Centre for European
Economic Research
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English edition

ZEWnews

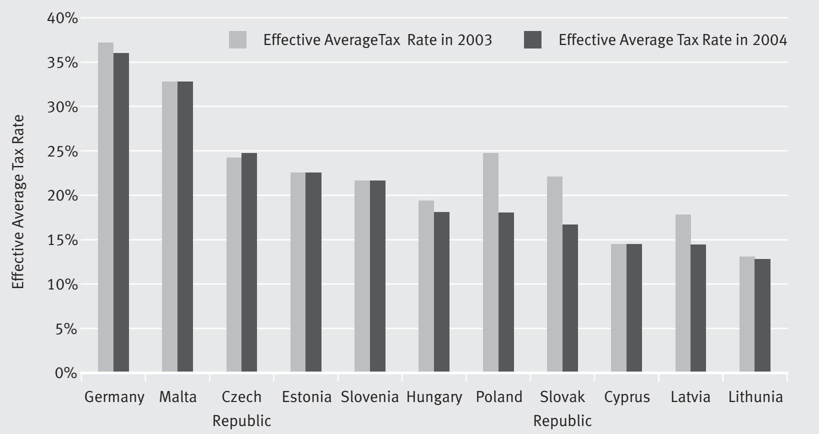
No. 4 · 2004

Research Results · Conferences · Publications

Recent Tax Reforms Increase Tax Attractiveness of New Member States

Compared to last year the effective level of company taxation has declined in half of the new member states. On average, the tax burden has decreased from 21.3 percent in 2003 to 19.6 percent in 2004. The highest relief accounts to Poland, the Slovak Republic, and Latvia, while Lithuania, Latvia, and Cyprus remain the most tax attractive countries overall. In Germany the effective average tax rate amounts to 36.0 percent which is about double the rate of six of the new member states. These are the results of a study carried out by the ZEW in co-operation with Ernst & Young. The study is based on a previous study and has been updated taking into account the dynamic changes in company taxation until the enlargement of the European Union on 1 May 2004.

Effective Levels of Company Taxation



Source: ZEW, Ernst&Young

The study relies on the measure of the effective average tax rate (EATR) derived from an internationally accepted approach developed by Devereux and Griffith. The model considers corporate income tax, real estate tax, local business tax, and covers the most relevant tax provisions in addition to the tax rates. Half of the new member states have reduced their corporate income tax rates in the past year, and some countries now offer more generous depreciation allowances and have eased restrictions concerning the tax treatment of losses. Compared to the previous year, the EATR has declined in five of the new member states. Only in the Czech Republic companies face a higher tax burden despite the fact that the Czech government has lowered the corporate income tax rate from 31 to 28 percent. The counter effect of abolishing a tax credit on distributed profits exceeds the reduction of statutory tax rate and thus leads to a rise in EATR. Poland and the Slovak Republic report the most significant decline of the tax burden. The tax rate reduction from 27 to 19 percent in Poland is reflected by an effective tax relief of 6.7 percent and by a new EATR of 18.0 percent. Within Central Europe, Poland has advanced from the country imposing the highest tax burden to the second most tax attractive location. The Slovak Republic has reduced the corporate income tax rate from 25 to 19 percent. As a result the EATR has declined from 22.1 to 16.7 percent which is now the lowest tax burden among the Central European countries. Considering all new member states the Slovak Republic has advanced to the fourth most attractive location. In Latvia corporate income tax rate was cut from 19 to 15 percent, driving down the EATR by 3.4 percentage points. The corporate income tax rate reduction from 18 to 16 percent in Hungary and changes in tax accounting rules

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in Lithuania have only caused a marginally lower EATR.

In Germany the corporate income tax rate was withdrawn from 26.5 to 25 percent. This has only a minor impact on the effective level of company taxation, reducing the EATR by 1.2 percentage points to 36.0 percent in 2004 which is still considerably higher than the average of the new member states (19.6 percent). German companies bear a tax burden which is at least 11.3 percentage points higher compared to the new member states when Malta remains out of consideration. Lithuania (12.8 percent), Latvia (14.4 percent), and Cyprus (14.5 percent) offer the lowest EATR. In addition to the latter, the Slovak Republic, Poland, and Hungary report an EATR which amounts to only about half of the tax burden of German companies. This reflects a significant tax advantage of the new member states which has been extended in some countries through recent tax reforms.

Since only 5 percent of dividend income is taxable in Germany, a Germany-based multinational enterprise can benefit from the lower tax level in the new member states even if the profits are repatriated to Germany by dividend payments. According to the Parent-Subsidiary Directive, withholding taxes have been abolished for qualifying participations as of 1 May 2004. As a result, the additional tax burden stemming from withholding taxes on dividends has been eliminated. The amendments of national rules to the Parent-Subsidiary Directive reduce the average EATR from 24.4 to 21.7 percent by 2.7 percentage points. The EATR is between 3.1 and 9.8 percentage points lower for countries having imposed a withholding tax on dividends.

Offering tax incentives is still a common policy of the new member states to attract foreign direct investments. These tax incentives have a considerable impact on both the level of effective tax burden and the ranking of the countries reducing the average EATR to 14.3 percent. The Czech Republic gains the most significant rise in relative attractiveness, advancing three places in the ranking. Furthermore, in the three Baltic countries as well tax incentives contribute considerably to the relief of the tax burden. However, multinational investors have to bear in mind that most of the tax incentives might breech European law, in particular contravene the state aid provision of the EC treaty. The new member states are aware of this issue and have either abolished tax incentives or left them to expire in the near future. In order to continue to attract international capital, there is a trend to compensate for abolishing tax incentives through tax rate reductions. Corporate income tax rates have been reduced recently or will be reduced in seven of the ten new member states.

The study is available on the Internet at ftp://ftp.zew.de/pub/zew-docs/gutachten/Studie_ZEW_E&Y_2004.pdf.

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INSIDE ZEW

Change in ZEW's Commercial Administration

On 21 July 2004, the ZEW held a farewell ceremony for the ZEW's longstanding commercial director Ernst-O. Schulze; by introducing management instruments and methods tailored to the needs of an academic institution. Furthermore, knowledge transfer has also been one of his key concerns.

from left: the chairman of the ZEW's supervisory board, Gerhard Stratthaus; the former and the new commercial directors, Ernst-O. Schulze and Thomas Kohl; the president of the ZEW, Wolfgang Franz

the ceremony also provided an opportunity to welcome his successor Thomas Kohl.

Born in 1939, Ernst-O. Schulze was appointed to the management of the newly founded ZEW in 1990 and subsequently shared responsibility for the overall management of ZEW initially with Prof. Dr. Dr. h.c. Heinz König and, after 1997, with the latter's successor Prof. Dr. Dr. h.c. mult. Wolfgang Franz. Ernst-O. Schulze worked with tremendous commitment on turning the new institute into one of the leading economic research institutes in Germany, leaving his mark

Schulze's position has been filled since 1 August 2004 by Thomas Kohl. Born in 1962, he worked as head of administration for an international organisation before coming to the ZEW in 1992 where he has since supported the development work undertaken by the management team. Thomas Kohl was in charge of administration services as well as holding several staff positions. He was granted general commercial powers of attorney in 1997 and was appointed deputy commercial director in 2001.

RESEARCH FINDINGS

Research Promotion in Europe: Collaborations Promise Success

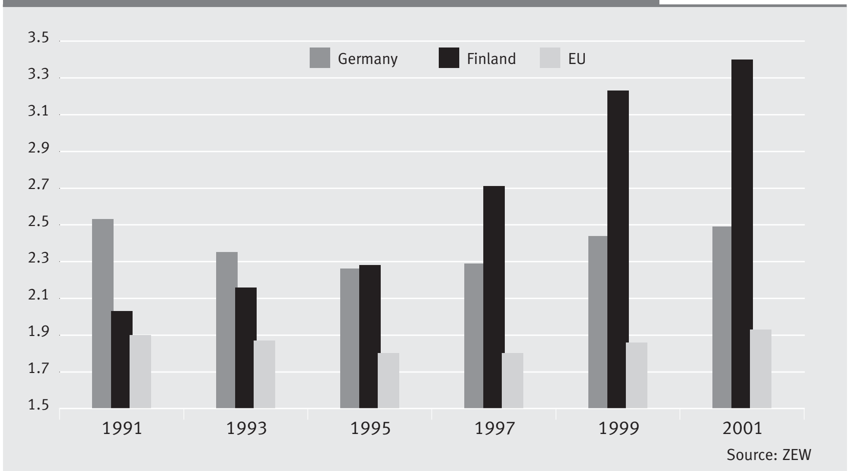
High levels of prosperity and welfare in Germany and other countries of the European Union are dependent on equally high levels of technological efficiency which will enable Europe to holds its own in international competition with the USA or rising China. A glance at expenditure on research and development (R&D) is alarming however: The USA invests over 120 billion euros a year more in R&D – and thus in new, competitive ideas and products – than does Europe.

In order to prevent the EU falling further behind the United States of America and its Asian competitors in terms of technological development, a political decision was taken in 2002 to exercise an enormous effort of will in the form of the "Action Plan for Europe". The objective of this action plan is to lift R&D spending from its current level of 2 percent of gross domestic product to 3 percent in the future. Two thirds of the extra funds are expected to come from business and industry, with one third being contributed by the state.

A study by the ZEW and the Finnish Technical Research Centre (VTT) has now examined whether more intensive public support for R&D really does stimulate innovative activities at the private enterprise level. The study measured the "innovation success" of Germany and Finland based on the number of patent registration applications generated by state promotion of collaboration in the field of research. Patent registrations provide a good indicator as they reliably map the future technological performance of countries.

The analysis of almost 3,000 companies reveals that financial incentives provided by the state are more successful than is generally assumed. Companies which receive state support for their R&D projects are more likely to register patents than companies which do not receive such support. Free rider effects appear to be of subordinate relevance in the overall assessment.

Gross domestic expenditure on R&D in percent of GDP



Source: ZEW

Major potential among SMEs

The positive impact of state promotion in Germany, for example, is largely due to the collaborative undertakings associated with such support – i.e. cooperative ventures with academic institutions or other companies – and which are chosen by the companies themselves. The innovation output of companies undertaking research is positively stimulated by such collaboration. The same holds true in Finland. Given that R&D collaborations are already much more widespread in Finland than in other EU member countries, there is very little scope for further boosting the innovation activities of companies by intensifying the promotion of cooperation in the field of R&D. In contrast, there is a great deal of potential in Germany, and among innovative German small and medium-sized companies in particular, which could be stimulated by cooperative research undertakings and networks and could well lead to improved technological performance.

The study thus concludes that state promotion alone is not sufficient to bring about an increase in R&D investments – a key role is played by the exchange of knowledge in a situation of division of labour. State promotion can help companies to improve their innovation success if such support is tied to a requirement to engage in collaborative ventures. Small companies can profit from state support for their R&D efforts in particular when such funds enable them to engage in more risky R&D projects.

However, the decisive role is played by the cooperative ventures linked to such research promotion. Cooperative networks currently in receipt of funding support are often felt by qualifying companies to be too large and unwieldy. The aim of European research policy must therefore be to stimulate collaborative R&D by private enterprise whilst ensuring that such cooperative efforts do not become impractical.

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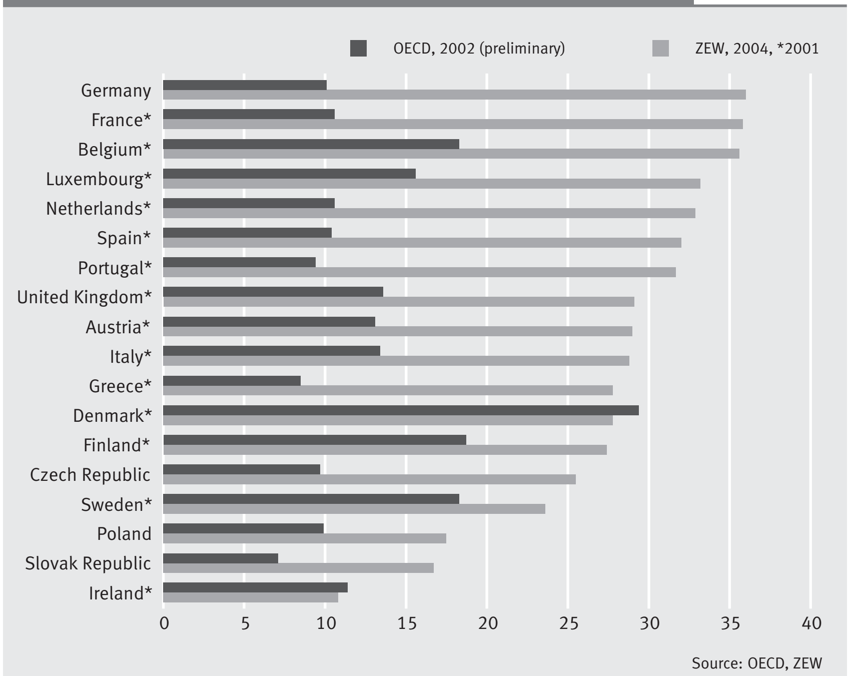
RESEARCH FINDINGS

OECD Tax Ratios are the Wrong Measures for Investment Decisions

According to the tax ratios regularly published by the OECD, Germany is characterized by a comparatively low tax ratio. In contrast, cross-country analyses by the ZEW display very high effective tax burdens for companies in Germany compared with companies in other OECD countries. This holds again true for the year 2004.

The OECD determines and publishes average tax ratios for each of its member countries. The provisional tax ratios for 2002 display 10.1 percent for Germany representing one of the lowest among the European OECD members. Discussions dealing with Germany's attractiveness for investments often state the low German tax ratio to be an investment advantage. The ZEW, however, identified an effective average tax rate of 36 percent for Germany, thus marking the negative rear light in Europe. The chart above demonstrates the striking differences between the two measurements.

Tax ratios and effective tax burdens in different OECD countries



For the appraisal of an investment location from a tax perspective, the company's position has to be considered. A company that intends to invest is interested in the future tax burden at a specific investment location. Specifically the tax burden on profits is considered the decisive factor.

At first glance, the attractiveness of a location from a tax perspective can be measured using the tax ratios on capital income which are calculated as the quotient of the entire national revenue from income and profit taxes and the gross domestic product (GDP). These aggregate measures, however, are not useful for a company's investment decision. Even the OECD admits that tax ratios alone are of minor importance for international comparisons of investment locations. This is especially due to the fact that the income revenue is determined by a whole range of factors. However, not all of them affect a company's investment decision.

Added value procured by non taxable institutions – for example by governmental institutions, churches, trade unions, and non-profit enterprises – contributes significantly to the GDP. Due to this fact the tax ratio decreases. In addition, extensive state subsidies negatively impact the income revenue and restrain public spending. Furthermore, low income revenue is not inevitably the result of a moderate tax law. In Germany, the comparatively low income revenue seems much rather to be the result of the disappointing economic performance of the past years. Finally, tax ratios are determined in retrospect, whereas investment decisions are future oriented, making only expected tax burdens relevant. Thus the retrospect approach used by the OECD is, in principal, not suitable for such decisions.

Forward-Looking approach

A meaningful comparison of tax burdens which points out advantages of locations has to reflect the expected effective tax burden on planned investments from a company's point of view. On the one hand, such comparisons include all relevant differences in national tax systems, kinds of taxes, tax bases, and tax schedules. On the other hand, they apply the tax payments on meaningful economic values such as an investment's net present value or accumulated value. The ZEW regularly determines effective tax burdens for companies by means of established dynamic approaches. There is no doubt among economists that solely future oriented effective tax burdens can serve as relevant indicators to determine a location's attractiveness for investments from a tax perspective.

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ZEW CONFERENCE

Education and Wage Inequality in Europe

On 24 June 2004 the ZEW hosted an international workshop entitled "Education and Wage Inequality in Europe". The aim of the event was to present the results generated to date by the like-named project undertaken on behalf of the European Commission in collaboration with project partners from nine European countries and to collect proposals for the second phase of the project.

The workshop examined various aspects of the interplay between educational expansion and wage inequality. Panos Tsakloglou from the University of Athens began by providing an overview of how wage inequality has developed in each of the countries taking part in the project. After breaking down populations into groups categorised according to education, sex and age, the analyses revealed that the distribution of education is the key factor in determining wage inequality. The moderate increase in wage inequality in the 1980s was mainly the outcome of progressive inequalities in pay within rather than between different population groups.

Pedro Pereira, from the University of Madeira, concentrated on wage inequality between and within educational groups. In all countries studied, a university degree potentially paves the way to substantially higher incomes. Educational expansion over the last two decades has not yielded lower returns to education. However, wage dispersion also rises with higher levels of educational attainment.

Influence of demography on employment and income

Claudio Lucifora, from the University of Milan, and the ZEW's Charlotte Lauer concluded the first part of the workshop by presenting research on the influence of demography on employment and income prospects. Population ageing, combined with educational expansion has a major impact on the composition of the labour supply. As long as potential employees compete on the job market with other people who have comparable qualifications and experience, we can expect that large age or educational cohorts will find themselves confronted with lower wages or higher levels of unemployment. These effects, though relatively weak, are underlined by empirical evidence.

Educational policy and educational attainment in the United Kingdom

The second part of the workshop was dedicated to a discussion and more in-depth appraisal of the results presented. To begin with, the keynote speaker, Paul Johnson, Chief Economist at the British Department for Education and Skills, provided an introduction to educational policy and inequality in educational attainment in the United Kingdom. The average level of qualification in the United Kingdom has risen sharply over the last two decades as the proportion of less-qualified people has decreased and the share of highly-qualified people has continuously increased in the population. At the same time, pay differentials have widened and there is a high correlation, in international comparative terms, between social background on the one hand and school performance and participation in education on the other. This implies that students with a less favourable social background rather reach lower school degrees and earn even less on the labour market in relative terms. Therefore, schools with weaker pupils from lower socio-economic sections of society, are provided with additional financial support and specialised trainers. There is a need for further research in the United Kingdom, particularly with regard to regional differences in the demand for qualified employees.

The last speaker, Peter Dolton from the University of Newcastle, presented findings on the phenomenon of over-qualification in Europe. Employees are classified as over-qualified when their qualifications and abilities exceed the requirements of their job. Depending on the data basis and definition of over-qualification, between one fifth and half of employees are deemed to be over-qualified. This status has a negative impact on the earnings of those concerned. Policymakers should therefore be careful to define formal educational qualifications in accordance with the needs of employees.

Discussion of results

The project findings were subsequently discussed. Thomas Zwick from the ZEW commented on the results relating to wage equality between cohorts and suggested that greater account should be taken of the influence of institutions in Europe on educational inequality and the labour demand side. Walter Müller from the MZES in Mannheim underlined the importance of the way of measuring educational qualifications. He presented his own studies which showed that the measured level of qualification of a population depends critically on the data basis and precision with which different levels of qualification are distinguished. This must be taken into account, particularly in the framework of Europe-wide comparisons. The following discussion followed up on these issues and attempted to specify clear criteria for measuring levels of qualification in Europe. However, it is important to do justice to both the need for a uniform data basis and the most precise description possible of national educational qualifications. Account must also be taken of the idiosyncratic features which may be inherent in national educational systems when interpreting the results.

Information about the EDWIN project can be obtained on the internet at www.etla.fi/edwin

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ZEW CONFERENCE

The Economics of Information and Communication Technologies

On July 2nd and 3rd, 2004, the ZEW held its fourth international conference on "The Economics of Information and Communication Technologies" in Mannheim. The conference was financially supported by the Landesstiftung Baden-Württemberg Foundation. As in former years, the conference objective was to present and discuss recent research results on the economics of information and communication technologies (ICT). More than 50 recognised academics from Germany and other European countries as well as from Israel, Canada and the USA contributed to the presentations and discussions.

The participants in the fourth conference on information and communication technologies.

This year's conference was framed by presentations of four invited speakers: Dirk Pilat (OECD, France) focussed on the economic impacts of ICT on productivity and growth by examining results from aggregate, sectoral and firm-level studies. He pointed out that in most countries the data on the use of ICT has improved considerably compared to a couple of years ago. Regular business surveys allow empirical research to be put on more solid ground. One main result of this recent research is that investments in ICT have to be complemented by organisational changes, innovative activities and investments in human capital in order to result in positive productivity effects. David Autor (MIT, USA) reassessed competing hypotheses on the causes for rising wage inequality in the U.S. since the early 1980s. He demonstrated that the variety of labour market trends in recent decades can neither be reconciled with a "unicausal" skill-biased technological change explanation nor with a hypothesis that focuses solely on minimum wages and labour force composition effects. Autor proposed a modified version of the skill-biased technological change hypothesis as a potential explanation. This version emphasises the polarisation of skill demand owing to the spread of computers at the workplace. Shane Greenstein (Northwestern University, USA) presented a geographical analysis of the diffusion of Internet infrastructure across the US, looking especially at the factors explaining urban/rural differences in the quality of Internet services, for instance, the availability of broadband access to the Internet. Finally, Scott Marcus (The German Marshall Fund of the United States, USA) introduced Europe's New Regulatory Framework for Electronic Communication focusing on how the framework deals with the issue of technological convergence of voice and data networks. A comparison between the U.S. regulation of telecommunication markets and the new EU framework showed that, even though they are based on different theoretical underpinnings, they lead to comparable regulatory outcomes.

Overview of current research

The members of the conference scientific committee, Ernst R. Berndt (MIT Sloan School of Management, USA), Karen B. Clay (Carnegie Mellon University, USA), Oliver Fabel (University of Constance, Germany), Francis Kramarz (CREST-INSEE, France), Georg Licht (ZEW), Konrad Stahl (University of Mannheim, Germany) and Manuel Trajtenberg (Tel Aviv University, Israel) reviewed the large number of submitted papers. A total of 22 papers were selected for presentation. The resulting conference programme gave an overview of current theoretical, empirical, and policy oriented research results in the economics of ICT.

The papers presented in the parallel sessions addressed diverse aspects of digital markets such as digital piracy, free sample offers, online advertisement, and pricing issues. One session was devoted to the labour market impacts of ICT, another focused on productivity and growth effects of ICT. Mandatory unbundling and access price regulation in telecommunication markets were further research topics.

The conference programme is available at www.zew.de/ikt-konferenz on the ZEW homepage. It is also possible to download conference papers from this site.

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ZEW FINANCIAL MARKET SURVEY

Results of the Survey in October 2004

The Financial Market Test conducted by the ZEW is a monthly business survey of German financial market experts which started in December 1991. The survey asks for the predominant expectations about the development in six international financial markets.

As a whole around 350 experts take part in the survey. 280 of them work in banks, 50 in insurance companies and investment companies and 20 in other industries. Participants in the survey are financial experts of the finance departments, the research departments and the economic departments as well as the investment and securities departments of the firms. The experts are questioned on their medium term expectations about the development of important international financial markets with respect to the business cycle, the inflation rate, short term and long term interest rates, the exchange rate and share prices.

Information to the applied procedure is available as an abridged version published by the ZEW. The present survey was conducted between September 29, 2004 and October 11, 2004. All calculations are termed to October 15, 2004.

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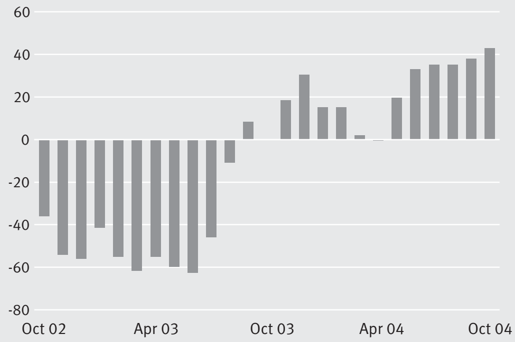
ECB interest rate increase: Expectations on the rise

Money Market: expectations concerning short-term interest rates



Balance of positive and negative expectations concerning short-term interest rates in the eurozone in six months' time. Source: ZEW

Interest rate expectations have started to change. While the share of financial experts assuming an increase of short-term interest rates rose by a mere 2.7 points in the previous month, it now increased considerably by 5.3 points and is standing at 43.9 percent. Rising oil prices and the ensuing inflation fears are the reasons for this development. Expectations concerning these values hardly show any difference compared to the previous month: The balance of inflation expectations declined slightly by 1.2 percent and the oil price expectations balance rose by a meagre 1.7 points.

In view of the persistently high level of oil prices and the high balance of inflation expectations (26.6 points) the financial experts' convictions are growing that the ECB will respond with an interest rate increase in the not too distant future. As yet, however, the conservative faction does not expect any change in the money market interest rates within the next six months and still holds a majority with 55 percent.

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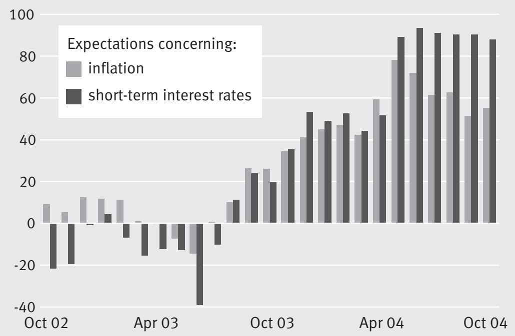
USA: Less pronounced downward trend in economic activity

Expectations concerning inflation and short-term interest rates



Balance of positive and negative expectations concerning inflation and short-term interest rates in the US. Source: ZEW

The index of current economic activity in the USA continues its downward trend that started in June and fell moderately by 3.1 to 33.2 points. Reasons for this trend may include lower growth rate of the national gross domestic product in the second quarter, negative labour market data, and restrained private demand.

Inflation expectations increased slightly. More than 60 percent of the analysts now believe that the inflation rate will increase in the medium term. The current rise of the relevant indicator by 3.7 to 55.1 points might be based on the assumption that the current all-time-high of oil prices also seems to drive the general price level.

Concerning the development of short term interest rates the balance fell by 2.7 points. It now totals 87.7 points. Thereby financial analysts expect a policy that will gradually increase interest rates, but assume that because of subdued growth prospects the rise will be more moderate than what they expected in the past months.

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PUBLICATIONS

ZEW Economic Studies

Lothar Lammersen, Robert Schwager

The Effective Tax Burden of Companies in European Regions – An International Comparison

The tax burden on investment or companies is an important factor for the attractiveness of a country or a region. In particular, business location and investment decisions are influenced by the relative tax burdens encountered in different regions. This study presents estimates of the effective average and marginal tax rates on company investment for 143 regions in Europe and the USA. Using the approach pioneered by Michael Devereux and Rachel Griffith, it is shown that companies face a wide variation of effective tax burdens across European regions. The results are explained by analysing the importance of specific tax provisions for the tax burden at the various locations.

Volume 28, Physica Verlag, Heidelberg/New York, 2004, ISBN 3-7908-1562-4

ZEW Discussion Papers

No. 04-47, Elke Wolf, Miriam Beblo: Does Work Time Flexibility Work? An Empirical Assessment of the Efficiency Effects for German Firms.

No. 04-48, Christoph Böhringer, Andreas Löschel, Thomas F. Rutherford (eds.): Efficiency Gains from from "What"-Flexibility in Climate Policy – An Integrated CGE Assessment.

No. 04-49, Horst Entorf, Jörg Fegert, Michael Kölch: Children in Need of Medical Innovation.

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No. 04-65, Helmut Fryges: Stepping In and Out of the International Market: Internationalisation of Technology-Oriented Firms in Germany and the UK.

No. 04-67, Alexandra Spitz: Using Methods of Treatment Evaluation to Estimate the Wage Effect of IT Usage.

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No. 04-71, Katharina-M. Rehfeld, Klaus Rennings, Andreas Ziegler: Integrated Product Policy and Environmental Product Innovations: An Empirical Analysis.

No. 04-72, Katrin Cremers: Determinants of Patent Litigation in Germany.

No. 04-73, Bettina Peters: Employment Effects of Different Innovation Activities: Microeconometric Evidence.

No. 04-74, Dan Stegarescu: Public Sector Decentralization: Measurement Concepts and Recent International Trends.

No. 04-75, Dirk Czarnitzki, Kornelius Kraft: Capital Control, Debt Financing and Innovative Activity.

ZEW
Zentrum für Europäische Wirtschaftsforschung GmbH

IMPRINT

ZEW news English edition – published quarterly
Publisher: Centre for European Economic Research (ZEW) Mannheim,
L 7, 1 · D-68161 Mannheim · P.O. Box 10 34 43 · D-68034 Mannheim · Internet: www.zew.de
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