

Visegrad countries and COVID-19: is the coronavirus pandemic a VUCA phenomenon?

Stefan Lehrner, *Andrassy University (Budapest, Hungary)*

E-mail: stefan.lehrner@andrassyuni.hu

ORCID ID: 0000-0001-9886-228X

Abstract

This article will examine whether the Visegrad Group countries (V4) are moving closer together or further apart in this COVID-19 pandemic. To achieve that, the respective COVID-19 measures taken by governments in March and April 2020 in the V4 countries will be analysed using the VUCA model. VUCA is an acronym, and it includes four English terms: *volatility*, *uncertainty*, *complexity* and *ambiguity*. Using the VUCA model, a *Framework of VUCA Factors* has been created in this article, which can be used as a basic model to further identify innovative leadership strategies during pandemic situations.

Keywords: COVID-19, pandemic, coronavirus, Visegrad Group countries (V4), VUCA, European Union (EU)

Kraje Wyszehradzkie a COVID-19: czy pandemia koronawirusa jest zjawiskiem VUCA?

Streszczenie

W niniejszym artykule zostanie zbadane, czy kraje Grupy Wyszehradzkiej (V4) zbliżają się do siebie czy oddalają w pandemii COVID-19. W tym celu, za pomocą modelu VUCA, zostaną przeanalizowane odpowiednie środki zastosowane przez władze przeciwko COVID-19 w marcu i kwietniu 2020 roku w krajach V4. VUCA jest akronimem i oznacza cztery angielskie terminy: *volatility* (zmiennosc), *uncertainty* (niepewnosc), *complexity* (zlozonosc) i *ambiguity* (niejednoznaczność). Wykorzystując model VUCA, w artykule stworzono ramy czynników VUCA, które mogą być wykorzystane jako bazowy model do dalszej identyfikacji innowacyjnych strategii przywództwa w sytuacjach pandemicznych.

Keywords: COVID-19, pandemia, koronawirus, kraje Grupy Wyszehradzkiej (V4), VUCA, Unia Europejska (UE)

Like all other countries, the Visegrad Group countries (V4) are also affected by the COVID-19 pandemic. Unlike in southern and parts of western Europe, however, an explosive spread of the virus was – for the time being – prevented here. Strengthened by the successes in crisis management from spring 2020, the V4 countries (Poland, Czechia, Slovakia and Hungary) have now positioned themselves confidently in the EU.

The Visegrad Group (V4) is a unique form of regional cooperation in the political landscape of Eastern and Central Europe. The aim of the participating countries was the integration into Euro-Atlantic structures and the European Union. After joining NATO, membership in the EU became the top priority for the Visegrad countries. Although the Association Agreements were concluded in 1991, the ratification process in the EU Member States was protracted. The Visegrad Group became an effective cooperation platform for the integration of Poland, Czechia, Slovakia and Hungary into the EU (accession took place on 1 May 2004). Thanks to continued cooperation in many areas, the V4 remained visible as a group even within the EU. As an independent sub-regional grouping, the V4 represents a hybrid variation of politics and enables the balancing act of bilateral and multilateral relations between the V4 states and the EU (Dangerfield 2009). Its political capital has always been geographical proximity, cultural similarity and sometimes common regional interests (Fitzmaurice 1998; Grodzki 2016; Hudec 2016; Baldwin 1994; Cottey 1999).

The aim of this article is to examine – based on the current academic publications and the discourse analysis of newspaper articles and Internet sources – whether there are differences in the way the V4 countries are dealing with the COVID-19 pandemic, and whether they are moving closer together or further apart. For this purpose, the respective COVID-19 measures taken by governments in March and April 2020 in the V4 countries will be analysed using the VUCA model of Bennis and Nanus (1985). The term VUCA is quite appropriate to describe the COVID-19 measures, as the keywords *volatility*, *uncertainty*, *complexity* and *ambiguity* are reflected in the measures to contain the COVID-19 pandemic. The research makes an attempt to identify how stable alliances like V4 are in the pandemic.

Theoretical framework: the VUCA model of Bennis and Nanus

VUCA is an acronym, and it includes four English terms: *volatility*, *uncertainty*, *complexity* and *ambiguity*. The model was introduced by the US military and originally referred to the world after the end of the Cold War, which is characterised by the factors mentioned above (Bennis, Nanus 1985). Increasingly, this concept is also used in crisis communication to describe and analyse current challenges and risks (Alkhalidi et al. 2017). Covid-19 is pandemic and requires a flexible leadership style, therefore VUCA is ideally suited to serve as a framework for this work. The research is using VUCA to create a "know how" for further development of innovative leadership strategies during pandemic situations. Each of the four abovementioned terms describes a way of looking at the world, and for many researchers it gives a language

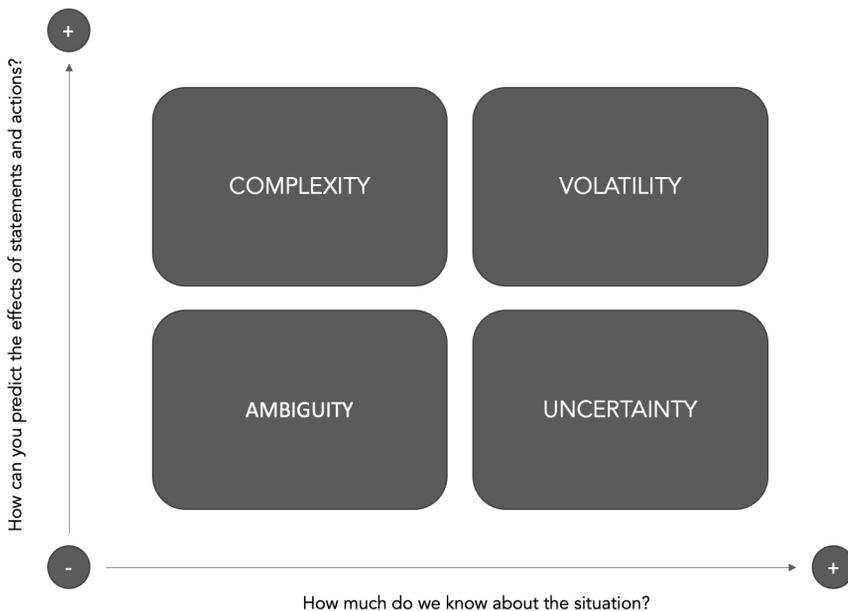
and a way to speak about what's happening around (Bennett, Lemoine 2014). For example, Falkenberg (2019) sees VUCA as a concept and a language for describing current challenges.

VUCA conflates four distinct types of challenges that demand four distinct types of responses (Jain, Saxena 2019; Singh, Shukla 2018; Korom 2019). That makes it difficult to know how to approach a challenging situation and easy to use VUCA as a way to throw off the hard work of strategy and planning. Volatility and uncertainty can create valuable conversations across an organisation, providing opportunities to listen across hierarchies as employees band together. Completely new ways of working can be introduced as the opportunity to take smart risks becomes available (Bartscht 2015).

VUCA description:

- *Volatility:* changes due to COVID-19 are unpredictable and occur daily.
- *Uncertainty:* no one can predict with certainty, when the pandemic will end or when we will have an effective cure or vaccine against the new coronavirus.
- *Complexity:* The pandemic affects all aspects of life, such as healthcare or the economy, in a complex way.
- *Ambiguity:* there is no "best practice" that governments can follow to meet the challenges posed by the pandemic (Bennis, Nanus 1985).

Figure 1. VUCA – graphic



Source: NextGen 2020.

COVID-19 measures

At the beginning and also at the top of the coronavirus crisis in spring 2020, all EU Member States banned major events (Weber, Wille 2020). Exception of Sweden, which relied more on the personal responsibility of its citizens in its measures against the coronavirus, all countries in the European Union closed down shops of non-essential needs during the first phase of the measures to contain the pandemic (Böhi, Quinto 2020). A set of measures to prevent the spread of the virus was also rapidly implemented in the V4 countries after the outbreak, with the V4 countries taking these measures, when the number of confirmed cases (in all four countries combined) ranged from 103 (on 11 March) to 726 (on 17 March) (Gasperek et al. 2020; Czech et al. 2020).

How can the measures be explained with the VUCA framework? *Volatility* (can also be described as *vision*) corresponds to the strategy with which the problem is approached. *Uncertainty* explains the comprehensibility of the measures. *Complexity* is the definition of stakeholders responsible for communication, and *Ambiguity* describes the problem and how the facts must be interpreted.

Table 1. Comparison of COVID-19 measures taken by governments in March–April 2020 in V4 countries

<i>Action</i>	<i>Czechia</i>	<i>Hungary</i>	<i>Slovakia</i>	<i>Poland</i>
<i>Health checks at borders</i>	9 March: Czech Republic introduced health control at the borders (Pedziwol 2020).	11 March: Hungary is introducing health control at the borders (Swissinfo 2020).	11 March: Slovakia introduced health control at the borders (Swissinfo 2020).	9 March: Poland introduced health control at the borders with Germany, Czechia, Slovakia, Belarus, Ukraine, Russia and Lithuania (Pinkas et al. 2020).
<i>Closing borders</i>	13 March: the borders were closed to travellers from China, South Korea and Iran, as well as from many European countries (Paufler 2020). 16 March: the borders were closed to all foreigners (exception: in the area of necessary care). (Koopmans 2020).	16 March: the borders were closed (Vogler 2020; MTI 2020; McKee 2020; Drinóczy, Bień-Kacata 2020; Guasti 2020).	15 March: the borders were closed (Donicova 2020).	15 March: the borders were closed (Gasperek et al. 2020; Czech et al. 2020; Gov.pl 2020c).
<i>Social distancing</i>	13 March: social distancing was introduced in Czechia (Dewitt 2020).	19 March: social distancing was introduced in Hungary (Hungary Helpers 2020).	12 March: social distancing was introduced in Slovakia (Gasperek et al. 2020; Czech et al. 2020).	17 March: social distancing was introduced in Poland (<i>English Wizards...</i> 2020).

<i>Institutions</i>	10 March: the government of Andrei Babis decided to close the schools (PNP.de 2020).	16 March: all schools were closed, and educational process was moved to digital channels (Dunai 2020).	10 March: most of the schools were closed (The Slovak Spectator 2020a).	On the 11 March: Schools and other institutions were closed (Reuters 2020).
<i>Retail</i>	14 March: all shops had to be closed (iDNES.cz 2020).	Starting on the 16 March retail shops were only allowed to stay open until 3:pm (Szilagyi 2020).	From the 15 March all retail shops had to remain closed (TASR 2020).	13 March: business closures were ordered (Gov.pl 2020b).
<i>Tourism</i>	14 March: all restaurants had to be closed (iDNES.cz 2020).	16 March: opening hours of cafés and restaurants were restricted (Vogler 2020; MTI 2020; McKee 2020; Drinóczy, Bień-Kacala 2020; Guasti 2020).	Starting on 16 March Restaurants remain open but are not allowed to serve clients on their premises (The Slovak Spectator 2020c).	15 March: all restaurants have been closed. All events have been cancelled (Poland Travel 2020).
<i>Health care</i>	19 March: Czechia was one of the first European Countries, which introduced compulsory mouth and nose protection (against the recommendation of the WHO). (Strížová et al. 2020).		25 March: Slovakia introduced mouth and nose protection (ECDC 2020).	9 April 2020: the government announced that from 16 April it will be mandatory to wear a mouth and nose protection in public sphere (Gov.pl 2020a).

Source: own graphic (based on results of the discourse analysis).

Evaluation of the measures according to the VUCA model

As already mentioned, the measures of the V4 states within the framework of COVID-19 pandemic are to be explained using the VUCA model:

1) Volatility

According to Bennis (see: Bennis, Nanus 1985) the best way to counter the effects of the crisis is to have a vision. Effective Administrations do not allow change to cloud their vision. However, in times of crisis they might have to revise their strategy to achieve that vision. In this time of change, leaders should stick to their core values, but it will be necessary that they amend their strategies to match the situation:

Czechia:

“Life in the Czech Republic could return to normal after the coronavirus crisis at the end of May or in June. However, this will depend on how the number of patients develops

and how the Czechs comply with government measures and restrictions," said Czech Prime Minister Andrej Babiš (Veinlich, Eule 2020). According to Roman Prymula, the Czech Vice Minister of Health, the most important measures are insulating measures, including wearing a mouth-nose-protection. The head of the central crisis team does not want to make any predictions for the future. Another wave of infections can only be prevented by closing borders (iRozhlas 2020). Babiš admitted partial mistakes and problems in solving the epidemic: "A pandemic of such an enormous scale is being solved by the whole world and we, like you, are just learning to respond. We need to adjust the measures whenever necessary. Therefore, please forgive us for partial errors or problems. There are a lot of them. It is a crisis situation, for which not a single country in Europe was prepared," he said. According to the Prime Minister, the government and state institutions are doing the best they can to protect the lives and health of the population. Overall, the Czech Republic is doing very well and will manage the situation, he said. Babiš thanked for the patience, with which people take restrictive measures, according to him it is not easy for anyone: "It is possible that these measures will take longer than we originally thought. I say it bluntly. That's how it is. But don't worry", he told. However, he expressed the belief that the effect of the measures would soon be felt and that the country would overcome the crisis together (Express15 2020).

Hungary:

Hungarian Prime Minister Viktor Orbán said that "the epidemic in Hungary [...] will enter a new phase, in which groups of people are more likely to be infected than individuals. As long as there is no vaccine, "the only chance" is to slow down the spread of the virus by taking measures..." (MTI 2020). Hungarian MPs considered a new bill, which would increase the government's powers during the coronavirus pandemic. The new legislation would allow Viktor Orban's administration to extend the state of emergency indefinitely, even if the spread of COVID-19 made it impossible to sit in Parliament. "We will solve this crisis, even without you," Orbán told opposition parties in parliament on Monday 23rd of March 2020, adding that the extraordinary measures are necessary to protect public health and Hungary's economy (Holroyd 2020).

Poland:

The Polish Minister of Health, Mr. Szumowski, already said on 16 March 2020 – referring to the strict measures taken by the Polish government: "Once the virus is circulating in the population, such measures are less useful. If several million people stop taking the bus and meeting at school or university today, we have a chance to limit the spread of the virus" (Bault 2020). Minister Szumowski also called for a summit of the European Parliament, where the proper approach of Member States to the coronavirus outbreak was discussed. The Polish health minister is also always up to date on what is happening in Poland and continuously implementing new approaches to combat the spread of the virus. The ministry also organised a system to disseminate information on public media on what to do, when we see the virus's symptoms. A bill for combating the virus was also swiftly passed in parliament (Polityka Zdrowotna 2020; Pankowska 2020; Senat.gov.pl 2020).

Slovakia:

Slovak Prime Minister Igor Matovic called for solidarity in his inaugural speech on the 22 March 2020: "We have a cure for the coronavirus – it is solidarity, responsibility and the determination of all people who care about Slovakia," he said. "Let us go into battle." (Aljazeera 2020). A few days earlier, on 12 March 2020, the (at this time) to-be prime minister has proposed several measures. The government of Pellegrini has no plan in case of rapid increase of population infected with coronavirus. He, for example, wanted telecom operators to send a text message every day to all people who returned from risky countries in order to stay in 14-day home quarantine. He has already discussed the possibility with Orange. He also proposed 25 measures, including establishing helplines, spreading awareness through media... (The Slovak Spectator 2020b).

Conclusion:

The VUCA factors identified from above discourse using *Volatility* are "creating a decision-making process", informing the population about the virus, and closing borders to secure the population.

2) Uncertainty

Especially in uncertain times (as the COVID-19 situation brings) it is important that the measures are understood, because understanding helps against uncertainty. When we are analysing the measures taken by the governments of the V4 states, the picture is ambivalent.

Czechia:

In Czechia, a dedicated hotline has been set up to serve as a basic information line and guide for citizens. This hotline provides background information on the coronavirus and the Covid 19 disease it causes (Ministry of Health 2020). Prime Minister Babiš twitted to President Trump: "Wearing a simple cloth mask, decreases the spread of the virus by 80 %! Czech Republic has made it OBLIGATORY for its citizens to wear a mask in the public."

Hungary:

In Hungary, Prime Minister Viktor Orbán has secured extensive possibilities for information policy with the Enabling Act. Anyone who publicly disseminates false news or distorted facts that impair the success of the protection measures can be punished with up to five years in prison. In principle – especially in a pandemic – it is important to take action against "fake news", but there is concern in Hungary that the law is only intended to guarantee pro-government reporting (Veyder-Malberg 2020; Walker 2020; Verseck 2020).

Poland:

In a speech in the Sejm, the Polish Prime Minister tried to "calm down the great concern that prevails in all Polish houses". He decided that "reliable knowledge, the knowledge we share can be a source of reassurance and the right approach to combatting coronavirus" (Pacewicz, Jedrysik 2020). The same added Health Minister Szumowski: "I appeal, especially to young people, that this is not the time for fun and night parties in clubs – I appeal to stay at home. The virus can take people who are weaker than us out of this world. Let us not underestimate him. Let's be responsible. Let us remain isolated

for the next two weeks. This is the only way society can help fight the virus", he added. The Minister of Health emphasized that the government and the ministry are working to prepare the health care system for the rapidly increasing number of positive results in the coming days (Gov.pl 2020b).

Slovakia:

Slovakia has placed Roma settlements under "general quarantine", but the city of Bratislava (with many positive cases) has not (see: Mijnssen 2020). In a television discussion, Matovič suggested that the measures to stop the spreading of the coronavirus could be, for example, centrally determined times, in which seniors would be able to shop preferentially. He also admitted the granting of an exemption for operations with gardening needs, on the contrary, as part of the tightening of restrictive measures, he spoke of the possibility of introducing a general obligation to wear a protective mask or an alternative to covering the mouth and nose, when moving outdoors (Topky.sk 2020). The Ministry of the Interior has sent text messages to the population of the Slovak Republic, in which it warned them of the mandatory quarantine in case they come from abroad. The SMS message reads as follows: "Warning!!! Coronavirus: If you came from abroad, observe the mandatory 14-day quarantine! For non-compliance, the penalty is € 1659." The research for Slovakia has demonstrated, that some measures in Slovakia were certain and some were not.

Conclusion:

The VUCA factors identified from the above discourse using *Uncertainty* are "clear communication of the measures", wearing a protective mask, going to quarantine and saving those who are weaker and need more protection.

3) Complexity

In order to simplify the complexity that a pandemic brings, it is advisable that the roles of those involved are clearly defined: All the countries studied in this paper have clearly communicated the measures of the pandemic:

Czechia:

Minister of Health in the Czech Republic tried to establish education by "Best Practise". Examples: Avoid contact with people who have symptoms of respiratory infections, especially in situations, where an infectious aerosol is formed. The risk of transmission of infection is greater with prolonged contact and exposure if confined. Travelling by subway is riskier than travelling by tram or bus. For direct personal protection against aerosol infection, it is possible to use a mouthpiece or drape; to do this, it is advisable to wear goggles at the same time as eye protection. The better the protection, the better the face mask fits. Protection against contact transmission is the highest possible hand hygiene. It is recommended to wash your hands thoroughly with soap every time you come home. It is essential to avoid as much as possible reaching for objects that have recently been touched by many other people... (Machala, Beneš 2020).

Hungary:

Viktor Orbán made an important announcement on Friday night (13 March 2020), and stated, that Hungary had set up 10 action groups due to the coronavirus epi-

demic. Following Orbán these action groups should help coordinate the measures, which are necessary to stop spreading the new virus. These 10 action groups are the following:

- Educational,
- Construction of a mobile container hospital,
- Critical Business Security Task Force,
- Action Group on International Coordination,
- Communication Action Group,
- Extraordinary Legal Action Group,
- Financial Action Group,
- Economic Restructuring Action Group,
- Drug Development Action Group,
- Border Control Action Group

(Portfolio 2020; Koronavirus.gov.hu 2020).

Poland:

The Polish Minister of Health Szumowski has introduced clear restrictions:

- temporary restriction of a specific mode of movement,
- temporary restriction or prohibition of the marketing and use of certain items or food products,
- temporary limitation of the functioning of certain institutions or workplaces,
- prohibition of organising shows and other gatherings of people,
- obligation to perform specific sanitary procedures, if their performance is related to the operation of specific production, service, commercial or other facilities
- an order to provide real estate, premises, land and to provide means of transport for anti-epidemic activities provided for by anti-epidemic plans (Gov.pl 2020b).

Slovakia:

The Slovak Minister of Health explained the “new coronavirus”:

What is the cause of COVID-19?

As a source of the pathogen, animals are believed to be on the market in the Chinese city of Wuhan. It is believed that humans have become infected by contact with live animals, which are also sold on the market. It is not yet clear exactly which animal the infection may come from.

What are the manifestations of COVID-19?

The new coronavirus causes acute respiratory disease – viral pneumonia (drip infection). These are general symptoms of virosis and classic respiratory diseases, such as influenza – temperatures above 38°C cough, rhinitis, muscle pain, joint pain, difficulty breathing. In a more complex examination, an X-ray finding is usually present – pneumonia. The incubation time for this type of coronavirus is given as 2 to 14 days, with an average of 6 days (Ministerstvo 2020).

Conclusion:

The VUCA factors identified from above discourse using *Complexity* are “simplifying a complex problem”, define the roles of those involved.

4) Ambiguity

Ambiguity describes the problem of how to interpret facts. Since information on the pandemic is incomplete, contradictory or too imprecise, it is not possible to establish causal relationships between individual factors. Furthermore, there are no empirical values to which one could refer for orientation or interpretation. The evaluation of the measures taken by the V4 countries has demonstrated that they were taken gradually: Poland started on 9 March 2020, Slovakia, Czechia and Hungary followed. Until the end of March 2020, further measures were taken – until the lockdown – to protect the own population and the health system.

Conclusions

In a rapidly changing and unpredictable situation such as the COVID-19 pandemic, it is essential that governments respond to these changes and fully understand the social and economic impact of the measures taken. It is essential that strategies are developed to get through this crisis as unscathed as possible. The present study has demonstrated that the measures imposed in the V4 countries are almost the same, but not coordinated.

Every day the V4 countries increasingly cut themselves off from the outside world – but also from the other V4 countries: Slovakia has closed its borders to Czechia and Hungary, but not to Poland. Poland has closed its borders to all countries. Czechia did not close its borders to Poland and Slovakia, but was dependent on the decisions of its neighbours (CTK 2020; Rettman 2020).

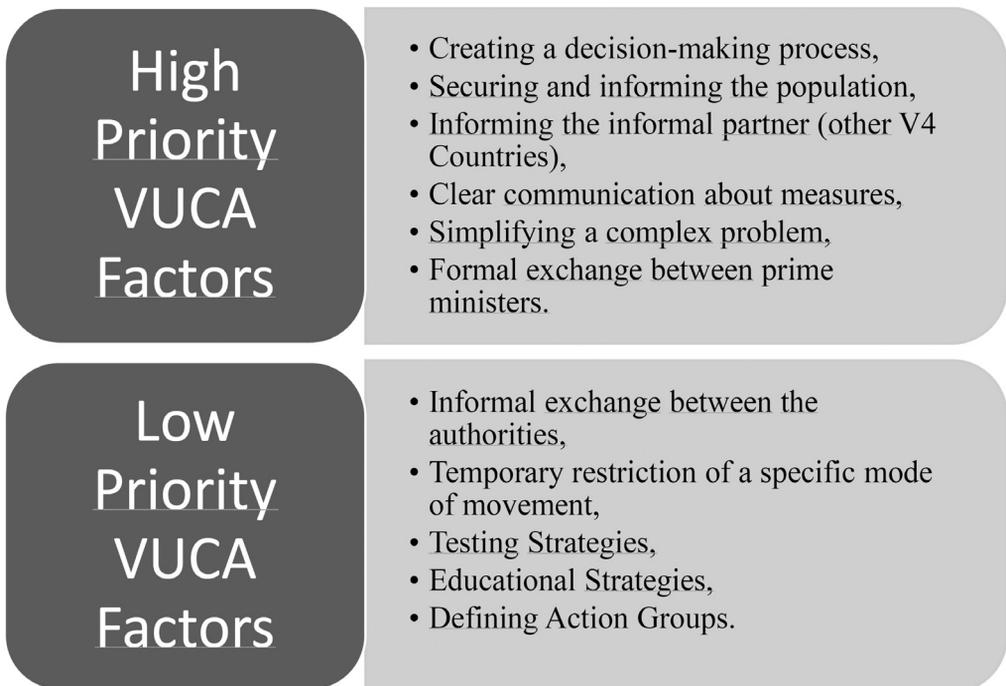
Research has demonstrated that governments are outbidding each other to show, who is better at managing the crisis: Babiš said in an interview, for example, "We were the first in Europe to ban flights, order quarantines, introduce border controls and ban events with over 100 participants" (Pedziwol 2020).

If we look at the measures on a timeline, we will see that – contrary to what you would expect from an alliance – they were not concerted, but were done step by step: On 9 March, Czechia introduced health controls at its borders with Germany and Austria (Pedziwol 2020). Slovakia banned events with more than 100 participants. The following day, Slovakia checked the health of those who wanted to enter from Austria, Czechia and Hungary. Czechia complied with the assembly regulation. On Wednesday, Hungary proclaimed the "national danger situation". Slovakia ordered the "extraordinary situation" from the next day.

The COVID-19 pandemic is a very complex system and poses major challenges for governments. The effects of the measures on the economy but also on the population are not foreseeable. Targets have to be defined in the shortest possible time in order to provide orientation for the population and take away uncertainties. Primary information was explained by the respective prime minister, and more detailed problems were then explained in more detail by the respective health minister – as in Poland, Slovakia or Czechia (Bault 2020). Mr. Orbán in Hungary is an exception to this rule because in the period under review, March and April 2020, crisis communication was primarily carried out by him.

New approaches must be created to reduce infection rates and not overburden health systems (Busch 2020). The current coronavirus crisis brings about enormous exogenous changes in the global system, but also within informal alliances, and raises the question "How stable are alliances like the Visegrad Group in the pandemic? Ultimately, the following conclusions can be drawn from this study: In this – for all parties involved – new situation it seems only logical that measures were implemented without coordination with the allies, because especially in rapidly changing systems linear approaches cannot lead to success, but it is necessary to use non-linear models (like the VUCA model). The research has demonstrated that in the COVID-19 pandemic, V4 countries, although not closer together, have not really moved apart either.

Figure 2. Framework of VUCA Factors



Source: own graphic

The framework is divided into two categories based on the responses given by individual participants:

- *High Priority VUCA Factors* – this category in the framework denotes those VUCA factors that came up as a common challenge in the responses given by the COVID-19 situation. This implies that these challenges are faced by the V4 countries. Hence, countering them becomes a priority.

- *Low Priority VUCA Factors* – this category in the framework denotes those VUCA factors, which acted as a challenge specific to certain countries. This implies combating these challenges might not be a priority for the industry as a whole. The framework suggested above can be used as a base model to further identify innovative leadership strategies that can be undertaken to counter the VUCA factors identified in this study.

The framework suggested above can be used as a base model to further identify innovative leadership strategies during the pandemic situation, that can be undertaken to counter the VUCA factors identified in this study. New challenges need new and different innovations according to the needs of the situation. Converting VUCA challenges into an opportunity needs a transformative role of leadership in pandemic situations.

Is the COVID-19 Pandemic a "VUCA" phenomena? The research has demonstrated that all the 4 terms of VUCA are covered. We have seen the vision, the uncertainty (which will be defeated by the government), the complexity (which forces the governments to define clear rules of communication) and the ambiguity (which describes the problem of how to interpret facts).

Stefan Lehrner – PhD student at the Andrassy University in Budapest (Hungary). He has a master's degree in political science and a master's degree in communication science. His research focus is on political communication: more precisely, he researches how politicians and parties use social media to communicate with voters.

Stefan Lehrner – doktorant Uniwersytetu Andrassy w Budapeszcie (Węgry). Posiada tytuł magistra nauk politycznych oraz tytuł magistra nauk o komunikacji. Jego badania koncentrują się na komunikacji politycznej: dokładniej, na badaniach, w jaki sposób politycy i partie wykorzystują media społecznościowe do komunikowania się z wyborcami.

➔ References:

- ALJAZEERA (2020), *New Slovak government sworn in amid coronavirus pandemic*, "Aljazeera", <https://www.aljazeera.com/news/2020/3/21/new-slovak-government-sworn-in-amid-coronavirus-pandemic> (21.03.2020).
- ALKHALDI Khaldoon H., AUSTIN Meredith L., CURA Boris A., DANTZLER Darrell, HOLLAND Leslie, MAPLES David L., QUARRELLES Jamie C., WEINKLE JR Robert K., MARCUS Leonard J. (2017), *Are you ready? Crisis leadership in a hyper-VUCA environment (Part 1 of 2)*, "Journal of Emergency Management", vol.15, no.2
- BALDWIN Richard (1994), *Poor men at the gate: Fortress Europe. (European Union's trade policies toward formerly communist countries of Eastern Europe)*, "The Economist" (US), 331.
- BARTSCHT Jan (2015), *Why systems must explore the unknown to survive in VUCA environments*, "Kybernetes", vol. 44(2)
- BAULT Patrick (2020), *Polen gegen das Coronavirus: Die richtigen Maßnahmen am richtigen Moment?*, "Visegrad Post", <https://visegradpost.com/de/2020/04/02/polen-gegen-das-coronavirus-die-richtigen-massnahmen-am-richtigen-moment/> (02.04.2020).

- BENNETT Nathan, LEMOINE G. James (2014), *What a difference a word makes: Understanding threats to performance in a VUCA world*, "Business Horizons", vol. 57, issue 3, DOI: 10.1016/j.bushor.2014.01.001
- BENNIS Warren, NANUS Burt (1985), *Leaders: The strategies for taking charge*, New York.
- BÖHI Peter, QUINTO Carlos (2020), *Schluss mit dem Corona-Theater (mit Replik)*, "Bulletin des médecins suisses", vol. 101
- BR24.DE (2020), *Corona: Grenzschießung trifft Firmen und Mitarbeiter*, "BR24.de", <https://www.br.de/nachrichten/bayern/corona-oberpfaelzer-firmen-bangen-um-10-000-tschechische-pendler-RuAHyJw> (25.03.2020).
- BUSCH Susanne (2020), *Corona-Krise: Welche Folgen hat die Pandemie für unser Gesundheitssystem?*, "BpB.de", <https://www.bpb.de/politik/innenpolitik/coronavirus/309530/gesundheitsversorgung> (11.05.2020).
- COTTEY Andrew (1999), *The Visegrad Group and Beyond: Security Cooperation in Central Europe*, in: A. Cottey (ed.) *Subregional Cooperation in the New Europe: Building Security, Prosperity and Solidarity from the Barents to the Black Sea*, London
- CTK (2020), *Czech Republic neighbor Slovakia closes borders to foreigners, toughens anti-virus steps*, "Czech News Agency", <https://news.expats.cz/weekly-czech-news/czech-republic-neighbor-slovakia-closes-borders-to-foreigners-toughens-anti-virus-steps/> (12.03.2020).
- CZECH Katarzyna, WIELECHOWSKI Michał, KOTYZA Pavel, BENEŠOVÁ Irena, LAPUTKOVÁ Adriana (2020), *Shaking Stability: COVID-19 Impact on the Visegrad Group Countries' Financial Markets*, "Sustainability", vol. 12, issue 15, DOI:10.3390/su12156282
- DEWITT Derek (2020), *A timeline of the spread of the coronavirus outbreak in the Czech Republic*, <https://news.expats.cz/weekly-czech-news/covid-19-in-the-czech-republic-a-timeline/> (08.04.2020).
- DONICOVA Viera (2020), *How Slovakia Is Handling the Outbreak?*, "Journal of Diabetes Science and Technology", vol.14, issue 4, DOI:10.1177/1932296820930269
- DRINÓCZI Tímea, BIEŃ-KACAŁA Agnieszka (2020), *COVID-19 in Hungary and Poland: Extraordinary situation and illiberal constitutionalism*, "The Theory and Practice of Legislation", vol. 8.
- DUNAI Marton (2020), *UPDATE 1-Hungary will close all schools to slow coronavirus -prime minister*, "Reuters", 13.03.2020.
- ECDC (2020), *Using face masks in the community*, <https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-use-face-masks-community.pdf> (08.04.2020).
- ENGLISH WIZARDS COVID-19 FAQ (2020), <https://englishwizards.org/covid-19/> (17.03.2020).
- DW (2020), *Corona-Live-Ticker vom 8. April 2020: WTO rechnet mit Absturz des Welthandels*: "Deutsche Welle", 08.04.2020.
- EXPRESS 15 (2020), *Andrej Babiš: Česko nikdy neprošlo podobnou zkouškou, jako je koronavirus. Ale vedeme si dobře*, "Express 15", <https://www.e15.cz/domaci/andrej-babis-cesko-nikdy-neprošlo-podobnou-zkouskou-jako-je-koronavirus-ale-vedeme-si-dobre-1367972> (23.03.2020).
- FALKENBERG Puk (2019), *We are living in a VUCA world and so what?*, "Bloch & Ostergaard", <https://blochoestergaard.com/were-living-in-a-vuca-world-and-so-what/> (09.09.2019).
- FITZMAURICE John (1998) *Politics and government in the Visegrad countries: Poland, Hungary, the Czech Republic and Slovakia*, New York. FRICZ Tamás (2020), *Politikai akaratot hajtanak végre*, "Magyar Nemzet", <https://magyarnemzet.hu/velemenypolitikai-akaratot-hajtanak-vegre-7967813/> (04.04.2020).

- GASPAREK Miroslav, RACKO Michal, DUBOVSKY Michal (2020), *A stochastic, individual-based model for the evaluation of the impact of non-pharmacological interventions on COVID-19 transmission in Slovakia*, "MedRxiv", <https://www.medrxiv.org/content/10.1101/2020.05.11.20096362v1.full.pdf> (18.05.2020).
- GOV.PL (2020a), *Obowiązek zastaniania ust i nosa już wkrótce, a zasady bezpieczeństwa na dłużej*, <https://www.gov.pl/web/koronawirus/zasady-na-dluzej> (09.04.2020).
- GOV.PL (2020b), *Ograniczenia działalności gastronomicznej, rozrywkowej oraz funkcjonowania galerii handlowych*, <https://www.gov.pl/web/koronawirus/ograniczenia-dzialalnosci-gastronomicznej-rozrywkowej-oraz-funkcjonowania-galerii-handlowych> (13.03.2020).
- GOV.PL (2020c), *Od dziś wprowadzimy stan zagrożenia epidemicznego*, <https://www.gov.pl/web/koronawirus/od-dzis-wprowadzimy-stan-zagrozenia-epidemicznego> (12.03.2020).
- GOV.PL (2020d), *Kolejne kroki w walce z koronawirusem – w sklepie mniej osób, ograniczenia w poruszaniu nieletnich, a parki, plaże i bulwary zamknięte*, <https://www.gov.pl/web/koronawirus/kolejne-kroki> (31.03.2020).
- GRODZKI Radosław (2016), *Die Visegrád-Gruppe: Zusammenarbeit über Unterschiede hinweg*, "Welt Trends", no.117.
- GUASTI Petra (2020), *The Impact of the COVID-19 Pandemic in Central and Eastern Europe: The Rise of Autocracy and Democratic Resilience*, "Democratic Theory", vol. 7, p. 47-60.
- HOLROYD Matthew (2020), *Coronavirus: Human rights alarm as Hungary seeks indefinite extension to state of emergency*, "Euronews", 23.03.2020.
- HOLT Ed (2020), *COVID-19 lockdown of Roma settlements in Slovakia*, "The Lancet", vol.20, DOI: 10.1016/S1473-3099(20)30381-9
- HUDEC Martin (2016), *Development of the Visegrad Group in the Context of Efforts to Accelerate the Convergence Processes by Joining the European Union*, "Studia Commercialia Bratislavensia", vol. 9 (33), p. 26-35. DOI: 10.1515/stcb-2016-0003
- HUNGARY HELPERS (2020), *Handling the COVID-19 epidemic in Hungary*, <https://helpers.hu/other/handling-the-covid-19-epidemic-in-hungary/> (19.03.2020).
- IDNES.CZ (2020), *Stát uzavřel hranice. Češi nesmí vycestovat, cizinci nesmí přijíždět*, iDNES.cz, https://www.idnes.cz/zpravy/domaci/vlada-mimoradne-jednani-koronavirus-covid-19.A200313_061812_domaci_kop (2020-03-13).
- IROZHLAS (2020), *Prymula: Koncem března čekáme 8500 nakažených. Budeme muset upravit pohyb pendlerů*, "iRozhlas.cz", https://www.irozhlas.cz/zpravy-domov/koronavirus-v-cesku-prymula-testovani_2003221405_pj (22.03.2020).
- JAIN Kritika, SAXENA Pallavi (2019), *Issues and challenges for potential women entrepreneurs in VUCA environment in Delhi/NCR*, "ABS International Journal of Management", vol. 7, issue 1.
- KOOPMANS Ruud (2020), *A Virus That Knows No Borders? Exposure to and Restrictions of International Travel and the Global Diffusion of COVID-19*, "Discussion Papers", SP VI 2020-103, October 2020, WZB Berlin Social Science Center.
- KOROM Ferenc (2019), *Hungarian Defence Forces capability transformation: Balancing acquisition and innovation*, "Honvédségi Szemle – Hungarian Defence Review", Special issue 2019, vol.147, no.1–2.
- KORONAVIRUS.GOV.HU (2020), *Orbán: a tanulók hétfőtől nem mehetnek iskolába, tíz akciócsoport állt fel*, <https://koronavirus.gov.hu/cikkek/orban-tanulok-hetfotol-nem-mehetnek-iskolaba-tiz-akciocsoport-allt-fel> (13.03.2020).

- MACHALA Ladislav, BENEŠ Jiří (2020), *Dodržujte karanténu a zachovejte klid. Lékaři z Bulovky vysvětlují, jak bojovat s koronavirem*, "Irozhlas.cz", https://www.irozhlas.cz/zpravy-domov/koronavirus-rady-navod-nemocnice-bulovka-lekari_2003181327_cib (18.03.2020).
- MCKEE Martin (2020), *Learning from success: how has Hungary responded to the COVID pandemic?*, "GeroScience", vol. 42.
- MIJNSSEN Ivo (2020), *Corona-Seuchenherde oder Sippenhaft? Die Slowakei stellt Tausende von Roma unter Quarantäne*, "Neue Zürcher Zeitung", <https://www.nzz.ch/international/coronavirus-slowakei-tausende-von-roma-in-quarantaene-ld.1552294> (21.04.2020).
- MINISTERSTVO (2020), *Slovensko dôsledne monitoruje situáciu v súvislosti s ochorením COVID-19*, Ministerstvo zdravotníctva Slovenskej republiky, <https://www.health.gov.sk/Clanok?koronavirus-opatrenia-situacia> (03.03.2020).
- MINISTRY OF HEALTH (2020), *Spouštíme celostátní informační linku pro občany v souvislosti s koronavirem*, Ministry of Health of the Czech Republic, <https://koronavirus.mzcr.cz/spoustime-celostatni-informacni-linku-pro-obcany-v-souvislosti-s-koronavirem/> (15.03.2020).
- MTI (2020), *Orbán: Ungarn schließt Grenzen und verbietet alle Veranstaltungen*, "Ungarn Heute", <https://ungarnheute.hu/news/orban-ungarn-schliesst-grenzen-verbietet-veranstaltungen-90098/> (16.05.2020).
- NEXTGEN (2020), *Guest Post: VUCA and what it means for leaders right now*, <https://bethenextgen.com/blog/vuca-and-what-it-means-for-leaders-right-now> (20.05.2020).
- ONVISTA (2020), *Unmut über Corona-Schutzmaßnahmen in der Slowakei steigt*, "Onvista – mein Finanzportal", <https://www.onvista.de/news/unmut-ueber-corona-schutzmassnahmen-in-der-slowakei-steigt-352498565> (24.04.2020).
- ORF.AT (2020), *Computer und Dokumente in Slowakei beschlagnahmt*, <https://orf.at//stories/3162412> (19.04.2020).
- PACEWICZ Piotr, JEDRYSIK Miłada (2020), *Morawiecki o testach. Straszy Zachodem i porównuje nas nie z tymi państwami, co trzeba*, "OKO.press", <https://oko.press/morawiecki-o-testach-straszy-zachodem-i-porownuje-nas-nie-z-tymi-panstwami-co-trzeba/> (02.04.2020).
- PANKOWSKA Maria (2020), *Wbrew oskarżeniom PiS rośnie pomoc z UE. Oto dowody, że Unia wydała miliardy na walkę z epidemią*, "OKO.press", <https://oko.press/rosnie-pomoc-ue-dla-panstw-czlonkowskich-na-walke-z-koronawirusem/> (22.04.2020).
- PAUFLER Sandro (2020), *Tschechien schließt die Grenzen*, "Wochenkurier.info", <https://www.wochenkurier.info/sachsen/bautzen/artikel/tschechien-schliesst-die-grenzen-75484/> (13.03.2020).
- PEDZIWIOL Aureliusz M. (2020), *Eine Viruswoche in der Mitte Europas*, "Deutsche Welle", 16.03.2020.
- PINKAS Jarostaw, JANKOWSKI Mateusz, SZUMOWSKI Łukasz, LUSAWA Aleksandra, ZGLICZYŃSKI Wojciech S., RACIBORSKI Filip, WIERZBA Waldemar, GUJSKI Mariusz (2020), *Public health interventions to mitigate early spread of SARS-Cov-2 in Poland*, "Medical science monitor", vol. 26, DOI: 10.12659/MSM.924730
- PNP.DE (2020), *Coronavirus: Tschechien schließt alle Schulen*, <https://www.pnp.de/nachrichten/panorama/Coronavirus-Tschechien-schliesst-alle-Schulen-3631040.html> (10.03.2020).
- POLAND.TRAVEL (2020), *COVID 19: Official Statement*, <https://www.poland.travel/en/travel-inspirations/covid-19-official-statement> (14.03.2020).

- POLITYKA ZDROWOTNA (2020), *M. Morawiecki: w wielu działaniach wyprzedzamy inne kraje UE*, "Polityka Zdrowotna", <https://www.politykazdrowotna.com/54362.m-morawiecki-w-wielu-dzialaniach-wyprzedzamy-inne-kraje-ue> (02.03.2020).
- PORTFOLIO (2020), *Hétfőtől új élet kezdődik, gyakorlatilag bezárnak a magyar iskolák*, "Portfolio", <https://www.portfolio.hu/gazdasag/20200313/hetfotol-uj-elet-kezdodik-gyakorlatilag-bezarnak-a-magyar-iskolak-419187> (13.03.2020).
- RETTMAN Andrew (2020), *Nine EU states close borders due to virus*, "EU observer", <https://euobserver.com/coronavirus/147742> (16.03.2020).
- REUTERS (2020), *Poland Shuts All Schools, Museums, Cinemas for Two Weeks Due to Coronavirus*, "U.S. News", <https://www.usnews.com/news/world/articles/2020-03-11/poland-shuts-all-schools-museums-cinemas-for-two-weeks-due-to-coronavirus> (11.03.2020).
- SENAT.GOV.PL (2020), *Posiedzenie Komisji Spraw Zagranicznych i Unii Europejskiej (nr 22) w dniu 26-05-2020*, <https://www.senat.gov.pl/prace/komisje-senackie/przebieg,8655,1.html> (26.05.2020).
- SINGH Anita, SHUKLA Timira (2018), *Job Seeker's Expectations from Recruitment Agency in VUCA World*, in: S.K.Mahapatra (ed.), *Changing global economic scenario: Strategies for business sustainability*, Bloomsbury Publishing India.
- THE SLOVAK SPECTATOR (2020a), *Coronavirus confirmed in Slovakia*, "The Slovak Spectator", 06.03.2020.
- THE SLOVAK SPECTATOR (2020b), *The incoming PM Matovič critical of outgoing government's attitude about coronavirus*, "The Slovak Spectator", 12.03.2020.
- THE SLOVAK SPECTATOR (2020c), *These are the measures currently in place in Slovakia*, "The Slovak Spectator", 18.03.2020.
- SWISSINFO (2020), *Coronavirus Could Mean the End of Borderless EU Travel*, <https://www.swissinfo.ch/eng/bloomberg/coronavirus-could-mean-the-end-of-borderless-eu-travel/45611410> (11.03.2020).
- STŘÍŽOVÁ Zuzana, BARTŮŇKOVÁ Jiřina, SMRŽ Daniel (2020), *Can wearing face masks in public affect transmission route and viral load in COVID-19?*, "Central European journal of public health", vol. 28.
- SZILAGYI Tamas (2020), *Hungary closes borders, shops as country braces for surge in new coronavirus cases*, <https://www.intellinews.com/hungary-closes-borders-shops-as-country-braces-for-surge-in-new-coronavirus-cases-178631/> (16.03.2020).
- TASR (2020), *Slovak Shopping Centres to Close due to Coronavirus over Weekends*, <https://news-now.tasr.sk/policy/slovak-shopping-centres-to-close-due-to-coronavirus-over-weekends/> (12.03.2020).
- TOPKY.SK (2020), *Vláda má prijať ďalšie kroky proti šíreniu COVID-19, odvolávať bude aj šéfa SŠHR*, <https://www.topky.sk/cl/10/1871357/Vlada-ma-prijat-dalsie-kroky-proti-sireniu-COVID-19--odvolavat-bude-aj-sefa-SSHR> (23.03.2020).
- TVN24 (2020), *Nowe ograniczenia w przemieszczaniu się. „Będą dotyczyć nas wszystkich”*, TVN24, <https://tvn24.pl/polska/koronawirus-w-polsce-zakaz-wychodzenia-z-domu-bez-konkretnego-powodu-i-nowe-obostrzenia-od-25-marca-4512517> (24.03.2020).
- VALIANS (2020), *Government's anti-crisis shield*, "Valians International", <https://valians-international.com/wp-content/uploads/2020/03/31.03.2020-Measures-taken-by-the-Polish-government-against-consequences-of-Covid-19-1.pdf> (01.04.2020).

- VEINLICH Jakub, EULE Sab (2020), *Česko se může vrátit do normálu v červnu, tvrdí Babiš. Proč se nenechal testovat?*, <https://www.blesk.cz/clanek/zpravy-koronavirus/639476/cesko-se-muze-vratit-do-normalu-v-cervnu-tvrdi-babis-proc-se-nenechal-testovat.html> (04.02.2020).
- VERSECK Keno (2020), *Corona-Krise: Orbáns „Ermächtigungsgesetz“ spaltet Europa*, "Deutsche Welle", 02.04.2020.
- VEYDER-MALBERG Thyra, MÜLLER-HEINZE Annett (2020), *Wie die Corona-Pandemie die Pressefreiheit in Osteuropa bedroht*, <https://www.mdr.de/nachrichten/osteuropa/politik/pressefreiheit-ungarn-rumaenien-serbien-corona-pandemie-100.html> (03.05.2020).
- VOGLER Richard (2020), *Ungarn schließt Grenzen für Personenverkehr*, <https://www.bvz.at/burgenland/politik/corona-massnahmen-ungarn-schliesst-grenzen-fuer-personenverkehr-burgenland-coronavirus-corona-massnahmen-grenzschliessung-196700261> (17.03.2020).
- WALKER Shaun (2020), *Hungarian journalists fear coronavirus law may be used to jail them*, "The Guardian", 03.04.2020.
- WEBER Florian, WILLE Christian (2020), *Grenzgeographien der COVID-19-Pandemie, Geographien der Grenzen*. Springer.