

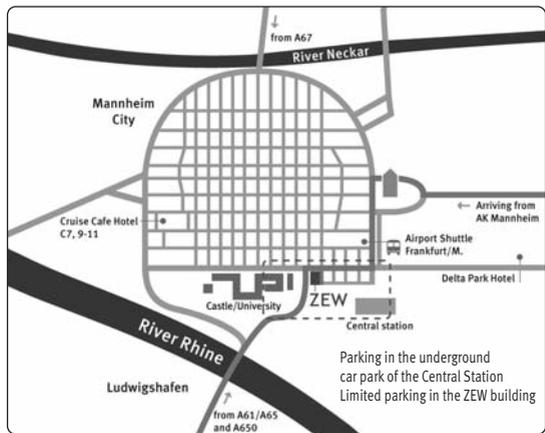
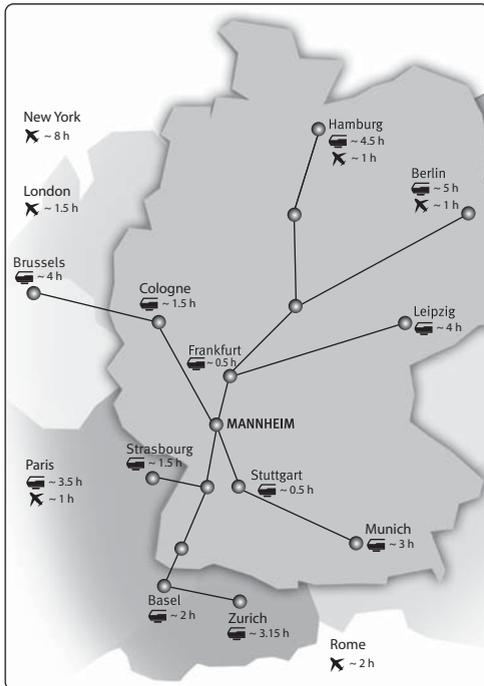
Aims and Research Activities



ZEW

Zentrum für Europäische
Wirtschaftsforschung GmbH

Centre for European
Economic Research



How to get to ZEW

- by train

From the ICE directly to ZEW: It is just a 5 minutes walk from the central station to ZEW. Thus, arriving by public transportation is convenient.

- by plane

The Mannheim airport offers flights between Mannheim/Berlin and Mannheim/Hamburg.

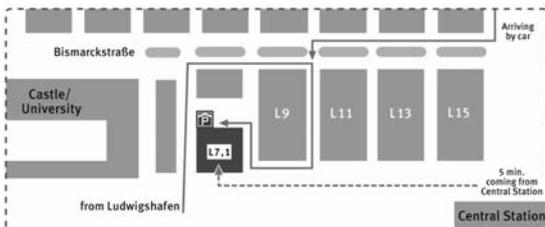
Further information at www.cirrus-world.de.

- by car

For visitors arriving by car, limited parking is available in our underground car park. Please reserve a space at the reception desk in time.

You will find further information and directions at www.zew.eu/en »Contact«.

Driving on Bismarckstraße the approach to the ZEW is signposted



How to contact us

Zentrum für Europäische Wirtschaftsforschung GmbH (ZEW)
 (Centre for European Economic Research)
 L 7, 1 - 68161 Mannheim · Germany

Correspondence may be addressed to:

ZEW Information and Communication department
 P.O. Box 10 34 43 · 68034 Mannheim · Germany
 Phone: +49/(0)621/1235-01 · Fax: +49/(0)621/1235-224
 E-mail: info@zew.de

Further information on ZEW activities can be found on our website: www.zew.eu/en



ZEW

Zentrum für Europäische
Wirtschaftsforschung GmbH

Centre for European
Economic Research



Imprint**ZEW Aims and Research Activities****Publisher:**

Zentrum für Europäische Wirtschafts-
forschung GmbH (ZEW) Mannheim
(Centre for European Economic Research)
L 7, 1 · 68161 Mannheim · Germany

Postal address:

P.O. Box 10 34 43 · 68034 Mannheim · Germany

Phone: +49/(0)621/1235-01

Fax: +49/(0)621/1235-224

E-mail: info@zew.de

Internet: www.zew.eu/en

Board of Directors:

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

Thomas Kohl,
Director Business and Administration

Contact for press and public relations:

Gunter Grittmann,
Phon: +49/(0)621/1235-132,
E-mail: grittmann@zew.de

Katrin Voß,
Phone: +49/(0)621/1235-103,
E-mail: voss@zew.de

Editor: Romy Weiland

Layout and make-up:

Media Design, ZEW

Photos: Erich Dichiser (17)
Susanne Dockendorff (1)
GES (1)
Yvonne Lupp (1)
Katrin Schleife (1)
Daniela Schreuer (1)
Roger J. Schwarz (1)
WGL (1)
Privat (1)

Printing: Elser Druck GmbH,
Mühlacker

Aims and Research Activities

ZEW

Zentrum für Europäische
Wirtschaftsforschung GmbH

Centre for European
Economic Research

Table of contents

About ZEW	1
Board of Directors	4
Organisational Structure	5
Mission Statement	7
The Research and Service Departments: Core Areas of Work	15
International Finance and Financial Management	16
Labour Markets, Human Resources and Social Policy	17
Industrial Economics and International Management	18
Corporate Taxation and Public Finance	19
Environmental and Resource Economics, Environmental Management	20
Research Group “Information and Communication Technologies”	22
Service Department “Information and Communication”	22
Activities of the Research Departments	23
Research Department “International Finance and Financial Management”	25
Selected Research Projects	29
Selected Publications	30
Selected Presentations	30
Research Department “Labour Markets, Human Resources and Social Policy”	31
Selected Research Projects	34
Selected Publications	35
Selected Presentations	36
Research Department “Industrial Economics and International Management”	37
Selected Research Projects	40
Selected Publications	42
Selected Presentations	42
Research Department “Corporate Taxation and Public Finance”	43
Selected Research Projects	46
Selected Publications	47
Selected Presentations	48

Research Department “Environmental and Resource Economics, Environmental Management”	49
Selected Research Projects	53
Selected Publications	55
Selected Presentations	55
Research Group “Information and Communication Technologies”	57
Selected Research Projects	60
Selected Publications	61
Selected Presentations	61
Research Group “Growth and Business Cycle Analyses”	63
Databases	64
Conferences and Workshops	65
ZEW Doctoral Studies Network and ZEW Visiting Researchers Programme	67
Activities of the Service Departments	69
Information and Communication	71
Knowledge Transfer & Qualification Programmes	75
Organisation, Personnel and Finance	77

About ZEW

Within merely 15 years since its foundation, ZEW has moved up into the ranks of national and international leading economic research institutes. Its outstanding research has established ZEW as a competent peer in the scientific community and as a highly demanded provider of economic counselling among German federal and state ministries and the European Commission.

As an economic research institute with an emphasis on applied empirical research preferably in the fields of microeconomics and microeconometrics, ZEW is host to a highly research-intensive environment and a team of excellent and devoted young researchers. Main research topics are labour economics, human resources, international finance, industrial organisation and regulation economics, environmental economics, taxation, and public finance. Moreover, issues in research in education, economics of information and telecommunication technologies, and innovation behaviour are investigated. Our research comprises both economic and management research. Much as its name suggests, ZEW especially focuses on the aspects of European integration and is particularly interested in promising research questions, analyses, and research methods which may prove viable for economic policy and strategic management.

ZEW is a non-profit economic research institute and was founded in 1990 on the initiative of the government of the state of Baden-Wuerttemberg, trade and industry, and Mannheim University. In April 1991, the institute took up work and has expanded rapidly since then. The outstanding quality of the research work conducted at the institute was confirmed by the Science Council (*Wissenschaftsrat*, an advisory body to the Federal Government) on the occasion of the evaluation of ZEW in 1998 and further officially documented by admission of ZEW to Federal Government and Laender Funding ("Blue List") by January 1, 2005. At the same time, ZEW became a member institute of the "Leibniz-Gemeinschaft".

ZEW's objective is to carry out economic research, economic counselling, and knowledge trans-

fer. The institute focuses on decision-makers in politics, economics, and administration, scientists in the national and international arena, as well as the interested public. Regular interview surveys on the situation of financial markets and business-related service providers as well as large-scale annual studies on technological competitiveness of and innovation activities in the economy are representative of the different types of topical information provided by ZEW.

ZEW takes a predominantly microeconomic and microeconomic research approach and closely relies upon pooled resources with other scientific disciplines, whenever the respective issue requires such. In this context, the research institute distinguishes itself, inter alia, in the analysis of internationally comparative questions in the European context and in the creation of databases on individual firms which are eminently important as a basis for scientific research. In addition, ZEW provides external scientists with excerpts of selected data for the purpose of their research.

ZEW is subdivided into the following research areas:

- International Finance and Financial Management;
- Labour Markets, Human Resources and Social Policy;
- Industrial Economics and International Management;
- Corporate Taxation and Public Finance;
- Environmental and Resource Economics, Environmental Management;
- Information and Communication Technologies (research group);
- Growth and Business Cycle Analyses (research group).

Although microeconomic and microeconomic research approaches are dominant at ZEW, each ZEW research department always takes the macroeconomic environment into consideration as well. On this account, the research group "Growth and Business Cycle Analyses" was established in 2005,

which consists of macroeconomically inclined researchers from different research departments. The team is mainly focused on three tasks: to quarterly publish “ZEW Wachstums- und Konjunkturanalysen”, to be the contact for the press and public relations office with respect to questions concerning macroeconomic issues, and to coordinate cross-departmental macroeconomic research cooperatives.

A new research area “Empirical Competition Policy” was introduced in 2006 and is in the process of being established. It is intended to address questions of firm concentration and regulation. As various industries have been experiencing deregulation or privatisation throughout recent years, it seems necessary to put much more emphasis on a scientific evaluation of these developments. Particularly in the area of energy supply and telecommunications, a change of market structures was observed. Accordingly, these areas are the first to be investigated concerning whether economic policy objectives were attained or whether further actions are demanded.

Evaluations in annual intervals ensure the quality of the work performed in the research fields and its orientation towards the institute’s research programme. The evaluations are carried out by ZEW’s Scientific Advisory Council, which is composed of renowned German and international scientists as well as of executives from firms and public institutions.

The institute closely cooperates with quite a number of partners and particularly with universities and scientific research institutes in Europe and the US. ZEW is, thus, part of a tight national and international research network. Visiting academics at ZEW and scientific workshops with national and international participants enhance the creation of networks. The annual ZEW Summer Workshop particularly aims at improving qualifications of young economists. We especially benefit from a close cooperation with Mannheim University including an integrated doctoral studies programme and joint appointments of ZEW’s research department heads. Moreover, ZEW’s president is full professor at Mannheim Faculty of Economics. The institution of “research professors” and permanent visiting scholars is vitally important

for ZEW research. Research professors are professors from various international universities working as project managers at ZEW and, thus, continuously contribute new ideas and scientific insights into the institute’s research work.

ZEW has always accorded high priority to further developments of the qualification of its staff. Therefore, the institute has increased the support it gives to those participating in university-based doctoral programmes by initiating the ZEW Doctoral Studies Network (ZEW DocNet) and by concluding cooperation agreements with the Universities of Mannheim, Constance, and St. Gallen. Against this background, ZEW provides young researchers with the opportunity of a scientifically challenging, problem-oriented involvement in research projects combined with a sound professional development to build on for future careers in the fields of science, business, public administration, or organisations. An expansion of the ZEW DocNet, by cooperating with doctoral programmes of universities in the EU member states, is envisioned for the future. In the light of this, ZEW’s role similar to a Graduate School of Economics becomes evident.

A further intensification of the institute’s involvement of international scholars in its research activities is now launched by the ZEW Visiting Researchers Programme. Suitable candidates are invited for visiting periods of at least several weeks at ZEW to pursue leading research with ZEW scientists at the fore of international scientific excellence.

ZEW communicates its research results to companies, politicians, scientists, and the public via the media, the Internet, and with different publications. ZEW publishes an international book series – ZEW Economic Studies – and magazines, such as ZEWnews English edition, that are nationally and internationally distributed. In addition, the research institute communicates its know-how by offering scientifically sound seminars for qualified national and international personnel and executives.

As an extension to our long-established monthly Financial Market Report, ZEW started a Financial Market Report Switzerland in cooperation with the Swiss bank “Credit Suisse”. The report – which is similar to its counterpart for Germany – contains the results and analysis of the Financial Market Sur-

vey Switzerland (a survey of financial market experts) and has been published monthly since July 2006. The aim of the Swiss survey is to develop indicators both for Switzerland's general economic climate as well as for the Swiss services sector. An extension of financial market tests to other EU countries are at the planning stage.

Professional trainings and seminars are important for ZEW's knowledge transfer. That way, research results and method competences of the research areas can reach science, economy, and politics. Many specialists, executives as well as business managers have already profited from ZEW's qualification programmes. The international orientation of ZEW's seminars is evident as they are offered both in Zurich and Brussels.

As of 2006, about 140 people are permanently employed at ZEW; two thirds among them are scientists. Their work is supported by about 100 student research assistants and other people who are employed on a temporary basis. Moreover, ZEW is grateful for, and proud of, the engagement of a number of research professors who, in addition to their university affiliation, direct research projects at ZEW and very actively give ZEW their backing.

The budget of ZEW amounts to around 14 million € (in 2006) and is financed both by the federal government as well as the state government of Baden-Wuerttemberg (approx. 60 percent) and funded projects raised by ZEW. Institutions that commission ZEW to do research work for them include the European Commission, federal ministries, firms, private organisations, and, to a considerable amount, science foundations, such as the German Science Foundation (*Deutsche Forschungsgemeinschaft*, DFG).

Funding by the state enables ZEW to carry out more general research and provide researchers with sufficient means to achieve higher qualifications. Valuable additional funding by the "Club of ZEW Friends and Sponsors" (*Förderkreis Wissenschaft und Praxis am ZEW e.V.*), which mostly consists of entrepreneurs from the Rhine-Neckar region, is gratefully acknowledged as well.

In the following sections, each ZEW department gives a more detailed overview on its aims and scopes. We hope that you will benefit from our research and would like to cordially invite you to visit our website to obtain an updated research agenda. Please feel free to contact us at any time.

Mannheim, July 2007



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



Thomas Kohl,
Director Business and Administration

Board of Directors



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

President

Science and Research

Phone +49/(0)621/1235-100, -101

Fax +49 (0)621/1235-222

E-mail franz@zew.de

Secretary's office: Andrea Hüneke-Zindl

Phone +49/(0)621/1235-101

Fax +49 (0)621/1235-222

E-mail hueneke-zindl@zew.de



Thomas Kohl

Director

Business and Administration

Phone +49/(0)621/1235-111, -112

Fax +49 (0)621/1235-222

E-mail kohl@zew.de

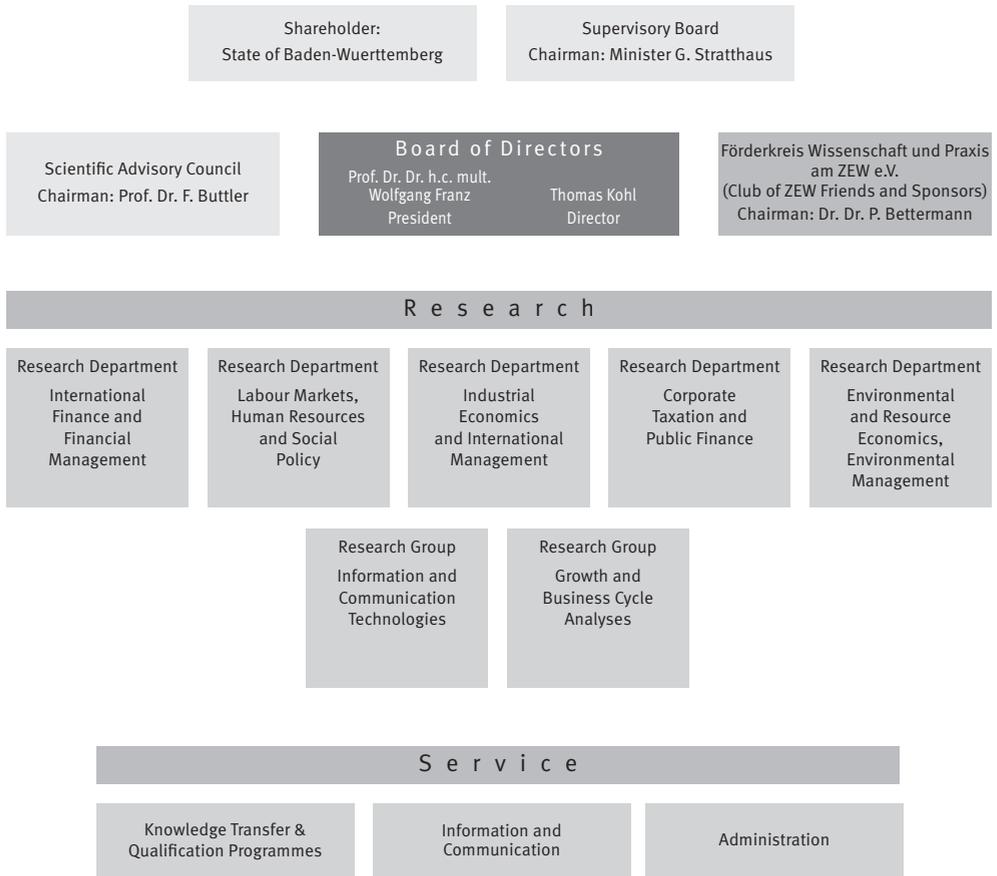
Secretary's office: Ingrid Rahm

Phone +49/(0)621/1235-112

Fax +49 (0)621/1235-222

E-mail rahm@zew.de

Organisational Structure



Contact Persons

RESEARCH

- **Research Department International Finance and Financial Management**
Head of Dept.: Dr. Michael Schröder
Phone +49/(0)621/1235-140, -142
E-mail schroeder@zew.de
- **Research Department Labour Markets, Human Resources and Social Policy**
Head of Dept.: Dr. Holger Bonin (from Oct 1, 2007)
Phone +49/(0)621/1235-151, -131
E-mail bonin@zew.de
- **Research Department Industrial Economics and International Management**
Head of Dept.: Dr. Georg Licht
Phone +49/(0)621/1235-177, -194, -197
E-mail licht@zew.de
- **Research Department Corporate Taxation and Public Finance**
Head of Dept.: Dr. Friedrich Heinemann
Phone +49/(0)621/1235-149, -142
- E-mail heinemann@zew.de
- **Research Department Environmental and Resource Economics, Environmental Management**
Head of Dept.: Dr. Andreas Löschel
Phone +49/(0)621/1235-200, -210
E-mail loeschel@zew.de
- **Research Group Information and Communication Technologies**
Head of Group: Dr. Irene Bertschek
Phone +49/(0)621/1235-178, -360
E-mail bertschek@zew.de
- **Research Group Growth and Business Cycle Analyses**
Head of Group: Prof. Dr. Dr. h.c. mult. Wolfgang Franz,
Phone +49/(0)621/1235-100, -101
E-mail franz@zew.de

SERVICE

- **Information and Communication Information Services and Public Relations**
Gunter Grittmann
Phone +49/(0)621/1235-132
E-mail grittmann@zew.de
- **EU Office and Research Contracts**
RA Shalini Saxena, LL.M.
Phone +49/(0)621/1235-355
E-mail saxena@zew.de
- **Knowledge Transfer & Qualification Programmes**
Barbara Hey
Phone +49/(0)621/1235-244, -240
E-mail hey@zew.de
- **Personnel**
Doris Brettar
Phone +49/(0)621/1235-250
E-mail brettar@zew.de

Mission Statement

Basics

The Centre for European Economic Research (ZEW) regards itself as an applied economic research institute, which feels constrained to empirical economic research as well as to economic counselling, to the education of young researchers, and to knowledge transfer.

In this respect, the monitoring and progress of sophisticated academic standards plays a prominent role and is the reason why ZEW is actively participating within a national and international network of university research and training. This networking takes on various forms: ZEW carries out joint appointments of its research department heads with universities; furthermore, ZEW receives valuable support from renowned research professors, who play an active part in the institute's research activities; the institute is integrated in postgraduate university programmes and has furthermore initiated an individual network to increasingly promote postgraduates; it facilitates further intensive training for its staff in form of "sabbaticals" for completing dissertations, habilitation theses (postdoctoral qualification), and academic publications in leading economic journals. At last, ZEW has established a "Visiting Researchers Programme" for extended guest visits of particularly international scholars.

The integration of ZEW in the "scientific community" and the resulting research results as well as the training of postgraduates in the field of applied and problem-oriented empirical economic research significantly contribute to ZEW earnings. All of these components are financed by ZEW's basic funding, and their results are made available to the public.

However, in spite of the references to academic research mentioned above, ZEW is not a university institute. On the one hand, it additionally runs a scientifically well-funded, economic counselling, which is capable of appropriately reacting to short-notice requests on behalf of our clients, e.g., those active within the European Union or the national economic policy. On the other hand, it transfers in-

ternationally oriented knowledge via seminars and other forms of advanced training to partners from within the corporate, associations, and academic sector as well as from governmental institutions. Apart from ZEW's specific profile primarily focusing on microeconomic and microeconomic aspects, this knowledge transfer distinguishes ZEW from other economic research institutions.

Main Objectives

These rather basic thoughts can be classified under the following objectives:

- (i) ZEW performs applied empirical economic research on a highly sophisticated level in accordance with international standards, which is also underlined by the number of our publications in distinguished scientific journals. The integration of university research, e.g., in form of designated research professors and visiting scholars working at ZEW, has formed valuable support to the institute. In this respect, not only a high scientific standard is of importance but also the establishment of a clearly defined, unmistakable profile as well as the development of innovative scientific and economic research areas.
- (ii) ZEW conducts qualifying postgraduate training of its staff. A significant part of this education is the provision of sabbaticals for the sole purpose of research. An increased integration in postgraduate university programmes, particularly with the universities of Mannheim, Constance, and St. Gallen (ZEW DocNet), additionally aims at reaching this goal far better in the future.
- (iii) ZEW will continue its high standard of economic counselling. In doing so, the institute will frame and adjust its focuses according to economic necessities. That does not only involve economic aspects of a medium-term view but also the ability to competently react to current counselling needs on short notice.

- (iv) ZEW will continue to further extend and focus its knowledge transfer to corporations, associations, and governmental institutions, including the academic sector, by appropriately conveying ZEW knowledge and research results and its bordering fields to the participants of our professional training programmes. Moreover, new training courses both in Brussels and in Zurich allow for ZEW's international orientation.

Research Profile

An ascertainment of the main objectives will initially be presented in form of a coherent and independent research profile of the ZEW. It is characterised by the pivotal field of research

“Microeconomics of functional markets in the European context”.

Its primary focus is on the investigation of which economic incentives have to be offered by economic policy in form of basic conditions in international and particularly European locational competition in order to:

- promote the creation of new jobs on the output markets, to support the balancing of supply and demand on the job market, and to secure the efficiency of job market policies;
- consolidate the integration and stability of international financial markets in the financial services sector, the supply of venture capital for businesses, and the decision making for private households regarding investments;
- achieve the objectives of a sustainable economic development with the scarce resource “environment” on the market for economic goods;
- promote the advancement of innovation activities and, thus, of technological performance with the help of appropriate research and technology policies and to effectively influence start-ups in a pro-competitive market;
- provide for an internationally competitive corporate tax burden, for adequate fiscal competition in a federal state structure, and to assume responsibility for government debts all on a national level; and

- observe and, as appropriate, to formatively complement the economic impact of new information and communication technologies on the job market, on innovation activities, and on market structures.

This topical feature of the research profile is supplemented by a methodical aspect:

- In regard to theory, ZEW's activities are predominantly orientated towards a microeconomic and, in terms of empiricism, microeconomic perspective. Microeconomically and empirically based simulation models are complementarily applied to analyse the macroeconomic effects on political measures.
- Therefore, macroeconomics is by no means ignored but rather based on supply side and decision theory foundations relating to growth analysis.
- In view of international locational competition, particularly in the EU region, the research ought to consider the European scope as far as possible due to economic decisions being increasingly made on supranational levels. In addition, the development of other (EU) economies ought to be taken into consideration.
- Economists are not the only experts consulted for analysing various questions posed within the analyses. The expertise of business economists, industrial engineers, natural scientists as well as lawyers is vital and an inherent part of ZEW's scientific research, i.e. ZEW follows an interdisciplinary, methodical direction.

In the following, this outline of ZEW's research profile is to be illustrated in greater detail, whereas further specifications, which distinguish ZEW from other economic research institutes and university institutions, are also paid attention to.

Specification of Activities

In detail, the following nine specifications create a distinctive, consistent profile at large.

Research objective

1. In accordance with its foundation agreement, ZEW is to analyse those challenges for the econ-

omy and economic policy which result from the European integration in the context of increasing internationalisation of the economy. Therefore, ZEW's scientific activities focus on aspects concerning the European Single Market, the realised and further planned expansion of EU and the European Monetary Union, and its chances and challenges for the labour market, the corporate dynamics, and innovative ability. Issues of tax harmonisation and tax competition as well as aspects of a competition of social security systems in respect to the European Single Market and their relevance for corporate decisions add up to ZEW's research interest. Finally, issues on national and international environmentalism gain in importance with regard to the discussion of sustainable economic policies, which deals with the quantification of potential conflicts between economic, social, and environmental policy goals.

The outcome of this is a first common denominator of research departments and the research group for the research objective's orientating to international and particularly European aspects. The challenges of the globalisation of markets are dealt with in detail by five research sectors, which serve as the basis for structuring the five research departments:

- International Finance and Financial Management;
- Labour Markets, Human Resources and Social Policy;
- Industrial Economics and International Management;
- Corporate Taxation and Public Finance;
- Environmental and Resource Economics, Environmental Management.

The rapid spreading and eminent significance of modern information and communication technologies were hardly predictable in the early 1990s, when ZEW was founded. Even though the "New Economy" has considerably lost its brilliance, the technologies mentioned have thoroughly reshaped economical processes. This research sector is covered by the research group "Information and Communication Tech-

nologies", whose founding was made possible by a Landesstiftung Baden-Wuerttemberg start-up financing.

2. The methodical emphasis in the areas of microeconomics and microeconometrics which have so far been rather successful is to be maintained and further developed as ZEW trademark. It seems justified to claim that ZEW plays a leading role in respect to the microeconomic review of new or advanced microeconomic theories in both the areas of industrial economics and public finance or of international taxation and labour market as well as environmental economics. The international comparison of effective tax burden of companies and of qualified employees on the one hand and the evaluation of labour market policies on the other hand are but two examples. To analyse macroeconomic effects on political measures, ZEW employs, among other things, a system of applied general equilibrium models, with which politically induced structural changes as well as efficiency and distribution effects can be systematically quantified. It is realised that conflicts of objectives between ZEW's microeconomic and European research orientation may be likely, if the access to comparable individual level data sets for the European countries is restricted. Whenever possible, such data sets are meanwhile used for comparative European research in cooperation with international partners. Moreover, ZEW methodically works on a double-track basis in the sense that European issues are taken account of by analysing them on a sectoral or macroeconomic level. Personal or corporate-related individual level data sets are prerequisite for theory elaboration and econometrical review on a microeconomic level. Here, not only the expansion of databases for the purpose of replying to new economic issues is essential but also the maintenance of the existing databases. Time-consuming and, in part, innovative work is related to such a mission that generally exceeds the capacities of a university research institute due to its long-ranging character. Experience shows that university databases are often become obsolete and, therefore, lose in scientific value. Consequently, it ought to be em-

phased even more that ZEW enables national and international scientists to access its databases and, thereby, offers significant assistance to university research. These are revenues as well that result from basic funding.

3. Notwithstanding the focusing on microeconomic and microeconomic basic principles, a range of problems necessitates taking the macroeconomic level into account as well. Herein, the connection to ZEW's microeconomically oriented emphasis is perfectly obvious, as is shown in the model of growth analyses. Germany's current growth path is too low; in order to reach greater goals, it is essential for economic measures to be implemented on the supply side. Microeconomics primarily provides the appropriate framework for analyses, e.g., in the form of economics of skill formation or innovation and the labour market research. The growth path, in turn, determines the macroeconomic production potential, a genuinely macroeconomic factor. Depending on the observation period, production potential can be running at substandard, normal, or full capacity. These different degrees of utilisation reflect economic fluctuations, which can, in turn, influence the behaviour of the supply and demand side – and, therefore, possibly economic growth. Hence, distinguishing between growth and economic activity or between demand and supply economics is superficial and can be misleading concerning economic policy suggestions. Consequently, ZEW has expanded its expertise in the field of macroeconomics and intends to pay even more regard to the analysis of economic activity and growth. Specifically for this reason, the research group “Growth and Business Cycle Analyses” was established for the purpose of addressing issues within this subject area. It is composed of representatives from various research departments and concentrates ZEW's macroeconomic expertise. ZEW continues to have a share in business cycle analysis by its monthly release of the ZEW Financial Market Test. Through this survey of financial analysts questioned, the assessment of the current as well as the expected development of

important economic determinants is revealed. The ZEW Indicator of Economic Sentiment derived from that survey has become one of the most well-known leading indicators for economic development in Germany and the euro zone. Moreover, ZEW has conducted the monthly Financial Market Report Switzerland in collaboration with Credit Suisse since June 2006. Financial market reports for further countries are at the planning stage.

To sum it up: Complementing the microeconomic and the microeconomic main focus with a macroeconomic perspective guarantees – and this is to be greatly emphasised – well-balanced and sophisticated economic counselling. Certainly: Microeconomics primarily examines the incentives which cause certain actions on behalf of investors, consumers, or employers and employees, and thus, offers starting points for economic policy in order to influence these behaviours. But: Confining the analysis on microeconomic statements alone carries the risk of pushing the effects of macroeconomic processes to the back of one's mind – also in regard to microeconomic decisions. On the other hand: A purely microeconomically based funding would carry the great risk of disregarding the important and potentially decisive supply side of an economy. Therefore, ZEW pursues a pluralism of methods with an emphasis on microeconomic standards.

Multidisciplinarity

4. In regard to methodology, the multi-disciplinarity of research projects is of further concern to ZEW. For that reason, at ZEW economists and business economists, industrial engineers and business information technology specialists, as well as natural scientists in ecology projects closely work together. Legal competence in the field of labour law, for example, is procured by collaborating with acknowledged scholars. The cooperation with “Heidelberg Academy of Sciences and Humanities” has already been established through an interdisciplinary research project. The collaboration with Heidelberg University has even been strengthened by the mutual

appointment of the head of ZEW research department “Environmental and Resource Economics, Environmental Management” to a professorship to Heidelberg University. In addition, cooperation with other national and international scholars and research institutes are of great significance; without such a research network neither sophisticated research nor the application for project funding at the EU Commission, for example, would be possible.

Great importance is additionally attached to the collaboration of the individual research departments in form of joint projects in order to benefit from various competences inherent to the various research departments for the purpose of receiving third-party funding. In these joint projects as well as in the research group “Growth and Business Cycle Analyses”, project teams from various departments work together. Temporary teams, in which scientists from various departments participate, represent an additional cooperation between the research areas. One specific example is the project team “Empirical Competition Policy”, which was engaged in investigating the same issues the newly established research area under the same name is now analysing. Another project team was designing the conception for the research group “Information and Communication Technologies” (ICT) established afterwards. These temporary project teams exemplify the organisation of work processes at ZEW, which is characterised by a high degree of collaboration on the one hand and by great flexibility on the other. For one thing: With the ICT research group it becomes apparent how new research fields are successfully elicited by acknowledged staff in close cooperation with the senior management and are then investigated as to whether an integration into ZEW’s research work is possible. For another thing: Project teams allow for an efficient and competent reaction to newly arising comprehensive problems while the organisational framework of the individual research departments represents a scientific nucleus for the staff in form of a “competence centre” which feeds into the work of the project teams.

Economic counselling

5. Apart from applied empirical economical research, ZEW’s second essential activity includes economic counselling at a high scientific standard. It is carried out in various ways: by processing research assignments on behalf of the EU, the federal as well as the state ministries, associations, and corporations; by active participation at hearings of the German Bundestag or the parties; or by advising politicians at discussion rounds, conferences, and symposia.

The main emphasis of economic counselling is put on research projects for which an invitation to tender is issued, even Europe-wide, by the EU and national ministries through a competitive process. The competition with numerous national as well as international research institutes involved by that represents an initial guarantor for a high quality standard. Cooperation with distinguished scientists of national and international universities acts as a second element of quality assurance. Thirdly, numerous research projects are subject to an evaluation, e.g., by presenting research results to external scholars at scientific conferences organised by the client. Fourth, research work produces dissertations, publications in renowned economic journals, and presentations at academic events. Being a fundamental part of economic counselling, the processing of third-party-funded projects, thus, fulfils not only the genuine purpose of scientific research institutes – this is what distinguishes them from university institutes – but is an integral part of the research work carried out at ZEW.

In other words, there is neither a conflict between research and project work nor between the staff’s own scientific work and the processing of his/her third-party-funded projects since ZEW is managing projects with utmost scientific professionalism. After all, this scientific demand is what differentiates research institutes from consulting firms.

Economic counselling is not only posing a challenge in respect of quality assurance. ZEW has to be capable of appropriately reacting to short-notice counselling requests by economic policy due

to current developments. Appropriate capacities are to be provided for that purpose. It is perfectly obvious that this cannot be carried out for the wide range of potential needs for economic counselling under the financial framework given. On the one hand, this is in favour of concentrating on a range of selected areas as they are identified by ZEW research areas and groups. On the other hand, however, such a classification must not be carried out too restrictively. Sophisticated economic counselling always takes the effects on other economic actors – such as labour market demanders and innovators – into consideration when analysing certain issues, e.g., ecological measures. Analogous holds true for the link between micro- and macroeconomics already discussed. ZEW fulfils these two aims – necessary focus on the one hand and required wide range on the other – by employing intensive collaboration between individual research areas and departments. Regarded in that light, ZEW's "value" in total exceeds the sum of the "values" derived from each individual department. ZEW's management emphatically encourages such collaboration by granting precedence to joint projects when allocating its own resources to projects.

Knowledge transfer

6. A further ZEW specific, which additionally acts as a bridge between the individual research areas, is represented by the knowledge transfer to economic policy, corporations, and the public. In this respect, not only communicating the research results to appropriate target groups is of importance, also current issues can be efficiently taken up and commented on from a scientific perspective on short notice – a concern that is not classically an integral part of a university institute's intentions.

This concern corresponds to ZEW's foundation agreement, according to which a contribution in counselling is made to economy and politics by means of knowledge transfer through qualification programmes, and according to which information and communication services are to inform the public and to support scientific research. Within these activities, ZEW's compe-

tence and specifics have to be the focus, i.e. the research areas will mainly bear the responsibility in terms of content. In this context, the reference to the knowledge reflux from corporations back to ZEW seems not to be that insignificant owing not only to expert seminars and specific training programmes for firms and institutions organised by the service department "Knowledge Transfer and Qualification Programmes" but also owing to the "Förderkreis Wissenschaft und Praxis at the ZEW".

Promotion of young researchers

7. All mentioned specifics of ZEW's orientation require high academic qualification on the staff's part. Initially, a vital prerequisite for this is the opening up of employment possibilities at ZEW to young researchers for which a fairly high proportion of temporary employment contracts is essential. In this respect, ZEW leads the way among German research institutes. Temporary employment contracts form the requirement for knowledge transfer into practice by well-trained young researchers. In addition, ZEW evidently supports the compatibility of profession and family as well as the equalisation of men and women.

Furthermore, scientific qualification upgrade in form of doctoral studies and habilitation theses, active participation at national as well as international scientific events, and internal ZEW qualification programmes are all part of a scheme which is to secure and increase scientific quality standards.

With the help of the "Qualification Fund", ZEW releases staff from work for an appropriate period of time for further intensive training, e.g., for writing dissertations or habilitation theses. This is not only required by ZEW's demand to offer high-standard scientific counselling but also by the competition for excellent university graduates, who often have been offered employment by universities and companies.

Moreover, ZEW annually organises an internationally oriented ZEW summer workshop at which leading scientists and Ph.D. students from all over the world intensively discuss a specified

research topic. The applications regularly exceed the capacity of such a workshop so that a tough selection process, which ZEW employees themselves have to equally undergo, is consequently necessary. For several years now, the most outstanding paper of a young scholar has been conferred the Heinz Koenig Young Scholar Award, which comprises of a residential fellowship at the ZEW for several weeks in addition to prize money worth 5.000 € sponsored by corporations. The 2004 laureate was recently approved to publish an article in a “Top-A” journal.

Integration in university research

8. The link to university research is primarily carried out through joint appointments of ZEW research department heads and the ZEW president, through research professors, and through mostly project-based research cooperation with external scientists. In addition, ZEW staff publishes articles in academic journals and books (primarily involving a peer review process) and actively participates in scientific conferences in Germany as well as around the world. The contact to universities is additionally strengthened by ZEW’s integration into postgraduate programmes with its own programmes “ZEW DocNet” and “ZEW Visiting Researchers Programme” as well as university courses taught by ZEW staff. Besides, the project-based employment of student assistants and interns and their inherent training in the field of empirical economic research aims for the same goal. Regarding this as an integral part of their training, ZEW introduces its Ph.D. students to the field of applied empirical economic research.

Public relations

9. The existing transmission channels are to be retained: public relations through appearances on the Internet including topical platforms, press releases and articles published by ZEW staff, as well as ZEW’s own generation of informational services dealing with topics that come within the limits of ZEW’s fields of activity. Also, expert seminars and specific training programmes for firms and institutions are to be a tool with which to attract attention to ZEW’s work. The public is

most efficiently informed by contributions of ZEW staff to the media, particularly by newspaper articles, and by ZEWnews, ZEW Financial Market Report, ZEW Wachstums- und Konjunkturanalysen (analysis of economic activity and growth), its reports on firm foundations (Gründungsreport), industrial sectors (Branchenreport), and the power market (Energiemarktreport), as well as by book publications on ZEW’s research results. In this process, it is guaranteed that the service department “Information and Communication” receives all relevant information from the research departments. In addition, lectures are given by leading personalities from politics and economics at the series of lectures entitled “Wirtschaftspolitik aus erster Hand” (“First-Hand Economic Policy Issues”) as well as at the annual, full-day ZEW Economic Forum held during the summer months. Furthermore, several times a year ZEW organises “Mannheimer Wirtschafts- und Währungsgespräche” (“Mannheim Talks on Monetary Issues”) in cooperation with Mannheim University, VWA Mannheim, and local banks. In Brussels, ZEW predominantly presents its results of the latest research and its standpoint on current economic policies to the members of the EU Commission; in Berlin similar procedures are carried out.

Rather than a summary

Which profits are generated by ZEW’s basic configuration financed by tax money or – to put it more mundanely – what does ZEW do with the taxpayers’ money? The profits – previous and future ones – can be specified in five points:

- (i) Research in the field of “Microeconomics of functional markets in the European context” is promoted, namely in form of doctoral studies, habilitation theses, and articles in internationally distinguished journals.
- (ii) ZEW educates young scholars in empirical economic research, whereby this promotion of young researchers partly goes hand-in-hand with university doctorate programmes and postgraduate education.

- (iii) ZEW holds its capacities for a topical demand for economic counselling on a high academic standard. It informs the public about currently significant economic and political topics in connection with a quantitatively oriented opinion.
- (iv) University research is supported by the building-up and continued maintenance of substantial model systems and databases. Allowing for privacy terms, university staff is given access to these databases.
- (v) ZEW offers a comprehensive range of qualification programmes to corporations, associations, and governmental institutions including the academic sector, which is significantly attributed to the competence of ZEW staff.

The Research and Service Departments: Core Areas of Work

A i m s a n d R e s e a r c h A c t i v i t i e s

International Finance and Financial Management



Head of the research department:
Dr. Michael Schröder
 Phone: +49/(0)621/1235-140
 E-mail: schroeder@zew.de

Deputy Head of the research department:
Dr. Peter Westerheide
 Phone: +49/(0)621/1235-146
 E-mail: westerheide@zew.de

- **International Financial Markets and European Integration**
 - Integration of European capital markets
 - Regulation and supervision of financial markets
 - Systemic risk in the banking market
 - Financial markets and real economy
- **Money and Currency**
 - Monetary policy: Concepts and strategic issues
 - Implementation of monetary policy
- **Capital Market Analysis**
 - ZEW Financial Market Survey
 - Expectation formation and behavioural finance
 - Asset pricing
 - Socially responsible investments
- **Investments and Financial Services**
 - Saving behaviour and wealth of private households
 - Financing of old-age provisions
 - Banks, insurances, investment funds
 - Real estate investment and financing
- **Corporate Finance**
 - Small business finance
 - Venture capital, private equity, and going public
 - Credit markets
 - Mergers and acquisitions

Labour Markets, Human Resources and Social Policy



Head of the research department:
Dr. Holger Bonin
 (from Oct 1, 2007)
 Phone: +49/(0)621/1235-151
 E-mail: bonin@zew.de

Deputy Head of the research department:
PD Dr. Bernhard Boockmann
 Phone: +49/(0)621/1235-156
 E-mail: boockmann@zew.de

- **Labour Markets**
 - Evaluation of active labour market policy
 - Analysis of labour demand and labour supply
 - Institutional analysis of the labour market
 - Gender research
- **Economics of Skill Formation**
 - Costs and benefits of investments in skill formation
 - Skill formation, labour market success and wage distribution
 - Family, participation and attainment in education
 - General education and vocational training, mobility
- **Human Resources**
 - Education and vocational training
 - Individual and social returns to human capital investment
 - Company-specific payment systems
 - Productivity effects of company-specific work organisation and flexible working time models
- **Social Policy**
 - Labour market effects of social security
 - Distributional effects and fiscal costs of social security
 - Social security system and demographic change
 - Experimental analysis of reform options for long-term care insurance

Industrial Economics and International Management



Head of the research department:
Dr. Georg Licht
 Phone: +49/(0)621/1235-177
 E-mail: licht@zew.de

Deputy Head of the research department:
Jürgen Egel
 Phone: +49/(0)621/1235-176
 E-mail: egeln@zew.de

- **Innovation Research and Innovation Policy**
 - Determinants of innovation activities at the firm level
 - Innovation indicators
 - Innovation and technology policies
 - Internationalisation of innovation activities
 - Research infrastructure and technology transfer
 - Evaluation of research and technology policies
- **Firm Dynamics and Market Development**
 - Start-ups
 - Firm mortality and survival
 - Determinants of firm growth
 - Evaluation of start-up funding
 - Start-up financing and venture capital
- **Empirical Competition Policy**
 - Analysis of mergers
 - M&A market trends
 - Corporate integration and market performance
 - Regulation of network-based industries
- **International Corporate Strategies**
 - Global sourcing
 - Market and industry analyses
 - Market introduction of innovative products
- **Firm-Level Databases**
 - Mannheim Enterprise Panel (MUP)
 - ZEW Start-Up Panels
 - ZEW Start-Up Panel Austria
 - Mannheim Innovation Panels for the manufacturing sector and mining as well as service sector (MIP, MIP-DL)

Corporate Taxation and Public Finance



Head of the research
department:
Dr. Friedrich Heinemann
Phone: +49/(0)621/1235-149
E-mail: heinemann@zew.de

- **Corporate Taxation and Analysis of Tax Locations**
 - Harmonisation of company taxation in Europe
 - Reform of company taxation in Germany
 - International comparison of effective corporate tax burdens
 - Tax burden on high-skilled labour and expatriates
 - Tax databases
- **Fiscal Competition and Federalism**
 - Decision-making in fiscal competition
 - Incentive effects of German fiscal equalisation systems
 - EU fiscal constitution
 - Effects of tax legislation on investment, innovation and choice of location
 - Non-profit sector
- **Fiscal Policy and Growth in the EU**
 - Empirical economics of growth
 - Fiscal determinants of potential growth
 - Determinants of structural reforms
 - Sustainability of public debt

Environmental and Resource Economics, Environmental Management



Head of the research
department:

Dr. Andreas Löschel

Phone: +49/(0)621/1235-200

E-mail: loeschel@zew.de

Deputy Head of the research department:

Dr. Klaus Rennings

Phone: +49/(0)621/1235-207

E-mail: rennings@zew.de

- **Innovation and Sustainable Development**
 - Specification of rules, indicators, and strategies for sustainable economic activities
 - Analysis of determinants and economic impacts of environmental innovations
 - Analysis of environmental innovation systems

- **Energy Economics**
 - National and European regulatory framework for the energy markets
 - Regulation of grid-bound energy industries
 - Renewable energy and external costs

- **Transport and Mobility**
 - Ecological and socio-economic effects of transport systems
 - Concepts for a sustainable development in the transport sector
 - Volume of traffic and means of transportation used in freight traffic

- **International Environmental and Resource Policies**
 - 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**
 - Design of environmental and economic policy tools
 - Quantification of trade-offs between ecological and economic goals on macroeconomic and sectoral levels
 - Impact analysis of national, international, and global policy measures

Research Group “Information and Communication Technologies“



Head of the research group:

Dr. Irene Bertschek

Phone: +49/(0)621/1235-178

E-mail: bertschek@zew.de

- **ICT Sector and Diffusion of ICT**
 - IT and media sector
 - Service providers of the information society
 - Diffusion of ICT

- **ICT and the Labour Market**
 - Workplace organisation
 - Qualification and wage structure
 - Age structure of employees
 - Training and further education
 - Pre-professional education

- **ICT, Competition and Firm Strategies**
 - Productivity and innovation
 - IT outsourcing and IT consulting
 - Internationalisation
 - Competition of economic aspects

Service Department “Information and Communication”

- Information services and public relations
- Media design and distribution
- Library

Contact person:

Gunter Grittmann

Phone: +49/(0)621/1235-132

E-mail: grittmann@zew.de

- EU Office and research contracts

Contact person:

RA Shalini Saxena, LL.M.

Phone: +49/(0)621/1235-355

E-mail: saxena@zew.de

Service Department “Knowledge Transfer & Qualification Programmes”

- Expert seminars
- Specific training programmes for enterprises and institutions

Contact person:

Barbara Hey

Phone: +49/(0)621/1235-244

E-mail: hey@zew.de

Activities of the Research Departments

A i m s a n d R e s e a r c h A c t i v i t i e s

Research Department “International Finance and Financial Management”

The research department is concerned with the economic analysis of international financial markets and the behaviour of central groups of economic agents, such as private households, institutional investors, and firms in these markets. Financial market-related issues are being viewed both from the macroeconomic as well as the microeconomic perspective. Most of the research projects are empirically oriented and methodically characterized by the use of sophisticated tools from the areas of time series as well as by panel econometrics.

Central to both research areas “International Financial Markets and European Integration” and “Money and Currency” are macroeconomic issues in the context of the European integration process. Accordingly, the projects pertain to the European monetary policy, capital market integration in Europe, and specifically the stability of financial markets as well as reforms of supervision and regulation. Another important field of research constitutes the interdependencies of capital markets and real economy.

The research area “Capital Market Analysis” particularly focuses on the theoretical and empirical investigation of asset pricing and the analysis of expectations. An important basis for studies on expectation formation is provided by the monthly “ZEW Financial Market Survey” delivering original expectation data on international financial markets and on important fundamental factors, such as the business cycle and inflation. Moreover, the widely acknowledged “ZEW Indicator of Economic Sentiment” for the German economy is based on this survey.

The two research areas “Investments and Financial Services” and “Corporate Finance” deal with financial market-related decisions of firms, financial service providers, and private households. Venture capital and private equity are important topics in the area of corporate finance. The studies on financial service providers concern the behaviour of banks, insurance companies, investment funds, private equity and venture capital funds, as well as the development of the credit market. In the domain of private

households’ saving and wealth, allocation is central, especially in terms of investment decisions regarding old-age provisions. A new focus is put on real estate investment markets and real estate financing.

Research Area “International Financial Markets and European Integration”

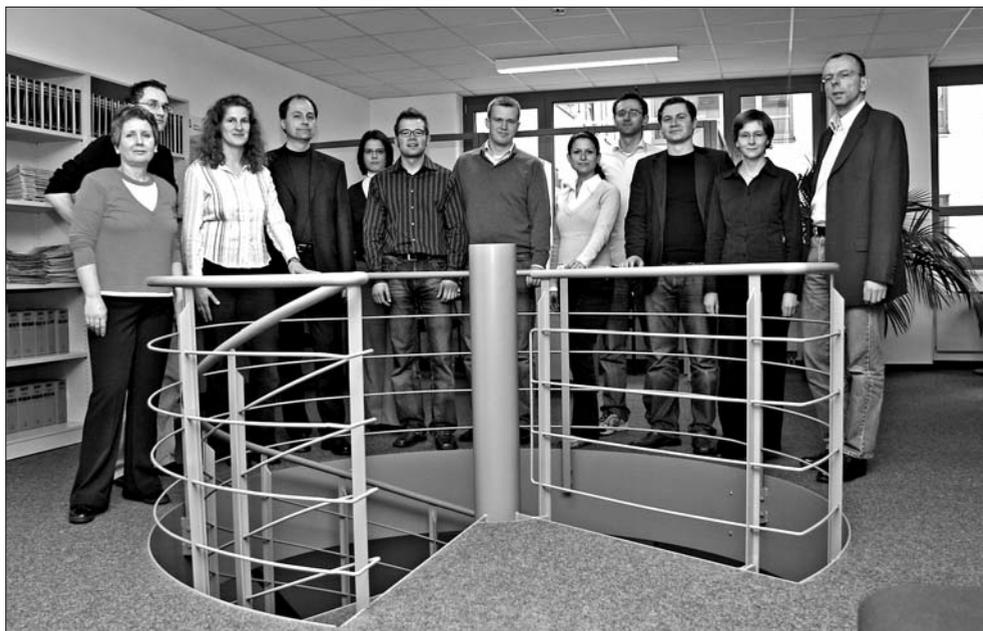
In this research area, macroeconomic issues are investigated in the context of international financial markets. Particular significance, thereby, inheres in the analysis of the effects from the European integration process. Accordingly, the projects cover cross-border capital market integration, European financial market supervision, and the stability of financial markets. In recent years, various projects were conducted concerning the topics mentioned above with their results providing a solid basis for future work. Changes of the research issues primarily result from the political advancement of the EU enlargement and the gradual elimination of obstacles to a single European market.

Capital market integration

In the area of European capital market integration, a reputation has been established during the past years based on several projects with a wide European impact (for the European Financial Services Roundtable and the British Investment Management Association). The studies concentrated on those markets that, even in today’s EU single market, still show substantial integration deficits. In a project for the European Commission on current trends in the European asset management industry, we have built up a Europe-wide database covering the relevant issues of asset management and analysed the major developments in these markets in the EU-25 countries.

Regulation and supervision

A new project sponsored by the German Science Foundation analyses regulatory differences in the EU



From left to right: Heidi Schielke, Andreas Schrimpf, Tereza Tykrová, Michael Schröder, Sandra Schmidt, Matthias Köhler, Gunnar Lang, Mariela Borell, Wojtek Piaskowski, Waldemar Rotfuß, Katrin Ullrich, Peter Westerheide

and evaluates their consequences for international competition and systemic risk in the banking market.

Research Area “Money and Currency”

At the core of the research work, monetary policy analyses of the European Central Bank and comparisons between the European Central Bank and the Federal Reserve currently reside.

Inflation expectations

The first focus of research is on the relation between monetary policy and the formation of inflation expectations. In this area, transparency and communication policy of central banks play a key role. The different perception of monetary policy decisions and explanations by the member states of the EMU as well as by different target groups, like consumers and financial market experts, provide a starting point of research. A specific potential for the empirical analysis in this respect bears from the data on financial market analysts’ expectations col-

lected as part of the ZEW Financial Market Survey pertaining to inflation as well as short- and long-term interest. Thereby, it is of interest whether there are systematic differences in the expectation formation of particular groups of analysts, which macroeconomic factors influence expectations formation, and by what means changes in expectations occur.

International comparisons

A second focus of research deals with the implementation of monetary policy in the euro area and the United States. The analysis particularly focuses on the effect changes in the operational framework have on short-term interest rates.

Research Area “Capital Market Analysis”

In this research area, questions of asset pricing and the functioning of financial markets in general are investigated. From the multitude of possible research questions, those topics are being preferentially treated that are both interesting from a theo-

retical point of view as well as pertinent to demanding empirical investigation. Particular significance is attributed to application-oriented questions that are relevant for capital market actors and the solution of economic policy problems. The projects concentrate on the following topical areas:

Analysis of asset prices

The aim is theory-deduced empirical investigation of the behaviour of asset prices with the aid of econometric methods. The analyses relate to the evaluation of stock indices, the interrelations between stock prices and other financial market variables, as well as the cross-section of expected returns.

Another important field of research is the investigation of the relationship between sustainable management (as regards ecological, social, and ethical criteria) and corporate success. Thereby, interrelations are econometrically assessed with firm-specific data. In addition, it is being investigated how fund management of socially responsible investments (SRI) is conducted by investment companies. A new project deals with the asset management of German foundations if investments concentrate on SRI.

ZEW Financial Market Survey

The survey in which, at present, about 350 financial market experts regularly participate has been conducted since the end of 1991. It provides original expectation data regarding the development of international capital markets and key fundamental factors for each 6 months in advance. These data serve as the basis for the analysis of expectation formation processes. The internationally acknowledged ZEW Indicator of Economic Sentiment derives from this survey as well. In cooperation with Credit Suisse, we now have extended this survey to Switzerland.

Expectation formation and behavioural finance

The data from the ZEW Financial Market Survey are being used to generate insight into the formation of expectations, taking especially into account the important role that the heterogeneity of expectation formation plays. Of particular significance are

questions of behavioural finance (at present specifically in terms of overconfidence), the analysis of certain influential factors on expectation formation (e.g., orientation according to past share price developments), the use of expectations data for macroeconomic modelling, as well as the evaluation of expectations as regards their predictive quality.

Research Area “Investments and Financial Services”

This research area is concerned with the savings and investment behaviour of private households as well as with current developments in the financial services sector. An important characteristic of this research area’s investigations is its empirical, micro-economically geared perspective. Therein, the following topics attain specific weight:

Old-age provisions and saving behaviour

This segment focuses on questions of private finance and private-saving behaviour as well as capital-funded old-age provision. The projects concentrate on private savings, private wealth allocation, and their changes over time, which are being analysed based on micro data from the German Federal Statistical Office’s Income and Expenditure Survey and from the German Socio-Economic Panel. In a project concluded in the year 2005, whose results served as input for the federal government’s national report on poverty and wealth, the assets of private households were comprehensively analysed and their development observed over time. This work is planned to be continued in further research projects on income and wealth distribution in Germany.

Financial service providers

Here, the research work focuses on the behaviour of banks, insurance companies, and investment funds as well as their product policy. Subject to a recently concluded project were the determinants of banks’ size of equity and payout ratio with observations particularly centring on savings banks. This question was analysed with recourse to

year-end closing data that was made available in a cooperative framework with Deutsche Bundesbank. Future research projects will concern, among others, comparative analyses of the costs as well as risk-return profiles of insurance and investment products, e.g., in the context of private old-age provision.

One project in this regard has already been finished analysing the impact of reallocations towards riskier assets in typical portfolios of different types of households.

Real estate investment and financing

The research efforts pertaining to the intersection of real estate and financial markets have been intensified in the recent past. The research department has already conducted a research project for the Federal Ministry of Finance regarding the introduction of real estate investment trusts as a new instrument of real estate finance in Germany. In a current project, the integration of owner-occupied housing in the deferred taxation system of old age provisions is being analysed based on comprehensive micro-simulation models. Further projects focus on the current state of the German mortgage market and on portfolio transactions in the European real estate market.

Research Area “Corporate Finance”

This research area investigates various aspects of debt and equity finance.

Small business finance

In general, projects concerned with small business finance typically deal with the access of small businesses to equity finance as well as the impact of equity capital regulations. These investigations are often conducted in cooperation with the research department “Industrial Economics and International Management” using its firm-level databases (e.g., ZEW Foundation Panels). One of the main issues with respect to small business finance is the analysis of venture capital financing.

Venture capital, private equity, and going public

The work on venture capital (VC) and private equity (PE) markets forms one of the research area’s

central focuses. In a DFG-funded project, the behaviour of VC funds upon sale of their participating interests on the stock exchange was investigated. In a current project, financed by the German Science Foundation (DFG), the role of joint financing of a project by several investors (“syndication”) is being analysed. In another current project, which is being conducted in cooperation with the research department “Industrial Economics and International Management”, the effects of the VC investment on executive turnover in the portfolio companies are analysed. Moreover, the market potential of private equity and venture capital markets are being investigated and questions of institutional arrangements are discussed. In a project on behalf of the Federal Ministry of Finance, the framework conditions for PE funds in Germany were compared to those of other markets.

Credit markets

Various projects deal with the credit supply of banks, changes to the business processes, and the framework conditions of the credit market. In a recently finished project, the influence of equity market developments on credit supply was investigated.

Mergers and acquisitions

Twice a year, an analysis of current developments on worldwide M&A markets is presented in the M&A Report, which is published in cooperation with the research department “Industrial Economics and International Management” and Bureau van Dijk Electronic Publishing (BvDEP). A new research project in cooperation with the research department mentioned above is intended to investigate the inter-firm linkages and intertwining structures inside and among companies with respect to the impact of hedge funds. Another new research project aims at investigating how firm valuation depends on acquisition policies and on corporate governance. In particular, it is to be analysed whether bad governance makes for poor bidding strategies and poor firm valuation. In a further project, the acquisition strategies of private equity firms are evaluated. One of the central topics is the investigation of the role of heterogeneous international syndicates.

Selected Research Projects

ZEW Financial Market Survey

The ZEW Financial Market Survey is a monthly survey that has been conducted among German financial experts since December 1991. A total of about 350 analysts from banks, insurance companies, and large industrial corporations regularly take part. We survey experts working in the finance, research, and macro-economic departments as well as those in the investment and securities departments of these companies. The financial experts are specifically surveyed about their expectations concerning trends in economic activity, inflation, short- and long-term interest rates, share prices, and exchange rates in selected countries (Germany, the United States, Japan, Great Britain, France, Italy) and the euro zone. Moreover, the market experts are asked to assess the earnings position of 13 German industries. International investors closely follow ZEW's expectations for the German economy (ZEW Indicator of Economic Sentiment) derived from the survey because of their leading indicator qualities. Since June 2006, ZEW also carries out the Financial Market Survey Switzerland in cooperation with Credit Suisse (CS). This survey displays the expectations of Swiss financial experts on six important international financial markets. The aim is to develop an indicator for the Swiss economy that is similar to the ZEW Indicator of Economic Sentiment.

(<http://www.zew.de/en/publikationen/finanzmarktreport.php3>)

(<http://www.zew.de/en/publikationen/finanzmarktreportschweiz/finanzmarktreportschweiz.php>)

Current Trends in the European Asset Management Industry

Over the last years, many changes have been taking place in the asset management industry. Some of them are driven by cost and performance considerations (e.g., outsourcing, multi-management), by investors' demand (e.g., guaranteed products), by asset managers' creativity (e.g., certificates, hedge funds), and, of course, by the enhancement of the EU framework for investment funds, UCITS III (e.g., cross-border funds and open-architecture). As a result, additional actors have emerged, and asset management processes and products have become more

complex. The aim of the project was to collect asset management-related data for several EU member states, to analyse the developments affecting this industry, and to develop new indicators. The focus was on indicators that measure the integration and efficiency in the European investment funds business in order to achieve a better understanding of the functioning of the market and of current trends which could affect the future development of the asset management industry.

(<http://www.zew.de/project539>)

The Consequences of Regulation Differentials in the European Banking Market for Market Integration and Systemic Stability

Since the introduction of the euro, there has been a common monetary policy in Europe. Banks are, however, still subject to national supervision. Although the EU has implemented minimum harmonisation standards, significant regulatory differences still exist between the EU member states. Following the enlargement of the EU to 25 member states, the relevance of potential differences in the regulation and supervision of banks has increased even more.

The objective of this research project is to investigate the impact of differences in regulation and supervision on bank behaviour (e.g., regulation arbitrage), the integration of the financial markets in the EU, and the stability of the banking system. Based on our findings, we will draw conclusions about the future development of the European regulatory and supervisory framework.

(<http://www.zew.de/project549>)

Regulatory and Institutional Framework in International Comparison – Private Equity and REITs

The project was concerned with the analysis of the institutional and regulatory framework for private equity (PE) funds and real estate investment trusts (REITs) in an international comparison. In the first part of the study, we identified factors that are important for the successful development of a PE market in Germany. The conditions in countries with a well-developed PE market (USA, UK, the Netherlands, and Sweden) have been analysed and compared with the situation in Germany. Finally, a set of ten recommendations for public policy in Germany have been devel-

oped. They concentrate on the establishment of favourable conditions for PE investments.

In the second part of the study, we compared legal and tax regulations as well as the market development of Real Estate Investment Trust (REITs) and similar investment vehicles in the US, Canada, Australia, Japan, the Netherlands, Belgium, and France. The German real estate investment market is analysed with respect to existing vehicles for indirect real estate investment, their regulation, taxation, and their performance.

(<http://www.zew.de/project390>)

Legitimacy of a European Constitution – Sovereignty and Solidarity

Results from the preceding interdisciplinary project “The Legitimacy of a European Constitution” indicated that the EU finds legitimacy, above all, in the benefit generated for the nation states as part of European level proceedings. In practice, this idea enforces a certain degree of solidarity among the member states. The failed referendums in the Netherlands and France have shown that this solidarity is increasingly being challenged. This poses questions regarding the shape and extent of solidarity in Europe, questions which, at the same time, are central to the legitimacy of a unified Europe. The research in this project will, thus, be oriented towards the following questions: Concerning the problem of legitimacy in a union based on the principle of national sovereignty, what forms of European solidarity and European social market economy are required or necessary? What forms of open or mandatory coordination of national policies on the supranational level are feasible in these policy areas and under which conditions or by which mechanisms could those be legitimised?

(<http://www.zew.de/project559>)

Selected Publications

Heinemann, F. and K. Ullrich (2006), The Impact of EMU on Inflation Expectations, *Open Economies Review* 17(2), 175-195.

Kruse, S., M. Meitner, and M. Schröder (2005), On the Pricing of GDP-Linked Financial Products, *Applied Financial Economics* 15(16), 1125-1133.

Schrimpf, A., M. Schröder, and R. Stehle (2006), *Evaluating Conditional Asset Pricing Models for the German Stock Market*, ZEW Discussion Paper No. 06-43, Mannheim.

Schröder, M. and M. Schüler (2005), Capital Markets and Demography, in: Heise, M. and V. Wieland (Eds.), *Capital Markets in the Long Term: Demography, Economic Development and Funded Pension Systems*, Frankfurt/Main, 45-70.

Tykvová, T. (2006), How Do Investment Patterns of Independent and Captive Private Equity Funds Differ? Evidence from Germany, *Financial Markets and Portfolio Management (Special Issue: Alternative Investments)* 20(4), 399-418.

Ullrich, Katrin (2005), Comparing the Fed and the ECB Using Taylor-Type Rules, *Applied Economics Quarterly* 51(3), 247-266.

Westerheide, P. (2006), *Cointegration of Real Estate Stocks and REITs with Common Stocks, Bonds and Consumer Price Inflation – An International Comparison*, ZEW Discussion Paper No. 06-57, Mannheim.

Selected Presentations

Köhler, M. (2005), International Capital Mobility and Current Account Targeting in Central and Eastern European Countries, ECB-CFS and Oesterreichische Nationalbank Conference on European Economic Integration, Vienna.

Schrimpf, A. (2006), Consumption-Based Asset Pricing with a Reference Level: New Evidence from the Cross-Section of Stock Returns, Annual Meeting of the Eastern Finance Association, Philadelphia.

Schröder, M. (2006), The Dynamics of Overconfidence: Evidence from Stock Market Forecasters, Symposium on Behavioural Finance, European Financial Management Association, Durham.

Tykvová, T. (2006), How Do Investment Patterns of Independent and Captive PE Funds Differ?, EFMA Annual Conference, Madrid.

Ullrich, K. (2006), Introducing Instruments of Central Bank Accountability in a Monetary Union, International Symposium on Money, Banking and Finance, Lille.

Research Department “Labour Markets, Human Resources and Social Policy”

This research department uses modern micro-econometric techniques to study labour markets, human resources, and social policies by drawing on administrative, enterprise, and other types of data. The department works in four specific fields of research: “Labour Markets”, the “Economics of Skill Formation”, “Human Resources”, and “Social Policy”. All of them share the microeconomic perspective of the analysed issues, i.e. the examination of individual behaviour, the empirical approach, and the application of modern econometric techniques. Furthermore, there is also a focus on the European context.

Important fields of activity include the evaluation of labour market policies where the department is one of the key players in Germany, the analysis of the costs and benefits of investments in pre-school education, representative and case studies of human

resources issues, evaluating proposals for social policy reforms with the help of econometric models, and concomitant research on social experiments.

The department draws on a number of individual-level data sources. For projects on the evaluation of labour market policy, the department’s competence in the use of complex administrative data not previously used for scientific purposes is crucially important. Furthermore, the department is involved in the development of individual-level databases such as the DFG-sponsored Family Panel. Data obtained from field experiments also provide new sources of information.

In recent years, the research department has regularly organised international meetings at ZEW. Besides, researchers from the department played an active role in conferences at universities and institutions all over Europe, the United States, and Cana-



From left to right: Johannes Gernandt, Thomas Zwick, Bernhard Boockmann, Christian Göbel, Susanne Steffes, Anja Heinze, Thomas Walter, Alexander Spermann, Stephan L. Thomsen, Markus Clauss, Andrea Altenrenger, Andreas Ammermüller, Nicole Gürtzgen, Henrik Winterhager, Giulia Colombo, Melanie Arntz, Grit Mühler, Michael Maier, Maresa Sprietsma

da. The department has been consulted on issues related to the German labour market by international organisations, such as the IMF and the OECD, by government branches, such as the US Department of the Treasury, and by the private sector.

Research Area “Labour Markets”

The most important issue in this research area is the phenomenon of unemployment. From a microeconomic point of view, research is primarily concerned with the reasons for individual transitions between employment, unemployment, and being out of the labour force. Many projects in this research area evaluate labour market policies, such as training and subsidised employment, but also changes in job placement, unemployment benefit entitlement, and early retirement. The focus is both on the effectiveness of these programmes or policies as well as on their costs and benefits for the government and workers and employers. Quantitative research in this area has become much more important in recent years. Together with its permanent visiting professors, the department is cooperating with leading experts in this field from Europe and the United States.

A particular focus of labour market analysis is on individual labour supply. The department examines factors influencing the participation in the labour market, the mobility of the work force across geographic regions as well as across firms, and the role of statutory regulation, collective agreements, and human resource policies given growing employment rates of women and increasing discontinuities in the careers of both men and women. New approaches of the microeconomic theory of household behaviour are considered looking closer at the labour supply in the family context.

The characteristics of labour market institutions are of crucial importance for the amount of unemployment. The auctions model of wage determination has been dominating empirical research for a long time. More recently, theories of imperfect competition have found widespread application. In much of the department’s research, approaches such as models of labour market frictions and bargaining models are refined and applied to empirical research questions.

With a large number of individual projects, the research area participates in long-term programmes funded by the German Science Foundation (DFG), such as the Priority Programmes “Potentials for More Flexibility on Heterogeneous Labour Markets” and “Intimate Relationships and Family Dynamics” and the Researcher Group “Heterogeneous Labour – Positive and Normative Aspects of the Skill Structure of Labour”. These initiatives strengthen collaboration within the community of German-language labour market researchers as well as international and interdisciplinary cooperation.

Most projects of the department are using microeconomic methods. Evaluation studies use a variety of recently established methods in order to estimate causal effects, such as extensions of the statistical matching method and duration analysis. Besides the well-known parametric methods, the department also develops and uses state-of-the-art semi-parametric statistics for specific applications. Techniques of modelling discrete decisions, econometrics of panel data, and quantile regressions belong to the methodological repertoire of the department. In addition to the econometric techniques, CGE and micro-simulation models are used.

Research Area “Economics of Skill Formation”

Public discussion often focuses on serious shortcomings in educational institutions and the German school system, which might lead to omissions in the formation of cognitive skills (e.g., mathematical skills, memory capacity). A neglected aspect that will be investigated in greater detail and future interdisciplinary projects point to deficits in non-cognitive skills (such as motivation, persistence, self-regulation, and social integration). Such deficits are often caused by poverty, physical violence, or neglect in early childhood, which in turn might result in school failure, youth unemployment as well as disintegration and exclusion tendencies among adolescents.

Since skill formation over the life cycle and the stock of human capital are central for individual well-being, wages, and economic growth, the causes and consequences of the factors behind skill acquisition will guide the future research agenda. Re-

search activities of the research area include the development of international and interdisciplinary networks on skill formation over the life cycle, both on cognitive and non-cognitive skills, and specifically the economics of early childhood education.

Joint research activities are planned with the Centre for the Economics of Education in London, the Central Institute of Mental Health in Mannheim, and the Socio-Economic Panel at the DIW Berlin to improve the understanding of deeply-rooted motivational factors and self-regulation in early childhood for these findings. In a joint research project on the economic analysis of pre-school investments in skills with Nobel Prize laureate James J. Heckman from Chicago, the nature of the skill multiplier and the characteristics of the production function of skill formation (such as self-productivity) in early childhood will be investigated.

On this basis, scientific consultancy is offered to decision-makers in the field of training and education policy. Several projects have been undertaken on behalf of the European Commission under the heading of "Education and Wage Inequality in Europe". A number of other on-going projects investigate educational inequality using PISA and TIMSS data. These projects often deal with the effects of the educational system, such as the effects of early ability tracking on the educational inequality, as well as other issues of policy concern, such as violence in schools and the composition of the student and teacher population.

Research Area "Human Resources"

Human resources are a key factor for the competitiveness of enterprises. An important future challenge for human resource management will be the issue of ageing employees. It is often feared that older staff is less productive and flexible. In addition, older employees are frequently more costly to employ due to mechanisms that automatically increase wages with tenure. Hence, wages are an important research topic in this area. Both the decision whether to retain older employees and whether to hire older workers after a period of unemployment are addressed.

An important trend in labour organisation is an increase in autonomy and participation of non-managers. On the basis of representative establishment data and in-depth studies in cooperating firms, the department analyses the productivity consequences of higher employee participation. Recent research also deals with the effects of works councils on establishments' wage structure, such as wage differences between different qualifications or the gender wage gap. A further research topic is the German dual apprenticeship system, which is under strong pressure because the number of young people seeking apprenticeship training outnumbers the quantity of available job offers. To investigate the companies' demand for apprentices, recent research on this issue focuses on the impact of apprenticeship training intensity on establishment profits.

For a number of years, our researchers working in this area have been actively engaged in the international Low-Wage Employment Research Network (LoWER) initiated by the European Union. The third LoWER phase, launched in 2006, concentrates on the uncertain future of the low skilled in a knowledge-based society. The research area also frequently cooperates with private sector employers. Recently, a study for a multinational health care enterprise has been completed which analyses future developments in the supply of labour market entrants with specific qualifications. In addition, some strategies how to cope with qualification gaps and ageing staff have been developed.

Research Area "Social Policy"

Unemployment benefits and public assistance are essential determinants of employment, in particular for those who are less qualified. Both the level and duration of unemployment benefits play a major role for the emergence of long-term unemployment. High unemployment and public assistance benefit reduction rates decrease the probability of transition to employment on the primary labour market. The financing of social security systems with taxes and social contributions enlarges the gap between gross and net wage and, thus, distorts labour demand and labour supply decisions.

Therefore, social security reforms are of top priority both in academic and public discussion.

Microeconomic models of labour supply, in connection with the Tax Transfer Model as developed by ZEW, are used in micro-simulations, e.g., for the analysis of distributional effects of means-tested unemployment benefit II. To consider feedback effects of reform proposals, a computable general equilibrium model, another ZEW development, is used as well. The link between these two models, which is currently developed, will produce a highly valuable item in the toolbox of the applied researcher.

Demographic change causes drastic effects on all systems of social security. The effects on nursing care insurance are still a neglected field of research among empirically-oriented economists. Empirical research in this area is complicated by a lack of suitable data sets. Therefore, the development of appropriate micro data sets is necessary for detailed econometric analyses. One opportunity to receive very detailed individual data is the evaluation of a unique social experiment conducted in several sites in East and West Germany with so-called “matching transfers”, where our department is involved. Preliminary results from this project were presented at several international conferences. Furthermore, long-term care researchers from all over the world met at ZEW for the first “European Long-Term Care Conference”.

Finally, the reform of basic income has been a hot topic in Europe for years. We offered our expertise in this field to policy-makers in Germany, Switzerland, and Liechtenstein and participated in numerous workshops, symposia, and hearings to get the public more informed.

Selected Research Projects

Evaluation of the Experimentation Clause in § 6c SGB II (Social Security Code) – Comparative Evaluation of the Labour Market Success of the Opting Municipality and Consortium Models

In a far-ranging reform to German social legislation, unemployment and social assistance have been joined into a common framework in 2005.

This has brought about major organisational changes. In most cases, employment offices and municipal administrations have established joint consortiums in order to support recipients and place them into the labour market. However, an experimentation clause allows 69 municipal administrations to compete with the consortiums and to explore alternative means of reintegration. In this project, the relative success and weakness of these two models will be investigated using individual-level data from a survey conducted among 25,000 recipients.

As opposed to the evaluation of individual active labour market programmes and policies, the focus is on the effectiveness of the entire activation process as well as on the efficiency of different institutional arrangements within consortiums or municipalities.

(<http://www.zew.de/project527>)

Family Behaviour: Empirical Evidence on Intra-Household Bargaining

The theoretical analysis of family behaviour has significantly gained from the latest developments in economic modelling and contributed to a better understanding of intra-family resource allocation. From a methodological as well as an analytical point of view, bargaining models offer an appealing approach to the decision-making process of families. Due to the lack of disaggregated information, however, the empirical implementation of these models remains difficult. In this joined project with Ruhr University Bochum, new data are collected in order to treat the relevant questions related to the economics of the household in a more satisfying way. Thus, the project tries to close a fundamental gap in the empirical research on the household decision process. The project consists of two parts: The first part compares different economic models of family behaviour. The second part of the project concentrates on the formulation of the items.

(<http://www.zew.de/project409>)

Microeconomic Methods for Assessing Heterogeneous Returns to Schooling

Conventional empirical studies on the returns to schooling assume that the return for an addition-

al year of schooling is the same across individuals. The goal of this project is to relax this assumption by developing and applying new microeconomic methods that account for heterogeneous returns to schooling and identify the causal effects of schooling.

In particular, we would like to identify the impact of observable and unobservable factors that determine the returns to schooling. Literature on skill obsolescence of labour yields valuable information on the observable heterogeneity of returns to human capital investments. Unobservable factors leading to heterogeneous returns to schooling may result from selection processes. Policy measures that change the individual's cost of schooling, therefore, lead to a change in the composition of individuals who invest in schooling. Hence, microeconomic tools have to be developed that are able to identify the causal effects of these policy measures. The project is part of the joint research group with Constance University on "Heterogeneous Labour, Positive and Normative Aspects of the Skill Structure."

(<http://www.zew.de/project277>)

The Insecure Perspectives of the Low Skilled in the Knowledge Society

The European Low-Wage Employment Research network (LoWER), started in 1996, will continue its activities until 2007 with a focus on the uncertain position of the low skilled in societies that are increasingly functioning on the basis of formal knowledge. The work is organised in packages addressing individual mobility and employer behaviour, household behaviour and intergenerational transmission, gender and skills, and skills and training.

(<http://www.zew.de/project389>)

Development of an IAB Micro-Simulation Model

The Social Code II (SGB II) has been introduced on January 1, 2005, and governs the merging of the former Unemployment Assistance (UA) and Social Assistance (SA) for able-bodied recipients. This project originates from the motivation of evaluating this policy reform and is conducted in cooperation with the Institute of Employment Research (IAB). In order to analyse the macroeconomic

impacts of the new tax-financed benefit (Unemployment Benefit II) supplementing previous research, the development of a tax-benefit micro-simulation model is required in advance. The joint objective of the project is to enhance the existing tax-benefit micro-simulation model and to apply it to a variety of research questions. Moreover, it is also intended to enhance the microeconomic labour market model that is integrated within the tax-benefit micro-simulation model. Eventually, both models should complement each other to a consistent micro-simulation model. The joint development work aims at conducting an ex-ante evaluation of the personal income distribution effects and the expected labour market effects caused by the merging of UA and SA.

(<http://www.zew.de/project496>)

Selected Publications

Beblo, M. and C. Lauer (2004), Do Family Resources Matter? Educational Attainment During Transition in Poland, *The Economics of Transition* 12(3), 537-558.

Boeters, S., M. Feil, and N. Gürtzgen (2005), Discrete Working Time Choice in an Applied General Equilibrium Model, *Computational Economics* 26 (3-4), 1-29.

Boockmann, B. (2006), Participation and Voting in Committees: *Evidence from the ILO, Public Choice* 126(3-4), 405-427.

Franz, W. and F. Pfeiffer (2006), Reasons for Wage Rigidity in Germany, *LABOUR – Review of Labour Economics and Industrial Relations* 20(2), 255-284.

Wilke, R. (2006), Semi-Parametric Estimation of Consumption-Based Equivalence Scales: The Case of Germany, *Journal of Applied Econometrics* 21(6), 781-802.

Winterhager, H., A. Heinze, and A. Spermann (2006), Deregulating Job Placement in Europe: A Microeconomic Evaluation of an Innovative Voucher Scheme in Germany, *Labour Economics* 13(4), 505-517.

Zwick, T. (2006), The Impact of Training Intensity on Establishment Productivity, *Industrial Relations* 45(1), 26-46.

Selected Presentations

Boockmann, B. (2006), Fixed-Term Contracts as Sorting Mechanisms: Evidence from Job Durations in West Germany, European Association of Labour Economics (EALE) Conference, Prague.

Gürtzgen, N. (2006), Rent-Sharing and Collective Bargaining Coverage – Evidence from Linked Employer-Employee Data, European Economic Association (EEA) Annual Conference, Vienna.

Pfeiffer, F. (2006), Rising Wage Inequality in Germany, European Association of Labour Economics (EALE) Conference, Prague.

Spermann, A. (2005), The Targeted Negative Income Tax in Practice – Evidence from a Quasi-Experiment, European Economic Association (EEA) Annual Conference, Amsterdam.

Zwick, T. (2006), High Performance Workplaces and Establishment Productivity, British Academy of Management HRM Special Interest Group Meeting, London.

Research Department “Industrial Economics and International Management”

The department’s main focus lies on the static and dynamic effects of competition among firms. This comprises both the allocation of goods and income as well as investments and innovations. In particular, understanding the determinants of innovative activities, internal and external growth, as well as firm entry and exit are essential aspects for assessing the potential and the limits of public policy. Technology and innovation policy are substantial research areas within the department.

Microeconomics and microeconometrics are the predominant research methods. They serve as instruments in order to analyse research questions on market failure, namely externalities or natural monopolies. These issues serve as a starting point for our research activities. The consultancy for public policy demands both sophisticated and robust methodology which simultaneously requires a the-

oretical foundation in order to resist in the public discussion of policy issues. The research results provide national and international institutions with recommended procedures for their innovation and competition policy to evaluate and improve economic competitiveness and to circumvent potential obstacles.

The department mainly covers four research areas: “Innovation Research and Innovation Policy”, “Firm Dynamics and Market Development”, “International Corporate Strategies”, and “Empirical Competition Policy”. The last-mentioned research area was established in 2006 and is to be further developed within the next years. This extension of the research portfolio was motivated by current topics in industrial policy and competition policy which came along with the liberalisation process in several industries: telecommunications, energy, and transportation. The



From left to right: Christoph Grimpe, Patrick Beschorner, Thorsten Doherr, Helmut Fryges, Sandra Gottschalk, Christian Rammer, Hannes Ullrich, Georg Metzger, Nina Leheyda, Jürgen Moka, Tobias Veith, Tobias Schmidt, Franz Schwiebacher, Kai Hüschelrath, Birgit Aschhoff, Heidrun Förster, Thomas Eckert, Wolfgang Sofka, Anja Schmiele, Bettina Peters, Heide Fier, Mark O. Sellenthin, Martina Lauk, Georg Licht

regulation of these industries has developed a strong focus on dynamic efficiency. This comprises the access to and maintenance of essential facilities controlled by former state monopolies, which are still dominant firms to this day. Furthermore, innovative performance on competitive markets may be jeopardised by inappropriate merger policy. In the light of increasingly active private equity firms and multinationals, the number and volume of merger transactions have substantially risen and, therefore, have become highly relevant research questions.

The research area “Innovation Research and Innovation Policy” aims at analysing in-house processes which lead to innovations. Typically, industry-wide innovation performance is broken down into determinants of innovative activities on firm level. These tasks are substantial parts of contractual and academic research. Inter alia, this covers the evaluation of public innovation and research policy and cooperation among public and private research. This includes the regulation of markets verifying the close relation of the new research area “Empirical Competition Policy” with the established research areas of the department.

Analyses on firm exit and entry is the core element of the research area “Firm Dynamics and Market Development”. This includes the assessment of institutional rules on foundations of firms and bankruptcy programmes as well.

“International Corporate Strategies” aims at developing instruments that support strategic decisions of firms. Such decisions become relevant with respect to suppliers on upstream and customers on downstream markets as well as in M&A decisions. Consequently, there is a strong interconnection to “Empirical Competition Policy”, which focuses on optimal policy in the light of the recent development in business strategies.

In addition to immediate academic and applied research, all members of the department continuously work on improving the databases which form the backbone of the department. The databases are unique to the department and form the essential infrastructure that is the core of many research projects both internally and externally, which may be carried out by German and international researchers from outside the ZEW.

Research Area “Innovation Research and Innovation Policy”

The Mannheim Innovation Panel (MIP) is the key element of this research area. It is an annual and representative survey on innovation activities of German firms. Since 1993, it is realized by ZEW on behalf of the German Federal Ministry of Education and Research (BMBF) in cooperation with infas and Fraunhofer-ISI. This survey constitutes the German contribution to the Community Innovation Surveys (CIS). In 2006, the 14th wave took place of which an anonymised version is accessible to external researchers.

Furthermore, the annual report on Germany’s technological performance is covering several aspects such as education, science, research, technology, production, innovation, and trade. ZEW regularly contributes to these indicators on higher education, sectoral innovation, and firm growth. Several projects with closely related research questions cover the econometric evaluation of policy instruments as research aid programmes, efficiency of technology transfer, or sectoral analyses of innovation policy instruments on EU25 level. Several projects are carried out on behalf of the European Commission. These tasks include a consultation on optimal policy instruments for innovation aid which may be financed by specific and limited European investment programmes. One further step is to evaluate the efficiency of aid programmes and to propose an appropriate design aiming at increasing the efficiency, precision, and predictability of such instruments.

A key to quantitative analyses on innovation activities is a database on intellectual property. It is used in combination with micro data in order to conduct research projects on the efficiency of the patent system. Both academic and applied research highly benefit from this database. Projects carried out on this topic propose explanations for the patent surge, which was observed in the 1990s. In particular, the strategic use of intellectual property rights is broken down into specific motives for patenting. This allows for insights in the firms’ patenting strategies as well as in the effect of existing patents on competitors.

Inventors are subject to our research activities as well. An analysis of their geographical mobility proposes explanations for obstacles to firms' innovative performance which might be restricted in terms of the availability of highly qualified researchers. One exemplary result is that researchers tend to go west: Researchers from Eastern Europe or Asia come to Western Europe while local researchers strive for positions in North America.

Research Area "Firm Dynamics and Market Development"

The dynamics of an economy is characterised by growth and decline of industries, thus, involving foundation of new firms as well as bankruptcy or other types of failure. Many studies on this topic carried out by ZEW rely on a data set which have been set up in cooperation with Creditreform: the Mannheim Enterprise Panel (MUP). The core of this database consists of a panel with information about 12,000 firms over time. ZEW can access 7.8m data records on firms in Germany and Austria, which turned into an essential source for firm foundation statistics in these countries. On behalf of Microsoft, firm foundations in high-technology sectors were analysed both with respect to the qualification of the persons involved in the new firms and to the specifics of the new firms. Obstacles or supporting instruments were identified as well, thus, creating an immediate relevance for public policy.

A further research project deals with the perspective of unsuccessful founders. Based on the ZEW Firm Foundation Panel and a survey carried out by KfW, one key result is that restarters who have gained experience in a former independent business tend to be more successful in their business than founders who engage in an independent business for the first time. It can be interpreted that the learning effect dominates the selection effect and that failures may be a consequence of the founders' qualification.

Apart from a comparative study on foundations in Austria and selected German regions and spin-offs from Austrian academic research institutions, another departmental focus lies on the ICT and me-

dia sector in order to evaluate current developments in the software and hardware industries as well as foundations in the high-tech sector. The Anglo-German Foundation sponsored a project on comparing entry and performance in high-tech industries in Germany and Great Britain. Based on the survey data, we found out that an international business strategy is more important for the success of a firm in a later stage when already well-established rather than at the very beginning. The survival of firms is more probable for firms that carry out R&D.

Research Area "Empirical Competition Policy"

This research area was set up in 2006 and is still in the process of being established. Research questions on market concentration and regulation are addressed. As various industries have been experiencing deregulation or privatisation throughout recent years, it is a challenging task for the field of economics to scientifically evaluate this economic policy. Particularly in the area of energy supply and telecommunications, a change of market structures was observed. Accordingly, these areas are the first to be investigated concerning whether economic policy objectives were attained or further actions are demanded.

In the field of market concentration, ZEW publishes the M&A Report in cooperation with the Bureau van Dijk characterising current developments on the M&A market. The scope of this cooperation gives access to a comprehensive database on worldwide M&A activities. This allows for large scale analysis of M&A as well as case studies. Research projects on the effects of a concentration on firm and industry innovations are closely related to the established research area "Innovation Research and Innovation Policy".

In the area of energy supply, many local and regional public utility companies were acquired by a few dominant electricity producers. This concentration process is subject to assessment by the Federal Cartel Office (*Bundeskartellamt*), whose decision behavior is empirically investigated.

Concerning regulation, we will initially concentrate on analysing the electricity and telecommuni-

cation markets. This is to be taken place in cooperation with the research department “Environmental and Resource Economics, Environmental Management” as well as the research group “Information and Communication Technologies”. In the discussion on the regulation of grid-bound industries, the existence of economies of scale and particularly of network effects is of major significance. This aspect is treated differently in the various industries such as energy supply, telecommunication and postal services. One study investigates whether findings in the context of regulation of one sector can be implemented to other sectors. A synthesis of the two research questions, regulation and market concentration, is to be made the subject of another study, which will comprise the institutional set-up of the electricity market and a welfare economic assessment.

Research Area “International Corporate Strategies”

In close cooperation with the Bureau van Dijk (BvDep), an M&A index synthesising the number and volume of worldwide M&A transactions was developed. It is updated on a monthly basis and is part of the M&A report which is published twice a year. A specific focus on investments is given in studies on the foundation and financing of biotechnology and ICT companies. Firms entering these markets are subject to high risks, and therefore, private equity tend to hold a higher share of such firms in the foundation phase compared to newly founded firms in less risky industries. Furthermore, venture capital financing promotes a faster growth in the foundation stage compared to traditional loan financing. These insights result from our dataset on enterprise foundation and the BIOC database. Biotechnology and the chemical industry play an important role in the Rhine-Neckar Triangle which was subject of a comparative study on strengths and weaknesses of European metropolitan regions. Finally, two dissertations on the importance of global knowledge sourcing for German companies were completed. Based on the MIP, several determinants of firms’ ability to implement

new ideas, which were gained from foreign sources – international cooperation among firms or research institutions –, were revealed.

Research Area “Firm-Level Databases”

For all research activities of the department, the availability of the databases is essential. They constitute the core infrastructure which is to be kept up-to-date and to be enlarged and adapted subject to current needs. The Mannheim Enterprise Panel, the ZEW foundation panels for Germany and Austria, and the Mannheim Innovation Panel offer unique data on firm foundations and growth and is most likely making up the largest data pool on corporate micro data. In addition, it is possible to combine these data with indicators for R&D and other business strategies like M&A data from the Bureau van Dijk or patent data of the European Patent Office.

The Mannheim Innovation Panel is available throughout ZEW and to external researchers as well – subject to legal secrecy obligations. Specific methods for data anonymisation while preserving the statistical properties of the data set were developed at ZEW.

Selected Research Projects

Innovation Watch – SYSTEMATIC

The “Innovation Watch – SYSTEMATIC” project is aimed at providing policy-makers and stakeholders within the sectors with a comprehensive and holistic understanding of the sectoral innovation performance and challenges across the EU25 member states. The fundamental question is to what extent and why innovation performance differs across sectors. The project investigates the sectoral innovation performance in specific European sectors. Therefore, it plays a great role in developing new indicators and innovation models at the sectoral level. Moreover, the project goes beyond statistical analysis of cross-sector innovation performance and incorporates qualitative analysis. The project will also establish innovation panels composed of outstanding sectoral innovation specialists that will

serve as a platform for discussions on policy recommendations for each sector.
(<http://www.zew.de/project530>)

*Impact of R&D Programmes on Innovation:
An International Comparison*

The Lisbon Objective – making the EU “the most competitive and dynamic knowledge-based economy in the world” – will only be achieved if R&D spending effectively and efficiently translates into socioeconomic innovation. The IMPLORE study analyses benchmarking strategies and methodologies of national, European, and international R&D programmes in order to assess and increase their impact on innovation. The study was launched in 2006 and is being carried out by a consortium of eight organisations from six countries with ZEW as coordinator of the project. The study covers four main activities. First, in the course of the study, initiatives and research programmes on national and European level with significant impact on innovation are identified, listed, and mapped. Second, benchmarking of methodologies is used in order to assess the impact of R&D on innovation and the relevant strategies adopted to increase this impact. Third, the study identifies good practice in design, management, and implementation of R&D initiatives and programmes, and analyses possible and most effective means to diffuse them. Finally, an international conference will be organised to present, validate, and disseminate the results and pave the way for further cooperation of the involved actors in order to maximise the benefits for the European Innovation Area.
(<http://www.zew.de/project543>)

*Mannheim Innovation Panel (MIP):
Innovation Activities of German Enterprises*

The MIP is an annual survey on innovation activities of German enterprises from the manufacturing and services sectors starting in 1993. It is the German contribution to EU’s Community Innovations Surveys (CIS) conducted in 1993, 1997, 2001, and 2005. The MIP is designed as a panel survey and provides important information on the introduction of new products, services and processes, the expenditures for innovations, and how economic success

is achieved with new products, new services, and improved processes. It is, thus, an important basis for the judgement of German economy’s technological performance. The micro data is placed at the disposal of external users in an anonymous form (Scientific Use File) for purely scientific and non-commercial purposes.
(<http://www.zew.de/project374>)

High-Tech Start-Ups in Germany

The project investigates the number and development of firm foundations in the high-tech sector with special emphasis on the field of information and communication technologies (ICT) in Germany as well as the firm foundations’ regional distribution using the ZEW Foundation Panel. A telephone survey of 1,000 high-tech start-ups is conducted to analyse the characteristics of the founders (level of education, job experience in science and industry) and of the firms founded (size, growth, pursuit of R&D, innovation activities). Moreover, obstacles to and determinants of success regarding the development of high-tech firm foundations as well as of associated potentials and risks are explored. The results show that the downward trend with respect to the number of foundations in the technology- and knowledge-intensive branches has been accelerating in 2005. Financial constraints are the most widespread obstacle among firms in the high-tech industry and are also perceived as a future risk factor. Another often cited obstacle to the firms’ development is the lack of qualified personnel. At the same time, the qualification of employees is one of the outstanding success factors.
(<http://www.zew.de/project541>)

*Intellectual Property, Appropriation of Returns
from Innovation and Competition*

The role of patents and trademark rights for intellectual property has fundamentally changed in the 1990s. The number of patent applications has increased notably faster than companies’ R&D expenditures, even though companies attribute a decreased role to patents in protecting innovations. Patents have gained a strategic importance that exceeds their traditional role of appropriating direct profits from R&D. The aim of this project is the the-

oretical structuring and empirical analysis of the reasons for the observed changes in patent applications. The project is part of the first special research area/Transregio in economics: Governance and the Efficiency of Economic Systems. (<http://www.zew.de/project378>)

Selected Publications

Czarnitzki, D. (2005), Extent and Evolution of the Productivity Deficiency in Eastern Germany, *Journal of Productivity Analysis* 24(2), 211-231.

Czarnitzki, D. and G. Licht (2006), Additionality of Public R&D Grants in a Transition Economy: The Case of Eastern Germany, *Economics of Transition* 14(1), 101-131.

Gottschalk, S. (2005), Microdata Disclosure Control by Resampling – Effects on Regression in Results, *Jahrbücher für Nationalökonomie und Statistik (Special Issue: Econometrics of Anonymized Micro Data)* 225(5), 567-583.

Griffith, R., E. Huergo, J. Mairesse, and B. Peters (2006), Innovation and Productivity Across Four European Countries, *Oxford Review of Economic Policy* 22(4), 483-498.

Grimpe, C. (2006), Making Use of the Unused: Shelf Warmer Technologies in Research and Development, *Technovation* 26(7), 770-774.

Niefert, M. (2006), Patenting Behavior and Employment Growth in German Start-Up Firms, in: Fritsch, M. and J. Schmude (Eds.), *Entrepreneurship in the Region, International Studies in Entrepreneurship*, Vol. 14, New York, 113-142.

Rammer, C., B. Aschhoff, B. Peters, and T. Schmidt (2005), Innovation Activities of German Enterprises – New Results from the Annual Innovation Survey by the ZEW, in: Filho, W. and M. Waresa (Eds.), *Economic and Technological Dimensions of National Innovation Systems*, Frankfurt/Main, 42-70.

Selected Presentations

Fier, A. (2004), SMEs and Policy in Germany, OMC Workshop of European Commission DG Research, Brussels.

Fryges, H. (2006), Hidden Champions – How Young and Small Technology-Oriented Firms Can Attain High Export-Sales Ratios, International J.A. Schumpeter Society (ISS) Conference “Innovation, Competition and Growth: Schumpeterian Perspectives”, Sophia-Antipolis.

Licht, G. (2004), Public R&D and Stimulation of Private R&D Activities, German Federal Ministry of Education and Research (BMBF), Berlin.

Peters, B. (2005) The Relationship Between Product and Process Innovations and Firm Performance: Microeconomic Evidence, Annual Conference of the European Association for Research in Industrial Economics (EARIE), Porto, and International Industrial Organization Conference (IIOC), Atlanta.

Sofka, W. (2006), Innovation Processes Fostering the Creation of Lead Markets: A Company Perspective on Lead Market Potentials, Europe INNOVA Thematic Workshop on “Lead Markets and Innovation”, Munich.

Research Department “Corporate Taxation and Public Finance”

The department’s guiding research question concerns the consequences of increasing international mobility of capital, companies, and labour on the public sector both in Germany and the European Union. The ongoing research activities are centred around the following three research areas: “Corporate Taxation and Analysis of Tax Locations”, “Fiscal Competition and Federalism”, and “Fiscal Policy and Growth in the EU”.

The first research area “Corporate Taxation and Analysis of Tax Locations” looks back at a systematic evolution since ZEW’s founding in 1991. Here, company taxation in Europe including tax harmonisation and reform debates is covered. The methodological focus is on the development and constant improvement of models for tax burden comparisons (among others, the well-established “European Tax Analyzer”). Our research activities are conducted in close cooperation with the University of Mannheim.

The second research area “Fiscal Competition and Federalism” is devoted to the study of governmental structures and federalism under the constraints of growing factor mobility. Both German federalism and the vertical division of tasks between the European Union and the member states are being scrutinised.

The third research area “Fiscal Policy and Growth in the EU” is differentiated from the other two by its rather macroeconomic focus. The projects conducted look into the necessities of sustainable and growth-friendly fiscal policy. A core empirical question is the link between the conduct of fiscal policy and growth potential. In addition to taxation, particular attention is being paid to public debt.

The composition of these three areas with their individual focuses guarantees that the micro-oriented views on tax policy and tax reactions are not detached from more aggregated views on the impact of tax policy on the overall economy. The explicit inclusion of the federal dimension of fiscal policy in Europe implies that empirical research can be based on detailed knowledge of institutions in Germany and the European Union.

Research Area “Corporate Taxation and Analysis of Tax Locations”

In this research area, the comparative analysis of the tax burden imposed on companies in industrial countries is conducted. Over the years, ZEW has built up and constantly improved its empirical models for these detailed comparisons. In cooperation with the University of Mannheim, ZEW researchers have developed a specific software tool, the “European Tax Analyzer”. This programme simulates the tax assessment of a representative firm taking into account all relevant taxes, their interactions, and specific features such as tax credits and reduced tax rates.

Supplementing the European Tax Analyzer, a number of alternative empirical models for international tax comparisons have been implemented and applied for a constantly growing number of countries and regions. For example, effective marginal and average tax rates are calculated on the basis of the Devereux and Griffith approach. A project commissioned by the European Commission is devoted to the calculation of these effective tax rates for a large number of countries as well as for historical data in order to produce thoroughly based time series on the effective tax burden on companies.

An important extension of the empirical toolbox of the recent time concerns the taxation of highly qualified employees. The implemented model, called the “Human Resource Tax Analyzer”, allows quantifying the tax burden for both purely national employment and cross-border expatriate employment in the EU-25 countries and a number of other industrial countries.

In a number of contexts and in cooperation with partners like BAK Basel Economics, these models are successfully applied to the production of international tax rankings and empirical research, e.g., with regard to the potential role of taxes as a determinant of locational decisions and growth.

A further topic of this research area deals with issues resulting from harmonising trends and tax policy in the European Union. Currently, the Commis-

sion's initiative to harmonise the company tax base is the focus of active projects. Attention is also paid to potential consequences of using the International Financial Reporting Standards for taxing multinationals in Europe.

Based on its thorough empirical knowledge and long-run experience with the trends and challenges of German and European tax policy, the department regularly contributes to the German tax policy debate. In this context, ZEW has joined the University of Mannheim, the German Council of Economic Advisors, and the Max Planck Institute Munich in designing a tax reform model for Germany based on the dual income tax approach.

Research Area “Fiscal Competition and Federalism”

This research area is devoted to the consequences of high factor mobility on the federal structure of countries and on both sides of the budget. In this sense, this area is of a more generalised nature compared to the clear taxation focus of the first research area. The mechanism of competitive interactions among governmental entities is of key interest. In this context, the differentiated structure of the public sector from the upper EU level down to local communities is included in the analyses. Furthermore, research projects also deal with the non-profit sector as a border case of public sector activities.

With regard to the German fiscal constitution, an ongoing dissertation is devoted to incentive effects of fiscal equalisation on budgetary policy of federal states. In the course of this project, the German fiscal equalisation system has been modelled in detail. In a series of projects, the department has looked into the EU fiscal constitution in general and the EU budget in particular. For the German foreign ministry, the department has developed a software tool to quantify distributive consequences of the EU budget for the EU-27 countries. This tool has been applied by the foreign ministry during the negotiations on the EU financial framework for the years 2007-2013. Research insights from this field are being fed into a European network of excellence

(“EU-CONSENT”) with ZEW as the responsible team leader for those network partners working on the European fiscal constitution.

Further active and planned projects explore the mechanisms of fiscal competition among countries or sub-national government entities. One empirical project funded by the German Science Foundation (DFG) exploits the German Bundesbank's database on foreign direct investment in order to derive multinational companies' tax reactions with regard to their financial structure or to transfer pricing. An ongoing study based on effective tax burden series searches for mutual influences of neighbouring countries' tax policies. Projects like that benefit from the department's strong position with regard to high quality tax data.

In the future, this area's research will experience a certain augmentation of research interests. Currently, projects are being initiated that look at federal interactions related to public sector efficiency. A significant shortcoming of the fast-growing literature on fiscal competition can currently be identified for the link between competition and efficiency of communities, federal states, or countries. Deficiencies of the existing research concern both the calculation of efficiency indicators and the identification of spatial interactions. New projects are to improve on these issues with a particular focus on German local communities and federal states. Innovative approaches on this field are promising not only from a purely academic point of view but also from possible applications in policy advice. For countries like Germany facing a dramatic demographic change, the optimisation of public sector efficiency is a key policy objective.

A further augmentation of this area's research programme targets at the inclusion of the non-profit sector into the research on public sector phenomena. The non-profit sector is amazingly under-researched given its large size in many industrial countries. It is also obvious that non-profit activities on fields like health, old age care, science, or education have a large potential to contribute to the provision of goods which, by tradition, have been produced by the public sector. In this context, both new research issues – public sector efficiency and the non-profit sector – have an obvious link. An im-



From left to right: Michael Grünewald, Sebastian Hauptmeier, Alexander Kalb, Timo Reister, Heidi Schielke, Sarah Borgloh, Jost Heckemeyer, Carsten Wendt, Friedrich Heinemann, Steffen Osterloh, Philipp Mohl, Marcus Kappler, Astrid Kremser, Christof Ernst, Christina Elschner

portant strategic partnership on the field of non-profit-research exists between ZEW and the Centre for Social Investment, which has been recently established at the University of Heidelberg.

Research Area “Fiscal Policy and Growth in the EU”

Activities in this research area revolve around the mutual link between fiscal policy and economic growth. The key question is how the public sector in Germany and the EU can and should be evolve in order to contribute to a higher potential growth. The logical connection to the first two research areas is obvious since tax competitiveness or public sector efficiency are relevant dimensions of a country’s growth potential. However, a methodological difference in comparison to the first two is the more macroeconomic approach of this area. In ZEW’s organisational context, this research area is strongly linked to other ZEW researchers with a rather macro-

economic focus via the ZEW research group “Growth and Business Cycle Analyses”.

A focus of this area’s empirical projects is on the study of growth determinants where particular attention is paid to fiscal variables. New approaches of panel econometrics are applied which show how relevant certain determinants empirically are which have been identified by new growth theories. A current project specifically deals with the overall context of tax systems, marginal tax rates, labour supply, and growth. Here, the research contributes to the important policy debate on the US-EU growth differential as well as the hypothesis that lower European labour input largely is a consequence of higher marginal tax rates on labour.

The link between fiscal policy and growth is prominent for public debt sustainability issues. Hence, questions of budgetary sustainability are a further focus of this research area. In cooperation with the Bertelsmann Foundation, ZEW has developed the “Schuldenmonitor” (“Debt Monitor”) which evaluates budgetary sustainability for the German

Laender. For these in-depth analyses, the empirical models on the German fiscal equalisation system are being used which have been developed in the research area "Fiscal Competition and Federalism". Thus, a detailed forward-looking picture of the budgetary situation of German states can be drawn comprising the manifold and intransparent redistributive effects of German fiscal equalisation mechanisms. The specific expertise on sustainability issues has initiated an active cooperation with researchers of the European Central Bank, which has recently resulted in a common publication in the ECB Working Paper Series.

Closely connected to growth empirics are current and planned research activities scrutinising the determinants of a country's capability to reform. Industrial countries show distinct differences regarding the speed of their institutional adjustment to quickly changing constraints. The reasons for phenomena like the slow pace of change in big continental EU countries are hardly understood. The same lack of knowledge holds, for example, for the question why a country like Germany is so slow to react to the intensified tax competition of its neighbours, even though the country suffers in terms of a loss in tax base and tax revenues. It is worth mentioning that the empirical work on this field is not limited to the usual econometric tools. In addition, the department cooperates with psychologists from the universities of Salzburg and Munich in the design and execution of experiments. This cooperation allows including recent new insights from behavioural psychology and economics.

Selected Research Projects

Effective Levels of Company Taxation Within an Enlarged European Union

The EU enlargement with 10 new member states considerably widens the EU-internal market and opens it to participants with very different levels of economic development. In this context, this study analyses the development of the tax burden on companies operating in the countries of the enlarged European Union. The neutrality of the dif-

ferent tax systems with respect to different sources of finance and types of investment is evaluated with an additional focus on small- and medium-sized enterprises (SME). The aim of the study is twofold. On the one hand, we analyse the development of effective corporate tax rates on domestic and cross-border investments within the enlarged European Union (EU-25) and a number of non-EU countries for a wide range of years. The determination of tax rates is based on the methodological approach by Devereux and Griffith. On the other hand, we also consider special tax schemes for SME within the EU-25 and the taxation of non-incorporated SME in selected countries. We compare the situation for SME with large companies and analyse how this situation is affected by the choice of legal status.

(<http://www.zew.de/project547>)

Tax Effects on International Business Activities

The aim of this research project is to analyse the impacts of company taxation regarding cross-border business activities of multinational enterprises. Especially in Europe, international business activities are of particular importance concerning taxation since enterprises are comparatively free to operate their businesses from different countries within the single European market, but the effective tax burdens on companies significantly differ among these various locations. Thus, countries compete with each other for the establishment of subsidiaries as investment locations.

Otherwise, this fact gives rise to tax planning by the parent company due to transfer-pricing and group-financing decisions. There is not much empirical evidence regarding the impacts and application of tax planning except for some well-known case studies, although tax planning makes the complete taxation of the entire business profits very difficult. This absence of empirical research complicates the evaluation of reform proposals concerning company taxation. Against this background, the research project aims at analysing the tax planning activities of multinational German companies using the information about investment behaviour in the existing database of Deutsche Bundesbank and applying adequate

econometric methods. Albeit the particular importance of this subject in the fields of Business Administration and Public Finance, such an empirical analysis regarding German enterprises is not existent at the moment.

(<http://www.zew.de/project477>)

Taxation Knowledge Database

For the measurement and international comparison of effective tax burdens, ZEW has already achieved comprehensive knowledge. The institute has developed own approaches (e.g., European Tax Analyzer) and applies additional models (e.g., Devereux/Griffith) for the measurement of international effective tax burdens. This includes the development of software solutions. Besides, ZEW has a huge amount of data on the taxation systems in many different countries including the member states of the European Union and some important states outside the EU. These data about the different types of taxes, the tax bases, and the schedules has not yet been collected and stored at a central point or location.

Against this background, the aim of the project is twofold. First of all, the whole knowledge about taxation systems at ZEW shall be collected and stored in a computer-based database (Taxation Knowledge Database) to create an archive and to make it easier to get information about a special state of interest. The second aim is that all ZEW's software solutions as well as external ones should be able to access this database.

(<http://www.zew.de/project462>)

EU-CONSENT

"EU-CONSENT" – a network of excellence for joint research and teaching – will look at the construction of a new Europe, especially in 2005-2008. It will address the question of mutual reinforcing effects of deepening and widening. Within an innovative, forward-looking, analytical framework, 25 teams will test lessons from the past in view of their academic and political validity for discussing visions and scenarios for the future. The major leitmotif is that the EU is in full process of reinventing itself – a development which is, however, difficult to grasp and explain. ZEW's role in the network is devoted to linking

researchers with an interest to the EU's fiscal constitution.

(<http://www.zew.de/project483>)

Public Debt Monitor: Coverage of Public Debt in Germany

This project aims at a regular monitoring of fiscal sustainability in Germany, both at the state (including social security) and the federal level (including municipalities). Using a scientifically founded concept as well as comprehensible and transparent assumptions and calculations, the consolidation needed for the individual households are quantified, and the current consolidation efforts are evaluated. The new version of the "Public Debt Monitor" updates the data of the former study of 2005 and compares the results of both studies.

(<http://www.zew.de/project568>)

Selected Publications

Eichler, M., C. Elschner, and M. Overesch (2005), *IBC Taxation Index 2005, Comparison of the Effective Tax Burden of Companies and Highly Qualified Manpower in European Regions and the United States*, BAK Basel Economics, Mannheim.

Elschner, C., L. Lammersen, M. Overesch, and R. Schwager (2006), *The Effective Tax Burden of Companies and on Highly Skilled Manpower: Tax Policy Strategies in a Globalized Economy*, *Fiscal Studies* 27(4), 513-534.

German Council of Economic Experts, Max Planck Institute for Intellectual Property, Competition and Tax Law, and ZEW (2006), *Reform of Income and Company Taxation by the Dual Income Tax*, Schriftenreihe des Bundesministeriums der Finanzen, Vol. 79, Bonn.

Hauptmeier, S., M. Heipertz, and L. Schuknecht (2006), *Expenditure Reform in Industrialised Countries: A Case Study Approach*, ECB Working Paper No. 634, Frankfurt/Main.

Heinemann, F. (2006), *Planning or Propaganda? An Evaluation of Germany's Medium-Term Budgetary Planning*, *Finanzarchiv* 62(4), 1-28.

Stegarescu, D. (2005), *Public Sector Decentralization: Measurement Concepts and Recent International Trends*, *Fiscal Studies* 26(3), 301-333.

Selected Presentations

Elschner, C. and M. Overesch (2006), IBC Taxation Index 2005 – Effective Tax Burden of Companies and on Highly Skilled Manpower, OECD Workshop “Effective Corporate Taxation”, Paris.

Hauptmeier, S. (2005), Fiscal Sustainability in Germany, European Central Bank, Frankfurt/Main.

Heinemann, F. (2005), Fiscal Preconditions for Structural Reforms – Or How Far Apart Are Lisbon and Maastricht?, European Commission Directorate General for Economic and Financial Affairs Work-

shop “The Budgetary Implications of Structural Reforms”, Brussels.

Kappler, M. (2005), Determinants of Long-Run Growth in Industrial Countries, Conference on Business Cycles and the Role of Government in Japan and Germany, Japanese-German Center, Berlin.

Wendt, C. (2006), EU Company Taxation in Case of a Common Tax Base, Congress of the IIPF (International Institute of Public Finance) “Public Finance: Fifty Years of the Second Best – And Beyond”, Paphos (Cyprus).

Research Department “Environmental and Resource Economics, Environmental Management”

The research department “Environmental and Resource Economics, Environmental Management” is primarily devoted to the challenges of sustainable development. With respect to both the goals of sustainability and the means of accomplishing these, there exist diverging social and political ideas. It is crucial to specify and operationalise the concept of sustainable development with the aid of indicators in order to evaluate policy proposals on a comparative basis. The research area’s objective is to analyse questions of the transition to sustainable economic structures by applying the relevant microeconomic and microeconomic methods and to develop politically feasible guidelines for action.

Rational decision-making support in almost every environmental policy field – including energy, transportation, and research policy – requires the modelling and, as far as possible, the quantification of economic and environmental impacts of alternative strategies. Only in doing so may conflicting goals be identified and forcefully assessed. Moreover, size and distribution of potential adjustment costs determine the acceptability of transformations derived from sustainability considerations. Accordingly, next to environmental impacts, quantitative information concerning the effects of environmental and economic policies on the economy as a whole, on economic sectors, and on private and public households are of great significance for decision-making support.

Against this background, the research department’s commitment reflects a profile characterised by problem consciousness in the analysis of present environmental and economic policy issues as well as by scientific competence regarding the methods employed in the analyses.

The tasks of the research department are structured along five focus areas:

- The research area “Innovation and Sustainable Development” analyses the determinants and economic impact of environmental innovations. Moreover, rules, indicators, and strategies for sustainable development are made subject to further explication.
- The research area “Energy Economics” investigates environmental policy-induced development of the framework for the liberalised European energy industries, such as the introduction of EU-wide CO₂ emissions rights trading.
- The research area “Transport and Mobility” is devoted to the question about how transport and mobility needs are to be met on a long-term sustainable basis. Shifts of transport modes and increasing transport efficiency are the primary regulative concepts under consideration.
- In the research area “International Environmental and Resource Policies”, regulatory systems for sovereign states addressing the institutionalisation of cross-border and global environmental and resource policy are of central concern. Under investigation is especially how, in the presence of global environmental externalities, economic incentives and welfare preferences must be accounted for in order to prevent free-riding and promote the efficiency of international environmental protection.
- The research area “Macroeconomic Analysis of Environmentally Relevant Policies” assumes the task of quantitative evaluation of economic policy regulation, particularly as regards environmental, energy, transport and climate protection policy, as well as the associated structural change. A model-based macroeconomic analytical framework permits systematic and consistent measurement of the impact of policy measures on the three dimensions of sustainable development: ecology, economy, and social equity.

Research Area “Innovation and Sustainable Development”

Environmental process and product innovations are at the core of sustainable development in conserving resources for future generations. Innovation research conducted in environmental economics is

today concerned with microeconomic analyses of the determinants of environmental innovations on the firm level. The basis for such analyses is mainly firm-level data obtained by mail-in or telephone surveys. Empirical studies on the relationship between environmental regulation, environmental innovations, and (financial) corporate success will continue to characterise the scientific contribution to the economic policy discourse on sustainability and competitiveness.

Establishing sustainable economic structures necessitates the adoption of environmentally friendly products by consumers. Economic policy seeking to guide future directions must, therefore, be based on the identification of the determinants of demand for environmentally relevant goods and services by consumers. To this end, stated preference surveys will be conducted with respect to selected consumption decisions in the areas of transport and energy, e.g., the choice concerning alternative fuel technologies or energy supply (conservative vs. regenerative).

Research Area “Energy Economics”

Research in the area of “Energy Economics” focuses on the formulation of goals and the choice of instruments in European and national energy policy. Within the threefold constellation of political objectives, i.e. efficiency, supply security, and environmental compatibility, the consideration of specific technological and economic characteristics of electricity and natural gas markets – such as the grid-bound nature of electricity supply, storage aspects, and the long-term nature of investment decisions connected to energy conversion and supply – is essential. These aspects raise complex regulatory issues regarding the introduction of competitive energy markets, e.g., barriers to market entry, investment, and innovation incentives, which are beyond conventional environmental problems of energy supply. In addition, the interplay of regulatory institutions on the national and supranational level as well as the interaction of different policy instruments constitute important areas of investigation.

The assessment of regulations and policy options is predominantly based on welfare economic approaches. So far, the research area has evaluated environmental policy regulation in the energy sector, such as the German environmental tax (*Ökosteuer*), with respect to subsidies for renewable energies (e.g., the *Erneuerbare-Energien-Gesetz* in Germany), as well as the European emissions trading scheme. In the future, aspects of overlapping regulation as well as questions of market power and the development of competitive markets in the European energy industries are to be investigated.

As part of the cross-departmental research pool “Empirical Industrial Policy”, empirical analyses on the regulation of the grid-bound energy industry are planned, providing a dynamic view with respect to market concentration, investment, and innovation behaviour.

Besides methods for the analysis of market outcomes (such as the planned analysis of mergers based on M&A data sets), the research area employs and continually develops microeconomically vested simulation models in order to assess expected efficiency and distribution effects of regulations. Hybrid general equilibrium models of the overall economy, combining the technology-based description of the energy systems with the aggregated description of technology options and consumer preferences, allow for macroeconomic evaluation of discrete technology policies, such as the transition to a hydrogen-based economy or continuation of nuclear energy. Complementarily, a multi-regional market model for the European electricity industry is continually being developed, which reflects in detail the respective production, trade, and consumption patterns. Beginning with a static perspective, the model is to be used to investigate the influence of market structures and regulatory measures on prices, volumes (energy mix), and competitive position of energy firms on a European level.

Further research addresses political economic aspects of energy policy. In this way, the German environmental tax reform’s sectoral differentiation of tax rates is theoretically explained on behalf of political support models and approaches of information transfer between groups and political decision-



From left to right: Christoph Böhringer, Georg Bühler, Tim Hoffmann, Kornelia Peter, Ulf Moslener, Astrid Dannenberg, Bodo Sturm, Ulrich Oberndorfer, Niels Anger, Claudia Hermeling, Sabine Jokisch, Henrike Koschel, Victoria Alexeeva-Talebi, Tim Mennel, Martin Achtnicht, Klaus Rennings

makers. Furthermore, a political economic analysis of the European emissions trading system is being prepared, in which the influence of interest groups on the sectoral allocation of emissions rights will be investigated.

The ZEW Energy Market Barometer continues as a biannual survey of market participants and experts concerning current issues of energy policy. The conceptual outline and analysis of its findings provide an important link between current energy policy debate and applied economic research.

Research Area “Transport and Mobility”

Economic growth and especially the increasing globalization of industry and trade will continue to act as a driver of further transport demand. As a downside, negative external effects on environment and natural resources are linked to this development. The research area “Transport and Mobility” seeks out regulatory concepts capable of addressing

the trade-off in terms of meeting transport and mobility needs in an environmentally responsible and economically efficient way.

Basically, transport policy governs three approaches: First, the decoupling of transport demand and the overall economic development can be pursued; second, the shifting of transport needs to environmentally friendlier modes can be attempted; third, the efficiency of transportation can be increased. The research area essentially focuses on the approaches of shifting transport and increasing efficiency, e.g., through the use of energy-efficient engines as well as alternative fuels in passenger cars.

Ongoing and future research of economic importance comprises the integration of alternative engine technologies as well as the required infrastructure for the market implementation.

The TransportmarktBarometer (Transport Market Barometer) for the shipping and transport industry, developed in cooperation with the ProgTrans AG, will be continued in the future as well. The quarter-

ly survey delivers an among experts and the press much-requested sentiment indicator of expectations regarding price and volume on the five transport markets road, rail, inland and international sea shipping, and air freight as well as the two specialised markets of combined transport and courier and express services.

Research Area “International Environmental and Resource Policies”

In contrast to national agendas, international environmental policy requires the cooperation of sovereign states: The fundamental incentive problems of public goods cannot be resolved by isolated intervention. The central topic in this research area has up to date been the analysis of international climate policy and – in light of continued pressures – will continue to comprise the core of the research done. The short- and mid-term agenda of international climate policy focuses on efforts related to including the USA as well as important developing countries, such as China and India, in an international climate regime.

Against this background, the basic research being conducted by the research area analyses the determinants of voluntary cooperation among sovereign states. Of primary interest here is the question concerning the influence of equity beliefs and distinct burden sharing rules on the success chances of international treaties: How can diverging conceptions of fairness of the various parties be integrated into a decisive climate protection deal? The analysis relies on game theoretical methods.

Further research activities concentrate on numerical simulation analyses of the economic impacts of international climate protection policies by means of microeconomically vested partial and general equilibrium models. Questions concerning the implementation of present-day climate policy instruments, such as emissions trading, joint implementation, and the clean development mechanism as well as the realisation of the Kyoto commitments in the EU and Germany, can be evaluated on behalf of results on efficiency and distribution effects.

As another research topic, the role of financial market instruments in environmental policy is being addressed in cooperation with the research department “International Finance and Financial Management”. This research investigates where the distinctions have to be made between markets for emissions certificates and established markets for stocks and financial derivatives.

In addition, it is planned to take a closer look at the significance of federal structures in EU environmental policy in the future. That is, for example, the multiple levels of political decision-making in the European emissions trading system – particularly the EU-level emission-trading directive and the national level implementation through allocation plans – are to be primarily analysed from a political economy perspective.

The evaluation of genetically modified organisms (GMO) and the design of various coexistence rules within the EU constitute a quite new and politically relevant research topic in the area of international resource policy, which is being addressed in cooperation with the research department “Industrial Economics and International Management”. Within this project, among others, the question of how different labelling schemes influence the valuation of GMO food is going to be analysed with the help of laboratory experiments.

Research Area “Macroeconomic Analysis of Environmentally Relevant Policies”

This research area is concerned with quantitative analysis of economic policy regulations from a macroeconomic point of view, especially in the field of environmental, energy, transport, and climate protection policy. Besides macroeconomic effects, the regulation-induced structural change on the sectoral level is taken into account as well.

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. On the receiving end, projects of the other research

areas provide stimulus for linkages to complementary models: CGE models are primarily suited to measure sustainability impacts of policy measures on the regional, sectoral, and household level; owing to the relatively pronounced degree of abstraction, however, limits are posed with respect to detailed assessments. Partial models generally contain significantly more pertinent detail on technological conditions (e.g., technical models of energy systems), socio-economic behavioural patterns of households (e.g., micro-simulation models), or fields of natural science (e.g., climate models, models of water, or land use).

Against this background, current and future development efforts of the research area aim at the combination of CGE and partial models. One example in the field of climate policy is the combination of dynamic CGE models of world trade and energy consumption with long-term climate models. In the integrated assessment framework, global strategies can be derived from that for the efficient realisation of climate protection goals, such as the stabilisation of greenhouse gas concentrations or the limitation of long-term temperature increases. Another example is the combination of top-down economy and bottom-up energy systems models into a hybrid analytical instrument that allows for the evaluation of the macroeconomic impact of discrete technology policies.

On the international level, the research area is involved in various networks on model-based analysis of energy and climate policies. 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 particularly highlighted.

A further important exchange forum – originally initiated by the research area – is the “Climate Policy Network” (CPN, <http://cpn.zew.de>) in cooperation with the Massachusetts Institute of Technology (MIT), Resources for the Future (RFF), and the Fondazione Eni Enrico Mattei (FEEM), hosting a transatlantic dialog on the shape of future climate policy.

Selected Research Projects

Indicators and Quantitative Tools for Improving the Process of Sustainability Impact Assessment (IQ TOOLS)

The I.Q. TOOLS project developed internet-based software designed to support the process of impact assessment within the European Commission. This software is designed to provide necessary information for each step of the impact assessment and help to structure this information in a meaningful way. I.Q. TOOLS provides resources supporting desk officers to assess the potential intended and unintended impacts of policy initiatives on the economic, environmental, and social dimensions of sustainability and the significance of those impacts. (<http://www.zew.de/project371>)

Case Study Comparisons and Development of Energy Models for Integrated Technology Systems (Cascade Mints)

CASCADE MINTS is a project involving the development and use of energy and energy/economy models with special emphasis on analysing technological developments. It is essentially split into two distinct parts: Part 1 focuses on modelling, scenario evaluation, and detailed analysis of the prospects of the hydrogen economy. The ultimate aim of this part of the project is to enable perspective analysis of the conditions under which a transition to an energy system dominated by hydrogen is possible. Part 2 does not involve significant model development. Its main aim, instead, is to use a wide range of existing operational energy and energy/economy models in order to build analytical consensus (to the extent that this is possible) concerning the impacts of policies aimed at sustainable energy systems. The emphasis in the current version of this joint case study project will be on policies influencing technological developments. (<http://www.zew.de/project417>)

HyWays – The Development and Detailed Evaluation of a Harmonised European Hydrogen Energy Roadmap

In developing the European Hydrogen Roadmap, the HyWays partners closely interlink with the European Commission to investigate the techno- and

socio-economic conditions for introducing hydrogen as a future energy carrier and fuel. A toolbox from well-known, widely accepted, and tested simulation tools with well-defined interfaces will be used for the consensus process to identify the technical, macro-, meso- and microeconomic, and policy framework conditions for the establishment of a sustainable hydrogen energy system. It will comprise a comparative analysis of regional hydrogen supply options and energy scenarios, including renewable energies. Though, an initial emphasis will be pathways to a hydrogen infrastructure for transport fuel, synergies for stationary and portable end-use will also be considered.

Regional or candidate state-specific issues are evaluated in partnership with local energy experts. In Phase I (18 months), the involved European countries will be represented to develop and validate the toolbox. Experienced coordinators of all other regions are also invited in Phase I to understand HyWays methods and progress and to provide input about their specific hydrogen energy policy situation. These regions will then be selected, based on various criteria such as motivation, country-specific characteristics etc., in order to become one of further 5-7 active HyWays partners in Phase II. Here, the framework is applied as developed in Phase I, and an integral and validated roadmap is designed.

Major deliverables of HyWays are the European Hydrogen Energy Roadmap including a technical report and strategy document and recommendations for stakeholders concerning realistic regional options to build the hydrogen energy infrastructure. The timeline considered will be the transition period until 2020 with a visionary view to an established hydrogen energy system until 2050, then mostly based on renewable energies. (<http://www.zew.de/project388>)

International Negotiations on Climate Protection in the Context of Domestic Climate Policy

This project investigates the institutionalisation of multilateral environmental negotiations. In particular, using a game theoretical approach, the results achieved in international climate negotiations shall be explained in terms of the respective parties'

egoistic bargaining position. Traditionally, climate protection is characterised as a global public good in economics. In contradiction to public goods on the state or national level, no single authority is in place to force desired cooperative behaviour of the stakeholders involved. Accordingly, sovereign states' cooperation only happens on a pure voluntary basis. This represents a major aggravation of the already short-handed incentive structure posed by public goods. Throughout the 1990s, double-tier coalition games were devised in order to generate voluntary cooperation. Based on neoclassical assumptions, these models, however, arrive at rather dim prospects regarding the realisation of international cooperation. The project, funded by the German Research Association (DFG), counters with the hypothesis that certain groups within society will indeed take fairness criteria into consideration (e.g., per capita emissions, proportional abatement efforts etc.). Of course, such aspects revolving around the concept of fairness are immediately evident from the issue of proportionality between industrialised and developing world. Besides ubiquitous cost-benefit rationale, a government, pressed by election cyclical concerns, will additionally have to take certain generally applied fairness measures into account. With respect to equity-preferential incentive structures, a non-cooperative game scheme is applied to international climate negotiations.

(<http://www.zew.de/project138>)

TETRIS – Technology Transfer and Investment Risk in International Emissions Trading

The TETRIS project aims at exploring the economic and industrial impacts as well as the prospects for achieving technology transfer associated with the implementation of the Kyoto flexible mechanisms. Comprehensive risk indicators measuring the risks of investing in climate change mitigation in foreign countries will be developed. Using quantitative methods and actual market experience from early transactions involving a broad range of technologies, the technology transfer and cost savings will be assessed that can be realized through the Clean Development Mechanism (CDM) and Joint Implementation (JI). Another goal of the project is to examine to what extent greenhouse gas emissions

trading schemes outside the European Union are compatible with each other and the proposed European emissions trading scheme. Our results will provide valuable insights into technology transfer and risk management in carbon markets for policy-makers and the business community.

(<http://www.zew.de/en/koooperationen/UMW/TETRIS>)

Selected Publications

Beise, M. and K. Rennings (2005), Lead Markets and Regulation: A Framework for Analyzing the International Diffusion of Environmental Innovation, *Ecological Economics* 52(1), 5-17.

Böhringer, C., T. Hoffmann, A. Lange, A. Löschel, and U. Moslener (2005), Assessing Emission Allocation in Europe: An Interactive Simulation Approach, *Energy Journal* 26(4), 1-22.

Böhringer, C. and A. Löschel (2005), Climate Policy Beyond Kyoto: Quo Vadis? A Computable General Equilibrium Analysis Based on Expert Judgements, *KYKLOS* 58(4), 467-493.

Böhringer, C. and H. Welsch (2006), Burden Sharing in a Greenhouse: Egalitarianism and Sovereignty Reconciled, *Applied Economics* 38(9), 981-996.

Rennings, K., A. Ziegler, K. Ankele, and E. Hoffmann (2006), The Influence of Different Character-

istics of the EU Environmental Management and Auditing Scheme on Technical Environmental Innovations and Economic Performance, *Ecological Economics* 57(1), 45-59.

Selected Presentations

Anger, N. (2006), Linking Emissions Trading Schemes Versus "Kyoto" Trading: An Economic Impact Assessment, World Conference of Environmental and Resource Economists (EAERE), Kyoto.

Böhringer, C. (2006), Integrated Bottom-Up into Top-Down: A Mixed Complementarity Approach, FEEM European Summer School, Venice.

Moslener, U. (2004), Possible Paths for International Negotiations, Climate Policy Network (CPN) Fall Meeting, Washington, DC.

Rennings, K. (2006), The Influence of Different Characteristics of the EU Environmental Management and Auditing Scheme on Technical Environmental Innovations and Economic Performance, World Conference of Environmental and Resource Economists (EAERE), Kyoto.

Ziegler, A. (2004), Determinants of Environmental Innovations in Germany: Do Organizational Measures Matter? A Discrete Choice Analysis at the Firm Level, Annual Congress of the European Economic Association (EEA), Madrid.

Research Group “Information and Communication Technologies”

The research group “Information and Communication Technologies” (ICT) deals with the economic aspects of ICT. Thereby, a main emphasis is laid on the effects of ICT usage on firms as well as on employees.

The first focus is on the “ICT Sector and Diffusion of ICT”. Thereby, it shall be pointed out that sectoral approaches play an important role within the analysis of the production and diffusion of ICT. Here, the ICT sector itself is analysed. It can be confined on a narrower or broader basis depending on the aim of the analysis. It can include IT and media industries or be characterised by IT- and knowledge-intensive services as they were analysed within the scope of the business survey “Service Providers of the Information Society”. Diffusion analyses often oppose the use of current information technologies in the user sectors and the ICT provider industries. Eventually, the sectoral approach of the ICT diffusion can be complemented by a macroeconomic approach.

The research area “ICT and the Labour Market” emphasises the effects of ICT use on the qualification requirements and the workplace situation of employees. Thus, especially training and on-the-job training measures as well as flexible forms of workplace organisation play an important role.

The third focal point, “ICT, Competition and Firm Strategies”, mainly includes industrial economic aspects of ICT. Primarily, it deals with the competition on ICT markets, such as on markets for internet infrastructure services or on the telecommunication market. Beyond that, the productivity and innovation activity of firms and industries offering and using ICT are analysed. (IT) Outsourcing and internationalisation are considered within this scope as well. As firm strategies they are increasingly gaining importance and are supposed to contribute to the strengthening of the competitiveness of firms.



From left to right: Jenny Meyer, Gordon Jochem Klein, Katrin Schleife, Ulrike Merkel, Irene Bertschek, Marianne Saam, Bettina Müller, Margit Vanberg, Katja Coneus, Daniel Cerquera, Jörg Ohnemus

The theoretical and empirical research is mainly conducted on a microeconomic and micro-economic level. The development of own collected firm-level data sets concerning IT-specific topics provides an essential basis for the empirical analyses. This basis is extended by the use of existing individual specific data sets. The research profile of the research group is located at the interface between industrial and labour market economic research. This is especially well founded by the cross-sectional character of information and communication technologies.

Research Area “ICT Sector and Diffusion of ICT”

Within this research area we follow the diffusion and usage of IT by conducting own firm surveys. The business survey “Service Providers of the Information Society” includes IT- and knowledge-intensive services industries in Germany. The survey has been quarterly conducted since 2002. On this basis, a new cyclical sentiment indicator, the “ZEW Indicator Service Providers of the Information Society” (ZEW-IDI) has been published since 2003. In the scope of the FAZIT project (a research project for current- and future-oriented information and media technologies and their use in Baden-Wuerttemberg), the development of the IT and media sector in Baden-Wuerttemberg is regularly observed by biannual surveys and is compared to the development of different IT-using industries. The surveys deal with current ICT trends for firms and the determinants and constraints to introduce new ICT applications. A further representative business survey of more than 4,000 firms belonging to the German manufacturing industry and to selected services industries will take place for the forth time in spring 2007. Consequently, the survey enlarges an important database for this research area as well as for “ICT, Competition and Firm Strategies”.

In addition to the analyses on the basis of firm-level data, studies on a regional as well as an international level are conducted within this research focus as well. Despite the proceeding technological development and decreasing prices, there are still distinct differences in the computer and internet

use between rural and urban areas. For international comparisons in the ICT diffusion we refer to officially available publications such as the OECD or the EITO (European Information Technology Observatory). Usually, the comparisons restrict to a description and interpretation of available ICT indicators.

Research Area “ICT and the Labour Market”

A lifelong learning has become a requirement for continuous success in the information economy. The rapid advancement of technologies to provide and process information demands an ongoing adaptation of the users’ skills. Therefore, investments in human capital are of great importance at every age. In this research area we investigate the consequences of ICT use on individuals’ qualification requirements. Thereby, different groups of persons play an important role.

A special emphasis is laid on older employees. While these have left the labour market quite early in the last decades, due to either active encouragement by firms or due to institutional conditions, currently a change can be observed. Against the background of the demographic development, institutional conditions such as the increase in retirement age to keep older employees longer in the labour market are established. Thereby, it will be of great importance to adapt the conditions at the workplace. The interaction of new technologies on the one hand and qualification and age structure of the employees on the other hand will, thus, play a crucial role and shall be particularly analysed on the firm level.

A further research topic refers to firm founders who – assuming an adequate qualification – provide a basis for employment and economic growth. A special emphasis in our analyses is laid on the importance of higher education for founding firms in ICT- and knowledge-intensive industries.

Another important question concerns the effects of increasing diffusion of ICT on the demand and wages for female employees. The very few studies that have been conducted to this topic so far hypothesise that women were able to improve their chances on the labour market by ICT diffusion and that they possess skills, such as interactive skills,

which are complementary to the use of ICT. On the basis of individual-level data (BIBB-IAB), we theoretically and empirically analyse this hypothesis.

Last but not least, education already plays an important role in the pre-professional phase, especially for skills that are necessary to acquire new knowledge, since at this stage first central qualifications are acquired. In cooperation with the research department “Labour Markets, Human Resources and Social Policy”, current and future projects shall analyse skills, qualification and social integration of young people from birth up to their career entry. Causes and effects of ICT and media use in relevant life phases will be considered.

Research Area “ICT, Competition and Firm Strategies”

In the last years, two larger firm strategic trends could be identified: the outsourcing of business processes and – often connected to that – the internationalisation of firms. Thereby, ICT use can facilitate outsourcing as well as the increasing international diffusion of firms. The creation of information-based services can also be outsourced and – e.g., via internet – be transported in an easy, quick and low-priced way by using ICT. Using the example of the outsourcing of IT services, we analyse the determinants of outsourcing as well as the consequences for employment and productivity on the basis of firm-level data.

Outsourcing business processes abroad is termed “nearshoring” or “offshoring” depending on whether the services are outsourced to nearby countries, such as the Eastern European states, or whether they are outsourced to faraway countries, such as China or India. A study for Baden-Wuerttemberg showed that most resident firms are outsourcing their IT services to IT providers within the federal state. But it is still not clear to what extent the IT providers revert to advanced contributions from abroad. Furthermore, the different forms of internationalisation are of interest. They can include exports, production abroad, participating in foreign firms as well as partnerships with foreign distributors. In this research area we analyse which types of

internationalisation are preferred by IT- and knowledge-intensive firms and to what extent internationalisation is facilitated by IT use.

The fast technological progress and the increasingly complex entrepreneurial structures require more and more specialised knowledge. Therefore, firms engage consulting services in order to secure an unobstructed implementation and use of their ICT systems on the one hand and to create organisational structures that enable an efficient ICT use on the other hand. The extent to which these consulting services contribute to firms’ innovative capability will be theoretically and empirically analysed.

Aspects of competition play a role in both the supply and use of ICT. The internet is a classic example for a market with network externalities since the advantage of an internet access increases with the number of firms and individuals that can be reached by it. To internalise these network externalities, interconnections between net islands as well as the compatibility of the single nets are required. We investigate the question whether Internet Service Providers (ISP) on the highest level of hierarchy in the internet infrastructure possess market power by having net externalities available of which they can take advantage in their interconnections with smaller ISP.

In the area of telecommunication, market structures have changed in the past years through different deregulating measures. It is still being discussed whether there has been too much or too little of regulation. In an international comparison, the diffusion of broadband access is low in Germany which is ascribed to a deficit in competition. In the scope of the new ZEW research area “Empirical Competition Policy”, the regulation on the German telecommunication market shall be analysed from an economic perspective and be compared with regulations in other countries.

Productivity and innovation are essential economic aims on the firm level as well as on the sectoral and the macroeconomic level. On the basis of firm-level data, we will analyse how different ICT-based firm strategies affect productivity and innovative capability. A further main interest is to what extent ICT-producing and ICT-using firms and industries differ with respect to their productivity and

their innovative capability. Thus, regulating aspects shall also be taken into account for ICT-providing sectors. These aspects correlate with the main research area "ICT sector and diffusion of ICT".

Selected Research Projects

Innovative Capabilities and the Role of Consultants in the Information Economy

The aim of the project is to assess, both theoretically and empirically, whether consultants contribute to innovative capabilities of firms. Thereby, the main focus is set on the abilities of firms to make use of information and communication technologies for innovating their products, processes and organisational structures. In the interdisciplinary approach, IT-based innovations are analysed as the result of the interplay of the knowledge and interests of consultants, managers, and employees on the one hand and of the cognitive and normative conditions of social innovation and learning processes on the other hand.

(<http://www.zew.de/project554>)

IT-Outsourcing, Competitiveness and Employment: Analyses Based on Firm-Level Data

The main purpose of this project is to analyse to what extent firms with IT outsourcing deviate from firms without IT outsourcing with respect to job creation and competitiveness. Moreover, we analyse the motives and determinants of the decision to outsource. In order to explain potential differences in employment between outsourcing and non-outsourcing firms, we also consider various indicators of competitiveness of firms, such as innovation and productivity measures. The empirical analysis entails statistical and econometric analyses based on representative data sources for Germany as well as semi-structured interviews with the persons responsible in firms supplying and procuring IT services.

(<http://www.zew.de/project498>)

Corporate Governance and Structures of Qualification in Higher Education

This project is part of the DFG research group "Heterogeneous Labor: Positive and Normative As-

pects of the Skill Structure of Labor" at Constance University and ZEW. The part of this project carried out by the ICT research group focuses on the identification of educational and particularly academic profiles that support entrepreneurship. We analyse which characteristics distinguish entrepreneurs from their employed fellow students and which academic background of the entrepreneurs supports the success of start-up firms. The investigative approach is empirical; the econometric models to be estimated are derived from established theoretical models.

(<http://www.zew.de/project521>)

Internationalisation of the IT-Related Services Sector (INTERDIG)

The research project INTERDIG focuses on the internationalisation of the IT-related services sector, especially of IT service providers and software firms in Germany. The aim of the project is to develop specific recommendations for action for the firms in order to strengthen their competitiveness and expand their international presence on the basis of well-founded research. Furthermore, the project results shall be transferred to service providers, relevant governmental institutions, and science by using adequate channels of knowledge transfer.

(<http://www.zew.de/project536>)

Interconnection and Competition Among Internet Service Providers

This project analyses the network externalities present in the Internet and the effect these externalities have on the interconnection incentives of competing Internet Service Providers (ISP). The utility of connecting to the Internet rises with the number of organisations and individuals connected to the Internet. The Internet is a classical example of a market featuring significant positive network externalities. ISP can internalise these positive external effects by network interconnection and by developing standards which make the applications provided on their networks compatible across network boundaries. The present analysis focuses on the question whether the presence of network externalities in the market for internet services leads to inefficiencies in the compatibility choice of ISP in the free market processes in such a way that government intervention into inter-

connection between ISP would be justified.
(<http://www.zew.de/project565>)

Selected Publications

Bertschek, I., H. Fryges, and U. Kaiser (2006), B2B or Not to Be: Does B2B E-Commerce Increase Labour Productivity?, *International Journal of the Economics of Business* 13(3), 387-405.

Bertschek, I. and U. Kaiser (2004), Productivity Effects of Organizational Change: Microeconomic Evidence, *Management Science* 50(3), 394-404.

Hempell, T. (2005), Does Experience Matter? Innovations and the Productivity of ICT in German Services, *Economics of Innovation and New Technology* 14(4), 277-303.

Hempell, T. (2005), What's Spurious? What's Real? Measuring the Productivity Impacts of ICT at the Firm Level, *Empirical Economics* 30(2), 427-464.

Schäfer, A., C. Spengel, and O. Jacobs (2004), ICT and Profit Allocation Within Multinational Groups, *Intertax* 6/7, 268-283.

Schleife, K. (2006), Computer Use and Employment Status of Older Workers – An Analysis Based on Individual Data, *LABOUR: Review of Labour Economics and Industrial Relations* 20(2), 325-348.

Spitz-Oener, A. (2006), Technical Change, Job Tasks and Rising Educational Demands: Looking Outside the Wage Structure, *Journal of Labor Economics* 24(2), 235-270.

Selected Presentations

Cerquera, D. (2006), Dynamic R&D Incentives with Network Externalities, European Meeting of the Econometric Society (ESEM), Vienna.

Häring, J. (2006), The Virtual Location of E-Tailers: Evidence from a B2C E-Commerce Market, Annual Conference of the European Association for Research in Industrial Economics (EARIE), Amsterdam.

Müller, B. (2006), Human Capital and Successful Academic Spin-Off, Annual Conference of the European Association for Research in Industrial Economics (EARIE), Amsterdam.

Schleife, K. (2005), Computer Use and the Employment Status of Older Workers, Work Pensions and Labour Economics Conference (WPEG), York.

Vanberg, M. (2006), Network Externalities and Interconnection Incentives, Conference on the Economics of Information and Communication Technologies, Paris.

Research Group “Growth and Business Cycle Analyses”

The research group unites the macroeconomic expertise present at ZEW. Although microeconomic and microeconometric research approaches are dominant at ZEW, each research department takes the macroeconomic perspective into account as well. The research group assumes cross-departmental functions and links this macroeconomically oriented research.

The research group “Growth and Business Cycle Analyses” mainly focuses on three tasks: First, the group coordinates cross-departmental research projects, provided they are of primarily macroeconomic character. Second, it is responsible for the quarterly publication of “ZEW Wachstums- und Konjunkturanalysen” (“ZEW Growth and Business Cycle Analyses”). This publication is devoted to the transfer of macroeconomic research results to an interested public. Third, the members of the research group are contact persons for, e.g., the press with respect to questions concerning macroeconomic issues.



Databases

ZEW has established several very important databases that are regularly updated. Extracts from some of these databases can be made available to scientists for research work only (subject to data protection rules for individual data).

- **Business Survey in the ICT-Related Services Sector**

Quarterly survey of firms from German ICT-related and knowledge-intensive services sectors. Firms are asked for their current as well as their expected economic situation.

- **ICT survey**

Firm-level data on ICT diffusion based on a representative sample by manufacturing and services sectors, firm size categories, and regions (East and West Germany); collected every two years.

- **Mannheim Enterprise Panel (MUP)**

This database covers all German enterprises including a description of their activities. It is used in order to select samples for surveys.

- **Mannheim Innovation Panels for the Manufacturing Sector and Mining as well as the Services Sector (MIP, MIP-DL)**

It is an annual survey on the innovation activities of the German manufacturing sector which is part of the Community Innovation Survey (CIS). This database is available to external researchers.

- **ProgTrans/ZEW Transport Market Barometer**

ProgTrans (Basle) and ZEW (Mannheim) have developed an indicator for the transport industry. This instrument makes systematic use of knowledge from 300 experts in the German shipping and transport industry so as to evaluate the short-term development of transport volume and transport prices on the transport markets. Four times a year, they assess the development of volumes and prices in seven different transport markets for the next 6 months.

- **ZEW Energy Market Barometer**

Continuous prognosis of short- and mid-term developments based on expert surveys. Volumes of energy demand and the corresponding energy prices are assessed for different energy sources.

- **ZEW Financial Market Survey**

This monthly survey displays the expectations and forecasts of experts for national and international financial markets' developments and the business cycle.

- **ZEW Start-Up Panels**

These panels include firm-level data for analysing business start-ups, growth, and insolvencies. The panels contain information on about 5,900,000 firms in West Germany and 1,400,000 firms in East Germany for the period from 1991 to 2006. The start-up panels also include firms from Austria.

Conferences and Workshops

ZEW holds quite a number of conferences and workshops, allowing researchers to exchange ideas and information on recent research results. For instance, ZEW's annual summer workshop is an opportunity for young scholars to present results of their research work and discuss them with leading economists who give lectures on the topic of the workshop. On occasion, we jointly organise conferences with foreign institutions.

Information on this kind of activities can be found on <http://www.zew.de/allevnts>.

An overview of events held in English of recent years is given below:

2006

- “Workshop on Internet Policy”
(<http://www.zew.de/event613>)
- “ACE 2006 – 4th Conference of the Association of Competition Economics”
(<http://www.zew.de/event560>)
- Conference “Relation Between Financial Markets and Monetary Policy – Deutsche Bundesbank and ZEW”
(<http://www.zew.de/event617>)
- “3rd Conference on Policy Evaluation”
(<http://www.zew.de/event519>)
- “Workshop on ICT and Firm Strategies”
(<http://www.zew.de/event539>)
- Summer Workshop “EU-Countries in Fiscal Competition”
(<http://www.zew.de/event535>)
- Conference “Wage Growth and Mobility: Micro-, Macro- and Intergenerational Evidence”
(<http://www.zew.de/event528>)
- Conference “Economic Growth in Europe”
(<http://www.zew.de/event522>)
- “Workshop on Firm Exit and Serial Entrepreneurship”
(<http://www.zew.de/event502>)

2005

- Workshop “Interaction Within the Family: Collective Approach and Bargaining Models”
(<http://www.zew.de/event450>)
- “European Conference on Long-Term Care”
(<http://www.zew.de/event425>)
- “2nd ZEW Conference on Economics of Innovation and Patenting”
(<http://www.zew.de/event495>)
- Conference “Heterogeneous Labour and Education”
(<http://www.zew.de/event494>)
- “5th ZEW Conference on the Economics of Information and Communication Technologies”
(<http://www.zew.de/event391>)
- Summer Workshop “EMU Enlargement”
(<http://www.zew.de/event434>)
- “LoWER Annual Conference 2005”
(<http://www.zew.de/event426>)
- Workshop “Education and Training: Markets and Institutions”
(<http://www.zew.de/event407>)

2004

- Workshop “German Research Foundation (DFG) Priority Program: Interdisciplinary Entrepreneurship Research”
(<http://www.zew.de/event299>)
- “2nd Conference on Evaluation Research”
(<http://www.zew.de/event375>)
- Workshop “European Unemployment: Recent Developments in Duration Analysis Using Register Data”
(<http://www.zew.de/event376>)
- “4th ZEW Conference on the Economics of Information and Communication Technologies”
(<http://www.zew.de/event303>)
- Workshop “Education and Wage Inequality in Europe”
(<http://www.zew.de/event275>)
- Summer Workshop “The Management of Global Commons”
(<http://www.zew.de/event268>)

Heinz Koenig Young Scholar Award Laureates

Named after the late ZEW founding research director Prof. Dr. Dr. h.c. Heinz König, the award is meant to acknowledge outstanding empirical work of young economists. The award consists of a prize of 5,000 € and also includes a three months' residential fellowship at ZEW. The winner is announced at the end of the ZEW Summer Workshop.

2006

- Benny Geys, Ph.D., Social Science Research Center Berlin (WZB), "Looking Across Borders: A Test of Spatial Interdependence Using Local Government Tax Efficiency Ratings"

2005

- Uwe Böwer, Munich University (LMU), „An Empirical Analysis of Stochastic Trends and Cycles in Central and Eastern Europe and the Euro Area”

2004

- Wolfram Schlenker, Ph.D., University of California, San Diego, "Nor Any Drop to Drink: Climate Change and the Future of Irrigated Agriculture"



ZEW Summer Workshop Participants 2006

ZEW Doctoral Studies Network and ZEW Visiting Researchers Programme

ZEW Doctoral Studies Network

ZEW has always accorded high priority to the qualification of its staff. The first career move for talented young researchers – most of whom start



working at ZEW directly after graduating from a university – is a doctoral degree. This route to a doctoral degree has grown in importance to such an extent that ZEW is now endeavouring to further increase the support it provides to its doctoral students. With this aim in mind, the institute has initiated the ZEW Doctoral Studies Network (ZEW DocNet) and concluded cooperation agreements with the Universities of Mannheim, Constance and St. Gallen. It is envisioned that the ZEW DocNet will be expanded to particularly include university-based doctoral programmes in EU partner countries in the years ahead.

ZEW offers young academics the opportunity to take part in scientifically demanding and applied research projects during the course of which they are able to acquire sound continuing professional development which will provide them with an outstanding launching pad for a career in the academic or business world, in government ministries, and organisations. The network ensures that doctoral students receive supervision of their dissertations in the course of their work at ZEW. Doctoral candidates work with experienced ZEW staff members and with national and international cooperation partners on what are mostly internationally focused projects.

ZEW is in a promising position to fulfil its role of passing on sound skills in applied empirical economic research: The institute's economic counselling services are not only frequently requested by gov-

ernment ministries and the European Commission, its research work also makes it a competent discussion partner within the scientific community.

ZEW is pleased to see even more doctoral students contribute new ideas to the further development of its own research work. By means of the ZEW DocNet, the institute anticipates gaining access to new resources in the acquisition of talented researchers for the institute's research work and, at the same time, is proud to engage beyond its current practice even further in the fostering of scientific careers in the German and European research landscape.

(<http://www.zew.de/en/kooperationen/zewdocnet>)

ZEW Visiting Researchers Programme

ZEW, in cooperation with associated university faculties, wants to intensify the involvement of international scholars in its research activities. Accord-



ingly, ZEW launches a specific programme which addresses well-established as well as young and promising researchers. ZEW invites suitable candidates for visiting periods of several weeks at the institute to pursue leading research at the fore of international scientific excellence. The first and foremost characteristic of this programme is the immediate involvement of the visiting fellows in ZEW's research activities. Short visiting periods of a few days are of course highly welcome as well, yet are not the subject of the ZEW Visiting Researchers Programme.

(<http://www.zew.de/en/kooperationen/zewvisiting>)

Activities of the Service Departments

A i m s a n d R e s e a r c h A c t i v i t i e s

Information and Communication

Knowledge transfer is of high importance to ZEW. The institute engages in various activities to inform firms, politicians, and the administration, the scientific community, organisations, and the public in general about its research work. In this context, it is the responsibility of the Information and Communication service department to prepare press releases and articles on ZEW's research results, to establish contacts between ZEW researchers and print and electronic media, to continually update ZEW's website, and edit, produce, and archive ZEW's own publications.

The Information and Communication department is also involved in the organisation and promotion of ZEW lecture series as well as annual events, such as the "ZEW Wirtschaftsforum" ("ZEW Economic Forum") or the ZEW Summer Workshop. Furthermore, it is responsible for the presentation of ZEW and its research activities at national and international conferences and meetings of economists. Moreover, the Information and Communication service department is in charge of ZEW's specialist library as well as the design and distribution of ZEW media.

Knowledge Transfer by Publications and Electronic Media

In addition to publishing in national and international scientific journals as well as participating in current political and economic debates by contributions in print and electronic media, ZEW also informs about its research results in its own publications and via the Internet:

■ Publication Series

Among the book series edited by ZEW, the "ZEW Economic Studies" are published in English. They are monographs on theoretical, empirical, and methodological problems in economics. The series in German are called "ZEW Wirtschaftsanalysen" and "Umwelt- und Ressourcenökonomie".

■ Working Papers

(to be downloaded from the Internet)



From left to right: Romy Weiland, Yvonne Bräutigam, Yvonne Lupp, Maria-Inti Metzendorf, Nicole Karle, Kerstin Heres, Shalini Saxena, Katrin Voß, Gunter Grittmann, Erich Dichiser



ZEW Discussion Papers

Discussion papers (nearly all of them in English) provide information on recent ZEW research for the scientific community. They are intended for publication in national and international scientific journals.

ZEW Dokumentationen

Non-technical analyses and surveys on selected economic topics, mainly in German.

- **Publications for the General Public/
Publication of Survey Results**

(to be downloaded from the Internet)

With the exception of *ZEWnews English edition* and *ZEW Financial Market Report Switzerland*,

the following publications are only available in German.

ZEWnews/ZEWnews English edition

ZEWnews contains general information on current research results, ongoing activities, and recent publications as well as dates of ZEW events. The German edition is published ten times a year. It regularly contains specials on: Stock Options, Energy Markets, Innovation Activities of the German Manufacturing and Service Industries, Mergers and Acquisitions. ZEWnews English edition is published quarterly. Twice a year, it contains a special on Stock Options.

ZEW Wachstums- und Konjunkturanalysen

In this periodical, ZEW publishes quarterly analy-

ses of macroeconomic topics as well as forecasts by European research institutes on business developments in their respective countries. The periodical also contains the main results of a quarterly ZEW survey on current and anticipated developments in the ICT-intensive services sector.

ZEW Finanzmarktreport/ZEW Financial Market Report Switzerland

Monthly reports presenting the current results of the ZEW Financial Market Surveys in Germany and Switzerland with assessments and expectations by financial experts regarding developments on national and international financial markets. The ZEW Finanzmarktreport also contains the monthly published ZEW Indicator of Economic Sentiment providing information on the current situation and future development of the economy in Germany and the Eurozone.

ZEW Branchenreport Innovationen

Annual reports on the innovation activities in 21 sectors of manufacturing and service industries based on the ZEW innovation survey.

ZEW Branchenreport Dienstleister der Informationsgesellschaft

A quarterly report on current and anticipated developments in the ICT-intensive services sector.

ZEW Gründungsreport

This biannual report contains the findings regarding start-up activities in Germany.

ZEW Jahresbericht

ZEW's annual report presents the institute's performance in the previous year with an emphasis on ongoing and completed research projects as well as activities of the service departments.

■ **ZEW on the Internet** (www.zew.eu/en)

ZEW's website provides information on ongoing and completed research projects, ZEW publications and research reports, statements and press releases on current economic topics, ZEW staff

and job offers, scientific conferences and workshops as well as expert seminars for the professional training of employees from enterprises, banks, and administration. Visitors interested in special subjects may find the topic-related information platforms of ZEW's website extremely helpful.

■ **ZEW Newsletter**

The monthly ZEW Newsletter is only available in German. It is sent to its subscribers by electronic mail and contains news from ZEW, such as information on the latest press releases, on new publications and research projects, on events, on job offers, and on interesting links on the Internet.

Lecture Series and Special Events

For the discussion of current economic problems, ZEW organises a few distinct lecture series and an annual conference. Several times a year in "Wirtschaftspolitik aus erster Hand" ("First-Hand Economic Policy Issues"), a distinguished representative of the German economy or a politician is invited by ZEW to provide an insight into current economic developments and practical policy issues. In the lecture series "Mannheimer Wirtschafts- und Währungsgespräche" ("Mannheim Talks on Monetary Issues"), which is organised three times a year by ZEW in cooperation with the University of Mannheim, the banks' association of the Rhine-Neckar region, and a regional academy, CEOs of financial institutes give lectures on developments in the banking sector. The annually organised "ZEW Wirtschaftsforum" ("ZEW Economic Forum") is a one-day conference that serves as a forum for entrepreneurs and representatives of business associations and state institutions to discuss current political economic questions. On this occasion, papers are presented by prominent representatives of politics and economics from Germany and abroad.

EU-Affairs Office

More than 40% of the ZEW funding comes from third-party funds. With more than 200 running projects at ZEW, the EU represents by far one of the most important contracting parties. Proposals submitted within the EU framework programme, however, need intensive assistance and preparation due to the complex requirements of the programme. This support is supplied by the EU-affairs office. Therefore, one of the major tasks of the EU-affairs office is to inform and consult the scientists of ZEW with regard to calls and tenders of the EU and to support them with administrative and legal issues. Furthermore, assistance is provided to the scientists by simplifying and optimising internal procedures especially with regard to the high requirements of the EU towards project management and the coordination of EU projects.

Another field of work of the EU-affairs office consists of the conceptions and the implementation of advanced training courses for ZEW staff and external participants. Internal advanced training courses constitute a good possibility for the scien-

tist to exchange their experiences with regard to framework programme proposals. Besides, the scientists are informed on current calls and tenders which complement the offer of information provided electronically and on the intranet.

Also part of the EU-affairs office's working field is the revision and negotiation as well as the counselling of research contracts and agreements. As EU projects often require the participation of partners from different EU member states, it is important to conclude consortium agreements covering important aspects like intellectual property rights and liability which have to be negotiated by the EU-affairs office. During the time of proposal writing usually confidentiality agreements or other pre-contractual agreements have to be developed or revised. This is also done by the EU-affairs office.

In order to actively take part in EU research policy by participating in, e.g., consultation procedures of the European Commission, EU research policy needs to be monitored. This is done by the EU-affairs office as well by analysing and evaluating communications from the European Commission as well as Council decisions.

Knowledge Transfer & Qualification Programmes

Knowledge Transfer & Qualification

ZEW is the only German economic research institute which runs its own continuing professional development section, which aims at making the results of the institute's practice-related research work available to experts and managers in businesses and institutions. The close cooperation between ZEW researchers and excellent practitioners facilitates soundly scientific and yet practice-oriented knowledge transfer and qualification.

There are two components to ZEW's offer. On the one hand, ZEW runs expert seminars and, on the other, provides specific further training for firms and institutions.

Expert Seminars

Expert seminars run by ZEW researchers and experienced practitioners are at the heart of our pro-

gramme of continuing professional development events.

These training events combine the output of recent research work with the lessons learned from professional practice. The Knowledge Transfer and Qualification Programmes service department collaborates with ZEW research departments and expert practitioners on the development of regular new training events, which deal with current topics and issues.

Seminars in Mannheim, Frankfurt/Main, and Berlin are now complemented for the first time by extremely successful ZEW seminars in Zurich and Brussels. From September 2006 onwards, a seminar series on financial market econometrics will be held in Zurich. In Brussels, the seminars "Econometrics in Action – Introduction to Econometrics" and "Economic Modelling Workshop 2007 – Economic Evaluation of Pension and Taxation" will be included for the first time in the 2006/2007 seminar programme.



From left to right: Valentin Schackmann, Axel Braun, Vera Pauli, Karin Schönfelder, Katrin Stratmann, Barbara Hey

Specific Training Programmes for Firms and Institutions

The Knowledge Transfer and Qualification Programmes service department works in close consultation with the client on the development of specific corporate qualification programmes – in German and in English. ZEW is not only able to commission the services of researchers working at ZEW itself, it can al-

so draw on an external network of outstanding speakers from the worlds of business and science. One special feature is the ZEW's dual management training, in which ZEW speakers work with professionals of the relevant client departments. Involving the client's own experts in running the seminar ensures that they are relevant to participants' day-to-day working concerns and that the seminar design is ultimately tailored to meet the needs of the client company.



ZEW Expert Seminar

Organisation, Personnel and Finance

Aims and Research Activities

Scientific Advisory Council

The Scientific Advisory Council accompanies and evaluates the work at the ZEW. It is composed of representatives from leading companies, universities, research institutes and politics.

- Chairman: Prof. Dr. Friedrich Buttler, State Secretary retd., Regional Director for Europe and Central Asia, International Labour Organization (ILO), Geneva
- Vice-Chairman: Prof. Dr. Dres. h.c. Arnold Picot, Chair at Institute for Information, Organization and Management, Munich University
- Prof. Dr. David Bruce Audretsch, Ph.D., Director Entrepreneurship, Growth and Public Policy, Max Planck Institute of Economics, Jena
- Prof. Dr. Uschi Backes-Gellner, Institute for Strategy and Business Economics (ISU), Zurich University
- Dr. Kurt Bock, Board of Executive Directors BASF AG, Ludwigshafen
- Prof. Dr. Christoph Engel, Executive Director Max Planck Institute for Research on Collective Goods, Bonn
- Prof. Dr. Michael Heise, Director Allianz Group Economic Research, Dresdner Bank AG, Frankfurt/Main
- Dr. Dieter Hundt, President Confederation of German Employers' Associations, Berlin
- Prof. Dr. Gebhard Kirchgässner, Swiss Institute for International Economics and Applied Economic Research (SIAW), University of St. Gallen
- Prof. Dr. Kai A. Konrad, Director Research Unit Market Processes and Governance, Social Science Research Center (WZB), Berlin
- Prof. Dr. Franz Luzius, CEO Chamber of Industry and Commerce Rhine-Neckar, Mannheim
- Prof. Dr. Pierre A. Mohnen, UNU-MERIT, Maastricht University
- Prof. Dr. Hermann Rensperger, Executive Board Member Deutsche Bundesbank, Frankfurt/Main
- Prof. Dr. Dr. h.c. Dieter Sadowski, Economics Director Institute for Labour Law and Industrial Relations in the European Community, Treves
- Prof. Dr. Dr. h.c. Bertram Schefold, Chair for Economics, esp. Economic Theory, Frankfurt University
- Prof. Dr. Bernd Schips, emeritus, former Director Swiss Institute for Business Cycle Research, Swiss Federal Institute of Technology Zurich
- Prof. Dr. Beatrice Weder di Mauro, Chair of Economics, Mainz University
- Prof. Dr. Dietmar Wellisch, Chair for Business Taxation and Public Economics, International Tax Institute, University of Hamburg
- Prof. Dr. Heinz Welsch, Department of Economics and Statistics, Oldenburg University

ZEW Permanent Visiting Scholars

Permanent visiting scholars and research professors are very important to the ZEW. Professors from German and international universities work together at ZEW as managers of research projects and, thus, make a notable contribution to keep the institute's work in line with the latest scientific research, and additionally provide interesting impetus for the ZEW. Moreover, they get involved in establishing and/or maintaining of ZEW research areas including third-party fundraising.

In the reference period, the following permanent visiting scholars are working at the ZEW:

- Prof. Bernd Fitzenberger,
Ph.D., Frankfurt University
- Prof. Dr. Ulrich Kaiser,
University of Southern Denmark, Odense
- Prof. Dr. Kornelius Kraft,
University of Dortmund
- Prof. Dr. François Laisney,
University Louis Pasteur, Strasbourg
- Prof. Dr. Andreas Lange,
University of Maryland
- Prof. Dr. Michael Lechner,
University of St. Gallen
- Prof. Dr. Reinhold Schnabel,
University of Duisburg-Essen
- Prof. Dr. Christoph Spengel,
University of Mannheim



In the centre: Prof. Dr. Christoph Spengel at the "Mannheimer Unternehmenssteuertag"

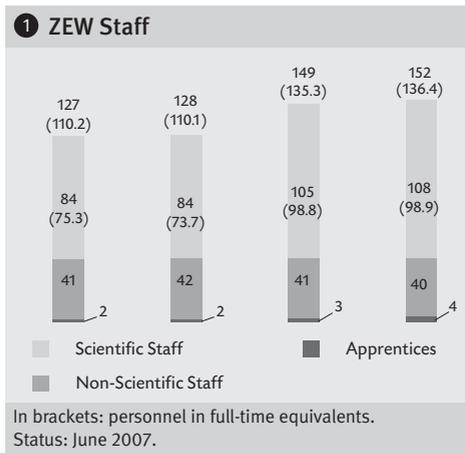


Prof. Dr. Ulrich Kaiser at the "ICT Conference"

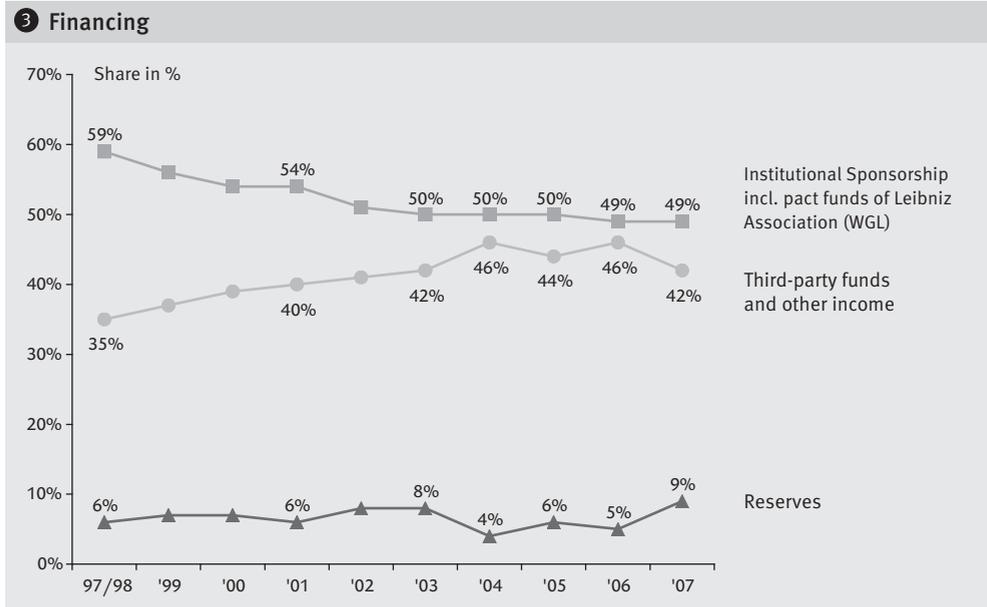
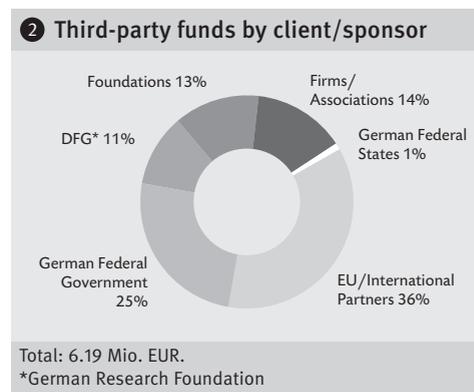
Personnel and Finance

As in previous years, the performance of ZEW's research and service departments could be enhanced notwithstanding the increased competition. Once again, ZEW could assure both its national and international position as one of the leading institutions of applied empirical economic research.

In 2006, 149 employees have been working at ZEW; among them are 105 scientists (see Chart 1).



This total number has been increased by 21 employees compared to the previous year. In addition, many national as well as international visiting researchers were integrated in ZEW's work with the aim of project cooperation and exchange of information and experience. In order to extend our international networking, in 2006 the ZEW Visiting Researchers Programme was founded. Further international cooperation is performed by involving external cooperation partners in our projects. Charts 4

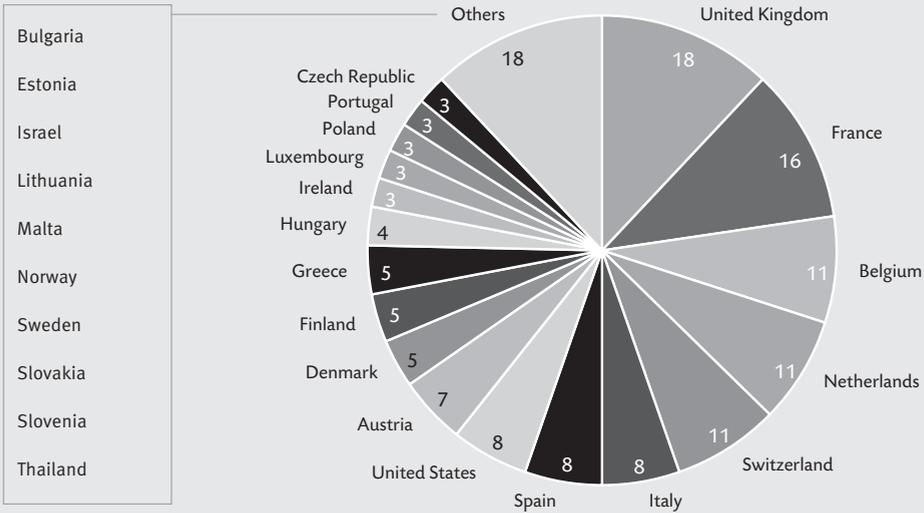


and 5 give an outline of ZEW's distinctly national and international networking.

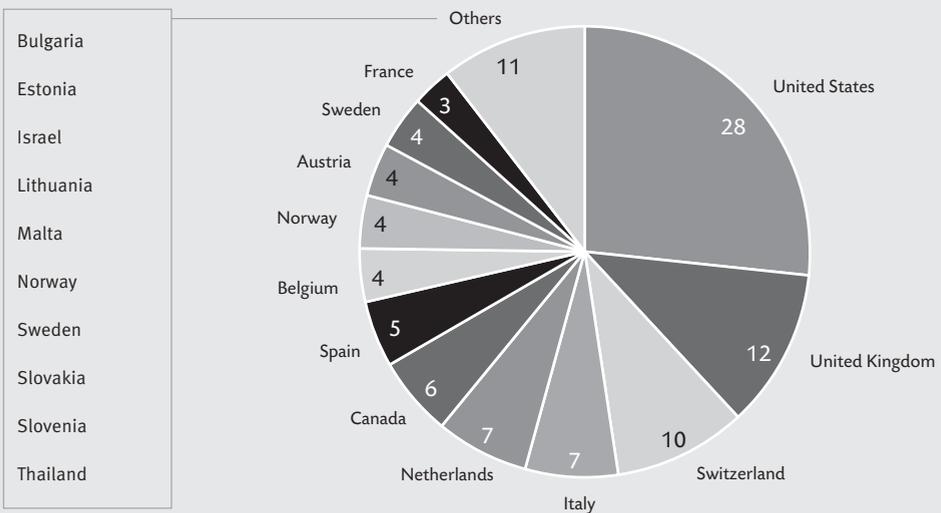
ZEW's financial situation repeatedly reveals a positive overall picture that is to be particularly assessed as eminent since the competition for third-

party funds at the national and international research market became more challenging. For several years now, the proportion of third-party funds (including other income) has constantly been over 40% (see Charts 2 and 3).

4 International Cooperation



5 International Visiting Scholars at the ZEW



ZEW

Zentrum für Europäische
Wirtschaftsforschung GmbH

Centre for European
Economic Research



L 7, 1 · 68161 Mannheim
P.O. Box 1034 43 · 68034 Mannheim
Germany
Phone: +49/(0)621/1235-01
Fax: +49/(0)621/1235-224
E-mail: info@zew.de
Internet: www.zew.eu/en