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ZEW ANNUAL REPORT 2020

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2020 was a unique year. The COVID-19 pandemic upended global society in a way few thought possible. At the same time, the crisis has underscored the importance of scientific inquiry. More than ever, we need evidence-based answers to urgent questions: How can the eurozone recover from the crisis? Are German start-ups sufficiently resilient? And how do school closures affect social inequality? These are just a few of the issues that required the expertise of ZEW this past year. You can read about our answers in our focus report on the COVID-19 crisis.

The pandemic not only changed the world; it also forced us to reorganise our institute. To safeguard employee health while maintaining operations, we developed safety plans, altered workflows, and created new communication channels. Within a very short time, our work, conferences and events had all gone digital. We also created two new online event series – #ZEWlive and #ZEWBookTalk – which we will continue to organise even after the pandemic. Another innovation is the #ZEWPodcast, in which our experts assess current topics in economics. The entire ZEW team merits many thanks for all its efforts.

While contending with the coronavirus crisis and carrying out our other work in 2020, we also planned a new project group. Launched on 1 January 2021, "Health Care Markets and Health Policy" will work to better understand the economic prerequisites for good health care, to investigate health market design, and to strengthen empirical health economic research in Baden-Württemberg.

More good news came when we recruited Professor Sebastian Rausch to head our Research Department "Environmental and Resource Economics, Environmental Management". The addition of Rausch – who was a professor of economics at ETH Zurich before joining ZEW in August – has further strengthened our work on climate change and energy policy. We are also proud to report that Professor Sebastian Siegloch, the head of the Research Department "Social Policy and Redistribution", beat out a strong competition to win an ERC grant for a project on real estate market inequalities, scheduled to start in mid-2021. Other important accomplishments were a cooperation agreement with the University of Strasbourg and the impressive results of the SEEK programme, which after ten years of funding from the state of Baden-Württemberg finally drew to a close.





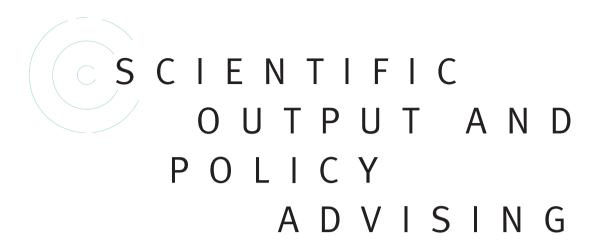
ZEW IN BRIEF

The Mannheim-based ZEW – Leibniz Centre for European Economic Research is a leading German economic policy institute and a member of the Leibniz Association. Its applied research aims to study and help design well-performing markets and institutions in Europe. In particular, it seeks to understand how to create a market framework that will enable the sustainable and efficient development of European economies.

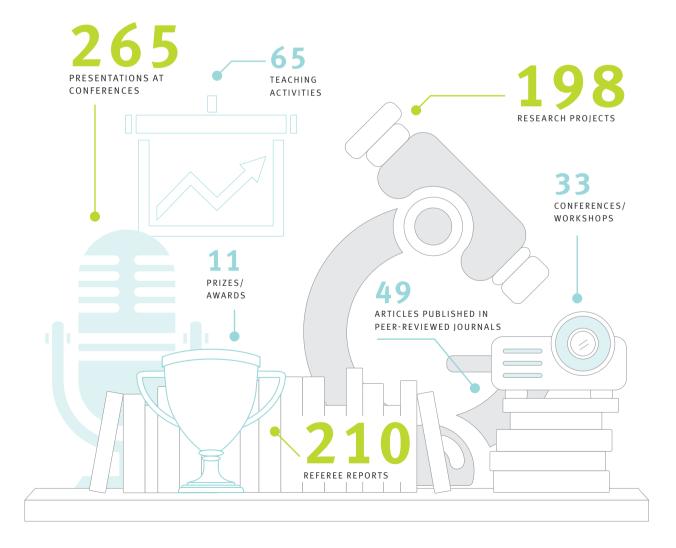
ZEW also offers evidence-based policy advising. The size of ZEW and the broad spectrum of topics studied by our research units enable us to take on major commissioned projects in economic policy.

Under the leadership of Professor Achim Wambach, the president of the institute, and Thomas Kohl, the institute's managing director, ZEW currently employees some 200 people spread out across nine research units, four junior research groups, and two service departments.

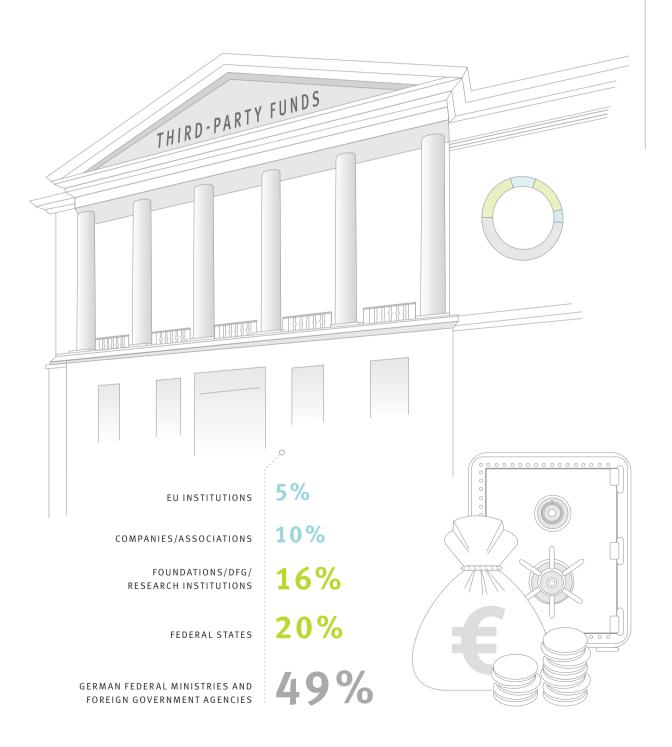




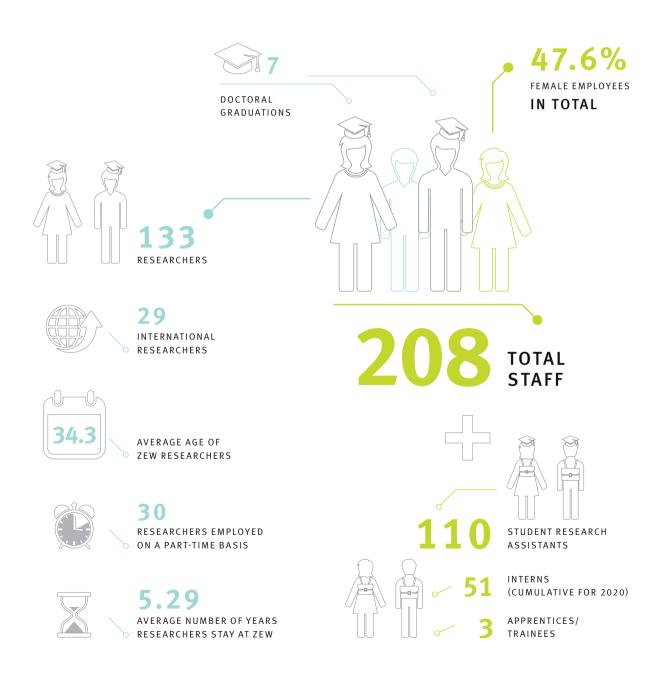
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S O U R C E S O F T H I R D - P A R T Y F U N D I N G I N 2 0 2 0







ZEW PROFIT AND LOSS STATEMENT

	2019	2020*
Institutional funds	11,688	11,886
Joint Initiative for Research and Innovation Funding	287	340
Third-party funds (turnover, inventory changes, subsidies)	7,028	7,535 150
Other business revenues	338	
Income from the reversal of the special item for contributions to fixed assets	549	578
TOTAL REVENUES	19,890	20,489
Staff expenditures	13,038	14,204
Third-party services	1,095	1,562
Other operating expenditures	5,097	4,640
Asset write-offs	530	561
Allocation to special items for contributions to fixed assets	392	476
Financial result	36	28
Other taxes	3	1
TOTAL EXPENSES	20,191	21,472
PROFIT/LOSS FOR THE FINANCIAL YEAR	-301	-983
Withdrawals from appropriated reserves	659	1,118
NET INCOME	358	135

ZEW BALANCE SHEET AS OF 31 DECEMBER 2020*

ASSETS	2019	2020	LIABILITIES AND EQUITY	2019	2020
Intangible assets	92	172	Share capital	26	26
Downpayments made	0	27	Appropriated reserves	4,380	3,620
Real estate and construction in process	8,177	7,952	Other reserves	2,169	2,169
Equipment	733	766	Net income	358	135
Fixed assets	9,002	8,917	Shareholder's equity	6,933	5,950
Stocks	3,062	3,385	Untaxed reserves	2,810	3,361
Receivables/other assets	960	950	Reserves	2.227	2.477
Cash at banks	8,348	7,519	Advances received	2,666	3,469
Current assets	12,370	11,854	Liabilities to banks	4,027	3,390
Prepaid expenses	186	275	Other liabilities	2,895	2,399
		273	Outside capital	11,815	11,735
TOTAL	21,558	21,046	TOTAL	21,558	21,046

As of April 2021, * preliminary figures in K euros



How has the pandemic affected your research?

At a time when society is riven with uncertainty, I as a researcher feel more than ever that it is my responsibility to find answers. Of course, like everyone else, I have also spent the last few months reorganising my work life and adjusting to the realities of remote work. When the pandemic broke out, I was in Argentina for a research project. Because of the travel restrictions what was supposed to be a six-week trip lasted almost an entire year. Obviously, I had envisioned my time in Argentina very differently. But in retrospect I was able to make the most of the unexpected stay, forging many valuable contacts and laying the groundwork for future projects.

How has communicating online $\[\]$ A $\[\]$ Z $\[\]$ W with colleagues been?

You certainly lose something this way, such as the spontaneous ideas for research projects hatched during informal conversations at work. But I also see a lot of potential in digital offerings. For instance, in June of 2020 we quickly organised an online research seminar about COVID-19 and inequality. The seminar featured renowned speakers and almost 300 participants from around the world. It was quite a success. I am certain that we will

was quite a success. I am certain that we will Z E W deploy various other online research tools

P E O P L E A T Z E W

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in the future.





P F O P I F A T 7 F W

What was it like starting at ZEW in the midst of the pandemic?

I joined ZEW in October of 2020, right before the second lockdown. It was an unusual way to start a new job - hardly anyone in the office, and Zoom sessions from home. I've had to do without in-person introductions. But I've been able to familiarise myself with the job via online meetings and telephone calls with my co-workers, who were always there to answer my 'beginner' questions. My work consists among other things in planning events with a strong public impact. Here, too, the effects of the pandemic are tangible. Since April 2020, nearly all of ZEW's events have taken place online. We have been pioneers in this regard. We initiated the #ZEWlive and #ZEWBookTalk series, which will surely continue in the post-pandemic era alongside inperson events.

PEOPLE AT ZEW

How has the work-life balance been while working from home? E A T Z E V

As a mum with two school-age children, I've often been pushed to my limits, especially during the school closings. ZEW was very accommodating, however. I am a part-timer and relatively free to decide when I work. Moreover, it is relatively easy to apply for special leave and receive sick pay for my children. On the whole, I am very satisfied in spite of the coronavirus

restrictions and am happy to have accepted

this new challenge at ZEW.

E O P L E A T Z E W

P F O P I F A T 7 F W

P E O P L E A T Z E W





What has the sudden switch to remote work meant for your jobs?

We are responsible for the digitalisation of operations and the creation of a digital work environment. Fortunately, ZEW already began to prioritise these areas in 2017. By the time the pandemic came in March of 2020, most of the personnel already had the option of working from home. This made it infinitely easier to switch to remote work when the first lockdown came. Nevertheless, we faced a number of challenges. We had to digitise workflows and procurement requests and rapidly introduce institute-wide video conferencing.

What are the long-term effects

of the pandemic?

COVID-19 has made clear once again how important it is to be prepared digitally. The pandemic has accelerated planned projects and has shown that we still have much to do. It has generated many ideas for future digitalisation projects that reduce administrative effort for employees. This includes the introduction of electronic invoices in a standardised format-

and new workflows for our student assistants and interns.





P F O P I F A T 7 F W

What has been the financial impact of COVID-19 on ZEW?

The pandemic has demanded a lot from us as an organisation. To ensure that ZEW personnel can safely continue to go about their work, we've had to make numerous purchases since March of 2020, from new software applications to plexiglass sneeze guards. These have produced additional costs. Moreover, we've had some worries about our business operations: What financial effects can we expect? Which additional investments are needed and how much money do they require? We're also concerned about our ability to secure third-party research funding going forward. With state budgets overstretched, I fear that funding for economic research could decline in the future.

Nevertheless, economic policy expertise remains much in demand, particularly so during

the pandemic. The past year has shown how important ZEW's work is for society. In this regard, the crisis also represents an opportunity.

E O P L E A T Z E W

P E O P L E A T Z E W

P E O P L E A T Z E W

P E O P L E A T Z E W



AT ZEW



PEOPLE AT ZEW

P F O P I F A T 7 F W

How have you viewed ZEW research over the past year?

I joined ZEW in February 2020; one month later, the institute entered crisis mode. Emergency is practically all I've ever known here. I was impressed by the speed and competence with which researchers adjusted their academic work and advisory activities. As I recall, I introduced myself to the Research Department "International Finance and Financial Management" at the beginning of March. ZEW projected an unprecedented drop in revenues one week later. The management started meeting weekly to discuss what needed to be done – such as the move to remote work and the restructuring of planned in-person events – and to find alternative solutions.

PEOPLE AT ZEW

We subsequently organised numerous ad-hoc presentations, published articles in popular media, and gave interviews on the coronavirus pandemic and its effects on the public. During this adjustment period, I assisted the president and helped him respond to the growing demand for ZEW expertise from decision-makers at all levels, from municipalities to the EU. We have published interesting studies on remote work, the value of social capital in crises, viral transmission at demonstrations, EU crisis management, and stimulus funding. At the same time, we've kept our sights on other pressing concerns as well. For instance, we developed approaches to solving the climate crisis and proposals for the needed structural changes to the economy.

P E O P L E A T Z E W

P E O P L E A T Z E W





How has the pandemic affected

Long-term work from home has posed multiple

administrative challenges. All at once, we had

to coordinate digital meetings, cancel busi-

ness trips and hotel reservations, and move

conferences online while keeping in mind the

various time zones of the speakers. For exam-

ple, we reconceived the ICT conference in July

of 2020. With almost 300 participants from

around the world, the conference was a great success. We had to adapt our workflows to the enew situation and assist researchers as well as we could despite the unusual circumstances.

your daily work?

PEOPLE AT ZEW

PEOPLE AT ZEW

Has anything helped the transition in particular? E O P L E A T Z E

The digitalisation and IT teams have done great work enabling remote work for all ZEW personnel. Thanks to the in-house IT infrastructure and the new digital workflows, the administration could effectively work from home starting in the spring of 2020. Before the events of last year, we had already created systems for support and coordination. A helpful feature we added to our intranet was the assistant calendar, which makes it easier to schedule appointments and tasks. We assistants value the fact that we can be there for

each other. It's a give and take. The approach has proven itself and enables smooth daily work routines.

OPLE ATZEW

PEOPLE ATZEW

P E O P L E A T Z E W





How has recruiting at ZEW fared during the COVID-19 pandemic? What have been the special challenges?

In 2020, we hired a total of 38 new employees – almost as many as in the previous year. This is quite an accomplishment when you consider the enormous amount of uncertainty on the job market and the fact that we had to rethink the application process due to the pandemic. Since March of 2020, we have conducted job interviews almost exclusively by telephone or video conference. The greatest challenge is giving applicants an impression of ZEW and its passion for research while deciding at a remove whether a candidate is a good fit.

PEOPLE AT ZEW

How has ZEW handled employee induction?

We have introduced measures so that recent hires can familiarise themselves even during the pandemic. In addition to virtual meetings, new employees take part in a mentorship programme. We assign each one a mentor to ease their start and help them network at ZEW. We also organise monthly blind lunches in which employees from different departments are E randomly paired for ā virtual meal. This is designed to make up for the accidental encounters that would otherwise have occurred in the coffee kitchen.

P E O P L E A T Z E W

P E O P L E A T Z E W

P E O P L E A T Z E W





P F O P I F A T 7 F W

What's the shift to remote work been like?

Doing our jobs from home? Before March of 2020, it would have been inconceivable. We were accustomed to discussing tenders and projects and coordinating suppliers and tradespeople in person on ZEW's premises. But, fortunately, ZEW rapidly instituted a digital purchasing system. With it, we can quickly assess employees' needs at home and set in motion the purchasing process. Thanks to the use of video conference tools, we are able to handle even the most complicated organisational tasks and transactions from home. But even though we all work online now, we still rely on active support from our in-house technician Andreas Roos and our reception personnel.

How did ZEW balance the need to maintain operations while safeguarding the health

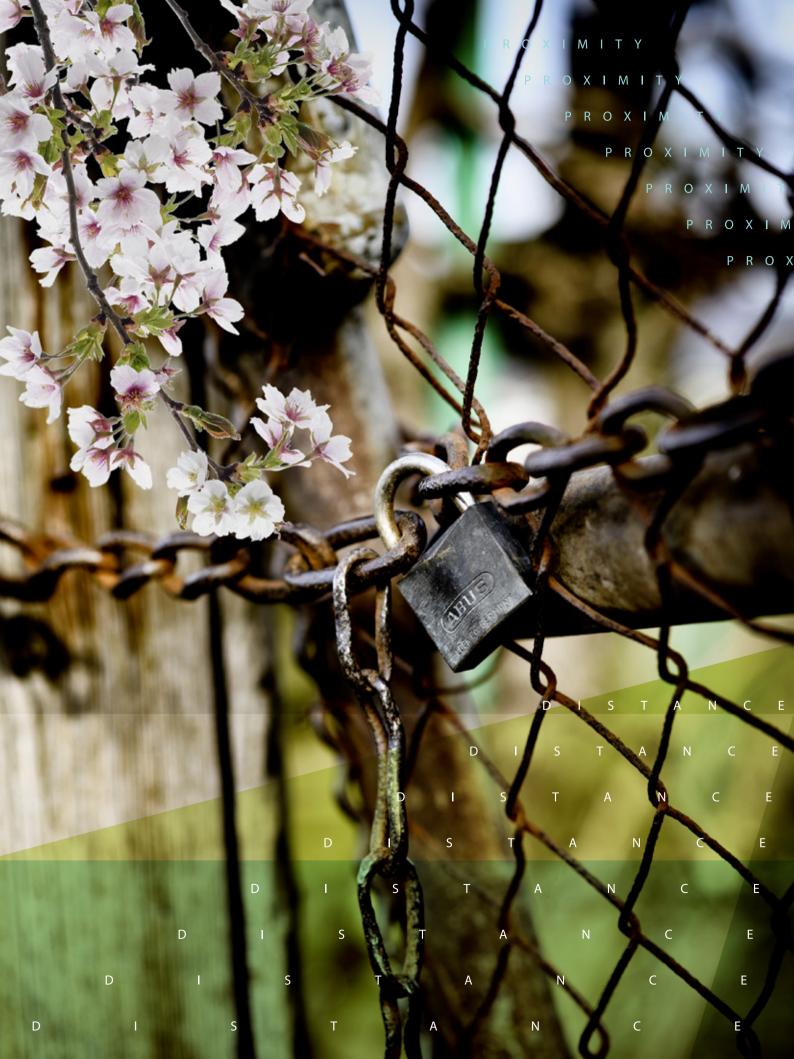
of its employees?

The purchases required by the pandemic were interesting and instructive. Suddenly, we had to think about such things as disinfectants, face masks, plexiglass sneeze guards, and pandemic safety plans. Though the current situation has been very stressful and challenging, we are confident that many of the new insights and routines we've learned in

the past months will be useful in the post-pandemic age.

P F O P I F A T 7 F W





Υ I T Y I M I T Y

I N F O C U S

32

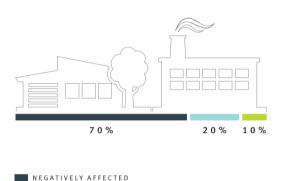
FROM VACCINE PRODUCTION TO NEXT GENERATION EU POLICIES & MEASURES

40

FROM INSOLVENCIES TO REMOTE WORK DIGITALISATION & THE ECONOMY

30 PANDEMIC AND ITS CONSEQUENCES INFOGRAPHICS THE COVID-19

THE COVID-19 PANDEMIC AND ITS CONSEQUENCES



100% = Companies from

all branches.

EFFECTS ON

START-UPS AND

MORE ESTABLISHED

COMPANIES

COVID-19 has had roughly the same basic impact on start-ups and more established companies. Around 70 per cent of all companies have been negatively affected by the pandemic. For roughly 20 per cent, the pandemic has been neither positive nor negative. The remaining ten per cent have fared well during the crisis.

A BACKLOG OF BANKRUPTCIES AND MORE ZOMBIE FIRMS

NOT AFFECTED

POSITIVELY AFFECTED

The fiscal response to the coronavirus pandemic has had several unintended consequences. One is a backlog of bankruptcies. Another is an increase in the number of so-called zombie firms – businesses that have become insolvent and unprofitable but are being kept artificially alive through state loans.

STRONG INCREASE

SLIGHT INCREASE

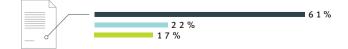
Appraisal of surveyed financial market experts

Experts believe that the increase of zombie firms has been caused by the following measures:

■ SUSPENSION OF THE BANKRUPTCY FILING REQUIREMENT

KFW LOANS

COMPENSATION FOR REDUCED HOURS



REMOTE WORK IN GERMANY

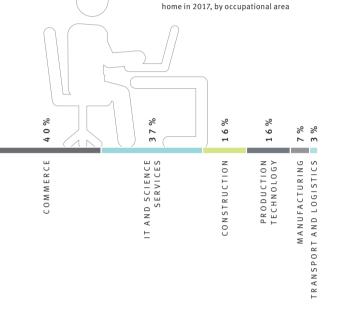
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CORPORATE MANAGE-MENT AND ORGANISATION

Before the COVID-19 crisis, Germany's remote work potential remained largely untapped. The pandemic has shown how successful remote work can be.

43%

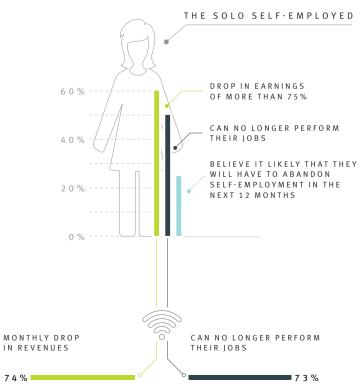
BUSINESS SER-VICES



Share of employees who worked from

S 0 L 0 SELF EMPLOYMENT

The solo self-employed have been hit especially hard. However, those whose work can be performed digitally have been noticeably more resilient and less likely to suffer from the pandemic's negative effects.



Negative effects of COVID-19 pandemic by degree of digitalisation:

VERY LOW DEGREE OF DIGITALISATION --7 4 % **=** 40%

VERY HIGH DEGREE OF DIGITALISATION -----

28%

POLICIES & MFASURFS

STANDSTILL





S T A N D S T I L L

In 2020, the coronavirus had the world fully in its grip, and governments and politicians had to act. The lockdown posed a massive challenge for the economy and society, and it continues to do so today. The topics that have dominated the discussion include school closures, competition to accelerate vaccine production, the consequences of pandemic fear for cancer prevention, COVID-19 denier demonstrations, contact-tracing apps, common good versus individualism and government aid for companies and states. Throughout, ZEW has endeavoured to shape the public debate for the better.

S T A N D S T I L L

S T A N D S T I L L

PRODUCTION OF COVID-19
VACCINES

BOOSTING COMPETITION

OPINION PIECE BY PROFESSOR VITALI GRETSCHKO
AND PROFESSOR ACHIM WAMBACH

he development of vaccines against COVID-19 is a success story. However, the production of the approved vaccines is progressing only slowly. Once a contract over an agreed quantity of vaccine has been signed, there is only a rather limited incentive to quickly build up large volumes. However, boosting competition can help create incentives for faster production.

In November 2020, the EU concluded supply contracts with pharmaceutical companies whose vaccines had a good chance of being licensed. One consequence of the individual deals with companies, however, is that competition between manufacturers to build up production capacities quickly plays only a minor role. Once a contract has been signed, a manufacturer can be sure to sell the agreed quantity of vaccine. Consequently, there is only a limited incentive to quickly produce larger volumes. Last year, when it was not yet clear whether vaccine development would be successful and when there was no contract with the EU, it was very risky for companies to invest in capacity building. In case of non-success,



OPINION PIECE IN THE HANDELSBLATT (IN GERMAN ONLY)

www.handelsblatt.com/ meinung/gastbeitraege/ gastkommentar-wiepraemien-die-coronaimpfungen-deutlichbeschleunigenkoennten/26865120.html

they would have been stuck with the high costs. At that time, direct support for capacity building would have made sense. However, now that it has become widely apparent which company has successfully developed a vaccine, boosting competition can help incentivise faster production. One way to increase competition could be to set up a new European fund. Payments from this fund would reward those manufacturers whose vaccines are actually administered quickly. For example, it would be conceivable to pay a high bonus for vaccinations that are added to the contractually agreed amount. However, this bonus decreases over time and falls to zero as soon as a certain proportion of the population has been vaccinated. The ambition to be one of the first companies to succeed in developing a vaccine has led to impressive advances. Likewise, competition should play a greater role when it comes to the rapid production of vaccines.

P R O G R E S S
O G R E S S
G R E S S

PROGRESS
PROGRESS
PROGRESS

HIGH SOCIAL CAPITAL, SLOW SPREAD OF THE VIRUS

S O C I A L R E S P O N S I B I L I T Y

OPINION PIECE BY PROFESSOR ACHIM WAMBACH

ince the beginning of the crisis, efforts have been made around the world to minimise the spread of the virus. It requires great wisdom to strike the right balance of measures. So far, the German government has fared relatively well compared to other countries.

An important factor contributing to the containment of the virus is the social capital of a region. Social capital is a term from the social sciences which refers to the willingness of people to act in a socially responsible manner and to contribute to the community through their individual behaviour. Social capital is measured, for example, in terms of voter participation in regional elections or the proportion of the population in a region that regularly donates blood. ZEW researchers have investigated the relationship between social

capital and the spread of the virus. It has been shown for Italy, Germany and the UK, among others, that COVID-19 spreads significantly slower in regions with higher social capital than in those with lower social capital. Trust in government measures plays an essential role in this context. With the help of mobile phone data, researchers observed a greater decline in mobility in regions where trust in policies is higher than in those regions where fewer people

trust politics. The success of crisis policies also depends on factors that cannot be imposed by policymakers. Shops and schools can be closed by decree, but the effectiveness of these measures depends on the population. The higher the social capital and the more the people trust in politics, the more successful the measures are. Federal and state governments can have a positive influence on this, for example by communicating more clearly the criteria according to which restrictions are made or lifted.



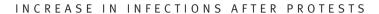
OPINION PIECE IN THE TAGESSPIEGEL (IN GERMAN ONLY)

www.background. tagesspiegel.de/ gesundheit/ schliessungen-alleinekeine-gute-krisenpolitik

ZEW ECONOMIST PROFESSOR SEBASTIAN SIEGLOCH

"Socially responsible behaviour plays a major role in containing COVID-19. Regions with a high level of social responsibility are seeing a slower spread of the virus than regions with lower levels of social capital."

X More information on the study on page 84



'QUERDENKEN' RALLIES

STUDY BY DR. MARTIN LANGE

he 'Querdenken' or 'Lateral Thinkers' protests in November 2020 led to a sharp increase in coronavirus infections in Germany. Up to 20,000 infections could have been prevented.

Researchers from ZEW Mannheim and the Humboldt University of Berlin analysed the impact of two large 'Querdenken' rallies on the seven-day incidence rate by the end of December 2020. The study examined the chain of infection in the counties from which tens of thousands of protestors travelled to the rallies in Leipzig on 7 November and in Berlin on 18 November 2020. In order to determine these precise locations,

the authors of the study relied on information regarding bus travel services offered by a network of bus companies that has specialised in transporting protestors to the 'Querdenken' rallies since summer 2020. After the protests the seven-day incidence rate increased considerably in the counties containing cities that had a bus connection to the rallies, compared to counties without these connections.

This resulted in an increase to the seven-day incidence rate of 40 in the affected counties in the run-up to Christmas. The effect is even stronger in counties where there are bus connections even in small towns. This underpins the causal interpretation of the results, as such bus connections are due to a high demand for these trips. Researchers estimate that between 16,000 and 21,000 COVID-19 infections could have been prevented in the weeks preceding Christmas, had both of these large 'Querdenker' rallies been cancelled.

The analysis therefore quantifies for the first time the conflicting objectives between the restriction on fundamental rights of freedom and the public health measures taken in order to prevent infections. According to the study, personal conduct, such as when individuals violate the measures in place by not wearing a facial covering or by disregarding social distancing rules, can have a big impact on public health. A small, mobile minority of people who do not obey the current hygiene rules can thus pose a great risk to other individuals.



DISCUSSION PAPER www.zew.de/

POLICIES & MEASURES

HOW EFFECTIVE IS THE GERMAN CONTACT-TRACING APP?

VIRUS



INTERVIEW WITH DR. DOMINIK REHSE

The German digital contact-tracing app "Corona-Warn-App" was designed to facilitate and speed up the tracking of infections. But the app is still falling short of its objective. In an interview with ZEW, Dr. Dominik Rehse, the head of the Junior Research Group "Digital Market Design", explains what needs to be done to increase the app's effectiveness.

Why is success so difficult to measure?

The app has been optimised for data frugality. This means that it collects as few data as

possible and shares it with the authorities as little as possible. Much information relevant to decision-making gets lost in the process. For example, the health authorities are not involved at all. As a result, the app does not serve to relieve health authorities; it can only have a supplementary effect.

Has the German contact-tracing app been a success?

Unfortunately, we cannot provide a reliable answer to this question. There are some hard facts to consid-

er, however. For one thing, only around 30 per cent of the population has installed the app so far. For another, only around 60 per cent of the users who tested positive have shared their test results on the app. This has limited the potential for tracking infection vectors.

How can the app be made more effective?

We should set up a living laboratory for the contact-tracing app involving the Robert Koch

Institute, service providers, health authorities and researchers from a variety of disciplines. The laboratory would systematically test measures for dissemination, use optimisation and success measurement. Though there are many ideas for improving the app, many come with both positive and negative effects. That's why it is important that tests be as realistic as possible. The knowledge gained in the lab should contribute to the further development of the contact-tracing app.



SCREENING GAP

RAPID TESTING EASES FEARS

ZEW EXPERT BRIEF BY DR. SIMON REIF AND SABRINA SCHUBERT

he coronavirus pandemic has led to a decline in cancer screenings, in particular during the first wave of the pandemic in spring 2020. This could have a negative impact on overall public health. Large-scale rapid testing could ease the fear of contracting COVID-19 during screening appointments.

Patients decide against cancer screenings because they worry about a possible infection with the coronavirus. Several studies conducted in Germany, the USA and Great Britain find a relation between high infection rates and low usage of preventive care. This correlation was confirmed by ZEW economists who analysed the Google search frequency of "risk of infection" and "cancer screening". They found that in 2020 in Germany the search frequency of "cancer screening" was lower when the frequency of "risk of infection" was high. Based on this finding, measures

are needed to reduce the subjectively perceived risk of infection and to increase the demand for preventive medical services again.

To address this prevention gap, physicians could carry out free routine tests during appointments. With such large-scale testing, infected persons could be identified, at least to a certain extent, and prevented from entering the practice. If the expected benefit of screening outweighs the perceived risk of infection, catch-up effects would also be conceivable. However, it is necessary to establish a comprehensive testing system so that the capacities of outpatient care are not overloaded. 'Should rapid tests be used in this or another area?' is the wrong question to ask. It is crucial to ensure that all citizens have access to all available options – self-tests, testing centres and medical practices. In addition, media campaigns or special events, such as World Cancer Day, could also contribute to raising awareness among the population of the importance of screening.



ZEW EXPERT BRIEF (IN GERMAN ONLY) www.zew.de/ PU82395

INEQUALITY FROM

SCHOOL CLOSURES

E D U C A T I O N P O L I C Y



INTERVIEW WITH DR. GUIDO NEIDHÖFER

School closures have helped contain the spread of the coronavirus – but they have also had negative effects on learning outcomes. Without the right digital concept for home learning, the policy can exacerbate educational inequality.

Are coronavirus-related school closures effective?

School closures were inevitable from an epidemiological point of view. But while there has been much

discussion about whether to close schools, scant attention has been paid to ensuring that all students are reached equally. We completed a study to examine the impact of the closures. We found significant negative effects, especially when the closures were protracted.

#ZEWQUOTE



https://zewquote.podigee. io/4-schulschliessungen More information on the study

More information on the study on page 52

What forms of inequality did the study find?

We examined how school closures affected knowledge and concentration in primary school children. Children from disadvantaged fami-

lies showed deficits in learning, while children whose parents have degrees in higher education tended not to have any. In normal face-to-face classes, effects on performance due to differences in the family is partially offset because everyone has roughly the same learning environment. School closures increase inequality because children must learn at home. If school closures are not accompanied by appropriate concepts for home learning, they can exacerbate educational inequality.

How can learning at home be better designed?

The coronavirus pandemic is an opportunity to bring today's digital technology into schools.

Instead of being tied to physical classrooms, instruction needs to be possible at home, regardless of the family situation. This is the only way to provide all children an even playing field for learning.

EU RECOVERY PLAN IN NEED OF IMPROVEMENT

N E X T G E N E R A T I O N E U

STUDY BY PROFESSOR FRIEDRICH HEINEMANN

ith the 'Next Generation EU' fund, the European Commission aims to limit the economic impact of the COVID-19 pandemic. What is at issue in the Council is not so much the size of the package as its allocation among the Member States and aid instruments.

The study investigates the EU Commission's proposal of how the EU funds will be allocated to the Member States and compares this allocation scheme to the expected severity of the recession. In this context, a strong link between these two variables would be a targeted stabilisation policy measure in the sense that it would ease the burden on countries that were disproportionately hard hit by the shock of the coronavirus crisis. Instead of following this approach, the funds of the recovery instrument 'Next Generation EU'



STUDY www.zew.de/ PM7267-1

are to be allocated based on income per capita and the unemployment rate prior to the coronavirus pandemic. As a result, a number of countries would profit in a disproportionate way despite the fact that the effect of the recession there is likely to be less pronounced compared to the European average. The study is also critical of the planned gradual pay-

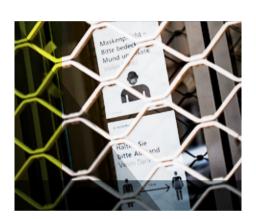
ment scheme. Under the current proposal, around 75 per cent of the recovery fund will only be made available after 2022, when it would be far too late. Moreover, this would have a procyclical effect, as the stimulating impact would take effect at a time when the economy will most likely already have recovered. This could even increase economic fluctuations instead of smoothing them. Another criticism of the study was that the provisions for the use of the funds are hardly binding at all. The recovery fund rewards countries that had high unemployment rates before the crisis without providing strong incentives for labour market reform. There is a risk that the conditions for structural reforms attached to

PROFESSOR FRIEDRICH HEINEMANN ON THE EUROPEAN COUNCIL SUMMIT

"There is no doubt that a joint European response is important. According to the current plans by the European Commission, however, the money not only comes much too late but is also being misallocated."

the funds will remain non-binding. According to the study, there are also positive aspects to the Commission's proposal in terms of its funding priorities, which place emphasis on climate policy and digitalisation – policy areas that promise true European added value. However, this comes with exceptions, as the coronavirus package also proposes spending increases for European agricultural policy and coal regions. The study concludes that the success of the package is not guaranteed, as much remains to be done with regard to its implementation.

DIGITA LISATION & THE ECONOMY CHANGE





N G E
N G E
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H A N G

The COVID-19 pandemic has changed the economy. At the same time, it has revealed deficits in financing, digitalisation, innovation and work organisation. ZEW has contributed to the public discussion by conducting studies on insolvency, self-employment and start-ups, together with the effects of the crisis on R&D, digitalisation and remote work. Its researchers have also suggested a host of measures to remedy the economic problems caused by the pandemic.

C H A N G E

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CHANGE

CHANGE

STATE AID CREATES BACKLOG

CORPORATE INSOLVENCIES

STUDY BY JULIAN DÖRR, DR. GEORG LICHT AND DR. SIMONA MURMANN

n response to the first coronavirus-related lockdown, particularly small and medium-sized enterprises in Germany received easy access to extensive state aid in order to strengthen the liquidity position of cash-strapped firms. However, the untargeted financial support could have further negative consequences for the national economy, as it has contributed to a backlog of corporate insolvencies.

The ZEW study compares the creditworthiness of companies in the pre-crisis period July 2017 to December 2019 with the COVID-19 crisis period April to July 2020 using data from the Mannheim Enterprise Panel (MEP) and covering approximately 1.5 million companies. In particular, very small, financially weak companies, which under normal economic circumstances would have been highly likely to file for insolvency, were kept alive without the prospect of successful recovery. Usually, insolvencies lead to employees moving to other, more efficient and creative companies and to capital flowing away from insolvent to economically sound companies. This process is, however, disrupted if companies that are unable to



STUDY
www.zew.de/
PU82411-1

survive on the market without policy support are saved from bankruptcy. The study shows that in the sectors particularly affected by the crisis, fewer than half as many companies filed for bankruptcy as would have been expected on the basis of pre-crisis data. This difference is particularly pronounced for micro-enterprises with up to ten employees, while it becomes less significant with increasing company size. The study shows that this group of companies accounts for the vast majority of the backlog of about 25,000 company bankruptcies. Furthermore, the analysis reveals that the insolvency backlog among micro-enterprises can largely be attributed to companies that were already financially weak before the COVID-19 crisis. For companies with a good credit rating, on the other hand, virtually no backlog of insolvencies can be observed.





DIGITALISATION HELPS TO OVERCOME THE CRISIS

SOLOSELF-EMPLOYMENT

ZEW EXPERT BRIEF BY PROFESSOR IRENE BERTSCHEK AND DR. DANIEL ERDSIEK

he coronavirus crisis is hitting solo self-employed individuals hard. For a ZEW expert brief, around 16,000 solo self-employed workers in Germany were surveyed between April and May 2020 on how severely they are affected by the pandemic and how digitalisation helps them to cope with the crisis.

The results show that one in four of the solo self-employed persons surveyed consider it likely that they will have to give up self-employment within the next twelve months. Just under 60 per cent stated that their monthly sales have collapsed by more than 75 per cent. At the time of the survey, half of the respondents were no longer able to perform their work, and more than 50 per cent of the respondents applied for emergency aid from the federal government or the federal state. However, 35 per cent of those surveyed expect to see significantly lower sales for

longer than six months. The sectors hit hardest by the crisis are consumer-related industries such as the gastronomic and hotel business, events, tourism and sports, as well as wellness, hairdressers and cosmetics. Around nine out of ten solo self-employed individuals in these sectors have to cope with sales losses of over 75 per cent. Between 73 per cent and 85 per cent in these sectors have applied for emergency aid from the federal or state governments, and between 32 per cent and 49 per cent of the respondents fear that they will go out of business in the near future. Highly digitalised solo self-employed workers are significantly more resilient to crises and less likely to suffer from the negative consequences of the pandemic. Only 28 per cent of the highly digitalised solo self-employed individuals were unable to carry out their activities due to the restrictions. Among respondents with a very low level of digitalisation, this applies to about 75 per cent. The current situation puts solo self-employed individuals under strong pressure to adapt: Around one in three solo self-employed workers stated to have increased their digitalisation level due to the crisis. This is particularly true for further training and schooling, the health sector, social work and stationary trade. The leap towards digitalisation was particularly pronounced among female and comparatively young solo self-employed workers, who are currently working from home or who hold a university degree. However, it should be taken into account that the digitalisation potential also depends on the sectors in which the individuals work as well as on the existing level of digitalisation.



PU81729

ZEW EXPERT BRIEF (IN GERMAN ONLY) www.zew.de/

NOT ALL START-UPS WILL MAKE IT

CONSEQUENCES FOR START-UPS

INTERVIEW WITH JÜRGEN EGELN

The COVID-19 pandemic sparked the worst recession of the post-war period in Germany. Many companies have managed to stay afloat thanks to government aid. The pandemic is hitting young, less established companies, such as start-ups, particularly hard.

Are mainly younger companies in financial trouble?

At a fundamental level, there is little difference between established companies and young companies.

Around 70 per cent of all companies have been negatively affected by the COVID-19 pandemic. Among the remainder, 20 per cent have remained stable, while just ten per cent have been positively affected by the crisis. A higher percentage of start-ups report being "very strongly" or "strongly" affected by the crisis (whether good or bad). Therefore, there is a stronger polarisation of effects in newly founded companies than in established ones.

responded to the crisis?

How have they

As in previous crises, companies have been reconsidering their business processes

and adjusting them where necessary. Around one-third of young companies have decided to change their innovation strategy. For example, they change the processes through which they are able to pursue innovations. One-quarter are moving to markets located elsewhere. Some have elected to change their product range. These are strategies designed to weather the crisis.

What can the government do to foster this process?

From an economic viewpoint, it makes no sense to keep all young companies afloat. The difficulty lies in identifying

the ones that have the best ideas. It is important that the federal government support innovative companies in high-tech industries working on technological advancements, because if they fail their knowledge gets lost and cannot be easily reactivated by other start-ups.



#ZEWPODCAST https://wirtschaft-forschungdebatten.podigee.io/4-jungeunternehmen

X More information on page 64

IMPACT ON CORPORATE R&D

RESEARCH & DEVELOPMENT

ZEW POLICY BRIEF BY PROFESSOR BETTINA PETERS

he economic consequences of the coronavirus pandemic are forcing companies to reduce spending on research and development (R&D). However, experiences from past recessions show that innovative companies are significantly more resilient and less likely to lay off workers than companies without innovations.

The ongoing COVID-19 crisis will most likely make conditions for company investments in R&D more difficult. Economic research has shown that R&D is a key driver for growth and, as such, vital for economic recovery after the COVID-19 crisis. This engine of growth is currently at risk. Companies expect a 2.2 per cent decline in spending on innovations for the year 2020. Small and medium-sized enterprises (SMEs) expect a dramatic slump in 2020 and 2021 of nine per cent and five per cent respectively, while large companies anticipate a decline of one per cent. Previous recessions have also shown that crises do



POLICY BRIEF www.zew.de/PU81633-1

not affect companies equally. During the financial and economic crisis of 2008/09, those who suffered most were companies engaged in international trade. Furthermore, small and medium-sized enterprises are more likely to face liquidity and funding constraints as a result of crises. Larger companies, on the other hand, have more internal financial re-

sources and better access to lending markets. While most companies in Germany adjust their R&D expenditure according to the economic cycle and reduce R&D spending during recessions, around 34 per cent of German companies increased their innovation activities in a counter-cyclical way during the financial crisis of 2008/09. As a matter of fact, the coronavirus crisis has forced many businesses to develop new business models at short notice. However, R&D is a collaborative process that requires the cooperation and steady exchange of several people, in addition to the use of technical facilities such as laboratories or workshops. Working from home thus hinders R&D activities. While the current crisis leaves more time for creativity, we will most likely see less counter-cyclical innovation activity than in the financial crisis of 2008/09.

ZEW ECONOMIST AND ISTARI FOUNDER DR. JAN KINNE

"With our AI web analysis model developed at istari.ai we can categorise the companies affected by the COVID-19 crisis into different groups, depending on the context in which the pandemic is mentioned. In this way, for example, companies that report closures can be distinguished from those that perhaps only announce changed opening hours."

✗ More on istari.ai at: https://istari.ai/en/marketanalyses-corona BETTING ON THE DIGITALISATION
OF THE ECONOMY

DIGITAL VACCINE

ARTICLE BY PROFESSOR IRENE BERTSCHEK

he coronavirus crisis laid bare Germany's deficits in digitalisation. At the same time, it has helped give the German economy a digital boost. Now is a propitious moment to embrace new technology. Politicians have realised that there's no going back. The measures in the German federal government's 'future package' are not entirely new, but they do send a signal that society must move forward. The prerequisite of progress is rapid, general purpose digital technology — deployable in all areas of the economy and a driving force of innovation. It is important that we take advantage of the current momentum to

create innovative products in transport, expand online services, generate better decisions in the healthcare sector and develop secure databases and assessment methods.

New technological developments such as AI, high data availability, rapid broadband, high-performance storage and increased computing capacity will pave the way for the post-pandemic phase. The current moment affords us the opportunity to explore new possibilities, test new applications and enter into new collaborations with research institutions or start-ups. For the economy, this means generating ideas or further developing those introduced during the lockdown. We need software that gives products and services intelligent functions, data that improves their utility and experts who develop the software, evaluate the data and draw the right conclusions. Digitalisation is less important for its own sake than because it offers solutions to many challenges. It paves the way for innovation and thus for more productivity and prosperity. It is nothing less than a COV-ID-19 vaccine for the economy.

REMOTE WORK AFTER THE

PANDEMIC

UNTAPPED POTENTIAL

ZEW EXPERT BRIEF BY JUN.-PROF. SUSANNE STEFFES

hough the coronavirus crisis shows just how well working from home can function in Germany, it also shows the catching up that could be done. So far, in almost all private sector companies to date, the potential for employees to work remotely has not yet been fully realised.

An expert brief from ZEW Mannheim together with the Institute for Employment Research (IAB) shows which jobs have the potential to be done from home. Before the coronavirus crisis, more and more professionals were working remotely. Depending on the type of work, however, remote work use varied greatly. In all the professional groups studied, it was found that more people could work from home, provided that the job was suited to mobile office work and the right technology was available. Especially for job types in which the proportion of those work-

ing from home was already quite high, such as IT, natural sciences, and commerce, there was still considerable room for improvement in terms of exploiting work-from-home potential. This is especially true for traditional office jobs, where up to 30 per cent of employees could additionally be working from home.

The researchers point out that the kind of job activity plays a central role when making use of remote work options. The majority of employees in the companies surveyed worked in specialised jobs, with 23 per cent of employees working at least occasionally from home, while the proportion of employees with specialist or expert jobs who worked from home

was more than twice as high at 61 per cent. The scope and structure of activities in the various job types also revealed the untapped potential of working from home, since the more time an employee was spending on activities that could be done from home, such as communication or computer work, the greater the likelihood that the person could work remotely. On the other hand, a higher proportion of work with machines and equipment was associated with a lower remote-work probability.



ZEW EXPERT BRIEF (IN GERMAN ONLY)

www.zew.de/ PU81595

ZEW ECONOMIST PROFESSOR MELANIE ARNTZ

"The lockdown measures could reinforce traditional gender roles in families. While working from home allows mothers to increase their working hours, they also have to assume more household and child-caring responsibilities, especially if fathers cannot work from home."

More information on the study on page 54

L A S T I N G C H A N G E S

ZEW SURVEY BY DR. DANIEL ERDSIEK

n light of the changes to organisational processes that businesses have had to make due to the COVID-19 pandemic, many firms have realised that there are more tasks that can be carried out from home than previously expected. Many companies plan to keep their remote work arrangements after the crisis.

In the business-related services sector, more than 50 per cent of companies – and in the manufacturing sector, more than 40 per cent – are reporting digital learning effects. About one in three companies had to invest in new technologies in the short term in order to make remote work arrangements available during the crisis. Especially in larger companies, the coronavirus pandemic is leading to a long-term expansion of remote work opportunities for their employees. Around 75 per cent of companies in the information industry with 100 or more employees ex-

pect a permanent increase in home-based work, for example. This figure is 64 per cent for medium-sized companies and 40 per cent for small companies with 5 to 19 employees. In the manufacturing sector, more than half of the large companies expect a permanent increase in remote work use as a result of the crisis.

A possible reason for the increased use of remote work arrangements even after the pandemic may be the experience gained during the crisis that fewer activities than previously assumed have to be done in the main office — a lesson which larger companies in particular are learning. The investments in new technologies will therefore also pay off in the long term.

Before the outbreak of the coronavirus pandemic, only one in four companies in the manufacturing industry offered their employees to work regularly from home. This share has now risen to almost 50 per cent. For the period after the crisis, around 37 per cent of companies plan to continue using remote work arrangements. The information economy is also increasingly relying on remote work as a result of the pandemic. Even before the crisis, around one in two companies in the information economy already made use of mobile work, since these sectors involve a large number of tasks that can be performed remotely. In the long term, almost two thirds of companies are now planning to offer remote work arrangements even after the crisis. Companies also assume that an increasing proportion of employees will regularly make use of remote work.



ZEW BUSINESS SURVEY IN THE INFORMATION ECONOMY

www.zew.de/ PM7293-1

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WAGES AND EMPLOYMENT

INTEGRATION OF MIGRANTS

DIGITALISATION OF LABOUR

COVID-19 AND
EDUCATIONAL OUTCOMES

SOCIAL MOBILITY

REMOTE WORK



ACTING HEAD

PD Dr. Friedhelm Pfeiffer

DEPUTY HEAD

Prof. Dr. Melanie Arntz

Dr. Katrin Sommerfeld

H E A D
J U N I O R R E S E A R C H G R O U P
Integration of Migrants



COVID-19-RELATED SCHOOL CLOSURES JEOPARDISE EDUCATIONAL EQUALITY

- School closures have magnified inequalities relating to a child's family background
- Rethinking schooling by making instruction independent of the classroom

School closures have been an effective way of reducing COVID-19 transmission, but they have also had many undesirable effects. Most significantly, they have jeopardised educational equality by augmenting inequalities relating to the children's background. As a ZEW expert brief has argued, the inequalities are especially pronounced at the primary school level, and concern not only subject-area knowledge but also basic skills crucial for school success such as perseverance and concentration.

Children enter primary school at very different levels based on their family situation (see the left graph in the figure). Teachers seek to neutralise some of these differences by working to ensure that all students develop the same skills (see the example for math in the right graph in the figure). In normal class instruction, children progress similarly well during the first months of primary school, independent of their family backgrounds. But school closures and frequent interruptions in instruction due to the coronavirus pandemic have meant that differences in students' family situations have once again had a greater influence on skill development. The expert brief's authors believe that much untapped potential for reducing educational inequalities lies in digital devices. With more than 90 per cent of all sixth-graders having their own mobile phone, the authors argue that more can be done to develop professional online learning systems. In short, we need to rethink our understanding of what school is.

ZEW
EXPERT BRIEF
"Rethinking Schoolin

"Rethinking Schooling"
www.zew.de/PU81930-1

LABOUR MARKETS AND HUMAN RESOURCES

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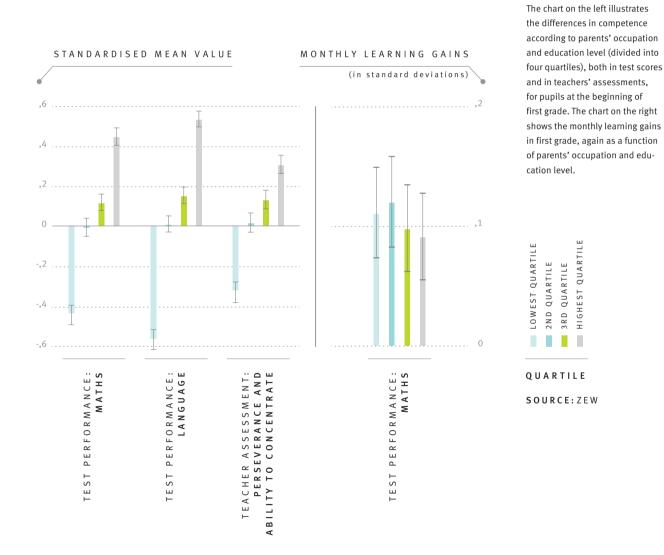


RESEARCH UNITS

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DIFFERENCES IN SKILLS WHEN ENTERING PRIMARY SCHOOL AND LEARNING GAINS IN GRADE 1





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LABOUR MARKETS

LABOUR MARKETS

• Working from home during the lockdown has not benefited mothers who work

PANDEMIC A MIXED BAG

• The lockdown has reinforced traditional family roles

REMOTE WORK DURING THE

FOR WORKING MOTHERS

LABOUR MARKETS AND HUMAN RE

A ZEW study – conducted before the outbreak of the coronavirus pandemic – found that working from home can help reduce the income and work-hour discrepancies between women and men. Mothers with small children in particular have often called for and benefited from remote work. Now that remote work has become very common due to the pandemic, working mothers have experienced a mixed bag. How they fare depends on the distribution of childcare and household work at home.

The ZEW study has found that only in 30 per cent of all households with a child under 13 years of age are fathers more flexible than mothers in their work (see the third bar in the figure). In 32 per cent of households, the women are more flexible than the fathers. One reason for this is that men are more likely to be essential workers or have jobs that require them to work on-site. In about 24 per cent of families, the parents have similar levels of flexibility. In the latter two categories of households, however, mothers are likely to perform a disproportionate share of non-work-related tasks as mothers spend around three times as much time on child rearing and twice as much on household chores as fathers, even in households where both work full-time.

Hence, the pandemic could partly re-establish a more traditional division of household labour. In that case, the wage and career prospects of mothers could deteriorate as employers come to believe that mothers working from home are not as productive. As a result, mothers could benefit less than fathers from pandemic-induced changes in how we work.

ZEW EXPERT BRIEF

> "Working from Home and COVID-19: The Chances and Risks of Gender Gaps" www.zew.de/PU81735-1

COVID-19 IN FOCUS

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COMPARISON OF PARENTS' WORK FLEXIBILITY ACCORDING TO THE MOTHER'S EMPLOYMENT STATUS

LEGEND



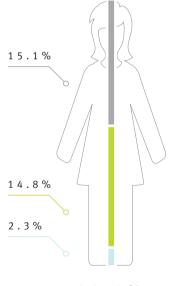






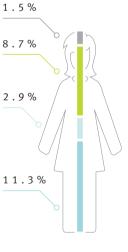


RELEVANT



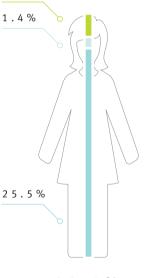
32.2%

MOTHER MORE FLEXIBLE



24.3%

SAME LEVEL OF FLEXIBILITY



2.5%

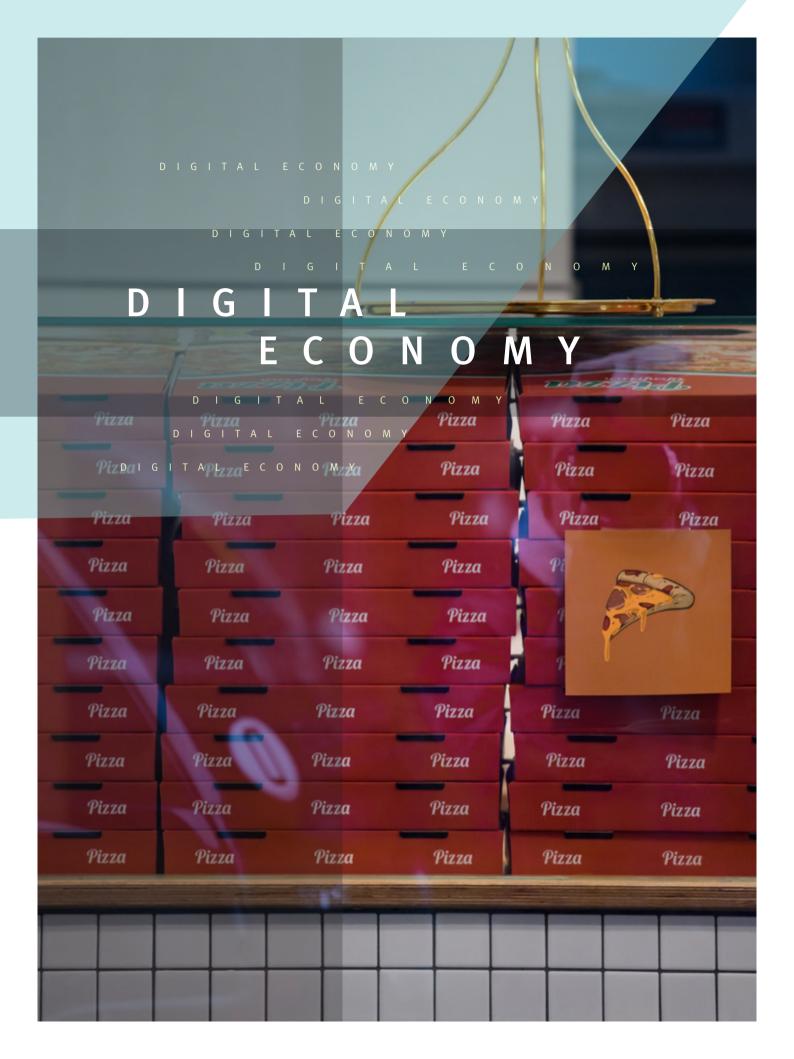
29.4%

MOTHER LESS FLEXIBLE

Flexibility was defined according to the following statuses in descending order: not employed > remote work > on-site > system-relevant

SOURCE:

German Socio-economic Panel 2018.





DIFFUSION OF DIGITAL TECHNOLOGIES



DIGITAL MARKET DESIGN

M E A S U R I N G D I G I T A L I S A T I O N

> ECONOMIC EFFECTS OF DIGITALISATION



HEAD

Prof. Dr. Irene Bertschek

HEAD
JUNIOR RESEARCH GROUP
Digital Market Design
Dr. Dominik Rehse



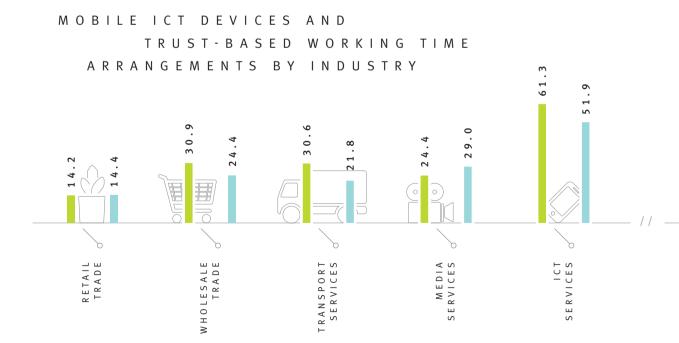
BUSINESSES STAND TO BENEFIT FROM A MORE MOBILE AND FLEXIBLE WORKFORCE

 More autonomy for employees improves the positive correlation between mobile device use and productivity

Faced with the COVID-19 pandemic, many companies had no choice but to give their employees more autonomy in how they organise their work. A study by the "Digital Economy" Research Department has shown that employers can benefit from a more flexible workforce if they provide employees with an adequate digital infrastructure. Companies in the service sector can increase worker productivity when they deploy flexible working models and supply their employees with mobile devices such as laptops or smartphones.

STUDY

"Mobile Information
Technologies and Firm
Performance: The Role of
Employee Autonomy"
www.zew.de/PU81601-1





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DIGITAL ECONOMY

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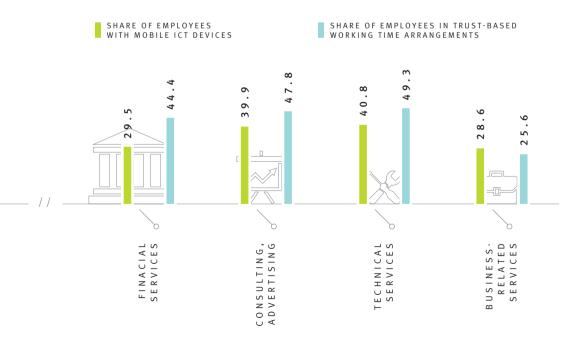
DIGITAL FCONOMY

DIGITAL FCONOMY

D I G I T A L E C O N O M Y

D I G I T A L E C O N O M Y

The study is based on a representative survey by ZEW from 2015, in which over 1,000 service-sector companies took part. It shows that organisational adjustments are necessary to fully exploit the positive aspects of new mobile technologies. Work can be made more flexible along a variety of dimensions, such as work hours or work location. The greatest flexibility comes from a trust-based system that grants employees control of how they organise their work. The analysis shows that the correlation between mobile device use and productivity is stronger if employees also have a high degree of autonomy. One possible reason for this is that in the case of remote work mobile devices can reduce organisational costs and increase efficiency by making it easier to access information.



In the surveyed companies from the ICT services sector, an average of 61.3 per cent of employees have been equipped with mobile ICT devices.

S O U R C E: ZEW-ICT Survey 2015, based on 1,045 observations.

THE ENERGY-EFFICIENCY POTENTIAL OF DIGITAL TECHNOLOGIES REMAINS UNTAPPED

 The use of digital technologies to lower energy consumption continues to lag despite the myriad of applications available

Digital technologies can make energy use more efficient and reduce consumption. But large amounts of energy are also required for the operation of data servers and computing centres.

In 2020, ZEW, in cooperation with IW Consult and the Institute for Industrial Management FIR at RWTH Aachen University, completed a study on digitalisation and energy efficiency. The study was part of a large-scale research project commissioned by Germany's Federal Ministry for Economic Affairs and Energy, which had organised a digital summit on the topic earlier that year.

The study found that only a third of the companies in the manufacturing sector and around a fifth of the companies in the information industry name energy savings as a reason for implementing digitalisation measures. More often, they cite customer requirements and pressure to innovate. Moreover, there's still room for improvement in the energy-efficient design of digital technology. Small and medium-sized companies in particular tend to lag behind in terms of energy efficiency and digitalisation. Energy efficiency measures can have real effects, however. Around one-third of the companies that implemented targeted energy efficiency measures saw a reduction in their overall electricity consumption. Without targeted measures, only 14 per cent of companies in the information industry and ten per cent of companies in the manufacturing sector witnessed a reduction.

STUDY

"Digitalisierung und Energieeffizienz" (in German only) https://www.de.digital/ DIGITAL/Redaktion/DE/ Digitalisierungsindex/ Publikationen/ publikation-downloadschwerpunktstudiedigitalisierungenergieeffizienz.pdf

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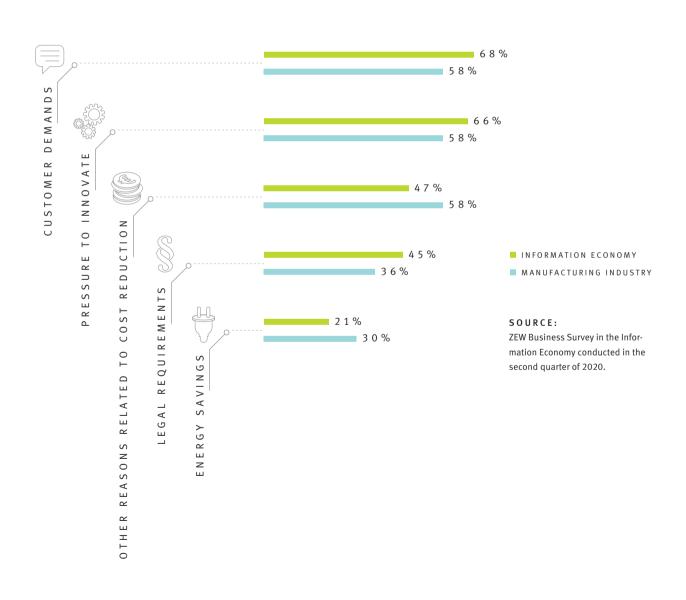
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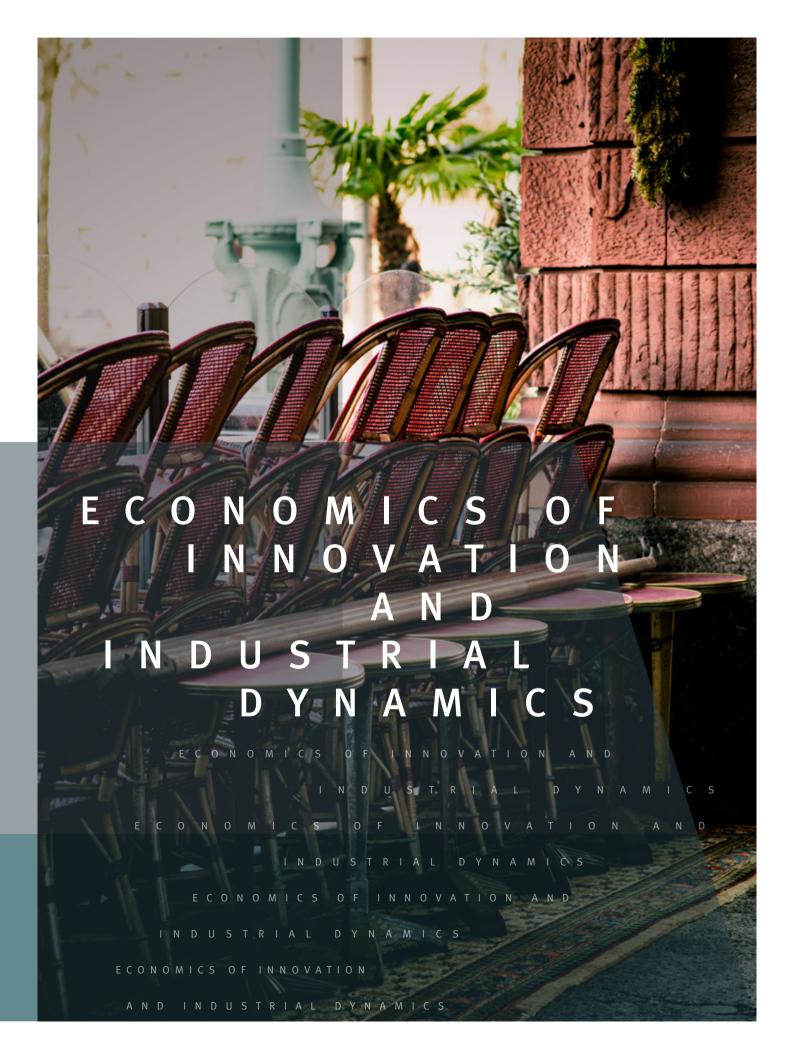
DIGITAL ECONOMY



COVID-19 IN FOCUS RESEARCH UNITS ZEW

REASONS FOR DIGITALISATION PROJECTS IMPLEMENTED IN THE PAST THREE YEARS







CORPORATE REACTIONS TO PANDEMIC AID

TAX INCENTIVES FOR PRIVATE-SECTOR RESEARCH









HEAD

Dr. Georg Licht

DEPUTY HEADS

Jürgen Egeln, Prof. Dr. Bettina Peters, Dr. Christian Rammer

HEAD
JUNIOR RESEARCH GROUP
Competition and Innovation
Prof. Dr. Bernhard Ganglmair

ECONOMICS OF INNOVATION AND INDUSTRIAL DYNAMICS

START-UPS IN THE CORONAVIRUS CRISIS

- The impact of the COVID-19 pandemic has been greater for start-ups
- Tech start-ups in manufacturing have been hardest hit

In May 2020, as part of the IAB/ZEW Start-up Panel, the ZEW researchers asked companies founded between 2016 and 2019 about their experiences during the coronavirus crisis. The survey found that the shares of start-ups and more established companies reporting negative, positive, or neutral effects due to the pandemic were nearly equal. However, it also noted differences in the intensity of the impact. Young companies were more likely to be strongly affected one way or another; whether it was positive or negative largely depended on the industry. Another factor was the company's previous position in the market. A young company that had already gained a market foothold was less likely to be badly affected. The companies hit the hardest had most recently entered the market. The companies that fared well were those offering products that happened to be high in demand during the crisis. On a whole, product line changes or innovative measures had little effect.

As could be expected, the spring lockdown particularly affected consumer-related services. But surprisingly, it also had a great effect on tech manufacturers. One reason was the interruptions in supply and demand, which were particularly consequential due to manufacturers' strong ties to partners on both sides of the value chain. Tech manufacturers also have high financing requirements — a possible source of liquidity problems in a crisis. Unlike young companies in other industry groups, which typically face one problem at a time, tech manufacturers have faced multiple challenges all at once during the pandemic.

INTERVIEW www.zew.de/AM7467-1

Z E W P O D C A S T https://wirtschaftforschung-debatten. podigee.io/4-jungeunternehmen

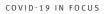
ECONOMICS OF INNOVATION AND

INDUSTRIAL DYNAMICS

CONOMICS OF INNOVATION AND

INDUSTRIAL DYNAMICS

E C O N O M I C S O F I N N O V A T I O N A N D



RESEARCH UNITS

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NEGATIVE EFFECTS ON START-UPS AND ON ALL COMPANIES IN GERMANY



ECONOMICS OF INNOVATION AND INDUSTRIAL DYNAMICS

BUSINESSES W H Y D O PUBLISH IN ACADEMIC IOURNALS?

- A strategy to protect intellectual property
- A means of producing signal effects

As part of the "PUBMOTIVE" project, the research department organised an online workshop together with the Fraunhofer Institute for Systems and Innovation Research to discuss why businesses publish in academic journals. The event, supported by the Federal Ministry of Education and Research (BMBF), offered around 50 participants the opportunity to listen in on discussions between experts from business, professional associations, research, and politics.

Professor Jochen Maas, the managing director of Research and Development at Sanofi-Aventis Germany, and Dr. Christian Tidona, the founder and managing director of BioMed X, presented the company perspective. According to Maas, publication is part of many companies' strategy to protect their intellectual property rights. For example, companies can patent key technologies while publishing on related technologies in order to deter competitors from seeking their own patents. Tidona observed that publishing telegraphs company expertise, which can help recruit highly qualified employees. For his talk, the BMBF undersecretary Engelbert Beyer discussed the ministry's current NKBF funding guidelines. He noted that the guidelines do not create any explicit incentives for the publication of project results. As a consequence, much of the knowledge gained remains inaccessible. But because many are critical of government interventions in company publication strategies, it is unclear whether policymakers should further incentivise publication.

WORKSHOP

"Scientific Publishing by Firms" www.zew.de/AM7493-1

STUDY

"Are Firms Withdrawing from Basic Research? An Analysis of Firm-Level Publication Behaviour in Germany"

www.zew.de/PU82227-1

COVID-19 IN FOCUS RESEARCH UNITS ZEW

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DYNAMICS

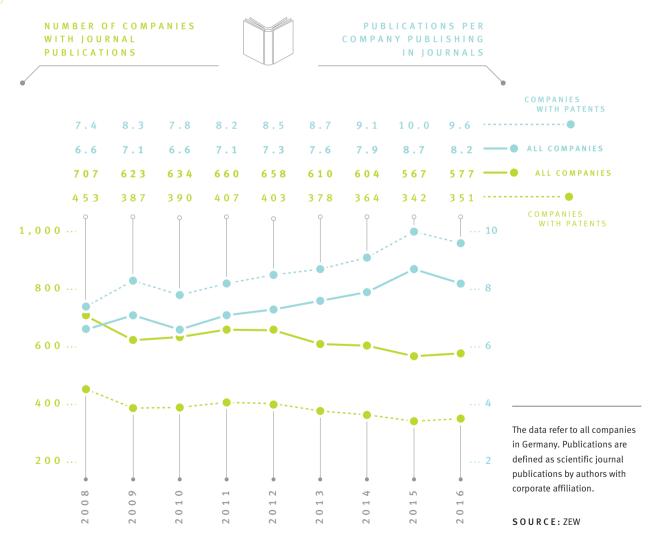
PUBLICATION ACTIVITY INCREASES,

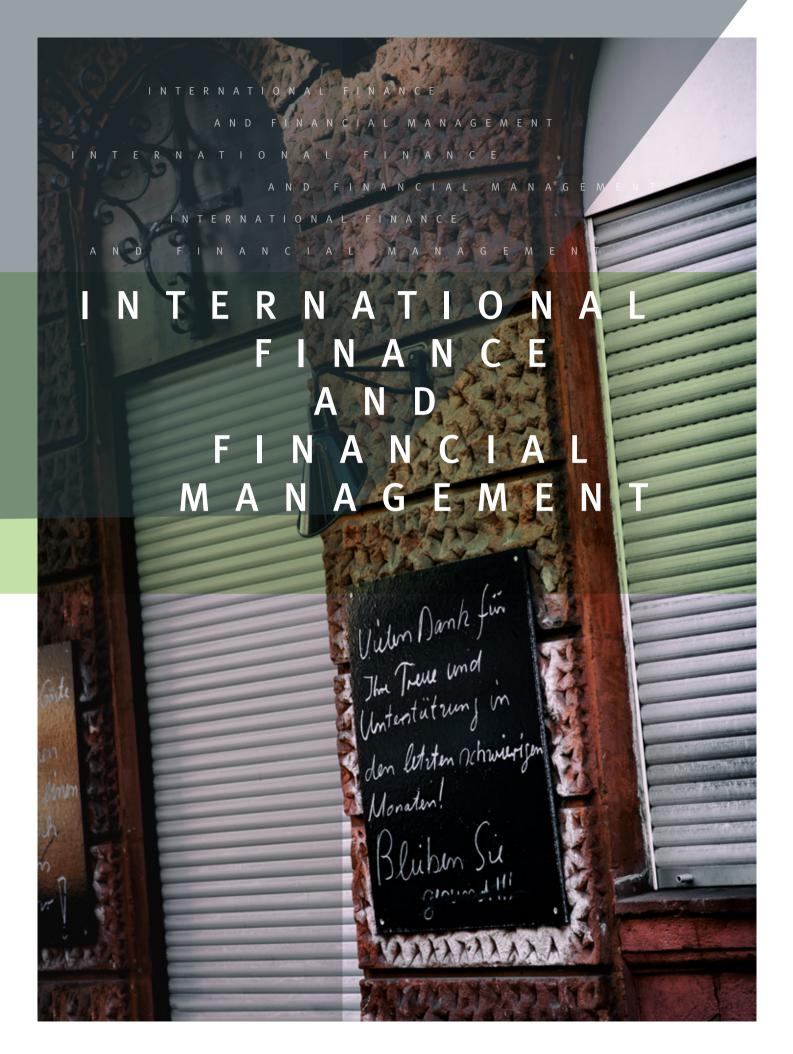
AND WHILE NUMBER OF COMPANIES

PUBLISHING IN JOURNALS DECLINES

INNOVATION

J A M I C S







SAVINGS AND RETIREMENT PROVISION

FINANCIAL LITERACY

EXPECTATION FORMATION ON FINANCIAL MARKETS

BANK LENDING
AND REAL
ECONOMIC EFFECTS

FINANCIAL SITUATION
OF PRIVATE HOUSEHOLDS
IN THE COVID-19 CRISIS



HEAD

Prof. Dr. Tabea Bucher-Koenen

DEPUTY HEAD

Dr. Karolin Kirschenmann

INTERNATIONAL FINANCE AND FINANCIAL MANAGEMENT

INTERNATIONAL FIN

AND FINANCI*A*

INTERNATION

MORE BANKRUPTCIES

AND CREDIT DEFAULTS INTERNATIONAL FI

EXPECTED

A N D F I N A N C I

• ZEW's financial experts on credit defaults during the COVID-19 crisis

The ZEW Financial Market Survey that ran from 30 November 2020 to 7 December 2020 solicited the opinion of 160 financial market experts on the state of the economy. According to their responses government measures to mitigate the economic effects of the coronavirus crisis were successful in stabilising the German economy in 2020. For the first half of 2021, however, experts expect an increase in corporate insolvencies and loan defaults. The number of zombie firms – insolvent firms that are kept artificially alive with loans – are projected to rise as well.

The majority of those surveyed expect an increase in corporate bankruptcies within the first six months of 2021 — around 43 per cent project a slight increase; 55 per cent, a strong one — with a rise in loan defaults in the German banking sector expected to follow. As for loan defaults, 48 per cent expect a slight increase, and 45 per cent reckon with a major surge. Experts believe that savings banks, cooperative banks, and regional banks will be hit above average by the defaults (see the figure).

At the same time, the economic policy measures taken during the crisis could have undesirable effects. 58 per cent expect a slight uptick in the number of zombie firms; 39 per cent fear a strong increase. The experts related the increase to the temporary suspension of the obligation to file for bankruptcy. A total of 61 per cent of those surveyed believe that the suspension has a strong effect. Experts also cited state loans and guarantees from the German development bank KfW as significant factors contributing to the increase in zombie firms.

INTERNATIONAL FINANCE

AND FINANCIAL MANAGEMENT

INTERNATIONAL FINANCE

AND FINANCIAL MANAGEMENT

INTERNATIONAL FINANCE

AND FINANCIAL MANAGEMENT

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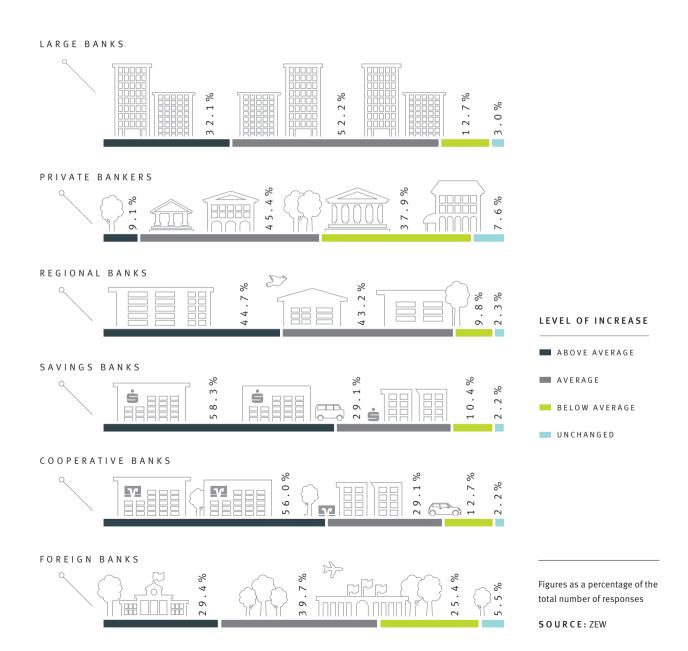
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INCREASE IN

L MANAGEMENT CREDIT DEFAULTS

BY BANKING SECTOR





INTERNATIONAL FINANC

AND FINANCIA

FINANCIAL LITERACY AND FINANCIAL EDUCATION IN GERMANY -

WHAT DO WE REALLY KNOW?

NATIONAL FINAN

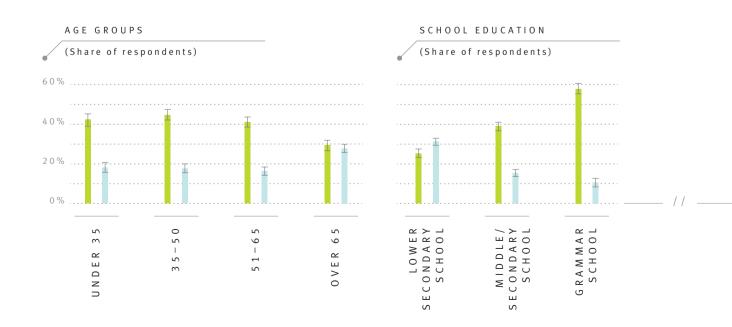
- Lower levels of financial literacy in the former East German territories than in western Germany
- Financial literacy strategy can improve general economic stability

"I AM ALMOST 18 AND KNOW NOTHING ABOUT TAXES, RENT, OR INSURANCE. BUT I CAN ANALYSE

A POEM. IN FOUR LANGUAGES."

When the 17-year-old high-school graduate Naina posted this tweet in 2015, it set off a debate about financial literacy and education in Germany. The topic has since commanded much attention in academic and policy-related discussions.

FINANCIAL KNOWLEDGE ACCORDING TO SOCIO-DEMOGRAPHIC CHARACTERISTICS







M A N A G E M E N T

N A T I O N A L F I N A N C E

N A N C I A L M A N A G E M E N T

E AND

MFNT

Compared with citizens in other countries, Germans have a relatively high level of financial literacy, though it is not universal. In a recent survey by the German Bundesbank, 60 per cent of respondents correctly answered three basic questions about interest rates, inflation, and risk diversification. The number was significantly lower among women, the elderly, and people with low incomes and little education. Financial literacy is also lower in eastern Germany than in the country's western states (see the figure). Scientific studies have found that financial literacy has a positive effect on financial decisions. Moreover, financial education programmes can improve financial literacy and behaviour. Germany still lacks a comprehensive financial literacy strategy and has yet to develop targeted evaluations and quality assurance measures for the programmes on offer. Such a strategy could help improve individual financial decisions while increasing macroeconomic stability.









MATCHING MARKETS

CALLOCATION PROCESSES

BEHAVIOURAL ECONOMICS



HEAD

Prof. Dr. Vitali Gretschko

DEPUTY HEADS

Dr. Marion Ott,

Jun.-Prof. Dr. Susanne Steffes

MARKET DESIGN

M A R K E T D E S I G N M A R K E T D M A R M A R K E T D M A R M A R K E T D M A R

- New virtual seminar on market design
- Speakers from all over the world address a broad spectrum of topics

In April 2020, ZEW launched the Virtual Market Design Seminar. Its purpose is to stimulate scientific exchange and replace on-site seminars cancelled due to the coronavirus pandemic. It is organised jointly by the "Market Design" Research Department, the universities of Paris2, Cologne, and Bonn, and the Karlsruhe Institute of Technology. Guests present their research and discuss it with invited experts and the audience. Talks can later be viewed on the seminar's YouTube channel.

The seminar has addressed a wide range of market design topics thus far. They include: how a market can optimally achieve redistribution goals, how to design the allocation of medical resources like vaccines and ventilators, to allocate support for different technologies of renewables via auctions, how minor discrimination at the start of a career can become more pronounced in the long term and how it can be corrected, and how great the advantage of targeted initial distribution of information is over random information distribution when it comes to network diffusion.

The seminar has generated much interest. More than 1,100 people have signed up for the mailing list and the seminar tweets have been viewed as many as 24,000 times. Scheduled to accommodate most time zones, the seminar attracts a global audience. Speakers have hailed from all over the world: from Stanford University at the US west coast, Harvard University at the US east coast, universities in Europe to Tokyo University (where the seminar starts at midnight). Thanks to the active participation and interest by both the audience and the invited speakers, the seminar is already in its third term.

VIRTUAL MARKET DESIGN SEMINAR http://virtual-mdseminar.com

YOUTUBE-CHANNEL www.youtube.com/ channel/UCwmz 3Z8veQWXy3LTePKMFsA

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D E S I G N

E S I G VNIRTUAL SEMINAR

GENERATES

MUCH

E S I G N INTEREST

D E S I G N

3× VIRTUAL MARKET

SINCE APRIL 2020

DESIGN

SEMINAR

PEOPLE IN THE MAILING LIST

1,100 A STATE OF TWEETS

MARKET DESIGN CAN IMPROVE THE DISTRIBUTION OF LIMITED MEDICAL RESOURCES

- OCOVID-19 has brought to light allocation problems
- Aggregated information is necessary to improve distribution
- Well-planned platforms and markets supply the necessary incentives

The outbreak of the coronavirus pandemic led to a dramatic increase in the global demand for medical resources. The lack of ventilators and skilled personnel has become particularly apparent. The crisis has brought to light two fundamental allocation challenges: on the one hand is the distribution of available resources to where they are urgently needed; on the other is the rapid increase of the supply when necessary.

Both problems can be solved only by aggregating information from discrete locations. In many cases, markets can do this by incentivising parties to reveal their private information, showing where resource would be of greatest benefit to society. But there are good reasons that preclude the use of price-based markets for that purpose. Well-designed markets or platforms can lead to significant improvements in the distribution of limited medical resources without price incentives.

In cooperation with the universities of Bonn and Cologne, the research department has started a project studying how to design markets and platforms for an optimal distribution of limited medical resources. Funded by the Volkswagen Foundation, the project proposes specific design recommendations that can be used in practice during the pandemic and beyond.

#ZEWPODCAST www.zew.de/AM7528-1

MARKET DESIGN

M A R K E T D E S I G N

MARKET DESIGN

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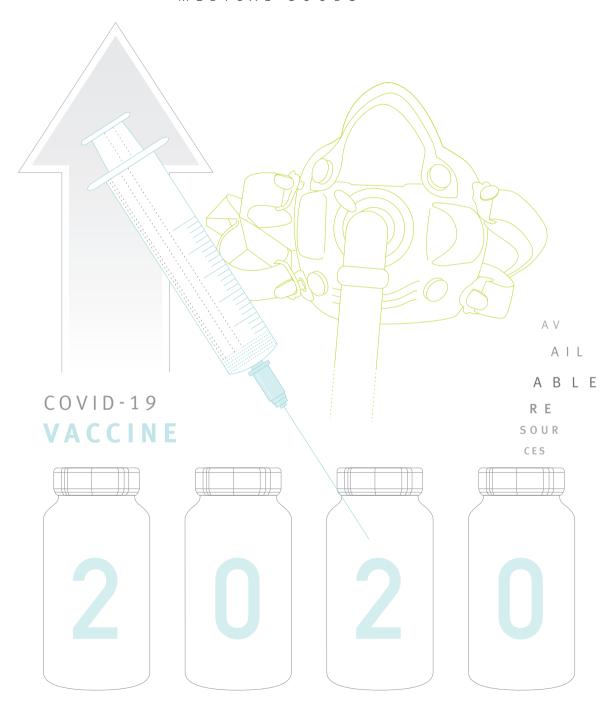
M A R K E T D E S I G N

MARKET DESIGN

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SOCIAL POLICY AND REDISTRIBUTION

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H E A D

Prof. Dr. Sebastian Siegloch

DEPUTY HEADS

Dr. Michaela Slotwinski, Dr. Holger Stichnoth

SOCIAL POLICY AND REDISTRIBUTION

COVID-19 CRISIS - MUNICIPALITIES WILL CONTINUE TO NEED SUPPORT AFTER 2020

- Municipal budgets have dramatically worsened due to the pandemic
- This has hampered the ability of municipalities to invest

A joint study by ZEW and the German Institute of Urban Affairs (Difu) on behalf of the German Association of Cities found that German municipalities will require billions of euros in federal and state aid in addition to the aid they already received in 2020. Without it, they won't be able to help stabilise the economy and work through the investment backlogs they face.

As a result of the coronavirus pandemic and the economic downturn, corporations have faced more bankruptcies, especially in urban areas and in the restaurant, retail, entertainment, and culture sectors. The economic consequences have led to a significant drop in municipal income in 2020, which will likely continue over the next few years. At the same time, municipalities will have to increase social spending.

The ability of the municipality to counter the economic consequences of the COVID-19 crisis varies widely. Indebtedness, structural unemployment, and default risks for local companies can reduce resilience. According to the study, municipalities that were already economically less resilient before the pandemic will find it particularly difficult to cope with the consequences of the crisis and make the necessary investments. With revenue losses and government compensation in 2021 and 2022 uncertain, the probability of drastic cuts in municipal budgets is likely to increase. Without further targeted aid, crisis-prone municipalities will find it difficult to make the necessary investments. Existing regional inequalities will most likely worsen in the medium term.

SOCIAL POLICY AND REDISTRIBUTION

S O C I A L P O L I C Y A N D R E D I S T R I B U T I O N

S O C I A I PO I I C Y A N D R F D I S T R I B II T I O N

SOCIAL POLICY AND REDISTRIBUTION

SOCIAL POLICY AND REDISTRIBUTION





RESILIENCE AND EXPECTED INCIDENCE AS WELL AS REPORTED SHORT-TIME WORK AT MUNICIPALITY LEVEL

RESILIENCE AND EXPECTED INCIDENCE RESILIENCE AND SHORT-TIME WORK **BODY OF THE STATE OF THE S

Both panels use debt, long-term unemployment rate and default risk of local companies as measures of crisis resilience. If two of the three indicators are in the top 33 percent, resilience is assumed to be low. The left figure uses the share of employees in particularly affected sectors as an incidence measure. The figure on the right uses the level of short-time work in the period March to May 2020.

SOURCE:

COVID-19 IN FOCUS

Own calculations based on data from the Federal Employment Agency (2020), INKAR (2020), as well as the Mannheim Enterprise Panel (MUP) and CREDITREFORM (2020).

SOCIAL POLICY AND REDISTRIBUTION

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SOCIAL POLICY

SOCIALLY RESPONSIBLE SOCIAL POLICY AND OF THE CORONAVIRUS

 A ZEW study investigated the connection between social capital and COVID-19 cases in seven European countries

ZEW researchers, in a study with the universities of Mannheim and Bonn, found that COVID-19 has spread more slowly in regions with greater social responsibility than in areas where less emphasis is placed on the common good. The relationship between socially responsible behaviour and the spread of the virus is evident not only in Germany, but also elsewhere such as Italy and Sweden.

The study's authors examined the relationship between social capital, a common measure of social responsibility, and the number of COVID-19 cases during the first wave of the pandemic. Seven European countries were considered: Germany, Italy, Austria, Switzerland, the United Kingdom, the Netherlands, and Sweden.

With the help of econometric models, the authors related social capital at the district level to the number of COVID-19 cases in each of the seven countries. Statistical methods allowed them to compare all districts in a country by the most important economic and social factors, such as gross domestic product, population, economic sectors, and medical infrastructure.

In addition to analysing the number of cases in the countries under review, the researchers examined the case of Italy more closely. They found that regions with higher social capital not only have lower death tolls but also show different types of behaviour. Using anonymised location data from mobile phones, they were able to determine that Italians in regions with high social capital travelled less than fellow citizens in areas with lower social capital.

STUDY

"Social Capital and the Spread of COVID-19: Insights from European Countries" www.zew.de/PU81710-1

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RIBUTION

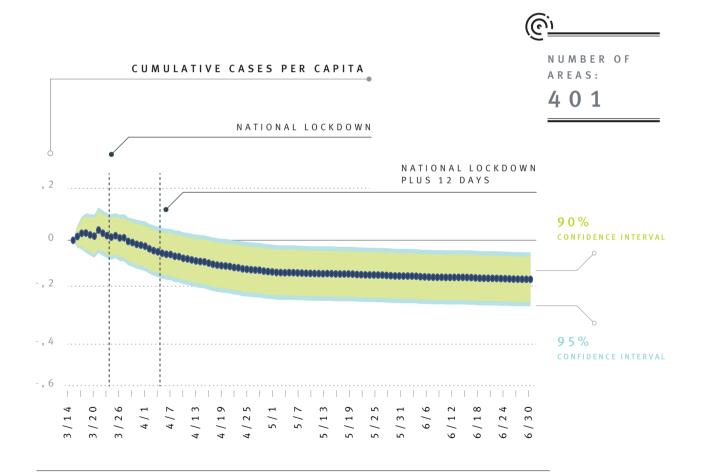
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Y AND REDISTRIBUTION

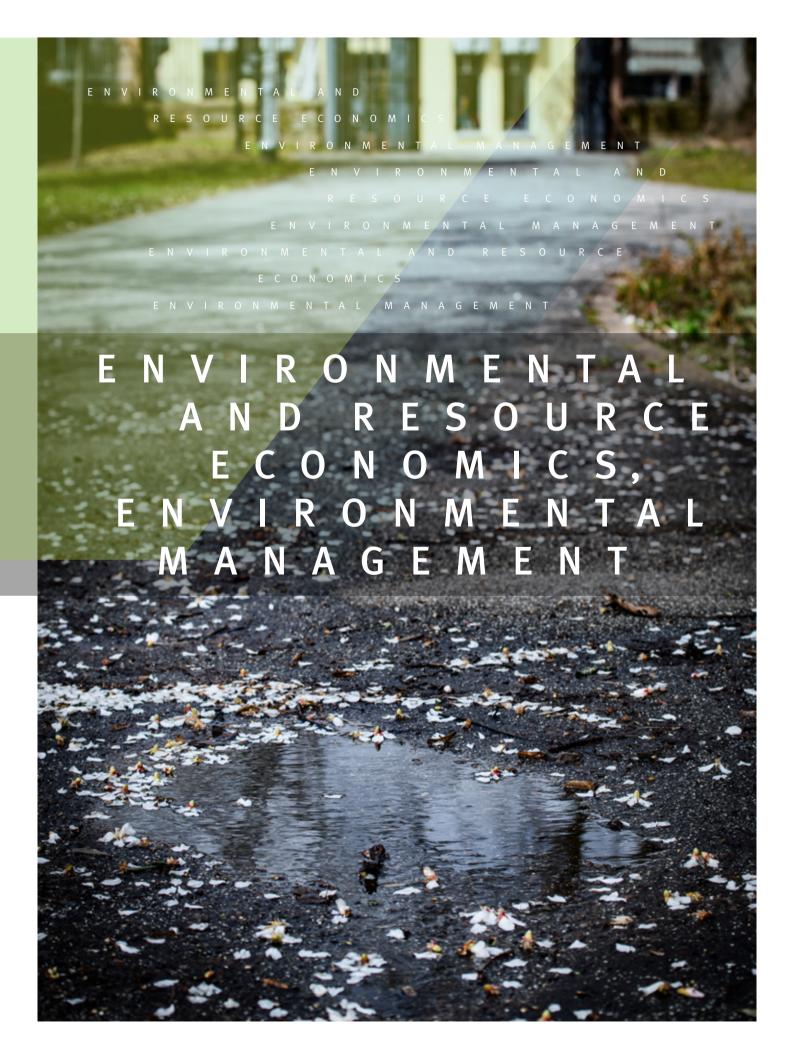
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IMPACT OF SOCIAL CAPITAL
ON VIRAL SPREAD
IN GERMANY



The figure presents the differential evolution of the relationship between cumulative COVID-19 infections per 100,000 inhabitants and social capital across time. The first dashed line marks the date of the national lockdown, the second dashed line the date of the national lockdown plus 12 days to account for incubation plus confirmation time. The dark (light) blue area corresponds to the 90% (95%) confidence interval.





S U S T A I N A B L E B E H A V I O U R

ON CLIMATE PROTECTION

CLIMATE-FRIENDLY ENERGY SUPPLY



HEAD

Prof. Dr. Sebastian Rausch

DEPUTY HEADS

Prof. Dr. Martin Kesternich, Kathrine von Graevenitz, PhD

ENVIRONMENTAL AND RESOURCE ECONOMICS, ENVIRONMENTAL MANAGEMENT

ENVIRONMENTAL.

R E S O U R C E E (

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CHANGES HOUSEHOLD

ENERGY CONSUMPTION

R E S O U R C E

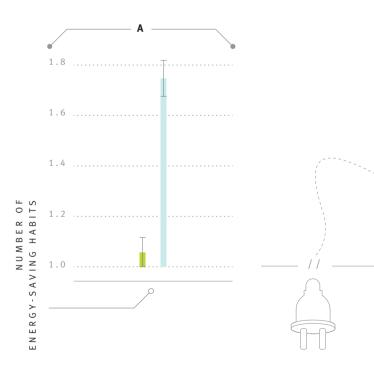
- German energy use declined in the spring of 2020
- Lockdown alters energy habits

In addition to health and the economy, the COVID-19 pandemic has affected the energy industry. The lockdown restrictions and the stay-at-home orders have led to a massive reduction in global CO2 emissions, local air pollutants, and energy demand. The longer-term effects of the pandemic are uncertain, however. The transition to sustainable consumption patterns will depend largely on changes in consumer behaviour and the new habits people develop during the pandemic.

E N V I R O N M

ENERGYSAVING HABITS
BEFORE AND DURING
THE COVID-19
PANDEMIC



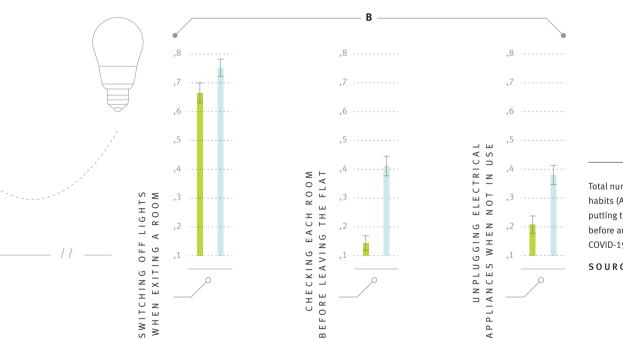


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Ongoing research by ZEW investigates German survey data to determine the link between COVID-19 and energy-saving habits. They found that the number of energy-saving behaviours during the pandemic rose by 67 per cent compared to pre-COVID-19 levels. For example, people are now more likely to switch off lights when leaving a room and unplug electronic appliances after their use. The analysis suggests that this is caused by an increased salience of energy consumption while at home – rather than by pressure to save due to loss of income. The development of energy-saving habits is an unexpected positive side-effect of the lockdown restrictions.



Total number of energy saving habits (A) and likelihood of putting them into practice (B), before and during the COVID-19 pandemic.

SOURCE: ZEW

ENVIRONMENTAL AND RESOURCE ECONOMICS, ENVIRONMENTAL MANAGEMENT

ENVIRONMENTAL AN

ZEW ECONOMISTS

ASSESS EUROPE'S

CARBON LEAKAGE RISK

IVIRONMENTAL

• In a study for the German Environment Agency, ZEW calculated compensatory payments for indirect CO₂ costs in Europe

Together with Berlin's Ecologic Institute, ZEW economists investigated the direct and indirect risks of carbon leakage for a project organised by Germany's Environment Agency. Carbon leakage occurs when a company moves their production facilities from countries with stringent rules governing greenhouse gas emissions to more lax countries. The phenomenon threatens to render climate policy ineffective and undercut the competitiveness of countries with ambitious climate targets. The ZEW study concentrated on the indirect CO2 costs borne by industrial companies. Indirect CO2 costs are the added electricity costs that arise from the purchase of EU ETS emission allowances. This makes manufacturing processes more expensive, especially those that are particularly energy intensive. Some European countries have introduced national compensation mechanisms that factor in the added costs and seek to limit the risk of carbon leakage. ZEW has analysed elements of these mechanisms in view of the incomplete integration of the EU electricity market. ZEW also developed models to study different scenarios for future compensatory payments. It found that in terms of macro-economic parameters such as GDP, compensatory payments in some countries did not lead to significant distortions between the national economies of the EU.





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N O M I C S

N M E N T A L M A N A G E M E N T

N M E N T A L A N D

N O M I C S COMPARISON OF NATIONAL

COMPENSATION MECHANISMS

AND RESOURCE ECONOMICS

Ν Τ Δ Ι

G E M E N T

In Germany companies must not be in insolvency or court proceedings.

In Spain companies must not have any tax liabilities.

	DE	BE	NL	NO	ES	UK	EL	FR	FI
MAXIMUM AID INITENSITY GRANTED	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
ADDITIONAL SECTORS EXCLUDED	No	No	No	No	No	No*	No	No	No
EMISSION FACTOR (T CO2 PER MWH)	0.76	0.76	0.76	0.67	0.57	0.58	0.82	0.76	0.67
RETENTION (GWH PER INSTALLATION)	1	1	1	10	n.a.	n.a.	n.a.	n.a.	1
AID GRANTING PERIOD	2013 – 2020	2013 – 2020	2013 – 2020	2013 – 2020	2013 – 2015	2013 – 2020	2013 – 2020	2015 – 2020	2016 – 2020
FINANCING: EUA AUCTIONS OR NATIONAL BUDGETS	Auction; Budget	Auction; Budget	Auction	Budget	Budget	Budget	Auction	Budget	Auction
MANDATORY ENERGY EFFICIENCY PLAN	No	Yes	Yes	No	No	No	No	n.a.	n.a.

^{*}Companies have to pass an additional test.

SOURCE:

Own illustration based on European Commission (2012b, 2013a-2013d, 2014a, 2014c, 2016, 2017), DEHSt, (2015), ESA (2013). "n.a." means that it is not specified in the national scheme.





TAXES AND DIGITALISATION

CTAX AVOIDANCE



FISCAL RULES
IN TIMES OF CRISIS

PROCUREMENT OF HEALTH GOODS



HEAD

Prof. Dr. Friedrich Heinemann

DEPUTY HEADS

Dr. Zareh Asatryan, Prof. Dr. Katharina Nicolay

JUNIOR RESEARCH GROUP Public Procurement

Leonardo Maria Giuffrida, PhD

CORPORATE TAXAT

AND PUBLIC F

CORPORATE TAXA

AND PUBLIC FINA!

CORPORATE TAXA

- BID RIGGING FOR
 PUBLIC TENDERS
 - Collusion between companies artificially inflates prices
 - The illegal practice wastes millions of euros of taxpayer money

A top priority for EU antitrust agencies is bid rigging, i.e. when competitors agree in advance who will receive a public contract. Bid rigging drives up prices and wastes millions of euros of taxpayer money. A ZEW study examined the consequences of anticompetitive collusion based on a 2009 case in Montreal, Canada, where police detected the presence of organised crime and price fixing among local asphalt contractors. In order to measure the effects of the illegal practices, ZEW determined the price differences between each bid and the lowest offered by the other bidders. The differences between the bids were suspiciously low before the start of the police investigation; once the investigation was underway, the differences increased again (see the figure for an illustration). By contrast, in Quebec, where police had found no evidence of collusion, the pattern could not be observed. The study's findings provide conclusive evidence of collusion and corroborate witness testimony describing mafia activities in Montreal.

STUDY

"Complementary Bidding and the Collusive Arrangement: Evidence from an Antitrust Investigation" www.zew.de/PU81981-1



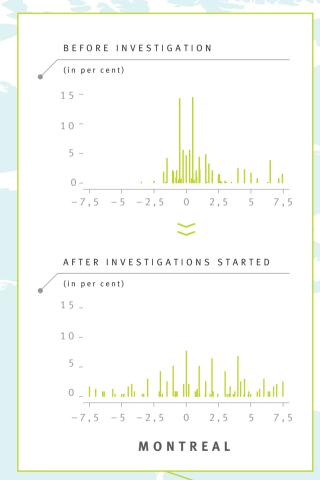
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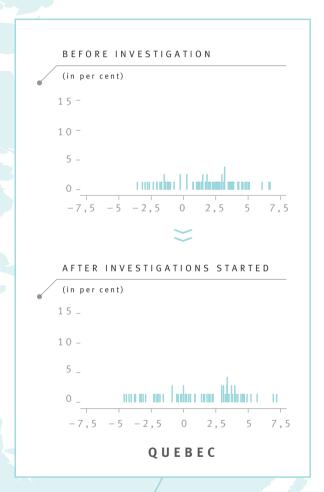
ZEW

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BID DIFFERENCES BEFORE AND AFTER THE START OF POLICE INVESTIGATIONS





Differences between bids (US dollars per tonne of asphalt) submitted in Montreal and Quebec City, auctions before and after the the start of the police investigation.

SOURCE: ZEW



SENSE AND NONSENSE:

NET NATIONAL BALANCES
AND THE EU BUDGET

AND ORPORATE

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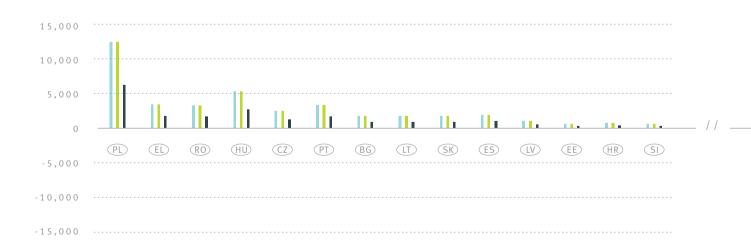
- Net balances of Member States are the focus of much political attention
- But net balances are not suited to measure the advantages of EU membership

A crucial part of the EU budget is the concept of the net national balance. Published annually by each EU Member State, the net national balance reflects the difference between a country's incoming and outgoing payments in the EU budget. The net national balance takes a zero-sum perspective: a positive balance in one country must necessarily be offset by a negative balance in a net payer. Conceptually, this contradicts the aim of the EU budget to generate added value. Nevertheless, a country's net balance plays a significant role in discussions about future EU budgets.

STUDY

"The Net Operating Balances: Variants, Emerging Numbers and History" www.zew.de/PU81504-1

INADEQUACIES OF THE NET OPERATING BALANCES - CONSEQUENCES OF TWO FICTICIOUS SCENARIOS (IN MILLION EUROS)



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I E I A X A I I O N

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FINANCE

A ZEW study for the European Parliament highlighted the inadequacies of the net national balances for determining EU budgets. The scenarios in the figure illustrate two situations in which the net national balance fails to be a helpful indicator. In scenario 1, the EU increases its customs revenue on products from outside the EU. In theory, this should increase the incoming payment of all Member States. But the EU budget compares only incoming and outgoing payments of the Member States, so the added revenue has no influence on national net balances. In scenario 2, Member States make greater payments to third-party countries as part of international cooperation. Intuition says that payments made to countries outside the EU should increase the outgoing payments of all the Member States. But this is not the case due to the way the net national balances are calculated. Rather, the balances signal merely a proportional reduction in net incoming and outgoing payments. From the scenarios, the study concluded that net national balances are not suited to measure the advantages of EU membership.

ments of all the Member States. But this is not the case due to the way the net national balances are calculated. Rather, the balances signal merely a proportional reduction in net incoming and outgoing payments. From the scenarios, the study concluded that net national balances are not suited to measure the advantages of EU membership.

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SOURCE: ZEW



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ZEW IN THE MEDIA

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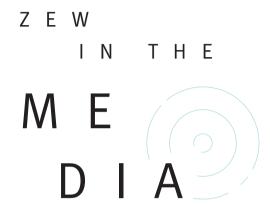
GOES DIGITAL ZEW 104

HEALTH PROTECTION GROUP

106

ORGANISATION CHART AND COMMITTEES

ZEW IN THE MEDIA



PD DR. FRIEDHELM PFEIFFER IN THE

FRANKFURTER ALLGEMEINE ZEITUNG

More help with the completion of study programmes "would on average have a positive effect on those thinking about dropping out."

Regarding a study on the effects of dropping out of university (17/02).

PROFESSOR VITALI GRETSCHKO IN

LES ECHOS

"L'Etat a tout fait pour limiter la dépense des opérateurs télécoms. Au détriment de l'Etat et des contribuables."

Regarding auctions for the allocation of 5G frequencies in France (06/10).

DR. GEORG LICHT IN THE

FRANKFURTER ALLGEMEINE ZEITUNG

"Some larger purchases, and perhaps vacations, will be made up for later. Business trips and visits to the cinema and concert halls will, in all likelihood, not be."

Regarding a study on business insolvencies (19/03).

PROFESSOR IRENE BERTSCHEK IN

DIE WELT

"It would have been better to have eliminated bureaucracy and provided immediate aid for everyone who needed it."

Regarding a study on COVID-19 aid for solo self-employed workers (08/06).

PROFESSOR TABEA BUCHER-KOENEN IN THE

FRANKFURTER ALLGEMEINE SONNTAGSZEITUNG

"The question is: How can I prepare myself for a counselling appointment and indicate that I know what I am doing? One should think of financial advising like some kind of customer counselling by salespeople for other products."

Regarding a study on differences in financial advising received by women and men (23/11).

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PROFESSOR SEBASTIAN SIEGLOCH IN

SWR AKTUELL

"Short-time work is a very good instrument to stabilise the labour market in the short term. Extending it too soon runs the risk of subsidising companies that are merely performing poorly."

Regarding the extension of reduced hours compensation (16/09).

PROFESSOR SEBASTIAN RAUSCH IN THE FRANKFURTER ALLGEMEINE ZEITUNG

"Emissions trading is popular because it establishes a price signal on a market that does not exist."

Regarding the economic effects of measures to protect the environment (20/11).

PROFESSOR ACHIM WAMBACH IN THE WIRTS CHAFTS WOCHE

"Having market power is not illegal. Abusing it is. That's why the EU monitors companies for abusive practices. Amazon is one of the companies it is actively tracking. But some doubt whether this is enough."

Regarding the regulation of online companies in Europe (05/06).

PROFESSOR FRIEDRICH HEINEMANN IN

THE NEW YORK TIMES

"The lack of competitiveness and low growth prospects in countries like Italy cannot be solved with transfers and loans from Brussels. Only comprehensive reforms of labor markets, public administration and the education and innovation system will help."

Regarding negotiations for Next Generation EU and the next EU budget framework (23/07).

PROFESSOR ACHIM WAMBACH IN THE

HANDELSBLATT

"In the future, regulators will have their work cut out for them as they deal will the competitive problems that emerged in the crisis."

Regarding the challenges for competitive regulators caused by the COVID-19 crisis (27/05).

PROFESSOR FRIEDRICH HEINEMANN IN THE

HANDELSBLATT

"The analysis shows that the Next Generation EU fund is not properly designed for the task of stabilisation."

Regarding the Next Generation EU fund (15/07).

ZEW IN THE MEDIA

ZEW GOES DIGITAL



The COVID-19 pandemic has brought with it many obstacles but it has also opened new windows of opportunity. ZEW has tried to make the best of the situation by introducing a host of new digital offerings. Last year it moved all its scheduled in-person events online and launched two new web-based programmes, besides: #ZEWBookTalk and #ZEWlive.

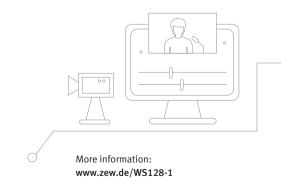


#ZEWBOOKTALK

In the series, leading economists from Germany and abroad discuss their recent books with experts at ZEW. Online viewers can tune in for the livestreams or watch the archived videos later. The first speaker in the series was Professor Clemens Fuest, the president of the ifo Institute for Economic Research. He presented his book "Wie wir unsere Wirtschaft retten: Der Weg aus der Corona-Krise", a plan for saving the coronavirus-beleaguered economy. The second episode featured the Canadian economist Professor Joshua Gans, who discussed his book "The Pandemic Information Gap — The Brutal Economics of COVID-19".

FIRST-HAND INFORMATION ON ECONOMIC POLICY

Thanks to innovative digital solutions, we ensured the continuation of our long-standing lecture series, which features stimulating exchanges with economic luminaries from around the world. In 2020, ZEW welcomed a number of prominent speakers, including Economic Minister Peter Altmaier and the Council of Experts Chair Professor Lars P. Feld.



RESEARCH UNITS

ZEW





#ZEWLIVE

Innovative, provocative, rigorous — #ZEWlive brings together ZEW economists, outside experts and skilful moderators for 60-minute discussions at noon. Launched in April 2020, the series allows viewers to ask questions during the livestream. Many of the events in 2020 addressed COVID-19. What challenges does the pandemic pose for the economy, for politics and for society? How can we best steer our way out of the crisis?

15 APRIL 2020

 $\begin{array}{lll} {\tt CORONAVIRUS-THE\;GERMAN\;ECONOMY\;UNDER} \\ {\tt PRESSURE} \end{array} \\$

with **Dr. Ralf Krieger,** CFO of the telecommunications company Freudenberg SE, and **Professor Achim Wambach.**

www.zew.de/AM7136-1

15 JUNE 2020

REBOOTING THE ECONOMY IN BADEN-WÜRTTEMBERG with **Dr. Nicole Hoffmeister-Kraut**, Baden-Württemberg Minister of Economic Affairs, and **Professor Achim Wambach**.

www.zew.de/AM7224-1

10 NOVEMBER 2020

EUROPEAN ANSWERS TO THE CORONAVIRUS-RELATED RECESSION

with **Sylvie Goulard**, vice-president of the Banque de France, and **Professor Friedrich Heinemann**.

www.zew.de/AM7453-1



The ZEW Sponsors' Association kindly supports the event series #ZEWive and First-Hand Information on Economic Policy. More information at: www.zew.de/WS62-1

19 MAI 2020

EUROPE'S RESPONSE TO THE CORONAVIRUS CRISIS

with **Dr. Franziska Brantner**, spokeswoman for the Green party's European policy in the Bundestag, and **Professor Friedrich Heinemann**.

www.zew.de/AM7184-1

07 SEPTEMBER 2020

COVID-19 AND THE DIGITAL ECONOMY with Luka Mucic, CFO of SAP SE, and Professor Irene Bertschek.

www.zew.de/AM7337-1

ARE YOU INTERESTED IN ATTENDING OUR EVENTS?

We are happy to include you in our invitation mailing list. If you are interested, please write to us at: event@zew.de

Contact: Dr. Daniela Heimberger Phone +49 (0)621-1235-109 daniela.heimberger@zew.de HEALTH PROTECTION

ZEW IN THE MEDIA

HEALTH IN THE PANDEMIC PROTECTION GROUP

How can we protect our staff during the coronavirus crisis? What are their concerns? How do we best maintain operations? And how can we effectively prevent transmission if a worker contracts COVID-19? These are some of the questions that ZEW's in-house Health Protection Group has addressed since the pandemic began. In these times, the ability to rapidly communicate health-critical information for employees is of the utmost importance.

When in March 2020 the German government imposed the first lockdown, ZEW had to act quickly to guarantee the safety of its employees. We immediately assembled a task force consisting of the executive management, the works council and representatives from the HR, purchasing, IT and PR departments. Since then, the task force has met online every two weeks to discuss case numbers, the implementation of internal policies and personnel matters. Every Friday, the team sends employees an email in German and English informing them about current developments and recent measures. The team is also in charge of answering individual employee questions regarding COVID-19 such as day-care closings and support for dependents. This is especially helpful for international employees, who might otherwise have a hard time keeping up with ever-changing policies and regulations.

PROFILE

HEALTH PROTECTION GROUP

- ★ Established in March 2020
- Nine-member team from different ZEW departments
- ✗ Number of meetings in 2020: 36
- Contact: healthprotection@zew.de

RESEARCH UNITS

ZEW



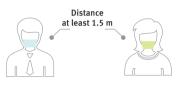
DURING YOUR VISIT, PLEASE OBSERVE THE FOLLOWING GUIDELINES







- ✗ Only one person per elevator
- ✗ Observe the floor markings to maintain distance



Please maintain distance!

PLEASE MIND THE HYGIENE MEASURES

- × Open the window frequently
- Cover your mouth and nose with a tissue or your sleeve when you sneeze
- ★ Wash your hands regularly







FACE MASKS

Face masks or coverings must be worn in all areas of the institute except when you are in your office.



REPORT TO RECEPTION

All visitors must report to reception.



CONTACT FORM

All visitors must fill out the contact form available at the reception.



HYGIENE MEASURES



All guests are instructed to follow the hygiene measures (wash your hands, wear face coverings; face masks are available at the reception if needed).



Virucidal hand sanitisers are available near the entrance and at the reception.



^{*} The management has reduced the presence of its employees in the ZEW building and enabled its staff to work in from home until further notice.

ZEW IN THE MEDIA

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A comprehensive overview of the scientific output and networking activities of ZEW in 2020 can be found (in German only) at: www.zew.de/dokujahresbericht20



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... events, publications or want to visit ZEW with your school class?

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(p.30/31)

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S H Ü T D O W N
I N
I M A N N H E I

Walking through a city without encountering another soul is a strange experience.

Store's are closed and squares and pedestrian areas once teeming with life are empty. The world has seemingly come to a standstill.

THE FEELING IS ONE OF AMBIVALENCE.

Being alone on the streets confers a sense of peace and calm. No masses, no bumping into others, everything quiet and serene, as if you had the city all to yourself. Yet there is also a creeping sense of loneliness. Uncertainty and fear dominate your thoughts. How's the world to carry on like this?

For our 2020 annual report, we have tried to capture the

ALTERNATING FEELINGS OF CLOSENESS AND DISTANCE, DESOLATION AND HOPE

that characterised the mood at the beginning of the pandemic.

D E S O L A T I O

D E S O L A T I O



