IN STITUT PRO DEMOKRACII A EKONOMICKOU ANALÝZU Thìnk-tank Národohospodářského ústavu AV ČR, v. v. i.

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 2019 – May 2020



Contents IDEA 2020

#### **IDEA Interactive web tools**

Where do universities recruit researchers? •

*Trends* in the publication output and authors of research organizations' workplaces in the Czech Republic, 2009 − 2018 **◊** 

Czech research centers' publication performance in 2017–2018 •

How can investments in the quality of teachers contribute to the growth of education of 15-year-olds in the Czech Republic •

What can investments in higher quality of teachers' work bring to the Czech Republic economically •

Globalization of Science **3** 

#### **IDEA Study Abstracts**

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 Shutdownto 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 ◊

Contents IDEA 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 ◊

The consumption tax as a dichotomy: Source of public budgets and instrument of harm reduction (discussion paper). Authors: Vladimír Novák, Michal Šoltés, December 2019 •

International comparison of school principals: Czech administrative hell. Author: Miroslava Federičová, November 2019 •

*Private and Public Returns to Business R&D spending in Czechia*. Author: Petr Pleticha, October 2019 **◊** 

Donations to Political Parties and Procurement Contracts: Evidence from the Period 2007−2014. Authors: Vítězslav Titl and Benny Geys, September 2019 •

Czech teacher's pay: a new hope. Authors: Daniel Münich, Vladimír Smolka, August 2019 3

Stigma as a self-fulfilling prophecy? An experiment in the Czech prisons. Authors: Lubomír Cingl, Václav Korbel, August 2019 •

Teaching quality, education, economic growth and prosperity in the Czech Republic. Authors: Daniel Münich, Jana Krajčová, Tomáš Protivínský, May 2019 •

#### Strategy AV21 IDEA CERGE Intro App Findings Conclusions Group: All Senior Junior Base: University City **②** Initial affiliation of current researchers (Social Sciences) Princeton University Oxford University Stanford University FTH Zürich Comenius University Tel Aviv University Palacky University Lund University Charles University

#### Where do universities recruit researchers?

https://idea.cerge-ei.cz/files/RecruitingResearchers/ >

## Trends in the publication output and authors of research organizations' workplaces in the Czech Republic, 2009–2018



https://ideaapps.cerge-ei.cz/Publication\_trends/ >>



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#### Czech research centers' publication performance in 2017 – 2018

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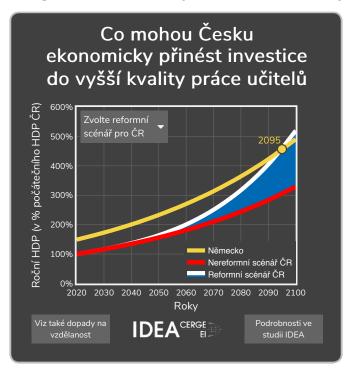
How can investments in the quality of teachers contribute to the growth of education of 15-year-olds in the Czech Republic



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### What can investments in higher quality of teachers' work bring to the Czech Republic economically



https://cdpn.io/ideaapps/debug/GzOowX# •>

#### **Globalization of Science**



http://www.globalizationofscience.com/ >



## The Covid-19 pandemic and socio-economic inequality in education<sup>1</sup>

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

<sup>&</sup>lt;sup>1</sup> 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 Kateřiná 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.



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- 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.





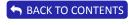
### How to reawaken the economy: Soothe, warm up, say some farewells<sup>1</sup>

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 be 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.

<sup>&</sup>lt;sup>1</sup> 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.



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## Macroeconomic policy during the coronavirus epidemic<sup>1</sup>

**APRIL 2020** 

Marek Kapička, Michal Kejak, Ctirad Slavík<sup>2</sup>

#### **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

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<sup>&</sup>lt;sup>1</sup> 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 innaccuracies 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.

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.

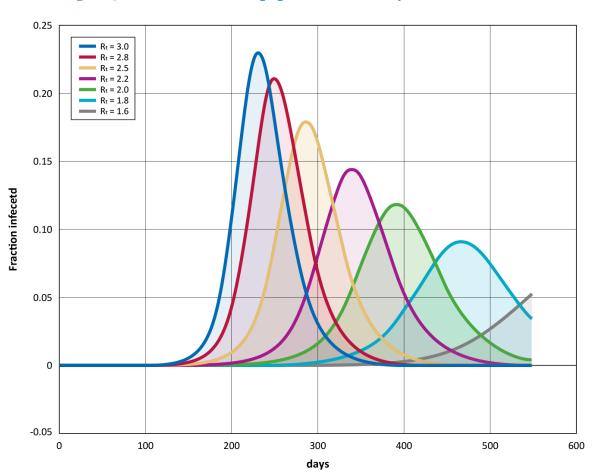


Figure 3: The fraction of the population currently infected over time

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





## Serological tests for Covid-19 antibodies: What could they be good for?<sup>3</sup>

APRIL 2020 Ludmila Matysková<sup>4</sup>

#### **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

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<sup>&</sup>lt;sup>3</sup> 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 Bo2).

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).



# Using Bluetooth technology for COVID-19 contact tracing.

**APRIL 2020** 

Ole Jann, Pavel Kocourek and Jakub Steiner<sup>2</sup>

#### **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

<sup>&</sup>lt;sup>2</sup>Contact: <u>ole.jann@cerge-ei.cz</u>



<sup>&</sup>lt;sup>1</sup> 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.

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.





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

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.

<sup>&</sup>lt;sup>1</sup> 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.





# Compliance with bans in the coronavirus period: enforcement must be effectively targeted,

APRIL 2020 Libor Dušek<sup>2</sup>

#### **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.

<sup>&</sup>lt;sup>2</sup> 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.



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<sup>&</sup>lt;sup>1</sup> 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.

- 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".



# COVID-19 tracing: How to motivate people and not scare them off

APRIL 2020 Ole Jann

(translated into Czech by Ludmila Matysková<sup>2</sup>)

#### **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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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.



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### · B·E + A V 1 @

IDEA anti COVID-19 # 10

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

**APRIL 2020** 

Václav Korbel, 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.

<sup>&</sup>lt;sup>1</sup> 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:
  - o make people more willing to limit the time they spend outdoors, especially in their longer-term personal plans,
  - o make people more willing to stay at home even for months, if necessary,
  - o 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.<sup>2</sup>
- In order to achieve voluntary compliance with government directions, public confidence in the measures adopted is fundamental.<sup>3</sup> 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)<sup>4</sup>

<sup>4</sup> See https://docs.google.com/document/d/1AbOjoexXyJ2jZjBCoh9amhaoiTVaigWWcm7gjb1HBG4/edit?usp=sharing



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<sup>&</sup>lt;sup>2</sup> For further recommendations from behavioural economics for communication in the current situation, see study # 9

<sup>&</sup>lt;sup>3</sup> See WHO Outbreak communication guidelines.



# How best to communicate with the public? Findings from behavioural economics in the fight against COVID-19

MARCH 2020 Vojtěch Bartoš<sup>2</sup>

#### **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.

<sup>&</sup>lt;sup>2</sup> The author is a lecturer at Ludwig-Maximilians Universität in Münich and is currently a visiting scholar at Princeton University in the USA.



22

<sup>&</sup>lt;sup>1</sup> 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 Korbel, 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.

- 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

### B·E H A V I ⊙

IDEA anti COVID-19 # 7

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

**MARCH 2020** 

Václav Korbel, 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 20<sup>th</sup> 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.

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- 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.<sup>2</sup>
- 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)<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> See https://docs.google.com/document/d/1AbOjoexXvJ2jZjBCoh9amhaojTVajgWWcm7gjb1HBG4/edit?usp=sharing



<sup>&</sup>lt;sup>2</sup> Which might not be visible past their face mask.



# What behavioural economics can teach us about prevention: another way of fighting COVID-19<sup>1</sup>

**MARCH 2020** 

Michal Bauer, Julie Chytilová<sup>2</sup>

#### **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.

<sup>&</sup>lt;sup>2</sup> 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. <a href="Michal-Bauer@cerge-ei.cz">Michal-Bauer@cerge-ei.cz</a>, <a href="mailto:julie.chytilova@fsv.cuni.cz">julie.chytilova@fsv.cuni.cz</a>.



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- 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.





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

MARCH 2020 Jan Kulveit, <sup>2</sup> Jakub Steiner<sup>3</sup>

#### **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.

<sup>&</sup>lt;sup>3</sup> CERGE-EI and University of Zurich, jakub.steiner@cerge-ei.cz



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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.



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

MARCH 2020 Tomáš Richter<sup>2</sup>

#### **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,

<sup>&</sup>lt;sup>2</sup> 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.



<sup>&</sup>lt;sup>1</sup> 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). 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 author's responsibility. The study was produced with support from the Czech Academy of Sciences as part of its AV21 Strategy programme and Foundation Experientia.

- **(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.



## Helping companies to maintain employment: fast, simple, economically meaningful<sup>1</sup>

(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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32



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.

<sup>1</sup> 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.





Study 13/2019

# The consumption tax as a dichotomy: Source of public budgets and instrument of harm reduction (discussion paper)

DECEMBER 2019

VLADIMÍR NOVÁK, MICHAL ŠOLTÉS<sup>2</sup>

- The tax system is an essential economic policy instrument used to finance public budgets and influence the economic behavior of individuals, households, and companies.
- Different tax liabilities on certain forms of consumption (e.g., more ecological forms
  of transport, less harmful tobacco products) is in the public interest, if they incentivize
  consumers to replace more harmful forms of consumption with less harmful options.
  Such tax liability differentiation can result in harm reduction without reducing overall
  consumption levels.
- Tax differentiation based on the potential harm of the consumption needs to take into
  account the extent to which it will discourage existing consumers from the more harmful
  forms of consumption and the extent to which it will attract new consumers, who would
  otherwise not consume the product at all.
- Attempts to use excise taxation to finance public budgets and as an instrument to encourage
  consumers to adopt less harmful behaviors have been observed in many countries over
  the past decade.

<sup>2</sup> We are grateful to Daniel Münich, Marek Kapička, Jan Švejnar, and Jan Berka for their comments and insights. Any remaining errors are the authors' own. In a number of passages, this study assumes that certain forms of tobacco consumption have detrimental effects on health; in our arguments, we assume that new types of tobacco products, such as electronic cigarettes and heated tobacco, are associated with a lower risk of health problems compared to smoking classic cigarettes. This assumption is based on the prevailing opinion in recent specialist literature on this topic (Hajek et al., 2014, Auer et al., 2017, McNeill et al., 2018). We must, however, also point out that these are new products and it is thus in principle impossible for research to have yet investigated their long-term health implications (Dinakar et al., 2016). The expert judgment of the health risks of these products is a matter beyond the scope of this synoptic study.





Study 12/2019

# International comparison of school principals: Czech administrative hell<sup>2</sup>

NOVEMBER 2019

MIROSLAVA FEDERIČOVÁ

- School leadership is a serious problem in the Czech Republic. In this study, we document how a number of extremes converge at the level of elementary school leadership in the Czech Republic: (i) schools have substantial autonomy, (ii) school principals labour under very large administrative burdens, (iii) the average new principal is insufficiently prepared for the role, (iv) principals' salaries are relatively low and insufficient to attract strong candidates, and (v) there are a very large number of small schools, necessitating a large number of principals. This unhealthy combination of factors generates a significant problem for Czech schooling, of which only a narrow circle of experts has thus far been aware. For this reason, little progress has been made towards considering how problems might be solved or at least minimised.
- International comparisons demonstrate that elementary schools have greater independence in organizational, staffing, curricular and financial decisions in the Czech Republic than in most other countries. Local and regional authorities are involved only minimally in these areas, although schools are extensively regulated by law.
- The decentralisation of Czech schooling, i.e. the transfer of administration, decision-making and responsibility to lower levels in the system, i.e. to local authorities and individual schools, began in the early 2000s in connection with reforms of public services including the introduction of the legal identity of schools and establishment of self-governing regional authorities. Since 2003, all schools have been separate legal entities, which has given school principals greater autonomy in all areas, including financial resource allocation, school property maintenance, and staffing, and thus much greater responsibility.
- Despite their high level of autonomy, the extent of their administrative role, and the level
  of responsibility entrusted to them, a large percentage of school principals are insufficiently
  prepared or qualified when they take up the post. The Czech Republic lags behind the

<sup>2</sup> This study was carried out with the support of the Strategy AV21 program of the Czech Academy of Sciences. The author would like to thank Miroslav Hřebecký, Daniel Prokop and Daniel Münich for their useful comments on the draft version of the text. Any inaccuracies or errors and opinions are however down to the author.



European average in terms of the share of school principals who were trained prior to taking the position. Indeed, a substantial proportion of Czech school principals have never completed any training or preparation course. For example, 42% of Czech principals have not completed a teacher training course, compared with an average of 12% of principals across Europe as a whole. This is an area of professional training in which Czech school principals feel they know too little and need to improve. On the other hand, a relatively high percentage of Czech school principals have training and/or qualifications in law, administrative management and other management-related tasks.

- These days, educational leadership is generally considered to be one of a principal's most important tasks, with substantial consequences for teaching quality and educational outcomes. This task includes observing classes, teaching pupils, mentoring teachers, coordinating and directing their ongoing professional training, coordinating curriculum content, developing teaching methods, making use of external resources, and etc. Czech principals spend on average just 15% of their working time on these tasks. Most of their time is occupied with administrative tasks and meetings (around 40%). Czech principals win first place among the European countries for having the heaviest administrative workloads. That workload is not the result of a lack of support staff in school leadership, but rather reflects the fact that the administrative burden placed on school leadership teams is disproportionate.
- The school principal's profession is insufficiently attractive in the Czech Republic. Czech principals' salaries are among the lowest in Europe relative to the salaries of other university-educated professionals. This is one factor behind decreasing interest in the profession, which has led to an ageing body of principals and growing difficulties recruiting new principals. There was only one candidate for approximately half of all principals' selection procedures during the 2017/2018 school year, and in approximately a quarter of cases, the selection procedure was essentially a formality.
- Almost half of all elementary schools in the Czech Republic have fewer than 100 pupils; this means that there is a relatively large number of small schools and thus rather a lot of principals are required. Furthermore, the Czech Republic's decentralisation of schooling and the greater autonomy and responsibility given to schools as a result have had significant impacts on principals of small schools; this has negative effects on the quality of school leadership and, in turn, on teaching quality.
- A combination of several measures can help to address these issues: (i) Encouraging smaller schools to merge at the leadership level or to form confederations of schools that can share certain aspects of their administrative organization. Not only could this result in bureaucratic economies of scale; it could also enable simpler and more effective use of teachers and other school staff and more intensive use of school premises and facilities, strengthen diversity in curricula, and reduce socio-economic selectivity; (ii) In smaller schools, providing administrative, technical, legal and other support. In larger schools, dividing up the principal's position to create two posts: educational director and technical director, with the latter taking on legal responsibilities; (iii) Carrying out a specialized procedural audit of schools' typical administrative workload and, based on that, streamlining that workload; (iv) Improving the quality of training provided to principals and other school leadership staff; (v) Raising and maintaining principals' salaries at a relative level equivalent to that of managerial positions in other sectors, and potentially introducing a career framework for principals.





Study 11/2019

# Private and Public Returns to Business R&D spending in Czechia<sup>2</sup>

OCTOBER 2019

PETR PLETICHA

- This study presents the first estimates of the relationship between business R&D capital and value added by sector in Czechia. The goal is to assess both direct effects of R&D spending in respective industries, and indirect, spillover effects on the rest of economy. We apply well-established regression approaches, using sectoral data from manufacturing and selected service sectors from 1996 to 2015. Because R&D spending and public R&D subsidies have soared in recent years, such an analysis has been long overdue.
- The estimated return to private R&D capital is 50%, which means that an increase in private R&D capital by CZK 1 is associated with CZK 0.50 increase in value added. The return to public R&D capital is not statistically different from zero, but its indirect return to the economy is estimated to be almost 30%. Raising public R&D capital by CZK 1 in one particular sector therefore leads to an average CZK 0.30 increase in value added to all the other sectors. For comparison, we have also estimated the rate of return on ordinary fixed capital, which is approximately 8%. R&D capital clearly offers far greater returns.
- The results illustrate that R&D spending not only rewards those who actively engage in it, but is also a key driving factor in overall economic development. Whereas private R&D capital aims to increase the efficiency of the firm which makes the investment, public R&D capital should focus on projects with uncertain direct but promising societal returns. Our results reflect this logic. They are also in line with the estimates of other studies which have used data from different countries.

<sup>2</sup> This study was carried out with the support of the Strategy AV21 program of the Czech Academy of Sciences and project 17-09265S of the Czech Science Foundation. The author would like to thank to the Czech Statistical Office for providing access to the R&D micro data. The author greatly appreciates the comments and guidance of Martin Srholec, Daniel Münich and Štěpán Jurajda. Any remaining errors and omissions are the author's.



• Assessing how R&D spending affects the economy requires estimation of both direct and spillover effects. Not taking spillover effects into account leads to imprecise estimates of the impact of public R&D spending, which may in turn lead to suboptimal related policies. Systematic data collection for the purpose of R&D program assessment as well as the possibility to link statistical and administrative firm-level data would also make such assessments more precise and reliable.





Study 10/2019

# Donations to Political Parties and Procurement Contracts: Evidence from the Period 2007 – 2014

SEPTEMBER 2019

VÍTĚZSLAV TITL AND BENNY GEYS<sup>2</sup>

- Political donations are an important source of income for political parties. With the exception of the extreme left, political donations constitute about 10% of the income of major left-wing parties, and 23% to 33% for major right-wing parties (Skuhrovec et al, 2015).
- In this study, we investigate whether and how political donations affect public procurement allocations in the Czech regions. We find evidence of *systematic favoritism in the public procurement process towards a particular group of firms* i.e. firms donating to political parties.
- A firm that increases its donations to a political party gaining (losing) power by 10% will on average see the value of its public procurement contracts increase (decrease) with 0.5% 0.6% in the following year. In monetary terms, one additional CZK in donations to the party gaining power increases procurement contracts by roughly 100 CZK on average.
- Furthermore, donating firms receive more small contracts allocated under less regulated procurement procedures, face less competition in more regulated and open procurement procedures, and tend to win with bids further above the anticipated contract cost.
- Taken together, our results suggest strategic behavior of contracting authorities in favoritism towards donating firms.

<sup>2</sup> The authors would like to thank Filip Pertold for his useful comments on the draft version of the text. Any inaccuracies or errors and opinions are however down to the author/s. The study received support from the research programme Strategy AV21 of the Czech Academy of Sciences.





Study 9/2019

# Czech teachers' pay: a new hope

AUGUST 2019

DANIEL MÜNICH, VLADIMÍR SMOLKA<sup>2</sup>

- Teachers' pay has long been lower in the Czech Republic than in almost all the other most economically developed countries. That is a natural consequence of the fact that the Czech Republic spends around one third less of its gross domestic product (GDP) on regional schooling than is usual in developed countries.
- If Czech teachers' average monthly salary was, relative to the salaries of other tertiary educated employees in the Czech Republic in 2018, comparable to the equivalent ratio in EU countries on average or in Finland or Germany, it should stand at around 53,000 or 56,000 CZK rather than the current 36,000 CZK.
- Relative to the average salary in the national economy, average teachers' salaries rose year on year in 2018 by 2.9 percentage points to nearly 115%. Nevertheless, this only marked a return to the levels of 2008, i.e. ten years ago, prior to the global financial crisis. Teachers' salaries were raised substantially in 2017-2018, but at the same time salaries for all tertiary educated employees rose substantially across the whole public sector. The raise in teachers' salaries was thus hardly ahead of the game.
- In relative terms, teachers at the beginning of their careers in the under 30 age bracket are the best paid. In 2018, 'only' 69% of non-teachers in this age group received higher salaries than their teacher peers (tertiary educated, same age and gender in the same region). Next best is the situation among the oldest teachers, in the 50-59 and 60+ age brackets. Teachers in the middle age bracket, 30-49 years, receive the worst pay in relative terms: 80% of demographically equivalent employees earn more than the teachers' average salary.

<sup>2</sup> We are grateful to the Czech Ministry of Labour and Social Affairs for their permission to use the ISPV data, which is collected and administered by TREXIMA spol. s r. o. The authors would further like to thank Štěpán Jurajda for his valuable comments on the working version of this text. Any ambiguities or errors are the authors' own, as are all opinions expressed in the study. The study was produced as part of and with the support of the Czech Academy of Sciences' AV21 Strategy and is based on research carried out within Czech Science Foundation project GA ČR P402/12/G130.



- Czech teachers' salaries are highly equalized, or even egalitarian, both in national and
  international comparison. In the youngest age bracket the variability in pay is comparable
  with that of administrative staff and other university educated public sector employees.
  However, whereas pay grades and variability increase with age (and experience) among
  non-teachers, teachers' pay rises extremely slowly with age (experience) and its variability
  remains low.
- In 2018 the already low share of overall teachers' pay allocated to merit-based bonuses decreased. The substantial raise to teachers' salaries in that year was achieved partially at the expense of further reducing the already very low levels of merit-based pay.
- Under Bohuslav Sobotka's government in 2014-2017, raising teachers' pay was not a priority above and beyond increasing salaries across the whole public sector more generally. A turn for the better in this respect only became apparent during the first year of the new government in 2018. Further development on this front is however still in the realm of promises, or at best rough estimates for 2019.
- The pre-election pledges made by ČSSD and ANO in this area are not mutually comparable. While ČSSD took the average salary in the national economy in 2021 as the basis for its calculations, the second took average teachers' salaries in 2017. Thus, in 2021 teachers should be paid 49,530 CZK per month according to ČSSD and 47,367 CZK according to ANO. The latter figure was adopted into the government's statement of policy. However, ANO's promise is problematic because it does not anticipate the concurrent growth of salaries in other professions, which can only be broadly predicted.
- If teachers' pay were to increase by 7.5% annually from 2020 onwards, the level of teachers' pay relative that of other tertiary educated public sector employees in the Czech Republic would match the equivalent ratio across the EU as a whole only in 2030, i.e. a decade from now. To reach the relative levels in Germany or Finland would take 13-15 years.
- Previous political promises in the more distant past regarding raises to teachers' pay were vague, short-lived and rarely fulfilled. The consequence of that has been to substantially reduce the public's belief in such pledges. In order to permanently and substantially increase the long existing low level of interest in the teaching profession among the youngest generations these pledges must be given greater credibility. It is not only essential that the current commitments be fulfilled, but also that they be extended well beyond a single term of election. Help in achieving this may come through key political parties declaring their consensus, the introduction of statutory salary indexation for teachers and a more responsible approach to compiling the mid-term state budget outlook.



Study 8/2019

# Stigma as a self-fulfilling prophecy? An experiment in the Czech prisons<sup>2</sup>

AUGUST 2019

LUBOMÍR CINGL, VÁCLAV KORBEL

#### **Summary of key issues**

- Prison inmates face many problems after their release which may hinder their reintegration
  into society. Discrimination from the society can lead among the inmates to the creation of
  a stigma of an ex-inmate. In such a situation, the history of the prison sentence is a source
  of shame and prejudice from the side of society. It can further lead to a loss of motivation
  and self-confidence, and ultimately to an increase in the probability of recidivism.
- The goal of our project was to investigate whether inmates currently serving a sentence expect stigmatization from people out of prison. Another goal was to test whether a light-touch psychological intervention targeting the self-confidence can reduce the effects of stigma.
- We tested our research questions on a sample of 297 male inmates from 15 Czech prisons using methods of experimental economics. Inmates made decisions involving trust and altruism in situations which simulate interactions with the general society so that we could measure the expectations of inmates about the attitudes they have.
- Our results show that inmates do not expect stigmatization. On the contrary, they expect a similar level of trust and even a more altruistic behavior from the general society than towards non-prisoners. Since inmates do not expect to be stigmatized, the psychological intervention did change neither beliefs nor behavior.
- The fact that prisoners do not expect stigmatization can be regarded as positive for their future reintegration. On the other hand, some inmates reported overly optimistic beliefs regarding the behavior of the general society. It could be one of the reasons why they do not prepare adequately for the release and subsequently recidivate. Further research should shed light, whether overly optimistic beliefs can negatively affect prospects for reintegration.

<sup>2</sup> The authors would like to thank opponents Vojtěch Bartoš and Josef Montag as well as Daniel Münich as expert editor for useful comments on the draft version of this study's. Furthermore, the authors would like to thank the General Director of the Prison Service of the Czech Republic Major General prof. PhDr. Petr Dohnal and Chief Psychologist of the Prison Service PhDr. Václav Jiřiček PhD. for enabling the implementation of the project. Many thanks go to the directors of all the prisons involved in the research and all the prison staff who helped us with the implementation. However, any inaccuracies and errors are down to the authors, as well as the views and statements in the study expressed. The study is based on research supported by the Grant Agency of Charles University (GAUK 910812/2015), and by the Strategy AV 21 of the Czech Academy of Sciences.





Study 5/2019

# Teaching quality, education, economic growth and prosperity in the Czech Republic<sup>2</sup>

MAY 2019

DANIEL MÜNICH, JANA KRAJČOVÁ, TOMÁŠ PROTIVÍNSKÝ

#### **Summary of key issues**

- This study reports in detail on how Czech society will suffer financially in the future if it is unable, or unwilling, to invest greater resources and systemic efforts into improving teaching quality. Our simulated estimates demonstrate that the financial impact of foregoing potential improvement would be huge. The paradox of this high level of unrealized societal gain can be explained in various ways. Either Czech society is still insufficiently aware of the extent of the societal advantages that they forgo by failing to improve teaching quality, or a substantial part of the society is currently failing to consider the long-term impact. It may also be that the Czech political-educational system is currently unable to translate a realization of the extent of this loss into concrete measures and investments.
- Good quality schooling is a fundamental precondition for any country's future economic and social development, its prosperity and its inhabitants' quality of life. That is the case despite the fact that this connection is not immediately obvious to us as we go about our daily lives. The time period over which causes and effects in education are measured is not a few months or years but several decades, by which time it is too late to change the observed effects. This study sets out those potential effects.
- By far the most important determiner of the quality of education is, and will long continue to be, the quality of teachers' work. That, in turn, is dependent on the quality of teachers' initial and further training and on the teaching profession's ability to attract the very best and most talented candidates into teaching, to retain them and to keep them motivated. It is thus a question both of the financial attractiveness of the teaching profession and of the way in which initial teaching qualifications and further training for teachers are organized.

<sup>2</sup> The authors would like to thank Ctirad Slavík, Karel Gargulák, Filip Pertold and other colleagues for their useful comments on the draft version of this study and calculations. Special thanks belongs to Jan Libich, who helped to make the originally very technical text make more intelligible. 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 and is based on research supported by the Czech Science foundation grant project (GA ČR P402/12/G130), the project Teach Live, and Česká spořitelna Foundation.



- While it is difficult to put figures to the non-financial gains that better education brings in the form of better health, longer life, cultural development, and so on, it is much easier to estimate the financial gains. The latest findings from the social sciences enable us to do so based on three essential phenomena: (i) The extent to which teacher quality differs across the country, (ii) How those differences in teaching quality impact the level of pupils' education and (iii) How those pupils' education later affects the country's economic growth, once they have entered the labour market. This study presents estimates of the long-term effects of various scenarios for the development of teacher quality on the Czech Republic's GDP.
- We work with three non-reform scenarios. The more optimistic non-reform scenario supposes that the current downward trend in the level of education and in teacher quality will come to an end and teacher quality will stagnate. The middle scenario supposes that pupils' results and teacher quality will continue to fall at the current rate for 15 years. The pessimistic scenario supposes that as teachers retire they will be replaced by younger teachers of substantially less-than-average quality.
- The reform scenarios with which we work differ in respect of which group of teachers we expect to improve in quality, how large we expect the improvement to be and how long the change would last. Teacher quality can be improved by improving the quality of teachers' initial education, by raising the quality of their further training, or by raising the requirements for selection into the teaching profession. Our simulation of the effects takes into account the fact that raising teacher quality is a gradual process that may take years or decades, that primary education lasts ten years, that better-educated pupils enter the labour market only much later, and that their better education will then translate into greater productivity throughout their active careers lasting several decades.
- The economic advantage of the reform scenarios in which teacher quality and pupils' education are improved is expressed as an additional accumulated value of gross GDP that is produced purely as a result of the improvement in teacher quality over a period of 80 years from the (simulated) implementation of the reforms in 2020. That additional GDP value can then be considered the value the society is currently sacrificing by failing to invest in teacher quality. We can also compare this additional potential GDP value with the amount that is currently spent on schooling. The figures give us an upper estimate of how much it would make sense to invest into improving teaching quality. The estimates of the gross long-term gains from investment in teacher quality improvement are very high and it is hard to find any other areas of public investment with such a high level of return. Even the most conservative scenario, representing a slight improvement in all teachers' work, would lead to a gross gain that diametrically exceeds the return on any commercial investment product.

#### 2020

*IDEA anti COVID-19 #18: The Covid-19 pandemic and socio-economic inequality in education.* Miroslava Federičová, Václav Korbel, May 2020 **♦** 

*IDEA* anti COVID-19 #17: How to reawaken the economy: Soothe, warm up, say some farewells. Filip Matějka, May 2020 **◊** 

IDEA anti COVID-19 #16: Macroeconomic policy during the coronavirus epidemic. Marek Kapička, Michal Kejak, Ctirad Slavík, April 2020 ◊

IDEA anti COVID-19 #15: Serological tests for Covid-19 antibodies: What could they be good for? Ludmila Matysková, April 2020 ◆

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

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

*IDEA* anti COVID-19 #12: Compliance with bans in the coronavirus period: enforcement must be effectively targeted. Libor Dušek, April 2020 **♦** 

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

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

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

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

*IDEA* anti COVID-19 #6: What behavioural economics can teach us about prevention: another way of fighting COVID-19. Michal Bauer and Julie Chytilová, March 2020 **♦** 

*IDEA anti COVID-19 #5: The economics of testing for COVID-19: beware of greater damage than benefit.* Jan Kulveit and Jakub Steiner, March 2020 **◊** 

IDEA anti COVID-19 #4: Insolvency during the Coronavirus period: a proposal for temporary changes to the Insolvency Act. Tomáš Richter, March 2020 **◊** 

IDEA anti COVID-19 #3: Helping companies to maintain employment: fast, simple, economically meaningful. Daniel Münich, March 2020 ▶

Where do universities recruit researchers? Study and interactive application.

Authors: Vít Macháček, Martin Srholec, February 2020 ● (INTERACTIVE APPLICATION ●)

#### 2019

The consumption tax as a dichotomy: Source of public budgets and instrument of harm reduction. Vladimír Novák, Michal Šoltés, December 2019 **◊** 

International comparison of school principals: Czech administrative hell. Miroslava Federičová, November 2019 •

*Private and Public Returns to Business R&D spending in Czechia.* Petr Pleticha, October 2019 **◊** 

Donations to Political Parties and Procurement Contracts: Evidence from the Period 2007–2014. Vítězslav Titl and Benny Geys, September 2019 •

Czech teacher's pay: a new hope. Daniel Münich, Vladimír Smolka, August 2019 3

Stigma as a self-fulfilling prophecy? An experiment in the Czech prisons. Lubomír Cingl, Václav Korbel, August 2019 •

Teaching quality, education, economic growth and prosperity in the Czech Republic. Daniel Münich, Jana Krajčová, Tomáš Protivínský, May 2019 **◊** 

GLOBALIZATION OF SCIENCE: Evidence from authors in academic journals by country of origin. Vít Macháček and Martin Srholec, May 2019 •

Employment effects of minimum wage increases in the Czech Republic. Jakub Grossmann, Štěpán Jurajda, Vladimír Smolka, April 2019

The school homework load in the Czech Republic and in international comparison. Václav Korbel, Daniel Münich, April 2019 ♦

*A Comparison of Journal Citation Indicies (interactive web tool).* Daniel Münich, Taras Hrendash, March 2019 **♦** 

Electric car reaches space, but only makes it into the Czech Republic after a discount. Milan Ščasný, Iva Zvěřinová, Zuzana Rajchlová, Eva Kyselá, February 2019 •

How school report grades affect pupils' life decision. Miroslava Federičová, February 2019 ◊

#### 2018

*The impacts of introducing the waiting period in 2008 for sick leave.* Filip Pertold, October 2018 **♦** 

An International Comparison of Economic and Academic Performance of OECD Countries (interactive application). Taras Hrendash, Štěpán Jurajda, Stanislav Kozubek, Daniel Münich, September 2018 •

The impact of higher wages of politicians on municipal elections. Ján Palguta, Filip Pertold, September 2018 ◊

The consequences of the postponed abolishment of super gross wages. Klára Kalíšková, Michal Šoltés, September 2018 •

Czech teachers' intellectual skills in international and generational comparison.

Jana Krajčová, Daniel Münich, September 2018 ▶

Obesity in the Czech Republic: an international comparison using data from the SHARE project. Filip Pertold, Jiří Šatava, August 2018 **◊** 

Impact of parental benefits reform in 2008 on mothers' occupational allocation. Barbara Pertold-Gebicka, July 2018 **◊** 

Senior guide: How not to lose income while taking early retirement. Jiří Šatava, July 2018 2

Who does preschool (not) help? Experience from a series of reforms to early and preschool care in Germany. Filip Pertold, Lucie Zapletalová, July 2018 •

Higher teachers' salaries: Promises, promises, promises. Daniel Münich, Vladimír Smolka, June 2018 ◊

Who publishes in predatory and local journals? A different take on bibliometric analysis. Vít Macháček and Martin Srholec, June 2018

The low-skilled in the Czech Republic (full study in English). Alena Bičáková, Klára Kalíšková, May 2018 ♦

Company names and their influence on company productivity. Jan Hanousek, Štěpán Jurajda, April 2018 •

What's Behind the Grades on Czech School Certificates? Daniel Münich, Tomáš Protivínský, January 2018 ♦

An International Comparison of Academic Publication Output and its Influence in Selected Countries – Interactive web tool. Taras Hrendash, Daniel Münich, January 2018 •

#### 2017

*Growth in individuals' disposable incomes between 2005 and 2015: whose income improved?* Petr Janský, Jiří Šatava, December 2017 **◊** 

Local journals in Scopus. Vít Macháček, Martin Srholec, December 2017 3

The effects of educational methods on pupils' results and socio-emotional abilities: classic vs. modern methods. Václav Korbel, Michal Paulus, November 2017 •

IDEA FOR THE 2017 ELECTIONS: Family policy in the election manifestos: and overview and breakdown. Klára Kalíšková, October 2017 ▶

IDEA FOR THE 2017 ELECTIONS: Pensions and pensioners in election manifestos. Filip Pertold, Jiří Šatava, October 2017 **⊙** 

*IDEA FOR THE 2017 ELECTIONS: Teachers' salaries in Czech election manifestos:* an overview and breakdown. Daniel Münich, September 2017 **●** 

Who is your mayor? Electoral competition and characteristics of political representatives in small Czech municipalities. Ján Palguta, August 2017 •

Birds of a feather: the importance of selecting the right field of study for finding a partner. Alena Bičáková, Štěpán Jurajda, Lucie Zapletalová, July 2017 •

*Teachers' low pay: a very expensive saving Interactive application.* Daniel Münich, June 2017 **◊** 

IDEA for Elections '17. Seniors' income: work, retirement pensions and their valorization. Filip Pertold, Jiří Šatava, June 2017 **◊** 

Do direct subsidies stimulate new R&D output in firms? A comparison of IMPULS, TIP and ALFA programmes (full study in English). Oleg Sidorkin, Martin Srholec, June 2017 •

IDEA for Elections '17: Support for families with children: tax, benefits and public services. Klára Kalíšková, May 2017 ◊

Inside Beall's lists. Vít Macháček, Martin Srholec, May 2017 **2** 

Harsher prison sentences for murder? An impact evaluation of the legislative proposal. Libor Dušek, Jan Vávra, March 2017 ▶

Public financing for pre-school places pays off: a cost and benefit analysis (full study in English). Klára Kalíšková, Daniel Münich, Filip Pertold, March 2017 ▶

Women and men in Czech R&D: Publication performance, productivity and co-authorship. Štěpán Jurajda, Stanislav Kozubek, Daniel Münich, Samuel Škoda, March 2017 ♦

*Predatory journals in Scopus (full study in English).* Vít Macháček, Martin Srholec, March 2017 **♦** 

Why European women are saying no to having (more) babies. Mathiass Doepke, Fabian Kindermann, February 2017 ♦

#### 2016

80% reduction of greenhouse gas emissions: Analysis of Czech energy industry development until 2050. Lukáš Rečka, Milan Ščasný, December 2016 •

Survey of preferences of people for climate change policies: Do Czech, Polish and British respondents support policy implementation? Iva Zvěřinová, Milan Ščasný, Mikolaj Czajkowski, Eva Kyselá, December 2016 •

A global comparison of Czech and Slovak academic journals based on their impact factor (IF) and article influence score (AIS). Daniel Münich, Samuel Škoda, December 2016

The tax system reduces the motivation to return to work among mothers with young children: recommendations and evaluation. Jiří Šatava, December 2016 •

Do direct subsidies promote private R&D expenditure? Evidence from regression discontinuity design. Ján Palguta, Martin Srholec, November 2016 •

Predatory Journals in Scopus. Vít Macháček, Martin Srholec, November 2016 •

Political Competition in Local Governments and Public Procurement. Ján Palguta, October 2016 **♦** 

Quality of Publication Output of Scientific Fields in Slovakia: An International Comparison. Štěpán Jurajda, Stanislav Kozubek, Daniel Münich, Samuel Škoda, August 2016 •

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