

INSTITUT PRO DEMOKRACII A EKONOMICKOU ANALÝZU

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INSTITUT FOR DEMOCRACY AND ECONOMIC ANALYSIS

Think tank of the Economic Institute of the Czech Academy of Sciences

BOOK OF ABSTRACTS

English summaries of recent IDEA studies

May 2020 – May 2021

IDEA **CERGE** 
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How many of us can work from home? IDEA anti COVID-19 # 23. Authors: Matěj Bajgar, Petr Janský, Marek Šedivý, October 2020

The Impacts of the Covid-19 pandemic on mental health. IDEA anti COVID-19 # 22. Authors: Vojtěch Bartoš, Jana Cahlíková, Michal Bauer, Julie Chytilová, July 2020 [▶](#)

The different economic effects of the Covid-19 crisis on women and men in the Czech Republic. IDEA anti COVID-19 # 21. Authors: Andreas Menzel, Martina Miotto, June 2020 [▶](#)

Health consequences of ekonomice crises. IDEA anti COVID-19 # 20. Authors: Kristína Hrehová, Štěpán Jurajda, June 2020 [▶](#)

Startups during the Covid-19 pandemic: experience for Czechia from the USA. IDEA anti COVID-19 # 19. Author: Petr Sedláček, May 2020 [▶](#)

The Covid-19 pandemic and socio-economic inequality in education. IDEA anti COVID-19 #18. Authors: Miroslava Federičová, Václav Korbel, May 2020 [▶](#)

How to reawaken the economy: Soothe, warm up, say some farewells. IDEA anti COVID-19 #17. Author: Filip Matějka, May 2020 [▶](#)

Macroeconomic policy during the coronavirus epidemic. IDEA anti COVID-19 #16. Authors: Marek Kapička, Michal Kejak, Ctirad Slavík, April 2020 [▶](#)

Serological tests for Covid-19 antibodies: What could they be good for? IDEA anti COVID-19 #15. Author: Ludmila Matysková, April 2020 [▶](#)

Using Bluetooth technology for COVID-19 contact tracing. IDEA anti COVID-19 #14. Authors: Ole Jann, Pavel Kocourek and Jakub Steiner (full study in English), April 2020 [▶](#)

Short-time Work and Related Measures to Mitigate Consequences of a (Partial) Economic Shutdown to Mitigate Consequences of a (Partial) Economic Shutdown. IDEA anti COVID-19 #13. Authors: Nikolas Mittag, Filip Pertold (full study in English), April 2020 [▶](#)

Compliance with bans in the coronavirus period: enforcement must be effectively targeted. IDEA anti COVID-19 #12. Author: Libor Dušek, April 2020 [▶](#)

Collecting personal data for smart COVID-19 tracing: How to motivate people and not scare them off. IDEA anti COVID-19 #11. Author: Ole Jann, April 2020 [▶](#)

How should the government's crisis measures be communicated? Through frequent repetition. IDEA anti COVID-19 #10. Authors: Václav Korbel, Vladimír Novák, Michal Šoltés, Lukáš Tóth, April 2020 [▶](#)

How best to communicate with the public? Findings from behavioural economics in the fight against COVID-19. IDEA anti COVID-19 #9. Author: Vojtěch Bartoš, March 2020 [↗](#)

Households' attitudes to infection and to the government measures: The latest survey data. IDEA anti COVID-19 #7. Authors: Václav Korbel, Vladimír Novák, Michal Šoltés, Lukáš Tóth, March 2020 [↗](#)

What behavioural economics can teach us about prevention: another way of fighting COVID-19. IDEA anti COVID-19 #6. Authors: Michal Bauer and Julie Chytilová, March 2020 [↗](#)

The economics of testing for COVID-19: beware of greater damage than benefit. IDEA anti COVID-19 #5. Authors: Jan Kulveit and Jakub Steiner, March 2020 [↗](#)

Insolvency during the Coronavirus period: a proposal for temporary changes to the Insolvency Act. IDEA anti COVID-19 #4. Author: Tomáš Richter, March 2020 [↗](#)

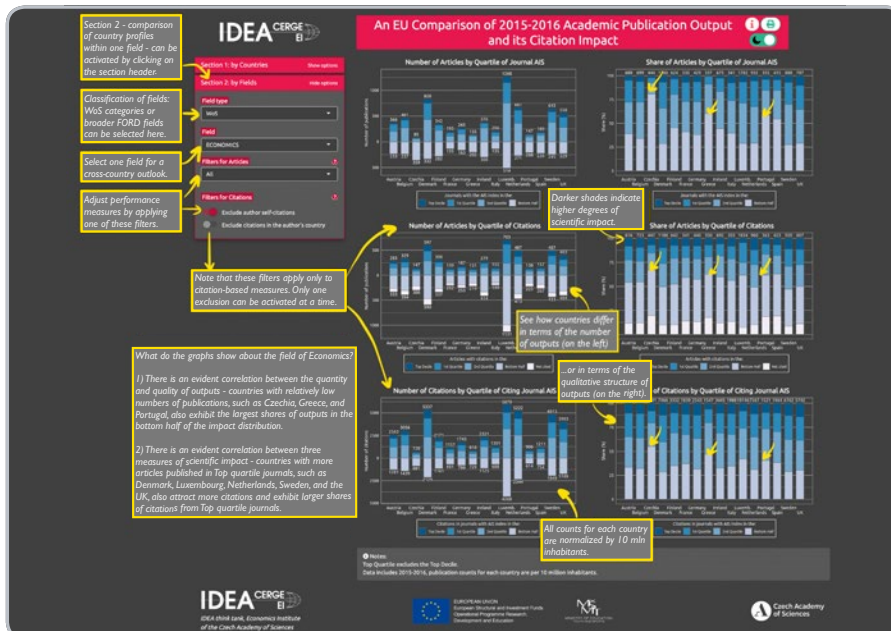
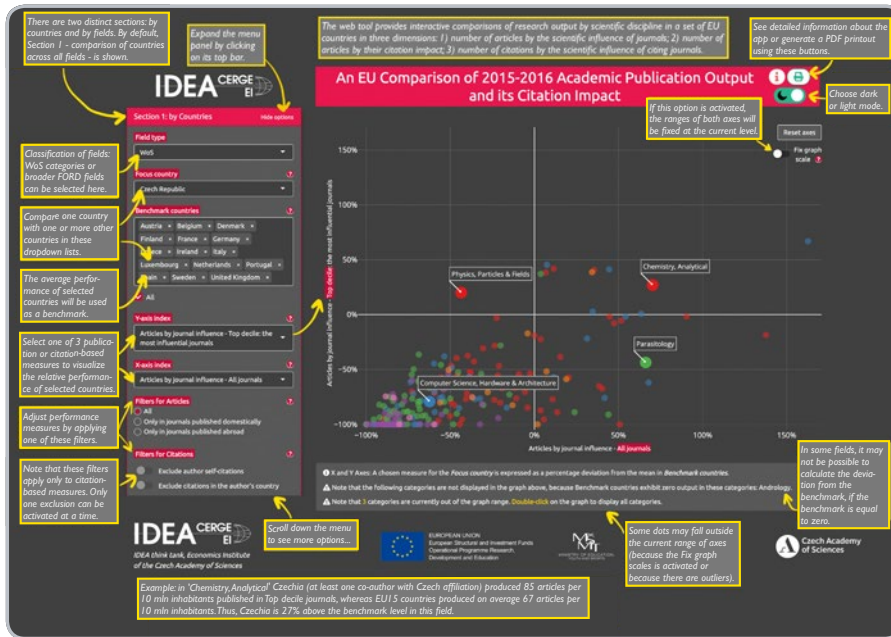
Helping companies to maintain employment: fast, simple, economically meaningful. IDEA anti COVID-19 #3. Author: Daniel Münich, March 2020 [↗](#)

Where do universities recruit researchers? Study and interactive application. Authors: Vít Macháček, Martin Srholec, February 2020 [↗](#)

An EU Comparison of 2015-2016 Academic Publication Output and its Citation Impact

https://ideaapps.cerge-ei.cz/EU_citations/

Video recording of a seminar presenting the application in English.



The Gap of in-person teaching during the Covid-19 pandemic: estimation of invisible economic losses

This calculator is a part of IDEA study *The Gap of in-person teaching during the Covid-19 pandemic: estimation of invisible economic losses* [↗](#)

https://ideaapps.cerge-ei.cz/covid_kalkulacka/ [↗](#)

Kalkulačka odhadu finančních ztrát způsobených výlukou prezenční výuky

Nastavitelné parametry		Původní nastavení	Ztráty na:	
Počet týdnů výuky v běžném školním roce	40		budoucím ročním výdělkem žáka/studenta	394 Kč
Počet týdnů výuky prezenční výuky	1		celkovém budoucím výdělkem žáka/studenta	17719 Kč
Efektivita distanční výuky	50 %		budoucích výdělcích všech žáků a studentů	24.8 mld. Kč
Počet žáků a studentů ¹⁾	1400000		budoucích příjmech veřejných rozpočtů	8.4 mld. Kč
Průměrný měsíční hrubý plat ²⁾	35000 Kč/os.		CELKEM	33.2 mld. Kč
Očekávaný růst reálné mzdy v % ročně	0 %		Částky pro srovnání:	
Průměrný dopad dodatečného roku studia na budoucí výdělek	7,5 %		Roční výdaje na školství	200 mld. Kč
Očekávaný počet let pracovního života	45		Roční výdaje na platy učitelů regionálního školství	75 mld. Kč
Diskontní sazba v % za rok	0 %		Dva antigenní testy žáků či studentů týdně	0.42 mld. Kč/týden

1) Studii IDEA pojednávající o parametrech a způsobu výpočtu najdete [zde](#).
2) www.vyzkum-mladez.cz, www.czso.cz

T A Č R
5 podporou
Technologické agentury
ČR v rámci Programu
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TP01010040.

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of Sciences
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Top research in the public interest

Citation Response to Journal Publications from Czech Research Institutes in 2015-2016

https://ideaapps.cerge-ei.cz/CZ_citations/

Jaký ohlas mají výsledky české vědy?
Oborový citační ohlas pracovišť ČR

Nová interaktivní 1. podobná aplikace v ČR IDEA

Mód 1 Ohlas podle zdrojů citací
Která česká pracoviště jsou nejvíce citována z TOP 10 % nejvlivnějších časopisů?

Mód 2 Ohlas podle citovanosti článků
Která česká pracoviště mají největší podíl na článcích citovaných stejně jako nejcitovanější články v daném oboru v rámci EU15?

Worldwide Journals (Světové časopisy)

- Naše pracoviště má v ČR 80% podíl citací z nejvlivnější desetiny světových žurnálů!
- Naše pracoviště má v ČR pouze 20% podíl.
- Naše pracoviště má v ČR 80% podíl na článcích citovaných stejně jako nejcitovanější desatina článků v oboru v rámci země EU15!
- Naše pracoviště má v ČR jen 15% podíl.

O všech možnostech aplikace se dozvíte v přehledném audioprůvodci.
Pro vstup do aplikace klikněte zde: ideaapps.cerge-ei.cz/CZ_citations
Přijemné bádání přeje tým IDEA!

IDEA CERGE EI Akademie věd České republiky Strategie AV21

A Comparison of Journal Citation Indices

https://ideaapps.cerge-ei.cz/AIS_IF/

A Comparison of Journal Citation Indices
A tool for finding discipline-specific rankings of scientific journals according to their citation indices

Menu

- Dark mode
- Field: All journals
- X-axis index: IF (2019-weighted)
- Y-axis index: AIS (2019-weighted)
- Select journals to highlight: Select a journal, Deselect all journals
- Highlight Nature Index journals
- Only Open Access Journals
- Journals in which Czech authors have published
- Proportional size by CZ authors
- Highlight CZ/SK journals
- Set the number of publications in each journal
- Show journals' names
- Reset filters, Save page to PDF, Save graph only to PDF

Select broad fields:

- Agricultural Sciences
- Engineering and Technology
- Medical and Health Sciences
- Natural Sciences
- Social Sciences
- Humanities and the Arts

Journal Title, Number of publications, Select journals

Journals' percentiles by AIS (2019-weighted) vs Journals' percentiles by IF (2019-weighted)

IDEA CERGE EI, European Union, Ministry of Education, Youth and Sports, National Science Foundation, Czech Academy of Sciences

Theory of probability for life

https://ideaapps.cerge-ei.cz/anti_covid/en/

Theory of probability for life

Prior probability of being infected (p)
Moderate: 20%

Test sensitivity (s_p)
50%

Test specificity (s_n)
90%

GUIDE

IDEA ANTI COVID-19

Czech Academy of Sciences

CONCEPTS: Probability
Kocourek, J. et al.
PROGRAMMING: Taras Hrendash, Jiri Munich
PRODUCTION: Blanka Javorova, Marketa Malis

What is it about:
Imagine that you belong to a group of people with a certain infection risk level. For example, if you are a worried pensioner who rarely leaves home, your infection risk level is minimal, say 1%. Now imagine 10,000 people belonging to this same group of people. How many of them will get correct test results from a rapid test? How many of them will falsely test positive and be needlessly alarmed? And how many of them will become carefree super-spreaders thanks to a false negative result?
Select the infection probability and the error rate of the test used and let the statics give you the answers.

How many people are truly infected in the group studied:
When the infection probability is 20%: 2000 people are infected out of 10000.

How should I interpret the test results and what does it mean:
(with the chosen infection probability and test quality)

Did I test positive?
Then the probability that I'm actually infected is 69.2% (1800 infected out of 2600).

Did I test negative?
That does not necessarily mean that I'm healthy. The probability that I'm infected is not zero, but 2.7% (200 infected out of 7400)

Probability Theory for Life
IDEA JUNE 2020

THE CASE OF A HUSBAND SHARING A HOUSEHOLD WITH HIS WIFE WHO IS PROBABLY INFECTED

Imagine that the husband tests negative. However, before getting tested, his probability of being infected is high, say $p = 80\%$. Let us consider 10,000 similar households. In $10,000p = 8,000$ of these households the husband is infected, and in the remaining $10,000(1 - p) = 2,000$ of the households the husband is healthy. Out of the healthy husbands $2,000 \cdot s_n = 1,800$ test negative, but also $8,000(1 - s_p) = 8,000 \cdot 0.1 = 800$ of the infected husbands test negative. It follows that in spite of testing negative, the probability that the husband is infected is $p' = \frac{80}{1800 + 800} \cdot 100\% = 30.8\%$. That is quite high and so he should stay in quarantine.



Study 4 / 2021

Who supported their employees during the first wave of the pandemic?

An analysis of the financial support granted through the Antivirus B programme²

APRIL 2021

ŠTĚPÁN JURAJDA, PAVLA DOLEŽELOVÁ, LUCIE ZAPLETALOVÁ

Summary

- This study examines the structure of Czech firms' use of the *Antivirus B* programme in the second quarter of 2020, i.e. during the first “spring wave” of the Covid-19 epidemic. We compare application of the programme benefits with the structure of the economy and with the structure of demand shocks, approximated by the drop in hours worked against those worked in the second quarter of 2019. The study provides an example of how this type of programme could be continuously monitored in the future. The study's findings can be useful when making long term decisions about how to set up tools such as *kurzarbeit* in Czech legislation.
- In total, 315,000 employees in companies with more than 10 employees received financial support from the *Antivirus B* programme in the second quarter of 2020. Expressed in FTE, this translates into support for more than 80,000 full time positions. For perspective, the number of registered unemployed individuals increased by approximately 80,000 between March 2020 and March 2021.

² This study represents the authors' own views and not the official position of the Czech Academy of Sciences Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to Filip Pertold, for his valuable comments and advice. This research was supported by a grant from the Technology Agency of the Czech Republic, ěta TLO2000206 „System of quality of life measurement and assessment in the regional dimension in the Czech Republic“. The study was produced in collaboration with Trexima s.r.o., and was published with support from the Czech Academy of Sciences as part of its AV21 Strategy. Any remaining inaccuracies or errors are the authors' own.

- Companies with more than 1,000 employees were 40 % more likely to draw on support from the programme than small firms with fewer than 50 employees. Whether the employer had a collective agreement in place or not had no impact on the likelihood to draw on support. There were substantial differences between the various branches of the economy in terms of how intensively they made use of available support.
- It is natural to expect that firms which are more heavily affected by the epidemic, measured by reductions in hours worked, would make more frequent use of support than those less affected. In the manufacturing industry, time worked in companies that made use of the support fell by an average by 30 %. In manufacturing companies that did not claim support, the reduction was around 10 %. However, in the accommodation, catering, and hospitality sector, in administrative and supportive activities, and culture, entertainment, and recreation, hours worked were also significantly reduced in companies that did not make use of support; those companies must have substantially reduced the numbers of employees or employee hours.
- Support from the programme was used most intensively in the manufacturing industry, where companies were able to make up for approximately one third of the reduction in time worked, and thus to maintain a relatively large proportion of their employment contracts. Only 10 % of the reduction in time worked was covered by the support claimed in the similarly strongly affected administrative and supportive activities field. When looking at full time equivalents, the manufacturing industry received almost three quarters of all support paid out through the Antivirus B programme. Manufacturing companies with more than 250 employees accounted for 13 % of all hours worked in the business sector in the Czech Republic in the second quarter of 2019. A year later, they claimed as much as 60 % of all support provided through the Antivirus B programme.
- Companies that had already faced a drop in demand prior to the onset of the pandemic claimed support more frequently. A 10 % reduction in overall wages in the pre-pandemic period is associated with a 3 percentage point increase in the likelihood of a company drawing on funding from the Antivirus programme, approximately one-tenth more than the average likelihood of drawing on funding across all firms (31 %).



Study 3 / 2021

Working from home: the possibility or necessity?²

MARCH 2021

JAKUB GROSSMANN, VÁCLAV KORBEL, DANIEL MÜNICH

Summary

- The study describes the use of work from home across socio-demographic groups in the Czech Republic during the coronavirus year 2020. It shows how work-from-home arrangements relate to workers' characteristics, such as their education, industry, gender, and type of household. The analysis reveals the perceived barriers to and benefits of working from home.
- The share of workers from home strongly correlated with the development of the epidemiological situation. The share of employees working from home reached 40% during the first spring wave of the pandemic and only 30 % during the diametrically larger wave in the autumn. The probability that workers switched to working from home was strongly related to their level of education and industry. Working from home was 20 percentage points (pp) more likely for university graduates than for workers with the high-school leaving exam (maturita) and as much as 40 percentage points more likely than for workers without the high-school leaving exam. Employment in finance and IT and in education was associated with 20 pp. more work from home compared to workers in unspecified sectors or, for example, in trade and services. The lowest incidence of transitions to work from home was quite naturally reported by the industry and agriculture sectors (by about 8 pp) and also overall during the autumn epidemic wave (by 5 pp).

² This study represents the authors' view, and not the official position of the Czech Academy of Sciences' Economics institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We thank Miroslava Aleksieva, Matěj Bajgar, Štěpán Jurajda, Michaela Kudrnáčová, Martina Pařízková, Filip Pertold, Dita Stejskalová, Petr Váša, and Jana Vávrová for valuable comments and advice. The data for this research were provided by PAQ Research within a long-term cooperation. This study was supported by the Microsoft Czech Republic and Slovakia, and by the Czech Academy of Sciences within the AV21 Strategy program "Society in Motion and public policies". All possible inaccuracies and errors are the responsibility of the authors.

- The main reason respondents gave for not working from home was the nature of their work. Onetenth of respondents also stated that they preferred to work at their workplace because it suited them better. Furthermore, the same share declared that their employer did not allow them to work from home.
- Workers who did work from home embraced the time flexibility it provided and the time they saved by not commuting to work. On average, their reported productivity was at a similar level as if they had been working in the workplace; women even reported slightly higher productivity at home. A notable share of men with small children reported that they were less focused on work at home. In the future, most workers, including those who did not work from home during 2020, would like to work from home for 50 % of their working hours.
- Greater use of work from home arrangements did not result in safer behaviour within corporate information systems. Almost half of those who worked from home did not have to make any IT security-related changes. The greatest insistence on IT security was felt in the IT and finance sectors, the least in education and culture.
- The group that switched most extensively to working from home consisted of workers with higher education who work in positions that allowed this transition. It is therefore very unlikely that we will see any significant expansion in work-from-home arrangements in the post-pandemic period compared to the situation before 2020. Working from home is primarily hindered by the structure of the Czech economy and the nature of the work performed. Significant changes can be expected only with the possible onset of the phenomena of Industry 4.0. However, that will depend on the further development of information technologies and a sufficient level of digital literacy, with most workers able to use digital technology.



Study 2 / 2021

The gap of in-person teaching during the Covid-19 pandemic: estimation of invisible economic losses²

APRIL 2021

OLE JANN, DANIEL MÜNICH, LUCIE ZAPLETALOVÁ

Summary

- Studies of the impact of school closures and school absences as well as impact studies already carried out abroad into the Covid-19 pandemic period all show, that the gap in in-person teaching caused by the pandemic will have a substantial negative impact on pupils' educational outcomes and will increase educational inequalities. The loss of learning will very likely lower the future earnings of current pupils and students for decades of their productive life.
- Based on estimates of the impacts on education and assumptions about the likely values of key parameters, we have estimated the impact of one week of complete school closure to **50 billion CZK** on the side of the pupils and students and a further **16 billion CZK** in lost future income to public budgets from employees' insurance contributions, in total **66 billion CZK** lost per week of school closure.
- In the optimistic case where distance learning can replace 50% of in-person teaching on average, the loss still amounts to **33 billion CZK** per week. For comparison, the costs of two tests for all pupils and students every week would be just 1.25% of this loss in the case of antigen tests, or 2.5% of this loss in the case of mass PCR tests. The loss represented by a closure lasting half a school year amounts to **660 billion**

² This study represents the authors' view, and not the official position of the Czech Academy of Sciences' Economics institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The research assistants were Tran Thanh Trang and Theodor Kouro. We thank, Štěpán Jurajda, Filip Pertold and Jan Švejnar for valuable comments and advice. The research was supported by the Technology Agency of the Czech Republic within the grant GAMA2 TP01010040 "How to mobilize society's resources against the pandemic". This study was supported by the Czech Academy of Sciences within the AV21 Strategy program "Society in Motion and public policies". All possible inaccuracies and errors are the responsibility of the authors.

CZK, which is more, for example, than the annual state budget expenditures on pensions.

- Our assumptions of the values of our input parameters are based on the international academic consensus, but still come with some uncertainty. Some changes in the assumptions would, however, balance each other out, such that their combined effect on the overall result would be rather small. An interactive on-line calculator of the costs of in-person teaching closures can be found on the IDEA web site under *Výstupy -> Aplikace*.
- Besides the direct financial losses of future earnings, there are also the indirect losses of earnings on the part of the parents who supervise primary age pupils at home (around **1.2 billion CZK** per week) and the additional costs to future public budgets connected to additional social expenditures, which we do not estimate in this study, just as we refrain from estimating other social and psychological costs associated with school closures.
- The losses caused by closures of in-person teaching are not as easily visible as the losses in the productive sectors of the economy. This is due to the fact that the educational losses will only manifest themselves years later in the form of reduced productivity, earnings and public budgets. However, these losses must be considered when proposing measures to control the epidemic both in schools and elsewhere. They must be compared to the additional expenditures on more intensive contact tracing and financial motivation for compliance with such tracing that could keep the virus spreading slowly enough in schools to enable in-person teaching. They must also be kept in mind when targeting and setting the level of restrictive measures in other sectors of the economy. The authors of this study are persuaded that when taking its decisions, the government has substantially underestimated the losses caused by the closures of in-person education during the Covid-19 pandemic in the Czech Republic.



Study 1 / 2021

Social status in Vocational Education and Training (VET) in the Czech Republic over the past 15 years, and an international comparison²

FEBRUARY 2021

VÁCLAV KORBEL A DANIEL MÜNICH

Summary

- The Czech Republic (CZ) has an historically strong system of vocational education and training (VET), which around 30% of first-year high school (HS) students enter each year. How many students should enter VET has often been debated. However, which students select into VET and how their composition has changed over time has been less examined.
- This study maps these phenomena by measuring the social status linked to VET programs in the Czech Republic since 2003. Based on previous literature, we define social status as the relative difference in PISA scores of first-year VET students compared to first year students at other types of high schools. The social status thus reflects which students chose VET, and is the sum of various factors that influenced their choice – the expected quality of education, employment prospects after graduation, and the perception and opinions of parents and primary school classmates. If the relative PISA scores of VET students decreased in comparison to those of students who entered other types of high schools from one PISA wave to another, we can interpret this as a decrease in the social status of VET students.
- We use PISA data from 2003 to 2018. The PISA survey tested fifteen-year-old students in their final months of primary school and early in their first year of HS. The data is representative for the different types of HS. For the international context, we subsequently expand the analysis to include 14 European countries that participated in the 2018 PISA

² This study represents the authors' view, and not the official position of the Czech Academy of Sciences' Economics institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We thank Josef Basl, Karel Gargulák, Štěpán Jurajd, Filip Pertold and Jiří Vojtěch for valuable comments and advice. All possible inaccuracies and errors are the responsibility of the authors. The study received support from PMI Czech Republic and the Academy of Sciences of the Czech Republic within the AV21 Strategy program.

survey and which include a VET program in their education system. In the international analysis, social status reflects not only the preferences of students but also the historical size of different types of HS, national educational policies, and state support of VET programs.

- The results show that the social status of VET programs in the CZ was significantly lower compared to that of other types of HS. The average difference in PISA scores was 113 points across 2003-2018. This represented the difference between the 50th (median) and the 15th percentile of students in the CZ. From an international perspective, this roughly corresponds to the difference between Singapore (1st place) and Serbia (43rd place) in the 2018 PISA survey.
- The social status did not increase over time, meaning that more students with relatively higher scores did not select into VET in more recent years of PISA testing. Outside of a temporary drop in 2006, social status was stable, and was similar for all groups of students, regardless of gender, size of the town where the school is located, or parents' education. This shows that VET was the least preferred option for all groups of students.
- Our international analysis documents that in 2018, Czech VET programs ranked among the lowest in social status of European VET programs, along with Slovakia and Belgium. The social status of VET programs was highest in countries with strong dual education - Austria and Switzerland. On average, social status was slightly lower (by 30 points) in countries which also have a technical education programs in addition to general and VET education.
- Our results confirm that the attractiveness of VET to Czech students is very low. The social status linked to it was stable over time and did not respond significantly to the economic cycles of the past 15 years. This suggests that soft interventions such as information campaigns, scholarships, and other support schemes implemented at national and regional levels have not been very effective in attracting better-performing students to VET education. This cannot be expected to change in the future. The goal of our study is not to argue for or against interventions aiming to increase the social status of VET, nor to consider what share of students should study in VET programs. However, if the Czech Republic decides to work towards higher social status for VET programs, international evidence suggests the following interventions would likely be effective:
 - Increasing the quality and effectiveness of teaching in VET programs, both by raising the competencies of existing pedagogical and non-pedagogical staff and by attracting new high-quality people.
 - Improving the long-term employability of graduates, for example, by teaching more general and soft competencies that enable students to adapt better in the labor market, and by improving the quality of vocational training so that the professional competencies of graduates correspond better to modern developments and are more applicable in the long run.
 - Increasing the permeability of the high school system, enabling students to change tracks during their studies if they find that a track does not suit them. Allowing specialization at a later stage of their studies more often is another option.



Study 9 / 2020

The Unintended Effects of Parental Leave Policies²

DECEMBER 2020

ALENA BIČÁKOVÁ, KLÁRA KALIŠKOVÁ, LUCIE ZAPLETALOVÁ

Summary

- This summative study is based on an academic article by Alena Bičáková and Klára Kalíšková, entitled “(Un)intended effects of parental leave policies: Evidence from the Czech Republic”, which was published in the *Labour Economics* journal in 2019.
- Two reforms to parental allowance in the Czech Republic, in 1995 and 2008, which changed the period during which parents could claim state financial support to take care of their child, did not only affect how long mothers stayed at home with their children, but also had an impact on their risk of becoming unemployed upon returning to the labour market.
- The 1995 reform extended the period during which parents could claim financial support from the state, from three years (i.e. until the child's third birthday) to four. However, it did not change the existing requirement for employers to protect the parent's job for a period of three years. The reform led to an increase in the share of women who remained economically inactive until their child reached the age of four, by an unexpectedly high 37.7 percentage points. As a result, it also reduced unemployment among women with three-year-old children, by 10 percentage points.
- As a result of the extended period of parental allowance receipt, mothers began to return to the labour market later and therefore after the end of the three-year period during which their previous job was protected. This placed them at a greater risk of unemployment upon their return to the labour market. The rate of unemployment among mothers of four- and five-year-olds increased after the 1995 reform by 6.0 and 4.4 percentage points, respectively.

² We are grateful to Daniel Münich and other colleagues for their very useful comments on the working versions of our calculations and text. Any remaining inaccuracies or errors, and any opinions here expressed are entirely our own as authors. We also thank the Czech Statistical Office for providing the data (VŠPS 1994-2013). This study was produced with financial support from the Czech Science Foundation, grant No. 18-16667S and as part of the Czech Academy of Sciences' AV21 Strategy. The study is based on Bičáková, A., and Kalíšková, K. (2019). „(Un)intended effects of parental leave policies: Evidence from the Czech Republic.“ *Labour Economics*, 61, 101783.

- The reform that came into force on 1st January 2008 partially reverted the previous changes. It did so by introducing the possibility of claiming the full parental allowance benefit over a period of less than four years. This reform had the opposite effect on mothers of three- to five-year-olds than the reform of 1995 had had, but to a lesser extent, primarily because not every mother was eligible for this shorter period of support. Insufficient availability of institutional childcare for children under four years of age was also an apparent limiting factor.
- Our findings highlight how important it is to take a broader view when considering family leave policies. Specifically, it is crucial to monitor the impact policy measures have not only on the duration of parental allowance claims, but also on the total time during which parents of young children (primarily mothers) are absent from the labour market. In particular, it is important to observe how much of the overall effect on women's employment can be explained by intentional changes in the length of paid parental leave and how much of it is caused by subsequent involuntary unemployment.
- Reforms to family leave policies that lead to parents being absent from the labour market for longer period should be accompanied by an effective job protection guarantee. Further measures are also needed that would: **(i)** enable parents to maintain their human capital, i.e. their professional knowledge and skills and **(ii)** ease their return to work. The first of these could be achieved for example through the provision of more affordable, high quality training and requalification courses and further education. The second can be achieved through support for flexible working hours and high quality, local, affordable institutional care for children of pre-school age, which accept new children during the school year, not only in September.



Study 8 / 2020

The high costs of low literacy in the Czech Republic

DECEMBER 2020²

JANA KRAJČOVÁ AND DANIEL MÜNICH

Summary

- By means of projections, we quantify the hypothetical impact of providing better education to insufficiently literate fifteen-year-old pupils on the Czech economy's long-term growth in the coming decades, using a number of scenarios. Our projections are not predictions of future trends, but represent hypothetical projections of future trajectories based on what is currently known about the causal relationships between educational achievements and economic growth.
- Insufficiently literate fifteen-year-olds – those who do not achieve score enough in functional literacy tests – face substantial economic and social difficulties later in life. Across the OECD countries, 24% of pupils fall into this category. In the Czech Republic the proportion is slightly lower (21%), and this represents some 20 thousand pupils in an age cohort. Only a negligible share of these pupils attend four-year or extended *gymnazia* (academic upper-secondary schools). These pupils represent about a third in elementary schools, while they represent almost half of vocational / apprenticeship secondary schools (without the *Maturita / Abitur* school-leaving exam). School closures during the covid-19 era will likely increase unequal access to quality education and thus the proportion of under-literate pupils.
- Our projections show that even a relatively small reduction in the proportion of insufficiently literate pupils can, through its positive impact on the productivity of the workforce in the future, have a non-negligible impact on the country's long-term economic growth. Considering the impact over a whole lifetime, even

² This study represents the authors' views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The authors thank Tomáš Protivínský, Dan Prokop, Jana Straková, Arnošt Veselý, Václav Korbel and Štěpán Jurajda for their valuable comments and advice. Any errors are the authors' responsibility. The study was produced in cooperation with PAQ Research and with the support from the Česká Spořitelna Foundation and the Czech Academy of Sciences as part of its Av21 Strategy Programme. The study was published in abbreviated form as part of the monograph „Inequalities in Education as a Source of Inefficiency“ published in cooperation with PAQ Research, and with the support of the Česká spořitelna Foundation.

the least ambitious reform scenario represents an annual GDP addition of 18 billion CZK. This potential impact is far greater than, for example, current expenditure on what is known as “inclusion”, which is close to 10 billion CZK per year. More ambitious reform scenarios yield GDP impacts in the range of hundreds of billions of CZK per year. The gross return on measures to reduce the proportion of insufficiently literate pupils is thus substantially or very substantially higher than the conceivable costs of implementing such measures. Our estimates of the gross return on such reforms may serve as an upper bound when considering how much public spending on measures to raise literacy is worthwhile or acceptable.

- The more substantial impacts of these scenarios are noticeable only after the year 2050, in other words from around 30 years after the intervention. This is because the gradual increase in literacy among low-skilled fifteen-year-olds over a period of ten years as a result of targeted measures will only begin to contribute to an increase in workforce productivity over the course of the following decades, once these more literate year-groups have entered the labour market and once they begin to make up a greater share of the workforce.
- In this study we do not propose or evaluate any specific measures or reforms to raise literacy levels of low skilled. Our analysis is primarily focused on potential returns, rather than costs. Any measures should, nevertheless, be based on more detailed data and analysis of the incidence of insufficient pupil literacy and its causes than the Czech Republic has so far obtained only thanks to international selective surveys such as the OECD’s PISA. Measures should also undergo pilot testing and an analysis of their costs and benefits should be carried out.
- Besides lower future earnings and foregone GDP growth, insufficient literacy among fifteen-year-olds also represents an obstacle to their full integration into society, their enjoyment of the benefits of technological development and globalization more generally, and increases their risk of poverty, unhealthy lifestyles, criminal tendencies, etc. Targeted higher quality education for these pupils would, in addition to the economic returns we have estimated, also result in financial savings on public expenditures, for example through savings on social benefits and spending on security and addressing criminality. Reducing the incidence of insufficient literacy would also give those affected a chance to gain even higher levels of education and thus transmit the positive effects to future generations.



Study / 2020

Grant support and doctoral studies: Analysis of the Grant Agency of the Charles University data²

OCTOBER 2020

VÁCLAV KORBEL

Summary

- Only about half of the doctoral students in the Czech Republic finish their studies. Students have both insufficient financial and non-financial support from universities. One way to support students in their research and studies is through grant competitions.
- This is the first study in the Czech Republic to study the relationship between grant support of doctoral students and their further studies. Specifically, we study the effect on graduation rate and study length at the Charles University. We analyze the effects for all students aggregately and divided into field sections. The grant agency is divided into field sections based on the field of research (social sciences, natural sciences, and medicine). We use data from the Grant Agency of Charles University from 2010 to 2013. One third to half of the doctoral students apply for grant support during their studies. Only one third of projects are supported.
- We match similar students with and without grant support in the analysis. We use matching procedure, which searches for similar students, who received grant support, and students, who applied but did not receive grant support based on their characteristics and their research project characteristics. Our empirical strategy does not guarantee to estimate the causal impact. We interpret our results as a non-causal relationship of grant support on further studies of doctoral students.

² This study represents the author's own view and not the official position of the Czech Academy of Sciences' Economics Institute nor the Charles University Centre for Economic Research and Graduate Education (CERGE). The author is grateful to Martin Srholec, Štěpán Jurajda, Daniel Münich, Filip Pertold, Prof. RNDr. Petr Volf, CSc., Prof. RNDr. MUDr. Petr Maršálek, Ph.D. and Bc. Tomáš Šrom for their valuable comments and advice. The author would like to thank the Grant Agency of the Charles University for providing microdata. The study was produced with support from the Czech Academy of Sciences as part of its Center for Research, Development and Innovation Analysis programme (RaDIAC).

- Our findings show that grant support is positively related to the graduation rate. Students with the grant support graduate more often by 10 to 20 percentage points. It represents an increase from approximately 60% graduation rate to 70–80% graduation rate. The relationship is positive for all field sections but the medicine. However, the relationship is insignificant for all sections with respect to a low number of observations.
- Students with grant support finish their studies 3 to 7 months later than similar students without grant support. This relationship cannot be precisely identified in field sections (social and natural sciences) due to limited statistical power except for medical science students who finish their studies with the grant support more than a year later in comparison to not supported students. Supported students also finish their studies within 3–4 years (standard study length) less often by ten percentage points. It represents a decrease from 28% to 18%.
- A positive relationship between grant support and doctoral studies suggests that grant support can be an effective way of support. The adverse effect on the length of study needs to be, however, taken into account.
- Our study can be understood as a pilot study. With longer time series and more information on the future careers of students, we could investigate other questions. For example: **(1)** What is the causal impact of grant support on studies of doctoral students? **(2)** Are there heterogeneous impacts on different types of students (e.g., based on their field of study). **(3)** Does grant support impact the future careers of doctoral students and their publication record? **(4)** Does it interact with other forms of student support? **(5)** Does grant support at other universities in the Czech Republic have a positive impact on students?
- Grant schemes supporting research from other providers such as the Grant agency of the Czech Republic, the Technological agency of the Czech republic, the Agency for medical research, grant schemes of ministries and the Operational programmes of the European Union should be evaluated in a similar way.



Study 6 / 2020

Personal Political Connections and Efficiency of Public Procurement Contracts in the Period 2007 – 2018

SEPTEMBER 2020

BRUNO BARÁNEK AND VÍTĚZSLAV TITL ³

Summary

- Public institutions in the Czech Republic award public tenders to the value of approximately 14.4 % of GDP every year. Expenditures on public tenders constitute one seventh of the country's GDP and around 35 % of state, regional and local budget expenditures. Public tenders thus play a substantial role in the Czech Republic and represent a substantial cost item within public budgets.
- A non-negligible proportion of public tender suppliers are companies with personal links to political entities. Approximately 1 % of all suppliers have traceable connections to governing parties on the procuring side, and these suppliers together supply 7 % of the total volume of the studied sample of public tenders (53 billion CZK between 2007 and 2018).⁴
- The number and financial volume of public tenders changed substantially between 2007 and 2018 and the pattern of the parties involved in these personal connections also changed. The number and volume of tenders with political connections fell sharply in 2014, but in 2018 that volume abruptly returned to the level seen between 2007 and 2013.
- Public contracts supplied by companies with personal connections to governing parties are on average more than 8 % more expensive than contracts supplied by companies without such connections yet this higher price cannot be explained by higher quality. Notably, contracts supplied by companies with personal connections to opposition parties are not, on average, overpriced.
- Tenders supplied by politically-connected companies are not overpriced when they are subject to the increased monitoring associated with co-financing from European Union funds. Closer supervision of public procurement could thus be an effective method to reduce the negative influence of politically-connected companies on the costs of public contracts.

³ The authors would like to thank Daniel Münich, Michal Šoltés, and Štěpán Jurajda for their useful comments on the draft version of the text. Any inaccuracies or errors and opinions are however down to the authors. The study received support from the research programme Strategy AV21 of the Czech Academy of Sciences.

⁴ This type of personal connection is not the only possible type of political connection, thus these statistics should be interpreted as the lower limit of the total volume of public contracts supplied by politically-connected firms.



Study 5 / 2020

Retirement in the Czech Republic: the role of expectations and health status in international comparison

SEPTEMBER 2020

FILIP PERTOLD, MIROSLAVA FEDERIČOVÁ²

Summary

- The Czech population is ageing, which will have long-term impacts on the economy and society. One of the principal problems is the risk of a future decline of the overall workforce.
- On the basis of the SHARE data we show, among other things, that most older workers retire as soon as they are eligible for an old age pension, whether that is early retirement or standard retirement age. Only a very small percentage of workers take their retirement later than at the moment of pension eligibility.
- At the ages of between 50 and 61 years, almost half of all working men and a quarter of all working women in the Czech Republic declare that they are very likely to work after their 63rd birthday. These values are very similar to equivalent values in Germany, but lower than those in Scandinavia.
- In the Czech Republic we observe that a high proportion of people who do not work beyond their 63rd birthdays despite having previously expected to do so. Only about a third of those who declare a high expectation of working at this age actually go on. This disinclination to work despite previously having expected to do so seems to be unique in Europe. Germany and Scandinavia both report that around 75 percent of working people who expect to work beyond 63 years of age do indeed go on to do so.

² This study represents the authors own view and not the official position of the Czech Academy of Sciences' Economics Institute nor the Charles University Centre for Economic Research and Graduate Education (CERGE). The authors are grateful to Daniel Münich for his valuable comments and advice. The study was produced with support from the Czech Academy of Sciences as part of its SAV21 Strategy programme and Krása pomoci Foundation.

- We should be particularly aware of the fact that even those in highly qualified professions and with university education leave the labour market on average substantially earlier than they had originally planned. Only 40 percent of university educated 63-year-olds work, even though at 55 more of them had planned to do so.
- Among workers aged between 50 and 61 years of age, around 25 percent subjectively consider themselves to have health problems; there is substantial variation in this proportion among groups with different levels of education, and in different types of occupations.
- The substantially higher share of early departure from the labour market observed in the Czech Republic is not affected by the educational or employment structure of the Czech society, nor by the labour force's subjective health status, but by the option of receiving an old age pension from an earlier age than is common in other countries.



Study 4 / 2020

Pension savings schemes with state contributions in the Czech Republic: a prop rather than a pillar

AUGUST 2020²

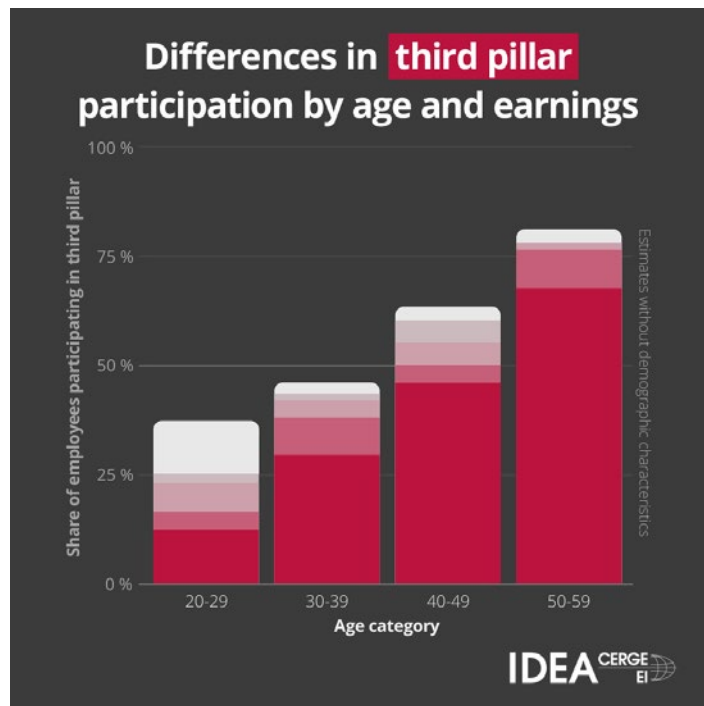
JIŘÍ ŠATAVA

Summary

- The third pillar should appropriately complement the first pillar, which is the cornerstone of the pension system. It should therefore be set up such that the level of payments from third pillar savings reflects how great a proportion of people's net incomes is replaced after retirement by their old age pension from the first pillar.
- In this study we analyse working people's savings behaviour dependent on how large a proportion of their net incomes will be replaced, once they retire, by their state pension from the first pillar. The first pillar old-age pension pays out a lower proportion of incomes for employees with higher salaries and for the self-employed in particular. Payments from third pillar savings should therefore play a larger role for these people.
- The share of self-employed people participating in the third pillar is almost ten percentage points lower than the share of employees. In all age categories, participation among the self-employed is at approximately this level or lower. The differences in third pillar participation between self-employed and employed people do not, therefore, reflect the differences in their net income replacement ratios.
- However, the self-employed people who do decide to save for their pension via the third pillar put aside a higher proportion of their earnings than employees, albeit only by one percentage point. This higher relative deposit rate among the self-employed is not sufficient to eliminate the differences in net income replacement ratios between employees and the self-employed.

² This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The author is grateful to Daniel Münicha and Filip Pertold for their valuable comments and advice. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme.

- The share of employees who participate in the third pillar increases with higher earnings. The participation rate is more than 18 percentage points higher among the highest-earning twenty percent of employees than among the lowest-earning twenty percent.
- The relative value of deposits against earnings declines with employees' higher earnings, unlike the share of participating employees. The relative value of deposits is thus not highest among employees with the highest earnings, but actually lowest. That is true despite the fact that for the highest-earning employees, the share of their former earnings that an old age pension from the first pillar replaces is the lowest.





Study 3 / 2020

Teachers' salaries in 2019: A glimpse of a brighter future ?

JULY 2020²

DANIEL MÜNICH A VLADIMÍR SMOLKA

Summary

- As far as the relative level of pay for teachers compared to other university-educated employees is concerned, the Czech Republic has long occupied a very low position relative to other developed countries. As recently as 2018, the country ranked lowest on this front among all the OECD countries. The relative level of teachers' pay is one of the factors that determine the attractiveness of the teaching profession. The teaching profession needs to be attractive not only in order to ensure a sufficient supply of teaching staff but also to enable selectivity in teacher recruitment, with an emphasis on teacher quality. The national data for 2019, which have recently been published and on which this study is based, show that this situation has begun to improve substantially. If the pledges originally made by the current government are anything to go by, this situation ought to further improve substantially during 2020 and 2021.
- In 2019 primary school teachers' average pay reached 123.5% of the average salary in the national economy, up from 114.3% in 2018. This means that teachers' relative pay level exceeded the previous record, which was set almost fifteen years ago in 2006. The speed of increase in teachers' salaries in 2019 was far greater than the speed of increase in the salaries of other university-educated public sector employees and very substantially greater than that in the private sector. During 2018-2019 teachers' mean and median pay rose by more than 28%. The equivalent growth among university-educated employees in the public sector was 19.8% and in the private sector just 14,1%.
- The youngest teachers saw the greatest rise in their relative salaries during 2019, although their salaries had already been relatively high compared with other age groups in the profession since 2011. Teachers in the middle age category, aged between 30 and 49 years,

² This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to the Ministry of Labour and Social Affairs for allowing us to use the ISPV data collected and managed by company TREXIMA spol. s r. o. The authors thank Štěpán Jurajda, Karel Gargulák, Václav Korbel and Filip Pertold for their valuable comments and advice. We would like to thank the statistics department of the Ministry of Education, Youth and Sports for consultations on wage indicators of the Ministry of Education, Youth and Sports. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme.

continue to receive the lowest relative salaries, reflecting age. Starting salaries for Czech schoolteachers are thus relatively attractive, but that attractiveness swiftly reduces as teachers gain years of experience, whereas their university-educated peers in other professions enjoy dynamic salary increases.

- There is very low variability in teachers' salaries and it does not correspond to the existing diversity in teacher quality. Over-generalised pay in the school system leads to high quality teachers being undervalued and insufficiently motivated, which increases the risk that they may leave the profession or low interest in this profession among young generation.
- During 2019, there was also a substantial increase in the proportion of teachers' pay provided as above-tariff items, which almost doubled. As a result this proportion is now similar to that for other university-educated public sector professions. A not insignificant part of the overall increase in teachers' pay was thus manifested in the above tariff component, as previously promised. Above tariff components are one human resources management tool available at the school level and can take the form of bonuses for effort, strong work ethic or high quality work, or of an external motivator.
- It is also necessary to monitor the motivational aspect of teachers' salaries at the regional level. The main drivers behind differences in relative teachers' pay between regions are differences in the levels of pay for other university-educated employees across the regions. The worst situations in this sense are in Prague and Central Bohemia. The relative level of teachers' pay compared to other university-educated employees looks far more felicitous if we distinguish between pay levels for men and women, since most teachers are women. The relative level of teachers' pay also looks better if median pay is used rather than mean pay, since median pay is not affected by the extremely high salaries in managerial positions that are largely occupied by men. Taking age into account, however, renders teachers' pay relatively low, because the Czech teaching staff is relatively old.
- The reform efforts recently initiated by the Ministry of Education, Youth and Sports, which aim to reduce the inter-regional differences in the level of financing for teachers' salaries at different types of schools have evidently already impacted the inter-regional differences in relative teachers' pay levels during 2019. Between 2018 and 2019 relative teachers' pay in most regions came some way closer to the national average. Nevertheless, Prague and Central Bohemia still have a long way to go to reach the national average.



IDEA anti COVID-19 # 23

How many of us can work from home?

OCTOBER 2020²

MATĚJ BAJGAR, PETR JANSKÝ, MAREK ŠEDIVÝ

Summary

- How well our society and economy can face the Covid-19 epidemic depends, among many other things, on how much work can be done remotely, i.e. from home. Work from home also has the potential to increase businesses' productivity and the living standards of their staff, regardless of the epidemic, but it also brings with it some undesirable phenomena.
- This study presents estimates of the proportion of the Czech working population who could work from home, based on detailed data, using an internationally recognised methodology of professional classification with Czech data.
- Our estimates show that roughly one third of all workers in the Czech Republic are capable of carrying out their work from home. This proportion is comparable with those in similarly economically developed countries and approximately reflects the share of workers who did work from home during the first wave of the Covid-19 epidemic in spring 2020.
- The ability to work from home is distributed rather unequally across professional sectors, regions and workers' levels of education. While four out of five employees in the financial sector and the IT and communications sector can work from home, only one in five employees in agriculture and in culture and leisure can do the same. Most university educated workers can work from home, but only one in ten workers without school leaving exams. In Prague, approximately half of the working population can work from home, whereas in other regions of the country this is only possible for around one quarter.
- Public policies, legislative and other regulatory measures should react more to the opportunity, particularities and needs for effective use of remote working in both the public and private sectors. Under pressure of the circumstances of the Covid-19 era, technologies that enable and facilitate working from home may be expected to develop faster than ever before. The structure of the Czech economy - in terms of structures and professions - can also be expected to develop in ways that are more accommodating of remote working.

² This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The authors are grateful to Daniel Münich for his valuable comments and advice. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy and from the Experientia Foundation.



IDEA anti COVID-19 # 22

The impacts of the Covid-19 pandemic on mental health

JULY 2020²

VOJTĚCH BARTOŠ, JANA CAHLÍKOVÁ, MICHAL BAUER, JULIE CHYTILOVÁ

Summary

- In addition to direct effects on physical health and economic situation, the coronavirus pandemic also significantly affects the population's mental health.
- Using a set of questions that identify symptoms of depression and anxiety, we monitor the extent of these problems in a large representative sample of the Czech population throughout the pandemic.
- In the first phase of the pandemic, 20% of respondents suffered from impaired mental health (showing symptoms of at least moderate depression or anxiety). This represents more than a threefold increase compared to the situation before the pandemic (6%).
- The most affected were: **(i)** women (26%) and especially women with children (up to 37%), **(ii)** young people aged 18–24 (36%), and **(iii)** respondents from households affected by a high drop in income (30%).
- We observe that the mental health of respondents improves again after an initial surge in deterioration. However, the incidence of symptoms of at least moderate depression or anxiety is as of mid-June 2020 still almost twice as large compared to the pre-pandemic state.
- These findings highlight the importance of having a sufficient infrastructure for psychological assistance, financially supporting the households most affected by the pandemic, and reducing feelings of insecurity. Given the high level of concerns about widespread lockdown measures during a potential second wave of the pandemic, the results also underline the need to reduce uncertainty, in particular by openly informing the public about the state's readiness for widespread testing and targeted quarantine.

² This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The authors thank ERC-CZ / AV-B (ERC300851901), a grant provided by the Czech Academy of Sciences, for financing wave 2-5, a grant provided by the German Science Foundation CRC TRR 190 for the funding of wave 6, Max Planck Institute for Tax Law and Public Finance for financing wave 7. Further, the authors thank Daniel Prokop, Lucia Hrubá and Daniel Münich for inspiring comments, and Kristýna Bartoš for careful linguistic editing of the text. Many thanks also to all the respondents of the survey "Life during a pandemic" for their patience and cooperation. All potential errors in this study are the responsibility of the authors. The study was produced with the support from the Czech Academy of Sciences as part of its AV21 Strategy programme and from the Experientia Foundation.



IDEA anti COVID-19 # 21

The different economic effects of the Covid-19 crisis on women and men in the Czech Republic¹

JUNE 2020²

Andreas Menzel, Martina Miotto

Summary

- Women are very likely economically and socially affected harder by the Covid-19 crisis for at least three reasons:
 1. They are disproportionally employed in sectors affected harder by Covid-19 related lock-downs (tourism, hospitality, retail, services).
 2. They are likely to shoulder more of the additional child-care needs due to the closing of schools and child-care facilities.
 3. They are more likely to be victims of domestic violence, with many indicators pointing towards an increase in domestic violence due to the lock-down.
- Unemployment data from Czech Republic for April and May 2020 shows a stronger increase in unemployment for women than men, whereas in previous recessions, this was typically the other way around.

¹ This document follows closely the structure of, and many arguments from, the report “The Impact of COVID-19 on Gender Equality” from the National Bureau of Economic Research for the U.S. (NBER Working Paper 26947), and the report “Work, Care, and Gender during the Covid-19 crisis” by the Centre for Economic Performance at LSE for the UK (CEP Covid-19 Analysis 002). However, numbers and case-studies are adjusted for the Czech Republic.

² This study represents the authors’ own views and not the official position of the Czech Academy of Sciences’ Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The authors are grateful to Daniel Münich and Filip Pertold for their valuable comments and advice. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme and from the Experientia Foundation.

- The stronger increase in unemployment for women is driven by women above age 44. This large increase in unemployment for older women exacerbates the already higher risk of falling into poverty in retirement age for women.
- Before Covid-19, women with children in Czech Republic spent almost twice as much time on child-care than fathers. Even full-time employed women spend 50% more time than full-time employed fathers. It is likely that the increased time for child-care needed by parents due to the closure of schools and child-care facilities will be unevenly distributed in similar ways.
- 26% of men vs 21% of women report in a survey of 3,000 Czech persons that they are able to continue to do their main job from home via tele-work, reducing the risk of job loss more for men than for women.
- Women report to be worried more about the health and economic impacts of Covid-19, and take more pre-cautionary measures against it, such as avoiding public transport, etc.
- Support groups of domestic violence victims report increases in seeks for help of around 40%.
- A second wave of new unemployment claims by women may have to be expected once schools and child-care facilities open again, as their mothers may then not be supported by temporary income support measures (Ošetřovné) anymore.
- In the long run, the strong increase in use of home-office and tele-commuting due to the lock-down may lead to their faster adaption by many employers, which should help gender equality in the workplace, as flexible home-office arrangements likely are more helpful to women (especially with children or other care-responsibilities).



IDEA anti COVID-19 # 20

Health consequences of economic crises

JUNE 2020²

Kristína Hrehová, Štěpán Jurajda

Summary

- In this article, we provide a summary of key findings from existing research on the relationship between countries' economic performance and people's economic activity on the one hand and their health and mortality on the other.
- The blanket restrictions imposed on day-to-day life as a swift defense mechanism in the face of the rapid spread of the Covid-19 pandemic saved many people from illness and death. On the other hand, these measures had and will continue to have a strong negative economic impact, which in turn has a negative impact on people's health and livelihoods, too. Decisions about the intensity and duration of blanket restrictions must take both these effects into account and attempt to achieve a balance between them. To do so, however, it is essential that those making the decisions have at least basic knowledge of the extent of both these impacts. Yet estimates of these effects in the context of Covid-19 are not yet available.

In the foreseeable future, we can expect the epidemiological models to be able to offer us—based on the experience and data we have gained thus far—more reliable estimates of the basic parameters of Covid-19, such as its fatality rate and the influence of various restrictive measures on its transmission. Yet hand in hand with this it is also important to develop more accurate models of the economic impacts and to incorporate impacts on health into them. Until that is done, all that is available to us is our experience from previous economic recessions and crises.

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- A wide range of past research has shown that economic growth has significant impacts on the physical and mental health of the population, including on the death rate. The mechanisms by which long-term economic growth trends affect health are, however, different from the mechanisms by which short-term fluctuations in the economy affect health. The extent of economic cycles' and temporary crises' impacts on health depend substantially on the quality of the given country's social and health care systems. This is why we focus primarily on studies that are based on data from EU countries, whose health and social care systems are more similar to those in the Czech Republic than, for example, the USA.
- Research has shown that long-term economic growth over many decades leads to greater quality of life and higher life expectancy, i.e. it reduces the death rate. Medium-term economic fluctuations that result from the regular economic cycle may also reduce the overall death rate in the population, for example when the positive impacts of fewer transport accidents, lower work strain or more intensive preventative health measures prevail.
- By contrast, very deep and lengthy recessions have negative health impacts. Economic worries and stress among the population are often connected with increases in alcohol consumption and drug use and higher rates of mental illness and suicide. What that means is that the overall health impacts of the economic crisis caused by the Covid-19 pandemic will substantially depend on governments' abilities to support an economic growth restart soon enough.
- A significant study from the USA has shown that, both in standard recessions and in long-term recessions, substantial health impacts happen when middle-aged men find that their career expectations unexpectedly shattered for a long time. Structural changes in employment, such as a long-term loss of jobs suited to a particular type of qualification, are evidently one crucial mechanism in the emergence of negative health impacts. It is thus advisable to take this fact into account when considering possible requalification programmes and occupational psychological therapy.



IDEA anti COVID-19 # 19

Startups during the Covid-19 pandemic: experience for Czechia from the USA¹

MAY 2020²

Petr Sedláček

Summary

- The current Covid-19 crisis will affect newly established firms considerably, including startups, i.e. companies in the initial, fragile stages of economic development. Startups and newly established companies are, however, important from the perspective of job creation and in the USA are responsible for three quarters of net growth in overall employment.
- My colleague Vincent Sterk of University College London and I have created a “startup calculator”, which quantifies the impact of various scenarios for the course of the crisis on overall employment in the economy. Our calculations, based on data from the USA, indicate that even a one-year fall in the number of new firms would result in the loss of millions of jobs and that it could take up to ten years to recover from this economically.
- Data from Eurostat show that startups are similarly significant for employment in the Czech Republic as in the USA. The fact that academics and governmental policy makers do not pay nearly as much attention to the phenomenon of startups and newly established companies here as in the USA does not change that. In designing its measures to mitigate the impact of the crisis caused by the Covid-19 epidemic, the Czech government should therefore keep in mind not only well-established small- and medium-sized enterprises but also recently established firms and new businesses that are only just preparing to enter the market.

¹This text provides a summary of research published in COVID Economics
<https://cepr.org/sites/default/files/news/CovidEconomics13.pdf>.

² This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). The author is grateful to Daniel Münich and Martin Srholec for their valuable comments and advice. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme and from the Experientia Foundation.



IDEA anti COVID-19 # 18

The Covid-19 pandemic and socio-economic inequality in education¹

MAY 2020

Miroslava Federičová, Václav Korbel

Summary

- In response to the Covid-19 pandemic, schools have been closed since 11th March 2020 and have been obliged to switch to remote teaching. This new situation may, among other effects, further deepen the considerable existing inequalities in education, which are already higher in the Czech Republic than in most other European countries. In this study, we look at various factors that may affect how remote teaching can be related to socioeconomic educational inequalities in the Czech Republic. For the sake of clarity, we distinguish between factors relevant to schools, families, and pupils. The aim of this study is not to describe the current situation but to outline who is most at risk of losing out as a result of remote teaching and where possible measures should be targeted in order to prevent deepening inequalities in education further. In this study, we focus on primary and lower secondary schools, with an emphasis on the lower secondary years.
- **Schools:** Only a small proportion of schools were technically prepared to face up to the demands of remote teaching. Only 19 % of primary schools had an online school information system that could be accessed by parents and pupils, while 50 % at most used some kind of online teaching platform.
- **Teachers:** In terms of ICT skills, fewer than half of all teachers were prepared for teaching remotely, which is below the average across OECD countries. Moreover, almost a quarter of teachers lack mutual support from their colleagues, in particular when introducing new ideas in school. However, these factors – which are essential for a smooth, swift transition to remote teaching – are not substantially different in schools with higher proportions of pupils from disadvantaged backgrounds. That said, schools in socially disadvantaged areas do suffer from

¹ This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to Jiří Kuhn, Filip Pertold, Daniel Münich and to our EDUin colleagues Karl Gargulák, Miroslav Hřebecký and Kateřinā Lánská for their valuable comments and advice. We also thank PAQ and the Czech Schools Inspectorate for providing us with data. Any inaccuracies or errors are the authors' responsibility. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme, from the Experientia Foundation and from the Česká Spořitelna Foundation.

a greater lack of teaching staff, in particular a lack of highly qualified teaching staff, which may indeed pose a problem in the current situation.

- **Households:** Technical equipment, in terms of computer hardware and an internet connection, may play the most significant role in households, together with parental support for children's learning. Although it may not seem that many households seriously lack technical equipment these days, 6 % of households with children still have no computer or tablet at home, and around 3 % have no internet connection. A small share of pupils will also have access only via a mobile phone with a limited data allowance. More often than not, these are pupils from the most deprived socioeconomic backgrounds. This group of pupils is also disadvantaged in terms of the support they receive from their parents. As many as 16 % of pupils from disadvantaged backgrounds lack support from their parents for their efforts to learn, compared with 8 % of pupils from households with higher socioeconomic status. These factors at the household level may contribute to deepening inequalities in education, in particular, if the remote teaching situation continues for a longer period of time. Their impact may also be worse if they are combined with unclear or complex instructions for the remote teaching from the teachers, which would necessitate greater involvement or help from parents.
- **Pupils:** Technical skills of pupils should not be a substantial factor contributing to social inequalities in education. More than 90 % of pupils have command of the necessary ICT skills, regardless of their socioeconomic background. A little more than half can resolve problems or install new software on their own; in this, pupils from disadvantaged backgrounds do slightly worse. What is crucial, however, in particular for school pupils in the lower secondary years, is their motivation, ambition, application, and self-confidence, all of which may be even more significant in the context of distance learning. In these socio-emotional ("soft") skills, pupils from households with higher socioeconomic status have a substantial advantage.
- The recommendations for public policy that arise from our findings are different for different time frames. **If schools are shut for a relatively short period of time**, pupils who do not participate in the on-going remote teaching, whether because they lack the necessary technical equipment to do so, are under-supported by their families or are not interested in participating, are most at risk. Failure to participate for a few months could lead them to fall behind in the long term and further reduce their motivation and aspirations. It is essential to make teaching accessible to pupils without technical equipment but also to attempt to engage incommunicative pupils through more intensive communication with their parents. In case of less strict restrictions, schools can collaborate with social workers. Once schools have reopened, it is worth considering both catch-up tutoring and summer courses to repeat material for the pupils at the greatest risk of falling behind. **If schools are shut for a more extended period of time**, then the gaps between schools will widen. It will be necessary to come up with innovative measures to help schools that are struggling with remote teaching. That will require high-quality data and a readiness to act on the part of the regional authorities, to identify the schools in need and provide them with help, or a strong centralised management.
- Last but not least, plans should be made for how to **react to further waves of the pandemic**, which could lead to additional school closures in future. Numerous countries are making targeted investments into ICT technology and teacher training, while in the Czech Republic before any further waves strike, it is also crucial to activate support network for schools (e.g. regional teams). That system could then support schools both while they are open and, in case they were to be closed again, could monitor and assist those in need flexibly and effectively.



IDEA anti COVID-19 #17

How to reawaken the economy: Soothe, warm up, say some farewells¹

MAY 2020

Filip Matějka

Summary

- May 2020 draws us closer to the time when we will reawaken the economy. The main aims of our economic measures will need to change hand in hand with the selective release of the blanket restrictions.
- What principles should we be guided by at this stage? What do we need to look out for to ensure that the hundreds of billions of crowns in support announced by the government do not end up being the greatest waste of state finances for several decades?
- The economic crisis over the next few months will be unique both in its very high level of uncertainty and in terms of the extent of late payments. The state support, which will arrive late and without prior clarity over who will and will not be eligible for it, may substantially worsen this situation. Volatility indexes and uncertainty measures are currently far higher than they were even during the financial crisis ten years ago. We do not know whether the epidemic will return, what its return will look like, or how governments will then react. Over half the contraction we will observe in economic activity over the next few months will likely be driven by high uncertainty, which we must reduce in a very targeted manner.
- State interventions in the economy must be gradually reduced. The world is changing. It will not be appropriate to keep businesses that were previously useful but will not be functional for some time in this new reality alive, merely for sentimental reasons (e.g. airlines and international travel services). While the markets do not work while artificially restrictive measures are in place, and are thus not a good indicator of which businesses will be useful to society afterwards, we must now begin once again to make greater use of free markets.

¹ This study presents the author's own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to Daniel Münich, Filip Pertold, Jakub Kastl, Petr Sedláček, Jan Švejnar, Štěpán Jurajda, Danuše Nerudová, Jan Bureš, Jan Žemlička, Rastislav Rehák and Michal Šoltés for their useful input and comments on the working version of the text. Any inaccuracies or errors are the author's responsibility. The study was produced with support from the Experientia Foundation and from the Czech Academy of Sciences as part of its AV21 Strategy programme.



IDEA anti COVID-19 # 16

Macroeconomic policy during the coronavirus epidemic¹

APRIL 2020

Marek Kapička, Michal Kejak, Ctirad Slavík²

Summary

- This paper summarizes the relevant economic literature to date, combining SIR models and macroeconomic models and discussing the consequences of the pandemic for fiscal and monetary policy.
- SIR models imply that our fight against the pandemic will only succeed if we are able to achieve a long-term reduction of the reproduction number.
- Macroeconomic epidemiological models highlight the mutual interaction between the spread of the infection and human economic behaviour. They show that there is a negative relationship between the depth of the economic recession and the rate at which the epidemic spreads. They also reveal that the epidemic creates negative externalities implying that spontaneously limiting activities is an inadequate response.
- The economic consequences of the pandemic are modelled as a mixture of supply and demand shocks; it is not entirely clear which type of shock will dominate. While the negative supply shock came first, the demand shock may end up dominating because certain sectors are hit harder than others.
- The macroeconomic literature also points out that the pandemic affects different groups of people to different extents: for example, quarantine measures affect young people and

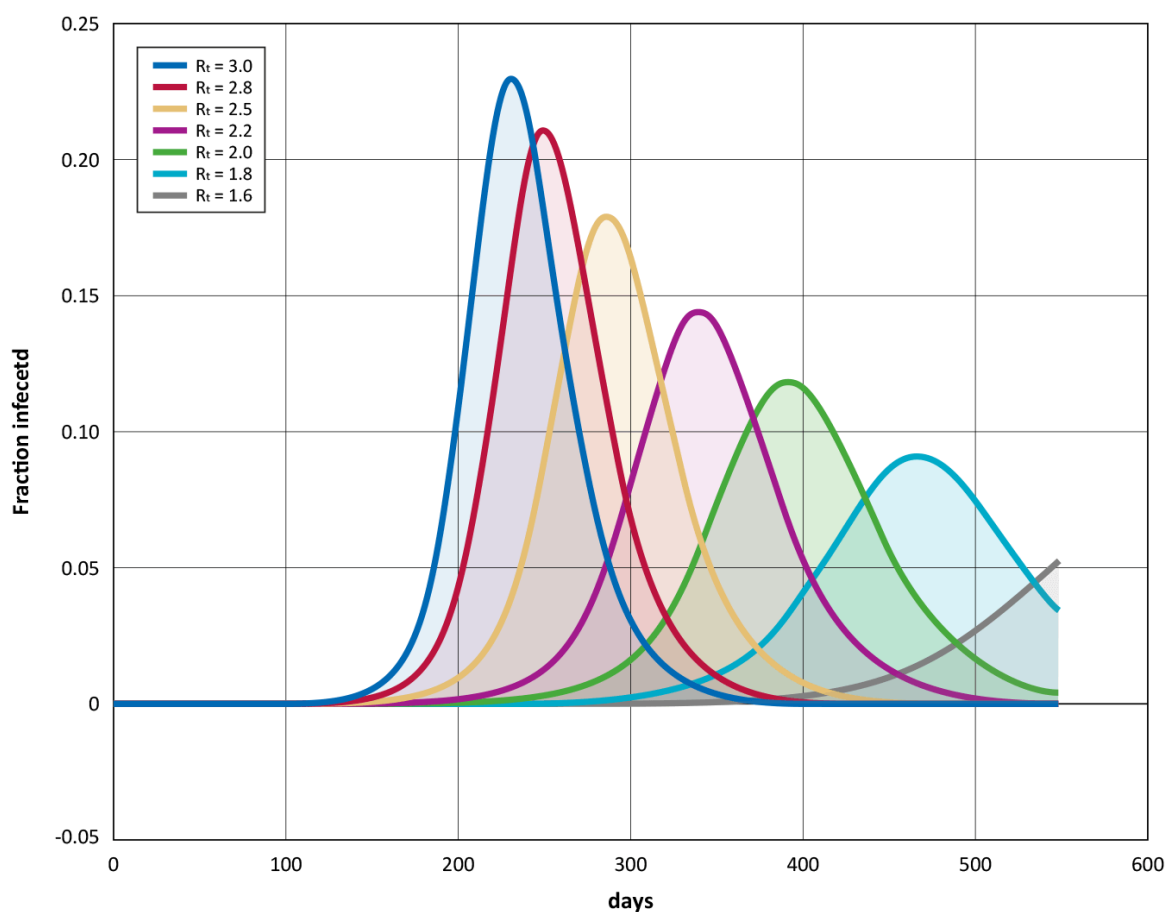
¹ This study represents the authors' views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to Danielu Münich for his helpful comments on the working version of the text. Any inaccuracies or errors are the authors' responsibility. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme and thanks to a donation from the Experientia Foundation.

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people with lower incomes more than others. The epidemic thus has significant consequences for the redistribution of income and consumption.

- In brief: governments' primary task is to implement public health measures that can flatten the epidemic's curve sufficiently to ensure that the health crisis connected with the spread of the coronavirus does not exceed the capacity of the given country's health system. These measures will necessarily contribute to worsening the economic crisis.
- During this stage of the crisis, in which fiscal policy plays an essential role, it is necessary ,to do whatever it takes' to maintain the majority of the economy in a viable state. Monetary policy will play only a secondary role during this phase.
- The longer and more serious the health crisis, the worse the economic crisis will be: it may also start to manifest itself in the form of a financial crisis, exchange rate crisis etc., which may then demand more drastic fiscal policy measures and greater coordination between fiscal and monetary policies.
- This pandemic and the economic crisis it has given rise to are global crises. They cannot therefore be overcome in isolation in one country or another, but demand coordinated efforts from the most developed countries and proper aid for the less developed countries, with the international and supranational institutions (IMF, WB, ECB, EU and others) playing a substantial role.

Figure 3: The fraction of the population currently infected over time



Fraction of the population with an active infection over 18 months under different values of $R_t = R_0$ held constant over the entire 18 month time period



IDEA anti COVID-19 # 15

Serological tests for Covid-19 antibodies: What could they be good for?³

APRIL 2020

Ludmila Matysková⁴

Summary

- There are two kinds of tests for Covid-19. The first kind are PCR diagnostic tests, which reveal whether, at the moment of testing, the individual in question has the virus in their body or not. These tests are able to identify the presence of viral RNA in any sample of tissue or bodily fluid, or from a swab. The second kind of tests are antibody (serological) tests, which indicate whether the individual in question has previously been infected with the virus. Since antibodies only begin to be formed in the body a certain amount of time after an infection, serological tests are entirely unsuitable for those diagnostic purposes aimed to reveal the illness in its early stages. Serological antibody tests are, however, very important for finding out and confirming who has already gone through the infection. Serological tests measure IgM antibodies, formed in the early stages of the immune response, and IgG memory antibodies, formed in the later stages. This study looks in detail at the possible uses for serological tests.
- The main benefit of serological tests lies in the possibility of collecting information, which is currently still missing, but which is essential for informing our policy decisions in adopting optimal strategies to fight the Covid-19 epidemic. Serological testing could provide us with representative data, from which we can reliably detect what percentage of the population has

³ This study represents the author's opinion and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE) or of the University of Bonn. The author is not an epidemiologist, doctor or microbiologist. The study may therefore contain errors as a result of her imperfect knowledge in these fields. Thanks are due to Štěpán Jurajda, Pavel Kocourek, Jana Lohrová and Jakub Steiner for their useful comments on the working version of this text, to Adam Jaroš, Hana Kaněrová and Josef Šilha for providing medical expertise, and to Daniel Münich for his help with editing the text. Any inaccuracies or errors are the author's responsibility. The study was produced with the support of the Czech Academy of Sciences as part of its AV21 Strategy programme, the Experientia Foundation, and Deutsche Forschungsgemeinschaft (DFG) grant CRC TR 224 (project B02).

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already been infected or re-infected, and how this percentage changes as the government introduces particular measures.

- A first use for serological testing are serological surveys carried out to estimate what percentage of the population has already come into contact with the virus. These surveys consist of testing a random sample of the population for antibodies. Blood donors or households that have already participated in existing socio-economic studies can serve as a suitable sample.
- Provided we know the combined error rate (false positive and false negative error) of the particular tests at use, serological surveys are useful, because they aim to reveal the extent of exposure to the virus within the overall population, rather than to diagnose individual cases. For this reason, however, it is important to use only those tests for whose the level of sensitivity (true positives) and specificity (true negatives) are known and have been verified on a large number of cases and control samples.
- A second use for serological tests is the possibility of issuing “immunity certificates” based on proven antibody protection. A suitable combination of serological and PCR tests can be used to identify individuals who have already been immune to the virus; these people have already been infected (they have a positive serological test) but have recovered (at the same time, they also have a negative PCR test). Such individuals can then be issued with “immunity certificates” that enable them to resume normal activities or that could be, for example, sent to the front line of the fight with the virus. However, caution needs to be taken so that the introduction of “immunity certificates” does not create perverse incentives for certain categories of people (such as those who expect the infection to affect them only mildly, or those who are in financial difficulties), who would then want to deliberately expose themselves to the virus in order to be able – after recovering – to return soon to work.
- At the moment, most serological tests for Covid-19 are still under development or they are undergoing evaluation. Nevertheless, many countries are preparing to carry out serological surveys, or they have already begun to do so (e.g. in the USA). The WHO is planning to launch a coordinated global programme of serological testing in the near future. It is important that intensive work on the complex algorithms of the suitable usage of these tests starts already now, so that we are ready to put these tests to use as soon as they become available.
- Serological tests are not suitable for over-the-counter sale, because they are not primarily intended for (self-)diagnosis. People might not be able to interpret the test result correctly: the tests are only effective a certain amount of time after infection; people might not correctly understand the test's sensitivity and specificity (the probability of a false positive or false negative result).



IDEA anti COVID-19 # 14

Using Bluetooth technology for COVID-19 contact tracing

APRIL 2020

Ole Jann, Pavel Kocourek and Jakub Steiner²

Summary

- The coronavirus is transmitted indiscriminately through proximity, which makes tracing infections difficult.
- Bluetooth tracing apps can reliably record transmission possibilities even when the participants do not know each other and do not remember the interaction.
- This can be done with a high degree of privacy. A well-designed app provides a similar level of privacy to not using an app at all.
- Decentralized data storage means that the privacy and security of the system is highly resilient against exploitation by any powerful actor (such as a government).
- A disadvantage of protecting privacy through decentralization is that tracing apps need to be taken up by the population one person at a time. Their use cannot be checked remotely and hence cannot be effectively mandated by governments or health authorities. A very high degree of take-up is necessary to make them an effective weapon against the virus.
- The eRouška app by COVID19cz follows these principles and offers a very high degree of privacy protection. Specifically, it does not collect any data except the phone

¹ This study represents the views of the authors, and not the official position of the Economics Institute of the Czech Academy of Sciences as well as the Charles University, Center for Economic Research and Graduate Education. The authors wish to thank Daniel Munich for useful comments and suggestions on the draft text. Any possible inaccuracies and errors are the responsibility of the authors. The study was also published thanks to the support of the Czech Academy of Sciences within the framework of the AV21 Strategy program and a donation from the Experientia Foundation.

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numbers of non-infected users, and only collects anonymized meeting data (and no location or other metadata) of infected users – this data is only available to a hygienist after voluntary data transmission by the user.

- No data is transmitted to the server without explicit user agreement.



IDEA anti COVID-19 # 13

Short-time Work and Related Measures to Mitigate Consequences of a (Partial) Economic Shutdown¹

APRIL 2020

Nikolas Mittag, Filip Pertold

Summary

The objective of this document is to provide someone discussion of short-time work policies with a basic foundation to think about their merits, alternatives and relevant policy design choices. To do so, the first section characterizes the motivation for short-term work as well as the types of cost that it can help to reduce or cause. The second section provides a brief overview of key policy alternatives and their merits to line out where short-time work has the potential to be useful and which tools can amend or replace it, followed by an overview of short-time work policies in the last recession and key lessons we learned. It closes with an overview of short-time work policies already enacted in response to the current economic situation. The main point of this document is to draw general policy conclusions for the current situation in the Czech Republic based on the reviews and considerations in the first two sections. Section 3 will attempt to do so. Readers mainly interested in specific policies or those familiar with the literature on short-time work may want to jump right to this section.

¹ This study represents the views of the authors, and not the official position of the Economics Institute of the Czech Academy of Sciences as the well as the Charles University, Center for Economic Research and Graduate Education.(CERGE). The authors wish to thank Daniel Münichov, Štěpán Jurajda, and Luboš Cingl for their useful comments and suggestions on the draft text. Any possible inaccuracies and errors are the responsibility of the authors. The study was also published thanks to the support of the Czech Academy of Sciences within the framework of the AV21 Strategy program and a donation from the Experientia Foundation.



IDEA anti COVID-19 # 12

Compliance with bans in the coronavirus period: enforcement must be effectively targeted¹

APRIL 2020

Libor Dušek²

Summary

- The fight against the spread of the coronavirus infection will only succeed if people comply with the measures taken to limit it. This overview study is based on the findings of previous empirical research and offers seven recommendations for how to achieve this effectively.
- The more people who comply voluntarily with the restrictive measures that have been adopted, the less need there will be to enforce those measures through repressive supervision and threats of punishment. To achieve this, it is crucial that the government and other institutions communicate those measures properly.
- Every newly adopted measure should be accompanied by a specific plan for how compliance with it will be monitored and enforced. Information about that monitoring and enforcement should be shared with the public throughout, to keep people more aware of it.
- The highest priority should be given to enforcing compliance with home quarantine orders, through random inspections, the involvement of local police forces, high fines, restrictive measures in response to repeated breaches of quarantine (e.g. house arrest bracelets) and the use of smart digital technology.

¹ This study represents the author's views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). Thanks are due to Josef Montag, Ole Jann, Michal Šoltés, Daniel Münich, Štěpán Jurajda and Luboš Cingl for their useful input and comments on the working version of the text. Any inaccuracies or errors are the author's responsibility. The study was produced with the support of the Czech Academy of Sciences as part of its AV21 Strategy programme.

² The author is an associate professor of economics and head of the department of economics at the Charles University Faculty of Law and collaborates with the IDEA think-tank at CERGE-EI.

- It is worth considering a one-off “amnesty” for people in quarantine who voluntarily admit to having breached their isolation and who provide details of the people with whom they came into contact.
- Enforcing blanket restrictions in public areas involves monitoring by the police, but this should not be excessive. Research findings point out good reasons for preferring warnings and low, administratively uncomplicated on-the-spot fines, based on a simple, nationally established recommended “tariff”.



IDEA anti COVID-19 # 11

Collecting personal data for smart COVID-19 tracing: How to motivate people and not scare them off

APRIL 2020

Ole Jann¹

(translated into Czech by Ludmila Matysková²)

Brief summary

- South Korea and Singapore, unlike many other countries, have recorded a slow increase in the number of cases of COVID-19 infection and a relatively low number of fatalities. Both these countries have not only carried out large numbers of tests, but have also used the information gained through them to trace the spread of the infection as quickly as possible, with the help of individual interviews, medical records, mobile phone data, credit card transaction data and CCTV recordings. Those who had come into contact with the chain of infection were then placed into strict quarantine. This substantially limited the spread of the infection and enabled softer restrictive measures to be taken across the remainder of the population, with a lesser impact on the economy. This strategy would now be possible in the Czech Republic, too. It would, however, require specific rules to be adopted, the principles of which

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² University of Bonn

are explained in this study. Each country only has one chance to implement them properly.

- Residents should be offered incentives to motivate them to cooperate by providing true and complete information, but these should not simultaneously provide undesirable motivations. Efforts to force people to provide detailed personalized data for the purpose of contact tracing and tracking the spread of the infection can, in fact, lead people to hide symptoms of illness or to hide the fact that they have recently been in contact with someone. It is thus necessary to find a compromise between the direct effectiveness of an imposed order and its negative side effects.
- Collecting data for the purposes of tracking the spread of an infection poses a greater problem in Europe than in East Asian countries, because in Europe there is less of a tradition of the local community enforcing the law for itself and there is greater mistrust of the state. Strong data protection is therefore crucial for the tracking strategy to succeed at all. Even a relatively low level of unwillingness among residents to cooperate in providing data, let alone a broader culture of non-cooperation and “cunning avoidance”, would mean the tracking system did not function sufficiently well.
- Data collected from residents for the purpose of tracking the spread of infection should be stored separate from other personal data in the state’s possession, beyond the reach of enforcement officials, tax investigators, the justice system or researchers, with the exception of those working directly on fighting the infection. The periods during which data are to be collected and retained should be clearly limited.
- Poorly established incentives for people to reveal personal information for the purposes of tracking the infection open the door to further contagion and result in huge economic damage, harm to people’s health and the loss of human lives.



and



IDEA anti COVID-19 # 10

How should the government's crisis measures be communicated? Through frequent repetition¹

APRIL 2020

Václav Korbek, Vladimír Novák, Michal Šoltés, Lukáš Tóth

Brief summary

- About three weeks after the first case of COVID-19 infection in the Czech Republic was confirmed, i.e. on 20th - 21st March, we carried out a survey to find out how the way government measures are communicated affects residents' willingness to abide by them. Our main findings were published in **IDEA anti COVID-19 study # 7**. We supplemented our questionnaire with an experiment in which we provided five different pieces of information about the government measures to five randomly selected groups of people. This study focuses on presenting the results of that experiment.

¹ This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute (EI) nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to Vojtěch Bartoš, Lubomír Cingl and Daniel Münich for their valuable advice and comments, and to Tomáš Šebek and Do Thu Trang for their willingness to work with us. This study was produced as part of a joint project between Behavio Labs and the IDEA think-tank. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme.

- **Simple reminders about the government's orders substantially increase the share of the population willing to follow them.** This is true even when the people in question had already previously received information about the orders. Reminders of the government's orders, in any form:
 - make people more willing to limit the time they spend outdoors, especially in their longer-term personal plans,
 - make people more willing to stay at home even for months, if necessary,
 - motivate people to react to those who do not wear face masks (reminding them that they should wear one).
- **Rules and recommendations must be conveyed repeatedly** throughout the time that they remain in force, and their current wording should be easy to find in a commonly known place.
- **Measures must be carefully prioritized** and a small number of the most important of them selected and **simplified as much as possible** before being clearly communicated.²
- **In order to achieve voluntary compliance with government directions, public confidence in the measures adopted is fundamental.**³ People who believe that the government measures will help successfully manage the current situation are much more willing to follow the government's orders and react positively to being reminded about them.
- The institutions in question should **pay extra attention to awareness among older people** to ensure, directly or indirectly (through family members), that they are sufficiently well informed. Information and reminders raise willingness among those over the age of 65 to abide by government requirements.
- **Appealing to swiftly changing societal norms and emphasising that those who behave in accordance with the government's directions are behaving normally** ("it's normal to stay at home", "people usually wear face masks when they go out", etc.) seems to be an effective way of communicating.
- Most age groups react very similarly to the various different kinds of information. Young people (between 18 and 24 years of age) constitute an exception: in this group, information that appeals to societal norms or describes health risks leads to greater acceptance of government directions than other forms of communication. People who live with someone from a high-risk group (i.e. elderly or unwell) also express greater willingness to stay at home. Communication of the government's instructions and reminders about them do not have any effect on willingness to stay at home among those who perceive becoming infected with the coronavirus as a low risk.

*The data were collected on a panel of 1 250 **Behavio Labs** regular respondents on Friday (20. 3. 2020) and Saturday (21. 3. 2020). The sample was representative of the on-line population in the Czech Republic aged 18 years and above (gender, age, income, education, settlement size, region, economic activity).*

Data description: [Policy Communication in the Time of Covid-19 \(popis dat\)](#)⁴

² For further recommendations from behavioural economics for communication in the current situation, see study [# 9](#)

³ See [WHO Outbreak](#) communication guidelines.

⁴ See <https://docs.google.com/document/d/1AbOjoeXxyJ2jZjBCoh9amhaoiTVaigWWcm7gjb1HBG4/edit?usp=sharing>



IDEA anti COVID-19 # 9

How best to communicate with the public? Findings from behavioural economics in the fight against COVID-19¹

MARCH 2020

Vojtěch Bartoš²

Brief summary

- During epidemics, communication with the general public is essential. Findings from behavioural economics could help with this.
- Public trust in the government and the information it provides is crucial. Trust can be strengthened through transparency and admission of any mistakes made. If the public loses trust, its behaviour becomes unpredictable.
- Uncertainty and unclear or untrustworthy information increase pressure on the public. Additional stress is a burden for society.
- Regular daily briefings from the government and the crisis committee can prove a good source of information and serve to adjust expectations within society. Waiting to hear what will be announced at an extraordinary press conference leads to unpredictable behaviour among the population.

¹ This study represents the author's own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). Michal Bauer, Jana Cahlíková, Julie Chytilová, Lubomír Cingl, Libor Dušek, Stefano Fiorin, Ulrich Glogowsky, Johannes Haushofer, Václav Korběl, Yves LeYaoaunq, Johannes Rincke, Silvia Saccardo, Simeon Schudy, Michal Šoltés and Severine Toussaert were swift to react and contribute comments on the working version of this text, for which I am very grateful. Any inaccuracies or errors are the author's responsibility. This study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme.

² The author is a lecturer at Ludwig-Maximilians Universität in München and is currently a visiting scholar at Princeton University in the USA.

- Information must be conveyed in simple language. People need to be able to quickly understand new regulations. They do not have the time or the mental capacity to process legal formulations.
- There is too much information. The government should endeavour to be the main source of news for the public. Second place, for local matters and details, should be taken by local authorities. This can help to weaken the spread and influence of fake news and scaremongering.
- People find it hard to understand statistics. This may result in the public underestimating the situation. Experts should explain statistics in simple terms.
- People care about others, behave according to societal norms, enforce those norms, and care how society views them. It is therefore useful to explain the crisis measures along these lines. It is also good to offer an explanation of sanctions and prohibitions, so that the public does not react negatively to them. If the government does not explain the steps it is taking, the public considers this a sign that the government does not believe the people will be willing to cooperate. Public figures can contribute substantially to establishing societal norms.
- People often fail to realise that their own behaviour affects other people's health. Illustrative examples can help them understand this better and lead to greater cooperation.
- Fear is a good servant but a bad master. Handle it with care.



and



IDEA anti COVID-19 # 7

Households' attitudes to infection and to the government measures: The latest survey data¹

MARCH 2020

Václav Korbek, Vladimír Novák, Michal Šoltés, Lukáš Tóth

Brief summary

- This study presents Czech people's real views about the Covid-19 pandemic from a survey carried out on a representative sample of internet users around the 20th March 2020. It thus presents very up-to-date information about people's attitudes to the ongoing infection and, moreover, to the measures imposed by the government. The findings provide new and important information to be taken into account when planning further measures. For example, if people had not considered the restrictions on free movement or the requirement to wear face masks as appropriate and had not begun implementing them voluntarily, the relevant authorities would have had to enforce these measures.

¹ This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute (EI) nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to Vojtěch Bartoš, Lubomír Cingl and Daniel Münich for their valuable advice and comments, and to Tomáš Šebek and Do Thu Trang for their willingness to work with us. This study was produced as part of a joint project between Behavio Labs and the IDEA think-tank. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme.

- More than half the population is concerned that they will catch the coronavirus. People have substantial confidence in the ability of the government measures to successfully overcome the current situation. The majority of people, around 75 %, declare themselves willing to limit their outdoor movements to essential activities and otherwise stay at home. Even so, almost 53 % of respondents go out every day. If it were to be necessary, many people are prepared to refrain from outdoor and social activities even for months. People believe that there is a moderately high chance of meeting an infected person on the street. Wearing face masks became a matter of course very quickly. 92 % of people only leave their homes with a face mask on; the majority agree that people without face masks should not be allowed into public areas; if they meet someone without a face mask, 42 % of respondents are prepared to tell the person concerned that they should wear a mask and a quarter would express their disapproval by frowning at that person.²
- Another study will follow soon after this one, which reveals how reminders about government orders and recommendations (to wear face masks and practice social distancing) affect people's willingness to abide by them and how the way the measures are communicated affects that willingness. Keep an eye out for more IDEA studies.

*The data were collected on a panel of 1 250 **Behavio Labs** regular respondents on Friday (20. 3. 2020) and Saturday (21. 3. 2020). The sample was representative of the on-line population in the Czech Republic aged 18 years and above (gender, age, income, education, settlement size, region, economic activity).*

Data description: [Policy Communication in the Time of Covid-19 \(popis dat\)](#)³

² Which might not be visible past their face mask.

³ See <https://docs.google.com/document/d/1AbOjoexXyJ2jZjBCoh9amhaoiTVaigWWcm7gjb1HBG4/edit?usp=sharing>



IDEA anti COVID-19 # 6

What behavioural economics can teach us about prevention: another way of fighting COVID-19¹

MARCH 2020

Michal Bauer, Julie Chytilová²

Summary

Findings from behavioural science:

- Every one of us can help limit the spread of the Covid-19 virus today, through our everyday behaviour. Research from behavioural science to date has shown how individuals, private organizations and state institutions can all contribute to changes in behaviour that are effective in prevention.
- Thanks to the studies that have been carried out so far, we know quite a lot about how the virus spreads most frequently and what kinds of behaviour are most effective in preventing that spread. Washing our hands with soap, avoiding touching our faces and stifling any coughs or sneezes into the air are all very effective. However, research has shown that simply being informed about all this is not sufficient for people to change their behaviour. People have a tendency to forget, which is enhanced by tiredness and inattention; many people also tend to procrastinate and not to do things even though they are aware of wanting to do them. Furthermore, it is difficult to change our long-established habits.

¹ This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute (EI) nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to the following people for helpful comments on the working version of the text: Vojtěchu Bartoš, Jana Cahlíková, Filip Matějka and Daniel Münich. Any inaccuracies or errors are the authors' responsibility. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme.

² The authors work at CERGE-EI, a joint academic workplace encompassing the Charles University Centre for Economic Research and Graduate Education and the Czech Academy of Sciences' Economics Institute, and also at the Institute of Economic Studies at the Faculty of Social Sciences, Charles University. Michal.Bauer@cerge-ei.cz, julie.chytilova@fsv.cuni.cz.

- Most existing research into behavioural prevention is, quite naturally, from developing countries, where the spread of infectious diseases has been a more topical problem than in the economically developed countries. These studies have shown that frequent, simple reminders can be very beneficial.
- Making hand-washing facilities available to the public does not mean that people will use them. Their placement within the public space and their visibility play a key role. We must think carefully about how to create an environment in which the target behaviour is easily carried out, people are constantly reminded of it, and it gradually becomes automatic.
- Our habits, which are very hard for us to shake off, often act as a barrier to regular, proper hand-washing at home. People tend to wash their hands too quickly and not thoroughly enough. Even when we know how to wash our hands properly, doing so systematically, several times a day for twenty seconds at a time is no easy task.

A few practical tips:

- Make automatic disinfectant gel dispensers widely available in public areas and locate them in suitable, very visible positions.
- Issue reminders in various forms: mobile applications, wristbands, catchy posters at entrances, in bathrooms and on the fridge.
- New automatisms to extend hand-washing time – songs, rhymes, or funny videos – can help both children and adults.



IDEA anti COVID-19 # 5

The economics of testing for COVID-19: beware of greater damage than benefit¹

MARCH 2020

Jan Kulveit,² Jakub Steiner³

Summary

- There are limited numbers of tests for COVID-19, especially of the more precise type known as PCR tests. That means they must be used as efficiently as possible, in terms of which people are tested. Efficiency in the use of these tests is not only a matter of revealing how many people are infected, but also has to do with the potential ability of those tested to spread the infection further, which a positive test result can help to prevent. The algorithms by which the short supply of COVID tests is assigned must therefore be grounded in the social, rather than individual benefits of testing. People whose testing brings maximum social benefit should be given priority.
- The social benefit of testing a particular person is calculated primarily in terms of the a priori likelihood (rough estimation) of that person being infected, based on information about where they live and their lifestyle. The second important criterion is that individual's epidemiological significance, which is an indication of how much the individual in questions comes into contact with, and is likely to come into further contact with other at-risk people. This can also be established by asking pertinent questions to the individual themselves, complemented if desired by a survey in the place where they live.

¹ This study represents the authors' own views and not the official position of the Czech Academy of Sciences' Economics Institute nor of the Charles University Centre for Economic Research and Graduate Education (CERGE). We are grateful to the following people for helpful comments on the working version of the text: Pavel Boguský, Petr Chytil, Marek Kapička and Daniel Münich. Any inaccuracies or errors are the authors' responsibility. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme and Experientia Foundation.

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- Although our estimations of the social benefit of testing are based on imprecise and incomplete data, the algorithm for allocating the limited numbers of PCR tests we have that is based on them is more socially effective than blanket use of them for testing anyone suspected of having contracted COVID-19. The greatest social benefit of testing comes from identifying the infection in people whose level of social interaction is high, during the phase of the infection in which they do not yet have any symptoms; that is, in so-called superspreaders.
- When evaluating the results of any test it is necessary to bear in mind that no test is ever entirely precise (reliable). Although PCR tests are very precise in laboratory conditions, errors can occur when samples are collected in the field, for example through poor sample handling. Our interpretation of the test result is then sensitive to the a priori likelihood that the person in question is infected, which might be low even when the test is positive, because the tests are not entirely reliable.
- It is not appropriate to use tests in situations in which nothing about the healthcare official's decision about the next steps to take will change, regardless of the test result. If the healthcare official knows beforehand that they will not change their approach even if the result of the test is surprising, they should not waste one of those rather rare tests on testing the patient in question.
- Among the general public, testing can create undesirable motives that facilitate the spread of the infection. For example, if only people with a high a priori likelihood of infection are tested, people will exaggerate their own likelihood of being infected in an effort to gain access to testing. That's why, for example, at the beginning of the Covid-19 epidemic in the Czech Republic, some Czechs who wanted to get themselves tested told healthcare officials they had been in Italy, when in fact they had not. Having been approved for testing, they then unnecessarily exposed themselves to the virus at the testing facilities. Social stigma surrounding infection with COVID-19 also poses complications, since it motivates people to conceal any symptoms they are experiencing and avoid being tested. For that reason, it may be sensible not to publicise details of the algorithm according to which individuals might be selected for testing, and to work systematically and intensively to prevent any stigma associated with Covid-19 infection through media campaigns and raising public awareness.



IDEA anti COVID-19 # 4

Insolvency during the Coronavirus period: a proposal for temporary changes to the Insolvency Act

MARCH 2020

Tomáš Richter²

Brief summary

- The economic situation that the Czech Republic is facing and will continue to face for some time, as a result of the Covid-19 epidemic and the restrictions imposed by the government in response to it, is utterly exceptional. This kind of situation demands exceptional counter-measures, not only in terms of budgeting and monetary policy, but also in private law, because the effectiveness of the steps the state takes in terms of fiscal and other policy to mitigate the expected recession should not be weakened by institutions of private law.
- Insolvency proceedings, i.e. the procedural instruments designed to deal with business entities' financial failure, at the individual level rather than at the sectoral level or for the majority of the economy, are one such institution.
- In its current form, which inter alia **(a)** obliges the defaulting entity and its management to launch insolvency proceedings, if the defaulter goes out of business,

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² The author is a barrister at Clifford Chance's Prague offices. He also holds a lectureship in commercial law at the Institute of Economic Studies, Faculty of Social Sciences, Charles University, is a member of the Academic Board at the Harry Pollak Centre for Restructuring and Insolvency at the University of Economics – VŠE in Prague, Chair of the Academic Forum at INSOL EUROPE and a member of the Board of Directors at the International Insolvency Institute.

(b) entitles the defaulting entity's creditors to launch insolvency proceedings and **(c)** involves the courts relatively intensively in the process, the insolvency law in force could – regardless of other government measures – potentially trigger a massive wave of business insolvencies. That wave could easily entirely overrun not only the decision-making capacity of the insolvency justice system, but also the capacity of the market for insolvent defaulters' assets.

- This text therefore presents a proposal for discussion, consisting of several temporary measures in Czech insolvency law, which aim to “flatten the curve” of the epidemic of business insolvencies that will very likely follow on from the Covid-19 epidemic. The primary aim is to boost the effectiveness of the country's other anti-crisis measures and so prevent insolvency justice system in the Czech Republic from becoming overrun and obstructed.
- These temporary changes could come into force upon the pronouncement of an amendment to the Insolvency Act, once they had been accepted during the state of legislative emergency. The obligation for defaulting business owners and members of their statutory bodies to submit a motion of insolvency could, for the effective duration of the changes, be temporarily suspended. Similarly, creditors' rights to submit an insolvency motion could also be temporarily suspended. For cases in which these two essential exceptional measures did not suffice, an exceptional automatic moratorium on the individual recovery of debts by creditors could be made available to defaulting businesses. It would seem appropriate to consider, in addition, a temporary moratorium on the fulfilment of previously approved reorganization plans.
- The temporary alterations discussed in detail in the following text have, naturally, a range of pros and cons. Their great “pro” would certainly be that they are very simple changes that would work almost entirely without the need for court decisions: this is the only kind of change that can really help in the present situation. Thanks to their limited scope and temporary validity, they could be adopted swiftly, which is another indisputable advantage in the current situation.



IDEA anti COVID-19 # 3

Helping companies to maintain employment: fast, simple, economically meaningful¹

(short recommendation)

MARCH 2020

Daniel Münich

Summary

This recommendation describes the basic characteristics of deferring the due date for payment of employers' social security and health insurance contributions from their employees' salaries, as one of a range of necessary measures that the Czech government should bring into force as quickly as possible in order to reduce the negative economic impact of the ongoing COVID-19 epidemic on companies, employees and residents and to shorten the domestic economy's future period of consolidation. The measure is in line with the recommendations in the study [IDEA anti COVID-19 #2](#) study, which emphasises the significance of bringing in measures quickly and targeting them at the survival of well-established economic structures during the most difficult period.

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Study 2/2020

Where do universities recruit researchers?

FEBRUARY 2020

VÍT MACHÁČEK, MARTIN SRHOLEC¹

Summary

- Where do university researchers come from? How many remain at the same institution where they began doing research? How many have come from elsewhere? Does the tendency to employ researchers originally from the same place markedly differ across universities from different countries? How does this tendency differ between disciplines and over time?
- From the author affiliations in the Scopus citation database, we found how many researchers are currently based at the same university they were affiliated with at the beginning of their research careers. If their early articles were published under a different organization, we traced whether this was in the same country or abroad.
- We do not directly measure ‘academic inbreeding’ in the sense of universities hiring their own graduates, because due to differences in publishing practices, a researcher’s early articles may not have been published under his or her alma mater. However, in many disciplines, particularly natural sciences, this is likely to be the case.
- Our findings are presented for eleven large disciplines and our comparison covers eighteen major universities in fourteen countries, including the new EU member states of the Visegrad group: the Czech Republic, Slovakia, Poland and Hungary.
- Generalizations are difficult to make, as each discipline looks a bit different. Overall, however, the most inward-looking institutions in employing researchers prove to be the national flagship universities in the Visegrad countries. In contrast, hiring researchers originally from outside is most prevalent in the leading universities in the United States and the United Kingdom, such as Princeton and Oxford.

¹ The authors would like to thank Štěpán Jurajda, Daniel Münich, Sergey Slobodyan, Šimon Stiburek and Aleš Vlk for their useful comments on the draft version of the text. Any inaccuracies or errors and opinions are however down to the authors. The study received support from the research programme Strategy AV21 of the Czech Academy of Sciences.

- The Visegrad universities appear to be similar in their tendency to employ researchers originally from the same university to KU Leuven, the University of Vienna and Lund University in many disciplines. The main dividing line does not seem to follow the traditional ‘East vs. West’ differences, but rather tends to highlight the gap between the institutions at the top of global university rankings and the rest.
- Not surprisingly, the flipside of employing researchers whose research careers began at the same university is low internationalization. Cosmopolitan universities in smaller countries have the highest shares of researchers with foreign’ origins, particularly ETH Zürich, which contrasts with a strong national focus in universities in the Visegrad countries.
- This analysis is original and its results are not available elsewhere. The findings should be of interest not only to research managers, academics and doctoral students who are based at the universities in the study, but also to policy-makers and the broader public. Human resources management issues tend to be often underrated in research evaluations, although they are a key factor in the development of universities.

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