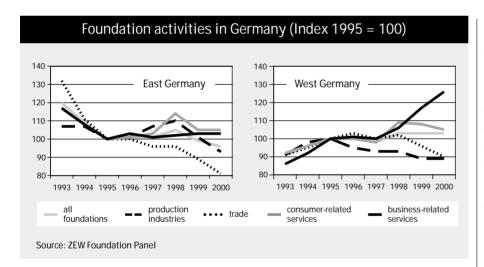
Selected Contributions from the Centre for European Economic Research

No. 4 · 2001

# Number of Firm Formations in East Germany is Declining

Compared to the previous year the number of founded firms in East Germany has fallen considerably by 3.5 percent in 2000. Both the construction industry and the trade experienced a particularly sharp decline of nine percent, respectively. In contrast, the number of start-ups in West Germany remained on the level of the past two years. This is the result of a recent ZEW-study on the development of firm formations in Germany.



■ In 2000 the number of company formations in East Germany has decreased for the second consecutive year. Compared to 1999 it dropped significantly by 3.5 percent. From 1996 to 1998 it had still been on the rise. In the first half of the nineties start-up activities were characterised by the creation of an entirely new stock of companies, which was accompanied by a high but declining number of new firms. The development in West Germany, on the other hand, took an entirely different course. Here the number of start-ups has remained stable since 1998. The total number of foundations has continuously increased in the nineties, and was only interrupted by declines in the years 1991 and 1997. Compared to 1999 this represents, due to the negative development in the East German states, a slight decline in the number of new firms for Germany as a whole in 2000 .

As less firms have been founded in East Germany, the formation intensity (absolute number of start-ups per 10,000 inhabitants of the age 18 to 65) has significantly dropped and is lower than the West German value for the first time. For 2000 it amounted to a mere 46.7 start-ups per 10,000 inhabitants of the age 18 to 65 in East Germany. In the West German states, the formation intensity was 48.4 foundations.

This is an disturbing development, particularly when considering the exist-

ing lack of companies in East Germany. In one of its recently published studies the Institute for Economic Research in Halle found that the East German states still have a lower company density (companies per 10,000 inhabitants) than the West German states. Furthermore, the weak formation dynamism slows down the extension of the enterprise stock. As the insolvency density (company insolvencies per 10,000 inhabitants) has been higher in East Germany than in West Germany for years, one can hardly expect that the company gap will close rapidly.

The latest developments in the construction industry and in trade are responsible for the declining numbers of start-ups in East Germany. Compared to the previous year the number of start-ups

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in the construction industry was nine percent lower. This development causes the decline in the number of new firms in East Germany's production industries (mining; manufacturing; electricity, gas, and water supply; construction industry) that is shown in the diagram. In West Germany the number of new firms for this economic sector remained on the

previous year's level. Thus the downward trend in the production industries that has been observed since 1995 seems to have been stopped here.

The number of new firms has declined in trade as well. Both in the East German and West German states the start-up figures have declined by nine and five percent, respectively. But not all

sectors present such a gloomy picture. In East Germany, for instance, the number of firm formations has remained constant in the sector of consumerrelated services (hotels and restaurants, health care industry, personal services such as laundries or hairdressers). In West Germany, on the other hand, the formation boom that started in 1998 has continued undiminishedly in 2000 in the sector of business-related services (for instance, EDP service providers, engineers' offices, advertising agencies, industrial cleaning). Particularly startups in the business consulting and legal advice sectors as well as EDP services have contributed to this positive development.

## Competence in Economics

The Zentrum für Europäische Wirtschaftsforschung (ZEW)/ Centre for European Economic Research in Mannheim welcomes applications for the position of

## Head of Research Department

Labour Economics, Human Resources, and Social Policy

The former head of the department was appointed professor at a university. Appointment to the position will be effective as soon as possible and as is mutually agreeable.

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We offer a challenging position in a distinguished scientific research institute as well as a remuneration package depending on qualification and experience. Research opportunities in our national and international network open up attractive opportunities for career development. If applicable we support a habilitation.

Closing date for applications is 11 January 2002. With reference to "Labour Markets Econ-12/01" applications should be sent to

# ZEW

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## Less business-related services in East Germany

Different start-up activities in individual sectors have changed the structure of all formation activities. In West Germany the share of business-related services in all firm foundations thus rose between 1995 and 2000 from almost 19 percent to almost 23 percent currently. Conversely, the share of trade went from 30 percent down to almost 26 percent in the same period of time. It is quite striking that the construction industry share in East Germany is much higher than in West Germany. With 20 percent this share, however, remained fairly unchanged in East Germany from 1995 to 2000, despite fluctuations in the absolute number of new firms. The share of consumer-related services in East Germany has risen to 29.5 percent in 2000 and is thus two and a half percentage points higher than in 1995. On the contrary, the business-related services are far less important. In 2000 their share amounted to approximately 15 percent, i.e. eight percentage points under the comparative value for West Germany. The continuously low industrial basis in East Germany might explain this value, since business-related services frequently present themselves as suppliers for companies in the manufacturing industries.

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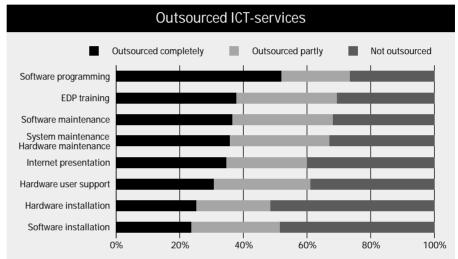
# Outsourcing of ICT Services Widespread

Many businesses outsource information and communication technologies (ICT) to be able to keep up with the rapid development and spread of ICT. A recent survey conducted by the ZEW and the Institute for Applied Social Sciences (infas) provides a representative picture as to what extent ICT services have been outsourced in the manufacturing and service industries. Higher technical expertise and higher quality of the services rendered by external companies are cited as the most important reasons for outsourcing.

■ 85 percent of German businesses in the manufacturing and service industries are outsourcing ICT services, with software programming being the most frequently outsourced ICT service. Just under 52 percent of the businesses outsource software programming completely and just under 22 percent partly. Electronic data processing (EDP) training activities rank second with 38 percent of all companies that outsource this service. System maintenance, i.e. software and hardware maintenance (both 36 percent), internet presentation (35 percent), and hardware user support (30 percent of the companies outsource this service) are in the middle field. Usually, companies install hardware and software on their own: Only 25 percent and 24 percent, respectively, of the companies fully demand services of external providers.

When looking at the individual sectors, companies in the EDP sector rather have the necessary resources and competences to provide their own ICT services. 73 percent of the EDP businesses outsource at least one of the ICT services named in the diagram completely or partly. Retail trade (81 percent) and transport (82 percent) also outsource less frequently than other sectors. The chemical industry as well as financial intermediaries outsource up to 96 and 94 percent, respectively.

Large corporations outsource more frequently than small businesses. Just under 88 percent of businesses with 5 to 49 employees outsource ICT services, in contrast to 98 percent of corporations with at least 500 employees. Due to their complex structure and their generally higher financial strength, large corporations are more likely to outsource ICT services to external providers, while



52 percent of all companies in the manufacturing and service sector that demand software programming services outsource these services completely to external providers, 22 percent outsource them only in part, and 26 percent do not outsource them at all.

Source: ZEW

small businesses tend to fall back, for instance, on standard software.

## Technical expertise and quality important reasons for outsourcing

Companies cite higher technical expertise and higher quality of services rendered by external providers as the leading causes to outsource ICT services. 38 percent of the companies outsourcing at least one of the services listed in the diagram count the quality aspect among the two most important reasons for outsourcing. In this context, not only the special expertise and the experience of external providers are decisive for companies. Companies also believe that it is easier for external providers to observe the rapid technological development and to guarantee, for instance, regular updates of software applications. Apart from quality assurance, companies decide to outsource ICT services due to lack of time (16 percent) and because they can save costs with external providers compared with internal solutions (27 percent of outsourcing companies).

Not all companies, however, outsource their ICT services voluntarily. The lack of qualified ICT specialists in their companies as well as insufficient qualification of their employees forces 36 percent of the companies to fall back on the services of external providers. Legal obligations, such as maintenance or license agreements related to the purchase of software applications assume only minor importance for the decision to outsource ICT services.

The leading causes for outsourcing ICT services do not differ considerably, neither with respect to sectors nor with respect to firm size classes. Companies with less than 50 employees often report that they are too small to provide their own ICT services. But also large firms consider outsourcing as a temporary completion e.g. in the case of insufficient technical equipment. ◀

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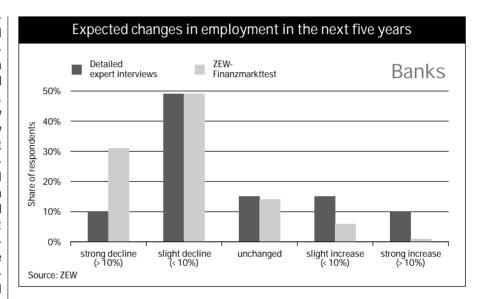
# Financial Sector: Great Demand for Highly Qualified Employees in Future

In the next few years up to 100,000 jobs could be lost in the financial sector. On the other hand, however, new jobs will be created – for university graduates. It is thus nearly exclusively the lower qualified employees who bear the burden of staff reductions. This was found in a recent ZEW study.

■ The employment trend at banks, insurance companies, and other financial service providers is presently at the centre of public discussions. The results of a recent study where the ZEW interviewed experts in banks, insurance companies, and other financial service providers by order of the Federal Ministry for Economy and Technology suggest, however, that there is by no means a uniform trend towards job cuts in the German financial business. Rather, one must distinguish clearly between qualification groups and areas of responsibility. The study dealt with the factors impacting past employment trends and future prospects. The influence of information and communication technologies was given special attention.

#### Job Josses since the mid-nineties

In 1998 approximately 670,000 employees subject to social insurance contributions worked in credit institutions in West Germany, and in 1997 just under 90,000 in East Germany. In 1998 approximately 267,000 employees subject to social security contributions worked in the insurance in West Germany, and in 1997 slightly more than 20,000 employees in East Germany. Staff reductions in banks and insurance companies have started in West Germany as early as in the mid-nineties. Nevertheless, the employment contraction up till now was moderate, as is demonstrated in a comparison with the highest employment values in these sectors: In the West German banking business they amounted to approximately 690,000 employees in 1994 and in the West German insurance business to approximately 280,000 employees in 1994. An analysis according to qualification groups reveals that parti-



cularly lower qualified employees were affected by previous job reductions. On the other hand, employment of graduates from university and university of applied sciences is experiencing a universally positive trend.

The ZEW analyses on the causes for the declining employment trend particularly for lower qualified employees demonstrate that the reasons for this development can be found in labour costs as well as in the use of technologies. Labour cost increases thus have distinctly more negative employment effects for lower qualified employees than for higher qualified employees. In addition, the employment of highly qualified employees increases simultaneously with the use of information and communication technologies, while particularly the lower qualified employees feel the negative consequences of this rationalisation.

The results also suggest that the most recent staff reduction trends in sectors where typically highly qualified employees are working are actually a cyclical reflex to the strong expansion at the end of

the nineties, and not so much a permanent trend. In the long run it is thus quite likely that more highly qualified persons will be employed. All business areas will show greater demand for university of applied sciences and university graduates. Business areas with high qualification requirements towards employees still have growth potential. By contrast, employment shares of employees without formal training will continue to shrink.

On the whole, it is likely that there will be further staff reductions in the financial sector. A majority of the interviewed forecast for the next five years a decline of up to ten percent compared to the current employment level, which would correspond to a loss of up to 100,000 jobs. Financial service providers – for instance independent investment managers or financial consultants – will on the contrary have employment increases. A major part of those interviewed even expect that other financial service providers will have employment increases of more than ten percent.

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# EU Commission Presents Study on Corporate Taxation in Europe

At the end of October the EU Internal Market Commissioner, Frits Bolkestein, presented the Communication "Towards an Internal Market without Tax Obstacles" including numerous proposals for the refinement of corporate taxation in the EU. The conclusions are based on the study "Company Taxation in the Internal Market" carried out by the European Commission. This study includes, inter alia, extensive calculations on effective corporate tax rates in the Community. The ZEW and the University of Mannheim in cooperation with the Institute for Fiscal Studies in London (IFS) carried out the tax burden analyses by order of the European Commission.

■ In cooperation with the IFS the ZEW presented a report stating tax burden figures based on an approach ("Devereux and Griffith Model") developed from economic theory. A second report was conducted under the management of the University of Mannheim and used the simulation programme "European Tax Analyzer". This programme has been developed since 1991 as a cooperation project between the ZEW and the University of Mannheim, and encompasses at present the tax systems from six states. Both the Devereux and Griffith Model and the approach of the European Tax Analyzer are restricted to the most important factors influencing the tax burden. Since each approach is based on varying corporate structures, the calculated tax burden indicators differ. Nevertheless, the results have distinct trends in common.

A comparison of the cumulated statutory top rates in the individual member states, which allows for interdependencies between the individual tax type conveys a first impression of the corporate tax burden. Within the EU the statutory tax rates for profits of incorporated enterprises of the manufacturing sector ranged in 1999 from 10 percent in Ireland to 52.3 percent in Germany for undistributed profits. The average tax rate was 34.7 percent. Due to the tax reduction law the German tax rate burden of corporate income tax, solidarity surcharge, and trade tax fell from 52.3 percent to 39.4 percent (implying a municipal factor of 426 (1999)/428 (2001) percent). In an EU-wide comparison Germany has thus improved its position from the last to the third but last place.

Effective tax burden indicators also include different calculation methods to determine the tax base, for instance divergent international depreciation regulations or limited deduction possibilities, as well as taxes on non-income values such as the real property and capital tax. These differences in statutory tax rates also become apparent in the effective average tax rates. According to the ZEW and the IFS they ranged from 39.1 percent in Germany to 10.5 percent in Ireland in 1999. Analyses with the European Tax Analyzer confirm this result. Germany is not able to considerably improve its position in

the European comparison with the tax reduction law. Although the effective average tax rate declines by more than 4 percentage points from 39.1 percent to 34.9, Germany still ranks lowest among the European countries.

Apart from the taxes to be paid by corporations, personal taxes of shareholders on income from capital and net worth may be interesting as well. The tax burden on the so-called overall level consisting of companies and shareholders is particularly important for medium-sized businesses. Even after the reform Ger-

## Statutory tax rate and effective average tax rate on profits of corporations (2001)

State	Statutory tax rate	EATR (DG)	EATR (ETA)
Ireland	10,0	10,5	8,3
Sweden	28,0	22,9	_
Finland	29,0	26,6	-
Great Britain	30,0	28,3	21,0
Denmark	30,0	27,3	_
Austria	34,0	27,9	-
Netherlands	35,0	31,0	23,7
Spain	35,0	31,0	-
Portugal	35,2	30,7	-
France	36,4	34,7	37,6
Luxemburg	37,5	32,2	-
Greece	37,5	28,0	-
Germany	39,4	34,9	30,1
Belgium	40,2	34,5	-
Italy	40,3	27,6	-
Average	33,2	28,5	

EATR (DG) states the effective average tax rate according to the economic "Devereux and Griffith Model" and EATR (ETA) that of the European Tax Analyzer of the ZEW and the University of Mannheim.

Source: EU Commission

many is still among the lower third of EU states, even though the applicable income tax rates after the last phase of the tax reform in 2005 were used for the calculations.

You can download the EU Commission's full report and the Communication from the Homepage of the European Commission(http://europa.eu.int/comm/taxation\_customs/taxation/information\_notes/tax\_saving.htm).

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# Ecological Tax Reform: Good Idea, Bad Implementation

On April 1, 1999, the federal government introduced the ecological tax reform. The aim of this reform is to gradually increase energy prices and to use the additional energy tax receipts to reduce pension insurance contributions. The implementation of the ecological tax reform, however, is beset with serious flaws.

■ The objectives of the ecological tax reform have been clearly stated: On the one hand, it aims at improving environmental quality by providing tax incentives for a change in production and consumption patterns towards less pollution. On the other hand, it intends to reduce the tax burden on labour as production factor. In economic research, the potential ecological and labour market effects of an ecological tax reform have been studied for some time under the catchphrase double dividend. While the first dividend resulting from ecological taxes, improved environmental quality, is undisputed, the prospects of a second dividend, reduction of unemployment or increased economic growth, are regarded sceptically. Ecological taxes themselves actually hamper economic activities. Numerous theoretical and empirical studies doubt whether the accompanying loss of employment can be compensated or even overcompensated with a reduction of labour costs.

### Design Fault of the Ecological Tax

In principle, energy taxes constitute a market-based instrument to reduce emissions resulting from energy consumption. The reduction of pension insurance contributions itself also makes sense in terms of employment. However, this first positive impression is fading after a closer look at the whole concept.

One of the weak points of the ecological tax reform is that energy was selected as tax base. Energy use is not ecologically harmful, but specific pollutants released during different energy conversions. Uniform taxation of the energy content of energy sources is thus less effective for climate protection policy than taxation of energy-specific CO<sub>2</sub> contents.



If the tax were consistently implemented, coal as an energy source would be subject to high taxation due to its high carbon content, and nuclear energy would not be taxed at all. Apart from climate protection, other political interests obviously also play a vital role.

Extensive compensation regulations are another design fault. Companies in the production industries as well as in agriculture and forest management only pay a reduced tax rate amounting to 20 percent of the standard rate for heating oil, gas, and electricity (as to electricity, this reduction is only effective if the tax burden exceeds DM 1.000). In addition, companies in the production industries receive compensation if their tax on electricity and heating combustibles amounts to more than DM 1.000 per calendar year and is more than 1.2 times higher than the implicit transfers associated with the reduction of the employer's contributions to the statutory pension insurance fund. The tax reductions and the compensation regulation are counterproductive in ecological terms, since especially energy-intensive companies that frequently have low-cost energy savings potentials are subject to the exemption provisions.

The ecological tax reform was passed with the goal of introducing an ecological restructuring process in the industrial society and to easing the strain on the labour market. Since prospects for a marked positive impact on employment are dim, ecological goals are all the more important to justify ecological taxes. Ecological taxes are intended to improve the quality of the environment and should be drawn up accordingly. Uniform taxation guarantees that anybody causing environmental pollution is liable for the resulting costs. This is the best method to attain environmental goals.

Yet the ecological tax reform deviates considerably from this principle. Apart from the fact that tax rates are not based on actual flows of pollutants, the exemption provisions are another main cause for only minor ecological effects. As a result, environmental protection proves to be more expensive than it should be. ◀

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### **ZEW Financial Market Test**

# Results of the Survey in November 2001

■ 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 400 experts take part in the survey. 270 of them work in banks, 50 in insurance companies, 40 in investment companies and 40 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. In detail, the financial 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.

To construct forecasted figures, the qualitative response categories (increasing, unchanged, declining) are transformed into quantitative figures by the Carlson/Parkin procedure. Additional information to the applied procedure is available as an abridged version published by the ZEW. The present survey was conducted between Oct. 29, 2001 and Nov. 13, 2001 and all calculations are termed to Nov. 16, 2001.

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Source: ZEW

### European stocks are the favourites for 2002

■ In 2001 shareholders have witnessed their assets diminish. Now they would like to know what to do differently in 2002. In order to provide assistance in answering this question, the ZEW has asked 246 analysts about their optimal portfolio weights for the year 2002.

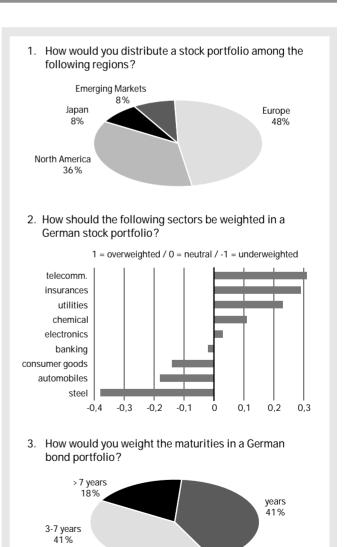
The analysts still prefer European stocks. Close to half of the portfolio should consist of European securities. With a price-earnings ratio of 18, the Euro Stoxx 50 is currently favourably priced. When this price-earnings ratio is seen in relation to the ratio on the bond market, these stocks appear to be particularly interesting. North American stocks shall only occupy 36 percent of the portfolio. The analysts believe these securities to be well-priced after the S&P 500 has lost more than ten percent in 2001. In spite of the seemingly positive pricing level in Japan and the emerging markets, analysts urge to be cautious due to the continuing high risks. Stocks from these markets shall make up no more than ten percent of the portfolio.

Considering the choice of industry in an all-German stock portfolio in 2002, analysts prefer the growth-oriented sectors such as telecommunications. These highly leveraged sectors should be the ones who will profit most from the recent reductions in the interest rate. Furthermore, analysts recommend defensive titles from the insurance and utility sector which tend to be less cyclical. Analysts expect no strong increase in business activity for the coming year. Therefore, they recommend lower portfolio weights for cyclical industries such as automobiles and steel.

For investors in German bonds, the experts recommend to invest for the short- and medium term and to avoid titles with maturities of more than seven years. Long-term bonds are currently unattractive with interests being around 4.3 percent. The holders of long-term bonds might incur losses should inflation become a problem again and long-term interest rates increase. The recent performance of the bond market insofar seems to confirm the analysts' expectations.

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Total number of answers: 246



### **ZEW Conference**

### 1st BLUEPRINT Workshop: "Environmental Innovation Systems"

January 23/24, 2002

The workshop will take place in the representation of the German state Rhineland-Palatina in Brussels.

It will deal with the following topics:

- national systems of innovation and environmental innovation
- orienting research policy to sustainable goals
- knowledge and environmental innovation
- a green national system of innovation

The BLUEPRINT-network aims at improving and exploiting synergies between environmental and innovation policies and at stimulating research and policy initiatives at the European level (see ZEWnews English edition No. 3/2001). It is coordinated by the ZEW. The programme consists of five workshops and a final conference.

For more information about the network as well as the first workshop please see www.blueprint-network.net or contact Dr. Klaus Rennings, rennings@zew.de

### **ZEW Publications**

#### ■ Discussion Papers

Download the Discussion Papers at our web site: www.zew.de/en/publikationen

Fitzenberger, Bernd; Schnabel, Reinhold; Wunderlich, Gaby: The Gender Gap in Labor Market Participation and Employment: A Cohort Analysis for West Germany; No. 01-47.

Falk, Martin: Diffusion of Information Technology, Internet Use and the Demand for Heterogeneous Labor, No. 01-48.

Böhringer, Christoph: *Climate Politics From Kyoto to Bonn: From Little to Nothing?!?*, No. 01-49.

Kaiser, Ulrich: Differences in Response Patterns in a Mixed Mode – Online/Paper & Pencil Business Survey, No. 01-50.

Bürgel, Oliver; Fier, Andreas; Licht, Georg; Murray, Gordon: *Timing of International Market Entry of UK and German High-Tech Start-Ups*, No. 01-51.

Löschel, Andreas; Mranz, Marian: *EU Enlargement and Environmental Policy*, No. 01-52.

Ziegler, Andreas: Simulated z-Tests in Multinomial Probit Models, No. 01-53. Czarnitzki, Dirk; Rammer, Christian: Technology Transfer and the Internet: A Chance for Outsiders at Public Science to get Into the Business?, No. 01-54.

Köke, Jens: *Corporate Governance, Market Discipline, and Productivity Growth*, No. 01-55.

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Hagen, Tobias: Does Fixed-Term Contract Employment Raise Firms' Adjustment-Speed? Evidence from an Establishment Panel for West-Germany. No. 01-57.

Böhringer, Christoph; Löschel, Andreas: *Market Power in International Emissions Trading. The Impacts of U.S. Withdrawal from the Kyoto Protocol*, No. 01-58.

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Research, No. 01-59.

Hautsch, Nikolaus; Hess, Dieter: A Mean Variance King? Creation and Resolution of Uncertainty Under the Employment Report's Reign, No. 01-60.

Löschel, Andreas: *Technological Change in Economic Models of Environmental Policy: A Survey*, No. 01-62.

Heiss, Florian; Köke, Jens: *Dynamics in Ownership and Firm Survival: Evidence from Corporate Germany*, No. 01-63.

Franz, Wolfgang; Zimmermann, Volker: Job Shopping after Vocational Training? An Empirical Analysis of the Transition from Apprenticeship Training to Work, No. 01-64.

Böhringer, Christoph; Welsch, Heinz: Contraction of Global Carbon Emissions: How Acceptable Are Alternative Emission Entitlement Schemes?, No. 01-65. Falk, Martin: The Impact of Office Machinery and Computer Capital on the Demand for Heterogeneous Labor, No. 01-66.



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