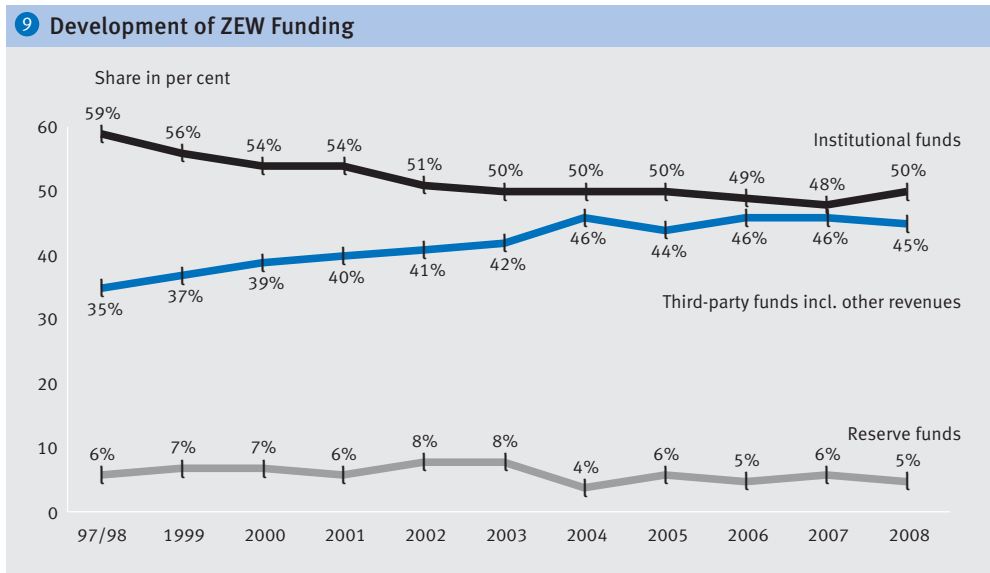
In summary, the following developments in ZEW's financial position were of significance in the fiscal year of 2008:

- The total revenue was significantly higher at 15.48 million euros than in the previous year (14.72 million euros). This was due to a planned increase in institutional funding to 8 million euros (2007: 7.38 million euros) and the approval of research funding under the Pact for Innovation and Research in a competitive processes. In addition, “other business revenues” also showed an increase to 0.76 million euros (2007: 0.63 million euros) along with the growth of third-party funding to 6.42 million euros (2007: 6.37 million euros).

8 Third-Party Funding 2008 by Clients and Grantors



- Total expenses were 14.97 million euros, below last year's figure of 15.09 million euros.
- The annual profit was 0.51 million euros in 2008, and the net income was 1.31 million euros.
- Figure 8 shows an overview of the distribution of third-party funding obtained in 2008 according to clients and grantors. The current contractual situation regarding third-party projects in 2009 onward has increased to 8.95 million euros and thus demonstrates the continued successful work of ZEW.
- In 2008 the proportion of third-party funding and other revenues was 45 per cent of total revenues and once again represents an outstanding result (see Figure 9).
- From the time of the Institute's founding in 1991 until now, ZEW staff members have obtained 70.92 million euros in third-party funding.



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COMMITTEES AND EXTERNAL RELATIONS

© SUPERVISORY BOARD

The Supervisory Board of the ZEW consists of eleven members from the world of politics, business, and academia.

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Vice-Chairman

- Dr. h.c. Eggert Voscherau, Chairman of the Supervisory Board, BASF SE

Members

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- Prof. Dr. Claus Eiselstein, Director, Ministry of State Baden-Württemberg
- Dr. Hans Freudenberg, Head of Ministry Department, Ministry of Economic Affairs Baden-Württemberg
- Dr. Dietrich Birk MdL, Secretary of State, Ministry of Science, Research and the Arts Baden-Württemberg
- Prof. em. Dr. Dr. h.c. mult. Otto H. Jacobs, University of Mannheim
- Prof. Dietmar Harhoff, PhD, Ludwig Maximilian University Munich
- Dr. Gisela Meister-Scheufelen, Head of Ministry Department, Ministry of Finance Baden-Württemberg
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► SCIENTIFIC ADVISORY COUNCIL

The Scientific Advisory Council, consisting of representatives from the worlds of academia and business, actively follows and evaluates the ZEW's work.

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- Prof. Dr. Friedrich Buttler, former Secretary of State, Ministry of Science, Research, and Culture Brandenburg; former Regional Director of Europe and Central Asia, International Labour Organization (ILO), Geneva

Vice-Chairman

- Prof. Dr. Dres. h.c. Arnold Picot, Head of the Institute for Information, Organization, and Management, Ludwig Maximilian University Munich

Members

- Prof. David Bruce Audretsch, PhD, Head of Department Entrepreneurship, Growth Public Policy, Max Planck Institute of Economics
- Prof. Dr. Uschi Backes-Gellner, Institute for Strategy and Business Economics (ISU), University of Zurich
- Dr. Kurt Bock, CFO, Chairman, and Chief Executive Officer, BASF SE
- Prof. Dr. Christoph Engel, Director, Max Planck Institute for Research on Collective Goods
- Prof. Dr. Michael Heise, Head of Allianz Group Economic Research, Dresdner Bank AG
- Dr. Dieter Hundt, President of the Confederation of German Employers' Associations
- Prof. Dr. Gebhard Kirchgässner, Swiss Institute for International Economics and Applied Economic Research (SIAW), University of St. Gallen
- Prof. Dr. Kai A. Konrad, Director, Max Planck Institute for Intellectual Property, Competition and Tax Law
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- Prof. Dr. Dres. h.c. Bertram Schefold, Johann Wolfgang Goethe University Frankfurt am Main
- Prof. Dr. Bernd Schips, former Head of the KOF Swiss Economic Institute, ETU Zurich
- Prof. Dr. Beatrice Weder di Mauro, Johannes Gutenberg University Mainz
- Prof. Dr. Dietmar Wellisch, Head of the International Tax Institute, University of Hamburg
- Prof. Dr. Heinz Welsch, Institute for Economics and Statistics, Carl von Ossietzky University Oldenburg

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COMMITTEES AND EXTERNAL RELATIONS

► RESEARCH ASSOCIATES

Research associates are professors from German and international universities, who work in close collaboration with the ZEW concerning research activities. Research associates usually function as managers of research projects at the ZEW. They also supervise dissertations of the ZEW's employees and, in addition, get involved in creating or maintaining major ZEW research focuses. This also includes fundraising from third parties.

At present, the following research associates are working at the ZEW:

- Prof. Dr. Christoph Böhringer, Carl von Ossietzky University Oldenburg
- Prof. Dr. Claudia Buch, University of Tübingen
- Prof. Dr. Thomas Cleff, University of Applied Sciences of Pforzheim
- Prof. Dr. Dirk Czarnitzki, Catholic University Leuven, BE
- Prof. Dr. Horst Entorf, Johann Wolfgang Goethe University Frankfurt am Main
- Prof. Dr. Oliver Fabel, University of Vienna
- Prof. Dr. Lars Feld, University of Heidelberg
- Prof. Bernd Fitzenberger, PhD, Albert Ludwig University Freiburg im Breisgau
- Prof. Reint Gropp, PhD, European Business School, Oestrich-Winkel
- Prof. Dietmar Harhoff, PhD, Ludwig Maximilian University Munich
- Prof. Dr. Uwe Hassler, Johann Wolfgang Goethe University Frankfurt am Main
- Prof. Dr. Katrin Hussinger, University of Maastricht, NL
- Prof. em. Dr. Dr. h.c. mult. Otto H. Jacobs, University of Mannheim
- Prof. Dr. Eckhard Janeba, University of Mannheim
- Prof. Jürgen Kähler, PhD, Friedrich Alexander University Erlangen-Nuremberg
- Prof. Dr. Ulrich Kaiser, University of Zurich, CH
- Prof. Dr. Dr. h.c. Alfred Kieser, University of Mannheim
- Prof. Dr. Kornelius Kraft, University of Dortmund
- Prof. Tom Krebs, PhD, University of Mannheim
- Prof. Dr. François Laisney, University of Strasbourg, FR
- Prof. Dr. Andreas Lange, University of Maryland, College Park, US
- Prof. Dr. Michael Lechner, University of St. Gallen, CH
- Prof. Ernst Maug, PhD, University of Mannheim
- Prof. Dr. Jeanine Miklós-Thal, PhD, MIT, Boston, US
- Prof. Dr. Andreas Oestreicher, Georg August University Göttingen
- Prof. Dr. Martin Peitz, University of Mannheim
- Prof. Dr. Winfried Pohlmeier, University of Konstanz
- Prof. Dr. Patrick A. Puhani, Leibniz University of Hannover
- Prof. Thomas Rønde, PhD, University of Copenhagen, DK
- Prof. Dr. Reinhold Schnabel, University of Duisburg-Essen
- Prof. Dr. Ulrich Schreiber, University of Mannheim
- Prof. Dr. Robert Schwager, Georg August University Göttingen
- Prof. Dr. Christoph Spengel, University of Mannheim
- Prof. Yossi Spiegel, PhD, Tel Aviv University, IL
- Prof. Dr. Alfred Spielkamp, University of Applied Sciences of Gelsenkirchen
- Prof. Dr. Alexandra Spitz-Oener, Humboldt University of Berlin
- Prof. Konrad Stahl, PhD, University of Mannheim
- Prof. Dr. Bodo Sturm, Leipzig University of Applied Science (HTWK)
- Prof. Dr. Stephan Lothar Thomsen, Otto von Guericke University Magdeburg
- Prof. Andrew Toole, PhD, Rutgers University, US
- Prof. Dr. Uwe Walz, Johann Wolfgang Goethe University Frankfurt am Main
- Prof. Dr. Berthold U. Wigger, Friedrich Alexander University Erlangen-Nuremberg
- Prof. Dr. Michael Woywode, University of Mannheim
- Prof. Dr. Thomas Zwick, Ludwig Maximilian University Munich

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COMMITTEES AND EXTERNAL RELATIONS

◉ VISITING RESEARCHERS

During 2008 the ZEW welcomed the following visiting researchers for a research stay. Research fellows are visiting researchers, which are cooperating especially close and long with the ZEW.

- Aarle, B. van,
Federal Planning Bureau, BE
- Achtzinger, A.,
University of Konstanz
- Aerts, K.,
Catholic University Leuven, BE
- Ager, P.,
UPF, Barcelona, ES
- Arai, S.,
Haas Business School, University of California,
Berkeley, US
- Bhargava, M.,
Oakland University, Rochester, US
- Bayer, U.,
University of Konstanz
- Blind, K.,
Fraunhofer ISI – Institute for Systems and
Innovation Research, Karlsruhe, University of
Berlin
- Blomeyer, D.,
ZI Mannheim
- Blüthner, A.,
University of Mannheim (Research Fellow)
- Boeters, S.,
CPB, Den Haag, NL (Research Fellow)
- Carbone, J.,
Williams College, Williamstown, US
(Research Fellow)
- Cassiman, B.,
IESE, Business School Barcelona, ES
- Delaney, L.,
University College Dublin, IE
- Dobbelaire, S.,
Ghent University, Catholic University Leuven,
BE, IZA Bonn
- Dohmen, T.,
University of Maastricht, NL
- Duckworth, A.L.,
University of Pennsylvania, US
- Faia, E.,
Johann Wolfgang Goethe University
Frankfurt am Main
- Faria, P.,
Technical University of Lisbon, PT
(Research Fellow)
- Goktepe, D.,
MPI Jena
- Gollwitzer, P.M.,
New York University, US, University of Konstanz
- Harms, P.,
RWTH Aachen
- Hauenstein-Sakai, M.,
University of Duisburg-Essen
- Heckman, J.J.,
University of Chicago, US
- Herbold, S.,
Ernst & Young AG Stuttgart (Research Fellow)
- Hoffmann, M.,
University of Zurich, CH
- Hoisl, K.,
Ludwig Maximilian University Munich
- Horbach, J.,
University of Applied Sciences Anhalt,
Bernburg (Research Fellow)
- Hottenrott, H.,
Catholic University Leuven, BE
- Kashyap, A.,
University of Chicago, US
- Kocher, M.,
Ludwig Maximilian University Munich
- König, M.,
University of Regensburg
- Kotzebue, A. von,
Friedrich Alexander University
Erlangen-Nuremberg
- Laucht, M.,
ZI Mannheim
- Li, P.,
Chinese Academy of Social Sciences (CASS),
Hongkong Maco and Taiwan, CN
- Li, W.,
University of Shanghai, CN
- Mairesse, J.,
UNU-MERIT, Maastricht, NL und CREST –
ENSAE, Paris, FR (Research Fellow)
- Mangelsdorf, A.,
Technical University Berlin
- Mohnen, P.,
UNU MERIT, Maastricht, NL

- Monacelli, T.,
Bocconi University, IT
- Montobbio, F.,
University of Insubria, Varese, IT
- Oestreicher-Singer, G.,
University of Tel Aviv, IL
- Pesonen, P.,
VTT Technical Research Centre of Finland, FI
- Pinto, R.,
University of Chicago, US
- Pottelsberghe, B. van,
Free University of Brussels, BE
- Prady, D.,
TSE-GREMAQ, Toulouse, FR
- Raymond, M.,
University of Maastricht, NL
- Reenen, J. van,
CEP London, London School of Economics,
NBER, UK
- Ryan, S.P.,
MIT, Department of Economics, Cambridge,
MA, US (Research Fellow)
- Saarinen, J.,
VTT Technical Research Centre of Finland, FI
- Scherer, F.M.,
Harvard University, Cambridge, MA, US
- Schertler, A.,
University of Kiel (Research Fellow)
- Schlenker, W.,
Columbia University, US
(Research Fellow)
- Schmidt, T.,
Deutsche Bundesbank, Frankfurt am Main
- Schupp, J.,
DIW Berlin
- Serra da Luz Mendonça, J.,
Technical University of Lisbon, PT
- Sérvulo, V.M.,
IPEA – Institute of Applied Economic Research,
Brasília, BR
- Shebu, E.,
Proximity Consulting GmbH, Hamburg
- Song, M.,
University of Rochester, UK (Research Fellow)
- Thoma, G.,
University of Camerino, CESPRI –
Bocconi University, Milan, IT
- Thorwarth, S.,
Catholic University Leuven, BE
(Research Fellow)
- Tominey, C.,
CEP, LSE
- Tonoyan, V.,
University of Mannheim
- Väänänen, L.,
University of Helsinki, FI
- Veugelers, R.,
Catholic University Leuven, BE
- Vezulli, A.,
CESPRI – Bocconi University, Milan, IT
- Vonortas, N.,
George Washington University, US
- Wagner, S.,
Ludwig Maximilian University Munich
- Ward, M.,
University of Texas at Arlington,
US (Research Fellow)
- Weyerstraß, K.,
IHS, Vienna, AT
- Wichert, L.,
University of Konstanz
- Yoshida, J.,
University of Tokyo, JP
- Zaby, A.,
University of Tübingen
- Zeebroeck, N. van,
ULB Solvay Business School, Brüssel, BE
- Zhang, S.,
Boston College, US
- Zirkl, F.,
Catholic University Eichstätt
- Zwick, T.,
Ludwig Maximilian University Munich
(Research Fellow)

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COMMITTEES AND EXTERNAL RELATIONS

► ZEW SPONSORS' ASSOCIATION
FOR SCIENCE AND PRACTICE

In 1993 representatives of trade and industry of the Rhine Neckar region established the ZEW Sponsors' Association for Science and Practice (Registered Society) (Förderkreis Wissenschaft und Praxis am Zentrum für Europäische Wirtschaftsforschung e.V.) to support ZEW's work. Since its foundation, an impressive number of large and medium-sized enterprises as well as personalities from the region and the federal state of Baden-Württemberg, and the federal government are counted among its members.

The purpose of the association is laid down in its statute. It accompanies ZEW's activities with advice and support. It promotes research projects that are relevant for practice and supports events at the Institute by financial contributions. This involvement is funded by membership fees which are paid annually.

Moreover, the association understands itself as a forum where companies and scientists from various fields can discuss vital economic and political issues. This dialogue proved to be fruitful for both sides. It gives companies scientifically sound answers to diverse topics and provides science with the necessary reference to practice.

The members of the ZEW Sponsors' Association for Science and Practice regularly receive the most

important information of the ZEW and are invited to all major events of the Institute.

Contact Persons

- Centre for European Economic Research (ZEW)
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Fax +49/ (0) 621 1235-222
E-mail hueneke-zindl@zew.de
- Chairman of the ZEW Sponsors' Association
Dr. Dr. Peter Bettermann
Company Spokesman,
Freudenberg & Co. Kommanditgesellschaft
69469 Weinheim
Germany
Phone +49/ (0) 6201 80 44 40
Fax +49/ (0) 6201 88 20 41
- Deputy Chairmen of the
ZEW Sponsors' Association
Dr. Kurt W. Bock
BASF SE



ZEW Executive Directors and board members of the ZEW Sponsors' Association for Science and Practice, from left: Prof. Dr. Dr. h.c. mult. Wolfgang Franz, Dr. Dr. Peter Bettermann, Dr. Kurt W. Bock, Dr. Alexander Selent, Dr. Uwe Schroeder-Wildberg and Thomas Kohl (Dr. Andreas Dulger, board member of the ZEW Sponsors' Association for Science and Practice, is missing on this photography).

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COMMITTEES AND EXTERNAL RELATIONS

► ZEW ALUMNI



ZEW Alumni meeting 2009 on the occasion of the ZEW Economic Forum

The ZEW alumni network provides former employees and employees leaving with a forum where they can stay in contact with each other, but also with the ZEW. On the one hand, former employees regularly receive ZEW publications. This helps them to keep informed about the latest research results and further training courses. On the other hand, former employees can provide the ZEW with valuable input for the research work. The ZEW alumni traditionally meet once a year, after the ZEW Economic Forum (ZEW Wirtschaftsforum).

Contact Persons

- Dr. Volker Marnet-Islinger
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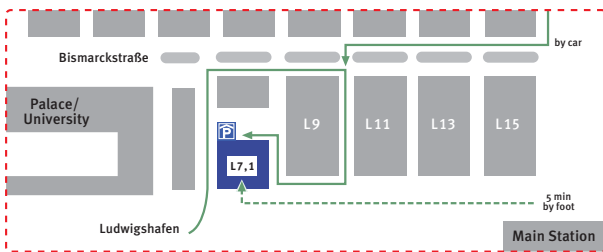
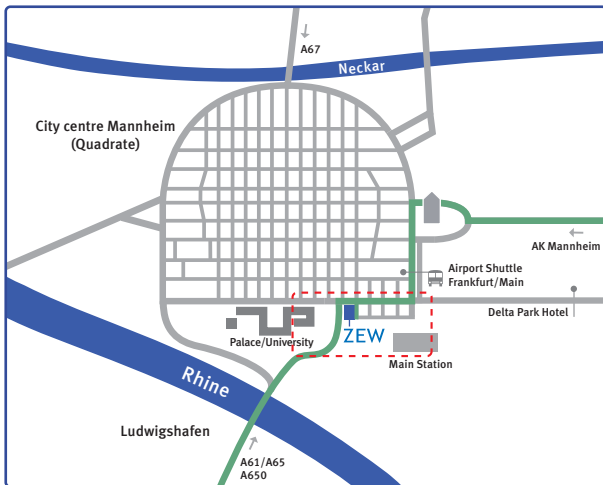
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