



University College
Prague

NOVÉ TRENDY 2022 – NEW TRENDS 2022

BEZPEČNOST, UDRŽITELNOST, KOMUNIKACE

15. ročník mezinárodní vědecké konference

PRAHA, THE GRAND MARK PRAGUE
10. a 11. listopadu 2022

SBORNÍK PŘÍSPĚVKŮ

partneři konference



UNIVERSITY COLLEGE PRAGUE
Vysoká škola mezinárodních vztahů
a Vysoká škola hotelová a ekonomická s.r.o.

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Praha, leden 2023

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a Vysoká škola hotelová a ekonomická s.r.o., 2023

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INTRODUCTION:

Dear ladies and gentlemen, dear readers,

thank you for your interest in getting to know the results of the jubilee 15th annual international scientific conference NEW TRENDS 2022, which this year was held for the first time in Prague on November 11 and 12, 2022. The motto of the conference was today's selected megatrends SAFETY - SUSTAINABILITY - COMMUNICATION. According to the organizers of the conference, these are needed more than ever to cope with the escalating problems and challenges of the times, marked by the effects of war conflict, the covid-19 pandemic, the recession of the economy, etc. In the proceedings you will find contributions from two parts of the conference.

On the first day of the conference, the plenary part of the conference took place. Here, key papers related comprehensively to the above-mentioned megatrends and challenges of the time were heard. The plenary session was opened by Professor Jan Eichler from the Institute of International Relations with a contribution on the topic *War as an old-time Trend in International Relations*, followed by a presentation by associate professor Hana Březinová on the topic *Impact of Extraordinary Events on Finance, Accounting and Taxes*, followed by a speech by the general manager of Aquapalace Prague Dipl. Ing. Vladana Horáková with the topic *Challenges of 2022: postCovid and Energy. Sustainability and Communication in Tourism, Hotels, Spas and Leisure Activities*, and Mr. Jindřich Válek and Mr. Šimon Pinkas from Pricewaterhouse Coopers on the topic of *Cybersecurity from the point of view of Current Trends in the Financial Sector and International Relations*, and at the end, the founder of the Czech Inn Hotels network, Mr. Jaroslav Svoboda, spoke on topic *New Trends in the Hotel Industry*.

On the second day, meetings took place in sections, professionally focused according to the professional interests of the participants. Part of the conference was a dissemination seminar on the project of the Ministry of Culture of the Czech Republic MK 30665/2022 OPP *Education, presentation and education methodology to appreciate the significance of world heritage monuments in formal education*, which aims to create a universal functional methodology integration of the curriculum on world heritage monuments into humanities-oriented educational programs in tertiary education.

The conference was successful, accompanied by stimulating discussions and the interest of the participants. During the plenary part, a new book was launched by associate professor Hana Březinová and Dipl. Ing. Vladana Horáková with title *Financial Management of Hotels and Spa Facilities*. New contacts were established and cooperation developed. Even in this, the organizers see a non-negligible contribution of scientific conferences.

We strongly believe that you will be interested in the contributions collected in the proceedings and that we will meet at some of the following conferences, which already have a well-established tradition and reputation.

doc. Ing. Pavel Krpálek, CSc., MBA

PROGRAM:

1. den – jednání v plénu

- 13.00 – 13.30 Registrace
- 14.15 – 14.45 **prof. PhDr. Jan Eichler, CSc.**, Ústav mezinárodních vztahů, v.v.i.
VÁLKA JAKO STARONOVÝ TREND MEZINÁRODNÍCH VZTAHŮ
- 14.50 – 15.20 **doc. Ing. Hana Březinová, CSc.**, UCP (University College Prague)
DOPAD MIMOŘÁDNÝCH UDÁLOSTÍ NA FINANCE, ÚČETNICTVÍ A DANĚ
- 15.25 – 15.55 **Ing. Mgr. Vladana Horáková, MBA**, AQUAPALACE PRAHA, General Manager
VÝZVY ROKU 2022 – POST COVID A ENERGIE. UDRŽITELNOST
A KOMUNIKACE V CESTOVNÍM RUCHU, HOTELNICTVÍ,
LÁZEŇSTVÍ A VOLNOČASOVÝCH AKTIVITÁCH
- 16.00 – 16.30 **Jindřich Válek, Šimon Pinkas**, PwC (PricewaterhouseCoopers Česká republika, s.r.o.)
KYBERBEZPEČNOST: AKTUÁLNÍ TRENDY VE FINANČNÍM SEKTORU
A MEZINÁRODNÍCH VZTAZÍCH
- 16.35 – 17.05 **Jaroslav Svoboda**, zakladatel sítě hotelů CZECH INN HOTELS
NOVÉ TRENDY V HOTELNICTVÍ
- 17.10 – 17.40 **doc. Ing. Pavel Krpálek, CSc., MBA**
Závěry plenárního zasedání
- 18.00 – 18.30 **vystoupení hostů a sponzorů, křest knihy**
- 19.00 – 21.00 **slavnostní večer**, hotel Grand Mark Prague

2. den – jednání v sekcích

9,00 – 12,00 (VŠMVV, U Santošky 17, Praha 5)

- **EKONOMIKA, ÚČETNICTVÍ, FINANCE, DANĚ**
– doc. Ing. Milan Palát, Ph.D.
- **MANAGEMENT, MARKETING**
– doc. Ing. Monika Ploch Palatková, Ph.D.
- **MEZINÁRODNÍ VZTAHY, DIPLOMACIE A VEŘEJNÉ VZTAHY**
– prof. Ing. Eduard Gombár, CSc.
- **HOTELNICTVÍ, CESTOVNÍ RUCH, WELLNESS**
– doc. Dr. Ing. Oldřich Kodým
- **LOGISTIKA, LETECTVÍ**
– prof. Ing. Václav Cempírek, Ph.D.
- **DIDAKTIKA NEJEN EKONOMICKÝCH PŘEDMĚTŮ**
– doc. Ing. Pavel Krpálek, CSc., MBA

Diseminační seminář výstupů projektu **METODIKA EDUKACE, PREZENTACE A OSVĚTY K DOCENĚNÍ VÝZNAMU PAMÁTEK SVĚTOVÉHO DĚDICTVÍ VE FORMÁLNÍM VZDĚLÁVÁNÍ** (MK 30665/2022 OPP)

MEDAILONKY ŘEČNÍKŮ:

Prof. PhDr. JAN EICHLER, CSc.



Jan Eichler působí jako seniorní výzkumný pracovník v Centru evropské politiky při ÚMV Praha. Vystudoval Vojenskou politickou akademii v Bratislavě, v roce 1984 obhájil disertační práci (CSc.), v roce 2004 obhájil habilitační práci (doc.), v roce 2014 úspěšně ukončil jmenovací řízení na VŠE Praha. Kromě toho vyučuje na Fakultě mezinárodních vztahů Vysoké školy ekonomické v Praze, v minulosti byl také zástupcem vedoucího odboru na Institutu pro strategická studia Ministerstva obrany (1991-1993), působil v Generálním štábu Československé armády (1990-1991) a na Ministerstvu obrany ČSSR (1982-1990). Předmětem jeho odborného zájmu jsou transatlantické

vztahy, strategická kultura, ozbrojené konflikty, vojenský rozměr bezpečnosti, mezinárodní bezpečnost, války v dnešním světě a terorismus. Je členem oborové rady doktorského studia FSV UK Praha, MUP Praha a FBMI ČVUT.

Doc. Ing. HANA BŘEZINOVÁ, CSc.



V osobě Hany Březinové se snoubí teorie s praxí v oblasti financí, účetnictví a daní. Má tak možnost přednášet na vysokých školách, ale také auditorům, daňovým poradcům, kontrolním orgánům a podnikům, vést vysoké školy jako rektorka, praktikovat jako auditorka, zpracovat due diligence, fúze, nastavit metodiku účetnictví v různých právních rámcích a ve všech těchto oblastech publikovat. Výraznou stopu zanechala doc. Ing. Hana Březinová, CSc. v řadě elektronických poradenských systémů.

Ing. Mgr. VLADANA HORÁKOVÁ, MBA, General Manager



Profesionál v hotelnictví, lázeňství a wellness, sdílející své nadšení a zkušenosti z oboru se studenty, odbornou i laickou veřejností. Otevřela a provozovala několik hotelů v pozici General Manager, v současnosti řídí největší volnočasový a wellness areál Aqupalace Praha. Souběžně vykonává pozici ředitelky Nestátního zdravotnického zařízení Lázně Praha a pozici Managing partnera hotelové skupiny Golden Apple Hotels, provozující hotely v Praze, Harrachově a Mariánských Lázních.

JAROSLAV SVOBODA, jednatel CZECH INN HOTELS



Moje práce zaujala kolegy i zákazníky, kteří mne doporučili na pozici ředitele hotelu (70 pokojů) v mezinárodním řetězci. Byl jsem velmi pracovitý a svou aktivitou získal pro zaměstnavatele další hotely.

Ve 28 letech začínám podnikat a zakládám s britským partnerem vlastní firmu CZECH INN HOTELS. Pronajali jsme si jeden malý regionální hotel, ke kterému následně připojili další a další. Brzy se stala naše firma největším podnikatelem v daném regionu se svými 5 hotely a 3 restauracemi. V době začínající krize firma získala první hotel v Praze, což byl dlouhodobý cíl. Během následujících 3 let následovalo přijetí dalších 5 hotelů. V roce 2013 jsme koupili podíl jednoho z nejprestižnějších hotelů v Praze (Kempinski), který také řídíme. V roce 2014 CZECH INN investoval do nového pětihvězdičkového hotelu v centru Lisabonu. A v roce 2015 jsme zakoupili hotel Dorint Don Giovanni, jeden z největších hotelů v Praze.

Práce mne stále velmi baví a jsem šťastný, že máme skvělý, mladý a perspektivní tým. Chceme být trvale rostoucí společností s angažovanými spolupracovníky, kteří mají zájem se dále rozvíjet a zlepšovat.

JINDŘICH VÁLEK, PwC (PricewaterhouseCoopers Česká republika, s.r.o.)



Jindřich Válek začal svou profesní dráhu v oblasti bezpečnosti na projektu implementace GDPR pro skupinu Innogy, kde následně pokračoval v práci na kybernetické a informační bezpečnosti společnosti. Své znalosti nyní rozvíjí v PwC, kde se zaměřuje na projekty týkající se designu a implementace systémů řízení bezpečnosti informací a osobních údajů (ISO 27001, ISO 27701), vzdělávací aktivity týkající se kyberbezpečnosti a pořádání odborných konferencí jako je CISO Fórum a BC Fórum, které sdružují odborníky v těchto oblastech.

ŠIMON PINKAS, PwC (PricewaterhouseCoopers Česká republika, s.r.o.)



Šimon Pinkas je absolventem magisterského studijního programu Bezpečnostní studia na Univerzitě Karlově. Zkušenosti získal prací ve veřejném, i neziskovém sektoru. Zde pracoval jako bezpečnostní analytik v think-tanku Prague Security Studies Institute a později jako operátor RSOC ve společnosti PINKERTON, kde se zaměřoval na risk management. V PwC se Šimon Pinkas zaměřuje na projekty týkající se designu a implementace systémů řízení bezpečnosti informací a osobních údajů (ISO 27001, ISO 27701) a vzdělávací aktivity týkající se kyberbezpečnosti.

MEZINÁRODNÍ VĚDECKÝ A PROGRAMOVÝ VÝBOR:

- doc. Ing. Hana Březinová, CSc., University College Prague – Vysoká škola mezinárodních vztahů a Vysoká škola hotelová a ekonomická s.r.o.
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- doc. Ing. Mgr. Katarína Krelková-Krpálková, PhD., vedoucí katedry didaktiky ekonomických předmětů, VŠE Praha
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- Dávid Melas, MPhil., předseda správní rady United College Prague a.s.
- doc. Ing. Milan Palát, Ph.D., University College Prague – Vysoká škola mezinárodních vztahů a Vysoká škola hotelová a ekonomická s.r.o.
- Ing. Martin Petříček, Ph.D., rektor University College Prague – Vysoká škola mezinárodních vztahů a Vysoká škola hotelová a ekonomická s.r.o.
- doc. RNDr. Jarmila Radová, Ph.D., vedoucí katedry bankovníctví a pojišťovnictví, VŠE Praha

ORGANIZAČNÍ VÝBOR:

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- Denis Melas, MSc., ředitel marketingu University College Prague – Vysoká škola mezinárodních vztahů a Vysoká škola hotelová a ekonomická s.r.o.
- Bc. Alena Petřinová, asistentka rektora a generálního ředitele, University College Prague – Vysoká škola mezinárodních vztahů a Vysoká škola hotelová a ekonomická s.r.o.
- Ing. Bc. Petra Nesvadbová, tajemnice rektora VŠLG Přerov
- Ing. Markéta Kratochvílová, tajemnice rektora University College Prague – Vysoká škola mezinárodních vztahů a Vysoká škola hotelová a ekonomická s.r.o.

OBSAH:

EKONOMIKA, ÚČETNICTVÍ, FINANCE, DANĚ

CURRENT TRENDS IN ACCOUNTING AND TAXES Hana Březinová.....	10
CURRENT RESEARCH IN THE FIELD OF BEHAVIORAL MACROECONOMICS Vladimír Petřík.....	19
THE NECESSITY OF ETHICS IN ACCOUNTANCY AND DAILY COMMUNICATION WITH CLIENTS Anna Prihodjko.....	34
MICROECONOMIC SPECIFICS OF AGRIBUSINESS: SUBSIDIES AND DIRECT PAYMENTS IN AGRICULTURE Milan Palát, Šárka Palátová.....	43

MARKETING, MANAGEMENT & TURISMUS, HOTELNICTVÍ, WELLNESS

THE PATH FROM COVID TO MORE SUSTAINABILITY AND RESILIENCY IN INTERNATIONAL AIR TRANSPORT AND TOURISM Monika Ploch Palatková, Jindřich Ploch.....	54
SECTORAL PROFITABILITY DURING COVID-19 PANDEMIC: BIG DATA PORTRAIT OF CZECH COMPANIES Ladislav Šiška.....	72

MEZINÁRODNÍ VZTAHY, DIPLOMACIE A VEŘEJNÉ VZTAHY

STRATEGIC GUIDANCE FOR BIDEN'S ADMINISTRATION IN THE RUN-UP TO A NEW US NATIONAL SECURITY STRATEGY - THE NATIONAL SECURITY STRATEGY, OCTOBER 2022 Branislav Kováčik, Juraj Kalický.....	82
EKONOMICKÉ SOUVISLOSTI INTERDEPENDENCE <i>ECONOMIC ASPECTS OF INTERDEPENDENCY</i> Jana Marková.....	93
CLUB OF ROME: NEW TRENDS AND IDEAS Bohumír Štědroň, Jakub Štědroň, Linda Nepivodová.....	102

LOGISTIKA, INFORMAČNÍ A KOMUNIKAČNÍ TECHNOLOGIE, VIRTUÁLNÍ REALITA

APPLYING THE AMBULANT INFORMATION SYSTEM DURING AN EVENT WITH A MASS DISABILITY OF PERSONS Daniel Brezina.....	109
UTILIZATION OF PARTIAL TROLLEYBUSES IN TRANSPORT Zdeněk Říha, Iveta Dočkalíková.....	118
SYSTÉM SBĚRU A ZPRACOVÁNÍ ODPADU <i>WASTE COLLECTION AND TREATMENT SYSTEM</i> Oldřich Kodym, Václav Cempírek, Michal Turek, Iveta Dočkalíková.....	129
HOME OFFICE AS ANOTHER ASPECT OF MANAGERIAL WORK AND ABOVE ALL COMMUNICATION Zora Říhová, Jindra Tumová.....	138

DIDAKTIKA NEJEN EKONOMICKÝCH PŘEDMĚTŮ

VZDĚLÁVÁNÍ JAKO SOUČÁST FIREMNÍ KULTURY Roman Kořán.....	149
INOVACE DIDAKTICKÝCH METOD A TECHNIK VE VÝUCE POLITOLOGIE <i>INNOVATION OF DIDACTIC METHODS AND TECHNIQUES IN THE TEACHING OF POLITICAL SCIENCE</i> Radka Löwenhöfferová.....	158
THE QUESTION OF FINANCIAL (IL)LITERACY FROM THE PERSPECTIVE OF THE INDIVIDUAL AND SOCIETY IN SELECTED COUNTRIES OF THE WORLD Lenka Silberhornová, Jarmila Radová.....	169

DISEMINAČNÍ SEMINÁŘ VÝSTUPŮ PROJEKTU „METODIKA EDUKACE, PREZENTACE A OSVĚTY K DOCENĚNÍ VÝZNAMU PAMÁTEK SVĚTOVÉHO DĚDICTVÍ VE FORMÁLNÍM VZDĚLÁVÁNÍ“ (MK 30665/2022 OPP)

METODIKA EDUKACE, PREZENTACE A OSVĚTY K DOCENĚNÍ VÝZNAMU PAMÁTEK SVĚTOVÉHO DĚDICTVÍ VE FORMÁLNÍM VZDĚLÁVÁNÍ <i>EDUCATION, PRESENTATION AND EDUCATION METHODOLOGY TO APPRECIATE THE SIGNIFICANCE OF WORLD HERITAGE MONUMENTS IN FORMAL EDUCATION</i> Pavel Krpálek.....	182
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EKONOMIKA, ÚČETNICTVÍ, FINANCE, DANĚ

CURRENT TRENDS IN ACCOUNTING AND TAXES

Hana Březinová

Abstract

Accounting must reflect handling of extraordinary events that have an impact on the economy in a way that clearly shows how the entity views the going concern and whether its accounts present a true and fair view. Tools used to offset economic impacts and enhance the economic results of legal and natural persons are non-standard and inconsistent, and their presentation in the accounts and reflection in the tax system are complicated. The redistribution is often looped.

Keywords: extraordinary events; redistribution; accounting; taxes; compensation

Introduction

War changes everything. The established rules, customs, agreements, or treaties no longer apply. Solution by force replaces diplomacy. The impact of war, which affects the very essence of civilization, can be seen at every turn. Whether one enters the war as the aggressor or is hit by it as the victim, the ability to finance the process is always essential. It is necessary to raise the resources to start the war or to defend your country. If the resources are used up, neither offense nor defense is possible.

Therefore, war changes the established economic and financial processes completely. If we want to study the impact of this distortion on previously existing economic processes, on financing methods and financial management, on the representation of the impact of the war crisis solution on the corporate economy, and on the inevitable redistribution of resources, it is necessary to apply accounting methods differently. In times of war, there is a shortage of energy resources or the usual range of foodstuffs, and the expenditure of the state on providing at least the most basic services for the population increases dramatically.

Security comes first, followed by functioning public infrastructures such as health care, social security, transport, waterworks and water resources, wastewater treatment plants, municipal waste collection and processing, electricity and other energy production and transmission, and supply of essential food, fuel, or telecommunication. It is desirable to have a functioning school system or public lighting. In order for the state to be able to perform these basic functions, it needs to be run differently, with a shift to directive management. Accordingly, the redistributive

processes change as well. It is necessary to apply principles, methods, and specific procedures which may differ significantly from those of the peacetime period.

1. Summary of current knowledge in accounting and taxes

According to Brezinova (2021), the long period in which accounting has been applied practically and developed theoretically has seen a lot of changes and adjustments in accounting terminology, principles, rules, methods, systems, and specific procedures. The systems used were influenced by the state of the economy and economic policy in a given country, including ownership (private, belonging to an individual, or private, belonging to a group of persons, state ownership), the legal system (civil law, common law), the need for direct single authority management, the main activity of a given accounting unit (production, trading, financial, non-production), applying solidarity in the social, medical and administrative spheres, the link of public finance including tax legislation to the business environment, and the respective function of accounting in the whole system.

A long-standing global effort to harmonize financial (accounting) reporting had resulted in the creation of US GAAP (compiled by the Financial Accounting Standards Board since 1972) while at the same time, the International Accounting Standards Board began work on IAS, followed by IFRS (Jílek, J. 2018). Efforts to unify financial statements in Europe date back to the period when the European Union of today began to take shape. Its origins go back to the European Economic Community, which was an international organization established with the purpose of economic integration (1958). At that time, the decision to start work on a code of accounting legislation was made. The first tangible output was the Fourth Directive (78/660/EEC), concerning the preparation of annual accounts for certain types of companies. The Directive was 20 years in the making, in use until 2015, and then replaced, after 35 years, by Directive 2013/34/EU of the European Parliament and of the Council of the EU.

Efforts to unify taxation above the state level have met with reluctance from individual states worldwide. They see this as a threat to their sovereignty, limiting the options to provide certain benefits to their citizens (Nerudová, 2011).

The European Union is successful in harmonizing the value added tax. According to Běhounek (2022), the basic legislation standardizing VAT throughout the European Union is Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax. The Directive is supplemented by Implementing Regulation No 282/2011.

2. Data and methods

By means of exploration, i.e. describing and classifying a problem and occurring situations, the author's aim is to predict a certain possible development in the field of accounting and taxation in relation to the crises in the world, in particular wars and the global pandemic of covid-19, and to offer an explanation. The data is mainly drawn from public sources.

3. The impact of war on the economy

When facing critical changes in the normal course of the economy and economic policy, a crucial task is to secure financing that alleviates the impact on the state and thus on its population. In such cases, this is essentially the task of the executive (the government or the sub-national local authorities).

3.1 The history

In the 18th century, during the era of the only woman on the Bohemian throne, **Maria Theresa** Walburga Amalia Christina, wars over the Austrian inheritance were fought from the very beginning of her reign and went on to escalate into a pan-European conflict. In the wake of this situation, Maria Theresa introduced a series of reforms, concerning mainly the army and the centralization of the civil service. The changes were necessary because her father, Charles VI, had left the Austrian Empire in a very difficult political and financial situation. Even the Pragmatic Sanction was of no help to Maria Theresa. She received financial support from England, their ally, but these resources were insufficient. Maria Theresa's husband, Francis Stephen of Lorraine, became not only the German-Roman Emperor but also a businessman who played a significant role in financing Maria Theresa's expenses incurred by the long war. This involved founding, supporting, and running a textile and glass manufactory and a paper mill. Thanks to the introduction of the Theresian land registry, an inventory of land, houses, and population was taken, land cultivation was modernized, and potatoes began to be grown as an important foodstuff to provide for the basic needs of the population, including soldiers. The introduction of a single currency (1 thaler = 2 guldens) and the first paper money made it possible to systematize property records as well.

Nevertheless, the national debt after the war remained high. Thanks to the inheritance from her husband Francis I, who left her an unprecedented sum of 18 million guldens and two estates in Bohemia, she was able to repay it. She used 12 million to pay off the national debt and retained the rest to provide for their large family.

World War I (1914-1918) represented a historic turning point in the political, cultural, and economic spheres. The war resulted in a series of revolutions and uprisings around the world and the demise of the Russian, Austro-Hungarian, Ottoman, and German empires (Willmott, 2005). The direct impetus for the outbreak of WWI was the assassination of the Austro-Hungarian heir presumptive to the throne, Franz Ferdinand of Austria-Este, and his wife, Sophie Chotek, but it was preceded by growing hostility between the great powers. The balance of power in Europe secured by the so-called Great Power Concert started to be disrupted by the rise of Prussia, which, after its victory over Austria, became the hegemon in the German space. Subsequently, after the defeat of France in the Franco-Prussian War, the German Empire was united and established, and the acquisition of Alsace-Lorraine and war reparations from defeated France led to a significant economic and military strengthening of Germany. This disruption of the balance of power resulted in the formation of two hostile military alliances that embarked on an arms race.

Military expenditure rose dramatically between 1908 and 1913. Armament spending increased by 14% in Austria-Hungary, by 30% in Great Britain, by 53% in Russia, by 61% in Italy, by 69% in Germany, and by 86% in France (Šedivý, 2001).

A direct consequence of the war was major political changes, the collapse of the pre-war structure of states, and new nation-states emerging in place of the defunct multinational monarchies. The war upset the stability of the pre-war world economy completely. Vast areas through which the war front passed were devastated. The depletion of resources and the enormous debts of the countries involved led to **skyrocketing prices and hyperinflation**. The economies of the Central Powers were already in deep **recession** during the war. The European economies, which had refocused towards war industries, were completely drained by the war and the United States of America took on the leading role in the world. Being the largest international creditor, the USA founded the League of Nations. The aim was to secure peace and cooperation between nations and resolve disputes through negotiation.

Neither the American president nor the newly established League of Nations were able to repair international relations in the long term. The German society's disapproval of the peace treaty after WWI, reinforced by the tensions caused by the global economic crisis, helped the Nazis and Adolf Hitler gain power in the 1930s. The aftermath of World War I became, in effect, the cause of **World War II** (1939-1945). The global conflict was using up almost all the human, economic, industrial, and scientific potential of all the nations involved. Towards the end of this total war, which is what WWII is commonly referred to as, the United Nations was

established, whose central aim has been the prevention of further war conflicts. Not long after the end of WWII, **new military conflicts** flared up in many parts of the world.

The closest is the **military conflict in Ukraine**. It is difficult to date it from February 2022; in fact, it started already with the annexation of Crimea (2014). The political and economic impact on Europe is enormous. After the crisis at the end of the first decade of the 21st century, Europe had major problems coping with the global sanitary-epidemiological pandemic (**COVID-19**). This led partly to a paralysis of the economy and changed the way financial management was handled from the government level, as there were attempts, sometimes rather chaotic, to find a way to support the shut-down or limited business structure and to support the population financially when it was not economically active. This economic turning point was followed by the impact of the war in Ukraine: the efforts to help migrants by integrating them or temporarily relocating them to the Czech Republic, material and financial aid directly in Ukraine, the effects of the shortage of energy resources, the substantial increase in the prices of all commodities, the high, long-term rising inflation, the demands of the population and companies on the executive for various forms of financial support.

3.2 Current developments

Despite the fact that economies around the world are suffering from the severe consequences of the pandemic, military spending has increased in 2020. According to the Stockholm International Peace Research Institute (SIPRI), based in Sweden, the investment in armament amounted to approximately €1.65 trillion (USD 1.98 trillion). In 2020, 2.4% of the world output was spent on arms (up from 2.2% in 2019). According to SIPRI calculations, this is the largest increase in spending since the global economic crisis 14 years ago.

The share of the USA of the total military spending is 39%, and in the era of President Donald Trump, the spending was increasing for three consecutive years after seven years of reductions. This is mainly investment in research and development, modernizing the US nuclear arsenal, and acquisition of weapons. The following countries had the highest military spending (62% combined) in 2020: the USA, China, India, Russia, and the UK. Overall, almost all NATO members met their defense spending obligation of 2% in 2020 (Germany 5.2%). According to SIPRI researcher Diego Lopes da Silva, the pandemic did not have a significant impact on global military spending (SIPRI, 2021).

4. Subsidies, allowances, bonuses, adjustments, exemptions, remission, transfers

It is difficult to respond to major impacts on the economy, such as profound global crises caused by for example the collapse of the real estate market, a pandemic in most countries, spiraling inflation, energy supply shortages, disruptions, or stoppage. Wrongly chosen measures may further aggravate the situation. The consequences are usually not short-lived but will have an impact for decades to come.

Internationally accepted accounting systems are based on generally accepted accounting principles. One of these is going concern, the other, which should be highlighted, is a true and fair view, which should respect the priority of content over form.

Whenever the risk emerges, however uncertain, that any of the above crisis scenarios is occurring or likely to occur, the economy starts to collapse, and an **integrated rescue system** must be used. Most countries have one for emergencies related to natural, health, or humanitarian disasters. In the event of an economic disaster, however, much less attention has been paid to an elaborate preparation for the implementation of rescue works and tackling its consequences. Yet this situation is no less a harmful action of forces and events, provoked by human activity, disturbing the stability of the system and thus posing a possible threat to the safety and existence of humankind.

The first good move in the Czech legislation is Regulation No. 160/2022, according to which all sub-national local authorities are obliged to monitor revenues and expenditures related to extraordinary events announced by the Ministry of Finance of the Czech Republic. This is an update of the financial statement, and starting on 1 July 2022, all sub-national local governments are obliged to monitor revenues and expenditures related to extraordinary events. However, this administration is not a tool that solves the problem. So far, subsidies, allowances, bonuses, benefits, adjustments, remission of payments, exemptions, transfers, and also “summer of grace” (Grycikova, 2021), or windfall tax (Matthew, 1980) are used as a kind of quick fix. The economy is thus caught in a loop of redistribution. An appropriate accounting method is then sought for non-standard random financial flows.

5. Results and discussion

As presented in the e-supplement of Auditor (in Pilařová, 2020), the article analyses the consequences that accounting and taxation have to deal with in relation to the impact of extraordinary measures. It starts with the (non-)remission from payments related to tax, fines,

and administrative fees. It then deals with the Antivirus program, working from home, and compensation bonuses from the perspective of both the employer and the employee, followed by VAT exemption in selected cases. Čížek (2020) proposes accounting procedures for state aid with respect to the coronavirus. These include the waiver of social security payments (with no impact on employees' pension entitlement in the future), state aid in helping to cover wage costs, and other subsidies.

In the Old Testament, the idea of summer of grace represented the protection of Israel's community as a whole. In the public sphere of today, there has been a hunger for a similar institute, something that would free the people along with the entire society from the heavy burden of debt. The law enabled debtors to pay the principal and the distrainer's costs. As Grycikova (2021) states, the issue of debt resolution needs to be viewed from an interdisciplinary perspective. It has implications for both the society and the economy. The summer of grace can mean a new beginning for many people, it can have a restoring influence on society. The question remains, however, whether this concept might lead to further debt defaults. In addition, there is the problematic impact of the summer of grace in the form of the extinction of the distrainer's and creditor's right to costs when the distraint is terminated for futility. The impact on the state budget is therefore also crucial. Some individuals may indeed be relieved of their debts, but the debt will not be extinguished, it will be just offloaded onto the society.

The IFRS Conceptual Framework states, "An entity shall not offset assets and liabilities or income and expenses, unless required or permitted by an IFRS". This issue is also addressed by the Czech Act on Accounting and its implementing regulations. However, applying this principle to specific situations during extraordinary events is problematic and this is what the current issue of the Auditor magazine was focused on. The authors of the articles offer citations of relevant legal provisions, links to the interpretations of the National Accounting Council, and give examples, many of which can help to find an accounting and taxation solution for financial incentives, subsidies, and relief related to extraordinary events.

Conclusion

The author recommends

1. developing an "integrated rescue system" for the purpose of significant impacts of risk events on the national economy. This system should include the creation of a state

reserve intended to serve such purposes (a budgetary reserve, but untouchable for relatively common economic problems);

2. defining instruments to be used when dealing with extraordinary events;
3. determining the accounting methods to be applied for the individual tools used when dealing with extraordinary events.

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CURRENT RESEARCH IN THE FIELD OF BEHAVIORAL MACROECONOMICS

Vladimír Petřík

Abstract

As mainstream economic theory is based on the rationality assumption, the behavioral economy proposed additional approach embracing human nature in economy. Behavioral economics found its way to many economic fields from corporate to personal finance, financial markets, and also to macroeconomic theory. The objective of the paper is to detect theoretical perspectives, themes and common issues of current research of behavioral macroeconomics. Selected tools of bibliometric analysis and semi-systematic review were used. Results indicated that in Scopus and Web of Science databases were 33 relevant articles published in the period of years from 2018 to 2022. These articles in the field of behavioral macroeconomics gravitated around nature of risk in human decisions and monetary policy. In conclusion, paper calls for more research activity in behavioral macroeconomics field and incorporation to complexity economics.

Keywords: Bibliometric analysis, behavioral macroeconomics, literature review, macroeconomics.

Introduction

Until recently, modern macroeconomic models have remained solidly grounded on assumptions of rational expectations, efficient markets and representative agents, with policy prescriptions focused on the power of markets, and complex and esoteric financial intermediation instruments justified as solutions to problems of asymmetric information and risk. Over the past 20 years, macroeconomists have incorporated more and more results from behavioral economics into their models. In modern microeconomics, behavioral economic analysis has flourished, focusing on individual responses and interactions. By contrast, in macroeconomics, humans are assumed to behave as if they are mathematical machines, making decisions in a mechanical, objective way. From this perspective, it is difficult to properly capture the instabilities that characterise modern macroeconomies and financial systems. While some progress has been made in recognizing the bounds to rationality, the complexity of the macroeconomy can be captured fully only by embedding psychological and sociological forces more fully into macroeconomic models. Already J. M. Keynes in his famous *A Treatise on Probability* (1921)

and his subsequent works onwards pioneered the analysis of the impacts of socio-psychological influences on macroeconomic phenomena. Current literature calls for linking behavioral insights both with modern behavioural economic theory and current macroeconomic policy debates. As any new theory should be built on our existing knowledge, the goal of this paper is to conduct semi-systematic review with help of chosen bibliometric analysis tools in order to detect current theoretical perspectives, themes and common issues of behavioral macroeconomics.

Objective and Methods

The behavioral macroeconomics links through various finance and economic areas as it is a broad topic with different types of studies and subtopic.

The objective of the paper is to detect theoretical perspectives, themes and common issues of current research of behavioral macroeconomics.

Research question is broad: What are current scientific development, topics and research areas in the field of behavioral macroeconomics?

To fulfill the objective of the paper and answer research question two methods will be used: (i) selected tools of the bibliometric analysis, and (ii) literature review.

The chosen approach for this literature review is semi-systematic review, as the synthesis and comparison of evidence is required. It is an approach and a process for identifying and critically appraising relevant research, as well as for collecting and analyzing data from said research (Snyder, 2019). The methods used in this semi-systematic review are content analysis and thematic analysis of selected articles, followed by qualitative analysis (McColl-Kennedy et al., 2017).

Tranfield et al. (2003) stated that conducting literature review often creates a pressure on its transparency. To balance potentially subjective influence resulting from literature review, the selected tools of the bibliometric analysis are used, namely scientific production, co-word analysis and others allowing description of behavioral macroeconomics field (Donthu, et al., 2021). Programs MS Excel and WOSviewer were used.

The sample characteristics are based on secondary data from WoS. The review within this paper was conducted in line with 8-step process of systematic literature review proposed by Xiao & Watson (2019):

- *Step 1*: Formulate the problem, is covered in first chapter of this paper;

- *Step 2*: Develop and validate the review protocol, is covered by aforementioned objective of the study, research questions and search strategy; while inclusion criteria and screening procedures are following: we search WoS and Scopus with searching query: “*behavior* macroeconom**” OR “*behavior* macroeconom**”. After these steps, the narrowing of the body of work took place;
- *Step 3*: Search the literature - search with aforementioned search request resulted 76 items for WoS and 20 items for Scopus.

It was identified that all 20 Scopus items were included also in WoS search results, therefore we continued with WoS results.

Then we applied filters:

- period 2018 – 2022 (36 items),
- document type “Articles or Early Access or Review Articles or Book Chapter” (33 items),
- language “English” (33 articles), and
- then 1 article (Sanchez-Carrera, Ille, & Travaglini (2021)) was identified as not available for download;
- *Step 4*: Screen for inclusion - abstracts of these articles were reviewed to identify whether it is relevant for scope of this paper, falls within inclusion boundaries or should be exclude: none of the articles has been excluded from the sample;
- *Step 5*: Assess quality – it was based on a review of full text of 32 articles;
- *Step 6*: Applying aforementioned methods (content, thematic and qualitative analysis), incl. extraction of data from articles;
- *Step 7*: Analyze and synthesize data was conducted with focus on identification of common themes, similarities and differences across 32 articles;
- *Step 8*: Report findings led to finalization of the paper itself.

For application of **bibliometric analysis** tools, **33 articles** have been used, as the missing full text of 1 article (see *Step 3*) was not a barrier for its inclusion to dataset for bibliometric analysis – sample incl. data for Sanchez-Carrera, Ille, & Travaglini (2021) (hereinafter referred to as “**Sample 1**”). For **semi-systematic review**, **32 articles** have been used, as missing text of 1 article (see *Step 3*) was the barrier for content, thematic and qualitative analysis of its methods

and results – sample excl. data for Sanchez-Carrera, Ille, & Travaglini (2021) (hereinafter referred to as “**Sample 2**”).

For the sake of timely manner of conducting this paper, the sample strategy was systematic, but it was limited only to Web of Science database (hereinafter referred to as “WoS”) and Scopus database. Therefore the research sample consisted of articles from WoS and for future research we would include also ProQuest and EBSCO databases, possibly including “gray literature”, such as conference proceedings, thesis and reports (Wong et al., 2013), available mainly in Google Scholar database, but in this paper, these sources were not included. This is also a limitation of this paper. The quality of literature review is highly dependent on the literature collected for the review (saying ”Garbage-in, Garbage-out”), so the decision was to start with most promising and acceptable databases like WoS and Scopus.

An expected contribution of this semi-systematic review is to (a) map areas (common themes) of current research in the area of behavioral macroeconomics; (b) synthetize and organize the state of knowledge in the field of behavioral macroeconomics; and (c) create an agenda for further research.

Results and Discussion

As it was mentioned in the previous section, the analysis gravitated around selection of 32 scientific articles. The results of application of aforementioned methods on these articles will be provided in next two chapters.

Results of selected tools of the bibliometric analysis

The results of bibliometric analysis are regarding scientific production and core themes in the field of behavioral macroeconomics. Selected information regarding scientific production and other bibliometric information is in following tables (Tab. 1 – Tab. 3) and Figure (Fig. 1):

Tab. 1: No of articles in period 2018 - 2022

Years	2018	2019	2020	2021	2022
No. of articles	1	8	7	7	10

Source: Author based on data on 33 articles in the Sample 1

Total article production for Sample 1 was 33 articles (Tab. 1). For year 2018, there was only one relevant article in the sample. In the years 2019, 2020 and 2021, the scientific production measured in article was stable around 7 – 8 articles yearly. In year 2022, which is not at the end at the time of preparing of this paper, there were already 10 articles available and published.

Tab. 2: Most active journals

Journal (J.)	J. of Economic Behavior & Organization	J. of Economic Dynamics & Control	B. E. J. of Macroeconomics	European Economic Review	J. of Economic Theory	Review of Economic Studies	Others
No. of articles	4	3	2	2	2	2	18

Source: Author based on data on 33 articles in the Sample 1

The most active journals (Tab. 2) in the area of publishing articles in the field of behavioral macroeconomics were Journal of Economic Behavior & Organization (4 out of 33 articles) and Journal of Economic Dynamics & Control (3 out of 33 articles). Moreover, there were 4 journal which published 2 articles each in the field of behavioral macroeconomics. The rest is composed of 18 different journal, each publishing one article in the Sample 1.

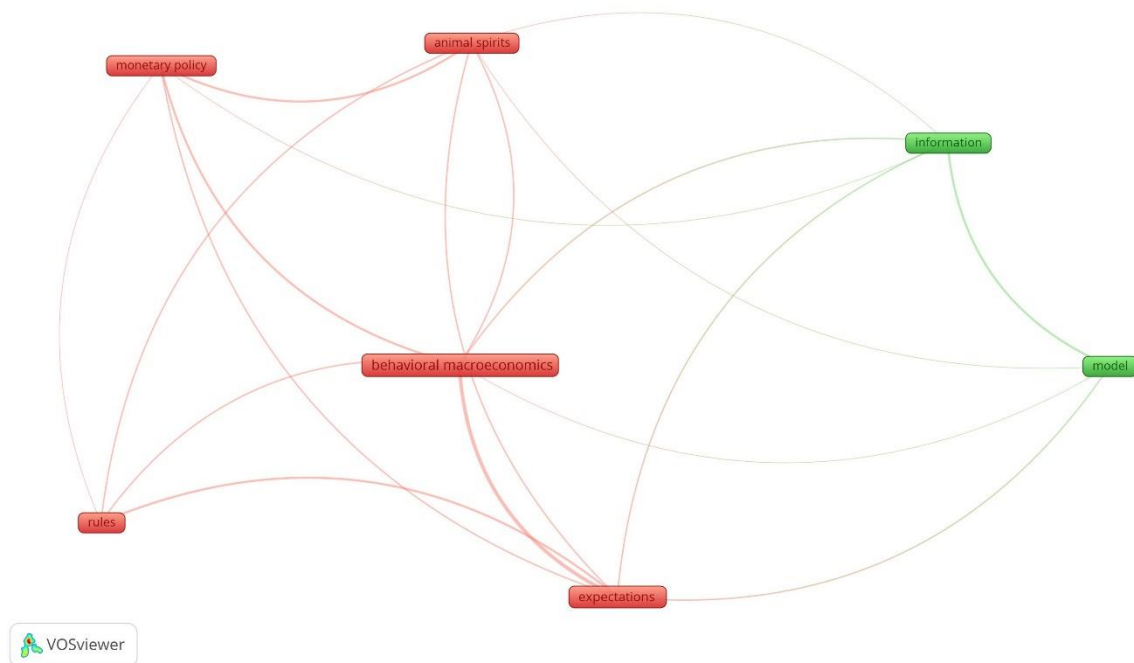
Tab. 3: Most active authors

Sumame	De Grauwe	Ji	Proano	Hommes	Lian	Lojak	Massaro	Mauersberger	Weber	Westerhoff
No. of articles	5	4	4	2	2	2	2	2	2	2

Source: Author based on data on 33 articles in the Sample 1

Tab. 3 do not recognize whether authors were first authors or authors on other positions. . It demonstrates that most active authors in the field of behavioral macroeconomics were Paul De Grauwe (co-authorship of 5 articles), Yuemei Ji (co-authorship of 4 articles) and Christian R. Proano (co-authorship of 4 articles). Most important co-authorship teams consisted of Massaro, D. and Weber, M. (2 articles), De Grauwe and Ji, YM (4 articles), and Proano and Lojak (2 articles).

Fig. 1: Title of figure



Source: Author based on data on 33 articles in the Sample 1

The analysis of co-occurrence of key words was conducted by VOSviewer. Two clusters were identified. First, in orange color, included 5 important co-occurring key words: behavioral macroeconomics, expectations, rules, monetary policy and animal spirits. Second, in green color, included two key words: model and information. Deeper understanding of topics and state of knowledge characterized by these key words shall be provided in following section covering results of semi-systematic review.

Core themes by semi-systematic review

There are several core themes in behavioral macroeconomics field based on semi-systematic review of Sample 2:

Expectations, Animal Spirits, New Keynesian Model and Price Stability

Hommes, Massaro & Weber (2019) focused on relation between monetary policy (inflation) and expectations which play a crucial role in modern macroeconomic theory. They show a different relationship between inflation and output- gap than is usually assumed. The policy implications are particularly straightforward for central banks that aim at price stability alone, such as, for example, the ECB or ČNB; these central banks should react to the output gap even if they are ultimately only interested in price stability. Proaño & Lojak (2019) investigated the risk-related effects of monetary policy in normal times, as well as in periods where the zero

lower bound binds, in a stylized macroeconomic model with boundedly rational beliefs. In their model, financial market participants use heuristics to assess the risk premium over the policy rate in accordance to an “implicit Taylor rule” that measures the stance of conventional monetary policy and which serves as an informative instrument during times when the funds rate is constrained by the zero lower bounds. In such a case, conventional monetary policy is exhausted so that the central bank is forced to use unconventional types of policy. Grauwe & Ji (2020) used a New Keynesian behavioral macroeconomic model (agents experience cognitive limitations preventing them from having rational expectations) to analyze how different types of structural reforms affect the economy. Instead of rational expectations agents used simple forecasting rules (heuristics) and evaluate the forecasting performances of these rules ex-post. This evaluation leads them to switch to the rules that perform best. This heuristic switching model produces endogenous waves of optimism and pessimism (animal spirits) that drive the business cycle in a self-fulfilling way, i.e., optimism (pessimism) leads to an increase (decline) in output, and the increase (decline) in output in turn intensifies optimism (pessimism). They found that in a rigid economy business cycle movements are dominated by movements of animal spirits. Increasing price flexibility reduces the power of animal spirits and the boom bust nature of the business cycle. Flexibility improves these trade-offs between output and inflation volatility faced by the central bank making it easier for the central bank to stabilize output and inflation. Annicchiarico, Surrinchio & R.J. Waldmann (2019) proposed behavioral variant of the New Keynesian model and confirms that agents’ heterogeneous beliefs and endogenous credit market dynamics represent ingredients that are particularly relevant for our understanding of the business cycle and of deep recessions.

Jump & Levine (2019) confirms the need for behavioral adjustments of New Keynesian model, discussing three key empirical regularities in macroeconomic data which are not accounted for by the standard New Keynesian model, namely, excess kurtosis, stochastic volatility, and departures from rational expectations, incl. presenting simple adjustment of standard model. Mauersberger (2021) continued in aforementioned approach and introduced a learning-to-forecast laboratory experiment based on a New-Keynesian macroeconomy that is particularly close to the model’s microfoundations. In this setup, subjects forecast their individual optimal consumption and prices instead of aggregate outcomes. Due to different personal experiences, coordination of forecasting behavior does not occur naturally, and there is considerable randomness in subjects’ responses.

Lye & McDonald (2021) explored the price stability from the deflation puzzle point of view which is defined as the failure of persistently high unemployment to exert a persistent downward impact on the rate of inflation, i.e. the failure of persistently high unemployment to exert a persistent downward impact on the rate of inflation in money wages. The estimates of the relationship between real unit-labour cost inflation and unemployment reported in this paper suggest that loss aversion by workers with respect to wages offers a resolution to the deflation puzzle. The loss-aversion approach implies a resistance to reductions in the rate of money-wage inflation.

Angeletos & Lian (2021) explores expectations materialized as confidence in macroeconomy. The first element allows aggregate supply to respond to shifts in aggregate demand without nominal rigidity. The second introduces a “confidence multiplier,” that is, a positive feedback loop between real economic activity, consumer expectations of permanent income, and investor expectations of returns.

Xiao (2022) investigated a behavioral approach towards understanding probabilistic expectations: to explain how people estimate the probability of an event that has binary outcomes, such as a boom vs. a recession. Central to this approach is a psychological trait called “base-rate neglect” - a tendency for people to ignore prior probabilities in favor of more salient diagnostic information. They proposed new model called the Bayesian sampler. They showed in 2 new experiments that this model better captures these mean judgments both qualitatively and quantitatively; which model best fits individual distributions of responses depends on the assumed size of the cognitive sample.

Financial Market, Exchange rate and Other Assets

Ciccarone, Giuli & Marchetti (2019) introduce some elements of Prospect Theory into a general equilibrium model with monopolistic competition and real wage rigidities due to wage bargaining, or efficiency wages. They showed that an increase in workers’ loss aversion: (i) reduces the equilibrium wage and in this way increases potential output; (ii) induces workers to work/ consume less and in this way decreases potential output. Sharper loss aversion may hence increase or decrease potential output according to the relative strength of these two effects. They also demonstrated that if loss aversion reduces equilibrium output, it also enhances the effect of nominal price rigidities. Lye & McDonald (2021) also examined effects of loss-aversion with similar results. These authors, Ciccarone, Giuli & Marchetti (2020) continued with exploring of Prospect Theory and presented a novel channel through which the volatility

of the monetary/financial sector affects the instability of the real macroeconomic variables originated by self-fulfilling market sentiments.

Schmitt, Schwartz & Westerhoff (2020) proposed simple agent-based computational model in which speculators' trading behavior may cause bubbles and crashes, excess volatility, serially uncorrelated returns, fat-tailed return distributions and volatility clustering, thereby replicating five important stylized facts of stock markets. Since each speculator bets on his own (technical and fundamental) trading signals, stock prices are excessively volatile and oscillate erratically around their fundamental value. However, speculators' heterogeneity occasionally vanishes, e.g. due to panic-induced herding behavior, yielding extreme returns. Simulations furthermore suggest that circuit breakers may be an effective tool to combat financial market turbulences.

Currency Unions

Bertasiute, Massaro & Weber (2020) continued with analysis of different behavioral models of expectation formation in currency unions. They showed that economic integration is important for stable economic dynamics (while this may be the healthy intuition of many economists working on currency unions, aforementioned authors provided a dynamic modeling framework to explain it).

Proaño & Lojak (2021) add that perception of macroeconomic risk by the agents is assumed to vary according to this measure by means of the Brock-Hommes switching mechanism. Numerical simulations indicate a) that a state-dependent inflation target may lead to a better macroeconomic and inflation stabilization, and b) the perceived risk-sharing among the monetary union members influences the financing conditions of the member economies of the monetary union.

Housing Market

Martin & Westerhoff (2019) tested the regulating speculative housing markets via public housing construction programs by using heterogeneous agent model (behavioral stock-flow housing market model). Results are mixed and not positive for general public deployment of public housing construction programs as results demonstrated that while public housing construction programs may reduce house prices, they seem to be incapable of bringing house prices much closer towards their fundamental values. In addition, these programs tend to drive out private housing constructions.

Poverty Traps

The complementarity between R&D (innovative firms) and human capital accumulation (skilled workers) is widely accepted as an engine of economic growth. Standard growth theory

teaches us that poverty traps are stable-low level balanced growth paths to which economies gravitate due to adverse initial conditions or poor equilibrium selection. In other words, societies fail to take off into sustained growth because they started poor, or because they cannot create institutions that coordinate their investments successfully. Carrera (2019) explains this pernicious form of coordination failure as an evolutionary game between firms and workers. Rates of return of innovative firms depend on average skilled workers, and rates of return on skilled workers depend on aggregate innovative firms' investments. So, in poor economies with a large fraction of unskilled workers or non-innovative firms, imitative strategies do not support a take-off into sustained growth. To achieve that take-off, the society should subsidize the cost of education and/or skill premia through a tax system on income until the economy builds a critical mass of high-profile economic agents. Similarly, work of Asano, et al. (2021) supports an alternative program of research that substitutes utility maximization for behaviorally grounded decision-making in savings experiment.

Conclusion

Mainstream policy analysis is still based on several decades old assumptions regarding basically perfectly rational representative agents. Recent development in macroeconomics, both theory and practice (e.g. global financial crisis), indicated that alternative approaches are needed to modeling, understanding and managing crises (Mauersberger, Nagel & Bühren, 2020).

Behavioral macroeconomic models require plausible assumptions about individual behavior. These assumptions can be gained by laboratory experiments with individuals which provide insights into individual decision-making of agents. Therefore, the field of experimental behavioral macroeconomics is emerging. Therefore, we recognize studying behavior of a group of individuals in laboratory macroeconomic settings as the research opportunity. We are aware that many macroeconomists are still skeptical about the idea that one can learn about macroeconomic behavior by conducting laboratory experiments (with small group sizes). However, while one cannot mirror a completely macroeconomy with all its decisions in the laboratory, it is possible to shed light on some specific macroeconomic questions.

Literature leaves several important questions unanswered. We need many more empirical studies on how private agents interpret the economy and how their interpretations may have been influenced by economics, with a focus on the factors that lead private agents to share some mental models and behavioral rules. The same is true of policymakers. These are not questions usually addressed by empirical studies.

“In the traditional macroeconomic paradigm there are (at least) three crucial assumptions: (i) agents have rational expectations; (ii) agents behave optimal, i.e. maximize utility, profits, etc. and; related to both, (iii) agents have an infinite horizon for optimization and expectations. A pragmatic (but still admittedly subjective) definition of behavioral macroeconomics would be that (at least) one of these assumptions is relaxed. How many of these assumptions should be relaxed and by how much is then a matter of debate” (Hommes, 2018). Based on the researched papers we propose that the most true reflection of real world is somewhere in the middle - a synthesis according to which people indeed act by rules, which usually work well, but may work poorly in exceptional or contrived scenarios. Nevertheless, it is not easy to define where exactly lie the boundaries of what behavioral macroeconomics is and what it is not. Akerlof (2002), in his Nobel Prize lecture *Behavioral macroeconomics and macroeconomic behavior* stated general definition that it includes models of asymmetric information, maintaining the assumption of rational expectation, to explain market failure; following research added other approaches using information frictions, but maintaining rational expectation and imperfect knowledge.

Considering this, we are coming back to aforementioned basic issue regarding alternation of current mainstream models: “How many of these assumptions should be relaxed and by how much is then a matter of debate”. A major problem is to identify the ‘right’ degree of deviation from rationality in the wilderness of bounded rationality. The most plausible way to solve the problem is to look at empirical evidence, but economic experiments typically show that subjects are heterogeneous with respect to behavior and their degree of rationality. Arbitrarily choosing one observed behavior and declaring it as representative for all agents is not convincing.

A better way to use research from behavioral economics for more realistic macroeconomic models might be to turn to complexity economics and agent-based modeling. This completely different perspective on the economy is still in its infancy, but has already a booming literature. Complexity economics and behavioral economics are linked in a very natural way, since both emphasize the direct interaction of heterogeneous agents that are boundedly rational.

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THE NECESSITY OF ETHICS IN ACCOUNTANCY AND DAILY COMMUNICATION WITH CLIENTS

Anna Prihodjko

Abstract

The article deals with the problems of ethics in accountancy, which has a particular impact on daily communication with clients, different governments, state offices and even professional conflicts, which professional accountants deal with. Ethical behavior is extremely sensitive nowadays, especially in the professional sphere, and every professional has to know the rules and principles that must be followed.

Keywords: Ethics, accountancy, communication

JEL classification: K19, K22, M48

Classification OECD – FRASCATI MANUAL: 5.2 Economics and Business

Introduction

The term “ethics” derives from the ancient Greek word “ethos” and means, first of all, “character”. The meaning is also closely related to moral philosophy and discipline, and also deals with problems on how we should behave. (Singer, 2022)

Being an accountant nowadays means not only having a large amount of knowledge in accounting and taxes, which refers directly to the main work of an accountant, but also being a good communicator, because an accountant has to listen, explain, and be very polite. That also means that an accountant has not only the knowledge that refers to his or her profession directly, but also abides by the Code of Ethics. Why it is important and what happens, if the accountant does not abide by the Code, will be described in this article.

Ethical code in general

Ethical code sets several rules and principles of communication and behavior in the company and also to the third parties. It also helps to present the company as more trustworthy and to gain more respect from its clients and partners. It contains entrepreneurial philosophy and credo. (Martínková, 2016).

Ethics and ethical behavior refer to general principles such as honesty, integrity and morals. (CFI Team, 2022).

Usually, it is summarized to the basic scope, like being honest, fair competition, security of production and information, discrimination prohibition, evaluation in accountancy and other accounting principles-and corruption. Fulfillment of these rules could be controlled by different departments in the companies, but also by different professional chambers. (Martínková, 2016). In some professions ethical code is obligatory, especially when it comes to auditors, accountants and tax advisors.

Ethical code - why it is needed

Ethics studies help to learn the skill of determining and finding the basic principles of ethics that should be applied in a particular situation. Ethics develops the ability to determine and understand what should be done in a given situation and why it should be done so. For solving difficult situations, testing questions and considerations will be useful, which will help determine possible options for solving the situation. Professional ethics provides us with all the necessary fundamental principles of professional ethics that can be used to solve ethical situations. Ethical issues are becoming more and more complex, so we also need to understand the basic structure of ethical reasoning (thinking) in order to “navigate ethics”. (Ponomarjovs, 2015).

That also means that if a company has an ethical code, it can answer a lot of questions and explain how to behave in a particular situation.

Code of ethics in accounting and audit

Now we can discuss the Code of Ethics for Professional Accountants including International Independence standards (hereinafter referred to as the Code of Ethics), which was prepared and issued by the International Ethics Standards Board for Accountants (IESBA)¹ and adopted by many professional bodies including Association of Chartered Certified Accountants (ACCA)². ACCA also gives the recommendations on how to use the Code and describes the different sections. Every professional has to remember that the Code is divided into three sections:

¹ IESBA is one of standard setters within IFAC

² ACCA is an international organization, which provides highly qualified education to accountants and is a partner of a high amount of professional chambre worldwide.

- Section A: International Code of Ethics for Professional Accountants
- Section B: Professional Accountants in Public Practice
- Section C: Professional Accountants in Business

Professional accountant can find guidance in any part of the Code applied to specific circumstances. (ACCA, n.d.)

Usually, Ethics and Professional Communication are a part of the certification process in accounting. That means that if an accountant wants to get a certification and to become a professional, he or she has to pass the examination, which also contains the rules of communication and professional ethics.

The Code of Ethics in IFAC

International Federation of Accountants (IFAC) has its own mission – “to serve the public interest, IFAC will continue to strengthen the worldwide accountancy profession and contribute to the development of strong international economies by establishing and promoting adherence to high quality professional standards, furthering the international convergence of such standards and speaking out on public interest issues where the profession’s expertise is most relevant.” (International Federation of Accountants, 2006)

The Code of Ethics for Professional Accountants of IFAC establishes ethical requirements for professional accountants. A member body of IFAC or firm may not apply less stringent standards than those stated in this Code. However, if a member body or firm is prohibited from complying with certain parts of this Code by law or regulation, they should comply with all other parts of this Code. Some jurisdictions may have requirements and guidance that differs from this Code. Professional accountants should be aware of those differences and comply with the more stringent requirements and guidance unless prohibited by law or regulation. (International Federation of Accountants, 2006)

IFAC also gives an enhanced conceptual framework of the Code that all the professional accountants are required to apply. It outlines the three-step approach, which includes identifying, evaluating and addressing threats to compliance with the fundamental principles and, if applicable, independence. It also includes:

- Integrity.
- Professional competence and due care.
- Objectivity.
- Confidentiality.

- Professional behavior.
- Independence (Jules & Erskine, 2018).

It should be pointed out that this three-step approach is very similar to the requests of the AML directive³, which also requires identifying, evaluating and addressing the threats (European Parliament and the Council, 2015).

Becoming a certified professional

The meaning of the words “professional accountant” could be understood in a different way and there should be a description of this term. First of all, an accountant is a person who “*has the requisite skill and experience in establishing and maintaining accurate financial records for an individual or a business. The duties of an accountant may include designing and controlling systems of records, auditing books, and preparing financial statements. An accountant may give tax advice and prepare tax returns*” (Bouvier, n.d.)

According to Bouvier (n.d.) there are several categories of the accountants:

- public accountants are those, who provide services for some fee and has all the qualifications of a certified public accountant
- certified public accountants are those, who have earned a license in his or her state that attests to a high degree of skills.

In different countries of the EU the certification provides different professional bodies – for example, The Association of Accountants of the Republic of Latvia, Chamber of Certified Accountants in Czech Republic, Das Institut Österreichischer Wirtschaftsprüfer in Austria. It should also be mentioned that in Austria all segments of the profession are regulated on state level (IFAC).

³ Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC

Unfortunately, different countries require different knowledge from future certified professionals. The number of exams is also different. There is (as a sample) a comparison between some of the European countries:

- Latvia requires only 4 written exams: Financial accounting, Taxation, Management accounting and Corporate and Business law (LRGA, n.d.). One year ago, Latvia also implemented a duty for accountants to get a license, which include internal AML guidelines and proof of knowledge - this will be enough to get a course of a financial accountant (Latvia, 2021).
- The Czech Republic requires not only the same exams as in Latvia, but also Accounting principles and techniques, IT, Management Finance and, of course, Professional Ethics and communication (icSu, a.s., n.d.). All the exams are also written. These exams were valid until year 2022. Starting with the 1st of January 2022 there is a new list of the exams for the first certification level, which contains Financial accountancy in Czech Republic, Law in Business, IT, Small and medium business control, Tax system of Czech Republic and Control of productivity (icSu, a.s. (b), 2022)
- Austria requires two parts of the exam - written and oral examination and mostly these exams contain knowledge about accountancy and taxation principles in Austria (Austria, 2014).

The main difference lies not only in the number of the exams, but also in the regulation: in the Czech Republic and in Latvia participation in the Chamber of Certified accountants is voluntary, but in Austria an accountant has an obligation to pass the exams in accordance with the law.

Usually, professional chambers also control the fulfillment of the adopted Code of Ethics, and in case the accountant doesn't abide by the code of ethics, could be controlled by the Commission on ethics.

Also it should be noted that being a legal provider of accountancy service sometimes is controlled only by state offices, such as trade offices in Czech Republic or financial offices in Latvia.

Committee on Ethics

Almost every professional chamber has its own committee on ethics, which supervises the ethics requests fulfillment. Usually information about the committees is included in chamber's articles.

The committee has different spheres of its activity:

- It explains the rules described in the Code of ethics for professional accountants, prepares explanations for usual situations, which could be met in the praxis of accountants and offers a solution in particular situations.
- It provides courses for chamber members about professional ethics and communication.
- It considers the complaints regarding the code of ethics violation and prepares conclusions on them.
- It cooperates with other chamber committees. (LRGA, n.d.).

In case when accountant does not abide by the Code and a complaint is filed against him/her, a disciplinary action can be taken against the accountant by the disciplinary committee and the accountant could be even expelled from the relevant chamber (Komora Certifikovaných účetních, 2015)

Potential conflicts

Professional accountant can face different complicated issues because from one side he/she has to comply with the requests of his/her employer or a client, and from the other side he/she has to fulfil the complicated rules of the chamber the accountant belongs to. An accountant could be forced to act in ways that could threaten compliance with the fundamental principles. The ways could be different:

- Act contrary to law or regulation.
- Act contrary to technical or professional standards.
- Facilitate unethical or illegal earnings management strategies.
- Lie to, or otherwise intentionally mislead (including misleading by remaining silent) others.
- Materially misrepresents the facts.
- Other conflicts (International Federation of Accountants, 2006).

If an accountant aids or yields the pressure of his employer or a client, he/she can even commit an offense. First, it can give distorted information of a financial statement of the company,

which also could lead to tax avoidance or tax evasion, which is an illegal method of tax minimization. (Kagan, 2022)

That also means that the professional can be penalized by the professional chamber in case the rules of ethical behavior are broken, but also it can lead to legal offense, but the responsibility is always on him/her given that the accountant agrees to take the risks of personal actions.

What if an accountant is not a member of the professional body?

It's worth asking: "What if the accountant is not a member of the professional body (in some countries it is still possible), does he/she need to meet the requirements of the Code of Ethics?"

The answer could be very different, because usually all the professional body supervise their members and can carry out control measures over his/her activity. Sometimes a member could be warned or punished. But in some European countries, such as Latvia or Czech Republic, an accountant is not obliged to be a member of the professional body, that also means that he/she has to meet only the requirements of the law. At this moment none of the laws demands ethical behavior from the accountant. Regardless of this fact, an accountant still faces a different conflict of interests - to meet the request of the clients or the request of the law? Seems that an answer is quite easy, but for some of them it is a dilemma. It should be noted that every accounting entity is responsible for its accountancy by itself and proving the accountant's fault or unethical behavior can be difficult.

Conclusion

To summarize, it should be said that at the moment a lot of demands are placed on accountants - not only the knowledge of accounting rules, but also the AML regulations, and the Code of Ethics. An accountant has to have a very big capacity to follow all the rules and regulations and manoeuvre between the requests of his/her client and the requests of state, professional body, and other institutions. In some countries being a member of the professional body is still not required, but it doesn't mean that an accountant can forget about the Ethic rules regardless the responsibility for accountancy in every accounting entity.

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MICROECONOMIC SPECIFICS OF AGRIBUSINESS: SUBSIDIES AND DIRECT PAYMENTS IN AGRICULTURE

Milan Palát, Šárka Palátová

Abstract

The system of subsidies in agriculture is permanently a very sensitive area of agrarian policy. If the state intervenes in the conditions of the world market with subsidies and other supports, it isolates domestic prices from price movements at the international level and thereby causes a risk of shock price effects on the international market and price fluctuations. The problem regarding the strategy and concept of solutions within the framework of economic policy in relation to agriculture relates in practice to the links between allocation efficiency and redistributive goals, including the definition of additional costs caused by the implementation of different types of subsidy policy instruments. Pareto optimal solutions can be associated with high transaction costs. This also applies to forms of support for positive and negative externalities associated with agricultural production. Additional costs also arise as a result of the deformation effects of the selected subsidy. Due to the difficulty of calculation of the costs of distorting effects of subsidies for markets, only part of the costs are most often taken into account, i.e. direct transaction costs and the volume of claims for budget funds, understood in this context as indirect costs. The current model of the Common Agricultural Policy is characterized by a retreat from income support in agriculture based on the price support of individual commodities and a preference for a system of direct payment subsidies and structural support based on the project concept.

Keywords: agribusiness, subsidy, direct payment, microeconomics

Introduction

Current multifunctional concept of agriculture derives its development opportunities not only from the success in selling products on the food market, but also from the recognition of the difference in the environment that determines the scope of agricultural production in specific conditions. From the point of view of the production tasks, the position of business in agriculture has been changing from a relatively independent farm to one of the components of food or non-food production within the distribution chain. The success of primary producers in achieving their goals is therefore increasingly influenced by other links within the agri-food sector. The changing economic environment opens up a number of issues regarding the

comparability of agricultural development conditions for established and new EU member states. In general, all EU member states are increasingly influenced by the process of globalization of food markets and the functioning of agribusiness. By transforming from the original model based on supply conditions to a system strongly oriented to demand conditions, it also changes the prerequisites for success in the context of the global food production network and becomes one of the decisive measures of modern agrarian policy. The period in which the Czech Republic and other Central and Eastern European countries became members of the European Union was difficult not only because the Union integrated with the most states in its history, but also because it needed to find its future direction, which would create the conditions for its long-term competitiveness in the global context, and at the same time, it maintained the social level guarantee within the presented social model. Increased market integration and its rapid growth was the main stimulus for the development of trade between and within regions, resulting in a significant shift in geographic and commodity distribution, see for instance WTO (2022). The aim of the paper is to evaluate the forms of instruments of the economic policy focused on subsidies and direct payments in agriculture, including their implementation and an outline of related costs on the basis of microeconomic principles.

Results and Discussion

In regard to the justification of agricultural support, even in the liberally oriented models of agrarian policy of developed countries, a number of specifics of this sector are generally mentioned, which negatively affect the income of its business entities. It is generally accepted that income disparity is caused by a number of factors that cannot be directly influenced, therefore a low and fluctuating income of agricultural producers in developed countries is considered the main argument for the high level of agricultural support. (Dvořáková, 2012) If we start from the theory of welfare economics and Pareto efficiency, then in practice it is possible to objectively define the areas of issues violating the model of perfect competition, as a prerequisite for efficient market allocation. The market failures include for instance externalities or imperfect information. (Samuelson, 2013) In case of market failure, the assumption of perfect competition in markets of products, services and production factors is not fulfilled. Above all, there is a varying level of monopolization in the processing and distribution sectors, simultaneously limiting perfect information accessibility and neutrality in transfers. Externalities are situations where the economic activity of one entity changes profit or benefit of another economic entity. They require targeted regulatory interventions using taxes or subsidies according to the impact of changes that occur as a result of the existence of a specific

externality. Imperfect information means that people do not have all information necessary to address the distribution of the amount of funds to a specific entity and obtaining such information is associated with additional costs. The need for state intervention is then usually justified for the above reasons. An approach based on the second best solution is applied here, i.e. limited allocation, where a part of the generated income is taken out of the allocation and is redistributed according to defined preferences within the rules and measures of the state's economic policy. (Bečvářová, 2021)

In this way, the problems of allocation and distribution can be divided from each other, which makes it possible to carry out a redistribution of equipment with the considered goods and thus determine the size of individual subjects and subsequently use prices as an indicator of relative scarcity. From the point of view of the principles of the market economy, efficient allocation is achieved if the economic entity compares the costs of its activities with the social costs and makes a choice reflecting these costs. The marginal decision as to what quantity of a certain good will be consumed will then depend on the price, which determines how other subjects value the marginal unit of that good. Social well-being can then be evaluated as the best solution from the point of view of the individual's own utility and a group of complementary valuations allowing to compare the marginal utility of the income distributed to individual subjects Bečvářová (2018). Within the economic policy of the state, or multinational subjects, a part of the resources obtained in this way is then used as transfers in the form of various forms of subsidies, see for instance Bijman (2012), Jurčík (2016), Novosák et al. (2018) or Dvořáková (2009). This is a realization of the redistribution of a part of the income based on preferences in relation to target groups within the economy. In this context, transfer is defined as a flow of payments from one agent (entity) in the economy to another, which is not connected to the flow of goods and services. Subsidies generally create transfers that reflect changes in the distribution of incomes. Subsidies have become a frequently used tool also within the support of the agricultural sector, in which the whole society participates to a certain extent and form. There are economic costs associated with their use, which affect the difference between the company's expenditure on a given subsidy policy and their manifestation in the recipient's pension. Economic costs are an expression of allocative efficiency if they are on the curve of the utility possibilities frontier. (Bečvářová, 2021) Next, we will move on to the choice of the form of subsidies and their effects.

Selection of the form of subsidies and direct payments in agriculture and their microeconomic impact

When choosing the form of subsidy, it is necessary to monitor whether the transfers do not interfere too much with the market and do not distort it. Bečvářová (2016) states that according to the degree of distorting effects and their use in agrarian policy, subsidies can be divided into the following groups: direct price support, proportional subsidies of primary factors, output subsidies (or subsidies linked to the use of inputs) and direct subsidies to the recipient's income (total amount targeted transfers). Each of these instruments is associated with economic costs, where, in addition to distortionary costs, direct and indirect transaction costs are also reflected. These items express the claim to redistribution of income, the direct costs of deformation are caused by the distorting effect of the tool used. Tab. 1 clearly shows the manifestations of cost characteristics in different groups of subsidies.

Tab. 1: Manifestations of cost characteristics in basic groups of subsidies

Tool	Direct costs		Indirect costs
	Market distortion	Transaction costs	
Direct price support: Export	very high	low	low
Direct price support: Import	very high	very low	negative
Proportional subsidy of primary factors	low	high	high
Output / input subsidy	high	low	high
Direct subsidies to the recipient's income	zero	very high	very high

Source: Bečvářová (2021)

Direct price support is an intervention in the formation of market conditions and the equilibrium price, when the effect of price support is manifested primarily on the supply side and subsequently also in the demand conditions of the commodity. The consequence is a distortion of the market, which is even more pronounced in the case of an open market. The importer has the lowest direct and indirect transaction costs. In the case of export, the transaction costs are low, mainly due to good record keeping and low budget expenditure requirements at this stage. The indirect costs of the transaction are negative due to the fact that the duties paid go back into the budget. In relation to the market, however, the distortionary effects are the highest, as

information for both production and consumption decisions is distorted by this tool. Proportional subsidies of primary factors (i.e. support for the use of land, labour, capital) require information to distinguish between factors used for agricultural and non-agricultural purposes and are only used during the supported activity. The information needs can thus mean high transaction costs. If this tool is used at a proportional level for all factors, distortionary effects on the market will be only low.

Output subsidies (i.e. supporting the conditions of supply of already produced output) require that the price reserve within the economy can be kept under control. If the transfers are provided to the level of the product vertical, where there is a small number of entities, it is relatively simple. However, if output subsidies are provided to each farmer individually, they are very costly. Indirect costs are high, distortion costs are also increasing, as this subsidy affects demand and, at the same time, production decisions in the agricultural sector. Input subsidies have high distortionary effects and thus distortionary costs. This category includes, for example, co-responsibility fees and consumption taxes, which can be understood as a combination of taxes and producer subsidies. Producer prices are then lower than consumer prices, and the cost estimate is thus identical to output subsidies. Direct subsidies to the recipient's income are a form of targeted transfer of the total amount, where payments separated from production can be included. As a rule, they are associated with high direct transaction costs, as increasing the income of those for whom they are intended requires them to be based on detailed information about individual beneficiaries. Indirect costs are also high, as these subsidies are usually financed by specific taxes. Direct payments do not cause distortions in the market because they do not affect the prices of individual commodities. Each of the above tools has its advantages and limitations. The best solution would be to use those subsidies that cause low or zero direct distortion and transaction costs or low or negative indirect transaction costs. However, since such a type of subsidy does not exist, it is necessary to search for an optimal subsidy tool that will remove the distortion effects and thereby liberalize the market.

According to Bečvářová (2018), direct payments are defined as a targeted transfer of a financial amount to the recipient's income regardless of his current production and prices of agricultural products. This transfer requires a redistribution of income from urban to rural households and may ultimately induce changes in the allocation of resources among sectors within the entire economy that may have some benefits for society. This type of agricultural support has been incorporated in the respective policies of economically developed countries (European Union, USA, Switzerland, Canada), for which it is easier to redistribute income. For economically less

developed countries, it is more advantageous to use direct price support. The use of direct income payments does not have a zero negative effect on welfare, but this effect is smaller if policy instruments directly influencing the prices of products and inputs are used. In the case of the income subsidy in the form of an amount per hectare, no worsening effect on the agrarian market is to be noted, if the subsidy is provided regardless of land use. However, if direct payments are tied to an animal or a production unit, they already interfere with the market and reduce welfare. Direct payments present a certainty of the income of the agricultural production enterprise. The long-term use of direct payments adjusts production risks, which leads to a reduction in risk aversion for most producers. They are positively motivated above all to invest in the innovation of operations, technologies and production systems, which lead to an increase in overall production, as well as to an increase in the overall competitiveness of producers in the future, see for instance Bečvářová (2014). This whole process will then be reflected in the reduction of production costs, the favouring of primary producers in agriculture and also the expectation of reforms.

Microeconomic context of the use of direct payments in agriculture

The use of direct payments increases the income of the recipient (agricultural producer) and influences his production decisions in the sector through:

a) impact on the well-being of the recipient and subsequent investment decisions

- immediate increase in beneficiary welfare – Redistribution of income from urban to rural households causes sectoral changes in the allocation of resources in the economy and a reduction in risk aversion for most beneficiaries in the agricultural sector.
- support in the decision-making of beneficiaries for investments in agriculture – The main stimulus is the increase of total production by agricultural producers thanks to innovations.
- increase in income and well-being – The result of individual decisions for investment and for the choice of production structure should be a reduction in production costs and higher efficiency, which lead to better competitiveness and a better position within the commodity verticals in agribusiness.

b) influence on consolidation in the sector – Consolidation of the business base in the agricultural sector can be specified by two tendencies of the effect of direct payments:

- Consolidation processes are slowed down by inefficient businesses that remain on the market (direct payments covering their losses)

- Accelerating consolidation processes contribute to the development of precision agriculture based on innovation, but at the same time leads to a gradual liquidation of enterprises that are unable to succeed on the market and are thus absorbed by successful larger enterprises.

c) choice of the basis for providing payments, which may affect the structural changes of specific producers

- unified payment for the farm – The basis for the calculation was a historical production structure, thus it preserved the original structure of the agricultural enterprise and there was no pressure for structural changes. Approximately half of the acreage in the European Union falls under this type of subsidy.

- partially decoupled systems – Part of the subsidy is paid by direct payments and part is tied to the decisions of individual countries. About 10% of the acreage in the EU falls under this type of subsidy.

- area payments – It is a type of regional subsidy used mainly in France or Germany. As a result of the use of these payments, extensive farms gain more than intensive ones, land remains in agricultural use as a resource to gain advantage, and this leads to rising land prices. There are also tendencies to withdraw subsidies from the sector due to the problem of determining the owner and the user of the land.

The European Union primarily strives to permanently strengthen the subsidy policy based on direct payments. The issue is whether or not the direct payment affects the producer's production decisions, whether and in what way it affects the growth of agricultural production, and whether it plays a role in the decision on the allocation of production resources over time. (Bečvářová, 2017)

Selection and implementation of state economic policy tools and related costs

The state should decide not only on the level of support and the choice of instruments, but also on economic costs caused by different forms of subsidies and relationships between the costs caused by the distorting effect on the market environment and other costs, preferring instruments with the lowest possible distortion effects (Bečvářová, 2021).

The choice of specific tools is related to the following factors:

- level of economic development of the country – Market price support is typical for economies with a lower level of development, direct income support prevails more often in economies with a high level of development.

- the trade position of the given state – Support for market prices is beneficial if the country is an importer, thus creating income for the state budget.
- length of time period – The expected time horizon of the support is important especially where transaction costs make up a higher proportion of incurred costs. With their long-term application, costs are reduced. Distortion costs increase over time as the difference between potential and real supply increases in response to the instrument's action over a long period of time.
- factor by which costs and benefits are discounted – A high discount factor promotes market price support type instruments. This type of support favours the immediate income of the factor owners in the current period, but raises an issue of restructuring in the future. This tool reduces resources for transfers to other sectors.

Last but not least the choice of specific tools is related to the overall concept of economic policy in a particular country, specific goals of the policy and selected strategies.

Conclusions

If the government significantly intervenes into the conditions of the world market with subsidies and other supports, it isolates domestic prices from price movements at the international level and thereby causes a risk of shock price effects on the international market and disproportionate price fluctuations. Such price movements can have a negative effect on all trading states. The problem regarding the strategy and concept of solutions within the framework of economic policy in relation to agriculture in practice concerns the links between allocation efficiency and redistributive goals, including the definition of additional costs that the implementation of different types of subsidy policy instruments causes. Pareto optimal solutions can be associated with high transaction costs. This may result in lower acceptability than if the issue would not be addressed through interventions. It may also refer to forms of support for certain positive and negative externalities associated with agricultural production. If the transaction costs, influenced by a better allocation of resources, were higher than the profit, it would not only be the amount of the subsidy derived from the redistribution of income (indirect transaction costs), but also the direct costs associated with the implementation of the transaction itself. Additional costs also arise as a result of the distortion effects of the chosen subsidy. In this context, the ability of a certain type of subsidy to interfere with market development and to distort its conditions and signals is then examined. Since it is difficult to measure the costs of distorting effects of subsidies for markets, only the remaining part of the costs, i.e. direct transaction costs

and the volume of claims for budget funds, understood as indirect costs in this context, are most often taken into account in decision-making. Evaluating the issue of instruments ensuring the implementation of restrictive measures is important in terms of reducing distortion instruments, but also increasing transaction costs. The problem of transaction costs arise when they are associated with the application of direct income subsidies. The rate of income redistribution and the proportion of administrative costs associated with the implementation of a specific instrument are assessed with follow-up checks on compliance with the conditions of its use, see Bečvářová (2018). The choice of the basis for providing a given type of support is also related to the problem of transaction costs, which is one of the main issues of financing during the reforms of the Common Agricultural Policy.

The current model of the Common Agricultural Policy is characterized by a retreat from income support in agriculture based on the price support of individual commodities and a preference for a system of direct payment subsidies and structural support based on the project concept. As part of these measures, member countries can independently allocate and distribute particular subsidies according to their own priorities, but within the rules and limits defined by law within the EU. Individual countries thus have the opportunity to independently decide which problems in agriculture they want to prioritize and how much money is to be spent on a specific problem. As part of the reforms, the Common Agricultural Policy also focuses on strengthening quality criteria in the area of food production and processing and on the implementation of regulations and limits related to production conditions. Although the system set up can be seen as a positive element, the subsidy system where preferences are used, is permanently a very sensitive area of agrarian policy.

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MARKETING, MANAGEMENT & TURISMUS, HOTELNICTVÍ, WELLNESS

THE PATH FROM COVID TO MORE SUSTAINABILITY AND RESILIENCY IN INTERNATIONAL AIR TRANSPORT AND TOURISM

Monika Ploch Palatková, Jindřich Ploch

Abstract

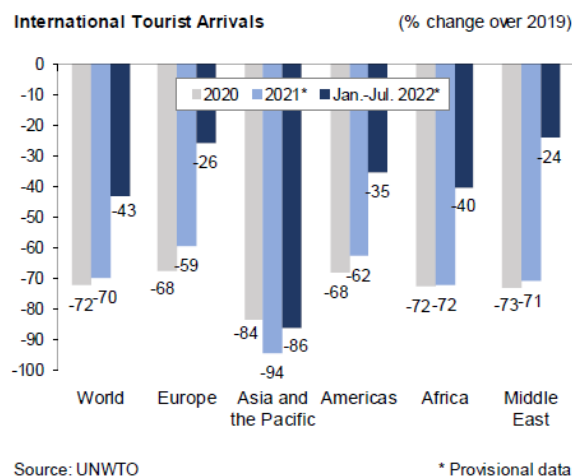
After the covid period the development of the global economy as well as non-economic factors connected with the effects of the Russian invasion of Ukraine are becoming a brake on the full growth of tourism and air transport sectors. The aim of the article is to identify and analyze the critical success factors (CSFs) of international tourism and air transport with regard to the efforts of both sectors to move **towards a resiliency and sustainability**. The expert studies of relevant international organizations were used and the MIT 90's model was subsequently applied to categorize the group of identified CSFs. The path to the resilience and sustainability of sectors (tourism destinations) leads through the introduction of technologies, changes in the structure of stakeholders, re-thinking the strategy and re-evaluation of management processes.

Keywords: resilience, sustainability, MIT 90's model, tourism, air transport, critical success factors

Introduction

After the unprecedented drop of tourism market caused by the outbreak of the pandemic the international tourism continued to show strong dynamic through January - July of 2022, so the number of arrivals reached 57% of the pre-pandemic level in July 2022 with growth dynamics three times higher than in the comparable period January - July 2021 as shown in figure 1. (UNWTO 2022c) The development of the world economy as well as non-economic factors connected with the effects of the Russian invasion of Ukraine, are becoming a brake on the full growth of tourism and air transport. The latest forecasts of the global growth count on dynamic of about 3,2 % in 2022, slowing to 2,7 % in 2023, so for the potential consumers the 2023 will feel like a recession. The main tourism demand generating markets will continue to stall between 2022 and 2023, namely the United States at the level of 1,6 % and 1,0 %, the European Union at the level of 3,2 % to 0,7 % and China at the level of 3,2 % to 4,4 %, but with the possibility of further pandemic-related supply-side disruptions (Chinese zero-covid policy). (IMF 2022)

Fig. 1: International tourist arrivals – regional spread



Source: World Tourism Barometer, Volume 20, Issue 5, September 2022

Air traffic situation before COVID-19 pandemic and predictions for further development aviation industry saw a spectacular results in the twenty years before the Covid-19 pandemic. Passenger numbers rose from 1,5 billion in 1998 to almost 4 billion in 2017. The air transport industry was having its best years and others were expected to follow. For example, based on these conditions, Airbus has yet to produce a forecast in 2019 that global annual air traffic growth will be 4,3 % over the next 20 years. They may have been prepared for anything but the effects of the unexpected onset of the global COVID-19 pandemic. On December 31, 2019, the World Health Organization (WHO) was alerted by China to several cases of unusual pneumonia in Wuhan, Hubei Province. Then, on January 7, Chinese authorities announced that they had identified a new virus, named 2019-nCoV, that was included in the coronavirus family. There was no effective vaccine for the new virus at the time, so the only way there was no effective vaccine for the new virus at the time, so the only way to stop or reduce its spread was by restricting the movement of people. One measure applied by governments has thus become the travel ban Revenues per person-kilometre were up to 62,7% lower than before the pandemic (May 2019).

A partial global economic recovery and a partial increase in bookings for certain flights in June 2021 triggered a partial optimism about the summer revival of air traffic. However, some optimism about the expected growth rate of air traffic, driven by the relative recovery in 2021, disrupted the year, in which the world had to face two global systemic crises simultaneously, i.e. climate change and the ongoing COVID-19 pandemic. Moreover, Europe has been negatively affected by war since February 2022. Before the escalation of the war between Russia and Ukraine, GDP was expected to grow by around 4-4,5% worldwide. Today, however, a growth rate of perhaps 3% seems more likely, and with that it is real even the fact that the probability of a global recession is still low. The war conflict in Ukraine and accepted sanctions for Russia have caused Ukraine airspace to be closed, halting the movement of some 3,3 % of total air passenger traffic in Europe and 0,8% of total traffic worldwide as of 2021.

The changing sector of air transport and tourism raises the question of what factors will be decisive and critical for the growth of both sectors, which work in mutual symbiosis. How to prepare and manage destinations that in fact connect the public and private sectors, and where tourism and air transport services are combined? The changing sector of air transport and tourism raises the question of what factors will be decisive and critical for the growth of both sectors, which work in mutual symbiosis. How to prepare and manage destinations that in fact connect the public and private sectors, and where tourism and air transport services are combined?

Objective and Methods

The aim of the article is **to analyze the CSFs of international tourism and air transport** with regard to quantitative and qualitative trends of the supply and demand and with regard to the efforts of the tourism and air transport sectors to move **towards a resilient and sustainable sector**. To meet the goal, the CSFs analysis using selected expert studies of relevant international organizations and **the use of the MIT 90's model** as a framework for organizing and creating a comprehensive overview of the CSFs appear to be a suitable method.

The updated research studies, statistical data, forecasts and other materials of international organisations active in tourism and air transport will be used for the CSFs analysis.

The concept of **critical success factors (CSFs)** itself was already defined in the 1980s by Bullen and Rockart (1986). According to Rockart (1979, 1982) the CSFs are “those few key areas of activity in which favourable results are necessary for a particular manager to reach his or her own goals”. The set of CSFs can be identified by different methods from interview (Rockart, 1982) to the statistical analysis (e. g. Cserhádi & Szabó, 2014; Ika et al., 2012). Different groups and categories of CSFs can be found in the literature, e. g. perceived success factors or real actual factors (Grunert and Ellegaard, 1992). Flynn and Arce (1987) and Francoise et al. (2009) or other authors define “actionable” CSFs as the factors characterized by the fact that they are practically usable from the point of view of achieving goals and are not identifiable only for theory.

According to the United Nations (UN) **the resilience** is “*the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to transform and recover from the effects of a hazard in a timely and efficient manner*” (UNISDR 2009). Similarly, **the vulnerability** has been defined as “*the conditions determined by physical, social, economic, and environmental factors or processes which increase the susceptibility of a system to the*

impacts of hazards” (UNDRR 2021). The concept of resilience thus covers not only the resistance, but also the process of adaptation of the system. Vulnerability definition is mostly based on properties of a system enabling the projection of negative influences and destabilization of the system e. g. Cannon, 1994; Turner et al.,2003). According to Clark et al. (1998) **the vulnerability** is a function of the degree of exposure to the threat and the ability to respond to this threat. **The resistance** (the system's ability to absorb an external shock and continue to function) and **the resilience** (the system's ability to adapt and function in new conditions) are reflected in the ability to react to threats. In recent years, professional discussions regarding the solution to the critical situation caused by covid-19 pandemics in tourism and air transport have been directed towards strengthening the resilience and resistance of systems, especially on the pillars of **sustainability** of tourism and air transport.

The set of following relevant documents, research studies published by leading international organizations in the tourism and air transport covering governments and private sector entities were analyzed as data sources to identify the group CSFs for subsequent application of the MIT 90's model.

World Travel and Tourism Council (WTTC)

- Enhancing resilience to drive sustainability in destinations (June 2022)
- Critical factors to attract hotel investment (June 2022)
- Towards destination stewardship - Achieving destination stewardship through scenarios & a governance - diagnostics framework (July 2021)
- Staff shortages (December 2021)

United Nations World Tourism Organisation (UNWTO)

- G20 Bali Guidelines for strengthening communities and MSMEs as tourism transformation agents – A people-centred recovery (September 2022)

International Air Transport Association (IATA)

- Quarterly Air Transport Chartbook IATA Economics (Q3 2022)
- Travel Recovery Rebuilding Airline Profitability, IATA, Press Release No: 28, 20 June 2022

EU Commission

- Air transport market rules, Facts and figures about the European Union (2020)

The MIT 90's model of Scott Morton (1986) enables to identify the critical external factors (society, economy, science and technology), to understand changes in five fields and to classify the CSFs into these fields/categories:

- **Structure:** the structure of the sector (public and private sector, residents) and of the value chain of the destination.
- **Strategy:** the goals of the players in both sectors and how the value chain changes.
- **Technology:** the technology already used and planned to use and promote sustainability and resilience.
- **Human factor:** the quantity and structure and how they should be educated, skilled, re-skilled, up-skilled, the ambitions, attitudes and their role in the value chain.
- **Management processes:** the role of destination management / stewardship.

The MIT 90's model is used to define the critical success factors of a strategy, project, change and other subjects. The model will be used for tourism and air transport sector on the floor plan of the tourist destination.

Results and Discussion

Tourism

According to the UNWTO Confidence index, (September 2022 UNWTO Panel of experts) in individual markets expect a slightly optimistic development and a return of the volume of international arrivals to the level of 2019 in 2023 (27 %) or 2024 (40 %). For the further development of tourism, over 80 % of experts consider negative external economic factors to be the key influence, and about 60 % higher transport and accommodation costs. (UNWTO 2022b) The current economic environment characterized by high inflation, extreme increases in oil and energy prices, increasing interests rates or tightening financial conditions in most regions causing the cost of living crisis are factors limiting fully positive expectations in tourism from investors and consumers (households). According to the UNWTO survey in September 2022, experts include **travel restrictions** (33%), **uncertainty from Russian offensive in Ukraine** (31%), **low consumer confidence** (26%) or **airport congestions, flight delays and cancellations** (24%) in the group of destabilising non-economic factors and major downside risks to recovery. The **fear of staff shortages** (21%) and **the lingering COVID-19 pandemic** can also be considered significant. (UNWTO 2022b, IMF 2022)

Air transportation

Measures taken to mitigate the negative impact on the aviation sector In response to the consequences of the spread of COVID-19, several measures have been taken within the European Union to mitigate the effects on the aviation sector. Regulation (EU) 2020/459 of 30 March 2020 amended Council Regulation (EEC) 95/93 on common rules for the allocation of slots at Community airports:

- a decision has been made to extend the slot allocation exemption for the entire winter season, i.e. until 27 March 2022
- in February 2021 it was decided by Regulation (EU) 2021/250 that in order for airlines to remain slots for take-offs and landings scheduled for the 2021 summer season, they must use 50% of its slots (instead of the 80% required before a pandemic)
- The EU Commission may extend these new rules for two further seasons in the future, adjusting the minimum usage rate to between 30% and 70% in order to respond flexibly to different levels of air traffic. Regulation (EU) 2020/696 of 25 May 2020 amended Regulation (EC) 1008/2008 on common rules for the operation of air services in the Community
- It was temporarily stipulated that in the event of financial problems caused by a pandemic, the rules for granting operating licences to air carriers would be amended.
- On 14 July 2021, in the context of the Green Agreement for Europe, the Commission adopted a set of proposals to ensure that the political course of the EU will ensure climate, energy, land use, transport and taxation policies are compatible with reducing net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. Some of the proposals relate, in whole or in part, to air travel and include: A proposal to phase out free aviation emission allowances and comply with the compensation and carbon dioxide reduction program in international civil aviation and a proposal for a revised regulation on the deployment of alternative fuels infrastructure, which notably stipulates that aircraft have access to clean electricity supplies at major airports.

Current aviation trends

Although the Covid-19 pandemic still persists, some increase in passenger numbers across the aviation sector has brought hope of improvement, but a return to normality may still take some time. One example of the assumption of a recovery in air demand is the forecast made in April 2022 by Bain Bain & Company (an American management consulting firm headquartered in

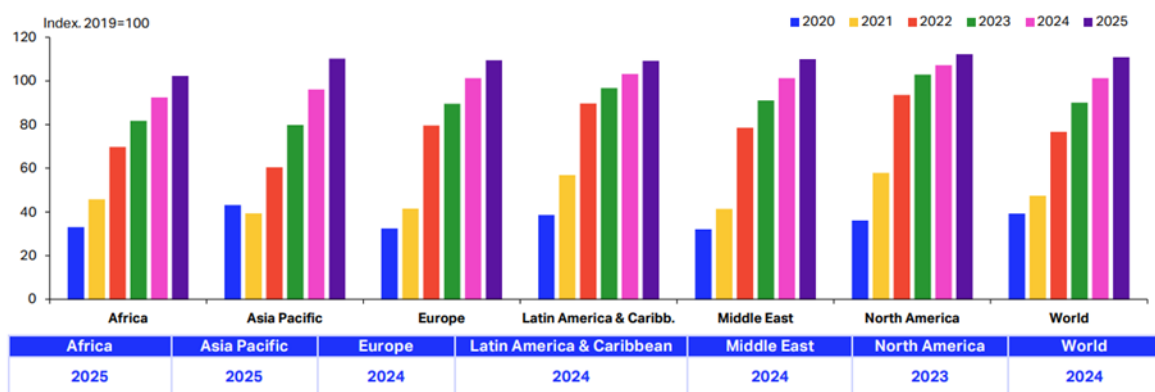
Boston, Massachusetts. The company provides advice to public, private and non-profit organizations.)

According to an assessment of the global economic situation in the IATA document, its slowdown is in full swing and can be expected to continue in the coming years. The global economy grew by around 6% in 2021, but will most likely grow at half the rate in 2022 and slow down marginally further in the next year. While a global recession is still unlikely, a local recession is to be expected. As for China, its GDP could struggle to reach 3% this year, the lowest since 1976. All of this points to the rising unemployment rate in 2023 and probably a more challenging environment for reviving air travel in the future compared to the relative positive shift in 2022. Risks to the positive outlook at present include:

- China's strict „zero – covid”, policy, which acts- causing significant movement restrictions (travel restrictions) war in Europe, the end of which is not yet in sight
- appreciation of the US dollar against the currencies of most other countries(increasing the risk of balance of payments crises)
- given the complex macroeconomic environment, there is still pressure to develop costs
- an unusually high spread between the prices of aviation fuel and crude oil
- tight labour markets imply demands for higher wages.

In this difficult situation, it is perhaps to be expected that the air transport industry could reach 2019 traffic levels in 2024. America is likely to reach this level as early as 2023, while China could meet the same target in 2025.

Fig. 2: Return of passengers on regional air routes 2020-2025 (2019=100%)



Source: IATA (2022). Quarterly Air Transport Chartbook - IATA Economics (Q3 2022)

Growth over the next two decades is a remarkable slowdown compared to pre-pandemic growth rates. According to Embraer, this reflects the effects of the pandemic itself, the expected slowdown in the global economy and the effects of the Russo-Ukrainian conflict. The aircraft manufacturer expects Asia Pacific (including China) to show the strongest growth over the next twenty years, increasing travel demand by 4.3% a year. It will be followed by Latin America at 4%, Africa at 3.8%, the Middle East at 3.2%, Europe including CIS at 2.3%, and North America with 2%. Embraer also expects continued strong growth in electric-powered aircraft to create new opportunities for replacing smaller cargo jet aircraft used and for making more transfers of passenger jet aircraft to cargo. The main points of this IATA forecast include:

- Industry losses are expected to narrow to USD 9.7 billion (better than the October 2021 forecast of a loss of USD 11.6 billion); a significant improvement from losses of USD 137.7 billion in 2020 and USD 42.1 billion in 2021
- The profitability of the whole sector appears to be within reach in 2023, with North America expected to make a profit of USD 8.8 billion already in 2022
- Efficiency gains and improved revenues help airlines cut losses even with rising labour and fuel costs (driven by a 40% rise in the world oil price and widening market spreads this year)
- Industry optimism and commitment to reducing emissions are evident in the expected supply of more than 1,200 aircraft in 2022
- So far, severely suppressed demand, the lifting of travel restrictions in most markets, low unemployment in most countries and expanded personal savings are fuelling a demand recovery that will bring passenger numbers to 83% of pre-pandemic levels in 2022
- Despite the economic problems, airfreight volumes are expected to reach a record high of 68,4 million tonnes in 2022.

The application of the MIT 90's model

For the application of the MIT 90's model, the above listed materials and studies of international organizations are used, on the basis of which the MIT 90's model for the sector (tourist destination) is completed. The analysis of critical success factors is carried out with regard to the resilience and sustainability of the destination. Based on the analysis of the above documents, CSFs can be identified in particular areas of the MIT 90's model, such as structure and system, technology, individuals and roles and finally the management processes in the sector (e. g. private and public sector co-operation in the tourism destination) as depicted in

Figure 3. The external socioeconomic environment for the development of tourism and air transport was characterized above. Some CSFs can be characterized as specific to the tourism or air transport sector, but most of them are relevant to both sectors.

Structure

The efficient structure of the sector and the role of the public sector and public finances became the basis for the formulation of recovery scenarios in both sectors. **The structure of the players in the industry and its horizontal and vertical level and the value chain development** represent not only the short-term, but especially the medium- and long-term subject of discussion in connection with tourism policy and air transport development policy. In the tourism sector, compared to the air transport sector, residents (communities) are also included in the game.

The CSFs for more resilience and sustainability highlighted in professional papers and studies for the area of industry **structure** can be summarized as follows. **Developing governance models** based on new trends of **destination stewardship** with clearly defined roles of particular interests groups in the system (sector). The development of strategies that will ensure a more resilient and sustainable business environment represent a challenge especially for the public sector. **Ensuring ownership, legitimacy, and transparency** is perceived to be one of the key resilience priorities. A specific legislative step in the air transport sector was the adoption of measures at the level of governments in the regions (EU) – Regulations 2020/459, 2021/250, 2020/696 establishing rules for simplifying the operation of air transport and the use of slots in the EU. **Increasing governmental interventions** in the system mainly regulatory (legislative) and fiscal increasing interventions should lead to the growth of strategically oriented projects and partnerships at different levels in engaging communities and creating new value for destination visitors.

Strategy

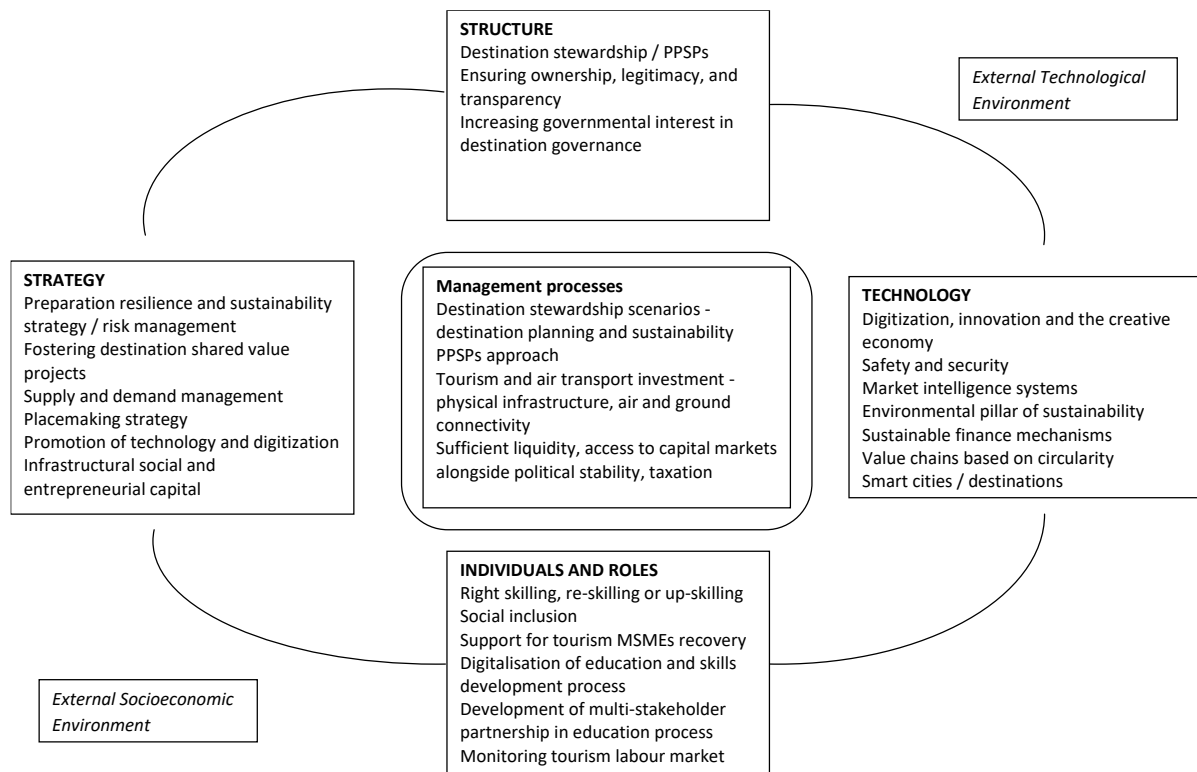
Strategy is usually the way to achieve the goals of a destination with a certain allocation of financial, personal, time, technological and other resources in order to reach the 3E criteria (effectiveness, efficiency, economy). Strategy is *“the direction and scope of an organisation over the long-term, which achieves advantage for the organisation through its configuration of resources within a changing environment and to fulfil stakeholder expectations”* (Johnson, Scholes and Whittington (2005) in Chadwick ... 2, p. 204) Stacey’s strategy concept (2003) covers the emergence of organizational identity (Stacey 2003 in Chadwick...).

In addition to the listed critical success factors, such as **developing successful governance models, ensuring ownership, legitimacy and transparency**, the list can be supplemented with necessity of **strategy and developing and implementing appropriate risk / resilience strategies. Preparation resilience and sustainability strategy** in both sectors means preparation and implementation of processes for the next catastrophic shock. Plans for the revival of air transport mainly by private companies include recovery plan for world air transport until 2025, strengthening regional routes in Asia (China, India and Indonesia) and the USA and increasing the role of low cost carriers.

Mid-term and long-term destination strategies as well as strategies of all public and private players, incl. airports, airlines, hospitality sector and other branches need to be interconnected **fostering destination shared value projects**. The resistance and sustainability of destinations will increasingly be determined by **supply and demand management** associated with an integrated development approach **involving not only visitors to the destination, but also residents** according to the long-term intention *"a better place to live is a better place to visit"*. Adopting a **placemaking strategy** incl. the management of public spaces brings an increasing awareness of sustainability. The placemaking focuses on the use of investment, regulation and value chain development for visitors and residents. The implementation of sustainability principles across the entire destination value chain **shifts the traditionally perceived criteria of success from quantity to quality with an impact on the structure of services and destination pricing policy**.

The key pillars of **the future smart strategies** of destinations in cooperation with air operators will be **the principles of sustainability, the promotion of technology and digitization, infrastructural social and entrepreneurial capital** and last but not least, **human resources and the human factor**.

Fig. 3: A model of critical success factors in the tourism and air transport sectors - an application of the MIT 90's model



Source: own figure using the MIT 90's model (Scott Morton, M.S., 1991)

Technology

The covid-19 greatly accelerated the implementation of technological processes in companies not only in the tourism and air transport sectors, including the internet of things, safety and security, virtual and augmented reality, cloud computing, biometric data and digital identity, mobile payments, e-shopping and other fields. **Digitization and technology** in general can be considered a critical success factor in increasing resilience and sustainability orientation in a destination, company or other system, esp. in the transportation system.

Digitization, innovation and the creative economy are perceived as critical factors of sustainability and resilience in long-term and mid-term period (product development, marketing communication, distribution policy, pricing). From the point of view of the private, public sector and the group of residents, **creation of market intelligence systems** and training programmes for MSMEs and communities to use the system can also be perceived as one of the critical factors.

Technologies contribute to the resistance and resilience of the tourism destination and both analysed sectors not only in the economic, socio-cultural, but also in **the ecological pillar of sustainability**. Especially **air transport sector** strives to reduce impact on the environment

implementing new elements as green aircrafts, electric aircrafts, production of small-capacity aircrafts (e. g. Embaer), cost reduction in cargo transport, expanded use of new wide-body aircraft (A350, B 787) or new types of fuel. For the speed and quality of progress on **climate action, biodiversity conservation and circular economy**, tourism and aviation sector actors focus on critical factors including **accelerating the transition towards low GHG emissions, capturing the value of conservation through tourism, investing in nature-based solutions for sustainable tourism and new tourism value chains based on circularity** incl. shift towards **a circularity of plastics** in tourism. Smart cities, use of unmanned aircraft in services and personal transport can be considered tools to promote smarter tourism development. The mentioned critical factors and their enforcement should be reflected in **steering recovery funds and promoting sustainable finance mechanisms**.

Personal (Individuals and roles)

All the analyzed research studies conclude, that the need for training and education of employees all studies conclude that the need for education and training of employees is absolutely crucial for the further development of the industry. To ensure **the qualitative and quantitative progress in the human capital strategy**, the analysis, evaluation of education and training programmes in the short, medium and long term and developing the action plan are recommended. **The right skilling, re-skilling or up-skilling throughout their working lives and adapting** to new operational requirements will be the key for future growth in tourism and air transportation. According to the survey **safety, operations, security and economic disciplines** are the main fields where training will be required. (IATA 2022a) The promotion of **the principles of sustainability in the socio-cultural area** brings with it greater pressure on **social inclusion**, i.e. the existence of transparent policies, actions to promote employment, decent work, entrepreneurialism support and fair representation.

According to the UNWTO (UNWTO 2022a) from the perspective of strengthening the resilience of the tourism sector and related areas in the field of human resources, **support for tourism MSMEs recovery** with specific programmes, promoting **specific policies and initiatives that stimulate entrepreneurship**, enhancing **the linkages to other sectors** (the tourism value chain) or **digitalisation of education and skills development process** appears to be critical. A specific set of critical employment-related factors includes decent working conditions, gender sensitive and sustainable social protection, fair wages or occupational safety and health. (UNWTO 2022a)

Demands for multi-skilling and the ability of employees to manage work in multiple positions require **the development of multi-stakeholder partnership** in building **a new approach to education and training** in tourism and air transportation. The **creation and skills development for sustainable jobs**, management and leadership (teams), **training of new teams**, reducing of the compact teams and acquiring of **the new soft skills** bring more flexibility, social responsibility and resiliency in human resources management. For the air transport sector with very specific needs simulation utilization, digitization (DGPS, new communication environment), problem solving ability and adaptability or legal awareness and awareness of set regulations can be considered as CSFs. To set up a relevant strategy towards employees and MSMEs, the public sector cannot do without **data on the development and state of the tourism labour market**. Promoting employment in tourism and air transportation is the key together with **changing the perception of the sectors** as risky for employment.

Management processes

Accepting the collaborative approach that is based on **destination stewardship** has a greater chance of creating a resilient, inclusive and sustainable destination. Future resilient and sustainable destination cannot do without the participation of the private, public sector and the community (residents) in managing the destination (WTTC 2021a, p. 9). According to WTTC **the destination stewardship scenarios** offer four scenarios that differ in the weight of individual groups in management and decision-making processes (WTTC 2021a, p. 11). Three groups of stakeholders (public sector, private sector, residents) deal with strategic vision, implementation, form of collaboration, resource mobilization, power relationships and interdependencies, legitimacy, data and knowledge and other parts of marketing management of sustainable and resilient destination. Management processes thus combine **the set of CSFS in the areas of structure, strategy, technology and human resources** with the aim of developing a sustainable and resilient destination. The

The scope of the management processes in both sectors covers besides policy, governance or stewardship also the investment framework. The extension of public-private partnership (PPP) to the local community can fundamentally change the destination management framework and system towards **the so-called PPCPs** (public-private-community partnership). Developing a sustainable and resilient destination means promoting **human capital development through targeted policies and programmes** as well as **capacity building for communities** (UNWTO 2022a).

The question of **tourism and air transport investment** as a critical factor of development is absolutely essential. To manage and use investment as a critical success factor is recommended by UNWTO to **promote strategies and schemes to protect tourism and air transport investment** in cooperation with other institutions (e. g. national investment agency, relevant ministries) and **strengthen support for investment from international financial institutions**.

One of the latest WTTC studies focused on the critical factors of investing in the hospitality sector showed that the set of factors can be very broad depending on the nature of the destination (WTTC 2022a). In the investigated destinations, the study identified **sufficient liquidity, access to capital markets alongside political stability, taxation, physical infrastructure, air and ground connectivity, destination planning and sustainability** and last but not least **the workforce** as the most significant critical factors for sustainable and resilient development in hospitality sector. (WTTC 2022a)

Developments in recent years have demonstrated the urgency of **risk management and crisis management** not only in tourism and air transport. The basis of crisis management is a functional **market intelligence system**, so the importance of tourism data is evident, namely for policymaking and management as well as for **measuring the sustainability and resiliency** progress (MST, Measuring the Sustainability of Tourism). (UNWTO 2022a)

Conclusions

The rapidly changing environment brings new challenges for destination stewardship in response to following economic and non-economic trends. To implement changes towards sustainability and resiliency means going the route of fundamental changes in structure of stakeholders, the introduction of technologies, re-thinking the strategy and re-evaluation of management processes. More emphasis on **managing supply and demand, increasing sustainability awareness and requirements** or **evolving visitor economy** mean a change in the weight of players in the destination from strategies clearly oriented towards the visitor to a stronger orientation towards the community of residents and a balance in particular of the socio-cultural and economic interests of both groups. Growing sustainability awareness and already visible shifts from volume to value can redraw the view of **definition of success**. The concept of **destination stewardship** based on technological and digital solutions, attracting private sector investment, increasing in air and ground connectivity or increase in labour market flexibility has a chance to change stakeholders' approach to strategic planning in both tourism and air transport.

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SECTORAL PROFITABILITY DURING COVID-19 PANDEMIC: BIG DATA PORTRAIT OF CZECH COMPANIES

Ladislav Šiška

Abstract

The article explores impacts of the COVID-19 pandemic on profit-seeking sectors of the Czech economy. The research question was how significantly the pandemic impacted the profitability of companies in different sectors and what was the distribution of these impacts. Complete ROA time series for 40,559 active entrepreneurial entities (approx. 12% of population) were collected for the years 2018 to 2021. For each entity, the differences between the profitability of the first and last two years were calculated. Boxplot visualisation reveals that most hard-hit sectors were 'R-arts, entertainment and recreation' and 'I-accommodation and food service activities', the latter named also showed the greatest variability in profitability as measured by the interquartile range.

Keywords: Profitability, Pandemic, Structural Business Statistics, Czech Economy.

Introduction

Since the appearance of the first confirmed cases of coronavirus in Wuhan, China, in December 2019, the disease (COVID-19) has spread like an avalanche around the world in the following year. National efforts to cope with the pandemic - lockdowns, travel bans and other restrictions - have resulted in a reduction in economic activity and resource availability. Equity investments in China, the cradle of COVID-19, slumped and resulted in a year-on-year decrease of 60% in the volume of investment raised (Brown & Rocha, 2020). Another study shows an uneven impact, with 'Hotels and catering' and 'Residential services' among the sectors with the largest drop in value creation (He et al., 2020). Similarly, (Huyan et al., 2021) demonstrate that sixteen out of twenty sectoral indices in Australia were significantly affected by the increase in COVID-19 confirmed cases.

In the Central European region, researchers have paid particular attention to individual sectors. Tourism became the subject of a study (Stuchlíková, Botlíková, 2020), who surveyed 25 Czech companies, which reported that in June and July 2020 the average occupancy in accommodation establishments was 20-30 % (60-80% lower compared to the same period of 2019). Construction sector in Slovakia was analysed by (Gajdošíková et al., 2022) who report a decline

in ROA by an average of 2.6 percentage points between 2019 and 2020. An overarching study (Čadil et al., 2021) over 4,478 companies data sought to identify potential winners and losers based on a comparison with the impact of the 2008 global financial crisis. Their model indicated that mining and quarrying along with entertainment were in the greatest danger.

Despite mandatory statistical surveys, even official statistics do not give a comprehensive view of sectoral profitability. The Czech Ministry of Industry and Trade (2020) has stopped publishing its regular ‘Financial Analysis of the Corporate Economy’ (its last analysis deals with data from 2019). Its benchmarking system INFA has been dead for 3 years now and its ‘Panorama of the manufacturing industry of the Czech Republic’ covers only the sector of ‘C-manufacturing’. The Czech National Bank focuses primarily on financial sector. The only available data on sectoral profitability is provided by Czech Statistical Office (2022) and – at the beginning of 2023 – only for 2020!

In summary, neither the official data of the statistical offices nor the many studies analysing the impact of COVID-19 provide a larger sample that would show the distribution of profitability declines due to pandemics in different sectors of the national economy. This study strives to bridge this gap for the case of the Czech Republic.

Objective and Methods

The objective of this article is to explore impacts of the COVID-19 pandemics on profit-seeking sectors of the Czech economy.

The research questions were:

- RQ1: How significantly the pandemics impacted the profitability of companies in different sectors?
- RQ2: What was the distribution of these impacts?

The answers to these questions will be explored by comparing average profitability two years before and two years after the pandemic. The ROA indicator was used to measure profitability because it is recommended as a basic indicator of productive power in all financial management textbooks and at the same time it is not dependent on the capital structure of the company. ROA was calculated as the ratio of operating profit to total assets.

To get representative picture, as many companies as possible are analysed. Specifically, data on the assets and operating profit of 40,559 companies based in the Czech Republic were

collected. Only companies with complete data covering years 2018 to 2021 were included in the sample.

The sectoral structure of the sample and its comparison to the population is depicted in Tab. 1.

Tab. 1: Counts of businesses in population and in the sample

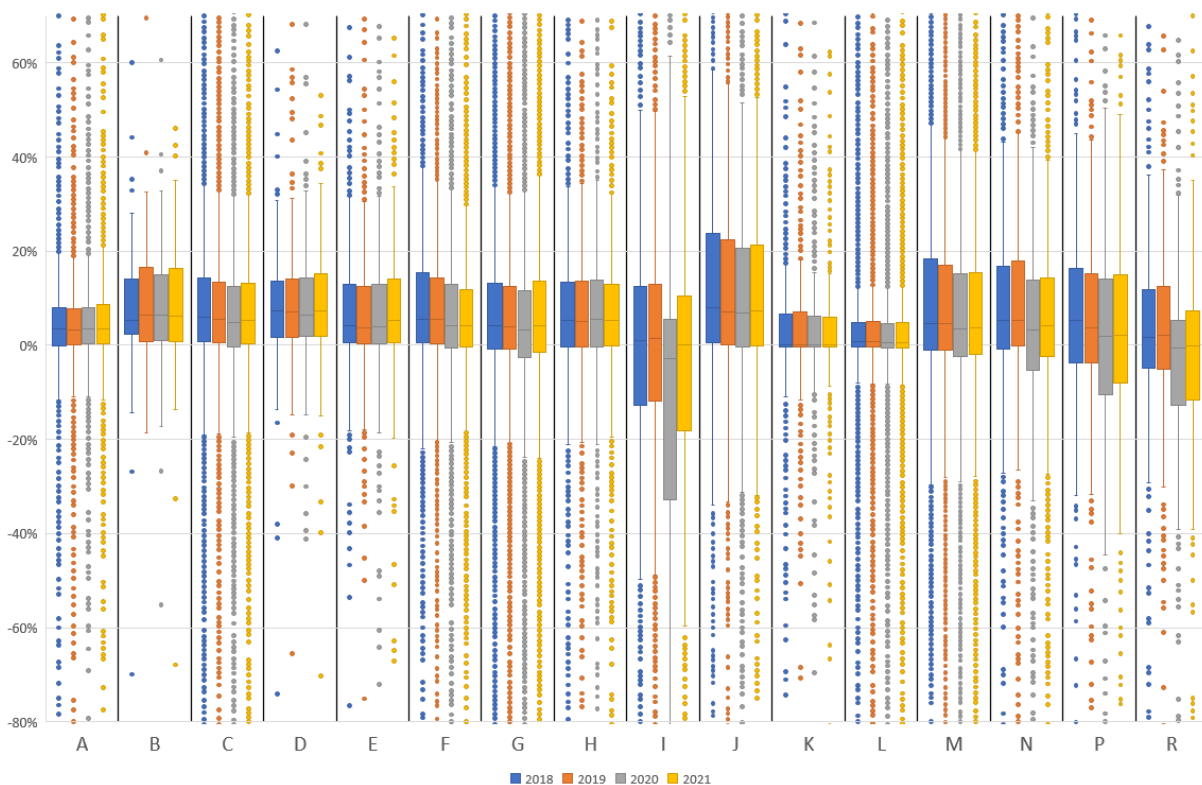
Principal activity of the business	Population	Sample	Coverage
A Agriculture, forestry and fishing	21,696	1,656	7.6%
B-E Industry total	53,373	6,676	12.5%
F Construction	48,456	4,068	8.4%
G Wholesale and retail trade;	65,908	8,947	13.6%
H Transportation and storage	11,866	1,401	11.8%
I Accommodation and food service	19,225	1,707	8.9%
J Information and communication	13,650	1,682	12.3%
K Financial and insurance activities	2,501	498	19.9%
L Real estate activities	18,955	6,395	33.7%
M Professional, scientific and	59,608	5,578	9.4%
N Administrative and support service	9,214	1,112	12.1%
P Education	8,798	429	4.9%
R Arts, entertainment and	10,025	410	4.1%
TOTAL	343,275	40,559	11.8%

Source: Economically active businesses reported by Czech Statistical Office (CZSO) in its Public database/Business Register Data. Author's sample statistics.

The analysed sample covered approximately 12% out of population of active entrepreneurial entities with sectors L a K overrepresented and P and R underrepresented. These estimates are consequence of the fact that Czech Statistical Office (CZSO) publishes counts of entities by principal activities including natural persons in business, who account for 75.2% of all subjects. This research focused on legal entities only, that is why counts published by CZSO for each activity sector were reduced by 75.2% to estimate only the number of legal entities.

To avoid bias due to outliers, box and whisker plots were constructed in MS Excel as the main tool of analysis. Fig. 1 presents such a boxplot illustrating ROA for each of the analysed years. The middle line of the box represents the median, which divides the data set into a bottom half and a top half. The bottom line of the box represents the upper bound of the 1st quartile (Q1) and the top line of the box the upper bound of the 3rd quartile (Q3), which means that the whole box corresponds to the interquartile range (IQR=Q3-Q1). The whiskers (vertical lines) extend from the ends of the box to the minimum values and maximum values after exclusion of outliers. A data point is considered an outlier if it exceeds a distance of 1.5 times the IQR below the 1st quartile (i.e. $Q1 - 1.5 * IQR$) or 1.5 times the IQR above the 3rd quartile (i.e. $Q3 + 1.5 * IQR$). The outliers are depicted with circles in the following charts.

Fig. 1: Boxplots of sectoral ROA between 2018 and 2021



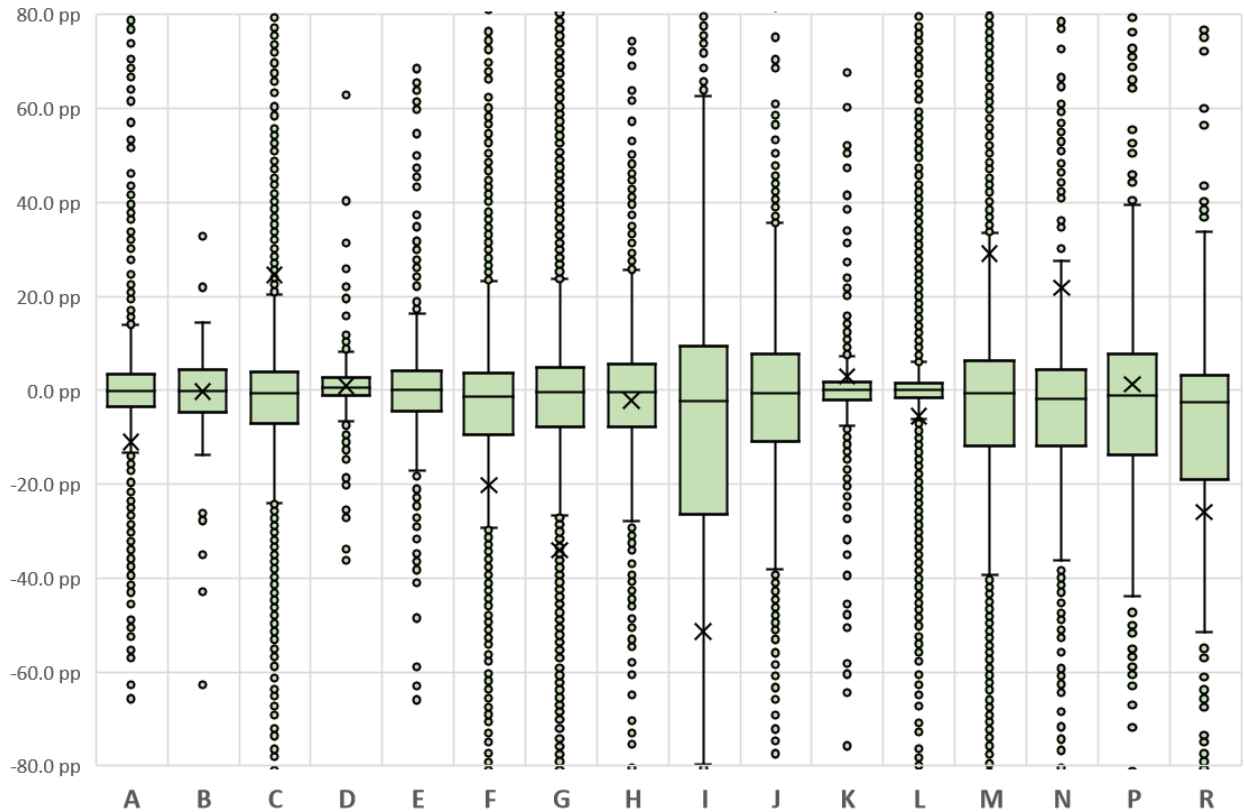
Legend: A-agriculture, forestry and fishing; B-mining and quarrying; C-manufacturing; D-electricity, gas, steam and air conditioning supply; E-water supply; sewerage, waste management and remediation activities; F-construction; G-wholesale and retail trade, repair of motor vehicles and motorcycles; H-transportation and storage; I-accommodation and food service activities; J-information and communication; K-financial and insurance activities; L-real estate activities; M-professional, scientific and technical activities; N-administrative and support service activities; P-education; R-arts, entertainment and recreation.

Source: Author's calculations in MS Excel.

Results and Discussion

The main results of the analysis are summarised in Fig. 2. The boxplot there shows by how many percentage points the ROA for each analysed company has fallen from the average for 2018 and 2019 to the average for 2020 and 2021.

Fig. 2: Change in two-year averages of ROA between and after pandemic



Legend: A-agriculture, forestry and fishing; B-mining and quarrying; C-manufacturing; D-electricity, gas, steam and air conditioning supply; E-water supply; sewerage, waste management and remediation activities; F-construction; G-wholesale and retail trade, repair of motor vehicles and motorcycles; H-transportation and storage; I-accommodation and food service activities; J-information and communication; K-financial and insurance activities; L-real estate activities; M-professional, scientific and technical activities; N-administrative and support service activities; P-education; R-arts, entertainment and recreation.

Source: Author's calculations in MS Excel.

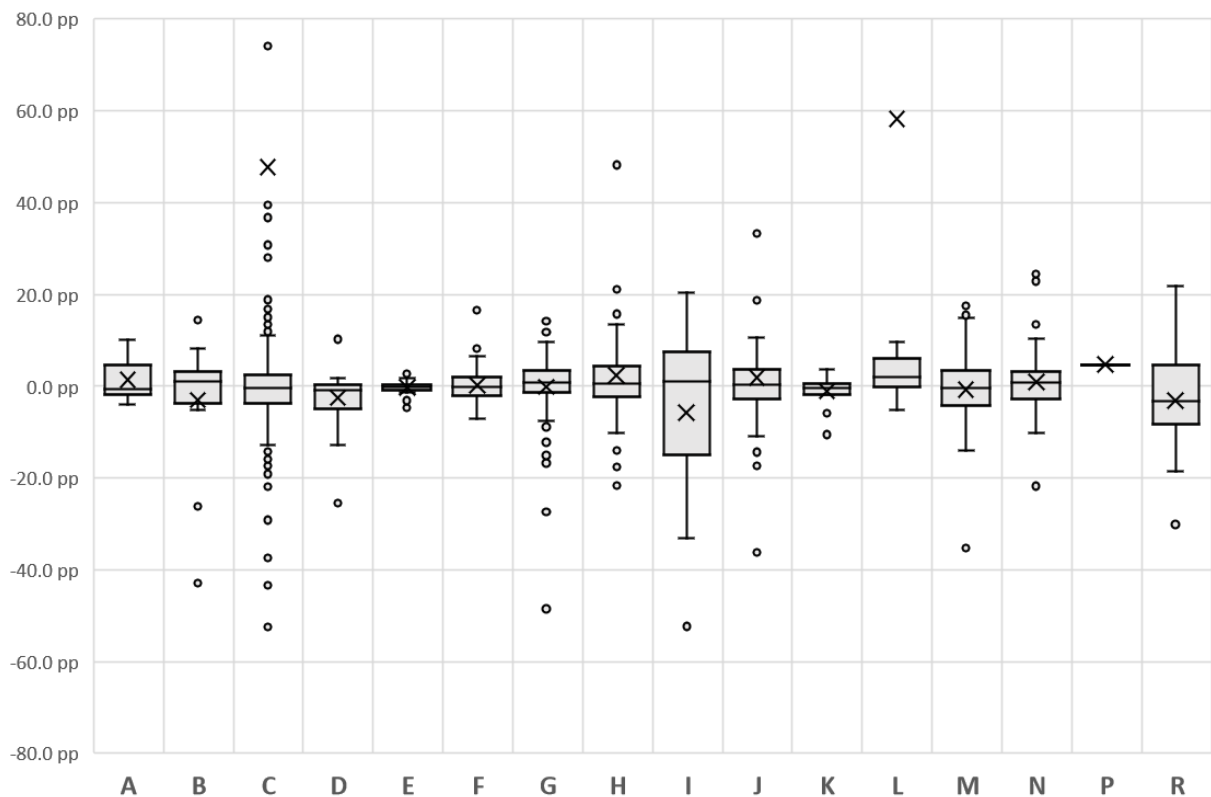
The positions of medians in Figure 2 reveal that the most hard-hit sectors were 'R-arts, entertainment and recreation' (2.5 percentage points decrease) and 'I-accommodation and food service activities' (2.3 pp decrease), followed by 'N-administrative and support service activities' (1.8 pp decrease), 'F-construction' (1.3 pp decrease) and P-education (1.2 pp decrease). The median of changes in ROA for any sector was not positive. Finally, the "X" marks in the graph, which show the mean change for a given industry, show how misleading such an assessment would be in this case, where the distribution does not follow a normal distribution.

The box sizes (ICQs) graphically represent the variability of ROA changes after pandemic spread. In this context, the sector 'I-accommodation and food service activities' again dominates. Moreover, its box is strongly asymmetric, indicating that the growth in profitability

(up to +9.4 percentage points) for third-quartile firms was relatively weaker than the decline in profitability of second-quartile firms (ranging from median -2.3 up to -26.4 percentage points). The divergent results for the mining and quarrying sector against the study (Čadil et al., 2021) suggest that the covid-19 pandemic represents a different phenomenon than the global financial crisis of 2008.

Finally, majority of cited studies agrees that the dominant factor in a firm's resistance to external shocks is its size. Therefore, using the same methodology, the calculated changes in ROA shown in Figure 2 were calculated and plotted in Figure 3 only for large firms with more than 500 FTEs. Indeed, a comparison of Figures 3 and 2 confirms the greater resilience of large firms, with half of large firms in many sectors achieving rising ROA despite the pandemic. Moreover, the frequent coincidence of means with medians demonstrates that large enterprises are less likely to deviate from a normal distribution.

Fig. 3: Change in two-year averages of ROA for large companies (>500 FTEs)

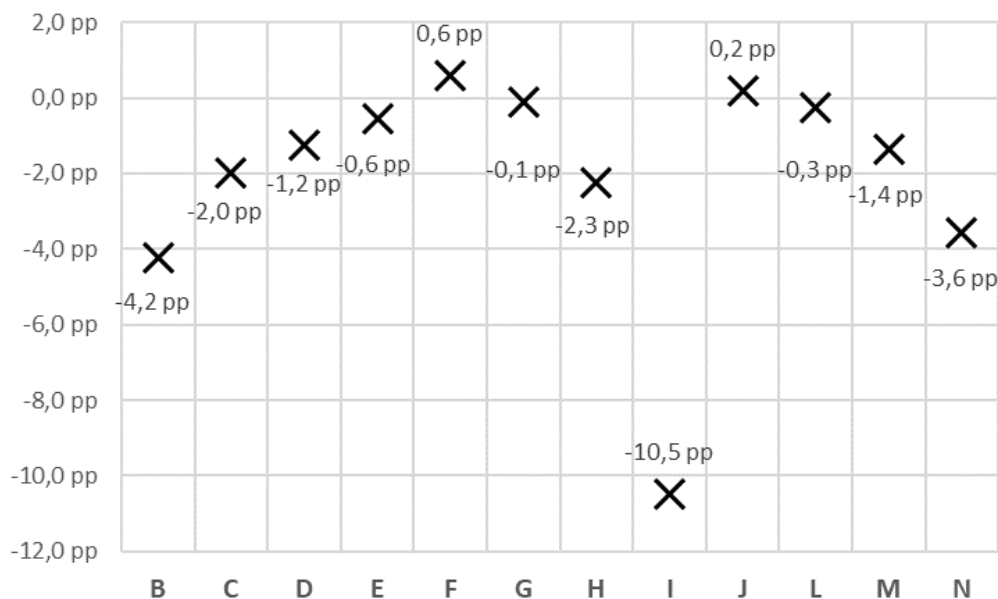


Legend: A-agriculture, forestry and fishing; B-mining and quarrying; C-manufacturing; D-electricity, gas, steam and air conditioning supply; E-water supply; sewerage, waste management and remediation activities; F-construction; G-wholesale and retail trade, repair of motor vehicles and motorcycles; H-transportation and storage; I-accommodation and food service activities; J-information and communication; K-financial and insurance activities; L-real estate activities; M-professional, scientific and technical activities; N-administrative and support service activities; P-education; R-arts, entertainment and recreation.

Source: Author's calculations in MS Excel.

The results found and shown in Figure 2 can also be compared with the changes in profitability published by the Czech Statistical Office (2022) and shown in Figure 4. However, the comparison will not be completely correct because the Czech Statistical Office (2022) lacks data for the year of 2021. These missing values may explain that the change in profitability (before and after pandemic) was positive for the 'F-construction' sector according to CZSO although the results in Figures 2 and 3 show the opposite. Another weakness is the point estimate used by CZSO, while the distributions in Figures 2 and 3 give a much more plastic pictures.

Fig. 4: Average change in ROA according to official statistics



Note: Czech Statistical Office (2022) published data on sectoral profitability in 2017-2020, that is why only ROAs for 2020 is juxtaposed to 2018 and 2019 mean.

Legend: B-mining and quarrying; C-manufacturing; D-electricity, gas, steam and air conditioning supply; E-water supply; sewerage, waste management and remediation activities; F-construction; G-wholesale and retail trade, repair of motor vehicles and motorcycles; H-transportation and storage; I-accommodation and food service activities; J-information and communication; K-financial and insurance activities; L-real estate activities; M-professional, scientific and technical activities; N-administrative and support service activities.

Source: Author's calculations in MS Excel.

Conclusions

The presented analysis fills the gap by showing the distribution of profitability declines due to pandemics of COVID-19 in different sectors of the national economy.

In response to the research questions, it can be concluded that all market sectors of the Czech economy were negatively affected by the COVID-19 pandemic (RQ1: How significantly the

pandemics impacted the profitability of companies in different sectors?). Strongly affected sectors were especially ‘R-arts, entertainment and recreation’ (2.5 pp median decrease), ‘I-accommodation and food service activities’ (, ‘N-administrative and support service activities’ (1.8 pp decrease), ‘F-construction’ (1.3 pp decrease) and P-education (1.2 pp decrease). The negative impact on profitability of the named sectors seems to be consequence of the government's measures to suppress the pandemic, such as restrictions on the movement of people and border closures, that led to deficiencies of guests or staff in the sectors concerned.

As far as RQ2 (“What was the distribution of these impacts?”) is concerned, the distributions are mainly characterized by interquartile ranges (IQR), which correspond to the sizes of boxes in Figures 2 and 3. These are highest in the sectors mentioned in the previous paragraph, but also in the ‘M-professional, scientific and technical activities’ sector. As expected, smaller changes in profitability, but also in its fluctuations, have been noted by large corporations.

The study faces many limitations. The main one is the availability of financial data, where many companies do not publish their financial results or publish them late. In addition, the number of enterprises analysed was significantly reduced by the research design, which demanded a continuous 4-year time series. Another limitation is the restriction to a single performance indicator (ROA).

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MEZINÁRODNÍ VZTAHY, DIPLOMACIE A VEŘEJNÉ VZTAHY

STRATEGIC GUIDANCE FOR BIDEN'S ADMINISTRATION IN THE RUN-UP TO A NEW US NATIONAL SECURITY STRATEGY - THE NATIONAL SECURITY STRATEGY, OCTOBER 2022

Branislav Kováčik, Juraj Kalický

Abstract

The US administration - apart from the NSS from 2017 and Nuclear Posture Review (2018), in the domain of solving major national and global security has relied (up to October 12, 2022) on the Interim National Security Strategic Guidance (INSSG) approved in March 2021 in the run-up to the adoption of a new National Security Strategy, i.e. the National Security Strategy from October 2022. The submitted paper, via the methodological apparatus of the descriptive, analytical and comparative method, aspires to provide analytical insight into the odds and options for addressing major nuclear weapons, nuclear and strategic threats, non-proliferation issues projected in INSSG. As the most crucial within stated INSSG's tasks has been undisputably reinforcement of nuclear stability and deterrence with the US greatest strategic rivals, i.e. Russian Federation – and, to a certain extent, China.

Keywords: national security strategy, Interim National Security Strategy, New START, national interest, arms-controlled processes

Introduction

In today's world, where more and more sophisticated weapon systems of the latest generation are being introduced, the security environment is changing, influenced by geopolitical conditions and the current global security environment. As for the term security environment, e.g. František Škvrnda defines it as: "*...the broadest term that is a concentrated and aggregated manifestation of the security situation at a certain time and space. It includes entities that are present and acting in it, as well as other conditions and factors that directly and indirectly affect the state of security.*" (Škvrnda, 2005, p. 32). As the security environment on global level changes, so do security threats that have or may have a direct or indirect impact. Due to the threat level and characteristics, the relationship between states is on the threshold of a new geostrategic transformation. James Jeffrey and Soner Cagaptay came up with the definition of the international security environment as a post-post-cold war period. According to Pavol Nečas and Jozef Kelemen, this post-post-cold war period gives more specific characteristics: “

... this time is connected with the return of realpolitics to international relations, starting with the multipolarity and political will to use military instruments to promote national interests. All instruments of power are used to promote the interests of the state. The development of a security environment is becoming increasingly difficult to predict and security challenges are becoming more challenging. This development affects how security and defence are ensured, their capabilities developed and the approaches by which the planned development of capabilities is carried out. The present is burdened by the beginning of multipolarity, an increased level of rivalry between the powers in the use of tools of the so-called hybrid method of struggle.“ (Nečas, Kelemen, 2020, p. 30-31)

The above-discussed security and political phenomena are and have to be reflected in our domain of this respective research, i.e. in the starting - departure points of the national security strategies of states, especially of world powers. As for the definitional frame of national security strategy *per se*, Oskar Krejčí points to the fact that: *“... the formation of a national security strategy is an intellectual-practical activity that not only defines general objectives and thus leads to practical action but also continuously evaluates the factual results of the policy, reassesses the results of its analysis, situation, continues to choose between alternative objectives of the means and possibly leads to correction of the original intentions or choice of means. These principles are generally applicable to any rational decision-making.“ (Krejčí, 2014, p. 304).* More specifically, according to another scholar of international relations - Bary Ross Posen, national security strategy focuses on military threats, because these are the most dangerous, and military remedies. After all, these are the most costly. Security has traditionally encompassed the preservation of sovereignty. (Posen, 2014, p. 7). Another expert on this issue, Stephen Krasner holds that: *“ ... a national security strategy is a conceptual framing that depicts how the world is, envisions how it should be, thus specifying a set of policies that can achieve that ordering. So this strategy is supposed to be designed to shape the international environment by determining international regimes, as such impacting the foreign policy choices of other states, and even determining the domestic regime of other countries.“ (Krasner, 2010)*

On American soil, the adoption of national security strategies accounts for a caution measure to guide US statecraft and to share a US official Weltanschauung and foreign policy philosophy at home and abroad of the still hegemonic superpower. Former US President Donald Trump officially presented the previous one on 17 December 2017. That basic security document formulated a vision of U.S. national security and the path to achieving it. What is more, at that

time adopted and put into practice document defined four main pillars of U.S. security policy (NSS, 2017):

- protecting the Homeland, the American People, and the American Way of Life
- promoting American Prosperity
- preserving Peace by Force
- strengthening American Influence

Briefly, the NSS 2017 officially and vividly declared a return to the politics of realism, i.e. recognizing the central role of power in international relations and as such defined U.S. national interests. The NSS reflected the 21st century that witnessed several stimuli for the return of the traditional realistic approach, the main manifestation of which can be marked by the intervention of the Russian Federation on the Crimean Peninsula in 2014. Before October 2022, apart from this document, Biden's administration still relies upon Nuclear Posture Review from February 2018. In short, this strategic document articulates the threats that require the United States to retain nuclear weapons and to reinforce deterrence by conveying to potential adversaries how U.S. nuclear resolve and posture will augment U.S. conventional military forces. The objectives of this document are deterrence of nuclear and non-nuclear strategic attack; assurance of allies and partners; achievement of U.S. objectives if deterrence fails; and capacity to hedge against an uncertain future. (NPR-2018) In sum, these two main political documents have accounted so far for two main pillars in US foreign and security policy to take appropriate steps in pursue of US national interest.

Having relied upon the above mentioned National Security Strategy from 2017 plus on Nuclear Posture Review (2018), in foreign and in the domain of solving major security problems, in March 2021 Biden's administration released, an additional strategic directive - the Interim National Security Strategic Guidance (INSSG)⁴. It was intended to narrow the gap before a full national security strategy was to be adopted and officially published the months ahead. Thus, this directive was supposed to serve as a complementary document and, in many aspects, a potential departure point for the creation of a new National Security Strategy. In other words, it gave the interim national security strategic guidance an authority both at home as well as

⁴ Before adopting a new National Security Strategy (NSS), the Administration of U.S. President J. Biden published The Interim National Security Strategic Guidance on March 3, 2021. (INSSG) Its aim is to familiarize both the domestic and the world public with the essential elements and possible approaches for addressing major security issues in the context of the current security environment within the world political scene, where the United States still plays the most important role. This directive will therefore be in force until a new national security strategy is issued.

abroad, and referred to national security measures and prospects. The directive laid out some important points of reference regarding the particular world regions. The attention was paid, among others, e.g. to rising Chinese power in Asia, the US military presence in the Middle East, a renewed Iranian push for nuclear weapons or an Israeli-Iranian conflict.

Objective and Methods

As for the objective and methods, this paper aspired within the limited and given span of space, via the methodological apparatus of the descriptive, analytical and deductive method, to provide a short insightful analysis and vision of the selected key parts of this strategic guidance (INSSG): how and what was implied in the directive to possibly and successfully guarantee and enhance the leading role of the USA by still maintaining the position of a key and decisive actor in arms-controlled and arms limitation processes. Mainly, by taking into consideration an effective diplomatic way to materialize the declared approach of U.S. President Joe Biden's Democratic administration to global security policy.

The Interim National Security Strategic Guidance (INSSG)

The decisive or most important point at issue in this directive was to primarily lead with diplomacy and to be open to partnership and cooperation. This intention was aspired to be implemented in areas such as, e.g. growing rivalry with China, Russia, and other authoritarian states, nuclear proliferation, cooperation with closest allies and partners, renewal of enduring sources of national strength, modernization of military capabilities, revitalizing America's network of alliances and partnership, but –most importantly- by leading first with diplomacy. The cooperative approach and need were also clearly stated as: *“Our world is at an inflection point. Global dynamics have shifted. New crises demand our attention. And in this moment of accelerating global challenges — from the pandemic to the climate crisis to nuclear proliferation to the fourth industrial revolution —, one thing is certain: we will only succeed in advancing American interests and upholding our universal values by working in common cause with our closest allies and partners, and by renewing our enduring sources of national strength.”* (INSSG)

As such the question arose: what were the tasks to be accomplished to impact, yet to positively mould the international security environment, especially in the sphere of reducing and eliminating nuclear weapons and on some other security issues via a proclaimed more cooperative approach and adroit diplomatic manoeuvres towards the “traditional“, and in the document clearly stated, geostrategic rivals of the US. As stated in the directive: *“We must also*

contend with the reality that the distribution of power across the world is changing, creating new threats. China, in particular, has rapidly become more assertive. It is the only competitor capable of combining its economic, diplomatic, military, and technological power to mount a sustained challenge to a stable and open international system. Russia remains determined to enhance its global influence and play a disruptive role on the world stage. Both Beijing and Moscow have invested heavily in efforts meant to check U.S. strengths and prevent us from defending our interests and allies around the world. Regional actors like Iran and North Korea continue to pursue game-changing capabilities and technologies while threatening U.S. allies and partners and challenging regional stability.“ (INSSG)

Considering the above-mentioned facts, the tasks to be accomplished to confirm the proclaimed diplomatic approach from the side of Biden’s administration as well as to positively impact the international security architecture accounted for the following measures. It was to strengthen trust and security worldwide. Supporters of these measures would particularly welcome e.g. the renewal of US membership in the international Open Skies Treaty (OST)⁵. Also, a possible retreat to The Intermediate-Range Nuclear Forces Treaty (INF)⁶, as Trump’s administration suspended its obligation under this treaty in February 2019, because of non-compliance and material breach of the provision of the INF, as well as due to China’s intermediate-range missile arsenals. Shortly thereafter, the Russian President also announced that Russia would officially suspend its treaty obligations. The status and reputation of US diplomacy will also be enhanced with the renewal of the United States in the Iran Nuclear Deal (Joint Comprehensive Plan of Action, JCPOA). In connection with the resumption of the U.S. position in arms control and nonproliferation of the process, Biden's administration's stance on the historically significant Treaty Prohibiting Nuclear Weapons (TPNW) of 2017, which was put into practice at the beginning in 2021, thus it will be at the centre of attention, in addition to continuing U.S.-Russian arms control negotiations, with the possible participation of other nuclear countries. At issue is also a continuation of negotiations on denuclearization with North Korea. Last but not

⁵ Signed March 24, 1992, the Open Skies Treaty permits each state-party to conduct short-notice, unarmed, reconnaissance flights over the others' entire territories to collect data on military forces and activities. (OST)

⁶ The 1987 INF Treaty - required the United States and the Soviet Union to eliminate and permanently forswear all of their nuclear and conventional ground-launched ballistic and cruise missiles with ranges of 500 to 5,500 kilometers. The treaty marked the first time the superpowers had agreed to reduce their nuclear arsenals, eliminate an entire category of nuclear weapons, and employ extensive on-site inspections for verification. ...In March 2017, a top U.S. official confirmed press reports that Russia had begun deploying the noncompliant missile. Russia denied that it is in violation of the agreement and has accused the United States of being in noncompliance. (see: INF)

least, a very important issue accounts for the five-year extension process of validity of the last U.S.-Russian control arms control treaty - New START.

New START – bipartisan strategic nuclear balance

Strategically, 21st century accounts for a period when the Russian Federation and the United States of America are mutually reachable utilizing inter-continental ballistic missiles and installed nuclear warheads within the time limit of app. thirty minutes. As for a strategic bipartisan strategic balance, the U.S.-Russian negotiations process raises the question of Russian tactical nuclear weapons and some new nuclear weapon systems. First of all, it is rocket technology. Russia was forced to accelerate developments in this area in response to the unilateral withdrawal of the US from the missile defence system limitation treaty (ABM) in 2001.⁷ Technologically, the new quality of the rockets is achieved primarily by increasing their speed to a hypersonic level (more than ten times the speed of sound). Thus nuclear weapons and strategic weapons are the directives identified as an existential threat and crucial task for the current US administration to deal with. As clearly stated in the document: *“As we re-engage the international system, we will address the existential threat posed by nuclear weapons. We will head off costly arms races and re-establish our credibility as a leader in arms control. That is why we moved quickly to extend the New START Treaty with Russia. Where possible, we will also pursue new arms control arrangements. We will take steps to reduce the role of nuclear weapons in our national security strategy, while ensuring our strategic deterrent remains safe, secure, and effective and that our extended deterrence commitments to our allies remain strong and credible. And we will engage in meaningful dialogue with Russia and China on a range of emerging military technological developments that implicate strategic stability.”* (INSSG)

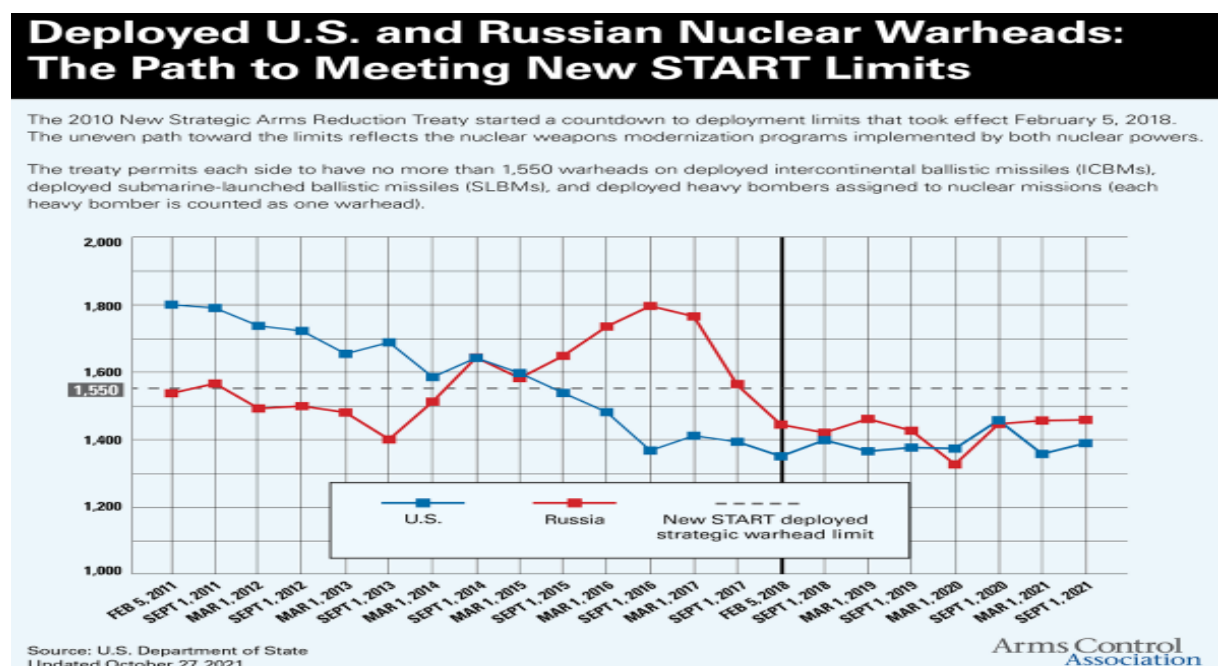
The collapse of the Intermediate-range Nuclear Forces (INF) Treaty in 2019 left New START as the only major surviving Russia-US arms control agreement.⁸ So the extension of the US-Russia New START Treaty, limiting the number of strategic (i.e. designed to strike enemies at the core of their military, economic, or political power) nuclear weapons deployed, is the first

⁷ The United States withdrew from the landmark 1972 Anti-Ballistic Missile (ABM) Treaty in 2001. Signed in 1972 by Washington and Moscow, the ABM treaty banned superpowers from deploying national defenses against long-range ballistic missiles and from building the foundation for such a defense.

⁸ The Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, also known as the New START Treaty, enhances U.S. national security by placing verifiable limits on all Russian deployed intercontinental-range nuclear weapons. The United States and the Russian Federation have agreed to extend the treaty through February 4, 2026. (U.S. Department of State – New START treaty)

hopeful step in the arms control efforts of the two nuclear powers (the US and Russia), which own about 90% of all nuclear weapons. Each side has approximately 1700 ready for immediate use. According to Arms Control Association, New START continues the bipartisan process of verifiably reducing U.S. and Russian strategic nuclear arsenals begun by former Presidents Ronald Reagan and G. H. W. Bush. The United States and Russia agreed on February 3, 2021, to extend New START by five years, as allowed by the treaty text, until February 5, 2026. (Arms Control Association - New START at a Glance, 2022) For more accurate information on the bipartisan (US-Russia) warheads limit, see the chart below.

Fig.1 US-Russia military warheads to meet New START limits



Source: <https://www.armscontrol.org/factsheets/NewSTART>

Diplomacy activities in the non-proliferation domain

The issue of another major regional issue, related to North Korea's nuclear and missile programs, is unlikely to be on the agenda anytime soon. As pointed to this fact in the directive:

“Renewed American nonproliferation leadership will also be essential to reducing the dangers posed by nuclear weapons. Working with allies and partners, we will pursue principled diplomacy to address the Iranian nuclear program and its other destabilizing activities. We will empower our diplomats to work to reduce the threat posed by North Korea’s growing nuclear and missile programs, standing shoulder-to-shoulder with the Republic of Korea and Japan.”

(INSSG) As for this issue, the Biden administration does not yet seem to have unified its

approach to addressing it. So far, it has stopped using the Trump-era term to achieve the ultimate goal of "denuclearization of the Korean Peninsula," which it has replaced with the term "denuclearization of North Korea." However, the term "denuclearization of the Korean Peninsula" was one of the four points of the Joint Statement of the first Kim-Trump summit in Singapore in June 2018. It was of a compromising nature because it took into account, among other things, North Korea's reservations about the concept of expanded nuclear deterrence, which also included South Korea. The Biden administration also emphasizes respect for the security interests of South Korea as well as Japan. and expects greater engagement from North Korea's closest ally – China in its addressing the issue. On the other hand, the North Korean side, meanwhile, rejects U.S. initiatives to resume talks and chooses to demonstrate military capabilities through cruise missile tests.

On the question of Iran and its nuclear programme, the temporary stagnation of U.S.-Iran negotiations to restore U.S. membership in the Iran Nuclear Deal (JCPOA) brokered by the Obama administration, and Iran's return to fulfilling agreed commitments, triggered by the prestigious reasons of who would back down first, have been overcome by an indirect form of mutual contacts. The United States withdrew from the JCPOA in 2018 intending to entice Iran to accept limits on enriching uranium, which Iran refused to observe and thus US sanctions remain in place. Closely related to the issue of Iran's nuclear programme and nuclear non-proliferation in general in the Middle East region is the question of creating a zone free of nuclear weapons and other weapons of mass destruction in the Middle East. The first-ever conference session on this topic was held at the United Nations in November 2019. Of the Middle East countries, it was only Israel, and then the American side, who both boycotted its participation at it. Here, the Biden administration has not yet commented on the issue.

Treaty on the Prohibition of Nuclear Weapons (TPNW)

Still ahead within the next political agenda is the TPNW Treaty entered into force on 22 January 2021, and it bans the use, possession, testing and transfer of nuclear weapons under international law. It was approved at the UN Conference in New York in 2017 by the votes of 122 non-nuclear states, in the absence of all nine nuclear countries and most of their allies and partners. In particular, it prohibits the development, production, ownership, purchase, use, and the threat of nuclear weapons, including their non-deployment in non-nuclear states. The new Treaty plays a complementary role concerning the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which have not yet

entered into force. According to Miroslav Tůma, it does not contradict them, since their regimes support each other to achieve a common goal. (Tůma, 2021) Its historical significance lies primarily in the delegitimization of nuclear weapons, including the concept of nuclear deterrence. Based on some of Biden's anti-nuclear statements, made both during his vice presidency in the Obama administration and during his presidential campaign, it cannot be ruled out that his administration will no longer take such an unequivocally dismissive stance on the TPNW treaty as the previous administration.

Conclusions

INSSG did account for an institutional effort to reflect the international security environment and the international political situation from the Biden administration's perspective. The directive clearly indicated the areas of strategic attention in order to pursue US national interest. The wording of the interim INSSG was undoubtedly transparent evidence of the Biden administration's orientation to confirm the position and role of the United States to be a key diplomatic actor in disarmament programs as well as in arms control negotiations. On the whole, the directive signalled a significant departure from the costly hawkish policies of the Trump administration. Thus it has been significant in the development of the new National Security Strategy (NSS) of the United States in the context of the guarantee of home security as well as the stabilization of the global international environment. As the most crucial within stated tasks is undisputably reinforcement of nuclear stability and deterrence with the US greatest strategic rivals, i.e. Russian Federation – and, to a certain extent, China. As for Russia and the US - both countries have the ability to the second strike in the event of an attack from the other side. The first sign of the US diplomatic success is the achievement of the extension of the New Start Treaty with Russian Federation, especially from the perspective of preserving mutual strategic parity. This parity is closely related to the principle of mutual guaranteed destruction (MAD). This particular step guarantees, among others, that collapse of the INF Treaty will not lead to the deployment of intermediate-range, nuclear-capable missiles on the American and Russian sides. In addition to nuclear threats, it will be necessary to formulate an appropriate U.S. diplomatic strategy because of the tense situation in Ukraine, where cooperation with NATO allies will be important. However, more detailed and long-term U.S. plans in the core areas are to be known now, after the release of the main security documents, new National Security Strategy from October 2022 and Nuclear Posture Review. Nevertheless, it can be stated that this directive has been an important and well masterminded strategic interstage for the correct orientation of the new course of American foreign and security policy.

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EKONOMICKÉ SOUVISLOSTI INTERDEPENDENCE

ECONOMIC ASPECTS OF INTERDEPENDENCY

Jana Marková

Abstrakt

V současnosti, v době druhé dekády 21. století, existují různé náměty, jak se má společnost vyrovnat s měnícím se prostředím. Dominantním filozofickým směrem byla řada let globalizace, nyní lze nalézt ve společnosti mnoho prvků, které vedou k deglobalizaci. Důležité jsou ekonomické zdroje a jejich geopolitické rozložení. V příspěvku je stručně popsána teorie globalizace a význam interdependence včetně současného pojetí změn v podobě VUCA world. Také je poukázáno na význam technologií pro Kreativní průmysl 4.0, který Konference OSN o obchodu a rozvoji (United Nations Conference on Trade and Development UNCTAD) považuje za pokračování původního konceptu Průmyslu 4.0.

Klíčová slova: globalizace; ekonomická globalizace; interdependence; VUCA world; Kreativní průmysl 4.0;

Abstract

Today, in the second decade of the 21st century, there are various themes on how society should cope with the changing environment. For many years, globalisation was the dominant philosophical trend, but now many elements can be found in society that lead to deglobalisation. Economic resources and their geopolitical distribution are particularly important. This paper briefly describes the theory of globalization and the importance of interdependence, including the current concept of change in the form of the VUCA world. The importance of technology for Creative Industry 4.0, which UNCTAD (United Nations Conference on Trade and Development) sees as a continuation of the original Industry 4.0 concept, is also highlighted.

Keywords: globalization; economic globalization; interdependence; VUCA world, Creative Industry 4.0;

Úvod

V současné velmi nejisté době existují různé náměty, jak se má společnost vyrovnat s měnícím se prostředím. Globalizace byla řadu let dominantním filosofickým směrem, který určoval další orientaci společnosti. Důležité jsou však především ekonomické zdroje, které společnost využívá. Efektivní tvorba i následné využití zdrojů pak přináší významnost některých nových aktérů. Geopolitický význam rozložení zdrojů je podstatným faktorem pro budoucí vývoj společnosti a i ekonomik.

Ve svém příspěvku nejprve krátce rozeberu teorii globalizace a význam interdependence včetně současného pojetí změn v podobě VUCA world. Následně popíšu současné ekonomické vazby hlavních aktérů a také význam zdrojů pro jejich společné působení. Také zmíním význam technologií pro Kreativní průmysl 4.0, který Konference OSN o obchodu a rozvoji (United Nations Conference on Trade and Development UNCTAD) považuje za pokračování původního konceptu Průmyslu 4.0.

1 Ekonomická globalizace

Globalizaci lze chápat z mnoha pohledů, a to jako dlouhodobý ekonomický, kulturní a politický proces, který rozšiřuje, prohlubuje a urychluje pohyb zboží, lidí i myšlenek přes hranice států a kontinentů. Tento proces má širokou ekonomickou, kulturní, politickou a environmentální dimenzi.

Německý sociolog Ulrich Beck definoval globalizaci jako procesy směřující k potlačování národních států a jejich suverenity (Beck, 2007). Globalizace představuje denacionalizaci, anulování vzdálenosti a vnímatelné mizení hranic všedního jednání. Globalizace je mnohorozměrná – obsahuje odlišné dimenze: komunikačně-technickou, ekologickou, ekonomickou, pracovní-organizační, kulturní, občansko-společenskou aj. To je podobné pojetí jako u Samuela Huntingtona, který popsal státy v rámci globálního vývoje jako stále primární činitele, nicméně postrádající velký díl své suverenity (Huntington, 2001). V rámci ekonomické globalizace pak dochází k rozvoji sjednocení celého světa po ekonomické stránce v podobě nadnárodních společností, mezinárodních organizací, díky pohybu pracovní síly a soustředění se do světových center.

Z hlediska ekonomických aspektů geopolitických změn je důležitá ekonomická globalizace. Mezinárodní měnový fond definoval v roce 2000 ekonomickou globalizaci jako historický proces, výsledek lidských inovací a technologického pokroku (Mezinárodní měnový fond, 2000). Ekonomická globalizace vychází z rostoucí integrace ekonomik po celém světě, zejména

prostřednictvím obchodu a finančních toků, a to včetně pohybu lidí (a práce) a znalostí (nebo technologie) přes mezinárodní hranice. Pohledem současnosti, tedy čtvrt století od definice MMF, je vidět, jak se dnešní nejen ekonomický svět změnil a globalizaci spíše opouští. Sledujeme totiž spíše desintegraci subjektů, a to lze vidět velmi příkladně v podobě brexitu, nebo s ohledem na stále sílící migrační toky a také v podobě diverzifikace zdrojů jako důsledek konfliktu Ruska a Ukrajiny, kdy mnohé nově zaváděné sankce boří výhody původní globalizace.

Samotný pojem globalizace se častěji využíval od konce 20. století, kdy šlo především o odraz technologického pokroku, který usnadnil a urychlil provádění mezinárodních obchodních i finančních transakcí. Tyto transakce však lze sledovat kdykoliv v minulosti, kdy byly využívány svobodné tržní síly, a to bylo vždy na všech úrovních lidské ekonomické činnosti, na vesnických trzích, v městských průmyslových odvětvích nebo finančních centrech mezi jednotlivými státy. Trhy podporují efektivitu prostřednictvím konkurence a dělby práce a následné specializace. Globální trhy nabízejí lidem větší příležitost proniknout na další a větší trhy po celém světě. Znamená to, že mohou mít přístup k většímu toku kapitálu, technologiím, levnějším dovozům a větším exportním trhům. Trhy však nutně nezaručují, že výhody zvýšené účinnosti budou sdílet všichni. Z tohoto pohledu pak globalizace skončí až s koncem využití tržních sil pro rozvoj nejen mezinárodní směny.

Mezinárodní měnový fond uvádí jako čtyři hlavní aspekty ekonomické globalizace mezinárodní obchod, pohyb investic a kapitálu, migraci osob a šíření znalostí (Mezinárodní měnový fond, 2000). Pokud kterýkoliv z těchto aspektů přestane působit pozitivně pro společnost, můžeme sledovat spíše deglobalizaci. Pozitivní směřování a výhled globalizace byl narušen již v době světové recese po roce 2008, silnější propojování světových vazeb bylo zpomaleno. Ukázalo se, že státy, které byly méně závislé na mezinárodních vazbách, recesi a následné přizpůsobení zvládaly lépe. Dnes, v době popandemické a v čase války na Ukrajině, se často hovoří o konci globalizace (Švihlíková, 2022).

Globalizace, a to nejen ekonomická, znamená odstranění různorodých hranic, růst otevřenosti a zvyšování přílivu informací o komplexním světovém dění. Teorie globalizace je úzce propojena z hlediska mezinárodních vztahů s teorií komplexní vzájemné závislosti, která ve světové politice vidí vzájemnou propojenost a závislost.

2 Interdependence

Model komplexní vzájemné závislosti neboli interdependence byl zformulován v 70. letech 20. století autory Keohane a Nye (Keohane, Nye, 2011). Hlavní myšlenkou je to, že se povaha

světové politiky v posledních desetiletích mění a nyní žijeme ve světě interdependence. Podle Keohane a Nye je závislost (dependence) stav, kdy je jev určen či výrazně ovlivněn externími silami. Vztah vzájemné závislosti (interdependence) popisuje situaci ve světové politice, kdy jsou na sobě všichni aktéři, včetně států, nevládních a nadnárodních aktérů, závislí a kdy se současně projevují nákladné efekty jejich vzájemného působení. Efekty, které mohou v důsledku interdependence nastat, mohou být kladné i záporné. S růstem záporných efektů interdependence roste i snaha zbavit se vzájemné závislosti. Takové efekty můžeme sledovat právě v době popandemické, která je navíc spojena s negativními efekty konfliktu na Ukrajině. Přelom tisíciletí byl přitom spojen především s pozitivními efekty interdependence, kdy se skoro přestalo uvažovat o možných negativních aspektech.

Pozitivní i negativní efekty interdependence vychází z toho, jaké jsou dopady politiky a akce jednoho aktéra na politiky a akce jiných aktérů a naopak. Koncept interdependence podle Keohane a Nye (Keohane, Nye, 2011) je vymezen vůči klasickému realistickému předpokladu o fungování mezinárodních vztahů. Komplexní vzájemná závislost má mít tři základní charakteristiky, a to více kanálů interakcí, absence hierarchie záležitostí a menší role vojenské síly.

Pokud jde o více kanálů interakcí, pak je tím myšleno mnoho formálních i neformálních propojení, které spojuje společnosti v mezinárodní politice. Tato propojení mohou být mezistátní, mezivládní a nadnárodní. Mezistátní vztahy jsou klasickými kanály, které předpokládá realismus. Pokud opustíme realistický předpoklad o státech jako koherentních jednotkách, objeví se mezivládní vztahy. A pokud opustíme realistický předpoklad o státech jako jediných jednotkách, půjde o nadnárodní vztahy.

U absence hierarchie záležitostí autoři poukazují na to, že agenda mezistátních vztahů a tedy i zahraniční politiky se stává stále více rozmanitou a záležitosti v ní nejsou řazeny dle jasné či koherentní hierarchie, což je významný rozdíl od realismu. V komplexní vzájemné závislosti může být na nejvyšší příčce mezinárodní agendy v konkrétním čase jakákoliv záležitost, a to jak ekonomická, sociální či environmentální, a není nejdůležitější pouze vojenská bezpečnost, jak předpokládají realisté. K takovému pojetí se kloní interdependence.

Na rozdíl od centrální role vojenské síly v realistickém světě plynoucí z ultimátní potřeby garantovat přežití, komplexní vzájemná závislost předpokládá její menší význam. Podle Keohana a Nyeho mohou sice intenzivní vztahy vzájemného vojenského vlivu přetrvávat, ale síla již není déle považovaná za vhodnou cestu dosahování jiných cílů, jako je např. ekonomické či ekologické blaho, neboť náklady vojenské síly jsou velmi vysoké a nejisté.

Pozitivní jsou na interdependenci možnosti výměny hodnot, avšak negativa, která mohou v důsledku vzájemné závislosti nastat, jsou dále rostoucí, a to v podobě zvětšujících se nerovností, nespravedlností nebo konfliktů (Ehl, 2001). Pak můžeme sledovat i procesy deglobalizace nebo desintegrace.

V rámci ekonomické globalizace a s tím související interdependence se stále častěji uvažuje o nutnosti reagovat na rychle se měnící prostředí, ve kterém se procesy vyvíjejí. Jde jednak o propojení s procesem Průmyslu 4.0, kdy se u většiny průmyslových odvětví v rámci formování strategií uplatňují nejen informační a komunikační technologie, které umožňují řídit velké komplexní systémy, ale také lidé tyto systémy vyvíjející, vyrábějící a obsluhující (Fotr, 2020). Významněji se o Průmyslu 4.0 hovoří od roku 2011 v souvislosti s německou high-tech strategií Industrie 4.0, a to jako o těžišti nové digitální strategie. Nástup Průmyslu 4.0 je možné definovat tak, že se jedná o přechod od vymezení dlouhodobých cílů a priorit k jejich naplnění krátkodobými aktivitami, konfrontaci s dopadem faktorů podnikatelského prostředí, které nemůže firma predikovat ani ovlivňovat.

Dále jsou změny spojovány s nestabilním a měnícím se světem, a to tzv. VUCA world. Jde o akronym čtyř anglických slov, která představují stav současného světa: V – volatility – proměnlivost – poukazuje na vysokou dynamiku změn, které jsou časté a rychlé. U – uncertainty – nejistota – znamená náročnost jakéhokoliv predikování. C – complexity – celistvost – je propojenost a nelineární souvislosti, jimž je náročné porozumět. A – ambiguity – dvojznačnost – ukazuje, že různá fakta mohou mít různé významy a nelze se omezit pouze na dualitu variant tedy, správně nebo špatně. Pojem VUCA byl poprvé použit v roce 1987, kdy se odkazoval na vůdcovské teorie aplikované na amerických armádních školách. Znamená nestálost, nejistotu, složitost a nejednoznačnost. Významnost získal tento přístup v době konce studené války, kdy byla situace pro strategické rozhodování nestabilní a nejistá. Najednou už nebyl jediný nepřítel, což mělo za následek nové způsoby vidění a reakce. Současná nestabilní situace je opět velmi podobná této nejisté situaci.

V souvislosti s interdependencí je potřeba uvést i další tendence jako regionalismus a internacionalismus. Internacionalismus jako snaha o mezinárodní řešení globálních a regionálních problémů přináší propojení a mezinárodní sounáležitost, která může být spojena až v interdependenci.

Huntington uvádí významnost regionalismu především s koncem 20. století, kdy šlo o regionalizaci světové politiky (Huntington, 2001). Hlavním problémem světové bezpečnosti se staly regionální konflikty, které nastoupily na místo konfliktů globálních. Bezpečnostní zájmy byly zdůrazňovány s ohledem na regionální pojetí. Obchod na vnitroregionální úrovni se

rozvíjel rychlejším tempem než obchod na úrovni meziregionální a vznikly regionální evropské, severoamerické a východoasijské bloky. Avšak regiony jsou základem spolupráce mezi státy jenom tehdy, kryjí-li se geograficky s kulturou (Huntington, 2001). samotné sousedství vzájemnou spolupráci nezaručuje, spolupráce je závislá na důvěře, která je tvořena ze společných hodnot a kultury.

Oproti tomu ekonomická interdependence bývá považována za velmi příznivý rys vzájemné integrace a spolupráce (Starr, 1997). Globální systém lze nejlépe chápat jako důsledek adaptace států na měnící se vzájemné závislosti - interdependenci. Státy jsou v tomto systému stále důležité, ale realita, které se přizpůsobují, se mění a tím se mění význam a důležitost mnoha strukturálních charakteristik. Způsoby, jimiž se státy přizpůsobují změnám v mezinárodním systému, vedou ke změnám jak v samotných státech, tak v jejich prostředí.

3 Ekonomické vazby hlavních aktérů - Kreativní průmysl 4.0

Světové ekonomické vazby prochází v posledních několika dekadách mnoha změnami. Růst objemu mezinárodního obchodu byl v pozitivním období expanze dvakrát i třikrát rychlejší než růst světového produktu (HDP). Mezinárodní obchod jako součást hrubého domácího produktu tak urychloval růst světového produktu díky levnému transportu meziproductů a levné kontejnerové dopravě. Takový trend ale nelze pozorovat v dobách světové recese, například v roce 2008 nebo v době pandemie a světových konfliktů. Můžeme tak pozorovat trendy deglobalizace.

UNCTAD definuje kreativní ekonomiku a hodnotí důsledky rychlých změn v automatizované technologii a pokročilé internetové komunikaci, které se staly známými jako Průmysl 4.0 pro kreativní ekonomiku (UNCTAD, 2021).

UNCTAD jde dále než k pouhé ekonomické definici kreativní ekonomiky a zahrnuje i umělecké, kulturní a průmyslové aspekty. UNCTAD uvádí definici „kreativní ekonomiky“ takto: Kreativní ekonomika je rozvíjející se koncept založený na tvůrčích aktivech, která mohou potenciálně generovat hospodářský růst a rozvoj. Může podpořit tvorbu příjmů, pracovních míst a příjmů z exportu a zároveň podpořit sociální začlenění, kulturní rozmanitost a lidský rozvoj. Zahrnuje ekonomické, kulturní a sociální aspekty, které se vzájemně ovlivňují s technologiemi, duševním vlastnictvím a dalšími aspekty. Jedná se o soubor ekonomických činností založených na znalostech s rozvojovým rozměrem a průřezovými tématy s vazbami na makro a mikroúrovni na celkové hospodářství. Jde o proveditelnou možnost rozvoje, která vyžaduje inovativní multidisciplinární politická řešení a meziřesortní spolupráci a opatření.

Jádrem kreativní ekonomiky jsou tvůrčí odvětví. „Kreativní odvětví“ lze definovat jako cykly tvorby, výroby a distribuce zboží a služeb, které využívají kreativitu a intelektuální schopnosti, a které se týkají zejména hlavních vstupů. Klasifikují se podle své role v oblasti kulturního dědictví, umění, médií a funkčních odvětví a tvorbě.

Konzervativní odhady uvádějí příspěvek kreativní ekonomiky ke globálnímu hrubému domácímu produktu na zhruba 3 procenta, což je v souladu s jejím příspěvkem ke světovému obchodu. Očekává se, že tento příspěvek bude posílen prudkým nárůstem digitalizace a pokročilých technologií, které charakterizují Kreativní průmysl 4.0. Mezi mnoha postřehy, které tato zpráva uvádí, jsou z hlediska udržitelného a inkluzivního rozvoje, zejména malých rozvojových zemí, důležité tyto: Kreativní průmysl 4.0 může urychlit přenos technologií, a to dokonce natolik, že velikost domácího trhu již nebude limitem při vývoji produktu. Objevují se nové příležitosti pro mezeru na trhu, které jsou spojeny právě s digitalizací. Klíčové je také to, že dostupnost odpovídající technologie bohužel není všude a na všech trzích dostatečná. Musí být mnohem lépe zpřístupněn zúčastněným stranám. Zpráva zdůrazňuje řadu politických možností zaměřených na využití potenciálu Kreativního průmyslu 4.0 pro hospodářský a sociální rozvoj.

Rozdíl mezi průmyslovými a vyspělými rozvinutými zeměmi v oblasti inovací se snižuje. Roční tempo růstu pozorované u zemí s nižšími a vyššími středními příjmy je totiž vyšší než u zemí s vysokými příjmy. Avšak inovační rozdíl mezi zeměmi s vysokou a nízkou výkonností se v posledních deseti letech zvyšuje. Například průměrný roční počet patentových přihlášek ze zemí s nízkými příjmy se od roku 2010 snížil o 16 %.

Sociálně-ekonomické dopady kreativní ekonomiky jsou mnohostranné. Ekonomové Daubaraite a Startiene (2015) zjistili⁹, že kreativní průmysl může ovlivnit národní ekonomiku mimo jiné prostřednictvím boje proti nezaměstnanosti, což je nejčastější propojení, a to zejména u nezaměstnanosti mladých lidí. Kreativní průmysl přispívá k tvorbě hrubého domácího produktu a přidané hodnotě a také k vývozu a celkově přispívá i k rychlosti růstu hrubého domácího produktu. Význam kreativního průmyslu je i v přispívání k sociálnímu a kulturnímu rozvoji a zvyšování kvality života. Navíc lze očekávat, že význam kreativní ekonomiky pro celkovou ekonomickou výkonnost pravděpodobně poroste. To znamená, že se pravděpodobně bude i nadále zvyšovat její význam pro tvorbu politik.

Hubert Escaith navíc hodnotí Kreativní průmysl 4.0 se zvláštní pozorností novým příležitostem, které jsou tak otevřeny rozvojovým zemím. Za tímto účelem lze i podle zprávy UNCTAD

⁹ Analýza 47 různých publikací z relevantní literatury.

revidovat řadu politických možností pro využití konkurenceschopnosti kreativních odvětví v rozvojových zemích v nové digitální ekonomice.

Závěr

Interdependence je významným faktorem pro určování vztahů mezi ekonomikami, jak je popisuje ekonomická diplomacie. Ekonomická globalizace je rozšířením pojmu globalizace ve směru širokého chápání závislostí, a to nejen zdrojových. Praktický význam má ekonomická diplomacie v rámci ekonomické globalizace mnohem více v dobách nestability a krize. I v takovém období je ale užitečný systém strategií, na který bylo v článku poukázáno v případě Kreativní ekonomiky, kterou prosazuje Konference OSN o obchodu a rozvoji. Reakce společnosti, a to jak vlád, tak i mezinárodních organizací nebo nadnárodních společností, musí být propojena i s významnou interdependencí a možným rozvojem v rámci procesu Průmyslu 4.0.

Teorie globalizace jako významný filosofický směr přináší důležité pohledy na současnou měnící se společnost včetně vývoje světové ekonomiky, a to v rámci mnoha geopolitických změn. V příspěvku byla krátce uvedena teorie globalizace, a to v souvislosti s interdependencí, regionalismem i internacionalizací. V tomto kontextu Konference OSN o obchodu a rozvoji rozšiřuje původní chápání konceptu Průmyslu 4.0 spolu s mnoha technologickými změnami na nový koncept Kreativní průmysl 4.0.

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CLUB OF ROME: NEW TRENDS AND IDEAS

Bohumír Štědroň, Jakub Štědroň, Linda Nepivodová

Abstract

The article analyses the past, present and new future trends of the Club of Rome. Attention is paid to new trends, i.e. communication with the biosphere, quantum computers, a holographic model of the world, and the resulting necessary reform of the political system.

Keywords: Club of Rome, biosphere, holographic world model, quantum computers, political system reform

Introduction

The formation of the Club of Rome represents a significant milestone in the history of civilization (Moll, P. 1993). The founding of the Club of Rome goes back to the year 1968 (Johnson, I. 2012). The founding fathers were Aurelio Peccei, a member of the Fiat Group Management Board, president of Olivetti and also a founder of Italconsult and Alexander King, a British chemist and a Scottish president of the Organization of Economic Cooperation and Development, who both shared a concern about the future of human nature and planet (Moll, 1993). The reason for the get-together of Aurelio Peccei and Alexander King was a transcript of Aurelio Peccei, in which King recognized the overlapping interests of them both (Keith, 1999). To spread and share their thoughts with others, the two invited more than 30 scientists and economists from all over the world to a conference organized by them. The conference on the problems of humanity in our future was considered a failure at first, but then led to the formation of a network of six European scientists. Together, they made a joint decision to create the Club of Rome and to promote its ideas all around the world (Club of Rome, 2020d).

The Club of Rome tried to describe all challenges that the humanity and world faced in 1972 and tried to overcome them (Johnson, I. 2012). Their published report from the year 1972 shows that these problems date back many years and have not existed only for a short time. In the report from 1972, entitled “The Limits to Growth”, the Club of Rome looked at the problems and challenges for the first time and formulated scenarios about the future of the world and mankind (Meadows & Meadows, 1972). They soon reached a worldwide attention. With its scientific considerations and critical scenarios about the world, the Club of Rome had a great influence on the population at the beginning of its existence.

In 2022, a number of international conferences were held analyzing the above-mentioned report. For example, "MIT-THE LIMITS TO GROWTH+50 CELEBRATION EVENT" created by The Club of Rome May 27, 2022,

EARTH4ALL PRESENCE AT THE STOCKHOLM+50 CONFERENCE created by The Club of Rome, June 02, 2022,

VOLKSWAGEN FOUNDATION: 50 YEARS THE LIMITS TO GROWTH created by The Club of Rome June 08, 2022 or

Marking the occasion of the "50th Anniversary of The Limits to Growth" with Professor Dennis Meadows, created by The Club of Rome June 14, 2022.

From the point of view of 2022, the authors of the study "The Limits to Growth" worked with exponential functions instead of logistic functions and did not appreciate the impact of technological development (the explosive development of information and communication technologies, e.g. the Internet absorbed the predicted negative trends) on the relative stability and prosperity of the civilisation environment as well as the possibilities of space expansion or the extraordinary impact of the sports segment on the global environment.

Objective and Methods

The primary objective of the present study is to analyse current and future trends and the method used is a systems analysis.

Systems analysis is the process of studying a procedure or business to identify its goal and purposes and create systems and procedures that will efficiently achieve them. Another view sees system analysis as a problem-solving technique that breaks down a system into its component pieces, and how well those parts work.

The Club of Rome, after its foundation, has attracted extraordinary interest from the media, industry executives and politicians. It has moved along a pendulum trajectory and for the past few decades, mentions of the Club of Rome in the media have been sporadic. In 2022, 50 years have passed since the publication of the famous book (Meadows, D. H., & Meadows, D. L. 1972) and international conferences are currently taking place around the world analysing the Club of Rome's 1972 forecast.

Results and Discussion

"The Limits to Growth" was published in 1972 and was very popular at the time. The book has been published in more than 30 languages and in more than 30 million copies. The book was based on computer simulations which suggested that economic growth could not continue indefinitely and that all resources, especially energy resources, would soon be exhausted. The book modelled the depletion of 19 non-renewable resources. In the case of oil, depletion was expected to occur after 20 years, i.e. in 1992, with exponential growth in consumption, and even if the recoverable reserves were to increase 5-fold, oil would be depleted after 50 years, i.e. this year. These predictions caused great concern and, to some extent, panic, because the depletion of non-renewable resources was to have far-reaching consequences: a dramatic fall in per capita food production after 2020, with the consequent starvation of people around the world and, from 2050 onwards, a decline in the planet's population. Similarly, industrial production was to decline dramatically from 2020 onwards. On the other hand, a positive side effect of the above was to be a decline in pollution of the planet after 2040. Today, 50 years on, we have the opportunity to look back at the strengths and weaknesses of 'The Limits to Growth'. On the one hand, we see that they were completely wrong on some points, and on the other hand, the book is an appeal for solutions to environmental problems that is still relevant 50 years later. A look at the prediction of oil depletion shows that everything is different. In 2022, we may be facing relatively high oil prices, but these are in no way due to the depletion of reserves, but to the Russian military attack against Ukraine and the fact that OPEC has cut production. There is enough oil for at least another 50-100 years, but more likely for even longer. The authors of 'The Limits to Growth' underestimated the capabilities of global markets and scientific and technological progress. The increasing demand and scarcity of oil is leading to an influx of capital being used to find more and more conventional oil resources around the world. The second underappreciated factor is scientific and technological progress. The authors of 'The Limits to Growth' did not anticipate that new fracking technology would emerge that would allow gas and oil to be extracted from rock segments where oil had never been extracted before (shale gas and oil). M. King Hubbert is often credited with introducing the notion in a 1956 paper which presented a formal theory and predicted U.S. extraction to peak between 1965 and 1971) so popular in its day, has not come to pass. It is quite possible that the tipping point will come at some point, but it certainly will not come as soon as was expected in 1972. On the other hand, the call for environmental protection has remained very relevant, but the emphasis has shifted. Today, the problem for the next 100 years is not that we will not have fossil fuels, but that in using them we will increase carbon footprint, raising the temperature of the whole planet,

which could lead to the melting of glaciers, to the rise in the world's oceans and to many disasters, which will cause droughts and extreme weather of all kinds all over the planet. One can assume that if the authors of 'Limits to Growth' were alive today, they would be sitting in conferences to save the planet and talking about catastrophic scenarios for the future of the world if our carbon footprint is not limited.

The Club of Rome organises regular meetings and provides forecasting information and information on the activities of all national associations. Today, the Club of Rome is an organization consisting of experts from different sectors. These include heads of state, politicians, notable scientists and economists, as well as businessmen and -women spread over five continents. The composition of the organization demonstrates a broad expertise that it achieves through the different competencies of these people. All the individual members of the organization share the vision of a sustainable future for mankind and earth. The aim of the association is to "define comprehensive solutions to the complex interconnected challenges that we face in our world and to overcome the crises through these solutions. The objectives also include the identification of long-term and interdisciplinary research, the development of future scenarios and analyses as well as the development of opportunities of action to be implemented in the end (Johnson, 2012). In order to draw attention to the relevant problems of the world, the Club of Rome published more than 45 reports, in which the most current and pressing problems and tendencies over the development of the planets and the future of mankind are prognosticated. The publications can thus create a basis for long-term changes (Štědroň, 2019) in the global social, environmental and economic systems.

Conclusions

Summarising the above facts (Keith, S. 1999), it is clear that future trends (Štědroň, 2019) will include the following interrelated components:

1. The publication of "The Limits to Growth" in 1972 produced many interesting facts using exponential extrapolation models. It is very likely that the saturation level for the relevant logistics functions will be placed much higher due to technological developments, i.e. probably between 2050-2100.
2. The current evolution of civilisation requires new objectives, e.g. the staging of the Olympic Games on the Moon, or the creation of green areas from current deserts in Africa. The sport segment itself has an extraordinary globalising influence.

3. New results in physics e.g. experiments with Bell's inequalities or the award of the Nobel Prize in Physics in 2022 show that the present world can have a holographic structure.
4. The further development of RFID and 3D technology will increase the average age above 100. RFID technology will gradually enable communication with the whole biosphere (animals, plants) to be integrated into the political and economic system.
5. In terms of quantum computing technology, it can be predicted for 2040 and beyond that quantum computers will reach hundreds of thousands or billions of qubits after 2040.
6. The sport segment will continue to exert an extraordinary influence on the development of civilisation as an integrating and unifying globalising factor that will make it possible to significantly reduce the diseases of civilisation caused by the development of information technology and artificial intelligence. When it comes to team sports, it can be assumed that artificially intelligent (robot) referee as a successor to the "hawk's eye" will be deployed within ten years and by 2040 at the latest, a robot team will have beaten the world football champion, hockey and other team sports under international rules. Legislative measures will necessarily follow: robot teams will not be allowed to participate in human competitions, just like the chess program is now not allowed to have human players in tournaments.

And similar legislative restrictions will apply to the now popular e-sports and many other segments (cryptocurrencies, marketing, political and sports forecasting). After 2040 we will also get used to robot lawyers, judges and prosecutors automating sports arbitration. Completely new growth opportunities will be demanded by sport in the biosphere segment (plants and animals).

Therefore, given the facts analysed, technological progress and the emergence of new segments in the political and commercial market will necessarily require a complete reform of the political system and the adoption of completely new laws.

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**LOGISTIKA,
INFORMAČNÍ A KOMUNIKAČNÍ TECHNOLOGIE,
VIRTUÁLNÍ REALITA**

APPLYING THE AMBULANT INFORMATION SYSTEM DURING AN EVENT WITH A MASS DISABILITY OF PERSONS

Daniel Brezina

Abstract

Crisis events, especially in which large numbers of people are killed or injured, place increasingly complex demands on an effective system of rescue work. The efficiency of rescue operations is increased by software support, including various tools, procedures and processes. The paper's primary goal is to evaluate the current state of information software support in the Integrated Rescue System. In this paper, the author points out the possibility of using the new Ambulant Information System to optimize decision-making processes during an event with mass disability. Optimizing decision-making processes and information flows in crisis management is only possible with the possibility of applying modern methods and procedures used by managers and executives worldwide.

Keywords: information system, crisis management, communication system, decision-making processes

Introduction

One of the essential measures in preventing the occurrence and effective and efficient resolution of crisis events is the comprehensive assessment of risks, their permanent reduction and monitoring of changes that enable the implementation of an active anti-crisis policy and the prevention of crisis events. The next step is processing crisis plans, creating forces and means, concentrating resources to solve possible crisis events, and preparing methodical procedures to eliminate their negative consequences. The mentioned activities are the core of the scope of crisis management, which becomes an integral part of public administration institutions and business entities.

The task of crisis management, which operates at various levels of public administration, is to create legislative, personnel, organizational, material and technical conditions for the prevention of crisis events and their practical and economical solution.

The activity of all components of the Integrated Rescue System assumes the mastery of special knowledge and, in the executive components, also specific abilities and skills. The dynamic development and process of permanent improvement of the entire rescue system, all its

elements, used progressive technologies, advanced technology, means and processes of material security creates the conditions for building, effective functioning and improvement of the Integrated Rescue System.

Theoretical backgrounds and the current state of the problem

In the introduction of the paper, it is necessary to define the basic terms and define the terms that are related to the solved problem. These will be part of the theoretical basis for increasing the efficiency of crisis management processes and, at the same time, enable the assessment of the conditions of the mentioned activities.

In order to manage individual crisis events, it is necessary to have specific knowledge about the behaviour of systems, their functions and connections. In the case of natural disasters, it is difficult to predict their occurrence and overall course. For this reason, the existence of a specific type of management that deals with this issue and is known as crisis management is essential.

Šimák (2016) writes in his publication that **crisis management** was first used and practically applied in 1962 during the Cuban crisis. American President John Fitzgerald Kennedy assembled a group of experts from various fields whose task was to prevent the outbreak of World War 3 and to find a peaceful solution to the international crisis during the Cold War.

According to Act no. 387/2002 Coll. on state management in crisis situations outside of wartime and state of war, as amended, crisis management is defined as *"a summary of the management activities of crisis management bodies, which are aimed at analyzing and evaluating security risks and threats, planning, taking preventive measures, organizing, implementing and control of activities carried out in preparation for crisis situations and their resolution"*.

In the Slovak Republic, the **Integrated Rescue System** was established in 2002 as a result of the experience of European Union countries in order to improve the quality of rescue activities. According to Act no. 129/2002 Coll. on the integrated rescue system, as amended. The integrated rescue system ensures the rapid use and coordination of forces and resources of rescue entities in the event of a danger of a crisis events or during its resolution.

According to Ristvej (2011), **information systems** can be a powerful tool in supporting decision-making in all phases of the crisis resolution cycle. Historically, the main emphasis is on the reaction phase. However, a change is gradually taking place, and information systems are becoming more critical in the subsequent phases of the cycle of solving crisis events,

emphasising prevention and possible analyses. An information system can currently be defined as software and hardware equipment that enables data collection, filtering, storage and usability. Their application in the entity enables the connection of individual levels of management, streamlining the exchange and use of data between them. In the past, we mainly referred to file cabinets, account books, attendance books, and archives as information systems. Electronic systems gradually replaced these with data available without space and time restrictions (Ristvej 2015).

Currently, the requirements are primarily for timely, filtered and correct data in a short period under challenging conditions. Among these, we also include an **event with a mass disability of persons**. By this term, we mean in the sense of Act no. 284/2008 Coll. emergency medical service as amended § 1, paragraph, "*every adverse event where the number of victims with health damage or life-threatening injuries is three or more*". In the event of a mass disability event, we can divide the necessary data into several groups:

- basic information about space, time and victims,
- extended information about space, time and victims,
- information on the possibility of deploying forces and resources,
- information about the capacity options of the nearest medical facilities.

Coordcom software is used in the Slovak Republic to ensure the deployment of Integrated Rescue System units. With the help of this software, the dispatchers of the Integrated Rescue System coordination centre can manage and coordinate the solution of emergency events, from the reception and identification of the incoming emergency call to the dispatch of rescue units to the scene of the intervention and its coordination. Coordcom software includes:

- emergency management,
- management resources,
- integrated communication with support for current and future standards within analogue and digital radio, telephony, IP communication and data communication,
- multi-organ support,
- management of automatic alarms,
- accessible geographical location with a complete IP architecture,
- the possibility of expanding the installation for local, regional or national operations.

The Coordcom software does not have the capabilities associated with providing sufficient information about the victims, their previous condition and complications, the capacity and personnel options of the hospitals and the operating rooms themselves, or the stocks of

medicines and other necessary medical material. He could process this data and then send the information to the event's location with the mass disability Ambulant Information System (AMBIS).

Objective and Methods

The paper's primary goal is to evaluate the current state of information software support in the Integrated Rescue System. Currently, there are many scientific research methods, techniques and procedures through which it is possible to create models or algorithms that serve to optimize decision-making processes. Algorithmic procedures based on the analysis of the current state of the problem of crisis management were used in the paper.

Possibilities of using the Ambulant Information System

Company Prosoft Košice was founded in 1993. Since its inception, it has been developing software products for healthcare providers. In addition to development activities, the company performs system analysis and design, implementation, operation and maintenance of information systems (Prosoft, 2004). This company came to the market with a package of new information systems intended for the management of medical facilities and the doctors themselves. The eHealth package is called the Complex Hospital Information System (CHIS), which includes two information subsystems, the Medical Information System (PROMIS) and the Management Information System (MIS). PROMIS also includes the Ambulant Information System (AMBIS) (Promis, 2022).

AMBIS is currently available for general practitioners and entire departments. The product of this company does not impose any special requirements on computer technology. The system is mainly intended for effectively managing the ambulance, relieving the administrative burden on ambulances and speeding up the flow of information.

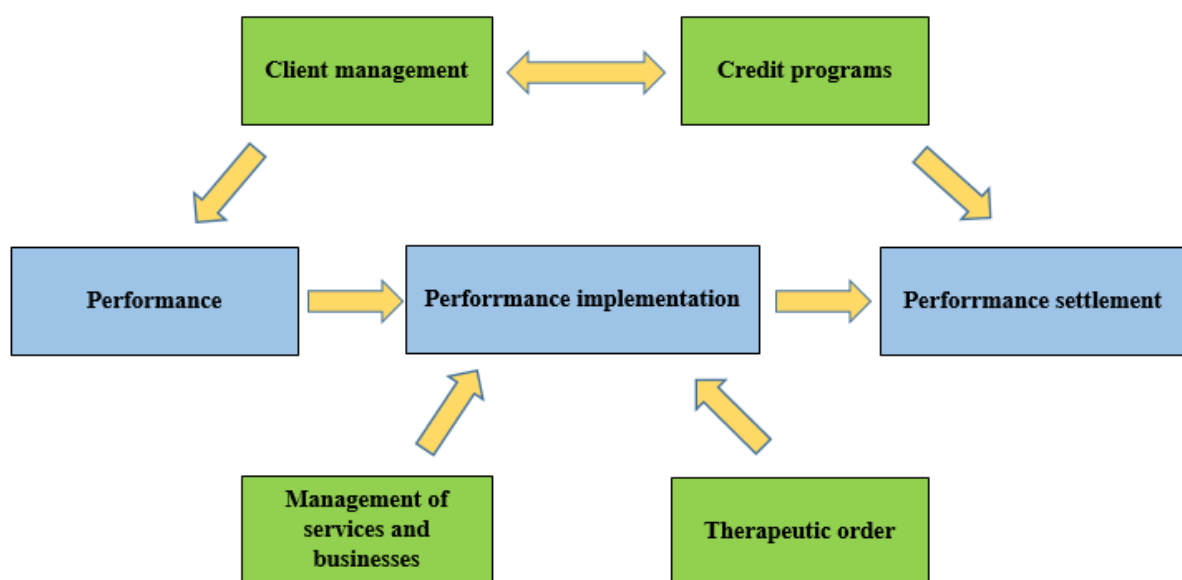
AMBIS uses the IBM platform for complex communication systems, thanks to which it is secured:

- the possibility of cooperation between several clinics,
- the possibility of working from a remote location,
- security when transferring and storing information (encryption, electronic signature),
- quick search for information in databases,
- integration with electronic mail (Ambis, 2022).

AMBIS automates the primary process (realization of services to patients), which includes the following sub-processes, such as planning client visits, service implementation (examination, examination, procedure, consultation), financial accounting (payment, deduction from credit), performance scoring (according to the treatment regimen). Furthermore, AMBIS automates support processes: managing client relations, management of own services and products, management of credit programs (bonus and barter programs), management overviews (reports and statistics) and treatment schedules. The scheme of operation of AMBIS is multi-level, as it includes management, planning and accounting of surgeries, private clinics and entire hospitals, which are interconnected (Fig. 1) (Ambis 2022).

The AMBIS program enables the division of data into cards, thus enabling a clearer and faster search or their simple modification. Patient data is contained in four sections of the program, which can be viewed separately for each patient or as a summary of a given surgery, hospital or another medical facility. The patient card allows the operating staff to view the patient's data. Examples of such data include a list of completed and planned visits, medications, diets, and allergies. Thanks to this card, it would be possible to quickly find out the patient's previous condition, drug allergies, and possible restrictions or pregnancy in the case of a mass casualty event. This would enable the effective deployment of treatment already in the area of the wounded and the reduction of rescuers' errors caused by misinformation about the victim's previous condition (Ambis, 2022).

Fig. 1: Basic diagram of the Ambulant Information System



Source: Own processing

The event planning calendar card allows one to look at the weekly calendar. It contains individual icons representing the clinics the patient has visited or should visit during that week. This service also has a reminder character and warns the doctor how many patients he expects on a given day and in total in a specific week. In the case of a mass disability event, it would be possible to read from the card the occupancy of operating rooms, specialist workplaces and their equipment, and the availability of doctors and medical personnel.

The form for a medical finding is a separate part, enabling a simplified diagnostic activity of the doctor. When writing about the progress, "model" texts are offered, which significantly speed up the process of creating a finding. The primary and secondary diagnoses are selected from a codebook with assigned point values (for insurance companies). The form for medical findings would find application in the context of an event with a mass disability of persons when searching for previous and planned examinations and possible operations to speed up and improve the diagnosis of the victim.

The financial card remains unused when solving an event with a mass disability of persons, but it forms an essential part of the entire system. The financial card enables simple treatment pricing by medical personnel, sending payment data directly to the health insurance company, or issuing an invoice to the patient.

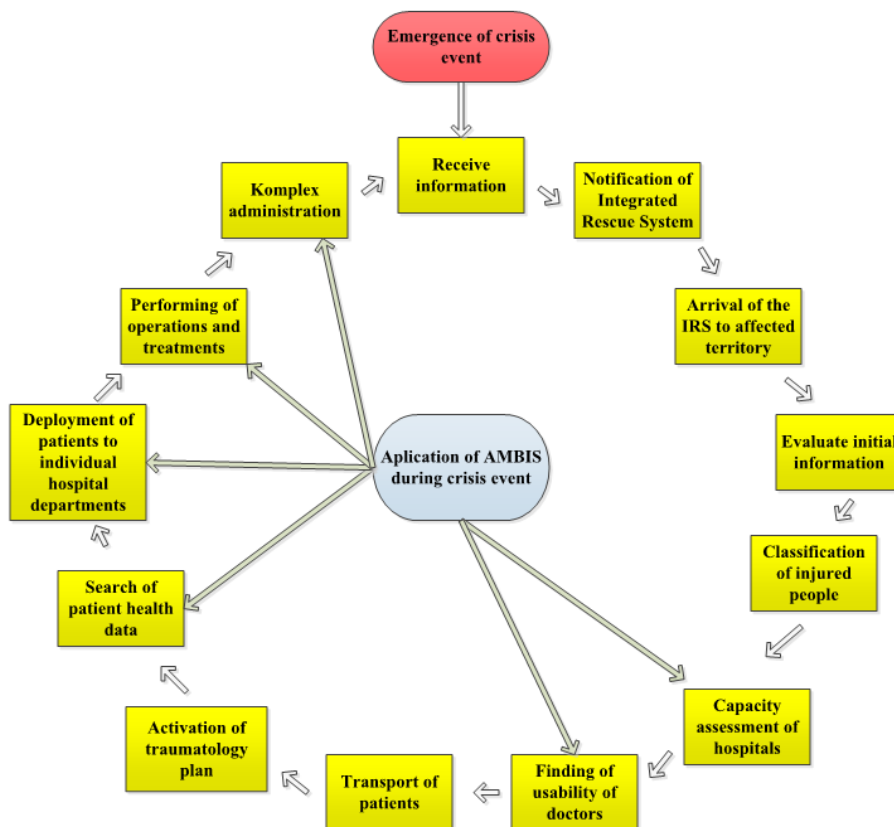
Optimization of decision-making processes through the Ambulant Information System

AMBIS could be applicable in various spheres and levels of crisis management as part of decision-making processes. When transferring patients, the coordination centre would be able to more effectively decide which victim to transfer to where, based on the occupancy, specialization and possibilities of hospitals in the vicinity of the event with mass disability of persons. It would also be effective when carrying out the transport within the position of the transported person and the pre-hospital treatment itself. For example, paramedics would be able to treat a transported patient with genetic or chronic damage even while driving, as AMBIS would make it easier for them to diagnose the patient. This would reduce the demands on the capacity of medical facilities. In the hospital's decision-making process, thanks to this information system, it would be possible to make decisions more quickly about the treatment of the victim, his placement in the department, and the supply of individual departments with medicines.

The situation in the case of using AMBIS by medical facilities and components of the Integrated Rescue System could ideally take the following course (Fig. 2):

1. receiving information about the occurrence of an event with a mass disability of persons,
2. understanding the individual components of the Integrated Rescue System,
3. arrival of individual components of the Integrated Rescue System at their destination,
4. evaluation of initial information on the expected number of injured persons,
5. classification of the injured,
6. determining the capacity possibilities of hospitals and the availability of doctors through AMBIS,
7. transport of patients,
8. activation of the trauma plan,
9. search for individual health data of patients via AMBIS,
10. allocation of patients to individual departments based on the information obtained (possible release of capacity options for emergency admission to other patients),
11. performance of medical and life-saving operations thanks to information from AMBIS,
12. complex administrative optimization to reduce bureaucracy.

Fig. 2: The course of an event with a mass disability of persons in the AMBIS application



Source: Own processing

Conclusions

It is possible to improve crisis management from a procedural, technical and technological point of view, as well as personnel. Part of the optimization of crisis management at the level of local state administration is the improvement of management methods, tools and procedures to achieve the maximum effect from ties, relationships, and competencies and effectively fulfil tasks related to the prevention of crisis events.

There are two ways to prevent collapse in hospitals. The first represents the doubling of personnel that must be called in quickly. The second option is to use the AMBIS information system. For AMBIS to be effective during an event with a mass disability, the situation requires knowledge and practical experience in its use and the software and hardware equipment itself. Also, for this reason, it would be an excellent benefit for hospitals to start actively using this program and verify employees' skills in handling it. A mass casualty event will test the experience and management skills of individual members of the Integrated Rescue System directly at the scene of the accident, including the activities and organization of hospitals. This event will also test the management skills of managers, who must make decisions quickly and effectively under pressure.

Acknowledgements

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UTILIZATION OF PARTIAL TROLLEYBUSES IN TRANSPORT

Zdeněk Říha, Iveta Dočkalíková

Abstract

The article deals with the issue of introducing partial trolleybuses into public, especially urban and suburban transport. In the introduction, the general assumptions for the introduction of alternative fuels and propulsion in transport and different economic perspectives on the solution of the environmental impacts of human activity, i.e., the so-called externalities, are mentioned. Furthermore, the partial trolleybus is defined and the possibilities for its introduction into transport are described, including cost calculations.

Keywords: Externality; alternative propulsion; partial trolleybus; environment; technology; cost calculations;

Introduction

In recent years, there has been increasing talk of introducing vehicles into transport systems that have close to zero, preferably zero, emissions from their operation. While gas buses have lower CO₂ emissions (compared to conventional diesel buses) and significantly lower other emissions (hydrocarbons and nitrogen oxides), electric buses have zero emissions. We are of course talking about local emissions, not emissions from gas or lithium extraction. Electric buses still have a few operational drawbacks (long charging times, limited range, etc.), which is why the use of partial trolleybuses is proving to be an interesting solution. However, there are economic barriers here, especially regarding the construction of the trolley network.

1. Preconditions for the introduction of alternative drives in transport

The problems of replacing petroleum fuels in transport are dealt with mainly for energy and environmental reasons. The alternative fuels or propulsion systems themselves must then meet requirements that can be divided into four problem areas:

- economic – price comparability with conventional fuels;
- ecological – comparability of environmental impacts with conventional fuels;
- energetic – in particular, the ratio between energy extracted and energy invested;
- technical – the fuels or propellants must be matched to the means of transport and the infrastructure must be in place for their distribution and sale.

By alternative fuel we mean a fuel that can replace petroleum products and at the same time has significantly lower environmental impacts. Such fuels exist, but their use faces economic, energetical and technical challenges. One of the characteristics of an alternative fuel should be its renewability.

A schematic representation of the energy production to power transport vehicles is shown in Figure 1. The figure shows that it is necessary to separate energy sources (renewable and exhaustible) and energy carriers (e.g. hydrogen).

In general, energy density can be seen as a significant problem for alternative fuels. In this respect, conventional fuels, which are said to be a concentrated form of solar energy (there is a large amount of energy in a small volume compared to alternative fuels), obviously dominate. Ironically, from an ecological point of view, the emphasis is currently on carbon dioxide emissions, whose impact on climate change has not yet been proven. It is also important to consider the local impacts of transport in terms of air, in particular emissions of nitrogen oxides, carbon monoxide or hydrocarbons.

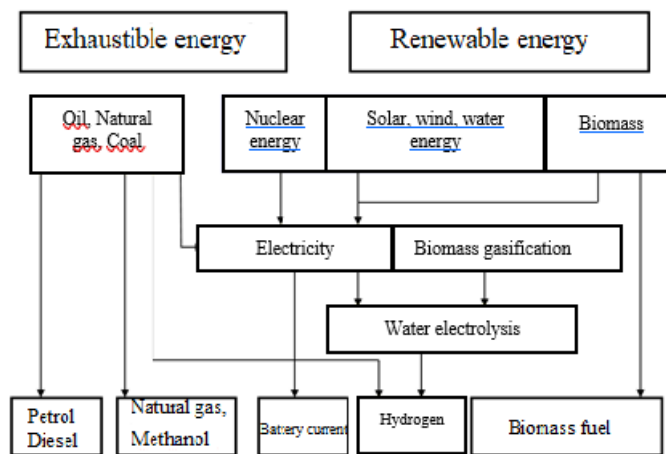


Fig. 1: Energy production for the drive of transport means, source: author

In any consideration of the introduction of alternative fuels in transport (especially freight transport), it is also necessary to consider the importance of transport to the socio-economic system of society, as described, for example, by Duchoň (2007), he mentions “... accessibility and mobility as a basic condition of the national economic system. Accessibility must be understood as the accessibility of the population to a range of activities, and this can be done through accessibility to transport. Mobility is to be understood as the ability to move through the transport system. Mobility can have several constraints (delays caused by congestion, high transport costs or low returns for the transport company etc.) “.

Transport as a national economic sector contributes to national economic output, but at the same time it is a production factor that generates positive externalities. Historically, for example, it is very easy to show how new transport technologies have contributed to rising economic levels by allowing other areas to engage in trade.

Within economic science, the question of the relationship between human activity and the environment has been addressed since about the middle of the 20th century and is associated in particular with the economist Arthur Cecil Pigou. The solution of externalities by means of subsidies or taxes was advocated by the English economist Arthur C. Pigou. Despite his liberal mindset, he saw an irreplaceable role for the state in externalities. Pigou was the founder of *The Economics of Welfare*, whereby he defined the Pareto optimum for the optimal allocation of resources. This occurs when, for at least one member of society, the allocation of resources results in an improvement in his situation and no member suffers a deterioration. However, this can only be achieved under conditions of perfect competition. Pigou also defined the first so called social costs, i.e. externalities, or external costs that are not paid by their originator. Pigou proposed that externalities should be solved by taxation (i.e. by adding the external costs to the internal costs of the producers of the externalities), but the issue itself is not so trivial. The pitfalls can be summarized as follows (Říha, 2016):

- the internalisation of externalities may give rise to so-called opportunity costs, i.e. foregone revenues from activities that will not be realised due to higher taxation;
- the effectiveness of internalising externalities using Pigou taxes depends strongly on the elasticity of demand (e.g. for individual transport) and if demand is inelastic, the internalisation effect will be weak;
- internalisation may reduce the competitiveness of the economy and undermine economic growth, and consequently, paradoxically, reduce government revenues;
- a non-negligible factor in the internalisation of externalities is transaction costs, which in the case of transport leads to internalisation being addressed by state intervention, but this too raises additional transaction costs.

In terms of dealing with external costs, two factors are important – the first is the clear definition of property rights, which necessarily include the ability to freely deal with one's property and the ability to enforce the rights associated with ownership; the second is the size of the transaction costs associated with the solution. Transaction costs can be defined as the costs of the pricing system, or the costs associated with changing property rights. Transaction cost theory is often overlooked, but it is key to understanding economic processes. It can be

concluded that if we start from the unrealistic assumption of zero transaction costs, the market system would allocate resources with maximum efficiency. However, given the existence of transaction costs, many transactions (exchanges) will not take place because in some cases the cost of finding a counterparty to a given exchange will already be too high (Coase, 1960).

Economists Gene M. Grossman and Alan B. Krueger (1995) had another point of view when addressing environmental impacts of human activity. They used the theory of Simon Kuznets (1995), which states that the larger the GDP, the lower the social differences in society (this can be seen in developed countries where there is a strong middle class - i.e. many people reach the average salary level) The derived Environmental Kuznets Curve (EKC for short) then shows that as a country's wealth, as measured by GDP, increases, the environment improves as well, because it only becomes worthwhile for countries to use cleaner technologies after a certain standard of living. There is a logical objection to this claim, which says that countries that have achieved a certain level of wealth shift production to less developed countries where they find cheaper labour. As production shifts, so do the emissions associated with production. However, this statement is not relevant to our investigation, given that we will be dealing with transport, the output of which cannot be shifted anywhere, and which always takes place within a given country (Říha, 2021).

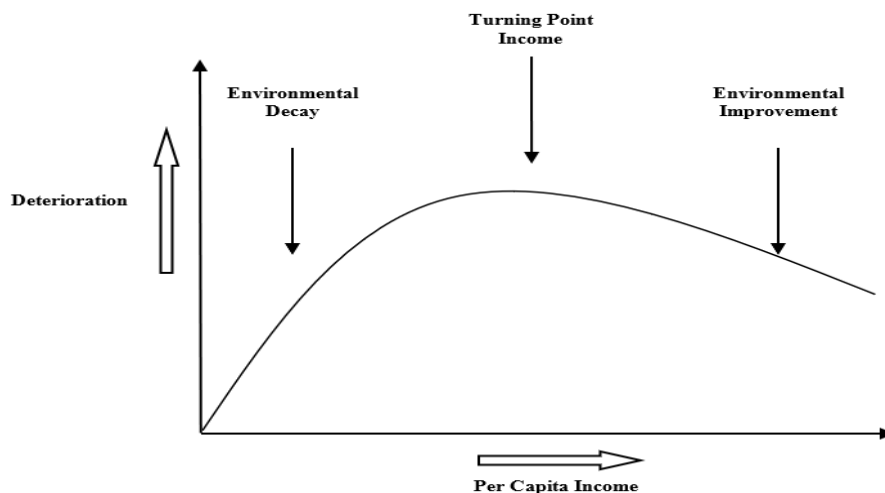


Fig. 2: Environmental Kuznets curve, source: Yandle (2002)

2. Utilization of Partial Trolleybuses

There are many alternatives in terms of alternative fuels and propulsion, but most of them face technological and economic barriers. We can talk about the use of liquefied natural gas, electromobility, hydrogen, but it is always necessary to consider very carefully where the optimal

environment is for a given fuel or drive to be deployed. Of course, everything must also be seen in the context of the current situation on the energy market, where there is an unprecedented rise in electricity and gas prices. It can be expected that, due to many circumstances, especially the geopolitical situation, this state of affairs will continue in the future and it is possible that we may never return to the price levels of previous years.

As far as trolleybuses are concerned, their origins date back to 1882 and they have always been a road-based electric vehicle powered by electric drive from overhead lines.

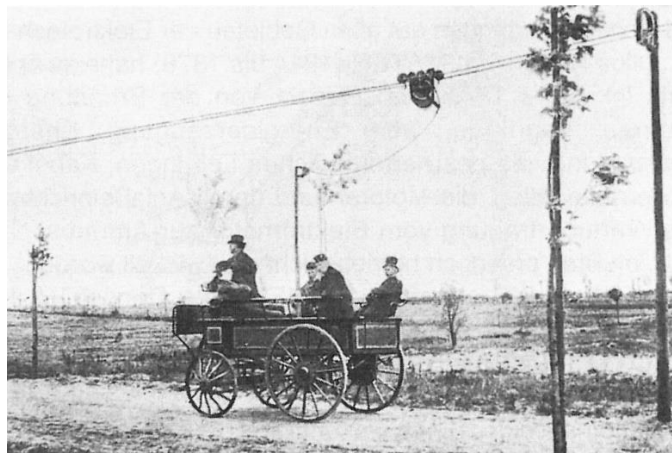


Fig. 3 The world's first trolleybus (Siemens) in Berlin in 1882, source: Brázdová (2017)

Partial trolleybuses are trolleybuses that have traction batteries as auxiliary propulsion, and their design allows them to be disconnected from the trolleys and run for up to several kilometres. In appearance, partial trolleybuses, or in other words partial sub-trolleybuses, resemble buses. However, the difference lies in the method of propulsion. These vehicles combine the advantages of a trolleybus and an electric bus. In addition to a direct connection to the overhead line, they also use batteries, not diesel generators, for driving. A partial trolleybus is charged dynamically, which means that the batteries are charged directly from the overhead line during the journey or by regeneration when braking. By braking, the trolleybus recovers energy, which it uses to power auxiliary drives or stores in traction batteries. In the event of surplus energy, the vehicle returns energy back to the grid and helps power other vehicles.

Partial trolleybuses are suitable for cities that already have an established trolleybus network. Investing in the construction of a new trolley line is very expensive and only profitable at a certain transport capacity. A partial trolleybus has the possibility to take off the headers in case of a power failure and continue to run on traction battery power. The possibility of

extending the route without pantographs to more distant locations increase the comfort of passengers as they do not have to change to another means of transport. Compared to a conventional trolleybus, the maintenance costs of a partial electric bus remain unchanged, service is provided by regular inspections and the traction battery has a guaranteed service life of 7 years. Currently, many cities in the Czech Republic already operate public transport using hybrid trolleybuses. Most of them operate on lines that do not have end sections that are trolleybarred. Examples include Zlín, Plzeň, Hradec Králové, Opava, Ostrava and others.

Clearly, the advantages of partial trolleybuses can be summarised in the following points:

- locally emission-free operation;
- quieter running of the car (starting at lower speeds);
- better dynamic characteristics (smoother and faster hill starts);
- less demand on the size of the traction battery (more internal usable space);
- greater usability in traffic.

3. Calculation of the cost of operating a partial bus- methodology

To compare the cost of operation of a diesel bus and a partial trolleybus (but also of any alternative propulsion vehicle), we can start from the principle of equality of specific costs, which are given in monetary units per kilometre (Říha, 2017). The aim is to find such combinations of the price of diesel (gasoline) and the price of the alternative energy source (electricity, gas, hydrogen etc.) In other words, we are looking for the maximum price of the alternative energy source at which the operation of alternative means of transport is economically advantageous compared to conventional ones, given the price of diesel (gasoline). The mathematical procedure is as follows (Říha, 2015):

$$n_D = n_{PT} \tag{1}$$

$$C_D \cdot S_D + n_p^D + \frac{N_{poř}^D}{T_Z^D \cdot L_D} = C_{PT} \cdot S_{PT} + n_p^{PT} + \frac{N_{poř}^{PT}}{T_Z^{PT} \cdot L_{PT}} \tag{2}$$

n_D ...	unit cost of operating a diesel vehicle (monetary units/km)
n_{PT} ...	unit cost of operating an electric vehicle (m.u./km)
C_D ...	price of diesel (m.u./l)
S_D ...	consumption of diesel (l/km)
n_p^D ...	operating costs associated with diesel propulsion (m.u./km)
$N_{poř}^D$...	acquisition costs of diesel bus (m.u./ vehicle)
T_Z^D ...	the lifetime period of the diesel bus (years/ vehicle)
L_{PT} ...	how much the partial trolleybus will travel (km/year)

C_{PT} ... price of electricity (m.u./kWh)
 S_{PT} ... electricity consumption (kWh/km)
 n_p^{PT} ... operating costs associated with the partial trolleybus (m.u./km)
 $N_{poř}^{PT}$... acquisition costs of partial trolleybus (m.u./ vehicle)
 $T_{\dot{z}}^{PT}$... the lifetime period of partial trolleybus (years/ vehicle)

$$C_D \cdot S_D - C_{PT} \cdot S_{PT} = n_p^{PT} - n_p^D + \frac{N_{poř}^{PT}}{T_{\dot{z}}^{PT} \cdot L_{PT}} - \frac{N_{poř}^D}{T_{\dot{z}}^D \cdot L_D} \quad (3)$$

$$d_p = n_p^{EL} - n_p^D \quad (4)$$

$$d_{ODP} = \frac{N_{poř}^{PT}}{T_{\dot{z}}^{PT} \cdot L_{PT}} - \frac{N_{poř}^D}{T_{\dot{z}}^D \cdot L_D} \quad (5)$$

For some simplification, we introduce the following terms:

d_p ... operating cost differential (CZK/km)
 d_{ODP} ... acquisition cost differential (CZK/km)

$$C_D \cdot S_D - C_{PT} \cdot S_{PT} = d_p + d_{ODP} \quad (6)$$

$$C_{PT} = \frac{C_D \cdot S_D - (d_p + d_{ODP})}{S_{PT}} \quad (7)$$

The result is a graph, showing various combinations of alternative fuel and diesel prices, for which will hold true that the total cost (f.u./km) of using alternative fuel are equal to the cost of using petrol or diesel via the p line:

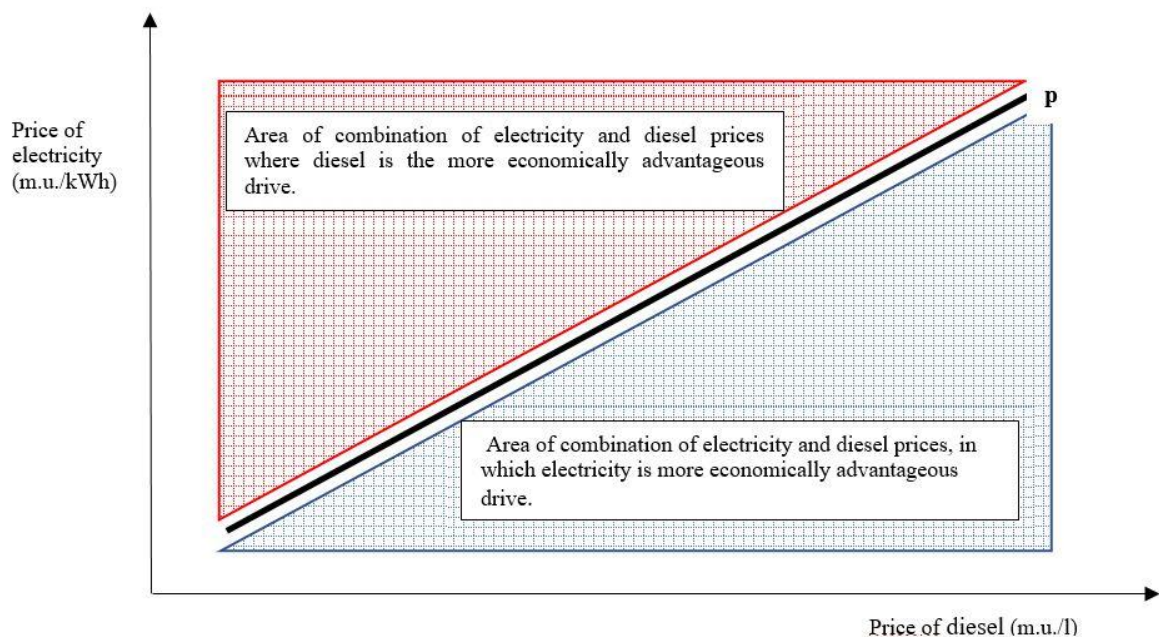


Fig. 4 Principle of graphical expression of cost equality of conventional and alternative fuel, source: Řiha (2021)

4. Calculation of the cost of operating a partial bus – case study

If we were to deal only with economic costs and not with operational aspects, the calculation can be followed based on vehicle-specific data. The aim is to calculate the maximum electricity price for each diesel price that makes it economically worthwhile to use a partial trolleybus. The data are summarised in the following two tables.

Tab. 1 – Input values for cost comparison, source: Ministerstvo dopravy (2020)

Input parameters of partial trolleybus SOR TNS 18	Value	Input parameters of partial bus SOR NB 18	Value
1. Kilometres made (km/year)	94306	1. Kilometres made (km/year)	94306
2. Consumption of electricity (kWh/100 km)	238,7	2. Consumption of fuel (l diesel/100 km)	32
3. Electricity price (CZK/kWh)	5	3. Engine oil (CZK/km) incl. AdBlue	0,25
4. Purchase price of PT without VAT (CZK)	15000000	4. Diesel (CZK/l)	44
5. Lifetime of PT (years)	15	5. Direct material and energy (incl. tires CZK/km)	1,18
6. Lifetime of traction battery (years)	7	6. Purchase price (CZK)	8000000
7. Replacement of traction battery (CZK)	1500000	7. Lifetime of the bus (years)	8
8. Maintenance and repair costs (CZK/km)	2,78	8. Depreciation (CZK/km)	10,604

source: Ministerstvo dopravy (2020)

In a simplified way, we assume here that maintenance and repair costs, labour costs and annual mileage are the same in both alternatives. Thus, we only consider the acquisition cost differential according to relation 5. To the acquisition cost of the vehicle, the cost of replacing the batteries in the seventh and fourteenth year of the vehicle must be added. For the second replacement, we consider only one-seventh of the cost of the batteries, given the 15-year life of the vehicle and the assumption that the batteries can be reused in another vehicle or sold after one year of use. The latter takes on the value of:

$$d_{ODP} = \frac{15000000}{15 \cdot 94306} + \frac{1500000}{7 \cdot 94306} + \frac{15000000}{7 \cdot 94306} - \frac{8000000}{8 \cdot 94306} = 2,597 \text{ CZK/km}$$

If we further use relation (7) to calculate the maximum electricity prices at which it is economically advantageous to operate a partial trolleybus at a given fuel price, we obtain the following table:

Tab. 2 –Maximum price of electricity at given diesel prices for the economic viability of a partial trolley bus, own calculations based on the data in table 1

Diesel price	CZK/l	10	15	20	25	30	35	40	45	50	55	60	65	70
maximum electricity price	CZK/kWh	1,3	2,0	2,7	3,3	4,0	4,7	5,4	6,0	6,7	7,4	8,0	8,7	9,4

Source: author

These values show that, given the chosen parameters and current electricity prices, a partial trolley bus is uneconomic. If we consider the so-called capped price, i.e. a price including distribution of around 9-10 CZK/kWh, the partial trolleybus would only be profitable at diesel prices higher than 70 CZK/l. The calculation can be further illustrated graphically, where the area of economic advantage of a partial trolleybus is below the line of equality of specific costs:

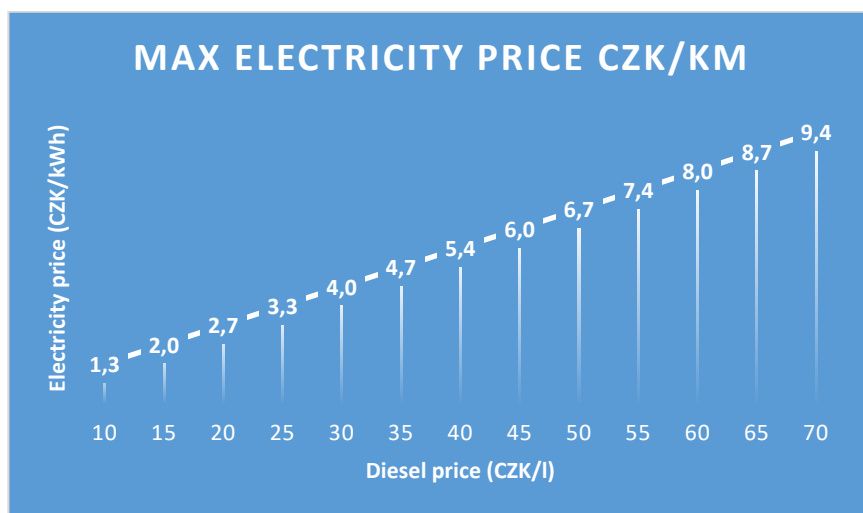


Fig. 5: Maximum price of electricity at given diesel prices for the economic viability of a partial trolley bus, own calculations based on the data in table 1

Conclusions

The current energy situation forces us to look at the various alternative transport technologies from an economic point of view in a different way. All energy commodities have been affected by price rising, but conventional ones, i.e., diesel and petrol, much less so. This will undoubtedly lead to several transport companies rethinking their strategies for using vehicles with alternative propulsion systems, in particular electric and gas propulsion.

Partial trolleybuses have been introduced in the Czech Republic in the last 5 years or so, made possible of course by lower electricity prices. They found their use especially in cities that already had a trolleybus network, the construction of which entails high investment costs and brings considerable financial demands for maintenance. In these cities, the added value of the partial trolleybus is the greater independence of the routes, the possibility of switching between

lines and the possibility of extending them, albeit briefly, in the order of sub-units of kilometres. However, given the developments in the energy market, it appears that the partial bus is becoming economically unviable, and the city must consider whether its operational benefits and environmental performance outweigh the cost disadvantage when deploying it.

At the same time, the introduction of partial trolleybuses on routes outside the city, where the trolleybus infrastructure would have to be completely built, is currently being considered. Regarding the vehicle runs over the lifetime of such trolleybus network, according to expert estimates, its costs can range between CZK 50-80/km, which puts the technology of partial trolleybuses at an even greater economic disadvantage.

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SYSTÉM SBĚRU A ZPRACOVÁNÍ ODPADU

WASTE COLLECTION AND TREATMENT SYSTEM

Oldřich Kodym, Václav Cempírek, Michal Turek, Iveta Dočkalíková

Abstrakt

Článek se zabývá systémovým pohledem na logistické procesy v rámci systému sběru a zpracování odpadu v podmínkách připravované legislativy. Ambicí autorů je dosáhnout systému, který je univerzálně použitelný v rámci cirkulární logistiky. Vychází ze stávajících provozovaných především autonomních systémů s cílem definovat univerzální optimalizovaný systém, kde jako jednotlivé články logistického řetězce mohou vystupovat samostatné firmy nebo jejich sdružení. Přístup autorů je založen na systému jednotných definovaných rozhraní jak v oblasti manipulačních a dopravních procesů tak i v procesech jejich informační podpory tak, aby je bylo možné využít v rámci plánování udržitelných logistických systémů.

Klíčová slova: intermodální doprava; ACTS; svoz odpadu; RFID; informační systém; optimalizace;

Abstract

The article deals with a system view of logistic processes within the system of waste collection and treatment in the conditions of the upcoming legislation. The ambition of the authors is to achieve a system that is universally applicable within circular logistics. Such a system is based on existing mostly autonomous systems with the aim of defining a multipurposed and optimized system where individual companies or associations of companies can act as individual subjects in the logistics chain. The authors' approach is based on a system of common defined interfaces in both the handling and transport processes as well as in their information support processes, so that they can be used in the planning of sustainable logistics systems easily.

Keywords: intermodal transport; ACTS; waste processing; RFID; information system; optimization;

Odpad jako součást cirkulární ekonomiky

Příspěvek předkládá první výstupy z řešení projektu, jehož výstupem bude „Metodika pro městskou logistiku“ s akcentem na odpadové hospodářství. Záměrem je energeticky využít směsný komunální odpad pro výrobu tepla, ale i elektrické energie. Pro zajištění efektivity

takového systému je důležité, aby byly plošně využívány pro sběr smíšeného komunálního odpadu stejné přepravní jednotky – kontejnery. Řešitelé navrhuji používat kontejnery ACTS s lisovacím zařízením. Jejich svoz z atrakčního obvodu do místa zpracování bude zajišťovat železniční přepravu.

1 Provozní technologie a využití systému odvalovacích kontejnerů

Systém odvalovacích kontejnerů ACTS (Abroll Container Transport Systém) v intermodální přepravě je založen na komodalitě silniční a železniční nákladní přepravy, kde se předpokládá, že železniční přeprava bude realizovat rozhodující přepravním běh a silniční přeprava bude využita pro svoz a odvoz kontejnerů do/z překladišť (Sung-Ho 2020). Z těchto míst budou kontejnery obslouženy vlaky intermodální přepravy. Systém ACTS při obsluze zákazníků, tj. vyzvednutí smíšeného odpadu ze sběrných nádob, využívá okružní jízdy.

Intermodální přepravu kontejnerů z překladišť do zpracovatelských subjektů mohou zajišťovat rychlé vlaky jezdící rychlostí 100–120 km/h, případně až 160 km/h. U těchto vlaků se předpokládá, že intermodální přepravní jednotky budou vybaveny satelitními pozičními systémy, které umožní zákazníkům sledovat jejich pohyb a polohu na dopravní síti. Pravidelné vlaky intermodální přepravy jsou vedeny tzv. nočními skoky, kdy odjezd vlaků je ve večerních hodinách a místo určení je dosaženo následný den ráno, intermodální přepravní jednotky jsou připraveny příjemci k odběru do 10 hodiny.

Vyšší produktivitu a spolehlivost lze dosáhnout zavedením kyvadlových vlaků (shuttle vlaky) s pevně danou sestavou železničních vozů shodného typu. Dalším typem mohou být skupinové vlaky, které jsou řazeny z vozových skupin více překladišť určitého relačního směru.

Tabulka 1: Požadavky na provoz ACTS

Požadavky	Řešení
Ekonomická a ekologická okružní doprava od nakládky k vykládce.	Kombinovaná přeprava železnice – silnice.
Bezproblémové dodávky různým cílovým zpracovatelům.	Doprava ložených i prázdných vozů s kontejnery nočním skokem.
Flexibilní a racionální překládka, možnost obsluhy zákazníka bez kolejového napojení.	Odvalovací kontejnery s horizontální překládkou.
Ložná kapacita kontejnerů, vodotěsná konstrukce.	Vývoj kontejnerů s lisovacím zařízením.

Zdroj: vlastní

Při návrhu systému logistických přepravních řetězců využívajících systém ACTS jsou především požadavky (viz Tabulka 1), ke kterým jsou hledány odpovídající řešení. Logistické trendy v intermodální přepravě prosazují na místo soutěživosti mezi dopravními prostředky

princip vytváření přepravních řetězců, při kterých je prosazována úzká kooperace silniční a železniční přepravy:

- dopravní prostředky železnice jsou určeny pro přepravu velkých objemů zboží a přepravních jednotek na delší vzdálenosti podle jízdních řádů,
- flexibilní nákladní automobily jsou určeny především pro soz sběrných kontejnerů se směsným odpadem do překladiště.

Systém ACTS přináší úsporu provozních nákladů, protože manipulace s ložnými jednotkami se provádí bez využití investičně nákladných mechanizačních zařízení pro vertikální překládku. Nakládka a vykládka probíhá v horizontálním směru za přítomnosti jedné osoby – řidiče nákladního automobilu.

Výhody systému odvalovacích kontejnerů ACTS:

- a) Nakládka a vykládka kontejnerů je možná bez použití speciálních zařízení pro vertikální překládku. Manipulace je možná u každé koleje s vymezeným manipulačním prostorem alespoň 10 metrů od osy koleje. Kontejnery lze přímo překládat v horizontální poloze z železničního vozu na silniční dopravní prostředek a opačně. Optimální využití ložného místa i ložné hmotnosti dopravních prostředků umožňuje zvýšení dopravních výkonů. Překládku provede řidič silničního nákladního automobilu během 5 minut. Manipulace může být uskutečněna na každém přístupném místě vyhovujícím pro spuštění a nasunutí kontejneru na dopravní prostředek. Nastavení prázdného nosného rámu pro kontejner na železničním voze je ruční.
- b) Zvyšuje produktivitu práce, protože manipulaci stejně jako dopravu provádí jedna osoba. Unifikovaný typ silničního podvozku s manipulátorem umožňuje přepravu a manipulaci s cca 15 typy kontejnerů určených pro přepravu odpadních surovin (papír, sklo, umělé hmoty, železo, biologické odpady) určených k recyklaci a průmyslové odpady (kontaminovaná zemina, popílký, kaly).

Technické prostředky systému:

- 1) Odvalovací kontejner unifikovaného provedení se standardizovaným rámem podle normy EN ACTS s rozměry šířka 2 500 mm, délka 5 950 mm a výška 2 500 mm.
- 2) Automobilový nosič vybavený manipulátorem, který umožňuje kromě vlastní přepravy i překládku kontejneru z a na železniční vůz, automobilový přívěs, manipulační plochu, vykládku zboží sklápěním při úhlu 53–57 stupňů, bezpečnou přepravu kontejneru na automobilu po dobu přepravy.

- 3) Plošinový čtyřnápravový podvozkový železniční vůz s otočnými rámy (zpravidla třemi) pro uložení odvalovacích kontejnerů při dovolené hmotnosti na nápravu 20 t poskytuje užitečnou hmotnost pro jeden kontejner 16 500 kg.

V současné době je systém v České republice využíván pro přepravy uhelných kalů, konvertorových prachů, chemických odpadů, popelovin, dřevných štěpků a dalších obdobných substrátů. Systém je výhodný pro sběr směsného komunálního odpadu s následnou přepravou do spaloven odpadů. Širší uplatnění systému v praxi má za cíl převést přepravy ze silnice na železnici, alespoň v místech častých dopravních kongescí, pro přepravy zboží s nízkou hodnotou, pro odpady všeho druhu a pro nebezpečné zboží.

Systém odvalovacích kontejnerů pro sběr směsného komunálního odpadu určeného do spaloven musí být zaváděn v České republice jako jednotný systém. Obdobně byl tento systém zaveden v zemích Spolková republika Německo, Rakousko, Švýcarsko, Nizozemí a Itálie, jako jednotný systém využívající stejné typy kontejnerů, automobilové nosiče a železniční vozy.

2 Systém podpory přepravy v nakládání s komunálním odpadem

Zákon ukládá obcím stanovit místa pro oddělené soustředování určitých složek komunálního odpadu. Povinnosti dříve dané vyhláškou dnes stanovuje zákon. Jedná se o nebezpečný odpad, papír, plasty, sklo, kovy, biologický odpad, jedlé oleje a tuky a textil. Realizace dlouhodobé strategie nakládání s odpady, obalovými odpady a výrobky s ukončenou životností je stanovena Plánem odpadového hospodářství ČR, který je v aktuálním znění schválen do roku 2024. Jeho strategickými cíli jsou:

- Předcházení vzniku odpadů a snižování měrné produkce odpadů.
- Minimalizace nepříznivých účinků vzniku odpadů a nakládání s nimi na lidské zdraví a životní prostředí.
- Udržitelný rozvoj společnosti a přechod k cirkulární ekonomice.
- Maximální využívání odpadů jako náhrady primárních zdrojů.

Pro naplnění těchto cílů způsobem, který odpovídá požadavkům a možnostem doby je nezbytná vhodná informační podpora, která je nezbytnou součástí pro informování všech účastníků tohoto logistického řetězce a která umožní přijímat optimální rozhodnutí na všech místech řízení.

Jako ukázka takového řešení může posloužit následující příklad, který propojuje jak informační podporu, tak i technická řešení pro automatické získávání informací. Zaměříme se zde především na začátek logistického řetězce, tedy místa vzniku komunálního odpadu, občany a firmy.

Pro zajištění přehledu, jaký odpad vstupuje do systému, je nezbytné jednoznačně identifikovat původce odpadu a jemu přidělené sběrné nádoby (s diferenciací pro třídění). Na tyto výchozí informace uložené v informačním systému navazuje automatická identifikace odpadu na jednotlivých svozových vozech. Ta je řešena technologií RFID, která bez zásahu člověka jednoznačně identifikuje, jaký odpad je do svozového vozidle vysypán (každá nádoba je vybavena RFID tagem, viz Tabulka 2).

Tabulka 2: požadavky na RFID tagy

	Na plastové nádoby	Na kovové nádoby
Provedení	sendvičová etiketa	sendvičový tag
Rozměry	100 x 50 mm	150 x 16 x 1,1 mm
Montáž	samolepícím povrchem	lepidlem nebo nýty
Instalace	do spodní výztuhy	na spodní okraj

Zdroj: Gaben

Obsluha svozového vozidla pak pouze kontroluje, odpovídá-li skutečný obsah nádoby jejímu určení a míru naplnění této nádoby ($0/4-4/4$). Ukázka vybavení takového vozidla je na Obr. 1.



Obrázek 1: Vybavení svozového vozu. Zdroj: Gaben.

Každý sběrný vůz je vybaven snímacím RFID systémem, který je nastaven tak aby sejmul RFID tag na popelnici nebo kontejneru až při samotném vysypávání. V kombinaci s analogovými čidly, které zaznamenávají fyzický pohyb vysypávacího mechanismu, je možno porovnat počet vysypávaných nádob s počtem skutečně načtených kódů a ihned identifikovat poškozený/chybějící RFID tag nebo neoprávněný výsyp.

Samotné RFID čtení je prováděno průmyslovou čtečkou s regulovatelným výkonem a speciálně upravenými anténami. Data i programové vybavení jsou umístěna na průmyslovém PC s vysokou odolností, neboť vše je umístěno na vnější straně karosérie vozu s provozními teplotami shodnými s venkovním prostředím.

Po příjezdu na základnu jsou data automaticky přenesena přes WiFi síť na centrální server. Systém je připraven na zaznamenání GPS souřadnic výsypu i okamžitý přenos dat přes mobilní datové síť. Přenášen je čas sejmutí a jedinečný EPC kód z paměti RFID tagu. Systém je ale připraven i na zaznamenání GPS souřadnic výsypu i okamžitý přenos dat přes GPRS síť. Přenášen je čas sejmutí a jedinečný EPC kód z paměti RFID tagu.

Občané a firmy pak mají k dispozici přístup do informačního systému, kde mohou pracovat se všemi potřebnými informacemi, viz např. (Vranovice, 2021). Obec udržuje identifikační údaje. Jde především o následující položky:

- Kontrola adresy / zadání adresy;
- Vložení RFID tagu do evidence;
- Přiřazení RFID tagu
- Generování přístupových práv pro občany.

Občané a firmy pak mají k dispozici:

- Tiskové sestavy, kde najdou všechny potřebné informace, především skóre svého třídění odpadu.
- Firmy navíc veškerou dokumentaci vyžadovanou platnou legislativou.

3 Optimalizace

Při sběru a zpracování odpadu je důležitá také optimalizace jejich svozu. Mezi nejpoužívanější optimalizační metody pro plánování svozu patří Clak-Wrightova metoda.

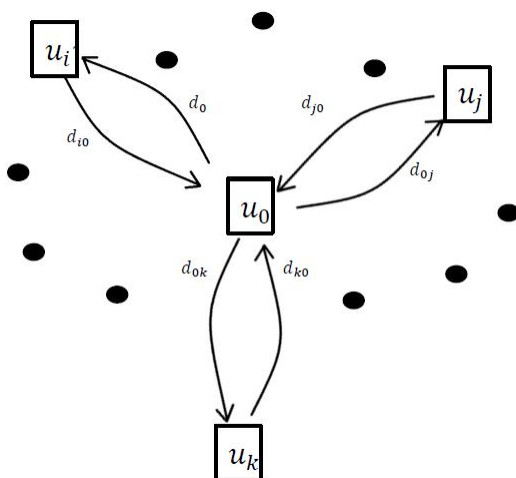
Princip této metody spočívá v tom, že v každém opakovaném kroku metody se zvolí, v případě splnění kritérií, dvě možné trasy, které se spojí v jednu v tzv. sdruženou trasu. Ovšem není možné spojit jakékoliv trasy, mohou být sdruženy jen takové, které splňují podmínku pro řešení

problému, že součet přepravovaného objemu na sdružené trase nesmí překročit danou kapacitu obslužného vozidla.

Zároveň je možné sledovat splnění dalších podmínek jako je počet navštívených uzlů, časová náročnost trasy i splnění její maximální délky. Hlavní výhodou této metody sdružování tras je hlavně úspora, která díky sdružení dvou tras samozřejmě vzniká a můžeme tuto úsporu i měřit a to díky tzv. výhodnostnímu koeficientu.

Dopravní síť s $n+1$ uzly (středisko označíme u_0 a kromě střediska bude v síti n zákazníků s požadavky b_j) můžeme znázornit diagramem grafů, kde jsou znázorněny uzly i úseky. Hodnoty jednotlivých úseků představují délku komunikací, které spojují uzly, a hodnoty uzlů představují objem přepravy, který je požadován při svozu.

Pokud chceme znázornit vzorec pro výpočet výhodnostního koeficientu, je potřeba nejprve vědět, jak vypadá výchozí řešení Clarke-Wrightovy metody, které tvoří soustava kyvadlových jízd.



Obrázek 2: Výchozí řešení. Zdroj: Daněk 2005.

Na základě výše uvedeného Obr. 2 je zřejmé, že pokud dojde k realizaci dvojice kyvadlových jízd, např. $u_0-u_i-u_0-u_j-u_0$ bude se ujetá vzdálenost rovnat:

$$d = d_{0i} + d_{i0} + d_{0j} + d_{j0} \tag{1}$$

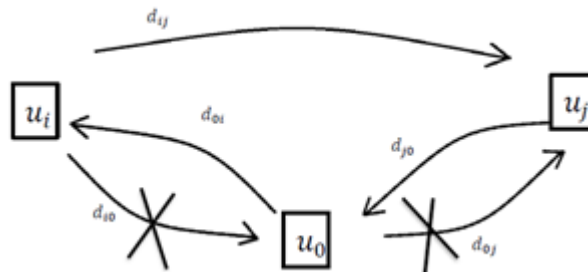
V případě, že se rozhodneme ke sloučení obou kyvadlových jízd do okružní jízdy na trase $u_0-u_i-u_j-u_0$, bude se ujetá vzdálenost rovnat:

$$d = d_{0i} + d_{ij} + d_{j0} \tag{2}$$

Ze znázornění obou vztahů v Obr. 3 je na první pohled patrné, že ve druhém z nich ubyly

vzdálenosti d_{i0} a d_{0j} , a jedna vzdálenost přibyla d_{ij} , která ovšem úsporu snižuje. Výhodnostní koeficient, který představuje výpočet úspory mezi uzly u_i a u_j vznikl díky náhradě uvedené dvojice kyvadlových jízd do jedné okružní a má tvar:

$$u_{ij} = d_{i0} + d_{0j} - d_{ij} \quad (3)$$



Obrázek 3: Znázornění úspory. Zdroj: Daněk 2005.

Samotný popis vlastního algoritmu můžeme znázornit v pěti krocích.

- Jako první je důležité sestavit výchozí řešení, které definujeme jako soustavu kyvadlových jízd.
- Ve druhém kroku vypočítáme všechny hodnoty u_{ij} a sestavíme matici úspor.
- Třetím krokem je zjištění, zda je v matici obsažena nějaká kladná hodnota, pokud se stane, že v matici nebude žádná kladná hodnota, tak algoritmus končí.
- Ve čtvrtém kroku zkontrolujeme, zda splňujeme kapacitní omezení. To zkontrolujeme tak, že vybereme největší hodnotu u_{ij} a otestujeme, zda součet položek je menší nebo roven kapacitě obslužného vozidla ($b_i + b_j \leq K$), v případě, že podmínku splňujeme, můžeme sloučit jízdy do jedné.
- V rámci pátého kroku využijeme námi vyhledanou největší hodnotu z matice úspor a položíme ji rovnu nule a vrátíme se opět ke kroku 3 (FD 2006, Daněk 2005).

Závěr

Předložené řešení nabízí využití systému kombinované přepravy s kontejnery ACTS. Systém využívá synergické efekty jednotlivých dopravních módů. Flexibilitu silniční nákladní dopravy při sběru směsného komunálního odpadu a odstavení naložených kontejnerů na manipulační plochu v železniční stanici. Hromadnost a termínovanou přepravu u železniční nákladní dopravy při přepravě kontejnerů do místa zpracování. Předložený návrh doporučuje plošné (celostátní) zavedení jednotného systému, který umožní při přetížení jednoho místa zpracování směsného komunálního odpadu jeho přesun k méně využitému zpracovateli.

Poděkování

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HOME OFFICE AS ANOTHER ASPECT OF MANAGERIAL WORK AND ABOVE ALL COMMUNICATION

Zora Říhová, Jindra Tumová

Abstract

Home office has become an important phenomenon for a large group of employees and companies. This is primarily due to the development of information technology. Another aspect of company management appears, where the quality of communication in the broadest sense of the word is key. The home office phenomenon needs to be examined not only from the perspective of the company, but also from the perspective of the employee. On the basis of a **holistic** evaluation of the contribution to the company, the aspects to which the manager should be able to answer were defined: The efficiency of the company's work versus the efficiency of the employee's work; Economics of the introduction of home office - benefits versus costs; Influence on the atmosphere of the company and the psyche of the employee.

Keywords: Home office, communication, information cloud, overall atmosphere of the company, effectivity of home office.

Introduction

The covid-19 pandemic has affected the entire society and brought many new phenomena. In the field of business, in addition to the disruption of supply chains, there was also another phenomenon in society, namely the mass expansion of work from home (home office - HO). HO has become an important phenomenon for a large group of employees and will certainly continue to be an important part of organizational and management structures in most companies. This is primarily due to the development of information technology. He discovers another aspect of company management, where the key quality of communication in the broadest sense of the word. It is emphasized that the HO phenomenon needs to be examined not only from the perspective of the company, but also from the perspective of the employee.

Objective and Methods

Remote work or home office, remote work, or telecommuting is a way of working that can be done from many different places and environments. It is a way of working that has been known from many professions for a long time, and the given problem remains, for example

(Fried, Hansson, 2014), (Morwick et al., 2013). Of course, forms of remote work are common at locally separated branches, sales representatives and international corporations were already prepared for various forms of telecommuting in the pre-Covid era. Although the employees spent time in the company, the work of the international teams (so-called virtual teams) was organized via the Internet, which reduced the costs of business trips. Before covid, HO work was a kind of reward for about 20% of the company's employees about once a week/14 days and it was considered a great privilege. In return, the employer expected greater dedication to the company. With the onset of the pandemic, more than 60% switched to HO (quotation) and this led to fundamental changes in communication between employees, employers and business partners.

In his book (Kučírek, 2017) he lists several ways in which remote work can be carried out. Names a combination of office and home or combines staying at home and access to the office. On the other hand, it enables more flexible use of working time and allows the employee some freedom.

The prerequisite is, of course, the fulfillment of his work tasks that are assigned to him. The employee must be able to handle the amount of work assigned within the scope of his employment contract. (Bočanová, Krejčíčková, 2020)

(Ondráčková, Rybová, 2016). in turn emphasize the possibility of the absence of social contacts with colleagues and motivation for better performance may be lacking. And they also draw attention to additional costs or communication noise.

Furthermore, handling of official/health needs during the working day is also pointed out (Heikenwälder, 2014).

You can also find activities that do not directly require personal contact, but it is much more advantageous for them. These are, for example, increasingly popular brainstorming sessions. Here, personal communication is also much faster than if, for example, employees were writing to each other. A problem with online meetings can be a failure of the internet connection of some of the colleagues, which can cause a problem with the online meeting for all participants and the inconsistency or prolongation of the entire online meeting. This possibility is eliminated during a personal meeting, and a personal meeting can thus greatly speed up and simplify the whole process. (Cook, 2019).

Communication between team members and across the entire company is very important. Intra-company relationships and culture are essential for their proper functioning, and if they begin to decline, this can be reflected in the results as well.

However, the choice of such a method for the performance of the employment relationship is mainly suitable for such employees who have sufficient motivation, responsibility and are reliable. The ability to independently perform assigned work tasks is also important. It is important that these people do not need constant supervision and are able to determine for themselves when they need advice, find out certain things or communicate with their superior. Such an employee should be able to independently determine the importance and priority of tasks and ensure proper adherence to deadlines, as well as adapt to changes. It goes without saying that involvement in the company culture is also possible remotely, when you are not sitting directly in the office. (Johnson, 1997)

Results and Discussion

As can be seen from the review of literature and publications, individual aspects of HO are addressed, but in this article we want to show what an overall comprehensive /holistic view could look like.

The authors are convinced from experience that managers should always have a comprehensive view of a larger problem. The article is therefore focused on the holistic concept of the integration of HO into practical and effective management and communication in the company.

The aim of the article is to reflect **on** comprehensive/holistic aspects of HO and its influence on management of company. The conclusions are based on two researches carried out - the first in an IT company (52 respondents), where a professional relationship to information technology was assumed, the second research was in a banking environment (82 respondents), where it was primarily about user access to information technology. In terms of the overall impact (holistic) on the company, the results were the same and are summarized in the following text.

With the fact of HO, managers encounter the need for a different management of workers. The situation is still dynamic and relatively new. If managers fail to properly set up communication or control processes within the HO, both employees and managers may find themselves in situations they cannot handle. However, it is also necessary to address the general questions first that must necessarily precede the decision about the HO.

The literature before the pandemic deals with individual aspects (communication, social aspects, cultural aspects,...), but developments during the pandemic have shown that it is a broader issue that needs to be approached holistically - i.e. focus on the entire area of business and not on examining individual phenomena. The area of business means production, services, transport, etc. Areas such as education, healthcare, social services have different specificities.

First of all, we need to clarify to whom the further considerations will concern. It follows from the English term that it is primarily about those who work in offices, i.e. outside the production process itself, but when it comes to material production or services. For other types of companies from the field of services such as ICT or design, legal and other services, it is an in-house production process. But in each company we can roughly divide the workers into creative workers (researchers, IT designers, designers,...) and routine workers (administration, accounting, supply, sales,...). Every manager perceives this division subconsciously, but it should be clearer for the correct setting of HO processes. It is a management problem that needs to be perceived and examined holistically, not only from the point of view of the company but also of the employee.

How can this problem be conceived. There are three main areas to explore:

1. The efficiency of the company's work versus the efficiency of the employee's work
2. Economics of HO introduction - benefits versus costs (from the point of view of the company and from the point of view of the employee)
3. Influence on the atmosphere of the company and the psyche of the employee.

Ad 1). The efficiency of the company's work versus the efficiency of the employee's work needs a partial change in the management model. The managerial challenge lies mainly in properly set communication.

First, it is necessary to assess:

- requirements for the technological discipline of the business processes of the given company (for which profession we must observe the presence of people at the workplace and which profession can be implemented remotely) and whether it fits into the functioning of the organization,
- employee qualifications – whether the qualifications of the employees enable full-fledged work from home or whether I can reliably train them,

- for which qualification and managerial level HO is suitable.
- according to which procedures to solve the problem in the event of a system failure, how to set the duties and responsibilities of individual workers.

If the company decides for HO, it needs a different system for assigning tasks and checking their fulfilment. Therefore, it is necessary to set communication rules for long-term work from home - meetings, the beginning of work, for working with data, increase control over e-mail tasks (so as not to make a wrong decision) and clearly ensure any change of dates and the method of employee evaluation. Sometimes the employer's lack of trust in their employees hinders the introduction of HO. However, there should not be a problem in monitoring the work of an employee, when information technology tools can monitor the user's activity - which applications are running, which are active, which files are being worked with, which websites are viewed, emails, calendar, etc. A report for the employer can be created from the information found. Easy monitoring via applications allows to estimate with a high degree of accuracy the degree of work engagement of people at HO. Using these tools, it can be found, for example, that people tended to work overtime more often during the pandemic or that they spread their work more throughout the day.

With HO, he relies more on written communication. However, even an ordinary e-mail can do a lot of damage, and the instructions need to be verified more. Analysis by (Eset, 2021), pointed out that people on HO are more susceptible to so-called phishing attacks - the number of these detections increased by approximately 100 percent compared to the previous year.

The most difficult thing will be to set up an effective system for evaluating effectiveness before HO and after its introduction. For the effectiveness of HO, it is necessary to focus in the company jeopardize his professional growth. At the same time, he must realize whether his career opportunities and the objectivity of the assessment of his work at the HO or even his existence security (so that he does not lose his job) will not deteriorate.

His "social hygiene" of work is also important, distinguishing between working and non-working time. It is important for employees to consider how they will work, how they will handle family business, how they will separate working and non-working time. From the point of view of both the employee and the company, this is a socio-legal problem, where the HO process must always be organized, tuned and regular. Therefore, the employee must also agree with the HO.

To ensure efficiency during HO, it is suitable as follows from the literature (e.g. Cook, Johnson):

- Work more together in teams, meet more often and regularly and give feedback on completed tasks, support teamwork, talk on the phone
- Support informal communication (create different channels for informal communication)
- Maintain the work habits given by working in the office at HO
- Devote yourself fully to the subject of the discussion by online meeting and not be distracted by e.g. writing e-mails, browsing the Internet, etc.
- Monitor the quality of communication from the point of view of connection and especially from the point of view of sufficient transfer of information.

on establishing rules that must be respected. The method of measurement and assessment of effectiveness is also important (% completion of tasks, attenuation/non-attenuation of work progress, deterioration/improvement of work efficiency,...). It can be assumed that this system will be different in each company.

The effectiveness of an employee's work is influenced by his family, conditions for working at home, equipment with information technology, equipment with ergonomic furniture, his own motivation - whether he is comfortable working without a team of co-workers, if this does not

Ad 2) Economics of introducing HO - benefits versus costs (from the point of view of the company and from the point of view of the employee)

The HO management model from the point of view of the company depends on the nature of the activities in the organization, the type of production and the possibility of applying HO.

If it is a permissible model from the point of view of business, then the economic point of view is mainly influenced by the change in the company's costs - on the one hand savings and on the other hand additional costs.

It is necessary to assess whether a greater proportion of HO's work is worthwhile in terms of energy or space savings. On the other hand, it is necessary to equip employees with the necessary information technologies and secure access to information systems and databases. This is where companies face the greatest risk to corporate data. Therefore, it is necessary to train employees and strictly observe the rules of cyber security.

From the employee's point of view, the saved costs and time for commuting, social clothing are assessed, but the employee also incurs costs for energy at home, meals (which are often provided by the company or contributed to), etc.

Ad 3) Influence on the atmosphere of the company and the psyche of the employee

The overall atmosphere of the company - this point of view is especially important in larger companies, where relations between colleagues contribute to the working environment and performance, which are important especially in creative work (brainstorming, personal meetings and discussion of the problem), but also have their place in routine work, when you need quick advice on a certain procedure. This also includes interpersonal relationships, belonging to the company. "Overall company atmosphere" is a broader term than just company culture.

In this case, the company's culture is enriched with a set of knowledge, experience and ideas that employees have in their heads, they can pass them on to each other, and this creates an "information cloud" of the company - an environment that affects work efficiency and problem solving. It can be imagined as formal and informal information, data that surrounds each employee, both negatively and positively. It is the contact with colleagues that leads to the enrichment of the company's "information cloud", which can be weakened in the HO mode. It is necessary to ask whether HO will not result in information noise or a decrease in transmitted information and thus the "information poverty" of the company's information cloud. HO can also have a negative impact on the sense of belonging to the company and motivation to work.

Therefore, they can be recommended:

- To be interested in how the employees manage the situation during HO
- Maintain social contact and prevent social and communication isolation of employees, e.g. organize regular company/team online meetings
- Send emails to employees about life in the company
- Monitor the emotional level of employees such as mental overload, exhaustion, low self-confidence and self-esteem, feelings of anxiety and helplessness, depression, stress.

The overall atmosphere of the company is not only in words and written speech, but for mutual understanding there are also emotional expressions, informal relationships, body language, facial expression, ambition to assert oneself, etc., which help solve the problem situation and enrich the "information cloud".

Conclusions

The Covid pandemic has brought the possibility or necessity of HO into many professions. The HO problem is new for companies with employees, but it has been solved by self-employed people for many centuries.

From the company's point of view, it is a managerial problem - a decision on the suitability or unsuitability of HO and possibly the setting of HO rules. The manager must ask himself and answer questions about how risky it is for the company to allow HO or not based on a holistic evaluation of the benefit to the company. Therefore, the aspects to which the manager should be able to answer were defined:

The efficiency of the company's work versus the efficiency of the employee's work,

Economics of the introduction of HO - benefits versus costs (from the point of view of the company and from the point of view of the employee),

Influence on the atmosphere of the company and the psyche of the employee.

While in IT companies HO is supported by 83%, in banks, even if the prerequisite for HO has been proven, the management strives to return employees to the offices.

HO was discussed in the article from the holistic point of view of the company and its basic aspects of economy, efficiency and overall atmosphere of the company. The brief discussion shows what questions managers and employees should ask themselves to decide on the HO rate.

HO is almost excluded in some places, HO is suitable only for certain professions, and somewhere it is possible to implement a high percentage of HO (e.g. in IT companies). And that is a new aspect of current managerial work, how to decide on HO, it depends on the above aspects and communication possibilities. Whether, when and why to enable or not enable HO.

There are many unresolved issues of HO's work, especially legal ones. E.g. the question of compensation for energy when working at home, occupational accidents, validity of signatures on documents, data archiving, data loss, etc. is not resolved. Furthermore, the question of ergonomic equipment for HO is also important, when inappropriate sitting can increase morbidity of the locomotor system with a much longer period of time healing (Ahrend,2020) and, of course, the question of quality information technology to make communication reliable and secure.

The decision on HO should contribute to the economy of the company, compliance with communication rules should maintain the efficiency of the work of the organization and employees and the overall atmosphere of the company. At the same time, it leads to the stabilization of employees in the company (after covid, HO is often directly required by employees).

The article sorted out the current knowledge of literature, journalism and two researches, put it into context and proposed a different approach to the given issue. The conclusions have a practical impact in that they are intended to alert managers on how to approach this problem, which we consider to be the most appropriate form of concretizing the conclusions from the article.

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DIDAKTIKA NEJEN EKONOMICKÝCH PŘEDMĚTŮ

VZDĚLÁVÁNÍ JAKO SOUČÁST FIREMNÍ KULTURY

Roman Kořán

Abstrakt

Nedefinování a neznalost vlastní firemní kultury může přinést řadu nedorozumění a problémů při řízení organizace. Vhodně nastavená firemní kultura ovlivňuje vztahy mezi zaměstnanci, vytváří vhodné klima na pracovišti a dokáže vytvářet kladnou image pro klienty nebo uchazeče o zaměstnání. Firemní kultura ovlivňuje firemní strategii a měla by také podporovat dosažení firemních cílů, což nemůže podařit bez nastaveného vzdělávacího systému a celkového přístupu organizace ke vzdělávání zaměstnanců. Teprve potom může být organizace připravená obstát v silné konkurenci, protože její konkurenceschopnost spočívá nejen v jejích pružných a adekvátních reakcích na změny v jejím okolí, ale především v její dlouhodobé přípravě na potenciální změny. Těchto změn nelze dosáhnout bez dobře propracovaného systému firemní kultury, jehož nedílnou součástí je systém dalšího profesního rozvoje zaměstnanců.

Klíčová slova: vzdělávání, firemní kultura, celoživotní vzdělávání, metody vzdělávání

Abstract

Not defining and not knowing your own corporate culture can bring a number of misunderstandings and problems in the management of the organization. A suitably set corporate culture influences relations between employees, creates a suitable workplace climate and can create a positive image for clients or job seekers. Corporate culture influences the corporate strategy and should also support the achievement of corporate goals, which cannot be achieved without a set education system and the overall approach of the organization to employee education.. Only then can the organization be ready to withstand strong competition, because its competitiveness lies not only in its flexible and adequate responses to changes in its surroundings, but above all in its long-term preparation for potential changes. These changes cannot be achieved without a well-developed system of corporate culture, an integral part of which is a system of further professional development of employees

Keywords: education, corporate culture, lifelong learning, education methods

Úvod

Kulturu lze definovat jako opak přírody, protože je stvořena člověkem. Je to v širším pojetí nové prostředí, ve kterém člověk existuje, nikoliv jako individuum, ale jako součást společnosti – firmy, školy. Jedinec se musí více či méně přizpůsobit ostatním členům a očekává se od něj, že se v prostředí nastavené kultury bude chovat určitým způsobem. Kultura v užším pojetí je dle G. Hofstede a G. J. Hofstede (2007) chápána jako „civilizace“, případně zdokonalení myšlení, které se projevuje vzdělaností, uměním a literaturou, filozofií a vědou. Souhrnně se jedná o určité naučené a osvojené vzorce chování, které určité skupině lidí připadají naprosto běžné a jsou sdíleny s lidmi v okolí. Tyto vzorce chování se formují v zázemí, ve kterém lidé vyrůstají a jsou vychováni. Kultura je také vymezována sociálním prostředím a rodinou, ve které vyrůstáme, školou, zájmovými činnostmi, je ovlivňována vrstevníky a sdělovacími prostředky. Toto vše se také projevuje ve firemní kultuře každé organizace. To, jakým způsobem, je také vlivem zažitých morálních a etických norem chování v organizaci. Z toho také vyplývá, že etika je podstatnou součástí firemní kultury.

Firemní kultura je nezbytnou součástí každé organizace a dobrá firemní kultura je součástí úspěšné firmy. Patří do ní nejen vnější faktory, které jsou nejviditelnější, ale také faktory vnitřní a tím nejvíce vnímaným je bezesporu úroveň komunikace firmy, protože s její pomocí můžeme motivovat, vzdělávat, hledat řešení. Vnější okolí nás také vnímá skrze náš způsob komunikace (propagace, prohlášení, obchodní jednání, úroveň kompetencí a vzdělání zaměstnanců).

Financování, používání technologií a přenos informací jsou do jisté míry nezávislé na místě vzniku a mohou se snadno přenést do jiného místa. Naproti tomu komunikace, styl řízení, vzdělávání a motivace pracovníků jsou prvky, které jsou dány vzorci dané kultury a určují způsob jednání a chování. Současnou turbulentní dobu lze charakterizovat stále zrychlujícím se procesem přijímání a aplikace změn, přičemž na tuto situaci musí reagovat veškeré subjekty ekonomického systému. Konkurenceschopnost organizace spočívá nejen v jejích pružných a adekvátních reakcích na změny v jejím okolí, ale především v její dlouhodobé přípravě na potenciální změny. Těchto změn nelze dosáhnout bez dobře propracovaného systému firemní kultury, především v oblasti vzdělávání.

1 Vzdělávání pracovníků

Jedná se o významný proces s dopadem na celou organizaci. Proces, který v první fázi představuje určitou investici z hlediska odběratelů. Odběrateli jsou v takovém případě jak zaměstnanci, tak zaměstnavatelé. Tyto investice můžeme rozdělit na prvotní (jedná se

o základní vstup do problematiky), nahrazovací (úkolem je obnovit zastaralé informace) a rozšiřovací (cílem je rozvedení, prohloubení znalostí či schopností pracovníků).

Profesní rozvoj pracovníků zajišťuje kvalitní budoucnost podniku, obsahuje v sobě multiplikační efekt. Jeho jednotlivé složky násobí účinek druhých, například získaná kvalifikace a absolvování dalšího vzdělávání výrazně posílí výkonnost člověka a zároveň ovlivní jeho vnitřní motivaci.

Pojem vnitřní motivace je velice důležitý. Potřeba profesního vzdělávání je člověkem pocíťovaný nedostatek informací, schopností, vědomostí, dovedností a návyků. Tento pocit samozřejmě stoupá, pokud okolí tohoto člověka vykazuje známky intolerance k omylům a chybám ve výkonu pracovníka. Zároveň se, celospolečensky, nároky na znalosti, dovednosti a vědomosti neustále zvyšují, jedná se tedy o celoživotní proces, který ale nutně souvisí s vnitřní motivací člověka. Bez toho, aby zaměstnanec sám chtěl prospět svými vědomostmi jak sobě, tak podniku, nelze úspěšně realizovat jeho vzdělávání. Jednou z hlavních úloh firemní kultury je prosazování etických aspektů práce a slušného zacházení se zaměstnanci. Stále více společností vypracovává své vlastní etické kodexy. Tyto dokumenty, které v souladu s hodnotami podniku, stanovují určité normy a principy vedení, které firma zohledňuje při svém podnikání. Také slouží ke kultivaci firemní kultury a jsou nezbytnou součástí personálního řízení podniku. Ovlivňují tím celou firemní kulturu a do jisté míry přispívají k úspěšnosti firmy. Tento souhrn morálních hodnot by měl obsahovat pojmy, jako jsou: poctivost, slušnost, ohleduplnost, přiměřenost, respektování zákonů, odpovědnost a další.

Stejně jako výrobky podléhají určitému tzv. životnímu cyklu, tak je tomu i v případě společností. Je důležité, aby manažeři pochopili zákonitosti vývoje a zjištění, ve které fázi se společnost nachází a k tomu přizpůsobit vhodný styl vedení. Jednotlivé fáze jsou následující: (2) *fáze proroka* (Inspirace a inovace) – *fáze barbara* (vybudování si trhů, postavení a soustředění se na zákazníka) – *fáze budovatele a objevitele* (je vykazován zisk, ale ten se dále investuje do příležitostí růstu za současného rozhodování a vedení „budovatele“, apod.) – *fáze administrátora* (jedná se o fázi bezpečného podnikání, kdy existují zdroje a je očekáván neustálý pohyb vpřed za současné tvorby systémů, procesů apod.) – *fáze byrokrata* (výroba/služba je ve stádiu „dojné krávy“ a je dosahován sice zisk, ale ne růst, očekává se profesionální řízení, apod.) – *fáze aristokrata: odcizení a revoluce*, kdy tato fáze nastává, pokud nedošlo ke změnám a je patrný styl ustrnutí, apod. Být tedy neustále ve střehu, sledovat směřování a vývoj, predikovat její budoucnost, na to jsou potřeba nejen zkušenosti, ale v dnešní době také notná dávka znalostí, schopností a dovedností, bez kterých se neobejdeme a pokud

se nebudeme průběžně vzdělávat a zajímat se o nové trendy, nemáme šanci uspět v konkurenčním boji. (1)

2 Strategický rozměr vzdělávání a rozvoje

Výdaje na vzdělávání a rozvoj pracovníků představují dlouhodobou investici nutnou pro perspektivu výkonnosti organizace. Čas od času jsme svědky, že obtížná měřitelnost efektivnosti vložených prostředků do vzdělávání svádí k rychlému rozhodnutí škrtnout je, kdykoliv firma potřebuje v krátké době snížit přímé náklady. Manažeři, kteří jsou podepsáni pod jejich redukcí, mohou prokázat okamžitý výsledek. Neuspokojivé kompetence zaměstnanců je netíží, protože tento problém bude trápit někoho jiného. Nápady, jak zlepšit procesy a výkonnost ve prospěch zákazníků i vlastního personálu, musí dnes ve zvýšené míře přicházet od zaměstnanců, kteří stojí v první linii. Organizace je k tomu může připravit, pokud, pokud zabezpečí jejich důkladnou rekvalifikaci, mobilizuje jejich potenciál a poskytuje příležitosti k rozvíjení tvůrčích schopností. Strategickou funkci investic do vzdělávání a rozvoje lze dokumentovat několika údaji:

- Podle studie U.S. Department of Labor bude v příštím desetiletí 75% národní pracovní síly potřebovat významnou rekvalifikaci,
- Podle studie National Center on Educational Quality of the Workforce (USA) má zvýšení vzdělání o 10% pozitivnější dopad na produktivitu, než nárůst pracovní doby nebo základního akciového kapitálu,
- Podle národní studie o USA byli zaměstnanci s alespoň 6 dny tréninku ročně více spokojeni s prací než ti, kteří absolvovali kratší školení nebo nebyli vůbec školeni.

Ve světě práce pojmy vzdělávání, trénink, program rozvoje apod vyvolávají představu, že jde o personální aktivity určené k rozvíjení dovedností a schopností pracovníků. Rozvoj člověka se samozřejmě uskutečňuje i mimo rámec formálních procedur personálního řízení. Přispívají k tomu jakékoliv činnosti, které jednotlivec podnikne, aby zvýšil svou užitečnost a výkonnost jako člen organizace. Může jít o činnosti, které:

- Přímo se vztahují k vykonávané práci, např. naučit se psát na klávesnici deseti prsty,
- Představují obecně použitelné dovednosti, např. osvojit si zásady time managementu,
- Nemají žádnou souvislost se zaměstnáním, např. organizovat sběr příspěvků na charitativní akci.

Firmě se vrátí čas a prostředky vynaložené na rozvíjení pracovníka, jestliže mu nabídne příležitosti, aby mohl u ní dosáhnout svých kariérových cílů. Přijme-li pracovníka jako celistvou osobnost, jejíž kompetence formují, jak podmínky zaměstnání, tak vnější prostředí, pak v takovém klimatu management může založit dlouhodobou výkonnost na intelektuálním kapitálu klíčových zaměstnanců. Lidé s výkonnostním potenciálem velmi dobře vědí, že jejich zaměstnatelnost a postup závisí na trvalém rozvíjení kompetencí. Proto zaznamenáváme, že úspěšné firmy na trzích práce vyspělých ekonomik stále více soupeří o kvalifikovanou pracovní sílu nabídkami tréninku a šancemi ke zvýšení kvalifikace.(2)

3 Intelektuální kapitál

V minulém desetiletí firmy zvyšovaly svou produktivitu re-engineeringem procesů, snižováním personálu, vytvářením týmů a outsourcingem vedlejších aktivit. Nyní jsou už v situaci, že využily“snadné“ zdroje přírůstků produktivity a stojí před výzvou, jak ji budou zvyšovat v novém desetiletí. Dnes je vzácností, abychom zaznamenali snadný růst. Trhy v průmyslově rozvinutých státech a zejména v USA jsou vyspělé a přežít dokáže ten, kdo vychází ze soutěže jako vítěz.

Některé světově známé společnosti, např. Coca Cola, Microsoft, Intel a další říkají, že „naši lidé jsou naším největším majetkem“. Microsoft byl uváděn jako typický příklad úředně nezapsané hodnoty nehmotných aktiv. V roce 1996 jeho tržní hodnota převyšovala 11,2 krát hodnotu jeho hmotných aktiv. Tato „nehmatatelná hodnota“ představuje v podstatě tržní odhad jeho intelektuálního kapitálu, který nezachycují finanční výkazy. Není to výjimka a ilustruje to, jaká omezení mají stávající modely finančního účetnictví. Podle odhadů nepochází 50 – 90 % hodnoty vytvořené firmou z řízení tradičních materiálních aktiv, ale z řízení intelektuálního kapitálu.

Akademici a někteří praktici projevují zhruba od poloviny 60. Let zájem o účetnictví týkající se lidí. Diskutovalo se o účetnictví lidského aktiva (human asset accounting), účetnictví lidských zdrojů (human resource accounting) a účetnictví lidské hodnoty (human Word accounting). V 90. letech se v literatuře rozšířil pojem intelektuální kapitál. Má mnoho významů a synonymně se používají i jiné výrazy: duševní vlastnictví, intelektuální aktiva a aktiva znalostí. Intelektuální kapitál lze pojmovit jako kapitál firmy, který vlastní a je založený na znalostech. Leif Edvinsson, první ředitel intelektuálního kapitálu v pobočce švédské korporace Skandia Group, jím rozumí *vlastnictví znalostí, aplikovaných zkušeností a odborných dovedností (tj. lidský kapitál), technologii vnitřního řízení organizace (tj.*

organizační kapitál) a vztahy k zákazníkům, dobré jméno a dodavatelské vztahy (tj. kapitál zákazníků.

Člověku je umožněno rozvinout své dispozice, pokud mu organizace dá příležitost svými systémy, kulturou a výzkumem. Příklady praxe ukazují, že:

- Organizaci se špatnými systémy se nedaří zkrátit cykly inovací a demotivuje lidi,
- Organizace, která není tolerantní a nedovoluje, aby pracovníci zkoušeli věci, která je sankcionuje za to, že neuspěli a neakceptuje, že se učí z chyb, může ztěžít počítat s dlouhodobým růstem,
- Světlé zítřky nečekají ani organizaci bez opravdového zájmu o výzkum a vývoj, bez pokory a zvědavosti, bez čestnosti přiznat si, jaká je realita. Vytváří si prostředí, kde panuje direktivní řízení a arogance.

V organizaci vnitřně blokové neefektivními systémy, firemní kulturou a nedostatečnou kreativitou se intelektuálnímu kapitálu nedostávají „živiny“, protože jeho potenciál růstu podvazuje nerovnost přístupu k informacím a nedostatek svobody pro lidský intelekt a jednání.

Budoucnost má jen taková organizace, která se učí a intelektuálně roste. Potřebuje však:

- Investovat do rekvalifikace zaměstnanců a rozvoje jejich kapitálu,
- Zdokonalovat informační systém a komunikaci,
- Kultivovat firemní kulturu, aby motivovala a podporovala delegování pravomocí a angažovanost.

Ukazatele lidského kapitálu:

- Pověst zaměstnanců společnosti mezi headhuntery
- Roky praxe v povolání
- Podíl nových zaměstnanců (procento zaměstnanců s méně než 2 roky praxe)
- Spokojenost zaměstnanců
- Podíl zaměstnanců navrhuje nové myšlenky (podíl zavedených nápadů)
- Přidaná hodnota na zaměstnance
- Přidaná hodnota na 1 dolar platu

Ukazatele organizačního kapitálu

- Počet patentů
- Příjem k výdaji na vědu a výzkum
- Náklad na podporu patentu
- Náklad na životní cyklus projektu na 1 dolar prodeje
- Počet individuálních počítačových spojení s databází

- Časový rozsah, po který byla databáze využívána
- Příspěvky do databáze
- Aktualizace databáze
- Objem využití informačního systému a počet kontaktů s informačním systémem
- Náklad na informační systém na 1 dolar prodeje
- Příjem na 1 dolar výdajů na informační systém
- Spokojenost se servisem informačního systému
- Poměr generovaných nových myšlenek k zavedeným novým myšlenkám
- Zavedené nové produkty na jednoho zaměstnance
- Počet multifunkčních projektových týmů
- Podíl příjmů ze zavedených nových produktů
- Pětiletý trend životního cyklu produktu
- Průměrná doba vynaložená na návrh designu a vývoj produktu
- Hodnota nových myšlenek (úspory, příjmy)

Ukazatele kapitálu zákazníků a vztahů

- Růst objemu obchodu
- Podíl prodejů stávajícím zákazníkům
- Věrnost značce
- Spokojenost zákazníků
- Stížnosti zákazníků
- Vrácené produkty jako podíl z prodeje
- Počet dodavatelských/zákaznických aliancí a jejich hodnota
- Podíl zákaznického (dodavatelského) obchodu v dolarech, který reprezentuje produkt (servis) (3)

Závěr

Nové technologie vyžadují celý produktivní život učit se. Pracovníci, kteří nedisponují požadovanými znalostmi a dovednostmi, se stávají na trhu práce nezaměstnatelnými. Vedle toho probíhají změny ve složení pracovní síly, jako růst podílu zaměstnanců starší generace, zvyšuje se zastoupení minorit, na trhu práce hledají své uplatnění pracující matky a osoby se změněnou pracovní způsobilostí. Ti všichni se ucházejí o limitovaný počet pracovních míst a zároveň jsou nositeli změněných hodnot – chtějí větší seberealizaci v práci a podílet se na plánování své pracovní kariéry. Chtějí dostávat příležitosti k profesnímu a osobnímu rozvoji,

rozšiřovat si své znalosti a zdokonalovat své dovednosti a schopnosti. Rovněž požadují sladění pracovního a osobního (rodinného) života tak, aby mohli uspokojit své potřeby v oblasti práce, osobního života a rodiny. V neposlední řadě ekonomické a sociální změny zvyšují tlak na organizace, aby jednaly společensky odpovědně, např. nabízely programy vstřícné rodině, flexibilní režimy pracovní doby a realizovaly princip rovného zacházení.

Při plánování systému rozvoje kariéry a programu diverzity pro různé věkové skupiny zaměstnanců musí podnik zohlednit, jaká rozhodnutí a problémy jedinec řeší v jednotlivých fázích svého života. Porozumění těmto věcem znamená znát teorie rozvoje kariéry, teorie vývoje života jedince a vzájemné vazby mezi fázemi v pracovní kariéře a vývoji osobního života. Kariérové zkušenosti žen a mužů se přitom do jisté míry liší vzhledem k jejich specifickým rolím ve společnosti a rodině. (4)

Poděkování

Děkuji organizátorům konference Nové trendy 2022 za její realizaci.

Literatura

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INOVACE DIDAKTICKÝCH METOD A TECHNIK VE VÝUCE POLITOLOGIE

INNOVATION OF DIDACTIC METHODS AND TECHNIQUES IN THE TEACHING OF POLITICAL SCIENCE

Radka Löwenhöfferová

Abstrakt

Didaktické metody představují významný faktor působící na efektivitu vyučování a učení na vysoké škole. Předložená studie je zaměřena na výuku politologie jako interdisciplinární vědecké disciplíny. Jedním z trendů inovací didaktického procesu je rozšíření využití klasických metod (přednáška, seminář, diskuze) o metody problémové, zejména o případové studie a hraní rolí. Druhým inovačním trendem je vývoj vyučovacích technik, které jsou zaměřeny na podporu kreativity studentů. Třetím směrem inovativních aktivit je využití elektronických nástrojů, digitálního světa ve vyučovacím i učebním procesu. Souhrnně lze tyto inovační procesy označit pojmem Blended Didaktikum, jehož podstata spočívá v propojení třídní výuky, kreativní techniky a elektronických zdrojů v procesu učení studentů.

Klíčová slova: Didaktické metody v politologii; Metody problémového vyučování a učení; Kreativní techniky ve výuce; Elektronické nástroje učení; Blended Didaktikum.

Abstract

Didactic methods represent an important factor affecting the effectiveness of teaching and learning at the university. The presented study is focused on the teaching of political science as an interdisciplinary scientific discipline. One of the trends in the innovation of the didactic process is the extension of the use of classical methods (lecture, seminar, discussion) to problem-based methods, especially case studies and role playing. The second innovative trend is the development of teaching techniques that are aimed at supporting student creativity. The third direction of innovative processes is the use of electronic tools, the digital world in the teaching and learning process. Collectively, these innovative processes can be characterized by the term Blended Didaktikum, the essence of which is the connection of classroom teaching, creative techniques and electronic resources in the learning process of students.

Keywords: Didactic methods in political science; Methods of problem-based teaching and learning; Creative techniques in teaching; electronic learning tools; Blended Didactics

Úvod – Didaktické metody ve vysokoškolském vzdělávání

V obecné rovině lze konstatovat, že vysokoškolské studium probíhá ve dvou hlavních směrech. Tím prvním je vyučování, tj. činnost, kterou řídí a organizuje a reguluje učitel. Vyučování je zpravidla podporováno informačními, studijními materiály, které mají jak klasickou (tištěnou), tak stále více elektronickou podobu. Důležitou součástí studia je vlastní proces učení studentů, ať se již týká jejich aktivit ve vyučování, přípravy úkolů na semináře, zpracování různých písemných zadání apod. Didaktické metody spočívají ve vytvoření souboru postupů, kterými učitel předává poznatky a formuje dovednosti studentů. Stejně tak lze do didaktických metod zahrnout postupy studentů, kterými si vědomosti a dovednosti osvojují. Počet metod neustále narůstá, stávají se důležitým know-how nejen učitelů, ale i jednotlivých škol. Z historie vysokoškolského vzdělávání vidíme, že některé školy se na základě speciálně vyvinutých metodických přístupů „*marketingově*“ odlišují od ostatních. Příkladem je americká Harvardská univerzita, která poprvé použila metodu případových studií ve výuce práva. Další příklad je Technische Universiteit v nizozemském Eindhovenu, kde byla vytvořena a použita metoda řízené diskuze v plénu Philips 66 a to v oblasti výuky managementu.

Metody vysokoškolského vzdělávání představují podle autorů Gonzáles, Perez-Juáres, Oviedo (2006) didaktický nástroj, který je základem pro pedagogickou komunikaci a sociální interakci učitele se studenty. Maňák a Švec (2003, s. 21) píší, že „*metodické jednání učitele vyrůstá z určité koncepce výuky, podílí se na organizaci výukového procesu a zajišťuje optimální vztah mezi všemi působícími činiteli*“. Těmito činiteli jsou podle autorů zejména cíl, obsah a didaktické prostředky výuky, a to jak klasického, tak elektronického charakteru. Uvedení autoři označují **didaktické metody jako komplexní edukační fenomén** (tamtéž, s. 23). S tímto názorem lze souhlasit, neboť právě problematika výukových metod představuje významnou oblast didaktiky, kde lze uplatnit kreativní přístupy a reflektovat různé zkušenosti z praxe.

1 Metodika výuky v oboru politologie

Uvedená hlediska pro koncipování didaktických metod je nutno uplatnit i při výuce odborných předmětů jako jsou např. politologické vědy. Důležitým rámcem pro volbu metod je obsah, resp. pojetí dané vědní disciplíny. V tomto kontextu lze přijmout koncept Heyworda (2008), který integruje v politologii různá témata z oblasti filozofie, ekonomie, politiky, mezinárodních vztahů a mediální komunikace. Podle autora představuje politologie nejen svébytnou vědu zabývající se jevy a procesy ve společenské sféře, ale současně také nástroj pro pochopení historie různých etap vývoje globálního světa. **Multidisciplinární charakter politologie a její metodologie zkoumání ovlivňují metodiku výuky v rámci vysokoškolského vzdělávání.**

Takto pojatá charakteristika politologie do značné míry vylučuje vytvořit nějaký „ideální“ model didaktických metod v této oblasti. Co je však signifikantní, je skutečnost, že po obsahové stránce je třeba ve výuce, zejména v úvodu probrat tzv. velká témata tohoto oboru. Těmito tématy jsou třeba teorie vládnutí, volební systémy, politické strany v pluralitní společnosti atd. V této počáteční fázi vyučování využívají učitelé povětšinou „klasické“ metody vysokoškolského vzdělávání, tj. přednášku, seminář a diskuzi.

Podstatou přednášení je systematický výklad tématu větší nebo menší skupině studentů. Někdy se poukazuje na neúčinnost verbální formy výkladu, na nedostatečnou zpětnou vazbu mezi učitelem a studenty. Studentům může také činit potíže systematický záznam hlavních myšlenek, popřípadě argumentů, mohou ztrácet orientaci v problematice a podléhat únavě. Na druhé straně nelze neocenit u přednášky možnosti, které jiné metody nemají. Dovoluje zvolit teoreticky náročné téma, podat celistvější přehled o látce, uplatnit preciznost formulací a poskytnout co nejúsporněji a ve velkém rozsahu utříděné poznatky. V tomto smyslu je přednáška do značné míry nenahraditelná.

Seminář (Maňák, J, Švec, V., 2003) je metoda zaměřená k samostatné práci s literárními prameny a k samostatnému vystupování před skupinou. Studující dostanou za úkol prostudovat příslušnou literaturu a poté mají na semináři diskutovat na základě tezí. Mohou mít též povinnost napsat na základě doporučené literatury písemný referát, který před skupinou přednesou. Vhodné je takové rozdělení témat prací, které směřuje k rozboru jednoho problému z různých aspektů. Při výukové komunikaci na semináři se studenti učí zejména argumentovat a hájit své poznání, názory a stanoviska.

Samotnou diskuzi je možno považovat za didaktickou metodu, jejíž podstatou je skupinová práce, resp. komunikace. Diskuzní metody mají v praxi řadu variant. Řízená diskuze (Čapek, J.

2015, str. 321) je nejběžnějším typem diskuzní metody. Obsah diskuze je zvolen učitelem a předem oznámen studentům. Učitel ve výuce nepodává výklad tématu, ale pouze stručně uvede hlavní myšlenku, resp. otázku do diskuze a bezprostředně poté klade další otázky. Nenásilně usměřňuje diskuzi tak, aby došlo k volné výměně názorů a postojů a k samostatnému formulování stanovisek k danému tématu. Řízená diskuze však má svá úskalí. Učitel se musí umět rychle orientovat v záplavě faktů, hledisek a zkušeností. Nesmí ztratit ze zřetele daný problém a udržovat diskuzi stále kolem něho. Musí mít na paměti faktor času a obrátně vymezovat vliv tzv. notorických diskutérů. Na druhé straně musí umět zapojovat vhodně do diskuze i ty, co stojí stranou. Diskuze v plénu je variantou řízené diskuze. Každá skupina studentů řeší samostatně zadaný úkol. Stanoviska a závěry diskuze zpracuje zvolený člen skupiny v písemné formě. Jestliže se skupina nesjednotí na řešení, mohou být v plénu předneseny i odlišné názory. Učitel provádí závěrečné hodnocení diskuze, rozebírá průběh diskuze, a nakonec posoudí i vystoupení jednotlivých účastníků, představitelů studijních skupin.

Zkušenosti ze vzdělávací praxe ukazují, že inovace klasických metod výuky politologie se ubírá směrem k metodám problémového vyučování a učení. V této souvislosti lze uvést některé podněty. Jednou z možností je uplatnění případové studie (Čapek, R., 2015), jejíž podstatou je stručné písemné zadání reálného problému, které obsahuje i návodné otázky k jeho řešení. Příkladem velmi aktuální případové studie může být analýza voleb v Maďarsku v roce 2022, tj. volební propagace, účast lidí, strategie jednotlivých stran a volebních uskupení. Je nutno podotknout, že cílem případových studií není řešit daný problém, ale nácvik dovedností tvořit a posuzovat možné varianty jeho posouzení. Další metodou může být hraní rolí, kdy každý studující řeší zadaný problém jako přímý aktér, tj. hraje roli politiků, novinářů, odborníků v konkrétním simulovaném prostředí. Příkladem je zasedání rady bezpečnosti OSN, kde jednotliví studenti zastupují členské státy, členy daného orgánu. Podle Štělce (2002) Každý student obdrží přesný a jasný popis situace a charakteru jeho role. V této fázi je velmi důležité, aby všichni účastníci hry přesně pochopili své zadání. Úloha učitele zde spočívá v tom, že musí účastníky doslova „vnořit do problému“. Jeho úvodní vstup musí být dynamický a podnětný. Je velmi důležité, aby byla už na začátku hry vytvořena atmosféra vzájemné důvěry. Studenti, kteří přímo nehrají, jsou v roli pozorovatelů a obdrží přesné pokyny, co mají sledovat. Jejich úkolem je tedy pozorovat, hodnotit a analyzovat. V průběhu této metody musí učitel udržet řídicí roli, hraní účastníků nesmí „opustit“ zadání. Jinak by měl mít průběh hry volný, je však třeba hru ukončit, ve chvíli, kdy je program řešení problému naplněn. Po skončení hraní následuje skupinová diskuze. Učitel při závěrečné diskuzi rekapituluje celý průběh hry

a dotazuje se studentů na jejich pocity. Jedná se o efektivní metodu při rozvíjení schopností analyzovat množství informací, utvářet vlastní úsudky a přesvědčovat ostatní.

2 Některé kreativní techniky vhodné pro výuku politologie

Do problematiky výukových metod patří i problematika tzv. kreativních technik vyučování, tj. speciálních postupů učitele ve výukových situacích. Za základní techniky využitelné i při výuce politologie lze považovat brainstorming, branwriting a Collective Notebook.

Brainstroming

Učitel přednese skupině nejlépe 4-12 studentů problém s jednoduchým zadáním, který má několik možných řešení. Studenti reagují přenesením svých okamžitých myšlenek, učitel hraje roli zapisovatele. Nápady musí být bezprostřední, přednost má kvantita před kvalitou. Doba trvání této „*bouře nápadů*“ by neměla být dlouhá, většinou nastává konec po vyčerpání nápadů ve skupině. Atmosféra takto pojaté výuky by měla být klidná, nápady se nehodnotí, studenti by neměli mít strach volně se vyjádřit. Po skončení všech vyjádření studentů učitel provede odborné vyhodnocení všech myšlenek, může je dát do struktury a souvislosti. Hodnotí se jen nápady, řešení problému nikoliv pak jejich autoři.

Brainwriting

Tato technika je založena na písemné formulaci nápadů studentů na řešení učitelem předloženého problému z výukové látky. Platí zde pevná pravidla. Studenti jsou rozděleni do skupin po šesti členech a po prezentaci zadání učitelem zapisují na předem připravený formulář postupně jeden za druhým každý maximálně tři možnosti řešení. Na tuto práci mají celkem pět minut. Teoreticky je tak možno nashromáždit až 18 možných řešení dané problematiky. Po skončení předepsané doby se provádí vyhodnocení podaných písemných návrhů ve skupinách a následně v plénu, které organizuje učitel.

Collective Notebook (CNB)

Tato metoda je využívána hlavně jako způsob propojení výuky a domácí přípravy studentů. Může probíhat klasicky v písemné podobě nebo v elektronické komunikaci. Základ je zadání řešeného problému studentům například na přednášce či semináři. Studenti pak problém řeší doma s využitím různých podkladů, různých zdrojů informací. K tomu mají připravené tzv. záznamové listy, kde si činí své poznámky. Tato individuální „*domácí*“ řešení si pak přinášejí do výuky, kde s nimi seznamují učitele a kolegy. Na základě těchto návrhů pak zpracovávají s učitelem závěrečné, kolektivní řešení zadaného problému.

Purtee (2016) charakterizuje kreativní vzdělávací proces jako významnou inovaci tradičního vyučování a učení. Motivace studentů k aktivnímu přístupu se děje několika mediálními kanály. Formulace problémů k řešení je doprovázena různými obrázky, grafy, vizualizacemi, animacemi apod. Jansen (2016) je názoru, že cílem takto pojatého vyučování je udělat výuku politických témat záživnou a přátelskou, a přitom naplnit stanovené výukové cíle. Tyto cíle jsou často formulovány ve velmi obecné rovině jako například „*formování demokratického myšlení*“ nebo „*osvojení hodnot pluralitní společnosti*“. V této souvislosti je zajímavé, že uvedený autor dává přednost technikám, které nevyžadují hlubší přípravu a spíše jsou do výuky nasazovány na základě vzniklé situace, tj. improvizálně. Příkladem takovéto techniky je technika zvaná „*Mlýnek*“, kdy učitelem nadnesený problém je postupně překrýván problémy dalšími, politicky závažnějšími tématy. Další technikou je tzv. „*baterka*“ neboli pomyslný světelný pruh zaměřený na vymezení aktuálního, kardinálního politického problému v dané zemi a v daném období. Zajímavým argumentem tohoto autora je, že právě tyto techniky vyučování přinášejí do komunikace učitele se studenty velmi kladný „*náboj*“ atmosféry a důvěry. Jelikož politické otázky a problémy jsou často velmi citlivou záležitostí a rozdílnost názorů může zasít mezi učitele a studenty nedůvěrou až nevraživostí, lze s tímto pohledem souhlasit. Podle autora je také možný tzv. *identifikační kroužek*, kdy studenti sedí v kruhu a obracejí se na souseda s otázkou, kterou chtějí vysvětlit. Otázka pak koluje tak dlouho, dokud se nenajde někdo, kdo ji zodpoví. Učitel pomáhá, naznačuje. Po zodpovězení otázky se daný proces opět nastartuje. Obdobně lze pojmut tzv. *písemný rozhovor*, kdy studenti zůstanou v lavicích, ale první student předá sousedovi na papíru dotaz se žádostí o odpověď a tento papír opět koluje po třídě do vyřešení a pak se opakuje. Zajímavé jsou tzv. *itexty*, kdy učitel ve výuce vybere tweet a komentuje nějakou zásadní poznámku předního politika na Twitteru. Další technikou je „*Analýza pavučin*“, kdy učitel se studenty pomocí Mind-map (myšlenkové mapy) znázorní nějaký politologický problém. Jansen (2016) uvádí například vztah zákonodárné, výkonné a soudní moci. Velmi podnětná je technika „*Dešifrování zdroje*“. Jde o známý výrok významného politika, který učitel vybere a prezentuje studentům. Jansen (2016) uvádí příklad „*Ich bin ein Berliner*“. Studenti pak určují jméno, příjmení daného politika a v následné diskuzi upřesňují okolnosti kdo, kdy, proč či v jakých podmínkách tato slova pronesl. Za zmínku stojí také Jansenova technika tzv. dvouminutového projevu, který si studenti připraví k zadanému tématu a projev přednesou jako politici v určité funkci, k situaci a ke konkrétnímu publiku. Jak autor upozorňuje, tato technika někdy může do výuky přinést humor, mnohdy potřebné „*koření*“ univerzitního vzdělávání.

3 Výukové metody s využitím elektronických nástrojů

Do problematiky výukových metod a technik je nutno zařadit i komunikaci učitelů se studenty s využitím elektronických nástrojů, resp. edukační činnost v digitálním prostoru. Metody monologického charakteru či aktivizující techniky zůstávají základním prvkem prezenční i kombinované výuky. Nástroje elektronické komunikace mohou tvořit doplňky vysokoškolské výuky nebo určité substituty metod stávajících. Jejich úloha v procesu vysokoškolského vzdělávání je však v praxi daleko širší. Otevřením komunikačních kanálů na internetu se posouvá studijní proces do virtuálního prostředí. V obecné rovině jsou výukové nástroje koncipovány jako nezávislé na místě (synchronní) a částečně nezávislé na čase (asynchronní). Jsou použitelné pro učitele i studenty, vytvářejí tedy do jisté míry didaktickou situaci nazývanou peer do peer (rovný s rovným). „*Peer learning je společný přístup k učení, ve kterém jednotlivci s podobnými znalostmi nebo zkušenostmi spolupracují na učení a dosažení společného cíle. Může to být účinný způsob, jak zlepšit uchování informací a zvýšit motivaci a zapojení, zejména ve vzdělávání a na pracovišti.*“ (Continu, 2021)

Ukažme si příklady těchto elektronických nástrojů vzdělávání, které se vlivem technologického pokroku vyvíjejí velmi rychle, dá se říci dosti překotně.

Software Mediawiki

Tento elektronický nástroj umožňuje studentům vytvářet společné webové stránky, které obsahují návody k učení, manuály, skripta i zpracované odpovědi na zkušební otázky. Jde o metodu, jak zapojit více lidí do učebního procesu. Problémem je kontrola obsahu, aby nevznikaly nepřesná a chybná sdělení.

Diskuzní fórum

Jedná se o asynchronní nástroj komunikace v online prostředí využitelný pro výukové účely. Zpravidla jde o funkci Learning Management Systems například ve formátu Moodle. Diskuzní fórum může navazovat na přímou výuku, fungovat jako „*dodatečná*“ výměna odborných názorů k stanoveným problémům. Diskuzní fórum může být založeno jako samostatná učební aktivita nahrazující prezenční odbornou diskuzi. Problém je často v moderaci této aktivity učitelem, musí být pravidelná, a ne vždy jde dosáhnout zapojení všech studujících.

Webinář

Jde o klasickou výuku, tj. o přednášku či seminář realizovanou v reálném čase prostřednictvím online technologie. Aplikace pro vedení webinářů umožňují přenos prezentací, filmů, obrázků apod. Přes webinář je možno realizovat výuku pro studenty z různých míst i z různých škol.

Vystoupení učitele je závislé na technickém zajištění, vhodné aplikaci a dostatečně kvalitním připojení k internetu. Technologie se dále vyvíjí s cílem umožnit plnohodnotnou diskuzi či skupinovou práci studentů.

Blog

Blogy jsou specifickým médiem, které slouží k publikování informací spojených s učivem, a to nikoliv na oficiální, ale na neformální bázi. Technicky se jedná o webovou stránku, která je provozována na publikačním systému v rámci webového serveru, ať již veřejně dostupného nebo uzavřeného pro danou studijní skupinu. Tato webová stránka obsahuje krátké učební texty, tzv. blogspoty, které mohou využívat a v omezeném rozsahu komentovat. Funguje v podstatě jako úložiště dat a informací pro studenty, kteří je mohou ze „*společné adresy*“ přebírat a používat pro své učení. Blog může také sloužit jako „*informační centrum*“ pro učitele i jako platforma jejich komunikace se studenty.

Video

Výukové video plní zpravidla vysvětlovací či instruktážní funkci pro nácvik různých dovedností v intelektuální i fyziomotorické oblasti činnosti studentů. V řadě případů má dnes video profesionální podobu, tzv. expertní videa hrají a natáčejí specialisté. Na síti Youtube mají výuková videa speciální kanál. Video je spojeno s efektivnějším učením, je názorné a instruktážně zaměřené. Rozšířené jsou videa s nahrávkami přednášek řady předních odborníků z různých oblastí lidské činnosti. Zajímavou variantou je záznam určitého výukového vystoupení sloučený s prezentací nazývaný *slidelive*.

Skupina na sociálních sítích

Výuka ve vysokoškolském prostředí je často vázána na konkrétní studijní skupiny. Učitel může využít sociální sítě například Facebook či LinkedIn pro komunikaci se studenty mimo přímou výuku. Může této uzavřené skupině poskytovat různé druhy zejména aktuálních nových studijních materiálů či upřesnit některé úkoly zadané v přímé výuce. Sociální sítě patří mezi mladými lidmi k oblíbeným elektronickým prostředkům a spojují přednosti blogu, e-mailu a dalších *www* aplikací, čímž vytvářejí platformu pro on-line komunikaci. Oblíbené je též sdílení různých dat a informací s ostatními členy skupiny. Jednotlivci mohou vyjadřovat své názory a komentovat názory jiných.

Je typickým rysem současné doby, že elektronických nástrojů, které lze využít ve výukové komunikaci je dnes celá řada. Prakticky každý den se v digitálním prostoru objevují nové

vzdělávací obsahy, vytvořené učiteli, studenty, různými nadšenci či profesionálními IT firmami. Je evidentní, že není v silách žádného člověka všechny tyto nástroje detailně znát a umět používat. Výše uvedené nástroje jsou jen příklady, které lze využít ve výuce politických věd. Nicméně velmi záleží na didaktických kompetencích učitele, aby si vybral takové elektronické prostředky, které mu pomohou splnit výukové cíle a které učiní studentům učení zajímavějším.

Z didaktického pohledu mohou elektronické digitální nástroje vzdělávání sehrát důležitou úlohu v rámci tzv. kontextového učení studentů. Tento koncept patří do konstruktivistického pojetí didaktického procesu, ve kterém učitel a studenti společně participují na průběhu a výsledcích výuky. Digitální technologie také vytvářejí podmínky pro tzv. gamifikaci výuky, kdy hra se stává součástí takřka všech metodických postupů. Herní prvky výukových situací také pomáhají zapojit se do procesu osvojení poznatků, dovedností a prohlubuje zkušenosti studentů a v konečném důsledku i učitelů.

Závěr

Kdybychom měli provést určité zobecnění teorie i praxe ve vysokoškolské výuce, tak se můžeme zastavit u tzv. hybridního způsobu výuky. Zkušenost z praxe univerzit ve vyspělém světě ukazuje stále více se prosazující koncept nazývaný „*Blendet Didaktikum*“. Výuka vychází z osvědčeného formátu přednášek, seminářů a diskuzí. K tomuto didaktickému základu jsou dodávány prostřednictvím elektronických médií další vzdělávací obsahy, zadání pro samostatnou práci studentů a vytváření možnosti pro domácí procvičení učiva v digitálním prostoru. Existuje hodně variant kombinací didaktických metod v klasické a on-line výuce. Vysoké školy se snaží smysluplně spojovat a upravovat prvky prezenční výuky a elektronického vzdělávání. Řada škol též vyvíjí virtuální prostředí pro zkoušení. Důležitým trendem vysokoškolského vzdělávání je, aby studenti dostali možnost pro volbu svých učebních postupů a zároveň i pro aktivní účast na vyučování v učebně. Elektronické prostředky umožňují diverzifikaci učebních zdrojů, výměny studijních materiálů mezi školami v řadě zemí, umožňují monitoring výuky, individuální úpravu učebních prostorů, rozvoj sebe řízeného učení apod. Nicméně i tento model má svoje meze. Keim (2013) píše o tzv. multitaskingu, který je charakterizován jako souběžná práce člověka na více úkolech. Autor do jisté míry oprávněně tvrdí, že učení jedince v každém věku je efektivnější, když postupuje krok za krokem a studující nemusí „*přepínat*“ koncentraci na různé zdroje informací. Na druhou stranu je nutno konstatovat, že vysokoškolská výuka si má klást vysoké, ale přiměřené cíle. Jedním z těchto

cílů je právě schopnost studenta adaptovat se na současnost, která je plná souběžně probíhajících „*problémových*“ procesů. Studenti se v rámci vysokoškolské výuky připravují nejen na budoucí povolání, ale také na život ve společnosti plné protikladu a plné změn. Z tohoto důvodu je nezbytné připomínat obecně kultivační a kulturní význam univerzitního vzdělávání.

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THE QUESTION OF FINANCIAL (IL)LITERACY FROM THE PERSPECTIVE OF THE INDIVIDUAL AND SOCIETY IN SELECTED COUNTRIES OF THE WORLD.

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Abstract

Financial literacy can be defined as the ability to understand and use financial concepts. It is a skill that is needed in order to make sound financial decisions. Financial literacy is becoming increasingly important in today's world as we are faced with more financial choices and decisions as never before. A lack of financial literacy can have serious implications for both individuals and society as a whole. It can also lead to larger societal problems, such as lack of economic growth and stability.

Keywords: Financial literacy, Productivity, Education, Human resources

Introduction

There is a lot of debate about financial literacy levels around the world. There is no doubt that levels could be improved in many countries around the world. However, it is important to remember that financial literacy is not just about knowing how to read and understand financial information. It is also about having the ability to use that information to make sound financial decisions (Atkinson and Messy, 2012). There are several reasons why people may be financially illiterate.

1. The main reasons for increasing financial literacy

- **Lack of financial education:** Many people are not taught about financial concepts at school, and do not have access to quality financial education resources.
- **Lack of awareness:** Many people are not aware of the importance of financial literacy or the available resources to help them improve their financial literacy.
- **Lack of financial resources:** Some people may not have enough money to cover their basic needs, let alone save for the future. This can make it difficult to learn about and invest in long-term financial planning.
- **Limited access to financial services:** Some people may live in areas where there are limited banking and financial services available. This can make it difficult to open a bank account, get a loan, or invest in a financial product.

- **Fear or mistrust of financial institutions:** Some people may be hesitant to work with banks or other financial institutions because they do not trust them or believe that they will take advantage of them.
- **Fear of making mistakes:** Many people are afraid of making financial mistakes, such as overspending or investing in something that loses value.
- **Lack of role models:** Many people do not have parents or other adults in their lives who model good financial habits.
- **Lack of confidence:** Some people may not feel confident in their ability to understand and manage their finances, which can lead to avoidance of financial topics altogether.
- **Negative experiences with money:** Some people have had negative experiences with money in the past, such as growing up in a household with financial stress, which can make them hesitant to manage their finances.
- **Lack of time:** Improving financial literacy can take time and effort, and some people may not have the time enough to dedicate to this task.

2. **Examples of the impact of insufficient literacy on individuals are listed below.**

- Lack of financial literacy can lead to people making poor financial decisions.
- People who are not financially literate are more likely to fall prey to financial scams.
- Lack of financial literacy can lead to people accumulating debt that they are unable to repay.
- People who are not financially literate are less likely to be able to save for retirement or other long-term financial goals.
- Lack of financial literacy can lead to people being unable to make sound investments.
- Lack of financial literacy can lead to people being unable to understand financial documents such as contracts or loan agreements.
- People who are not financially literate are more likely to suffer from financial stress and anxiety.
- Lack of financial literacy can lead to intergenerational financial problems, as children of financially illiterate parents are less likely to be financially literate themselves.
- Financial literacy can help people to make better decisions about saving and spending, and can ultimately lead to improved financial wellbeing.

As it was mentioned before, financial illiteracy can have negative impact on a country's economy as a whole. Individuals can influence much larger forces. As an example, poor financial decisions can lead to debt, which can then lead to default and bankruptcy. This can then lead to a decrease in consumer spending, which can lead to a decrease in economic growth. Financial literacy is important for the development of economies and for the stability of financial markets. Its lack among people in many countries around the world is a problem.

3. Financial literacy in the economic context

What are the key ingredients of economic growth? There is no definitive answer to this question as there are a variety of factors that can contribute to economic growth. However, one of the key drivers of economic growth is definitely productivity.

Economic growth cannot be explained solely by technological progress or an increase in physical capital. The quality of labor also plays an important role. Human capital is important for economic growth because it increases the productivity of workers and makes businesses more efficient. A key determinant of productivity is human capital. The theory is quite explicit in identifying human capital as a source of economic growth.

Human capital refers to the skills, knowledge, and abilities that people have that can be used to generate economic value. Therefore, countries with higher levels of human capital tend to have higher levels of economic growth.

Already the ancient philosopher Aristotle (384-322 BC) considered individuals with high morals and good education as the basis of an ideal state. He sees the means in state-controlled education and upbringing. Education is also considered by William Petty (1623-1687) as a fundamental factor in economic growth. Adam Smith (1723-1790) also discussed the role of education in society. Indeed, education is closely related to increasing productivity and specialization of the individual.

The theory of human capital emerges in the second half of the 20th century. Theodore W. Schultz (1902-1998) in his article *Investment in Human Capital* (1961) was one of the first to use the term human capital. Together with Gary S. Becker (1930-2014) and representatives of the Chicago School of Economics, he was one of the first to elaborate on this theory. (Both of them received the Nobel Prize in Economics.)

Thus, there is great pressure for investment in human capital development by individuals, firms, and the state. We consider higher education, healthy lifestyles and greater efficiency at work to

be trends in today's society. Human capital has an impact on the prosperity of the individual, but also on the development of society as a whole. Human capital can be seen as a new source of economic growth. Today's society is based on knowledge and skills, so human capital is becoming a key component of society's wealth.

The view of the role of human capital in economic growth theory has changed completely several times over the last decades. Lucas (1988) and Romer (1990) are the first to attribute a key role to human capital for long-term sustainable growth in the new growth theory. Subsequent studies view human capital as a mere input without the possibility of generating endogenous growth, such as Mankiw, Romer and Weil (1992). Human capital tends to be referred to as a specific factor of production. The investments associated with it bring higher benefits to the individual as well as to society as a whole. As with other forms of capital, current resource investments will only be reflected in future returns.

There is a strong link between financial literacy and human capital. Financial literacy is the ability to understand and use financial information. Human capital is the knowledge, skills, and abilities that people have that can be used to generate economic value. Financial literacy is important for human capital because it allows people to make better decisions about how to use their resources. Financial literacy can help people invest in themselves and their future, and make better decisions about how to spend and save their money.

4. Comparison of financial literacy levels around the globe

Comparing financial literacy and the way and level of financial education is also of great importance for national policies. All stakeholders seek to understand why one country performs better economically than others. One aspect of this may be the financial literacy of their populations. Policymakers across countries are implementing different financial education strategies. Raising the level of the population can help in the development of the whole economy.

One of the main international organizations working on financial literacy with a transnational perspective is the Organization for Economic Co-operation and Development (OECD).

Comparing financial literacy between countries is not easy. The OECD has developed a questionnaire that focuses on the comparability of individual results across cultural differences. The OECD study is sophisticated and pilot results were published in 2012. The output of the pilot study is a summary of the results of financial literacy levels in 14 countries across four continents, namely Armenia, Czech Republic, Estonia, Germany, Hungary, Ireland,

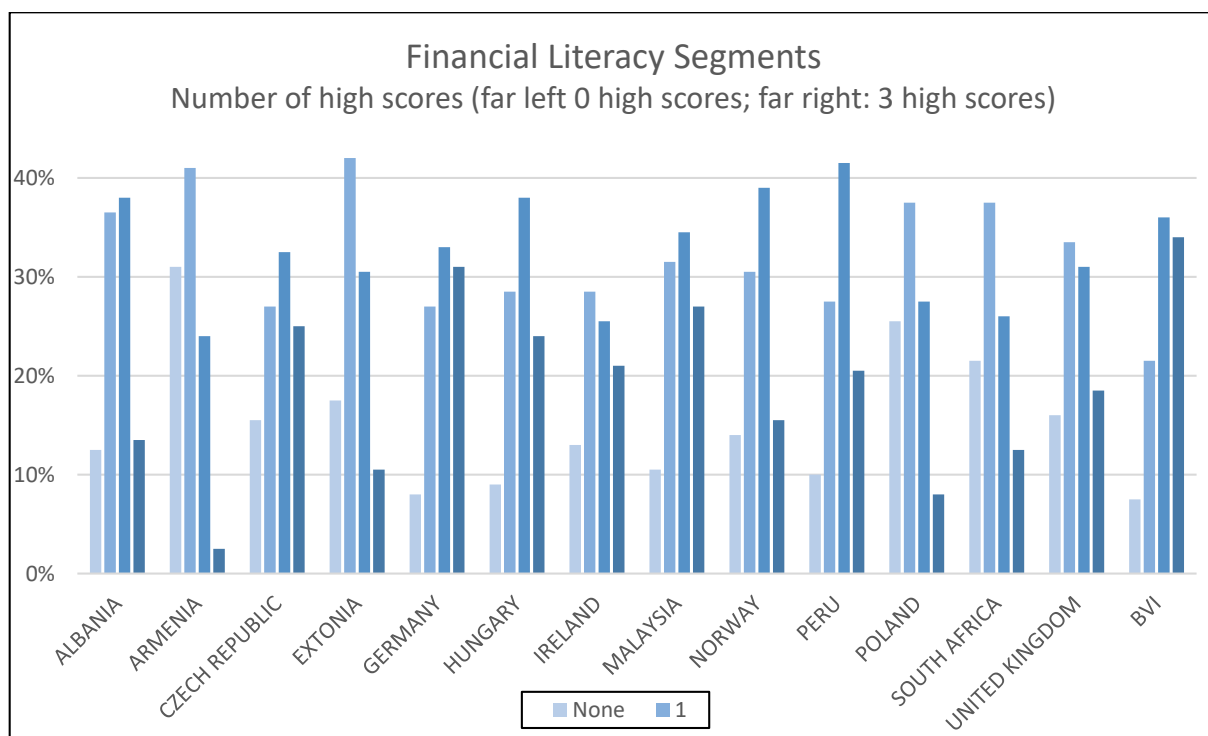
Malaysia, Norway, Peru, Poland, South Africa and the UK. A brief summary is provided at the beginning of the study: „*The results highlight a lack of financial knowledge amongst a sizeable proportion of the population in each of the countries surveyed. Furthermore, there is considerable room for improvement in terms of financial behavior. Attitudes are shown to vary widely.*“ (OECD, 2012). The summary of this study highlights a significant problem that affects the whole of society in the 21st century.

The questionnaire used in the OECD study is divided into three parts, namely Financial Education, Financial Behaviour and Attitudes to Financial Planning. In general, it can be summarized that in each country there is a strong correlation between financial education and positive financial behavior. It also shows that in most countries women are less educated than men in this area.

Financial literacy can also be understood as a complex mix of knowledge, attitudes, and behaviors. Examining the combination of these factors is cardinal. The population was divided into four categories based on the high scores obtained in each section of the questionnaire - 0 no high score was obtained in any section, 1, 2, 3 - the number of sections where a high score was obtained. The negative effect is that in most countries there are more than 10% of the population who do not achieve a high score in any of the three sections. The notable exceptions are Germany, Hungary, Peru and the British Virgin Islands.

The comparison of results by gender in the overall comparison is quite balanced, yet in the individual sections the better results prevail for men than for women. The largest differences are in financial literacy between the two genders, where in eight countries out of 14, women did not score even 50 %. In the area of financial behavior, the differences are not so significant; one explanation may be that decision-making is often shared by all household members and thus by men and women together. There is probably a positive influence of the sexes on each other. When analyzing attitudes and preferences, it appears that in most countries women were more likely to score higher than men, indicating that they usually had a positive attitude in the longer term. The investigation also shows a positive correlation between educational attainment and questionnaire scores. In principle, it can be said that respondents with higher education achieved higher scores and therefore higher levels of financial literacy.

Graphic 1



Source: OECD 2012 (Graphically modified for the purposes of the article.)

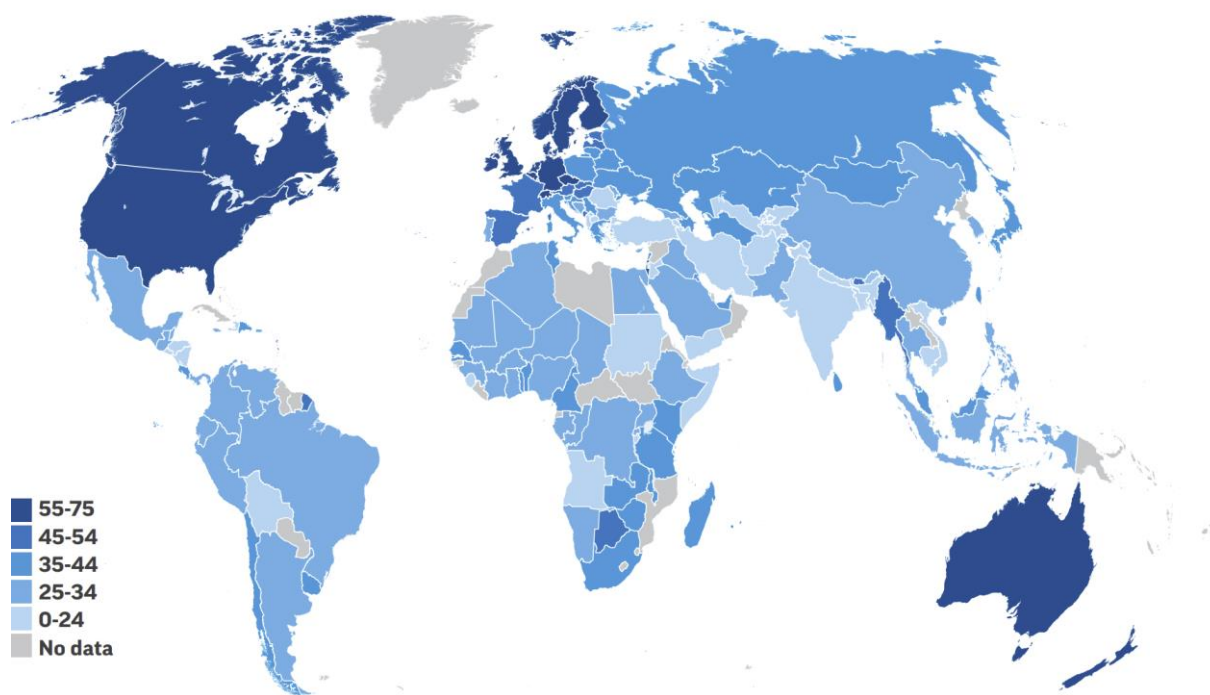
150,000 adults in 148 countries took part in another survey by the international credit rating agency Standard & Poor's (*Financial Literacy Around the World*, STANDARD & POOR'S 2015). Estimating financial literacy, and capturing whether adults know how to make good decisions, was key for the researchers. Therefore, questions were selected from four main themes related to personal finance: inflation, simple interest, compound interest and risk diversification.

Everyone who answered three of the four topics correctly was assessed as financially literate. The results show that 33 % of adults worldwide are financially literate. This means that about 3.5 billion adults, most of them in developing economies, do not understand basic financial concepts. These global figures hide deep disparities around the world. A closer breakdown can be seen in the following map.

Graphic 2

MAP 1: GLOBAL VARIATIONS IN FINANCIAL LITERACY

(% OF ADULTS WHO ARE FINANCIALLY LITERATE)



Source: Financial Literacy Around the World, STANDARD & POOR'S 2015

The countries with the highest financial literacy rates of over 65% are Australia, Canada, Denmark, Finland, Germany, Israel, the Netherlands, Norway, Sweden and the United Kingdom. At the other end of the spectrum there is South Asia. In this part of the world, only a quarter of adults are financially literate. Unsurprisingly, financial literacy levels vary significantly between developed and emerging economies. Yet the financial literacy challenge is faced by developing and developed economies alike. In China, for example, the number of credit card users has doubled, but only half of cardholders can calculate interest correctly. European countries are struggling with an ageing generation and a lack of public funds to secure pensions.

The study also looked at the relationship between GDP and financial literacy levels. It shows that richer countries (according to GDP per capita) tend to have higher financial literacy scores. However, the relationship only holds when looking at the richest 50% of economies. About 38% of the differences in these economies can be explained by differences in income across countries. For the poorer half of economies, with GDP per capita of \$12,000 or less, there is no evidence that income level is associated with financial literacy. This likely means that national-level policies, particularly education and consumer protection measures, have a much greater impact on financial literacy than other factors.

Financial literacy also increases significantly with educational attainment, and is often strongly associated with mathematical ability, as well as age and income level. Globally, the gap between adults with primary, secondary and tertiary education is about 15%. In advanced economies, only half of adults with secondary education are financially literate.

5. Possible ways to raise the level of financial literacy

There are many factors that contribute to financial literacy levels. One of the most important factors is education. If people are not taught about personal finance and money management in school, then they are likely to have a low level of financial literacy. Another important factor is access to financial information. There are a number of ways to improve financial literacy. One way is to provide financial education in schools. Another way is to provide financial education through the media and other channels. Financial literacy is not an innate trait and therefore develops over time in an individual. External influences are an integral part of the whole learning process.

The family is the first institution that influences the individual and affects their knowledge from an early age, including in the area of financial literacy. The individual is primarily influenced by the social level of the family and the resulting money management practices. The financial literacy of the family is also influenced by the education of the parents.

In addition to the family, the school also influences financial literacy and can influence a change in the direction of the child. The strength of the school's influence is also dependent on the strength of the family's influence and vice versa.

In the Czech Republic, both primary (since 2013) and secondary (since 2009) schools are currently obliged to educate their pupils/students in the area of financial literacy. This is similar in other countries.

Apart from family and school, we are also influenced by the environment and society in which we live. While the family and the school "mean well", society is primarily concerned with profit and uses all possible means to influence our decisions

There is no one-size-fits-all solution to the problem of financial literacy. Each country must tailor its approach to fit its own unique circumstances. However, there are some general principles that all countries should keep in mind when designing their financial literacy programs. First, financial literacy programs should be designed to meet the needs of the target population. Programs should be accessible and appropriate for the target audience. Second,

financial literacy programs should be compulsory. All students, regardless of their background or economic status, should be required to take a financial literacy course. Third, financial literacy programs should be taught by qualified instructors. Teachers should have the necessary skills and knowledge to effectively teach financial literacy. Fourth, financial literacy programs should be interactive and engaging. Students should be given opportunities to actively participate in the learning process. Fifth, financial literacy programs should use a variety of teaching methods. Programs should make use of lectures, discussions, case studies, and hands-on activities. Sixth, financial literacy programs should be evaluated on a regular basis. Evaluation is necessary to ensure that programs are effective and meeting the needs of the target population. The issue of financial literacy is a global one. However, each country must tailor its approach to fit its own unique circumstances. By keeping the above principles in mind, countries can develop financial literacy programs that are effective and meet the needs of their citizens.

Conclusion

Financial literacy is an integral part of everyday life. Its impact on the well-being of individuals and society as a whole is unquestionable. When it is at a high level, people are able to navigate the world of financial products well and some are even able to profit from them. Today's world is very complicated, and not only in the field of finance. The amount of information we are inundated with is enormous and it is important that we are able to filter and evaluate this information correctly. More and more, people are calling for freedom and for greater powers in all aspects of everyday life (finance not excluded). However, few people realize that with freedom and power comes responsibility. Financial literacy is a key characteristic that leads to being able to make good and responsible decisions and behavior in the world of finance. Yet, as many studies confirm, it is at a low level worldwide. Financial markets are becoming increasingly complex and the range of products on offer is growing, but unfortunately the level of financial literacy is not increasing fast enough.

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**DISEMINAČNÍ SEMINÁŘ VÝSTUPŮ PROJEKTU
„METODIKA EDUKACE, PREZENTACE A OSVĚTY
K DOCENĚNÍ VÝZNAMU PAMÁTEK SVĚTOVÉHO
DĚDICTVÍ VE FORMÁLNÍM VZDĚLÁVÁNÍ“
(MK 30665/2022 OPP)**

METODIKA EDUKACE, PREZENTACE A OSVĚTY K DOCENĚNÍ VÝZNAMU PAMÁTEK SVĚTOVÉHO DĚDICTVÍ VE FORMÁLNÍM VZDĚLÁVÁNÍ

EDUCATION, PRESENTATION AND EDUCATION METHODOLOGY TO APPRECIATE THE SIGNIFICANCE OF WORLD HERITAGE MONUMENTS IN FORMAL EDUCATION

Pavel Krpálek

Abstrakt

Článek představuje diseminaci východisek a prvních výsledků řešení grantového projektu Ministerstva kultury ČR č. j. MK 30665/2022 OPP, který si klade za cíl na základě didaktické analýzy vytvořit univerzální metodiku funkční integrace učiva o památkách světového dědictví do humanitně zaměřených vzdělávacích programů v terciárním vzdělávání. Autoři navrženou metodiku následně pilotně ověří implementací volitelného předmětu Památky světového dědictví, který v následujícím akademickém roce zařadí do studijního programu Mezinárodní management a marketing se specializací na cestovní ruch. Na základě diskurzu výsledků situační analýzy a vytvořené metodiky bude tento základní výstup projektu diskutován se členy externího expertního týmu a prezentován na diseminačním semináři a na vědecké konferenci, výsledky budou následně zveřejněny a dány k dispozici uživatelům v síti škol a vzdělávacích institucí v České republice i v zahraničí.

Klíčová slova: památky světového dědictví; formální vzdělávání; metodika; didaktická analýza; kurikulum; koncipování vzdělávacích programů;

Abstract

The article presents the dissemination of the starting points and the first results of the solution of the grant project of the Ministry of Culture of the Czech Republic, no. 30665/2022 OPP, the goal of which is to create a universal methodology for the functional integration of the curriculum on world heritage monuments into humanities-oriented educational programs in tertiary education based on a didactic analysis. The authors will then pilot test the proposed methodology by implementing the optional subject World Heritage Monuments, which will be included in the study program of International Management and Marketing with a specialization in tourism in the following academic year. Based on the discourse of the results of the situation analysis and the methodology created, this basic output of the project will be discussed with

members of the external expert team and presented at a dissemination seminar and at a scientific conference, the results will then be published and made available to users in the network of schools and educational institutions in the Czech Republic and in abroad.

Keywords: world heritage monuments; formal education; methodology; didactic analysis; curriculum; creation of educational programs;

Úvod

Strategický záměr Ministerstva školství, mládeže a tělovýchovy ČR pro oblast vysokých škol na období od roku 2021 vnímá postavení vysokých škol jako vrcholných center vzdělanosti, čemuž by měla odpovídat i jejich mise a vize ve vědeckém, kulturním, sociálním a ekonomickém rozvoji společnosti. Instrumentálním odrazem tohoto trendu je důraz na kvalitativní změny v systému akreditací studijních programů, spočívající ve zvyšování nároků u akreditačních standardů a v rostoucí roli funkčních systémů zajišťování a vnitřního hodnocení kvality, regulovaných a kontrolovaných Národním akreditačním úřadem pro vysoké školství. Akreditační standardy jsou primárně zaměřeny na profil absolventa, procesy a výsledky učení. Pozornost si však zasluhují i měkké prvky vzdělávacího působení, méně nápadné formativní aspekty vzdělávání, promítající se do mravního povědomí mladých lidí, do jejich vztahu ke kulturnímu dědictví, k tradicím a hodnotám společnosti.

Potřebnost posílení formativní složky vzdělávání dokládají mnohé negativní projevy soudobé společnosti, které reflektujeme v každodenním životě takřka „na každém kroku“ i u mladých lidí, jako jsou vzestup materialismu, konzumerství, arogance, sobectví, bezohlednosti, agresivního jednání, potlačení národní identity a hrdosti. To vše přímo volá po nějaké iniciativě, která by pozvedla mravní a kulturní povědomí národa. Kde jinde s takovou iniciativou začít než ve výchovně vzdělávacím procesu na školách, v osvětě a edukaci mladých lidí, budoucích humanitně a ekonomicky zaměřených odborníků, působících v praxi. Do vzdělávání by mohla tato dimenze nenásilně vplynout také v podobě úspěšné implementace příslušné metodiky do cílů a obsahů vzdělávání a napomoci tak obnově mravních hodnot a prvků etické a estetické výchovy, přičemž kontext by byl obohacen uvědoměním si historického přesahu, kontinuity, transcendence mravních hodnot a kulturně historických tradic a souvislostí. To vše je potenciál hlubší integrace odkazu památek kulturního dědictví do vzdělávací praxe.

1 Východiska, cíle a metody řešení projektu

Projekt ideově vychází z výše uvedeného Strategického záměru Ministerstva školství, mládeže a tělovýchovy ČR pro oblast vysokých škol na období od roku 2021, a to především z Prioritního cíle 1. Rozvíjet kompetence přímo relevantní pro život a praxi XXI. století, přičemž si klade za cíl rozvinout sféru transverzálních kompetencí, má vysloveně interdisciplinární povahu, zaměřuje se na komplexní vzdělávání a má předpoklady navozovat proces „učení se v širších sociokulturních souvislostech“ (learning in wider socio-cultural context).

Obecným cílem projektu je projekce metodiky pro tvorbu volitelného předmětu *Památky světového dědictví* a jeho začlenění do kurikula humanitně zaměřených studijních programů. Bude zkoumána didaktická realita na prvním stupni vysokoškolského vzdělávání v návaznosti na dosažený stupeň poznání ve vyšším sekundárním vzdělávání (ISCED 344, 354 / EQF 4). Zvolený bakalářský studijní program *Mezinárodní management a marketing* se specializací na *cestovní ruch* je v současné době úspěšně akreditován a uskutečňován na řešitelském pracovišti třetím akademickým rokem.

Metodicky bude postupováno na základě obsahové analýzy, komparace a diskurzu zdrojů, dále metodou didaktické analýzy, na jejímž základě budou revidovány a navrženy edukační cíle, konkretizován vzdělávací obsah a styl vedení výuky, tak aby finální strategie výuky směřovala k hlubšímu holistickému vnímání kulturně historického odkazu památek světového dědictví. To by mělo zajistit žádoucí posílení formativní stránky edukačních procesů o fenomén osvěty a prezentace hodnot ve smyslu předávání světového kulturního dědictví budoucím generacím (článek 4 *Úmluvy o ochraně světového kulturního a přírodního dědictví*).

Dílní postupové cíle projektu jsou definovány následovně:

- terénní šetření, sběr dat, analýza literárních pramenů, standardů, metodik a vyhlášek pro akreditace studijních programů,
- didaktická analýza vybraného studijního programu v terciárním vzdělávání (bakalářský studijní program *Mezinárodní management a marketing* se specializací *cestovní ruch*, návrh inovace,
- vymezení edukačních cílů a systému učiva pro podporu osvěty a edukace ve vztahu k památkám světového dědictví, návrh způsobů integrace do kurikula, metodická doporučení
- konstrukce modelu řízení výuky a návrh kurikula konkrétního předmětu *Památky kulturního dědictví*,
- zobecnění poznatků pro tvorbu inovované metodiky, generalizace závěrů,

- prezentace výsledků analýzy, osvěta a edukace zaměřená primárně na odbornou pedagogickou veřejnost, akademické pracovníky ve vysokoškolském vzdělávání, sdílení poznatků a zkušeností, nalezení konsensu, generalizace poznatků do sdílené metodiky, networking odborníků ve formě diseminačního semináře a prezentace na mezinárodní vědecké konferenci.

2 Výsledky analýzy kurikula ve vyšším sekundárním vzdělávání

Analýza kurikula byla zaměřena na první stupeň dvoustupňového kurikula, tzn. na základní kurikulum, které má podobu rámcových vzdělávacích programů, podle kterých si jednotlivé střední školy připravují školní vzdělávací programy. Zabývali jsme se jak cíli vzdělávání, jejich přenosem do profilu absolventa a do pojetí vzdělávacího programu, tak i konstrukcí kurikula, zejména struktur průřezového učiva. Z uvedené analýzy jsme dospěli k závěru, že zobecnitelné jsou klíčové kompetence *občanské a kulturní povědomí* a prvky průřezového učiva *občan v demokratické společnosti*.

Z hlediska občanského a kulturního povědomí by mělo sekundární vzdělávání formovat absolventy mimo jiné i k tomu, aby si byli vědomi a uznávali hodnoty a postoje podstatné pro život v demokratické společnosti, aby jednali v souladu s principy trvale udržitelného rozvoje a aby podporovali hodnoty národní, evropské i světové kultury, tzn. že by měli být schopni reflektovat vlastní kulturní, národní a osobnostní identitu, uznávat tradice a hodnoty svého národa, chápat jeho minulost i současnost v evropském a světovém kontextu, podporovat hodnoty místní, národní, evropské i světové kultury a mít k nim vytvořen pozitivní vztah. V oblasti jazykového vzdělávání se tyto kvality profilují v chápání jazyka jako jevu, v němž se odráží historický a kulturní vývoj národa. Okruh společenskovedního vzdělávání pak kultivuje historické vědomí, učí hlouběji porozumět současnosti, uvědomovat si vlastní identitu, kriticky myslet, nenechat se manipulovat a co nejvíce porozumět světu, v němž žijeme. Průřezové učivo *občan v demokratické společnosti* ani žádné kurikulární rámce a obsahové okruhy však explicitně neobsahují žádné struktury učiva vztahující se přímo k památkám světového dědictví. Proto se toto učivo objevuje spíše nahodile v programech vzdělání zaměřených na umění, kulturu a cestovní ruch. Na všeobecně vzdělávacích školách a vybraných odborných školách nesystematicky v předmětech občanská nauka / základy společenských věd.

3 Začlenění předmětné problematiky v terciárním vzdělávání

Ze shora uvedených důvodů usuzujeme, že začlenění předmětu *Památky světového dědictví* nelze opřít o nějaké hlubší systematické poznatky v poznatkovém systému studentů, které by si přinesli ze středních škol, formování jejich kulturního povědomí probíhalo na obecnější anebo spíše formální rovině. Empirické poznatky a zkušenosti řešitelského týmu z akademického působení, a to nejen na Vysoké škole mezinárodních a veřejných vztahů Praha, to potvrzují. Na druhou stranu je potřebné konstatovat, že ne u všech studijních programů je smysluplné předmět *Památky světového dědictví* do studijního plánu začleňovat. Při této úvaze je nutné vycházet z profilu absolventa. Předmět doporučujeme koncipovat jako volitelný, na bakalářském stupni, a to v akademicky i profesně orientovaných studijních programech, zde záleží spíše na oblastech vzdělávání a zaměření studijních programů. Nesporným přínosem jsou u studijních programů zaměřených na environmentální aspekty, kulturu, cestovní ruch, i na kulturologicky orientované studijní programy. V podmínkách řešitelské organizace lze jednoznačně předmět *Památky světového dědictví* doporučit nejen ve studijním programu *Mezinárodní management a marketing* se zaměřením na *cestovní ruch*, ale i u alternativního zaměření na *digitální marketing*. Vzhledem k tomu, že u studijního programu *Mezinárodní vztahy a diplomacie* jsou dále nabízeny specializace na *kulturní diplomacii*, je i zde tento volitelný předmět využitelný a přínosný. Konstrukce a evaluace metodiky edukace, prezentace a osvěty k docenění významu památek světového dědictví bude probíhat na půdorysu volitelného předmětu *Památky kulturního dědictví*, koncipovaného průřezově a univerzalisticky, tedy tak, aby byl využitelný v širším diapazónu oblastí vzdělávání a profilů absolventa různých studijních programů.

4 Kurikulum a pojetí předmětu Památky kulturního dědictví

Ze shora uvedených důvodů usuzujeme, že u výběru učiva, volbě strategie výuky a způsobu začlenění volitelného předmětu *Památky světového dědictví* do studijního plánu konkrétního studijního programu poněkud ustoupíme z pozic konstruktivismu (kognitivně psychologické teorie vzdělávání) směrem k aplikaci technologické a sociokognitivní teorie vzdělávání, která zdůrazňuje význam kulturních a sociálních faktorů při výstavbě poznatků a přiměřeně i jejich kulturní a sociální kontext. To je v tomto případě zásadní, protože didaktický materialismus a prekoncepty mají opodstatnění v předmětech teoretického základu a profilujících odborných předmětech. Funkce předmětu *Památky světového dědictví* jsou jiné, liší se akcentem na sociokulturní transakce mezi člověkem a prostředím, jde o pohled sociálně psychologický,

důraz je na formativní aspekty vzdělávání, na sociální interakci, jde převážně o sociální, kontextualizované učení. Na to se v přímé výuce váže promyšlené a funkční používání strategií sociálně zprostředkované výuky, více než v jiných předmětech badatelsky orientované. Metodické portfolio obsahuje aktivizující metody výuky, integrované organizační formy, jako jsou problémové vyučování, projektové učení, kooperativní učení, různé diskusní a simulační metody, metody směřující k rozvoji prosociálního chování, k rozvoji mediální gramotnosti studentů, směřující k podpoře jejich kulturního rozhledu, hodnotově je orientující, kultivující jejich osobnost.

Činnostní kooperativní charakter vedení výuky v předmětu *Památky světového dědictví* tak směřuje k pojetí participativnímu, které se promítá do konstrukce obsahové stránky výuky. Volitelný předmět kategorie B ve studijním programu *Mezinárodní management a marketing* skupiny 1 (Cestovní ruch) anebo 2 (Digitální marketing) a doporučujeme rozsah 0 / 2 (přednáška /seminář), tzn. třináct dvouhodinových seminářů s kreditním ohodnocením 4 kredity. Úvodní část seminářů bude realizována jako prezentace institucionálního zázemí (UNESCO) a smluvního zajištění ochrany památek světového dědictví na základě *Úmluvy o ochraně světového kulturního a přírodního dědictví*, která vstoupila v platnost dne 17. 12. 1975. Na základě této konvence byl založen *Seznam světového dědictví* a stanoveny povinnosti států k jeho položkám, tj. k nejvýznamnějším památkám světa. Předmět bude zaměřen na české památky zapsané na *Seznamu světového dědictví*, a to jak na materiální kulturní a přírodní památky, tak i na nemateriální kulturní dědictví. V této první orientační části předmětu bude zároveň vysvětlen proces nominace a prezentována procedura schvalování památek světového dědictví na bázi případové studie „*Slavná lázeňská města Evropy – nadnárodní sériová památka zastoupená za ČR městy Karlovy Vary, Mariánské Lázně a Františkovy Lázně* (2021),“ kde budou využity poznatky z grantu Ministerstva kultury č. j. MK 22822/2020 OPP „Partnerství měst a začlenění západočeského lázeňského trojúhelníku mezi památky UNESCO“ (řešitelské období: březen až prosinec 2020), který byl realizován na pracovišti Vysoké školy mezinárodních a veřejných vztahů Praha, o.p.s.

V rámci kurikula předmětu bude zařazen i postup další péče a kontroly zapsaných památek světového dědictví, agenda *site manažera* a vývoj v této oblasti. Bude modelově vyučujícím prezentována SWOT analýza trvalé udržitelnosti ve vztahu k zapsaným památkám světového dědictví, a to na příkladu historického centra Českého Krumlova. Pojednáno bude o významu památek světového dědictví a jejich odkazu pro kulturu, identitu, budování národního sebevědomí.

Následně budou jednotlivé zapsané památky světového dědictví přiděleny k podrobnému samostatnému prozkoumání jednotlivým studentům, kteří o nich zpracují seminární práce, které budou prezentovat před ostatními studenty, diskutovat a obhajovat závěry a hodnocení v nich uvedená. Nepůjde o pouhou ilustraci jednotlivých památek světového dědictví, ale o analýzu jejich přínosu, významu, potenciálu v cestovním ruchu, resp. rezerv z hlediska podpory v digitálním marketingu. Tento komplexní pohled bude zahrnovat SWOT analýzu (silné a slabé stránky, příležitosti a hrozby z hlediska udržitelnosti) i rámcové vyhodnocení aspektů politické, ekonomické, sociální, technologické, ekologické, legislativní (PESTEL analýza). Na základě kvalitně zpracované a obhájené seminární práce po úspěšné diskuzi a obhájení výsledku bude udělen zápočet. Na těchto principech je zpracována univerzální metodika, která zobecňuje získané zkušenosti a nad rámec tohoto článku reflektuje uvedené výsledky v kontextu pravidel a standardů Národního akreditačního úřadu pro vysoké školství.

Závěr

Řešitelským týmem byla identifikována a na základě provedených analýz dostupných kurikulárních dokumentů následně potvrzena potenciální rezerva ve vzdělávacím obsahu společenskovědně a humanitně zaměřených studijních programů. Situační analýza prokázala, že na předchozích stupních vzdělávání (vyšší všeobecné nebo odborné vzdělávání, ISCED 344, 354 / EQF 4) není učivo vztahující se k památkám světového dědictví systematicky začleněno. Vyskytuje se spíše nahodile ve volném zapracování do druhého stupně kurikula. Přitom po stránce formativní je v profilu absolventa a v rámci závazných struktur klíčových kompetencí předpokládáno. Probíhající revize rámcových vzdělávacích programů může zajistit posílení těchto struktur učiva a podpořit reálný dopad do formativní stránky vzdělávání. Na základě těchto poznatků bylo přistoupeno k projektování nového předmětu a vymezení jeho pozice ve studijním plánu studijních programů v terciárním vzdělávání. Přes význam tohoto učiva jsme se přiklonili při zařazování do studijního plánu k jeho umístění na pozici volitelného předmětu B, aby bylo možné jej zařazovat do reálné výuky bez vazby na akreditaci, respektive bez nutnosti oznamovat změnu na Národní akreditační úřad pro vysoké školství anebo bez nutnosti odkládat jeho zařazení do studijního plánu až při další akreditaci, resp. reakreditaci studijního programu. Metodika podrobně rozpracovává aplikaci standardů na tvorbu kurikula předmětu, vymezuje doplnění profilu absolventa a metodicko-didaktické přístupy k začleňování učiva. Specifické je nasazení participativní výuky, založené ve zvýšené míře na badatelském přístupu a vlastních činnostech studentů. Přes skutečnost, že z hlediska formy výuky půjde o semináře, které by z podstaty této organizační formy výuky měly být činnostní a studenti by na seminářích

měli být aktivní, kooperovat a samostatně pracovat, v reálné výuce tomu tak mnohdy nebývá, zejména tehdy, pokud předmět má pouze formu seminární bez přednášek, což je u volitelných předmětů častou realitou. Proto je první část předmětu realizována na bázi interaktivních prezentací a případové studie, které jsou vedeny vyučujícími, samozřejmě s diskuzí a zapojením studentů, a teprve následně jsou rozdělena zadání a výuka probíhá participativně. Metodika bude obsahovat jak podrobně stanovený rozpis učiva, tak důkladně zpracované metodické přístupy ve vazbě na předepsané standardy a formuláře Národního akreditačního úřadu pro vysoké školství. Předmět konstruovaný v duchu této metodiky bude pilotně realizován v následujícím akademickém roce a zkušenosti s jeho realizací budou řešiteli opět zveřejněny.

Poděkování

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