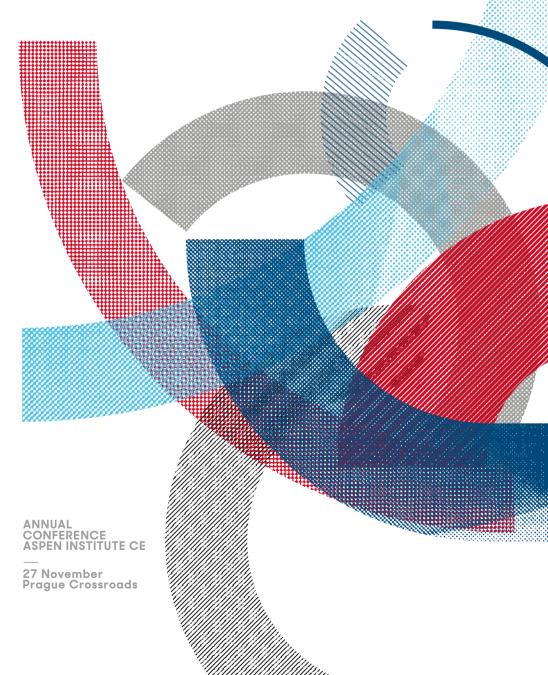
The Shape of (Central) Europe 2019



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The Shape of (Central) Europe 2019

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Aspen Institute Central Europe

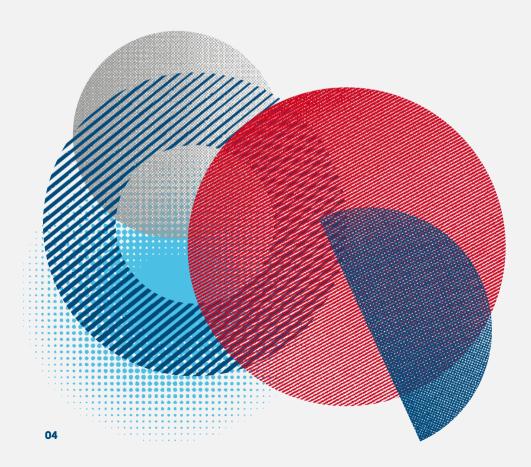
Short Introduction About the Aspen Institute CE

Our mission

We connect and inspire people who want to improve society.

Who we are

The Aspen Institute CE is an independent platform where representatives from politics, business and public institutions as well as personalities from the arts, sports and science meet. With the participation of figures from various disciplines, we organize public conferences, seminars, workshops and professional discussions.



Leaders, celebrities, politicians, the public



Aspen Young Leaders Program

Every year, young people from various disciplines meet in this program to discuss the challenges today's society is facing and the role they play in them. The basic idea of the program is to encourage these promising young people to pause and reflect on the impact of their activities on the world, on society and on the future.

The Shape of (Central) Europe

Annual Conference

The Aspen Institute CE holds an annual conference entitled The *Shape of (Central) Europe* at which the results of the year-round work of expert groups - a comprehensive and long-term perspective on political, economic and social developments in the Czech Republic and in Central Europe - are presented. Public figures can formulate new ideas that encourage society and its leaders to engage in self-reflection and comparison, and prompt discussion about other political strategies in Central Europe.



Highlighting topics of public interest

The Aspen Institute CE expert meetings allow for a multifaceted discussion between policymakers and influential business and public figures. They address themes that resonate in politics, but also the impact of innovation and technology on the development of society, democracy, quality of life, change and formation of public opinion and its participation in decision-making. Global issues, transatlantic relations, and the problems of Europe and the Central European region are discussed.



Aspen Review

The Aspen Review is a quarterly magazine in which the Aspen Institute CE provides space for a wide range of views on topical issues that resonate in society. The magazine offers analysis, interviews and commentary by world-renowned professionals as well as Central European public figures, journalists, scientists and academics.

Foreword



For the fifth time, the annual conference The Shape of (Central) Europe asks a crucial question concerning the future of the Czech Republic and Central Europe as a whole. The project for this conference was initially prepared by the Aspen Institute Central Europe in 2015. We started by comparing available data, international rankings and recommendations for the future direction of our society. We have gradually built an open platform for experts in various areas, and coming from different regions, to meet and present - both over the course of the year and at the annual conference - inspiring examples and topics worthy of attention. What connects all these experts? They all agree that the current situation is not satisfactory and believe that the Czech Republic, as well as other Central European countries, have a much greater potential, and they want to show their leaders a way to realize it.

In previous years, we discussed topics such as competitiveness, education, security, governance and quality of life as separate issues. This year, however, we chose to link together our discussions on competitiveness and education, innovation and security, and the significance of regional differences in quality of life. The unsatisfactory state of governance is an issue that cuts across all the aforementioned areas. As always, we wish to give an opportunity to internationally successful business people from Central Europe to speak about the ways in which the flaws of public institutions in this region hinder its further development.

You might have noticed that we are expanding the scope of the annual conference to cover the entire Central European region and its perspectives in a European context. Over the course of the year, we organized thematic round-tables and public discussions in Olomouc, Ostrava, Košice and at the Warsaw Security Forum. I wish to give my thanks to Palacký University Olomouc, Technical University of Košice, the organizers of the Ostrava Impulses for Education, and Casimir Pulaski Foundation in Warsaw for their co-operation in organizing these events.

I want to thank all our partners and sponsors who support our efforts to connect and inspire people interested in building an open and cohesive society in a prosperous Europe.

I would also like to express my gratitude to all those who have participated in our working groups and especially their guarantors who have drawn up the reports included in this publication. These are not academic studies meant to be read only by experts, but materials designed to spur public discussion. I sincerely hope that they will encourage people to work collectively for a good and prosperous future and greater security in Central Europe and beyond.

Jiří Schneider director Aspen Institute Central Europe

Program

8.30-9.00 **Registration** 9.00-9.10 **Opening**

> Zuzana Řezníčková, President, Economia Media House Ivan Hodáč, President, Aspen Institute Central Europe

09.10-9.25 Keynote Speech

Michal Pěchouček, CTO, Avast & Initiator of the prg.ai project

9.25–10.45 **Future of Central Europe** (The panel will be in English language.)

Speakers: José Perdomo Lorenzo, CEO, T-Mobile Czech Republic and Slovak Telekom

Matt Kurleto, CEO, Neoteric, Poland

Andrej Pančík, Co-Founder of Prizeo and Represent / AYLP Alumnus, Slovakia Balázs Vinnai, President and Founder, Codecool & President, W.UP, Hungary

Pavlína Zychová, Co-Founder and CCO, MyStay, Czech Republic

Moderator: Michala Hergetová, Czech Television

10.45-11.00 **Coffee Break**

11.00-11.15 Keynote Speech

Karel Havlíček, Deputy Prime Minister and Minister of Industry and Trade

11.15-12.30 Education-Competitiveness

Live Video Presentation: Andreas Schleicher, Director for Education and Skills, OECD

Introductory Presentation: Bohumil Kartous, Head of the Aspen Institute CE Expert Group / Head of

Communications, EDUin

Speakers: Robert Plaga, Minister of Education, Youth and Sports

Daniel Münich, Advisor to the Aspen Institute CE Expert Group/ Executive

Director of think-tank IDEA at CERGE-EI **Vladimír Schmalz,** CEO, EDUA Group

Petr Šmíd, Head of Consumer Marketing CEE, Google

Rudolf Urbánek, Country General Manager, Microsoft CZ and SK

Tanja Vainio, Country Managing Director, ABB Czech Republic and Slovakia

Moderator: Michala Hergetová, Czech Television

Lunch 12.30-13.45

13.45-14.45 **Security-Innovation**

Tomáš Pojar, Head of the Aspen Institute CE Expert Group/ Vice-President, *Introductory*

Presentation:

CEVRO Institute

Speakers: Jana Černochová, Chairman, Parliamentary Committee on Defence

> Petr Konvalinka, Chairman, Technology Agency of the Czech Republic Tomáš Kopečný, Industrial Cooperation Dept. Director, Ministry of Defense

Pavel Šalanda, CEO, Rohde & Schwarz

Moderator: Michala Hergetová, Czech Television

Coffee Break 14.45-15.00

15.00-16.00 **Quality of Life—Regional Differences**

Introductory Presentation: **Daniel Prokop,** Head of the Aspen Institute CE Expert Group/ Founder, PAQ

Research

Martina Štěpánková, Deputy Minister of Labour and Social Affairs Speakers:

Juraj Bóna, Chief Country Officer, T-Mobile Czech Republic

Tomáš Salomon, Chairman of the Board of Directors and CEO, Česká

spořitelna (Erste Group)

Martina Seidlerová, Member of Jeseník City Council & Co-Founder, Sudetikus

Michala Hergetová, Czech Television Moderator:

16.00-16.25 **Final Recommendations**

Ivan Hodáč, President, Aspen Institute Central Europe

Tomáš Salomon, Chairman of the Board of Directors and CEO, Česká

spořitelna (Erste Group)

Martin Záklasník, CEO, E.ON Czech & Chairman of the Board, E.ON Energie a.s.

19.30 **Gala Dinner** (By invitation only.)

Keynote Speech: **Günther Oettinger,** European Commissioner for Budget and Human Resources

Aspen Central Europe Leadership Award 2019 Ceremony:

Tomáš Petříček, Minister of Foreign Affairs

Speakers





Juraj Bóna

Juraj Bóna is the Chief Commercial Officer of the T-Mobile Czech Republic. He graduated from Faculty of Economic Informatics at the University of Economics in Bratislava and began his career as an auditor and account manager in Ernst & Young in 1998. Since 2003, he has worked for Deutsche Telekom Group (Slovak Telekom and later on TMCZ), in the Finance Division at first, and since 2014 in various marketing functions. In 2016, he became Director of Marketing and Product Management for the Consumer Segment in Slovak Telekom and T-Mobile Czech Republic. In March 2019, he was appointed Director of the Commercial Division Czech Republic.



Jana Černochová

Jana Černochová has been a member of the Chamber of Deputies since 2010, and currently chairs the Committee on Defense of the Chamber of Deputies of the Parliament of the Czech Republic. She is interested in security and defense issues and participates in supporting initiatives for war veterans and active reserves of the Czech Army. She was Vice-mayor of Prague 2 from 1998 and since 2006 has been re-elected several times as Mayor. She was awarded The Best Mayor 2010 - 2014 prize in 2014 of the capital city Prague. Jana graduated with a master's degree in International Relations and European Studies at Metropolitan University Prague.



Karel Havlíček

Karel Havlíček is the Deputy Prime Minister for Economic Affairs and the Minister of Industry and Trade. Since the turn of the millennium, he has been defending the interests of entrepreneurs, especially in the position of Chairman of the Board of Directors of the Association of Small and Medium-Sized Enterprises and Crafts of the Czech Republic. As co-owner and CEO of the SINDAT Group, he developed this company into a respected investor in the small

and medium-sized industry and new technologies. He has been a member of the Government Council for Research, Development and Innovation since 2014 and its Vice-Chairman since 2018. He is also the author of the Innovation Strategy of the Czech Republic 2019–2030. He completed his doctoral studies and later was habilitated at the University of Economics in Prague.



Michala Hergetová

Michala Hergetová is a TV reporter and moderator of business news and events. She graduated from the University of Economics in Prague with a specialization in International Trade and European Integration in 2005. She interrupted her studies for a Joint European Studies Program at Staffordshire University in the UK and University of Antwerp in Belgium. She graduated with a MA EITEI in 2004. Her professional career began with Mafra a.s. in 2000, where she worked for the TV news department TVD, with a specialization in economics and politics. She also worked as the PR Director for the National Trade Promotion Agency - CzechTrade. Through the floods in 2002 she led the CzechTrade and Radio Impuls Diluvial Centre. Since 2005, she works for the public service TV Czech Television at different positions and moderates various events and debates.



Ivan Hodáč

Ivan Hodač is the Founder and President of the Aspen Institute Central Europe. He was Secretary-General of the European Automobile Manufacturers' Association (ACEA) from 2001 until 2013. He was among others a member of a special Advisory Group of experts, which was advising the European Commission in negotiation of the Transatlantic Trade and Investment Partnership with the United States (TTIP). He is also a senior advisor at Teneo CabinetDN, a leading consultancy on the EU. Before joining ACEA, he was Senior Vice-President and Head of the Time Warner

Corporate office for Europe. Previously, he was Secretary-General of the trade organization IFMA/IMACE. The Financial Times listed him among the most influential personalities in Brussels politics. He completed his education at the University of Copenhagen and the College of Europe in Bruges.



Bob Kartous

Bob Kartous is head of communications and analyst in think-tank EDUin and conceptual author of The Czech Education System Audit. Bob serves as an advisor to Jiří Drahoš, chairman of the education committee in the Senate of the Czech Parliament. He is a member of the rector's collegium at the University of Economics and Management in Prague. He helped launch the start-up Education Republic. Together with the Center of Contemporary Art DOX, he helped create the education program Synapsis encouraging social and civic awareness among young people. Bob is co-author of 2036, a book on the future of society, and author of No Future: Do We Carry Children on a Steam Machine into Virtual Reality?, a non-fiction book published in October 2019.



Petr Konvalinka

Petr Konvalinka was appointed the Chair of the Technology Agency of the Czech Republic by the Czech government in 2018. He graduated from the Faculty of Civil Engineering of Czech Technical University in Prague (CTU) with studies in Construction and Transport Engineering. In 2008 he was appointed professor in Theory of Building Structures and Materials. Since 1984, he has worked as an academic at the CTU giving lectures on construction mechanics and working on research and experimental projects. He was the lead researcher and co-investigator on many important projects in fundamental and applied research. Between the years 2014 -2018, he was the Rector of CUT.



Tomáš Kopečný

Tomáš Kopečný is the Director of the Industrial Cooperation Department at the Czech Ministry of Defence. Since 2014, he has been responsible for the development of Czech defence industrial and R&D policies and strategies. He has led dozens of industrial missions all over the world and represented the Czech Republic at numerous summits and conferences. Prior to joining the Ministry, he worked in media monitoring and economic analyses for the Special Advisor to the NATO Secretary General in the NATO International Staff. He teaches in Master's degree programs at Charles University in Prague.



Matt Kurleto

Matt Kurleto is the founder and CEO of Neoteric, a company producing software for start-ups and corporations, specializing in web app development, AI development and product design. Since child-hood, he has been involved in the IT field. He is the founder of three start-ups that have raised over PLN 2M in investment, and he is currently also responsible for the strategy and acceleration program TechSeed, offering start-ups an acceleration program focused mostly on the technology side of the start-up.



José Perdomo Lorenzo

Jose Perdomo Lorenzo is the CEO of T-Mobile Czech Republic and Slovak Telekom. He is a seasoned executive with more than 20 years of experience and a profound telco and commercial background. The graduated aeronautical engineer worked in the Boeing Company, McKinsey & Company in Spain, Telefónica in the Czech Republic and Spain, and the Millicom Group in Paraguay. He joined Deutsche Telekom in 2018 becoming Chief Executive Officer of T-Mobile CZ and Slovak Telekom. Under his leadership, both companies have achieved more intense synergies striving for better customer experience.



Daniel Münich

Daniel Mijnich has served as the Executive Director of the academic think-tank IDEA at CERGE-EI since 2012. He focuses on research in the fields of labor economics, economics of education and schooling and bibliometric analysis. He was a member of the National Economic Council of the Czech Government NERV. For many years, he has served as a senior advisor to the European Network of Economists of Education, and he is a leader of the national team in European project Euromod. Daniel is also a member of the advisory board for policy impact evaluation to the Legislative council of the Czech Government, and since 2018 he is a member of the National Council for Budgetary Forecasts. He received his Ph.D. in Economics from CERGE.



Andrej Pančík

Andrej Pancik is co-founder of Blue Vision Labs that develops technology for self-driving cars. It was selected among Technology Pioneers by World Economic Forum and acquired by Lyft in 2018. Previously, he co-founded Represent.com - an online e-commerce platform for selling custom merchandise without any up-front costs. Represent.com was acquired by CustomInk in 2016. Earlier, he co-founded Prizeo, acquired by Charity Network, which raised over \$20M for charity with one of the most efficient ways of fundraising using influencers. Andrej holds a degree in Computer Science from Masaryk University, attended the University of Oxford and Harvard Business School.



Michal Pěchouček

Michal Pěchouček is the CTO of Avast. He leads the core technology and R&D teams supporting the work of the Avast Threat Labs, Big Data and innovation teams. He is also responsible for the company's scientific research in the fields of Artificial Intelligence, machine learning and cybersecurity. Before joining Avast, he spent over twenty years as a professor at the Faculty of Electrical Engineering at Czech Technical University, where he led the Department of Computer Science and founded the Artificial Intelligence Center in 2001. Michal graduated from University of Edinburgh and gained his Ph.D. in Artificial Intelligence. While pursuing his academic career, Michal co-founded several technology start-ups including cyber security firm Cognitive Security, which was acquired by CISCO in 2013.



Robert Plaga

Robert Plaga is the Minister of Education, Youth and Sports of the Czech Republic. He graduated from the Faculty of Business and Economics of Mendel University in Brno, where he also taught between 2002 and 2013. From 2013 to 2015, he held the position of the Director of the Technology Transfer Center and in 2015 he was appointed the Deputy Minister of Education for Higher Education, Science and Research. Before assuming the Minister's office, he was a city councilor of Brno.



Tomáš Pojar

Tomáš Pojar is the Vice-President of the CEVRO Institute, Vice-President of the Czech-Israeli Chamber of Commerce and a security and defense consultant. He studied Political Science at the Faculty of Social Studies at Charles University, and Counter-terrorism Studies and Homeland Security at the Interdisciplinary Center in Israel. In 1995, he began to work for the NGO People in Need, which he led from 1997 to 2005. In 2005, he joined the Ministry of Foreign Affairs, where he served as Deputy Minister for Bilateral Relations and First Deputy Minister for Security and EU Affairs as well as bilateral relations with European states. From 2010 to 2014, he was Ambassador of the Czech Republic to Israel.



Daniel Prokop

Daniel Prokop is a sociologist focused on political, social and educational research, in particular social inequality, poverty, and transformations in public opinion. He is an expert in quantitative methods and introduced a number of innovations to Czech election surveys. Daniel is a member of the expert group preparing the educational strategy 2030+ and works at the Faculty of Social Sciences at Charles University and leads the sociological platform PAQ Research. Previously, he worked for nine years in the research agency Median. For a series of analytical articles about Czech society entitled An Introduction to Practical Sociology published in Salon Právo, he received the 2016 Journalists' Award.



Zuzana Řezníčková

Zuzana Řezníčková is the Chief Executive Officer of BM Management, which manages the assets of the investor Zdeněk Bakala. Since September last year, she has also been the Chair of the Board of Directors of the Economia media house, whose portfolio includes, for example, Hospodářské noviny, the weekly Respekt and news websites iHNed.cz and Aktualne.cz. Zuzana previously held management positions in ČEZ, MEDIATEL and O2. She also held the position of Vice President for Marketing and Sales at Czech Airlines.



Tomáš Salomon

Tomáš Salomon is the CEO and Chair of the Board of Directors of Česká spořitelna. He is a graduate of the Faculty of Economics of Services and Tourism of the Slovak University of Economics in Bratislava. For most of his life, he has worked in the financial sector. He was a member of the Board of Directors of Slovenská sporitelina, and co-founder of the company Mopet CZ. As CEO and Managing Director, he ran GE Capital Multiservis; the retail bank of GE Capital Bank, and Poštová banka in Slovakia. He has also devoted himself to private investment projects and among other achievements initiated the creation of a platform which implemented mobile payments.



Andreas Schleicher

Andreas Schleicher is Director for Education and Skills, and Special Advisor on Education Policy to the Secretary-General at the Organization for Economic Co-operation and Development (OECD). He initiated and oversees the Program for International Student Assessment (PISA) and other international instruments which create a global platform for policy-makers, researchers and educators to innovate and transform educational policies and practices. He has worked for over 20 years with ministers and educational leaders around the world to improve quality and equity in education. Andreas is the recipient of numerous honors and awards, including the "Theodor Heuss" prize. He holds an honorary professorship at the University of Heidelberg.



Vladimír Schmalz

Vladimír Schmalz is currently focusing on business projects in the area of education, technology, IT and sustainable development. He graduated from the Faculty of International Relations at the University of Economics in Prague. He participated in international programs and internships such as at Hochschule St. Gallen or London School of Economics. His professional career is connected with ČEZ. He worked in the statutory bodies of many companies in the field of energetics in Germany, Russia, Turkey and other countries. In the years 2010–2014, he was a councilor of the City of Prague. He also represented Prague's interests as Chair of the Supervisory Board of Pražská energetika.



Martina Seidlerová

Martina Seidlerová works as an English teacher and became a town councilor of Jesenik in 2018. She studied philosophy and English philology at Palacký University Olomouc. She spent a year in Mexico, where local culture inspired her to work for community development. She is interested in sustainable development, community development and global education. In 2016, she became a co-founder of Sudetikus, z. s. association which organizes activities to support the development of local economy, natural and cultural heritage and civil society - markets, festivities, discussions, student councils, an old open-air theater enlivening, or planting trees.



Pavel Šalanda

Pavel Šalanda has been working in Rohde & Schwarz - Praha since 1995, and has been the executive director from 1996. Here, he led successful national projects, such as the digitalization of frequency spectrum management (1998), automated system of frequency spectrum monitoring ASMKS (2004-2009), the project of the transition from TV and radio broadcasting to DVB-T (2008-2011), digitalization of ground / air voice communication and the transition to VoIP (2014-2016). As of July 2019, he has been the executive director of the newly established company Dicom which focuses on development of radio communications means for defense and security forces. He graduated from the Faculty of Electrical Engineering of Czech Technical University in Prague.



Martina Štěpánková

Martina Štěpánková is Deputy Minister of Labor and Social Affairs in charge of European Funds and International Cooperation since April 2019. She specializes in human rights and social inclusion. She graduated from the Faculty of Law at Masaryk University in Brno. After graduating from the university in 2004, she joined the Human Rights Department of the Office of the Government. Between 2006 and 2014, she worked in the non-governmental sector. In 2014, she returned to the Office of the Government to become the Director of the Human Rights Section and subsequently Deputy Minister for Human Rights, Equal Opportunities and Legislation. From June 2018 to March 2019, she held the post of Government Commissioner for Human Rights.



Petr Šmíd

Petr Šmíd is now working hard to bring the best of Google's consumer technology to users in Central & Eastern Europe – from the west of Czechia to the east of Kazakhstan. He started in McKinsey & Company where he spent 7 years exploring banking and healthcare – with marketing at the core of his work most of the time. CEMS and INSEAD MBA graduate himself, he's passionate about education – leading frequent workshops for students, professionals, startups, and other businesses.



Rudolf Urbánek

Rudolf Urbánek has been managing the Czech and Slovak branch of Microsoft since 2018. He joined Microsoft after 16 years at T-Mobile Czech Republic and Slovak Telekom. He has been responsible as the Executive Director for the Corporate and Business Segment for all business strategies on both markets. During his time at T-Mobile, he participated in a number of fundamental changes related to the development of the telecommunications market and company transformation. He was leading business integration at T-Mobile, GTS and T-Systems and successfully managed the transition of T-Mobile Czech Republic into a fully integrated ICT and telco operator in the business segment. In the past, Rudolf held various positions in sales and marketing in Slovakia and the Czech Republic. He graduated from the University of Economics in Bratislava.



Tanja Vainio

Tanja Vainio is the Country Managing Director for the Czech Republic and Slovakia for ABB. Tanja is an inspiring and engaging business leader with 20 years of experience in various management positions. She has a passion for innovation, people and technology and is a strong advocate of sustainable development, digital technologies, automation and gender equality. Tanja holds MBA and MS in Engineering from Massachusetts Institute of Technology (MIT) in the US. In addition to her role at ABB, Tanja is also a board member at Impact Coatings AB in Sweden and the Aspen Institute Central Europe. Tanja was awarded "Manager of the year in the Czech Republic" in 2018.



Balázs Vinnai

Balázs Vinnai is a Hungarian serial entrepreneur, investor and mentor for growth stage companies. He is an experienced and well awarded leader with a demonstrated history of working in the digital banking industry. He is the founder and president of Codecool, one of the leading coding schools. He is also president and investor of W.UP, a go-to digital sales company for banks in Europe and beyond. He holds the position of Vice President of the Committee of the Software Development and Innovation in the Association of IT Companies (IVSZ), and he established the company tokaj.hu with the collaboration of the local government in Tokaj.



Martin Záklasník

Martin Záklasník is the Managing Director of E.ON Czech and also Chair of the Board of E.ON Energie a.s. He studied at the University of Economics in Prague, where he received a degree in international business and finance and a Ph.D. in international economic relations. He started his career with a six-year engagement in Germany and later held senior positions in T-Systems Czech Republic and T-Mobile Czech Republic. Currently, he is also a member of the Board of the German-Czech Chamber of Industry and Commerce, Vice-President of the Czech Gas Association and a member of the Supervisory Board of ŠKO-ENERGO FIN.



Pavlína Zychová

Pavlína Zychová is the engine of the start-up MyStay for several years already. The goal of MyStay is to make the guests' stay more pleasant after booking and offer them all the services of the hotel to be as satisfied as possible and give the best possible rating. Last year, Hospodářské noviny named her Top Woman of the Czech Republic in the start-up section. For the fourth year, she has been organizing the national round of the Women Startup Competition Czech Republic, in which she helps raise the profile of businesswomen and motivate people. She graduated from Palacký University Olomouc, and is a lawyer by education and an adventurer by profession.

Gala Dinner



Günther Oettinger

Günther H. Oettinger is European Commissioner for Budget & Human Resources since 2017. From 2014, he held office as European Commissioner for Digital Economy and Society after being European Commissioner for Energy from 2010 to 2014 and lastly also Vice-President of the European Commission in 2014. From 2005-2010, he was Prime Minister of Baden-Württemberg (Germany) and, since 1984, a member of the regional Parliament (Landtag). He was the leader of the CDU Landtag group from 1991 to 2005. A lawyer by training, Günther became actively involved in politics during his adolescence. He is a member of the Federal Executive Committee and of the Steering Committee of the CDU Germany.



Tomáš Petříček

Tomáš Petříček serves as the Minister of Foreign Affairs of the Czech Republic since 2018. He has been gathering political and executive experience during his 14 years work in the European Parliament, at the Prague City Council and serving as Deputy Minister of Labor and Social Affairs. He also has experience from the private sector, whether as a member of the executive or supervisory bodies of companies, or as an independent consultant. Tomáš holds a Ph.D. and M.A. in International Relations from Charles University Prague, further he received his M.A titles from universities in Warwick and Brussels (CERIS).

What We Have Done Since Last Year's Conference

We discuss the topics of the Aspen Annual Conference throughout the whole year. This year, the conference was preceded by several expert roundtables which brought together relevant experts from various fields and their valuable conclusions served as a basis for the studies we prepared. Moreover, we organized additional public debates and expert roundtables in Czech regions, as well as in other countries of Central Europe.

Expert roundtables

At the beginning of May and in mid-July, two expert roundtable discussions on **education** and **competitiveness** were chaired by **Bob Kartous**, Head of Communication at the EDUin information center on education, with support from **Daniel Münich**, Executive Director of the IDEA think-tank at CERGE-EI. Within the roundtable discussion, experts in the area of education, business and non-governmental sector focused on the role education will play in the future competitiveness of Czech society.

Less than a month later, a second expert group led by the Vice-President of CEVRO Institute, **Tomáš Pojar**, discussed issues of **defense and innovations**. The discussion mainly focused on the issue of investments in defense research and innovations. The participants focused on how to better co-ordinate industrial co-operation and strengthen the mechanism of government support of defense research.

In mid-June, a round table on **quality of life and regional differences** was held with participation of experts, representatives of public administration and other regional stakeholders. During the discussion, the experts led by the guarantor of the final study on this topic, sociologist **Daniel Prokop**, the Founder of PAQ Research, focused on factors affecting quality of life, such as availability and quality of education, the environment and job opportunities.

Regional debates in the Czech Republic and Central Europe

Regional debates in Olomouc:

Peripheries: the Curse of Personal Debt

In May of this year, we went to Olomouc to organize a public regional debate in co-operation with Palacký University Olomouc. The debate focused on one of the most fundamental problems affecting contemporary Czech society - the debt collection procedures and the related debt traps. The participants, including sociologist Daniel Prokop, Tomáš Pospíšil, the author of the Exekutor má smůlu (Go Away Debt Collector) project, and Martin Smejkal, a member of the Nugis Finem group and student of the Faculty of Law of Palacký University Olomouc, discussed the key factors determining conditions for debt collection procedures and the ways to improve the situation, e.g. amending the personal bankruptcy legislation. Before the public debate, an expert roundtable on civic education and regional educational differences was held at the Rectorate of Palacký University Olomouc.

Expert roundtable in Poland:

Security and Innovation

An expert meeting focusing on the connections between innovations and security was held at the Warsaw Security Forum 2019 of the Casimir Pulaski Foundation. It was attended by Tomáš Pojar, the guarantor of the Defense and Security study and Vice-President of CEVRO Institute, General Petr Pavel and Robert Ondrejcsák, State Secretary of the Slovak Ministry of Defense. The starting point for the discussion were the conclusions of our 2019 expert study, where we argued that defense spending should not be regarded as a non-recoverable expenditure, but rather as an investment that could significantly boost the competitiveness of industry and its potential for innovation.

Regional debates in Košice:

Are Cities the Only Place for a Good Life?

The public debate held in mid-October in Tabačka, a popular local culture and art center, brought together Czech and Slovak experts on quality of life and regional differences, namely Josef Bernard from the Institute of Sociology of the Czech Academy of Sciences, Jakub Lysek, political expert from Palacký University Olomouc, Miriam Šebová from the Department of Regional Sciences and Management of the Technical University of Košice (TUKE), and Zuzana Želinská, Vice-President and Executive Director of NESS Košice Development Centre and the Chairperson of the Board of Directors of the Carpathian Foundation. During the lively discussion hosted by Zuzana Kovačič Hanzelová, editor of SME daily newspaper, several causes of regional differences were identified, including the currently insufficient effectiveness and efficiency of regional public administration and the lack of qualified labor force in peripheral areas. The public debate, supported also by the Creative Industry Košice non-profit organization, was preceded by a meeting with local experts from the Department of Regional Sciences and Management of the Technical University of Košice and representatives of NGOs and public administration. The participants discussed factors affecting regional quality of life, such as migration of university graduates, aspirations of children and parents, the role of culture and the subjective perception of inequalities.

Regional debates in Ostrava:

School and Society: Searching for Inspiration

At the end of October, the guarantor of our expert study on education **Bohumil Kartous** of EDUin, **Susanna Bäckman**, research and development specialist for new concepts in the teaching theory and practice from Finland, and **Libor Witassek**, entrepreneur and a member of the municipal assembly of Opava, met for a public debate on education. The discussion focused on how to incorporate inspiring elements into education in the context of a gradual reform of the Czech education system. Special attention was paid to apprenticeships and vocational education where the private sector should be more involved. This discussion marked the opening of the two-day conference titled *Ostravské impulsy pro vzdělávání (Ostrava Impulses for Education)*, which we organized in co-operation with the Statutory City of Ostrava and the local Centrum PANT.



Developments in Competitiveness

Lukáš Kovanda, Guarantor of the Study / Chief Economist, CZECH FUND and Aspen Young Leaders Program Alumnus

Introduction

Securing growth in any economy is a long-term endeavor. In a treatise on competitiveness presented at its previous annual conferences, Aspen Institute Central Europe praised the fast pace of growth of the Czech economy, but expressed concerns about the fact that the Czech Republic is not really catching up with its more developed neighbors. This is a result of two factors: firstly, the Czech Republic still functions as an "assembly plant with a highly skilled workforce", as it is sometimes pejoratively called, and secondly, the growth model based on cheap labor is reaching its limits.

Both these factors continued to apply this year. Many processes in the national economy have a strong inertia and economic policy is not amenable to rapid change, even over several years. For this reason, it is of importance to monitor at least the individual trends and their aggregate long-term influence on the possible ambitious reform of the Czech economy that could ensure its competitiveness for most of the 2020s and 2030s. It is difficult to see at times the forest for the trees, so let's look at the Czech economy from the outside and see how the world – and especially the rating agencies – perceive it.

Are we competitive? - a slightly different look

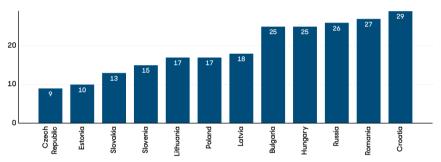
Moody's, Standard & Poor's and Fitch are the three most important rating agencies. Their ratings of securities are closely watched by international investors all over the world. The agencies rate both private securities such as company shares and public securities such as government bonds. To be able to evaluate the bonds, they obviously also have to evaluate the countries that issued them.

By issuing a bond, the country becomes a debtor. Creditors purchase information from the rating agencies on the creditworthiness of a country to assess whether and under which conditions, i.e. under which interest rate, they wish to buy the bonds and thus lend money to the respective country. In 2018, the Czech Republic's bonds achieved the best rating in history and this further improved in October 2019, at least in terms of the ratings released by the three leading world rating agencies.

Until October 2019, the Czech and Estonian long-term foreign currency-denominated bonds had the best rating among the post-communist countries. The improvement of the Czech rating from A1 to Aa3 in October 2019 means, however, that the Czech Republic now has the best rated foreign currency-denominated bonds among all the countries of the former Eastern Bloc.

Graph 1: The most successful economies of the former Eastern Bloc (according to the rating agencies)

Source: Compiled by the author based on the data of the Moody's, Standard & Poor's and Fitch



Note: The chart is based on the ratings of the three most important credit rating agencies worldwide (Moody's, Standard & Poor's and Fitch) and shows how many grades each country lags behind Germany, whose bonds are the global standard of security and reliability. The lower the number, the better the result. The data refer to 8 October

The Czech Republic is also doing well in comparison with Euro area countries. Only six out of nineteen countries using the Euro as their currency have a better Moody's rating and, therefore, higher creditworthiness. In this regard, the potential accession of the Czech Republic to the Euro area need to necessarily be seen as joining an elite club. On the contrary, it is the Euro area who would be accepting an elite member and thus increasing its overall economic standing. It is now clear that the Czech Republic does not need to adopt the Euro in order to enjoy economic and institutional growth.

Moody's assessment of the Czech Republic explaining the increased rating does not even mention the common currency. The agency believes the Czech economy faces other key challenges.

[&]quot;Rating Action: Moody's Upgrades Czech Republic's Ratings to Aa3, Changes Outlook to Stable from Positive," Moody's Investors Service, October 4, 2019, https://www.moodys.com/research/Moodys-upgrades-Czech-Republics-ratings-to-Aa3-changes-outlook-to--PR_408085.

Challenges for the Czech Republic

Moody's specifically mentions challenges related to the aging population and the related need to enact retirement and public health-care reforms. If these reforms are not adopted, the agency believes this could seriously impact Czech public finances. This will not happen, however, until the mid-2030s. Unfortunately, this is likely to further lull Czech politicians into a false sense of confidence followed by years of inactivity, as the mid-2030s is a very distant period in a politician's mind.

Out of the other risks that could cause serious problems earlier than around 2035, Moody's highlights the poor accessibility of housing. This problem is, however, again up to the politicians to address. A legislative easing of residential construction could boost the real estate market while also reducing real estate prices. While it is true that the number of new structures built is the highest in about a decade, the overall volume of new construction is still lagging behind that of the mid-2000s and the turn of the millennium.

Moody's justifies the improved rating by the Czech Republic's new innovation strategy and the reallocation of investment incentives to high value-added activities. The amended investment incentives legislation adopted this summer will significantly reduce incentives to purely manufacturing investments which are pushing the Czech Republic to the aforementioned "assembly plant with highly skilled workforce" model. In the future, companies should be better motivated to invest into research and development and partner with universities. These are areas where the Czech Republic has a great deal of room for improvement. Attracting high value-added manufacturing is an absolute priority in terms of boosting Czech competitiveness. If the Czech Republic manages to meet the objectives of its new innovation strategy, it will reaffirm its position as the most innovative country in the former Eastern Bloc.

Looking for inspiration

Czech ambitions should not, however, end there. If the country is to ever leave the "middle income trap", it is not enough to settle for first place among the former communist nations. The Czech Republic must look to countries such as the Netherlands for inspiration.

Indeed, the Netherlands – together with Germany and Luxembourg – are the countries which receive the most dividends from their investments in the Czech Republic. It is no accident that these countries are also the ones which receive the best rating from all the three major agencies, scoring three steps above the Czech Republic. The Netherlands attracts investors to place their registered offices there especially by its stable and highly functional legal environment. An investor who chooses to put its registered office in the Netherlands can be confident that should disputes arise, its investment will be well protected.

Therefore, the most reliable way to "correct" the outflow of dividends from the Czech Republic is to become a bit more like the Netherlands, or at least "the Netherlands of Central and Eastern Europe". In the medium to long term, the Czech Republic could commit itself to creating a stable and internationally recognized legal environment that is attractive to foreign companies. Should the Czech capital also be "mobilized", the issue of dividends could be resolved. Strong Czech companies would be able to expand their presence abroad and bring back dividends, which means the current dividend outflow would not need to be reduced at all - there would only be a need to ensure that Czech companies rapidly increase dividend inflows. Indeed, there is much room for growth. Last year, the inflow of dividends from the investments made by Czech companies abroad corresponded to about 10 billion Czech crowns, which is a mere fraction of the dividend outflow totaling hundreds of billions of crowns.

How do we mobilize capital?

"Mobilizing" Czech capital does not mean just the financial resources, but also the human and infrastructure capital. It makes sense, however, to speak of a "mobilization of capital" since a well-conceived activation of one type of capital can mobilize the other types as well. This is well-illustrated by a study of the social impact of high-speed rail in Germany².

The shortening of travel times between the center and the periphery, provided by a modern railway network, increased the number of people traveling between regions. This boosted not only the "exchange" of people, but also of thoughts and ideas, i.e. the key elements helping to build up human capital. Shorter travel distances would enable peripheral regions to expand the labor pool of people who prefer working or doing business at the peripheries, for example in the Czech border regions.

Applying the German example to the Czech environment, developing infrastructure capital in the form of dense highway and high-speed rail networks would enable easier and shorter commuting and thus bring the Czech borderlands closer to cities such as Prague and Brno. This would help ease tensions between peripheries and the center and, consequently, reduce the political polarization and the periphery's tendency to vote for extremist political parties. The border regions would thus be integrated into mainstream society and the dislike for "elites" from Prague and Brno, or indeed Brussels (who allegedly neglect and ignore the more distant regions) would weaken. Therefore, improving infrastructure capital also improves human capital. At the same time, better human capital

²⁾ Heuermann, D., Schmieder, J. "The Effect of Infrastructure on Worker Mobility: Evidence from High-speed rail Expansion in Germany," Journal of Economic Geography 19, no.2 (2019).

creates interest in public affairs, which feeds back into infrastructure capital, e.g. by increased environmental awareness.

Building infrastructure – highways, railways and digital connections – thus elevates the economy and indeed society as a whole. No "mobilization" of capital is conceivable without a better infrastructure – and without such an infrastructure, it will be difficult for the Czech Republic to become "the Netherlands of Central and Eastern Europe".

Infrastructure: highways on debt

According to the Czech Road and Motorway Directorate, only 4 kilometers of new highways were completed last year, while this year the number should increase to 26 kilometers.3 Infrastructure construction cannot, however, be understood separately from the macroeconomic context. In 2001, Hungary's highway network was smaller than that of the Czech Republic, but today, Hungary has 700 kilometers of highways more, i.e. its highway network is 54% longer. The public debt to GDP ratio in Hungary is about twice as large, in contrast, compared to the Czech Republic. In other words, Hungary's debt is about two times higher, partly because of the faster pace of highway construction. This represents a key reason why Moody's rates Hungary's creditworthiness significantly worse, only one step above the speculative grade. The Czech Republic (then part of Czechoslovakia) last received a speculative rating in 1992. This means that as far as rating agencies are concerned, Hungary is in a similar position now as the Czech Republic in the mid-1990s. Hungary thus also has to pay more interest to service its debt compared to the Czech Republic, while higher debt also makes it more vulnerable in case of a financial or economic crisis. The Czech Republic, in contrast, is relatively well prepared to handle such a downturn. When comparing the speed of infrastructure construction, this fact needs to be taken into account, even though it obviously does not justify the objectively slow pace of infrastructure capital buildup in the Czech Republic.

The fact that infrastructure capital in itself should not be overestimated is also documented by the current Global Competitiveness Index 4.0 for 2019. In this ranking of 141 countries, the Czech Republic has the highest score among the Visegrad Group (V4) countries, being on the 32nd place overall. It is followed by Poland (37th place) and Slovakia (42nd place), while Hungary ended up last (47th place). Although in some categories the Czech Republic scores worse than some of the other V4 countries, in other areas it scores

^{3) &}quot;V ČR je rozestavěno 140 km nových dálnic, letos se otevře 26 km," ČTK, May 2, 2019, https://www.ceskenoviny.cz/zpravy/v-cr-je-rozestaveno-140-km-novych-dalnic-letos-se-otevre-26-km/1751637.

significantly better. All in all, not even a much more developed highway network helped Hungary become more globally competitive than the Czech Republic. This demonstrates that all types of capital need to be mobilized together.

The Czech Republic and the EU15

The results are less flattering in comparison with the "old" EU members, since the Czech Republic lags behind in all criteria except for macroeconomic stability. The most significant factor responsible for over one fifth of the overall gap between the Czech Republic and EU15 is its relatively low innovation capability. This year, the Czech Republic finally started working on improving it. While the Czech Republic is still in the "middle income trap", it is taking at least some steps to escape it. This does not involve merely the area of innovations, but education as well. These areas are among the government's priorities this year, which was also mentioned by Moody's in its remarks on the improved rating of the Czech Republic.

Developments in Quality of Governance

Karel Šimka, Guarantor of the Study / Judge of the Supreme Administrative Court Contributions: Matěj Petrásek, Partner, DigiLion and Aspen Young Leaders Program Alumnus

Introduction

Between 2015 and 2018, we performed an annual analysis of the performance of public institutions in the Czech Republic. Our findings collected over the five years demonstrate that the difficulties of these institutions are of a long-term nature and cannot be overcome quickly.

Constitutional and political system

The constitutional system established at the beginning of the 1990s, which has since been stable for almost twenty years, underwent a fundamental change in 2013 as a result of the introduction of the direct election of the Czech President, which reinforced the political importance of this constitutional role. Miloš Zeman, one of the most prominent personalities of the post-1989 Czech political scene alongside Václav Havel and Václav Klaus, has since been re-elected for his second consecutive term.

The crisis of the party system, which has been apparent for about ten years, transformed the political landscape of the Czech Republic in the 2013 parliamentary elections (this trend continued in the 2017 elections). As a result, the formerly dominant parties, ODS and ČSSD, were fundamentally weakened. ANO, a political group basically owned by the second richest Czech entrepreneur Andrej Babiš, emerged as a new dominant player. In the 2013 elections, ANO won almost 19% of the vote and four years later, its electoral share increased to almost 30%.

Babiš's business is significantly linked to the public sector (through agricultural subsidies, subsidized production of biofuel and urea, public contracts in the forestry sector, etc.). When he entered politics in 2013, Babiš also purchased key mainstream media (the daily newspapers MF Dnes and Lidové noviny). The growing success of ANO was, to a large degree, based on criticism of certain aspects of political and economic development of the Czech Republic after 1989 (endemic corruption and abuse of power by the elites). ANO as a

political group is part of a broader political current critical of post-1989 developments. Prior to the founding of ANO, this current also included the Czech Pirate Party, which is becoming increasingly influential, and the now defunct Public Affairs party. The "traditional" political parties (ODS, ČSSD, KDU-ČSL and, in a certain sense, also KSČM) now represent only a third of the electorate.

The "new normal" of the Czech constitutional and political system now consists of two distinctive political personalities: the directly elected President, who is pushing the limits of his constitutional powers, and a business tycoon with political, economic and media power, who controls the dominant political party.

Law and administration

Despite the shifts in the political landscape in the past few years, there have been no radical changes in the everyday functioning of the legal and administrative system. The legal system has long been very complex and difficult to navigate. This is partly caused by a limited national political consensus on how the legal system should be streamlined, as well as by growing influence of EU law. The Czech legislation is in fact an amalgam of inputs from three different sources - EU law, national law and case law of the high European and national courts (Court of Justice of the European Union, European Court of Human Rights, Czech Constitutional Court, Supreme Administrative Court and the Supreme Court).

Administrative authorities and courts are able to resolve ordinary cases (e.g. general crime or common administrative matters) in a satisfactory manner. They are unable to handle, however, complex or difficult cases, which is documented by a number of examples. The corruption case involving David Rath, former governor of the Central Bohemian Region took seven years to proceed from the start of criminal prosecution (May 2012) to Rath commencing his prison sentence (October 2019). Elsewhere, delays related to spatial planning and transport infrastructure construction are notorious - only limited progress was achieved, e.g., with regard to completion of the Prague highway bypass or the final relocation of the main railway station in Brno. Especially regarding Prague, the inability to issue construction permits within a reasonable time resulted in a dramatic increase in the prices of apartments. The State has also had some difficulties with the administration of large public contracts, e.g. those related to the freight transport road-toll system (the case of Kapsch v. Skytoll) or when awarding highway construction contracts.

Consumer debt

Rule of law only works better in a small number of areas. With regard to consumer debt, for example, the activities of loan sharks have been substantially restricted and debt collection and personal bankruptcy procedures have become considerably less strict. This, together with economic growth that has continued for many years, has led to a gradual decrease in the number of people facing distraint.

Judicial independence

The judicial system has remained independent even after the changes in the Czech party system. There have been no signs, thus far, of an effort to interfere with the courts' independence. There has been, however, an attempt to influence courts in the form of communication of the Czech President and his Chancellor Vratislav Mynář and certain judges of the Supreme Administrative Court and the Constitutional Court, which came to light at the beginning of 2019. The judges, however, did not succumb to the pressure.

For several years now, the State Attorney's Office and the Police have been in a precarious situation caused by the criminal prosecution of Andrej Babiš in the Stork's Nest case (alleged subsidy fraud). As Prime Minister and "owner" of the strongest coalition party, Andrej Babiš has a number of ways to informally influence the bodies of criminal justice for his own benefit. At the same time, however, Babiš's actions are closely watched by the media and civil society.

In view of Babiš's prosecution, there are some doubts over the efforts of the Ministry of Justice to overhaul the State Attorney's Office. According to the critics, the actual objective of the reform is to remove Pavel Zeman and Lenka Bradáčová, the leading State attorneys who came to office in 2011 and 2012 as part of the anti-corruption drive initiated by the cabinet of Prime Minister Petr Nečas.

Construction, spatial planning and infrastructure construction

The lack of flexibility in dealing with complex cases is manifested especially in the area of construction, spatial planning and generally in the conflict between the priorities of development and nature conservation (including heritage protection). In the past few years, progress in these areas has been limited. In addition to the partial amendment to the Construction Code adopted in 2017, expropriation and other proceedings for a number of nationally important infrastructure buildings were simplified and accelerated thanks to an amendment to the Act on Accelerated Construction of Certain Types of Network Infrastructure approved in 2018.

The Government prepared the draft of a completely new Construction Code, which should bring about a fundamental qualitative change both in terms of spatial planning and constructions permits. Nature and heritage conservationists as well as local governments are fiercely opposing, however, the new Code.

Elsewhere, the expansion of the highway network has been sluggish, especially when compared to neighboring Poland or Hungary. The Czech Republic still lacks the backbone highways leading from Prague to the south (D3 to the Austrian border), to the east (D35 to Olomouc and further to Ostrava) and to the west (D6 to Karlovy Vary) and they will not be completed for a long time. For years there has been no progress in completing the highway from Brno to Vienna (D52). High-speed rail corridors are still at the planning stage and will remain so for the next ten or twenty years.

Tax system, social security and public expenditures

In the past five years, computerization of the tax administration has intensified, which was mainly due to the introduction of control tax reports, electronic records of sales and a strengthened emphasis on electronic communication between tax entities and tax administration. Owing to pressure from court decisions and the business community, the uncompromising practices of the tax administration in the area of VAT (frequent use of retention orders) used especially from 2013 to 2015 were eased.

In 2018, it was decided that the retirement age for both men and women would remain capped at 65 years. Despite the general consensus that the current retirement system is not financially sustainable in the long term under the existing rules, no other changes have been made and only a limited expert discussion has been held in recent years. Softening of the rules for payment of paid sick days (from July 2019 onward, employees will again receive sickness benefits for the first three days of the sickness) led to an increase in the employee's sickness rate and the related company expenses.

The state of public finances has also become concerning. Despite strong economic growth, national budgets in the past few years have had deficits. Although the public debt to GDP ratio decreased from approximately 40% in 2014 to approximately 30% in 2018, this was due to the dramatic economic growth in that period and not a result of reduced public spending. In fact, the number of public sector employees has increased significantly in recent years. While the number of civil servants decreased during the economic crisis (2008-2013), their number as well as expenditures associated with their salaries have been growing since 2014. The Czech Fiscal Council therefore warns that current budgetary planning is irresponsible.

Digitalization

A systematic plan with the aim of moving forward after years of stagnation has recently been created under the summary name Digitální Česko (Digital Czechia). In order to accomplish the plan, the Government Agent for Information Technology and Digitalization obtained almost CZK 0.5 billion for the year 2019. As part of its implementation, the development of the eGovernment cloud including a State-operated part (comprising the most sensitive information) and a commercial part, has begun. The Parliament, at the initiative of the ICT union (a professional association) and with support across the political spectrum, has begun discussions on an accessible digital services bill.

The introduction of authentication for State electronic services using Internet banking is now also in the legislative process. As a result, eGovernment services could become available to the general public using online banking. In the area of health-care, the eRecept (electronic medical prescriptions) application has been introduced and other plans are being prepared. The launch of the eNeschopenka (electronic sick note) application has been delayed, in contrast, by the Ministry of Labor and Social Affairs.

The weak point of eGovernment is a high level of decentralization. The individual projects are coordinated to a certain degree by the Government Agent, although it is unlikely that a central authority similar to the British Government Digital Service will be established. The internal ICT teams of public institutions are also not being expanded. This is caused mainly by the fact that public expenditures on ICT are provided for primarily in the form of investments, but only to a limited degree as concerns sufficiently competitive salaries of internal ICT specialists. The position of external suppliers of digital services continues to be too strong in the public sector and public institutions are highly dependent on them. This is due to their limited ability to design, build and maintain IT systems using their own employees. Ineffective use of funds for information technologies in the public sphere was also criticized by the Supreme Audit Office. Cooperation between the public sphere and start-ups in the area of ICT is also low.

Energy, environment and climate change

Adaptation to climate change (water management, soil protection, changes in the forest composition, cooling of urban heat islands, etc.) is gradually becoming a reality, but the broader public has only become interested in this topic over the last year. The energy strategy and the related transport strategy have not been decided even after years of discussions. For a number of years, it has been unclear whether new nuclear reactors should be built, or whether the aging coal-fired power plants and some nuclear power plants should instead be replaced in some other way. Electric mobility is only at the very beginning of its potential development. In view of the currently unclear situation on the European energy market, however, the generally reserved attitude of public authorities to radical changes in the energy sector seems prudent.



Developments in Education

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Introduction

When considering changes in education, one year is too short a period to assess the actual impact of the changes made. Given the fact that education depends primarily on the human factor, i.e. the ability to transfer changes into the reality of everyday life, it is important to assume an impact horizon at least in the order of years or rather decades (for example in the case of investments in the quality of teachers) for most of the educational policy instruments applied.

One year is enough, however, to perform a number of changes in the manner in which the educational policy is made and by analyzing these changes, it is possible to anticipate a certain development trend. A number of such changes have been made since the last Aspen Annual Conference in November 2018.

Investments in education

The previous study pointed out the fact that, in the Czech Republic, the intensity of investments in education funded from public sources is one of the lowest when compared to other OECD countries. This has been a long-standing issue in the Czech Republic; it can be stated that there is a hidden (unrecognized) debt worth hundreds of billions of Czech crowns. According to experts on educational policy, this is one of the largest obstacles to development of education in the Czech Republic.

After the 2017 elections, the current Government made a commitment to increase the salaries of teachers to 150% of the average school teacher salary (level of 2017) by 2021. Thus far, the Government has been working to fulfill this commitment. Throughout the individual years, there have been proportional increases in the education budget at a pace that promises that the target value will actually be achieved.

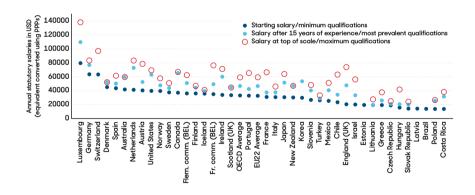
Nevertheless, investments in education are not only connected to the salaries of teachers. In order to allow teachers to bring quality to education, they must have suitable conditions for such work (support services, integration of technology, changes in the curricula, inclusion, redesigning of high-stakes exams, etc.). In this regard, the steps taken by the Government can be considered inconsistent. While the salaries of teachers are being

continuously increased, in 2019, the Ministry of Education adopted an amendment to a 2016 decree regulating the course and support of inclusive education at Czech schools.¹ One of the main goals of this amendment is to "optimize inclusive education expenses". This is primarily achieved through efforts to reduce the costs of salaries of teaching assistants, which constitute the largest portion of expenses, and also through limiting other supporting measures for which schools can draw funds from the budget of the Ministry of Education.

The educational policy has once again not made use of the possibility to perform pilot verification of the impact of these changes and the same view can also be taken on the approach of the educational policy towards the Digital Education Strategy (adopted in 2014 with the time-frame for its implementation set to 2020). The Czech educational system is also lacking an effective tool allowing principals to diversify remuneration of teachers based on their objective professional performance. The "career rules" whose draft was prepared by the previous Government were rejected in the legislative process and the current Government did not include their review or implementation in its program.²

Graph 1: Lower secondary teachers' statutory salaries at different points in teachers' careers (2017)

Source: OECD Education at a Glance 2018, p. 364



Decree No. 27/2016 Coll., on education of students with special educational needs and exceptionally gifted students. See: http://www.msmt.cz/dokumenty-3/vyhlaska-c-27-2016-sb-o-vzdelavani-zaku-se-specialnimi-1.

At the same time, principals are fundamentally limited by the already low and further shrinking headroom of school budgets remaining above tariff salaries. See: https://idea.cerge-ei.cz/files/IDEA_Studie_09_2019_Platy_ceskych_ ucitelu/IDEA_Studie_09_2019_Platy_ceskych_ucitelu.html#p=15.

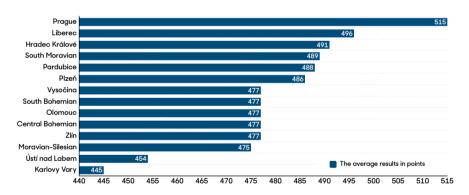
The curricula at Czech schools, completed with the high-stakes exams, are still awaiting a fundamental review.³ It should be noted that the currently applicable framework of education in Czech kindergartens and elementary, secondary and higher vocational schools was drawn up in the first half of the previous decade. In this regard, Strategy 2030+ represents a unique opportunity for change.

Differences in the quality and results of education in the regions of the Czech Republic

The Czech Republic is markedly heterogeneous when comparing various indicators of the quality of education in individual regions, be it results of education of current students measured through secondary school entrance examinations, secondary school graduation examinations, inquiries of the Czech Schools Inspectorate, or shares of inhabitants of regions according to their levels of education.

Graph 2: Average results of 15-year-old students completing compulsory education – a regional comparison

Source: Data PISA 2015, National report PISA 2015, ČŠI (Czech School Inspectorate)



All decisive examples demonstrate that the situation is the worst in the Ústí and Karlovy Vary regions, followed usually by the Moravian-Silesian Region. This situation did not change in the year-on-year comparison of education and no change can be expected.

³⁾ This does not concern just the OECD recommendation regarding the possible negative impact of high-stakes exams on the curricula as a figurative whip to be used in evaluation of schools. (See: http://www.msmt.cz/mezinarodni-vztahy/ zprava-oecd-o-hodnoceni-vzdelavani-v-cr) On the contrary, examinations and their design can be used positively to stimulate positive changes in education.

The Government does not adopt any effective measures to ensure decreasing of the difference in quality of education and education attainment. The Restart Government project, which started under the previous Government and which focuses on supporting the above regions, has been allocated a considerable amount of resources, some of which are spent on development of the educational infrastructure, but apart from these, there is no targeted effort to address in detail the factors leading to these regions falling behind in the area of education.

(In)equality in education attained and social mobility limits

The issue of inequality in results and in education attained is closely related to the impact and reproduction of socio-economic inequalities in the Czech Republic.

The OECD points out⁴ that in the Czech Republic, the influence of family background on the education attained and thus on social mobility is greater than in most other countries. Only about 4% of children whose parents have only attained elementary or secondary vocational education are successful in attaining tertiary education. That is up to several times less than in the other compared countries.

The above-mentioned limitation of expenditure for inclusive education may have a negative impact on a large portion of vulnerable children. In addition, the regions were given the possibility to directly regulate the numbers of children to be accepted in the individual study fields at secondary schools and thus the possibility to restrict access to study fields with secondary school graduation examinations and the possibility to attain higher education. It will only be possible to assess the impact of this measure in the coming years. ⁵⁶

Quality of teachers - a key factor affecting the quality of education

It is easier to make assumptions, rather than objective assessments regarding the professional quality of teachers in the Czech Republic. For many years, expert estimates have discussed the issue of the increasing lack of teachers. It has also been apparent from individual statistics for a very long time that the average age of teachers is increasing and that changes can be seen in the individual age groups that further support this trend. It was not until 2018

 $^{4) \}quad \text{``Education at a Glance 2018,'' OECD, 2018, https://read.oecd-ilibrary.org/education/education-at-a-glance-2018/independent of the control of the c$ czechrepublic_eag-2018-42-en.

⁵⁾ The introduction of a compulsory year in kindergarten before elementary school and the failure of this measure regarding children from a socio-economically less stimulating environment, which were the primary focus of this regulation, is also related to this topic. Instead of focusing on the part of the population in need, the educational policy introduced a general measure which does not have sufficient effect.

Another illustration of the efforts to limit evidence-based principles at the educational policy level: based on a decision of the Government, the Czech Republic has not participated in the TIMSS international studies focused on eighth grade students for several years (it only participates in studies at the level of fourth grade students). As a result, important data on the value added is missing.

that the Ministry of Education commissioned a more detailed analysis of this situation; for this, the current educational policy deserves some praise. It should be noted, however, at the same time that the long-term neglect of this issue by the management is reprehensible.⁷

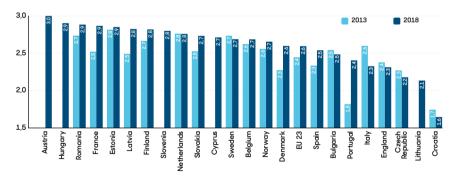
At least we know that public education in the Czech Republic is in a situation where the expected departure of teachers from regional education exceeds 6% while the number of new teachers is about half of this amount while just over 2% of the new teachers are fresh graduates of teaching study programs at higher education institutions. This situation has been developing for years, however, and it must be assumed that a change could only be made with an intensive reform of the selection, preparation and further professional development of teachers.

Principals as a key factor for development of education

Similarly to the attempts to improve the quality of teachers, the efforts made so far to find suitable candidates for the positions of principals and support them can be deemed insufficient.

Graph 3: Index of formal education of directors9 - an international comparison

Source: Own calculations from the IDEA study by D. Münich and M. Federičová based on TALIS data; https://idea.cerge-ei.cz/studies/mezinarodni-srovnani-reditelu-skol-ceske-administra-tivni-inferno



A major problem continues to lie in the relatively low interest in the position of a principal (based on the TALIS survey and data of the Czech Schools Inspectorate) – a position entailing a high degree of responsibility and a large number of work tasks compared to the

⁷⁾ Another obstacle is the absence of a teacher register that would allow for easy and continuous monitoring of teachers and adapting the supply, and facilitating pairing of teachers with a very large number of autonomous.

 [&]quot;Hlavní výstupy z Mimořádného šetření ke stavu zajištění výuky učiteli v MŠ, ZŠ, SŠ a VOŠ," MŠMT, http://www.msmt. cz/file/50371 1 1/.

The index is based on whether the school principal has completed a training program before or on taking up their position.

salary principals receive for their work. Professional support is provided to principals only in exceptional cases (South Moravian Region). The educational system is still failing in this respect.

High-stakes exams and their impact on the educational system

High-stakes exams (secondary school entrance examinations, secondary school graduation examination, higher education institution entrance examinations) have a fundamental influence on the aims set for public education. They establish a clear goal that teachers seek to achieve for the benefit of the further education of their students. This aspect of public education is also subject to certain efforts of the Czech education policy.

In its previous statements, the Ministry of Education proposed individual changes in the common part of the secondary school graduation examinations, for example a greater departure from testing knowledge of individual subjects and creating a portion of examinations focused on general scholastic aptitude. Even these statements do not adequately reflect, however, the fact that high-stakes exams represent the most effective tool for quick change in the curricula and approach of teachers. A proposal for major changes can be expected from Strategy 2030, nevertheless, their implementation remains uncertain. The Czech public education therefore continues to waste the opportunity to make the necessary changes in education in the fastest way possible.

Last year's recommendations in light of the changes

Clear vision: The Ministry of Education is preparing an education strategy with a time-frame for fulfillment set to 2030. This promises formal fulfillment of the recommendation, however, there are doubts regarding the instruments chosen to implement the goals set.

Information and data: Despite certain improvements, this recommendation remains valid for the following years. The Czech educational policy is still not evidence-informed in the true sense of the word.

Investments in education: Increase in teachers' salaries was and still is a necessary condition for development of education in the Czech Republic. This still only settles, however, a debt from the past while other steps taken by the Government lead to reduction of important investments (inclusive education).

Principals are key to good schools: Absolutely. The support of their selection and preparation is still failing.

Attractiveness of teaching and quality of teachers: Not even the expected increase in teachers' salaries will lead to an increase in interest in teaching as a career. A fundamental change in this respect could only be made if this topic becomes a priority for society.

Change in the curricula and structure of education: The curricula must be updated. It is also important to focus on updating the structure of education, especially in regard to the secondary and post-secondary levels. Nevertheless, no major progress in this area can be expected under the current conditions.



Developments in Defense and Security

Tomáš Pojar, Guarantor of the Study / Vice-President, CEVRO Contributions: Daniel Kunštát, Head of the Department of Political Science and International Relations, CEVRO

The Czech Republic remains one of the safest countries in the world, but we should not lull ourselves into a false sense of security. The global security situation is not good and there is a need for systematic and long-term investments into the country's defense sector. Our defense relies on the ties and mutual trust we have built with our allies within the North Atlantic Treaty Organization (NATO). Yet, it is not only our allies, but also our potential rivals and enemies who must see us as credible actors. The truth is that we are not able to defend ourselves alone. If we lose faith in our own armed forces and the will to participate in defense alliances and, at the same time, fail to build up our own defense capabilities, our medium-term prospects could become rather grim.

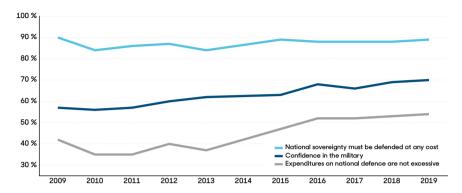
Recent Czech polls

Confidence in the Czech military increased again this year, reaching 70%. The credibility of NATO has also been growing in recent years. The organization is currently trusted by 61% of Czechs, while being distrusted by 21% of their compatriots. As many as 58% of respondents are satisfied with the country's NATO membership, as opposed to 22% who are not. At the time when the Czech Republic joined NATO, respondents with a non-favorable view of NATO slightly outnumbered those in favor of the organization. The country's NATO membership has considerably more supporters at present than opponents.²

¹⁾ Likewise, confidence in the EU has also increased: 52% of Czechs currently trust the EU, as opposed to 44% who do not.

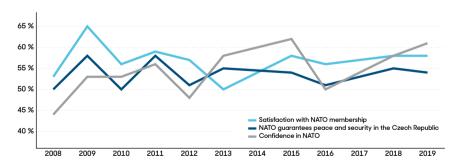
²⁾ According to surveys conducted by the Public Opinion Research Centre of the Czech Academy of Sciences (CVVM).

Graph 1: Confidence in the military and opinions on defense



This year's CVVM survey again indicated that 89% of Czechs wish to defend the country's sovereignty at any cost. Currently, 54% of respondents (the historical maximum) believe that defense expenditures do not excessively burden the national budget (as opposed to 37% holding the opposite view). According to a poll conducted by Empirica in August 2019, 56% of Czechs agree that the Czech Republic should meet its commitments to NATO as soon as possible and raise defense spending to 2% of its GDP, while 29% of respondents disagree with that statement. Likewise, less than half of the respondents (49%) believe that the Czech Republic invests enough money in its defense.

Graph 2: Statements about NATO



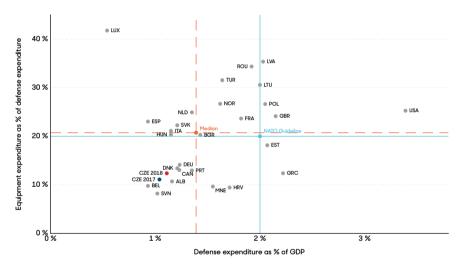
According to surveys conducted by the Public Opinion Research Centre of the Czech Academy of Sciences (CVVM).

Current situation

The annual report released by NATO's Secretary General Jens Stoltenberg indicates that last year, the United States reinforced its presence in Europe, whereas European countries, together with Canada, still lag behind in defense spending. It is also true that in the past year, European NATO members increased their spending by an average of 4%, representing a nominal increase of USD 41 billion since 2016. This amount is expected to reach USD 100 billion by 2020.

Graph 3: Defense expenditures in 2018

Source: NATO



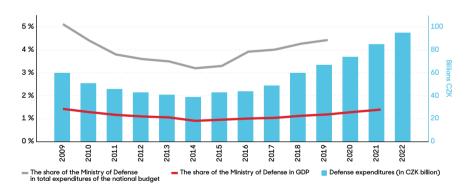
In nominal and percentage terms, NATO member states' spending continued to grow in 2018. Out of the twenty-nine member states, seven (Poland among others) met their commitment to spend a minimum of 2% of their GDP on defense. Sixteen countries, including Slovakia, Hungary and Poland, exceeded the recommended 20% threshold for investment expenditures. Unfortunately, despite showing positive growth, the Czech Republic still remains among the worst-performing countries in respect to the two criteria (in general as well as in comparison with its neighboring countries, except for the neutral Austria). As regards the share of GDP spent on defense, the Czech Republic ranked as the fifth worst-performing country among NATO members, and the sixth worst in terms of money spent on investments.

The good news is that in nominal terms, the Czech Republic has increased expenditures to almost CZK 60 billion. This corresponds, however, to a mere 1.13% of its GDP.

According to NATO methodology, the investments made amounted to 12.39% of the budget, or 15.8% within the "program financing" section according to the Ministry of Defense. Despite some progress in this area, the Czech Republic still lags seriously behind the desired goal of allocating 20% of expenditures for investments, which should guarantee a viable army.

The best news of 2018 is that the number of professional soldiers increased from 23,000 to 24,000 and that the army is able to attract new recruits even in times of virtually zero unemployment. The age of the recruits poses a problem, however, (in 2018, the average age was 25.9 years) and the military in general is growing old as well (the average age of soldiers was 36.9 years). Moreover, the University of Defense's recruitment target for 2018 (730 recruits) was not met and the University only admitted 401 new students. A similar situation is apparent this year. It is not only the University which fails to train a sufficient number of new officers - the secondary military schools are also struggling. The Sokolov branch of the Military Secondary School and College in Moravská Třebová could not even attract enough students to open. Moreover, the demographic forecast demonstrates⁴ that in the decades to come, the lack of new recruits is likely to become even more severe, mainly due to overall demographic decline and aging.

Graph 4: Czech defense expenditures



Last year, the current government postponed the target of achieving defense spending of 1.4% of GDP from 2020 to 2021. According to the current draft budget, the Ministry of Defense is to receive CZK 75.5 billion in 2020, which is 800 million less than expected in the budget outlook approved last year. The budget outlook for 2021 establishes defense

[&]quot;Věková skladba obyvatel Česka se výrazně promění," Czech Statistical Office, November 2, 2018, https://www.czso.cz/ csu/czso/vekova-skladba-obyvatel-ceska-se-vyrazne-promeni.

expenditures at CZK 85.3 billion. Recently, however, there have been significant increases in salaries, but the Ministry of Defense was not allocated extra funding in the planned budget. If the originally planned amount of investments is to be maintained, the budget would have to reach CZK 92 billion in 2021.

Czech commitments

Fulfillment of the government's promises relating to 2021 mainly depends at present on the execution of contracts and the beginning of implementation of large arms contracts (Titus vehicles [the contract has been already executed], MADR radars, multipurpose helicopters, infantry fighting vehicles, CASA aircraft, air defense systems, etc.). Implementation of large investments is directly dependent, however, upon fulfillment of promises concerning long-term growth of the Ministry of Defense's budget and, especially, the amount of funds allocated for investments. Failure to comply with the budgetary promises leads, however, to constant changes in the military's acquisition plans and ultimately results in a less efficient use of the budget. By contrast, the fact that the government envisages that the domestic industry will be substantially involved in all large contracts can be regarded as a wholly positive development, resulting, among other things, in higher revenues for the national budget.

The long-term prospects are less optimistic. Assuming that the Czech Republic maintains its current rather modest ambition to annually increase spending by 0.1% of GDP until 2021, and the annual growth rate of the Czech economy is between 2-3% of GDP, one can realistically expect to reach a maximum of 1.7% of GDP in 2024. The 2% limit can only be reached in 2024 if there is a rapid increase of 0.2% of GDP annually in the period from 2022 to 2024. The proposed budget outlook for 2022 mentions, however, a mere CZK 95 billion, clearly indicating that the Czech Republic is not on course to spend 2% of its GDP on defense in 2024. The goal of allocating 20% of defense expenditures for investments is still realistically achievable, however, it is still uncertain whether the country will actually achieve it. Given the growing defense expenditures, reaching the 20% threshold could provide great opportunity for the Czech economy as a whole.

Ten recommendations

The ten recommendations from the previous years are still valid today. Although last year saw improvements in some aspects, we have not yet reached an optimum situation in any of the areas. There has been little progress, for instance, as regards the functioning of the National Security Council or the establishment of a functioning cyber defense system.

- 1. Continue increasing defense spending to 2% of GDP.
- 2. Enhance the competences and retention of the armed and security forces personnel.
- 3. Spend the recommended 20% of individual budgets on investments.
- 4. Spend 2% of individual budgets on investments in research, development and innovation.
- 5. Support capability building of individual NATO and EU member countries.
- 6. Strengthen the role of the National Security Council and establish the office of the National Security Advisor.
- 7. Enhance the credibility of security institutions.
- 8. Take warnings issued by intelligence seriously.
- 9. Maintain a conservative approach in respect to the migration and asylum policy.
- 10. Build a system of state cyber defense including offensive capabilities.

Developments in Quality of Life

Daniel Prokop, Guarantor of the Study / Founder, PAQ Research

Introduction

Quality of life in the Czech Republic can be approached from two perspectives. One consists of an international comparison, while the other comprises a comparison of regional differences in quality of life and the need for reforms in key areas limiting its further growth. This chapter will briefly look at both these perspectives.

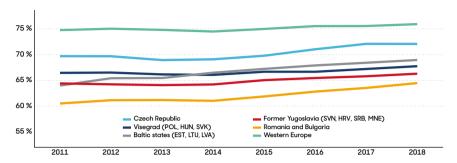
The Czech Republic in international comparison

International rankings may suffer from certain problems in terms of comparability, accessibility and relevance of the data obtained for the individual countries. Nevertheless, if an uniform methodology is applied, they can be used to analyze broader trends. One of such useful long-term comparisons of quality of life is the Legatum Prosperity Index, an annual ranking developed by the Legatum Institute, which comprises nine individual areas of analysis: economic quality, business environment, governance, education, health, safety & security, personal freedom, social capital and natural environment.

Earlier analyses drawn up for the Aspen Institute indicated that the Czech Republic does better in quality of life compared to other post-communist countries. In 2018, the Czech Republic moved from the 24th to the 27th place. This slight change is not, however, a result of worsening quality of life in the Czech Republic, but rather of improvement seen in other countries. The Legatum Institute ranks the quality of life in the individual countries with a score ranging from 0 to 100. In recent years, the Czech Republic's score has been stable around 71 to 72. The overall quality of life thus remains the same, but some countries are overtaking the Czech Republic. This has to be understood when dealing with quality of life indexes where the countries are ranked.

A comparison of the development of quality of life in all the individual countries would only overwhelm us with data and cause higher volatility (inaccuracies in the evaluation of quality of life in a given country). For this reason, it is better to focus on a comparison of the development of quality of life in those regions of Europe which can reasonably be compared to the Czech Republic. Looking at the period following the last economic crisis, there is a clear trend of substantial quality of life growth in the Baltic states (Estonia, Latvia and Lithuania), Romania and Bulgaria.

Graph 1: Development of quality of life in European regions according to the Legatum **Prosperity Index**



The Czech Republic was visibly affected by the aftershocks of the economic crisis (and saw stagnation and a drop before 2014), followed by sustained economic growth. That, however, flatlined in the last two years, probably also due to the absence or insufficiency of key reforms and the persisting regional differences which will be discussed later in this chapter. The rather slow growth in quality of life is also shared in other parts of the Visegrad Group, where Hungary stagnates the most.

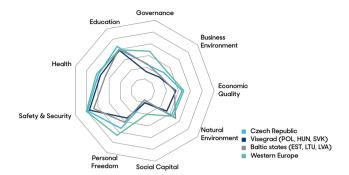
Obstacles to growth: The devil is in the detail

More important than the overall index score is to look at factors that boost or hinder the Czech Republic's progress. This perspective has to critically address both the actual state of affairs and the methodology used by the Legatum Institute.

The main problem of the Czech Republic is its low social capital. Social capital measures, in this international comparison, the strength of interpersonal and institutional trust (corresponding to social capital as emphasized e.g. by Robert Putnam, while other authors such as Pierre Bourdieu understand social capital as resources consisting in social contacts and the individual's social network). According to most international surveys (e.g. ESS, ISSP), the trust in society is weak in the Czech Republic, as well as in other post-communist regions. This not only affects areas such as civic engagement, the willingness to pay taxes and otherwise participate in the government, but also increases the "transactional costs" in society (e.g. through a higher degree of formalization of contractual relationships in response to the lack of general trust, high bureaucratization of the social welfare system resulting in its inability to flexibly respond to the needs of individuals, etc.).

Graph 2: Quality of life profile - a regional comparison

Source: Legatum Prosperity Index 2018



According to the Legatum Institute, the Czech Republic's strengths lie in its economic quality, natural environment, education, health and safety and security. This picture is largely accurate in terms of safety and security (as the Czech Republic is one of the safest countries in Europe according to the Institute for Economics and Peace (IEP) and crime statistics) and health (high life expectancy and some healthcare outcomes). The good results, however, in terms of education and economic quality compared to Western Europe are less reliable. In the education category, the Legatum Institute only takes into account the elementary education completion rate, but not the "early leavers", i.e. children who do not continue in any kind of secondary/vocational education, even though the number of these children keeps increasing in the Czech Republic. The Czech Republic receives a high score for free schools, but in fact, the country demonstrates one of the greatest differences among the individual schools and one of the higher dependencies of children's educational outcomes on the socioeconomic status of their parents (Prokop, Dvořák 2019). Access to quality education is thus actually very unequal. Similarly, in economic quality, the Czech position reaches the Western European average because the Legatum Institute gives more relative weight to business conditions, anti-trust legislation and other factors than to people's actual income and indebtedness (including the number of people subject to debt collection) - in these factors, the Czech Republic significantly lags behind Western Europe. 1

While these trends are useful to follow, the individual rankings should not be overestimated. The overall trend demonstrates a decreased growth in quality of life which, despite the progress since 2014, has likely hit a ceiling consisting in structural limits and unsolved problems of the Czech economy and society, highlighted already in last year's Quality of Life report presented at the Aspen Annual Conference.

For a more detailed summary and the methodology used by the Legatum Institute, see https://prosperitysite.s3-accelerate.amazonaws.com/4115/4521/1964/Country_Profiles_Full_report.pdf and https://prosperitysite.s3-accelerate.amazonaws.com/7915/4398/9989/20181204_LI_PI_Methodology_Report.pdf.

Recommendations from 2018 and their implementation

It is useful here to review the manner in which the 2018 recommendations were implemented.

1. The Czech Republic should focus on solving the persisting problems affecting social policy which limit regional development and bring a number of adverse consequences. Aside from the absence of a social/accessible municipal housing policy, this includes personal over-indebtedness faced by the poorer strata of the population, who often also face a debt collection procedure. According to data from the Chamber of Executors, 863 thousand Czechs were facing distraint in 2017, while nearly 500 thousand had three or more outstanding debts. These people are in a hopeless situation unless more accessible debt relief legislation is enacted to motivate the debtors to work and the insolvency trustees to write off the most suspicious debts (debts incurred from loans provided by loan sharks, hidden penalties, etc.) and allow people to enter personal bankruptcy even if they cannot repay the required 30% of their debts.

Progress evaluation: A more accessible debt relief system was approved, where people do not have to prove in advance the ability to pay 30% of their debts and enables some groups to achieve debt relief faster. After 4 months when this system has been in effect, it is estimated that 40 to 55 thousand people will apply for personal bankruptcy each year (the current rate is approx. 140 people per day, but this may decrease after months of relaxed insolvency conditions, because some debtors might have only been waiting for it to come into force). While this represents more than double the previous values, the number is still at the lower range of the original expert estimates. Due to the long debt relief period, full discharge from the debts on the part of the overindebted part of the population would take 15 to 20 years, with serious impacts in the form of maintaining a significant gray economy in the affected regions. It is therefore important to adjust the system's parameters. The system of leaving part of the wage above the unseizable minimum in insolvency and distraint should be unified, for example, so that the transition to insolvency is not associated with a significant and discouraging decline in income for some debtors. Insolvency trustees remuneration should be set up in order to encourage higher claims review and a faster and more effective insolvency process; the guarantees of debt relief after 5 years if all conditions are met should be strengthened; the boundaries of debt collectors' territorial jurisdiction should be established; and further measures should be introduced ensuring the independence of debt collectors from the creditors and the possibility to terminate the debt collection procedure if the debt is unenforceable.

2. Politicians should focus on reducing economic gaps among regions, which is manifested in different unemployment rates, concentrations of socially excluded areas, etc. Measures supporting development of poorer regions should include e.g. lower taxes on low-wage jobs, decentralization of public administration, investments into infrastructure development, more effective use of EU funding and support for regional education.

Progress evaluation: There has been no progress in the area of tax relief on lower-wage jobs and decentralization of public administration. Progress in terms of investments into infrastructure development and more effective use of EU funding differs region from region, but overall there has been little marked change in supporting education and key infrastructure.

3. Investment in education should focus on reducing regional differences in the quality of elementary and secondary schools, where low-quality schools help perpetuate poverty. It is also important to support programs that help improve the opportunities of young children from disadvantaged backgrounds (e.g. through free lunches in kindergartens and special preschool education).

Progress evaluation: In the area of education, there has been an increase in teacher salaries and a change in the funding of regional schools, which may be the first step towards a less bureaucratic and easier funding of certain supporting jobs. The Education Strategy 2030+ also includes changes in education aiming to reduce regional and other inequalities. With respect to free lunches, instead of adopting a systemic solution (e.g. free lunches for all children from households receiving child benefits, i.e. approximately 280 thousand), funding was increased for some small-scale programs.

4. Investments in transport and services infrastructure must take in**ternal peripheries into account** – i.e. the fact that quality of life is seriously impacted by the unavailability of certain healthcare, educational and other services.

Progress evaluation: There have been changes specific to certain regions which cannot be evaluated yet due to their long-term effect.

5. There should be better cooperation among the individual levels of government in certain areas. In the areas of accessible and social housing, funding of social services, and special projects such as the "free lunches scheme", there is often a clash of interest and lack of cooperation between the State, the administrative regions and the municipalities on policy implementation.

Progress evaluation: No legislation of social housing exists and there is no operational government housing policy. Such a policy should combine social housing for a narrow target group and other welfare elements (e.g. support for rental housing, municipal housing, greater use of extraordinary social benefits) for groups of people who cannot afford home ownership. There is still a lack of greater inter-departmental cooperation (education, social affairs and healthcare); pilot projects are under way in some regions, but this must be supported country-wide.

6. Public policy should support civic and cultural engagement and community life, i.e. factors increasing quality of life even in otherwise deprived areas. This can be implemented locally, but also by measures such as tax assignment (i.e. the ability to redirect a share of paid taxes to a select organization or association).

Progress evaluation: There have been some localized regional progress, especially in terms of the use of best practices of proactive municipalities with good planning.

Education and Competitiveness

Bob Kartous, Guarantor of the Study / Head of Communication, EDUin Contributions: Daniel Münich. Executive Director, IDEA at CERGE-EI

Economic changes, introduction of new technologies on the labor market and growing automation will undermine the competitiveness of the Czech economy. Despite this fact, public education – a key element in developing the country's competitiveness and other social benefits – is still not a priority.

After long years of sustained recovery from the last economic crisis, the year 2019 brought signs that things may again be turning for the worse. The US Federal Reserve (Fed) reduced the interest rate this summer, which brought a response from the markets as well as many economists. In both cases, they expected a repetition of a scenario that played out after a similar step by the Fed in 2008, i.e. a significant economic slowdown with all its implications such as a decrease in production and the price of certain commodities, and naturally an increase in unemployment across the globalized economy.

There were also signs that the Czech Republic would be directly affected as its economy is closely linked to Western European markets, especially Germany. In this regard, the analysis of industrial production of the Czech Republic's western neighbor and the single largest trading partner should ring an alarm bell, as it shows there has been a rapid fall in automotive production. This is very concerning since the automotive sector is linked to many production and supply chains in the Czech Republic.

It is to be expected that a similar thing is happening or will soon happen in other sectors as well. The Czech Republic will feel the impacts on employment, salaries, but also on companies' willingness to make further investments. As the situation appears now, it is highly

 [&]quot;Global Economic Indicators: German Factory Orders & Industrial Production," Yardeni Research, October 2019, https://www.yardeni.com/pub/ecoglindordip.pdf.

unlikely that the Czech economy will be able to profit from the upcoming crisis in any way. The ability to establish a country's position on export markets depends on its ability to supply finished goods and services with a high added value. Unfortunately, this is not the case of the

Czech Republic which mostly delivers parts within subcontractor chains, where the added value is only created in the countries receiving Czech exports. In other words, the Czech Republic does not have much to offer if global supply chains (on which the Czech economy is reliant) are disrupted and orders dry up, especially in the short term.

Highly industrialized countries such as the Czech Republic. will be seriously hit by the advancing automation.

The long-term outlook of the Czech economy is also gloomy in terms of competitiveness. The annual Employment Outlook (OECD)² analysis warns that highly industrialized countries such as the Czech Republic, Slovakia and Slovenia will be seriously hit by the advancing automation. This means that the Czech Republic will face the need to undergo an economic transformation. A comprehensive analysis drawn up by PwC, 3 based on OECD data, predicts that automation will come in three waves:

- 1. Algorithmic wave (from the present day to the early 2020s) comprising automation of simple computational tasks and analysis of structured data, affecting data-driven sectors such as financial services.
- 2. Augmentation wave (to the late 2020s) comprising a dynamic interaction with technology for clerical support and decision-making, and also including robotic tasks in semi-controlled environments such as moving objects in warehouses.
- 3. Autonomous wave (to the mid-2030s) comprising automation of physical labor and manual dexterity, and problem solving in dynamic real-world situations that require responsive actions, such as in transport and construction.

PwC analysis also outlines the expected impact of the individual automation waves on the labor market (and thus also the economy). The first, currently ongoing wave of automation, will open the door to further, much more significant technological disruption of the labor market. The forecast mentions the Czech Republic among the countries to be most affected by automation.

^{2) &}quot;OECD Employment Outlook 2017," OECD, 2017, https://read.oecd-ilibrary.org/employment/oecd-employmentoutlook-2017_empl_outlook-2017-en#.WbBb-8gjHIU#page97.

³⁾ Hawksworth, J. et al. "Will Robots Really Steal Our Jobs?" PwC, 2018, https://www.pwc.com/hu/hu/kiadvanyok/assets/ pdf/impact_of_automation_on_jobs.pdf.

It is to be expected that the Czech Republic will be hit by automation not only directly, but also indirectly by changes occurring in its main trading markets. According to the aforementioned data, automation will also significantly affect the German economy. The potential concurrence of growing automation and production decline in the key sectors caused by an economic recession will lead to a reduction in exports. Furthermore, it can be expected that these countries will seek to protect their own labor markets and maintain domestic employment, which could further aggravate economic problems in the Czech Republic. In the short term, there may be a tendency to move production away from countries with lower labor costs in an effort to maintain domestic employment in countries with often much larger populations. In the medium and long term, this trend will be intensified by automation, with the decreased need for human labor in key sectors of the Czech economy, especially in industry and construction.

In such a scenario, the factors that currently underpin the Czech economy's competitiveness – low costs of labor (at various qualification levels) and the relative geographical proximity to the main export markets – will be seriously undermined. Such forecasts natu-

The competitiveness will depend on the ability of the individual economies to keep pace with the trend, innovate and shape it.

rally raise questions about how the Czech Republic plans to maintain its competitiveness on global markets. The available forecasts (e.g. those by the World Economic Forum⁴ and the World Bank⁵) indicate that countries will be more or less forced to accept the shifting contributions of the individual sectors to the overall economic output.

The overall competitiveness will depend not only on the ability of the individual economies to keep pace with the

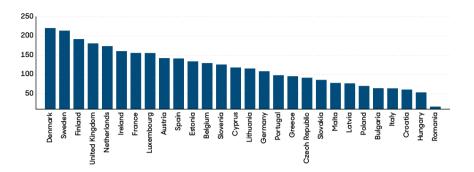
trend, but also their capacity to innovate and shape it. In this respect, the ability of individual economies to maximize human resource development and thereby increase innovation potential is crucial. As illustrated in Graph 1, the Czech Republic is below the European average.

^{4) &}quot;7 charts on the future of automation," World Economic Forum, February 25, 2019, https://www.weforum.org/agenda/2019/02/the-outlook-for-automation-and-manufacturing-jobs-in-seven-charts/.

⁵⁾ Bentaouet Kattan, R. et al. "Automation and labor market outcomes: the pivotal role of high-quality education (English)," World Bank Group, 2018, http://documents.worldbank.org/curated/en/356581528983322638/Automation-and-labor-market-outcomes-the-pivotal-role-of-high-quality-education.

Graph 1: Synthetic index of human resources development

https://interactivetool.eu/EIS/EIS_2.html#d



The current trend in digitalization characterized by a gradual shift of economic emphasis towards services and a rapidly increasing share of economic output generated in the digital space (e-commerce, communication, digitalization of many services) and the growing dependence of other sectors on information technologies is set to continue in the future. This means that an economy's competitiveness will, to a large degree, depend on its ability to keep pace with the trends. A truly competitive economy will also have to find sufficient capacities enabling it to shape the direction of these trends. To achieve this, the country needs to have the necessary infrastructure, but also sufficient potential to innovate, which mostly depends on its ability to produce innovations, implement them and thus create internal added value that helps increase living standards and spur further investments into economic and social development.

This can only be achieved if the education system and the associated R&D can effectively use the available human capital. In this regard, Czech society should heed the warnings repeatedly included in analyses and studies of the current situation and possible future developments.

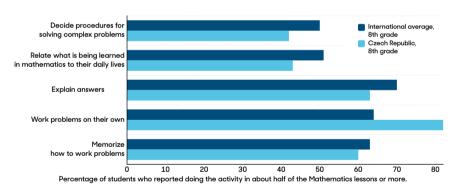
• The chapter summarizing last year's recommendations for the Czech government includes a number of important indicators which are directly linked to increased competitiveness. The Czech Republic has in the long term faced a problem generally consisting in the lack of vision and direction of its education policy, as manifested by the ignorance of evidence-based (also known as evidence-informed) principles and continuously extremely low investments in education.

- This is reflected in teacher salaries and the support teachers and principals receive, which then affects which people choose to pursue a career in education and thus coshape the Czech Republic's (not only economic) future. This factor, coupled with the incoherence of the individual government policies, significantly decreases the country's ability to fully utilize its human potential.
- It is also important to consider the historical burden that is reflected in the obsolete education structure and curricula, as well as in the approach to high-stakes exams, which are currently the main driver and "motivator" of educational objectives.

Under the present conditions, the Czech Republic's position in terms of future competitiveness and other aspects of social development can be considered rather precarious. The inability to meet the basic requirements for multi-layered social perspectives has its roots in the low priority assigned to education, which acts as a figurative bridge to the future. This leads to the other problems mentioned above.

Graph 2: Characteristics of mathematics education in eighth grade

Source: TIMSS 2007 International Mathematics, p. 285 https://timssandpirls.bc.edu/TIMSS2007/PDF/TIMSS2007_InternationalMathematicsReport.pdf



The complexity of the problem that the education system is facing needs to be appreciated in order to set public priorities appropriately:

- the legacy of the Communist regime which undermines contemporary society's trust in identifying public interest and following it in the long term based on pre-set objectives;
- unpredictable long period that societies in transition need to adapt to the new reality;
- lingering paradigms in education going against the rapidly changing circumstances shaping cultural, social and economic reality;

- continuing economic growth leading to the entrenchment of the status quo and the notion that current approaches are correct and lead to success;6
- the structure of the educational (sub) system and its strong inertia hindering transformation:
- too many mutually exclusive interests that the educational system should promote and support (political agendas versus economic interests versus civic society).

In an international comparison, indicators such as the investment rate, teacher salaries, inequality in access to education or the response time in terms of adjusting the curricula in public education are signs that society does not perceive education as a priority and, consequently, there is a serious risk of neglect. This is likely to translate into low flexibility even in such important details as the teaching of mathemat-

In an international comparison, Czech society does not perceive education as a priority which leads to a serious risk of neglect.

ics or physics with an emphasis on real usability (see Graphs 2 and 3 on activities in mathematics and physics classes). There are things that need to be accomplished in order to support the country's competitiveness in the area of education (policy), quality of life, security, development of civic society and other important objectives, having a regard for the current situation and the limitations it imposes.

Firstly, it is important to clarify how (public) education can contribute to competitiveness and other qualities of people's private and public lives. Pasi Sahlberg, a globally acclaimed expert on educational policy analysis and planning, concluded as follows: "The key features of education reform policies that are compatible with competitiveness are those that encourage flexibility in education systems, creativity in schools and risk-taking without fear on the part of individuals."7

Sahlberg further emphasizes the key determinants of competitiveness outside the education system: good governance, strong social cohesiveness and an extensive social safety net provided by the welfare state. The other main source consists in the analysis by Harry A. Patrinos, an economist with the World Bank. His conclusions are based on ongoing and predicted shifts on labor markets and lays down the following general recommendations:

The latest annual Education at a Glance report (OECD, 2019) indicates that the employment rate of university-educated people between 25 and 34 is lower than that of people with only secondary education. (See: https://www.oecd.org/ education/education-at-a-glance/EAG2019 CN CZE.pdf.) In the current situation where the Czech economy creates relatively more opportunities for people with secondary education, this may seem to support the argument that there are "too many" university graduates, which often appears in the Czech discourse.

⁷⁾ Sahlberg, P. "Education Reform for Raising Economic Competitiveness," Journal of Educational Change (2006): https:// pdfs.semanticscholar.org/b714/18a18343f0f11405bc2dff540bac43326996.pdf.

 $^{8) \}quad \text{Patrinos, H. A. "The Future of Automation and Its Implications for Educational Systems," IDEA at CERGE-EI, November 1997 and 1997 are also supported by the State of States and States are also supported by the States and States are also supported by the St$ 12, 2018, video, https://slideslive.com/38911757/the-future-of-automation-and-its-implications-for-educational-systems.

- focus on basic literacy skills first (reading, maths, IT, soft skills);
- raise productivity of schooling;
- teach relevant skills (problem solving, learning skills, communication, personal and social skills);
- avoid early specialization in the education system;
- strong support of higher education (post-secondary).

A comparison of the above suggestions on how to boost competitiveness with the current state of the Czech education system, as comprised e.g. in the Education System Audit annually prepared by the educational think tank EDUin⁹, reveals a great degree of mismatch.

- Basic skills (and their level) are supported unequally both as regards the differences between the individual basic skills and their distribution among students at various schools and school types.
- The productivity of schooling is objectively not increasing as the Czech Republic still
 struggles with key obstacles such as teachers' competence, and currently also a shortage of teachers, obsolescence of curricula, the employment conditions in schools, etc.
- The aforementioned relevant skills (problem solving, learning skills, communication, interpersonal and social skills) are not specifically developed.
- The Czech education system forces a significant percentage of elementary school graduates (70%) to choose their future specialization at the age of 15 or 16, in direct contradiction to the above-mentioned recommendations.
- The share of Czech secondary school graduates entering higher education is comparable to other countries. The Czech Republic typically shows, however, a higher university dropout rates.¹⁰

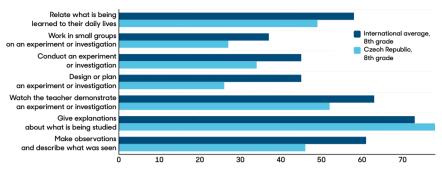
 [&]quot;Audit vzdělávacího systému v ČR: rizika a příležitosti (2018)," EDUin, 2018, https://www.eduin.cz/wp-content/ uploads/2019/01/Audit_vzdelavaci_system_ANALYZA_2018.pdf.

¹⁰⁾ Mouralová, M et al. "Studijní neúspěšnost na českých vysokých školách," CSVŠ, AULA 15, no. 1 (2007): https://www.csvs.cz/wp-content/uploads/2019/01/03-2007-1-studijni-neuspesnost.pdf.

Graph 3: Characteristics of physics education in the eighth grade

Zdroj: TIMSS 2007 International Science Report, p. 301

https://timssandpirls.bc.edu/TIMSS2007/PDF/TIMSS2007 InternationalScienceReport.pdf



Percentage of students who reported doing the activity in about half of the Mathematics lessons or more.

Therefore, it is to be concluded that the educational system of the Czech Republic is not aligned with expert recommendations; in some cases, the Czech education system even directly contradicts these recommendations. A reasonable guess as to why this is happening is that the current labor market demand is based on the current structure of the economy and its underlying competitive advantages. In other words, this follows from the "subcontractor" model of the economy where the share of lower-skilled labor is higher and where the key qualification criteria do not reflect the recommended steps for developing an economy adapted to innovation. This would explain the slow pace of reform of the Czech public education system towards a more sustainable and perspective model - there is simply an insufficient demand for such a change.

General recommendations for increasing competitiveness and quality of life through education:

- Strong adherence to evidence-based decision-making. Competitiveness,
 quality of life and other areas associated with education are the subject of many
 studies and data analyses made in the Czech Republic and abroad, which serve
 as a basis for recommendations which should be seriously considered in terms
 of their feasibility in the Czech environment.
- Seek and find political consensus. Education is clearly one of the key areas for long-term development of Czech society, and the education policy should reflect that. A responsible education policy underpinning the country's economy and society cannot be implemented without a great deal of consensus on the strategic objectives of education across the political spectrum. This is the only way to ensure a continuous and sensible implementation of fundamental solutions such as improving teacher competences, inclusive education or reforming the curricula of Czech schools.
- Think more ambitiously and more about the future. Any kind of a decision that requires a political consensus is, to a certain degree, a compromise between current and future needs. The existing approach to education policy greatly favors current and short-term needs (especially the needs of employers) at the expense of the future needs of the students. This approach to education must be fundamentally adjusted. Primarily, it is essential to understand education and make education policy based on higher objectives such as supporting and developing liberal democracy, social cohesion and the growth of individuals in an environment of social diversity.
- Follow strategy documents and the rules of good governance. Educational policy must respect legal rules and applicable strategy documents, which are currently often ignored or insufficiently implemented. In some cases, the existing strategic goals contradict the "key performance indicators" of education policy. The Czech education system often establishes reasonable goals, but the approach to high-stakes exams significantly influences and redirects schooling objectives within the education system itself.

Specific recommendations for improving competitiveness and quality of life through education:

Note: Recommendations for the individual time scopes are often interrelated and should be implemented in a consistent manner.

Short-term recommendations:

- Harmonize objectives with assessment. Significant reform of the key entrance and leaving examinations (and methods of assessment of educational outcomes in general) is in line with the desired education system objectives as laid out in key legislative instruments and strategy documents. Study assessment should reflect a much broader spectrum of literacy, skills and knowledge than that covered by the current tests and examinations. It should cover the long term results of formal and informal schooling (student portfolios) and evaluation of papers and larger projects (school-leaving seminar papers).
- An evidence-based approach to education policy must be immediately introduced. It is alarming that the recommendations following from international observations and comparisons (e.g. the annual OECD Education at a Glance report) are not seriously taken into consideration. Furthermore, the available data are not sufficiently used (and the Czech Republic lacks the opportunity to learn more about the performance of its education system). We have only very limited data on the outcomes of elementary school education and the Czech education system as a whole. This is due to the long-term non-participation of the Czech Republic in the TIMSS¹¹ surveys conducted with eight grade elementary school students. PIRLS¹² and TIMSS surveys are more similar to the contents of curricula taught at schools than the PISA¹³ survey and guarantee clear results for the given grade.

¹¹⁾ The TIMSS (Trends in International Mathematics and Science Study) assessment identifies the level of knowledge and skills of fourth and / or eighth grade students in mathematics and science

¹²⁾ The PIRLS (Progress in International Reading Literacy Study) study is focused on reading literacy of students of the fourth grade in elementary schools.

¹³⁾ The OECD's PISA (Program for International Student Assessment) study is considered the largest and the most important international survey on measurement of educational outcomes currently in the world in progress.

- An ongoing campaign stressing the importance of education for the future and the changes that need to be made in the area. Social awareness of this issue needs to be significantly increased for education to become a true priority. The campaign must involve a maximum number of key stakeholders influencing and shaping social discourse.
- Achieving a binding political consensus enabling building of medium and long-term development plans in the area of education (see medium and longterm recommendations).

Medium-term recommendations:

- Principals play an essential role in the development of regional education. The Czech education system gives schools a great deal of autonomy and it has been demonstrated that a principal can significantly influence the quality of education at his or her school. A principal can also, however, hinder the school's development. While there are approximately 150 thousand teachers in the Czech Republic, the number of principals is only about 5.5 thousand. Proper selection and support of principals can thus help achieve positive change within years. The existing methods of their selection, remuneration, training and incentivization to further growth and development of their schools are often insufficient.
- Significant support for quality and available preschool education, especially for socially disadvantaged children. Studies such as the Perry Preschool Project have demonstrated that support for education from its very beginning is crucial for later personal growth. It is all the more important to help disadvantaged children from backgrounds which insufficiently motivate them to further growth as soon as possible. Such an investment brings social as well as economic benefits and significantly increases the country's human and social potential.
- Reforming the structure of secondary education and introducing better links to higher education. The existing bias in secondary education towards vocational training (70% of secondary school students) represents a significant

liability in a situation where reliable recommendations suggest that the choice of the professional track should be made by students at later stages of education (higher education). The Czech education system is burdened by a fundamental mismatch where most secondary school graduates entering university education have had to choose their professional track already when selecting the secondary school they would attend. This is one of the reasons behind the extraordinarily high university dropout rate. Boosting general education in secondary schools could help combat this mismatch and contribute to the factors identified by the aforementioned recommendations as crucial for promoting long-term competitiveness. Conversely, Czech universities should offer a much broader and diversified range of shorter vocational study programs to the maximum number of future students. Cooperation with the private sector is essential in both cases.

• Changing the closed curriculum to an open one (Strategy 2030+). Having regard for the shifting requirements, it is necessary to seriously consider a far-reaching change in the manner of teaching (e.g. of mathematics and languages) with an emphasis on practical use of the skills learned. Equally important is to reconsider the time allocated to teaching, especially with regard to ensuring that students are well prepared for adult life (in terms of problem-solving, critical thinking, communication, creativity and team work). This is an area that has long been neglected by the current education system, despite its significant potential to improve future competitiveness and quality of life of Czech citizens. Anything but a true comprehensive reform of the current structure is unlikely to bring the desired outcomes. As the previous decades have shown, schools and teachers often fail to implement reforms in their everyday classroom work.

Long-term recommendations:

• Investments in education need to be increased consistently. The previous increases in the education budget have almost always only aimed at increasing teachers' salaries and represent merely a settlement of the debt owed to teachers by society rather than a proper investment (see the summary of existing recommendations in the introductory chapter). The funding allocated to education in the Czech Republic does not reach OECD standards and lags

significantly behind that of developed European countries. Money can only be considered an investment if it is clear, based on a cost-benefit analysis, that the funding leads to specific future economic, social or personal benefits. This concerns both the teachers and the curricula, including the ability to implement such elements and areas that correspond to real-world needs and the requirements on competitiveness and quality of life that drive the changes. Any curriculum reform requires a fundamental reconsideration of the objectives that the public education system aims to achieve. Minor adjustments are insufficient if the world is rapidly and fundamentally changing. If funds are only spent on minor changes and this is presented as reform, the money is essentially wasted.

- Teachers. Based on available analyses of the influence of individual factors on the quality of education, it is beyond any doubt that increasing teacher salaries is an essential but not the only prerequisite for success. Selection, training and lifelong education of teachers are all essential elements. An increase in teacher salaries is not an investment if it occurs in isolation. The money spent must be carefully allocated to all areas influencing the overall quality of teaching. In the absence of significant reform of teacher training, with an emphasis on their competences and ability to work with children and young people in the twenty-first century, and lifelong learning to help teachers respond to the changing world, the money spent on higher salaries will merely further increase the public debt.
- Inclusive education helps improve social cohesion, a social indicator influencing subjective perception of quality of life (see e.g. Better Life Index OECD¹⁴ and the top ranking European countries with a high degree of social cohesion such as Switzerland or the Scandinavian countries). According to Sahlberg (see above), social cohesion represents one of the prerequisites for competitiveness, since the ability of individuals to fully utilize their own potential is a means to increase the potential of all society. Inclusive education is based on the education system's ability to offer individualized care to all children, not only those classified either as handicapped or extraordinarily talented. Inclusive

¹⁴⁾ Better Life Index OECD, see: http://www.oecdbetterlifeindex.org/#/1111111111.

education cannot be provided, however, by the education system in the absence of a change in the teachers' approach. Czech teachers are not being adequately prepared for this practice. Instead of improving social cohesion, the very early division of students into different types of schools tends to intensify the social and performance differences between the students of different schools.

Defense, Innovation and Competitiveness

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Expenditures for science and research in the field of defense are not just a mandatory expenditure and a necessary reaction to deteriorating security situation; they can also significantly boost the competitiveness of the economy, including its potential for innovation. The Czech Republic now begins to appreciate this. The budget forecast, however, for Czech investments into science and research in the field of defense is still a cause for concern.

Introduction

The Czech population and many of its political representatives share the relatively wide-spread opinion that defense expenditures are necessary, but, at the same time, they represent merely a mandatory expense with no subsequent benefit for the economy or the country's industrial, scientific and research competitiveness. Examples from around the world show, however, that this is far from true. Indeed, countries that make clever investments into their own defense and also provide systematic support to defense research end up not merely with developed and innovative defense industry, but also with a more competitive industry in general. As a result of their defense expenditures and defense research, these countries can not only ensure better security for themselves but also aid the growth and competitiveness of the entire economy.

In this year's Annual Report, Jens Stoltenberg, the Secretary General of NATO, clearly states that the Alliance needs a prosperous defense industry – both for innovation and for developing and manufacturing cutting-edge technologies necessary to maintain the necessary capabilities. Close cooperation with the defense industry helps to identify and

introduce new technologies, assess their best use in defense and the ways they can be obtained in the most efficient and economical manner possible.¹

The good news is that the Ministry of Finance is beginning to appreciate the economic and budgetary benefits of defense investments with the maximum reasonable involvement of the domestic industry. According to the Czech News Agency, in this year's GDP forecast for the following years the Ministry of Finance stated that in the medium-term, economic growth could be boosted by the planned purchase of military vehicles worth CZK 80 billion, which would affect the growth of investments.² It is high time to start viewing expenditures for military modernization as any other long-term investment made by the Czech government aiming, among other things, at increasing the competitiveness of the Czech economy.

It seems that even the Czech people in general are becoming increasingly aware of the linkage between expenditures for defense, investments in science and research and the involvement of the domestic defense industry. The key attributes which, according to the public, should be taken into account alongside price, in deciding on which companies should be awarded arms contracts, include (1) the company's long-term presence on the market; (2) investments in research and development; and (3) manufacture of advanced (hitech) products with high added value. According to the respondents, the least important criterion is whether the company exports its products or services abroad. When the respondents had to pick the most important factor, most citizens (26%) had a preference for manufacturing of hi-tech products with high added value.³

Maintaining the technological edge

It clearly follows from this year's Annual Report of the Secretary General of NATO that if the Alliance is to be successful, it needs to maintain its technological edge. This means mastering new technologies such as artificial intelligence, big data analytics, autonomous systems, quantum technologies and blockchain. In order to meet this objective, NATO must closely cooperate with its industry. To this end, various institutions and agencies of the Alliance closely cooperate with the industry, e.g. by participating in dozens of start-up projects.⁴

A similar message was also included in the recent report of the Science and Technology Committee of NATO's Parliamentary Assembly which relayed a clear warning that developed economies no longer have a technological edge over their competitors. On

^{1) &}quot;The Secretary General's Annual Report 2018," NATO, March 4, 2019, https://www.nato.int/cps/en/natohq/ opinions 164187.htm.

^{2) &}quot;MF pro letošek odhadů růstu HDP zlepšilo, pro příští rok zhoršilo," ČTK, July 31, 2019, https://www.ceskenoviny.cz/ zpravy/mf-pro-letosek-odhadu-rustu-hdp-zlepsilo-pro-pristi-rok-zhorsilo/1782632.

³⁾ Survey performed by Empirica for Právo and Novinky.cz in August 2019.

^{4) &}quot;The Secretary General's Annual Report 2018," NATO, March 4, 2019, https://www.nato.int/cps/en/natohq/ opinions_164187.htm.

the one hand, it is true that traditionally, investments into defense have been crucial to successfully adapt to changed circumstances, while, on the other hand, it is apparent that especially the European expenditures for defense research dropped significantly since 2003. For example, the Russian expenditures for military R&D doubled between 2012 and 2015. The Chinese budget is being systematically increased on an even larger scale. Furthermore, China completed major reforms of the organizational and political processes in the area of military research and development to make full use of cooperation with the private sector both in China and abroad. Therefore, the protection of sensitive technologies against potential opponents will be one of the main challenges for Western economies and their industrial and technological base in the coming years.

It is not surprising that the trend of the last decade (2009-2018) points to the decline of traditional Western military powers, whose budgets dropped by several dozen percent or, in the best case, stagnated, whereas the (re)emerging powers such as Russia, China or India increased their military expenditures by dozens of percent (by 83% in China). It is clear that a technological edge can only be achieved and maintained in the context of total expenditures for defense. Therefore, the dramatic decrease in defense research expenditures in European countries was clearly the consequence of reducing defense budgets in general. This is especially true since defense research is usually affected by budget cuts sooner and more severely than other segments of defense budgets.

Recently, even the European Union has become more aware of the gravity of the sit-

The protection of sensitive technologies against potential opponents will be one of the main challenges for Western economies. uation where low defense budgets undercut both public and private investments into defense research, which leads to a loss of global competitiveness of European arms manufacturers.⁸ The necessity to boost their defense and the competitiveness of domestic industries thus led the Member States to establish the European Defense Fund (EDF) and a mechanism for closer cooper-

ation in defense and security known as PESCO. Using the EDF budget of EUR 13 billion for the period of 2021 to 2027, the European Union aims to become the fourth largest investor in defense research in Europe. Among other things, the funding should aid small and medium-sized enterprises working on joint projects focusing on breakthrough innovations. As a

^{5) &}quot;Maintaining NATO's Technological Edge: Strategic Adaptation and Defense Research & Development," NATO Parliamentary Assembly: Science and Technology Committee, October 8, 2017.

^{6) &}quot;Annual Report to Congress," Office of the Secretary of Defense, May 2, 2019, https://media.defense.gov/2019/ May/02/2002127082/-1/-1/1/2019_CHINA_MILITARY_POWER_REPORT.pdf.

^{7) &}quot;Trends in world military expenditure, 2018," SIPRI, April 2019, https://www.sipri.org/sites/default/files/2019-04/fs_1904_milex_2018.pdf.

⁸⁾ According to SIPRI, seven of the ten largest global arms exporters are EU Member States - France, Germany, United Kingdom, Spain, Italy and the Netherlands.

result, defense, innovations and competitiveness have recently become integrated even in the policymaking of the largely pacifist-minded European Union.

The importance for EU Member States of having a competitive defense industry was also emphasized by the European Parliament; according to its figures, in 2014 (i.e. before NATO members began to increase their defense spending), the European defense industry had a turnover of EUR 97.3 billion and employed half a million people, making it one of the largest industrial sectors in Europe. Its economic and technological components thus had a major impact on the competitiveness of the entire European industry. New forms of close cooperation between the government and the domestic defense industry are also being introduced in the individual Member States including, for example France, United Kingdom, Spain, the Netherlands or Poland. 10 Their motivation is clear. They believe that strengthening defense capabilities through sophisticated involvement of their own industry leads not only to better preparedness and the ability to mobilize the economy in case of future security crises but also to near-term economic, scientific and research development.

Science and development in the field of defense¹¹

Military research and innovation have always been linked with civilian research and many inventions originating from the military have had a profound impact on the civilian sector. Of the OECD countries, the United States of America has the largest budget for science and

research for defense purposes. In 2016, it was USD 78.1 billion, i.e. 0.42% of GDP. In total, this represents almost 88% of the total OECD expenditures in this area. It is therefore of no coincidence that U.S. weapon systems, as well U.S. university research centers are among the best in the world according to various international rankings. In terms of total spending, the USA is followed by South Korea (3.1

The largest science and research spending in the area of defense is the domain of neutral and relatively small countries as well.

billion), United Kingdom (2.3 billion), France (1.1 billion) and Japan (1.0 billion). The top ten also includes Germany, Turkey, Australia, Canada and Poland. According to the ratio of expenditures to GDP, the ranking is as follows: South Korea (0.16%), United Kingdom (0.08%), Turkey, France, Norway, Sweden, Australia, Germany, Japan, Poland, Finland and Estonia. 12

⁹⁾ See Defense Industry: http://www.europarl.europa.eu/factsheets/en/home.

^{10) &}quot;Maintaining NATO's Technological Edge: Strategic Adaptation and Defense Research & Development," NATO Parliamentary Assembly: Science and Technology Committee, October 8, 2017.

^{11) &}quot;Government Expenditures on Defense Research and Development by the United States and Other OECD Countries: FactSheet," Congressional Research Service, R45441, 2018, https://fas.org/sgp/crs/natsec/R45441.pdf.

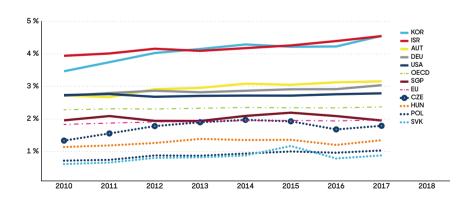
¹²⁾ Data from Israel are not available, although it is likely Israel would rank near the top.

Taking into account the government expenditures for science and development alone, it is again the United States who spends the most on defense research among the OECD countries; in 2016, its share reached 51.9%. The USA is followed by the United Kingdom and Turkey (15.9%) and, with over 10%, South Korea and Poland. The top ten also includes Australia, France, Norway, Sweden and Japan. ¹³ Based on the European Defense Agency data, defense R&D funding from the Member States' budgets has reached EUR 7-9 billion in recent years. The largest science and research spending in the area of defense is thus not only the domain of developed NATO members who maintain high defense expenditures, but also of neutral and relatively small countries such as Switzerland and Finland. Nevertheless, these are all countries with developed, globally competitive defense and other industries and science and research centers.

Czech investments into science and research

How does the Czech Republic fare? In this area, the Czech Republic also ranks slightly below average. Based on the OECD data, science and research spending was 1.79% of the GDP in 2017. Although this represented an increase compared to 2016, the result was still worse than in the years before. The European Union average is 1.96% of the GDP, while OECD average is 2.37%. Spending of at least 2% is recommended. It can therefore be said that the gap between the Czech Republic and the developed world is steadily growing.

Graph 1: Science and research expenditures to GDP ratio



¹³⁾ Data from Israel are not available.

Science and research spending in defense paints a similar picture. In 2018, the Czech Republic spent CZK 436 million from the State budget for science and research in defense, amounting to approximately 0.7% of the total defense expenditures. The average of the European Defense Agency member states was 0.8% in 2018. 14 It should be mentioned that even here, the recommended target for all countries is 2% of the total spending. Indeed, the Czech Republic made a commitment to achieve these goals by signing the accession protocol within the framework of the Permanent Structured Cooperation (PESCO), which was activated in December 2017. 15

An even more serious problem lies in the fact that, nominally, the relevant Czech budget has basically stagnated at the level of 2014 and, based on budget forecasts, was supposed to remain the same for the next ten years! In case the total defense expenditures grow at least as currently planned, the budget expenditures for science and research in defense will decrease to about 0.3% of the total defense expenditures. This is alarming news for Czech industrial, scientific and research competitiveness in security. There can be no solace in the report prepared in 2017 for the NATO Parliamentary Assembly, which stated that other NATO members are also facing this problem. The decrease in R&D budget expenditures of NATO member states since 2008 was even greater than the decrease in total expenditures, and thus far, there has been no improvement. ¹⁶ Therefore, not only is the Czech Republic in a worse situation than most other countries, but the budget forecast puts it on course to become one of the very worst.

In the coming years, the defense technology industrial base in Europe will certainly also be changed by the increasing emphasis of the European Commission on defense and the defense industry. There will also be more pressure on consolidation. Virtually all programs in the field of defense, supported from the European Union budget (European Defense Fund, PESCO, with possible connection to Horizon Europe) to which billions of euros will be allocated annually in the coming years, are based on necessary cooperation of entities from multiple countries and support of national governments, be it in the form of national cofinancing or commitments to product purchases. Thus, the following holds true with regard to this area: (1) Without cooperation between the Czech government and the domestic industry and research centers, and without subsequent cofinancing of projects from national budgets, Czech companies and institutions are markedly disadvantaged when applying for any EU

^{14) &}quot;Defence Data 2016-2017," European Defence Agency, 2018, https://www.eda.europa.eu/docs/default-source/ brochures/eda_defencedata_a4.

¹⁵⁾ See Binding Commitments, PESCO: https://pesco.europa.eu/binding-commitments/. (After all, this goal was already approved by the EDA Steering Board in 2007, see: https://www.eda.europa.eu/info-hub/defense-data-portal/

^{16) &}quot;Maintaining NATO's Technological Edge: Strategic Adaptation and Defense Research & Development," NATO Parliamentary Assembly: Science and Technology Committee, October 8, 2017.

funding. (2) Without European funding, the competitiveness of Czech companies and institutions in many areas will decline, potentially leading to their closure. ¹⁷

Domestic defense industry

Based on the data of the Defense and Security Industry Association (DSIA), around 100 companies in the Czech Republic with a total turnover of around CZK 50 billion (including the civilian component and dual-use portion of their manufacture) report the manufacture of arms and security solutions as their objects of business. These companies employ up to 20,000 workers, of which every fifth is estimated to have a higher education.

Based on a study contracted by Česká Zbrojovka and calculated on the basis of the portfolio of its products, if the Czech government buys weapons manufactured and developed in the Czech Republic (for example the BREN II assault rifle), 43.75% of the original price would go back to the Czech national budget in the form of taxes and fees (VAT, social and health insurance, income tax, tax on profits, excise duties, etc.). It follows from the EY study prepared for the Czechoslovak Group that every Czech crown spent by the CSG in the Czech Republic

Purchases of the Czech Republic from domestic companies increase their competitiveness on foreign markets.

generates an additional CZK 2.8 Czech crowns and that one CSG employee generates 3.7 additional job opportunities.

If the Czech arms manufacturers are competitive or if they offer a good price, domestic purchases are clearly worth it. Furthermore, the know-how and stability of the domestic defense industry are of key importance for maintaining

the national defense capabilities of the country in case of emergency situations where there would be a need for effective economic mobilization for the purposes of national defense and its NATO partners. Furthermore, the positive effects of domestic purchases are not limited just to the Czech economy and the conditions of the domestic industry. It is somewhat axiomatic in the defense industry that good references from the domestic market make it significantly easier for companies to apply for contracts on foreign markets. Deliveries to the armed forces of other countries are commonly considered a strictly necessary condition, which makes references from the company's home country a necessity.

Export potential is another important factor. The volume of exports of arms and military material in 2018 fell to CZK 14 billion from CZK 15.1 billion in 2017. Exports thus fell for the second consecutive year after reaching the peak of CZK 18.2 billion in 2016. In 2015,

¹⁷⁾ It is true that major Czech manufacturers are not all that interested in applying for science and research funding. One of the reasons is that the results of the research are owned by the contracting authority, i.e. the government, which is not obliged to make use of the results in any way. The companies cannot work with the results independently and, therefore, lack motivation to e.g. find an application for them on foreign markets. If the companies could become at least partial owners of the results of the research, it would definitely increase their motivation to participate in similar programs.

¹⁸⁾ The increase in 2016 was mainly caused by the sale of several L-159 aircraft.

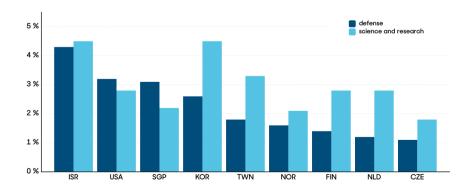
it was CZK 15 billion. Nevertheless, these are still good figures in comparison with the situation 10 to 15 years ago. ¹⁹ About half of the exports go to Europe and the United States, the rest mainly to Asia, the Middle East and Africa. Although the geographical distribution is more diversified compared to the general Czech export, of which 85% goes to the European Union, it is still an insignificant part of the Czech export in terms of volume. Indeed, no one has to worry about an "excessive militarization" of the Czech economy. On the other hand, if export of arms and military material were to increase, it would represent a useful diversification of the total exports of Czech industrial goofs.

Defense and R&D expenditures

The situation in the world shows that long-term and well-planned investments in modern weapon systems and their development guarantee the fulfillment of commitments towards NATO allies, better security and the stability needed to strengthen long-term prosperity. Additionally, they also contribute to the competitiveness of industrial enterprises and boost university research. Furthermore, they have also recently contributed to stronger growth in the hi-tech sector. It is certainly not the case that military spending must automatically mean less investment in science and research and undermine the country's economic competitiveness. The opposite is often true.

Graph 2: Defense, science and research expenditures (as % of GDP)

Source: Data on military expenditures are given according to SIPRI for 2018, data on science and research according to OECD for 2017. Data on R&D expenditures for Singapore are from 2014.



¹⁹⁾ CZK 2.64 billion in 2003 and CZK 4.73 billion in 2008.

The best example of this is Israel, which is also comparable to the Czech Republic in terms of its population. The country was established 71 years ago in the swamps and deserts of the Middle East and was gifted with virtually no natural resources. Moreover, it has been at war throughout the entirety of its existence and currently spends over 4.3% of its GDP on defense annually. At the same time, however, it spends over 4.5% of its GDP on science and research. Undoubtedly, the combination of meaningfully invested defense expenditures (largely through Israel's own arms industry, which is also globally competitive) and large investments in science and research contribute to the fact that Israel boasts a higher GDP than the Czech Republic – total and per capita.

There are more examples, however, of developed countries where defense, science and research spending is complementary and which have competitive defense industries contributing further to their defense capabilities and wealth creation. The list includes both small and large countries, traditionally rich and developing countries, as well as NATO-aligned or neutral countries. Of the larger countries, the United States (3.2% of the GDP for defense / 2.8% of GDP for science and research) and South Korea (2.6/4.5) are naturally at the top. Of the smaller developed countries, there is Singapore (3.1/2.2), Taiwan (1.8/3.3), Norway (1.6/2.1), Finland (1.4/2.8) or the Netherlands (1.2/2.0). Furthermore, the United States, Norway and the Netherlands spend over a quarter of their defense budgets on investments. In the case of the Czech Republic, the ratio is 1.1/1.8 and investments comprise about 13% of the defense budget.²⁰

An emerging opportunity

Expenditures of European NATO member states reached USD 282 billion in 2018 and should continue to grow. The European part of NATO invested about CZK 1.3 trillion in equipment and new weapon systems in the previous year. If most of the member states reached the declared defense spending goal of 2% by 2024, the annual defense spending of European NATO members should be close to USD 400 billion in five years. Many other European countries are also increasing their defense expenditures. In five years' time, European countries (excluding Russia) will invest around CZK 10 trillion a year in defense. Out of this amount, CZK 2 trillion should be spent on modernization of armies, i.e. new weapons and equipment. This is a huge opportunity for Czech industry. It is up to Czechs themselves, however, as to whether they use this opportunity or leave it to others.

²⁰⁾ Data on military expenditures are given according to SIPRI for 2018, data on science and research according to OECD for 2017. Data on R&D expenditures for Singapore are from 2014.

Increasing spending on the modernization of the Czech army must be seen not only as a necessary budgetary burden in view of the worsening security situation, but also as one of the opportunities to close the gap separating the Czech Republic from the most economically advanced countries in the world. A long-term government policy based on sufficient funding of the modernization of the Czech army as well as close cooperation with the defense industry and the science and research sector is absolutely necessary, however, in order to successfully achieve this objective. Indeed, if the Czech Republic increases its defense expenditures (especially the investment part), it will not only fulfill its obligations towards its NATO allies, but will also support its economy as a whole.

Recommendations

Fortunately, the Czech Republic remains one of the safest countries in the world. The sense of security (coupled with a casual approach to building up defense capabilities) may soon become, however, the greatest security threat. In order to avoid this, it is necessary to:

- 1. Continue to increase defense expenditures to 2% of the GDP, spend at least 20% of the budget on investments and at least 2% on defense R&D.
- 2. Establish and maintain a five-year acquisition budget framework.
- 3. Strive for maximum involvement of the domestic industry in acquisition processes.
- 4. Establish a section for industrial cooperation at the Ministry of Defense, create Czech equivalents of DARPA (Defense Advanced Research Projects Agency), FMA (Foreign Military Assistance) programs and SIBAT-type agency (for export / import and other forms of government-government cooperation).
- 5. Strengthen the mechanism of government support of defense research in connection with the EU funding programs.

Local and Individual Quality of Life and Its Relationship to Social Attitudes and Trust

Daniel Prokop, Guarantor of the Study / Founder, PAQ Research

Trust in rule of law, democracy and the pro-Western course of a country is closely related to an individual's quality of life, which in turn is linked to the regional quality of life. Current values can only be maintained if society-wide inequalities and inadequacies of public policy are addressed.

The aim of this chapter is to follow up on the quality of life study presented at the 2018 Aspen Annual Conference, where we attempted to describe differences in quality of life among Czech regions. After the follow-up roundtable discussions with expert in the fields of geography, social inclusion, education, inequalities, regional development and business, we concluded that rather than updating and improving the quality of the life map (where there would be only minor changes year on year), there would be greater value in investigating two implications of regional differences:

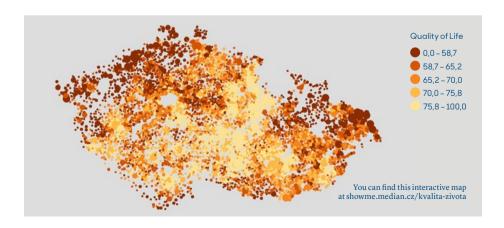
- 1. How does local quality of life relate to the social stratification of the inhabitants of the given region and the individual quality of life? How are these factors reflected in their attitudes and trust?
- **2.** What is the regional correlation with the most serious problems affecting the quality of education?

Compared sources of data

Local quality of life index

The Quality of Life 2018 study specified the quality of life index for every Czech municipality (except for Prague, which is internally diverse and stands out from regional comparisons) based on 13 indicators, including socioeconomic indicators (debt collection/distraints, unemployment, the structure of the regional labor market), problems of peripheries and the availability of services (distance to the nearest district town, availability of pre-schools and secondary schools, accessibility of healthcare services, availability of high-speed Internet), demographic indicators implying better quality of life (life expectancy, population growth), and indicators related to strong family and community life (divorce rate, number of religious believers), safety and security as well as pollution. The relative weight of these indicators was determined based on two sources: subjective assessment of problems according to respondents and regional correlation with the share of socially dissatisfied groups. This aggregate measurement revealed that the best quality of life is found in some of the large Czech cities and their outskirts, as well as in rural areas which are not affected by major socioeconomic problems (parts of the Vysočina Region and the Hradec Králové Region). The lowest quality of life was identified, in contrast, in large parts of the Ústí Region, the Karlovy Vary Region, and the Moravian-Silesian Region, which suffer from multiple socioeconomic and other problems. Nevertheless, there is significant diversity in quality of life even among municipalities in the aforementioned administrative regions.

Map 1: The overall quality of life in the Czech regions and towns (Aspen Annual Conference 2018)



Czech Radio survey - Czech Society 30 Years Later

The position and power of an individual in society are not based merely on income and wealth, although these are often the two most debated factors when it comes to inequality. Also of importance are social contacts and connections, new competencies ensuring opportunities in an uncertain globalized world and cultural capital which transmits educational aspirations and enables identification with higher social classes. Identifying these types of inequalities is important for explaining why people are dissatisfied, vote for populist parties and fear globalization, why society fragments and why there is a longing for a return to a simpler world.

The notion of three "species" of capital was invented by the French sociologist Pierre Bourdieu half a century ago. Aside from economic capital, he also came up with *social capital*, which comprises the contacts an individual has in society and the strength and extent of an individual's connections, and cultural capital – the individual's education, orientation and participation in cultural life and society. These three types of capital were later used by the sociologist Mike Savage as the basis for his study², according to which modern British society consists of seven distinct classes.

In a survey entitled *Czech Society 30 Years Later*, which was prepared for Czech Radio in cooperation with the sociologists Martin Buchtík, Paulína Tabery, Tomáš Dvořák and Matouš Pilnáček, we attempted to describe similar structures in Czech society. We learned from some of the shortcomings of Savage's original study and our research thus included specific forms of capital that have not played such an important role at the time of Bourdieu and the British survey – e.g. language and ICT competences as components of human capital, which is a key to success in a changing globalized society, and local helping contacts and connections as a unique resource in a post-communist society.

Czech Radio's data comprise a large sample (4,039 respondents from approx. 1,300 municipalities were interviewed by the MEDIAN and STEM/MARK polling agencies) and also included the question of where the respondent lives. These data were then linked to the data on quality of life in the individual municipalities from the analysis made for the 2018 Aspen Annual Conference.

The following chapters seek answers to the following questions:

a. How does quality of life in a municipality relate to the forms of capital held by its inhabitants and what is the social stratification of these municipalities like?

¹⁾ See Distinction: A Social Critique of the Judgement of Taste by Pierre Bourdieu.

²⁾ See Social Class in the 21st Century by Mike Savage.

- **b.** How does quality of life in a municipality as an ecological factor influencing the inhabitant's aspirations, migration and quality of education - relate to the educational mobility in the region?
- **c.** How does quality of life in a municipality relate to the individual quality of life of the respondents calculated on the basis of their economic, social, cultural and human capital, as well as the existence of recent negative life events (e.g. debt collection, loss of employment/housing, divorce)?
- **d.** How does quality of life in a municipality and individual quality of life influence the attitudes of the respondents such as trust in institutions, positions on democracy and membership of the Czech Republic in the West - i.e. factors that are often considered to be a matter of values, but also concern quality of life and social status.

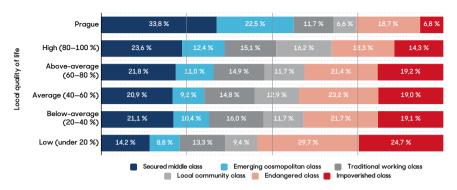
Quality of life in a municipality and the population structure (and resources)

Before we get to the key question of how quality of life influences life satisfaction, trust and the educational aspiration of people, it is important to look into how this is connected to their resources - not only economic capital, but also the aforementioned social, cultural and human capital and generally the class stratification of a region as a whole.

The social structure of a population is closely linked to regional quality of life, as defined by the 2018 study presented at the 2018 Aspen Annual Conference. In Prague, over half of the population is made up of the two upper middle classes (specifically the secured middle class and the emerging cosmopolitan class); the impoverished class is rather small in the capital city. By contrast, in a fifth of municipalities outside of Prague with the lowest quality of life, the two upper middle classes only comprise less than a quarter of the population (23%), while over half is formed by the two most economically vulnerable classes of society. These include, aside from the impoverished class lacking any form of capital, the endangered class which, while having relatively solid social, cultural and human capital, suffers from low wages and property wealth. In municipalities with a middle and higher quality of life, the share of the economically secured classes increases.

Graph 1: Social structure of municipalities according to quality of life

Source: PAQ Research



The different population structure stems from the differences in the various capitals and available resources.

Economic capital of the inhabitants – As would be expected, Prague is separated by a wide income margin from the rest of the country, even though the real value of income is partially offset by the higher costs of living. In the fifth of municipalities with the lowest quality of life, there is a higher share of low-earners. The relationship is more gradual in terms of property wealth. Municipalities with the lowest quality of life practically lack wealthy inhabitants and about 35% of the population consists of people with the lowest property wealth. The wealth of the inhabitants then almost linearly increases with the quality of life in the municipality. This may be a result of the growing price of the real estate owned and higher savings. Prague stands out with its much higher wealth polarization – there are many respondents belonging to the richest wealth class, but there is also a higher share of poor people compared to other municipalities and cities with a high quality of life. The capital city's polarization is also caused by housing and its growing price – the home

While Prague respondents have more prestigious social networks, they often do not know any craftsmen or people in assisting jobs.

owners' wealth has increased in recent years on account of the growing real estate prices. On the other hand, a larger group of people cannot afford to buy their homes and thus accumulate wealth.

Cultural and human capital – In terms of human capital (language and ICT skills), aside from the gap between the capital city and the rest of the country, there is a stronger po-

sition of people in municipalities with above-average or high quality of life and a lower level of "new competencies" among respondents from the fifth of municipalities with the lowest

quality of life. Cultural capital - as measured by various forms of cultural activities - does not depend strongly on quality of life in a municipality as defined in our study, but this may be a result of the fact that the structure of regional quality of life did not include a measure of cultural opportunities (this may be included in the future).

Social capital - One would expect that the inhabitants of Prague would show one of the highest rates of social capital in the form of contacts and connections. This is not the case, however, while respondents from Prague have relatively more prestigious social networks, they often do not know any craftsmen or people in assisting jobs. Their connections are relatively narrow, which may become relevant in certain life situations. Our indicator takes this into account. In this regard, people in municipalities with a high quality of life outside of Prague, combining a more educated and heterogeneous population structure, also boast higher social capital.

On the other hand, people from Prague have a relatively higher measure of active social capital. Active social capital indicates whether and how many people an individual can ask for advice in emergencies and for help in the household or assistance in case of financial (and other) problems. On the face of it, this does not correspond to the stereotypical impersonal metropolis and poorer areas with strong social ties. It may be a result of the fact that the divorce rate in Prague is lower and the elderly are not so often in danger of loss of social capital caused when younger people leave for the prosperous cities. Outside of Prague, people from towns and municipalities with the lowest quality of life generally also have a slightly lower social capital. As a result, they face multiple disadvantages in the form of low social, cultural and human capital.

Quality of life in a municipality and the individual quality of life

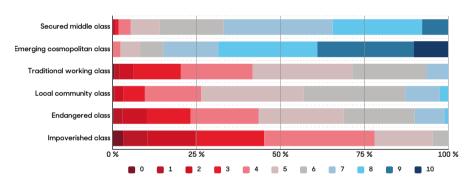
Economic, social, human and cultural capital do not have to be approached merely as determinants of social class, but also as sources of individual quality of life which are either accumulated or absent in an individual's life. Individual quality of life is not determined only by these relatively long-term resources, but also by the fact of whether or not a person faces specific social and life problems.

Based on the data from the Czech Society 30 Years Later survey, we calculated a variable of the individual quality of life with a value from 0 to 10. Each respondent received a plus point for each of the 6 forms of capital if his or her values were above-average. These forms of capital include: income, household wealth, social capital in the form of a network of friends from various professions, active and helping social capital in the person's immediate circle, language and ICT skills, and cultural capital. We have also assigned minus points to each respondent whose household has faced a debt collection procedure over the past 10 years, long-term unemployment, loss of housing or a divorce and separation of the household. The resulting variable was recoded from the original values of -4-6 to 0-10.

Unsurprisingly, quality of life measured in this way differs significantly among the 6 social classes which the survey (inspired by the Great British Class Survey) identified based on the class model corresponding to the structure of the individual forms of capital. Among the upper middle classes, an overwhelming majority of respondents scored above average (6–10), while in the impoverished class, most respondents scored 0–4. Respondents from NUTS2 Northwest (the Ústí Region and the Karlovy Vary Region) generally have a low individual quality of life index, while the opposite is true for the inhabitants of Prague.

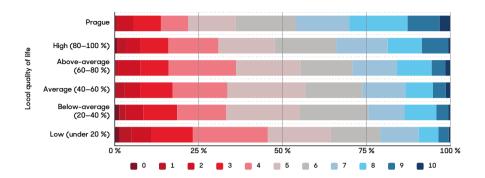
Graph 2: Individual quality of life of the respondents (0–10) in the framework of social classes and regions

Source: PAQ Research



Another interesting finding is the relationship between local quality of life in a municipality based on the 2018 Aspen Annual Conference and the individual quality of life of respondents based on the survey by Czech Radio. In Prague, about 20% of respondents showed a lower individual quality of life values (0–4); in towns and municipalities outside of Prague with the best local quality of life, the number was 30% or 46% in the municipalities with the lowest local quality of life. This means that while the data have been collected separately, they show that local quality of life is related to the individual quality of life and that the low-performing 20% of towns and municipalities are becoming separated and lag behind the rest. Around the middle levels of local quality of life, the relation to individual quality of life was limited.

Graph 3: Individual quality of life of the respondents (0-10) in the framework of the types of municipalities based on local quality of life (2018 index)



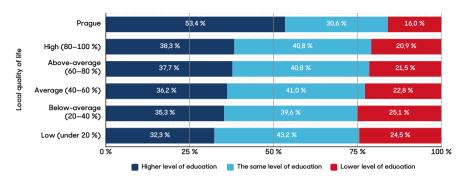
Local quality of life, educational mobility and attitudes

The overall quality of life in municipalities is a weaker predictor of social trust compared to individual quality of life, but there is still significant correlation with some attitudes. Educational mobility is one of the important factors. Less than a third (32%) of respondents from areas with low quality of life attained a higher education degree than either of their parents.³ The number for municipalities with high quality of life outside of Prague was 38%. Prague is significantly ahead of the rest as over a half of the respondents attained a higher education degree than their parents.

We compared the education degree of the more educated of the parents on a 4-point scale (1-Elementary school, 2-point scale) and the education degree of the more educated of the parents on a 4-point scale (1-Elementary school). The parents of tSecondary school without school-leaving examination, 3-Secondary school with school-leaving examination, and 4-University) in respondents aged 27 and more who have already completed their education. Where the more educated of a respondent's parents had an university degree, the respondent was included in the first category (higher attained education), because he or she could not have (even theoretically) exceeded the parents' education level.

Graph 4: Educational attainment compared to the most educated parent

Source: PAQ Research



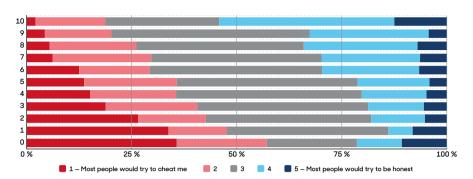
These geographic differences in educational mobility result from (a) a higher number of students completing higher education in the more affluent regions; (b) a greater share of "early-leavers" (students leaving schooling without completing vocational training or secondary education) in the less affluent regions; and (c) a migration of the more educated inhabitants to the more prosperous regions and to Prague. Thanks to these effects, the more affluent parts of the Czech Republic with a higher quality of life have more people who have exceeded the education level of their parents and profit from upward mobility; in the less affluent regions, there are more people who have been educationally stagnant.

Inhabitants of municipalities with a low quality of life also differ in certain political attitudes – e.g. their opinions on the benefits of Czech membership in the EU, the course of Czech society after 1989 and the belief that immigrants threaten the Czech way of life. In all these areas, respondents from municipalities with high quality of life are about 10 percentage points more open compared to respondents from municipalities with low quality of life. Opinions of people from Prague are significantly different from the rest of the country.

Individual quality of life, social trust and attitudes

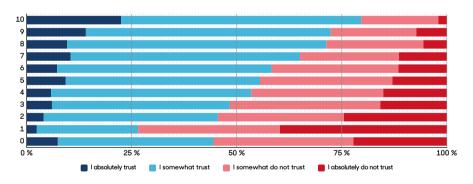
While the link between local quality of life and social trust and attitudes is indirect and rather weak, individual quality of life (calculated based on the number of types of capital the respondent possesses in above-average abundance and the number of adverse life and social situations) very strongly predicts the individual's attitudes. It is strongly linked e.g. to interpersonal trust, where on a five-point scale, people with above-average quality of life indicators (6–10) believe more often that most people would not try to cheat them even if they could. Conversely, most people with low quality of life believe most people would try to cheat them. It is precisely this lack of interpersonal trust that pushed the Czech Republic down in the aforementioned Legatum Prosperity Index. This issue is typical of a number of post-communist countries.

Graph 5: Interpersonal trust according to the individual quality of life index (0-10)



Individual quality of life is also strongly related to trust in courts and justice; most people with above-average and below-average quality of life trust courts, but only a minority in the group with a strongly below-average set of capital and life experiences. Other surveys (MEDIAN for A2) show that the trust in courts is significantly impacted by experience with court-ordered debt collection procedure.

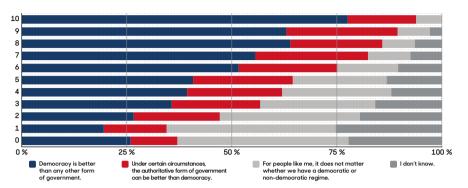
Graph 6: Trust in courts and justice according to the individual quality of life index (0-10) Source: PAQ Research



A majority of people with above-average individual quality of life consider democracy to be the best form of government, but the same sentiment is shared by only a minority of other Czechs. In groups with the lowest quality of life, only above 25% of people share this opinion. This is not because these people would significantly lean towards authoritarianism - more than anything, these groups are apathetic and believe that "for people like me, it doesn't matter whether we live in a democracy or not" or just "don't know". Indeed, apathetic respondents are a group that can easily be mobilized to undermine liberal (constitutional) democracy because its members do not believe democracy serves them well and feel no loyalty to it.

Graph 7: Attitude to democracy according to the individual quality of life index (0-10)

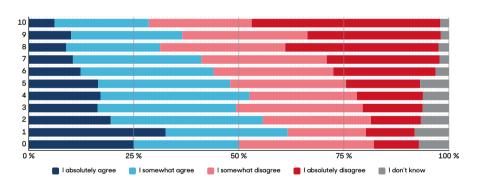
Source: PAQ Research



This clearly shows, for example, that if a more leading question is asked in line with an authoritarian discourse as well as one's willingness to accept it – the parts of the population with a lower quality of life and more apathetic attitudes towards democracy are the most likely to agree. In most cases, these respondents agree with the claim that the Czech Republic needs a strong leader who does not have to follow the rules.

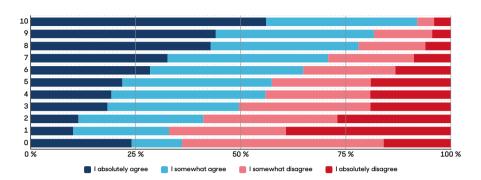
Graph 8: Strong leader narrative according to the individual quality of life index (0-10)

Source: PAQ Research



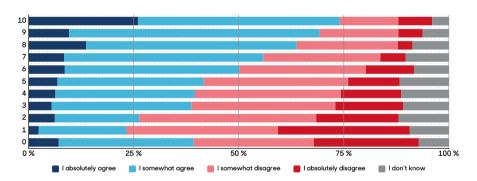
Because of these attitudes and feelings of social deprivation or inability to fully participate in society, individual quality of life is also reflected in opinions as to whether the Czech Republic benefits from EU membership and whether Czech society has been heading in a generally good direction after 1989. A majority of people with above-average and average quality of life agree with these statements (6–10), while the same sentiment is only shared by a minority of people with low quality of life. As in the case of the other statements related to democracy and trust, the relationship between quality of life and this political attitude is nearly linear.

Graph 9: EU membership is beneficial for the Czech Republic - according to the individual quality of life index (0-10)



Graph 10: Czech society has been heading in a generally good direction after 1989 according to the individual quality of life index (0-10)

Source: PAQ Research



Conclusion

There is a tendency to explain trust in other people, the rule of law and democracy, as well as attitudes towards EU membership or the country's direction since the fall of communism, by people's values, their media sources (fake news) and residual attitudes from the communist era. And while these factors can indeed play a role, our study shows that all the attitudes crucial for preserving democracy in the Czech Republic depend on individual quality of life, which is determined by an individual's possession of above-average economic capital (income, wealth), social capital (contacts, connections, support), cultural capital and emerging important competencies, as well as the fact of whether or not the individual experienced negative social and life situations (debt collection, unemployment, loss of housing, divorce, family breakup).

Our analysis also shows that to some degree, individual quality of life is also related to regional quality of life as it was defined in the Aspen Annual 2018 Conference study. This local quality of life is also closely related to the educational mobility of the people and their ability to achieve success in society.

Our study thus provides another piece of evidence that even thirty years after the Velvet Revolution, there is a need to address the issue of unequal quality of life and failures of public policy, which lead to a situation where a significant part of Czech society suffers from the relative poverty of their region or adverse phenomena such as debt collection and problems with housing. These problems, which should be manageable given the Czech Republic's GDP and overall quality of life, need to be solved in order to maintain constitutional democracy in the Czech Republic and its pro-Western course even thirty years after the Velvet Revolution.

We offer the following recommendations to increase the aspects of quality of life that are significantly related to people's trust in democracy, institutions and pro-Western course:

1. Focus on individual issues affecting quality of life in poorer regions, i.e. especially the Karlovy Vary Region, the Ústí Region, and parts of the Moravian-Silesian Region, as well as the internal peripheries. The recommended measures include tax policy (reduced taxes on labor, increased taxes on wealth) and investments in infrastructure.

- 2. Reduce the number of overindebted people (people facing multiple debt collection procedures), who are often lost to the gray economy and avoid social participation. This may be achieved e.g. by making the debt relief procedure more accessible (by making personal bankruptcy preferable to living under a debt collection regime, giving guarantees as to the end of the debt relief procedure, and by motivating stakeholders to shorten the debt relief procedure).
- 3. Improve education quality in poorer regions and reduce the number of early leavers, who form a group prone to having low economic, social and cultural capital in the future.
- 4. Introduce a policy of social and accessible housing to provide: (a) social housing under fixed conditions for a narrow target group with extreme housing problems (primarily families with children, handicapped persons, the elderly, etc.); (b) accessible housing to a broader group of people burdened by high costs of housing who are at risk of evictions, also by other means such as tax relief and housing benefits for them to be able to afford rent, more flexible use of extraordinary social benefits, and municipal housing.
- 5. Improve cooperation among the individual levels of government (e.g. by introducing a middle management component in the education system and better cooperation between municipalities and the state in housing policy), inter-departmental cooperation (e.g. cooperation between the social welfare and education system in helping to improve opportunities of children from disadvantaged backgrounds) and use of public administration data in policy planning and evaluation.

Within this chapter, the team of Daniel Prokop, in cooperation with the Aspen Institute Central Europe and the Bader Foundation, also prepared a map of social and educational problems. It captures at the ORP level (municipalities with extended powers) how intensely the impact on municipalities of distraint, divorce and the lives of children in non-residential and low-quality housing is linked to educational problems, absenteeism and early school leaving.

The map can be found at: aspn.me/mapaproblemu

Paling into insignificance?

Visegrad Group's – and along with it the whole region's – significance in the EU is, unfortunately, diminishing. Some of the reasons behind this process are beyond our control. But the local political class does its share to accelerate the process.

After Brexit finally becomes reality, over 85 percent of the EU's GDP will be produced in the Eurozone countries. This simple fact must change the balance of power in the European Union and therefore its priorities. Our region seems to be unprepared for these changes. Out of V4 countries, only Slovakia belongs to the Eurozone club.

What will happen to the others? At the last edition of the Aspen Young Leaders Program in Ustroń, Polish long-time MEP, Jan Olbrycht, claimed that Brussels will no longer try to compel any country to adopt the common currency. It does not have to – if Central European states want to truly participate in decision-making processes, they have to join the new core of the Union. Otherwise, their influence on EU policies – already weakened – will diminish even further.

The consequences of Brexit only shed more light, however, on already visible trends. After the last European elections and the selection process for the top EU officials, it is obvious that the organization is moving to the West, with our region paling more into insignificance. Out of the top five posts all went to representatives of Western European countries and – except for the High Representative of the Union for Foreign Affairs – to citizens of the so-called "Inner Six".

All these developments only illustrate far deeper problems that have troubled V4 states for some time now. First of all, group members have divergent goals in areas as important as energy policy or the EU's policy towards its most significant foreign partners, including Russia.

Secondly, and even more importantly, the group presents hardly any positive – not to mention ambitious – plans to reform the European Union. Its calls to take into account the particularities of the region in drafting new policy proposals are nothing more than a thinly veiled effort to thwart any significant reforms the EU needs.

If Central Europe wants to play an essential role in the European Union, it must come up with its own constructive agenda. Calls to bring "more sovereignty" back to the states are vague at best and will not solve our problems. On the contrary, as the case of Brexit indicates, they may have quite unintended consequences.

Łukasz Pawłowski, Managing Editor, Kultura Liberalna

Central Europe – a leader, or a follower of global trends?

I'm an archaeologist. I love digging around in nations' pasts. Understanding Central Europe's history is key to understanding its status quo. But defining Central Europe is tricky; Schenk, Johnson, and Katzenstein all have different views. This in itself poses an obstacle for Central Europeans in terms of identity. We simply don't quite know our own place in the world, which has ramifications on our policy.

Let's take the Visegrad Four as a definition of Central Europe. This particular constellation is glued by a common cultural heritage and by the experience of oppression and terror under Communism, Nazism, and the Austro-Hungarian Empire. This 'underdog' past has led V4 nations to be generally pro-entrepreneurial, state-skeptical, and unenthusiastic about foreign powers forcing policies from outside.

These countries also have a determination to survive, a general reliance on family units, economic nationalism, shy patriotism (our countries are roughly only 100 years old) and a willingness to take risks - mainly because we have often had nothing to lose. Countries such as Britain and France have a very different approach to policy-making. They're trying to preserve centuries of global domination, tradition and structure. Conversely, the V4 has a 'hacky', trial-and-error attitude which leads to some amazing successes. The Czech Republic is a global hub for the AI. Poland is projected to grow 6 times faster than Germany. Slovakia's exports are booming. Hungary is attracting large investments into its tech startups.

However, we must be careful. Holy speaks of the 'small-mindedness', embedded jealousy, and fear of our neighbors (triggered partly by the neighborhood spies network used by the Gestapo and Communist secret police). This phenomenon has seeped to the highest echelons; corruption, blackmail, and conflict of interest amongst politicians are commonplace, and only enforce the public's apathy with the state, creating an unhealthy chasm between politicians and citizens. Plus, there's the brain-drain, relatively low purchasing power, and low salaries compared to the West.

Central Europe needs to attract and keep its young entrepreneurial population, move hard against corruption, and support the growing technology sector in which it has so much potential. It also psychologically needs to shed (but never forget) its painful past in order to

build a resilient future and be a true, confident leader on the world stage.

We cannot be followers for another century.

Sara Boutall, CEO, Anthropologica

Looking good?

Recently, several internationally active businesses, working in the Central and Eastern European region, have come to me with a challenge they are facing time and again: they "weren't looking good enough on the international market".

This was not mentioned, however, as any sort of derogatory comment as far as their quality of service was concerned, but rather in the most literal sense of the word. The problem was their poor marketing strategy which damaged the image of their brand - and with it also the image of their corporate culture - that has placed them at a disadvantage in terms of international competition.

Pretty girls smiling in product photos. "Sex sells", marketing experts have been telling us for decades. It appears, however, that sexism is - thankfully - less and less able to achieve the same result. When companies tried to enter the international market with the "sex sells" attitude, they found themselves facing a challenge which they had perhaps not even thought about.

It's important to note that this is not a matter of taste: in the age of social media, consumer expectations have changed, and people want more honest and realistic images. Communication gestures that bombard the audience with highly stereotypical content are less and less effective. Thankfully, I might add. Credible communication, which goes against stereotypes, requires that the culture of the company be also open, diverse and inclusive.

Positive change in this area would result in benefits. Business, economic and social aspects must be taken into consideration. Some creative professionals in the United States have noticed that while women are the primary shoppers in nearly every product category-i.e. they are the ones making a decision of what product to buy-, 97% of creative directors in the advertising market are men. It has been proven, however, that when a team is composed of people sharing very similar backgrounds, the chances of producing non-stereotypical, novel solutions that respond to the market are lower. This may harm business results - and it also has an impact on society: advertisements are more likely to remain on the same, stereotypical track. And by this, they confirm prejudices already present in society.

Living in Central Europe, when we ponder the state of our region, we should also consider how we look from the outside. This image - to simplify things greatly - should change and show the diversity you encounter in person, walking

Melinda Miklós, CEO, WeAreOpen

down the street.

All the best in the 2020s, dear Central Europe!

Have you ever tried identifying the central theme of a given decade? Think of the 1920s, the 1970s, the 1990s... would we mostly agree on a single issue or topic that shaped the given decade in a certain region? (I think we would!)

The previous decade brought us into Europe and gave us an equal standing next to confident nations such as France or Germany. We joined the club of countries with a clear pro-western orientation. We promised a number of things to our political partners, most importantly respect for human rights and adherence to rule of law. In exchange, we received full access to the internal market and an equal seat at the negotiation table - a much stronger position than we deserve. Most importantly, we became partners in a project with noble goals: peace, prosperity and a solid standard of life for everyone.

This year we have celebrated 15 years of our membership in the European Union. Looking back at the 2010s, the first fully European decade in our modern history, what has it been like?

Going through crises has become our daily bread - maybe even the central topic of our present decade. The financial crisis, migration crisis, rule of law crisis, the never-ending Brexit crisis, as well as crises brought about by technological progress. We can no longer rely on our privacy, we no longer know where to look for the truth. These developments have inevitably shaped our world and our region. So, where do we stand?

Quite often we stand in the streets, in fact. Elections are no longer enough, we want to be heard more often, we feel the duty to express ourselves and exercise our political rights. This has become a trend of the past years. And while it points to the very poor state of our public institutions, often rotten and corrupt, it also shows a positive phenomenon: that we care, that we read, discuss and participate. Our young democracies have come of age and for us, this has been a decade of political emancipation and of people returning home and slowing down the brain drain in our region.

If I could formulate a wish for the next decade, I would wish for our countries to grow more mature in their governance - both in their national matters and on the international field. We can do better in both directions: communicating European values at home, as well as defending our national interests in Europe. We have a lot to learn and I truly hope that

the 2020s will one day be remembered as a decade of political stabilization

and responsible governance.



Notes

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