

GLOBSEC Megatrends 2019



GLOBSEC MEGATRENDS 2019 GLOBSEC MEGATRENDS 2019



CONTENT

Trend 1: Digital platforms continue to disrupt our economies	04
Trend 2: Al crawls out from our monitors and into our physical world	07
Trend 3: Political processes are increasingly compromised	10
Trend 4: New political forces are on the rise in Europe	13
Trend 5: Europe remains an important front of global jihad?	17
Trend 6: Growing confusion about the role of the transatlantic bond continues	19
Trend 7: Call for cyber sovereignty threatens the democratic nature of the Internet	22
Trend 8: A widening urban-rural gap continues to cause concerns	24

GLOBSEC Megatrends 2019 GLOBSEC Policy Institute Date: June 2019

© GLOBSEC

© GLOBSEC Policy Institute

Dear Reader,

We live in a dynamic world, where predicting the future is becoming increasingly challenging, because the risks we are facing are more complex than ever. Fascinating high-tech innovations and technological disruption bring a new dimension to nearly every aspect of life on the planet from the public sphere to strategic actors in the way we live, work, communicate, travel, and consume news. The rapid pace of transformation has proven that the future will look nothing like the present. In order to face the challenges of the future, we need to identify them and prepare for them now.

The top experts of the GLOBSEC Policy Institute have decided to take on this challenge, in the form of a short experimental exercise. Based on year-round research activities at GLOBSEC, they identified major trends related to their areas of expertise, which they believe are of utmost importance when it comes to the future of our societies. It would be a rather hopeless task if the list had an ambition to be exhaustive or if the trends, we are writing about were to be properly explained or described. We aim to call the readers' attention to important trends and exciting technological disruptions already happening now or are to come in the near future. To spark our readers' imagination, we included a number of "what if?" scenarios not to fully prepare you for hypothetical events, but to stimulate your mind to think ahead, be innovative, creative, and open to solve new challenges. Therefore, this publication is a collection of essays to spark your mind and challenge you.

Each year, several thousands of participants gather at GLOBSEC Bratislava Forum over three days to take part in dozens of events and sessions with topics spanning from technology, innovation through trade, to security and defence, and beyond. The level of detail and richness of debate at Central Europe's leading forum on international issues can indeed be overwhelming. We invite you to cluster the details around several major trends and join GLOBSEC Policy Institute experts in discussing these strategic issues. •

TREND 1: DIGITAL PLATFORMS CONTINUE TO DISRUPT OUR ECONOMIES

▶ By Juraj Čorba (Tech and Society Fellow)

MESSAGE: We are on the brink of an era in which the success of economies and societies will depend on what stance governments or international organisations take towards existing and new digital platforms.

Governments, international organisations, and municipalities are overwhelmed by a rapid growth in Internet-based commerce and services. How quickly will they respond, and how effectively will they review their policies on the go? How will they regulate in a way that innovation is not suppressed while the legitimate interests of citizens, businesses, and public authorities are protected?

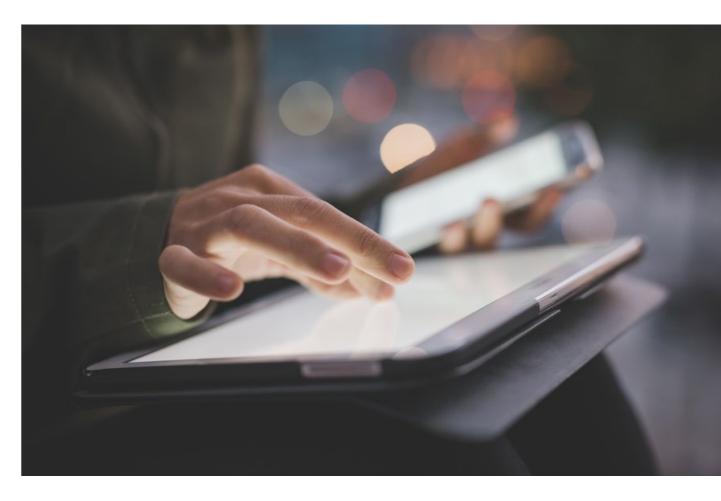
Business, commerce, and our daily lives have become ever more reliant on digital communications and networks. Platforms such as Amazon, Facebook, Google, Airbnb, Uber, Spotify, and others have become the main gateway to shopping, information, entertainment, and socialising for many. Data has become a new valuable resource recorded in our daily exchange and communication. It is now being recorded, collected, analysed, traded, and commercialized by various players with the aim to improve production processes, give insight into - or even shape — customer preferences, monitor and stimulate workers and suppliers, receive feedback on products or services sold.

Data also provides competitive advantage to those who wish to develop or employ algorithms or machine learning systems in their business, as they are dependent precisely on availability of the data to be able to operate and learn. For instance, to be able to offer (automated) personalised shopping offers, a platform needs to know the customer's shopping history, possibly even his interests and her or his habits. Take the case of "Under Armour", a fitness and sportswear brand as an example for

data collection. To personalise offers, the brand has created a complex ecosystem of apps for mobile devices, through which it tracks every run, walk, hike or gym session, tracks nutrition through a food diary and motivates users to achieve their fitness goals.¹

Many observers argue² that these developments gave a birth to a new kind of a business model: the "platform". These are the digital infrastructures (intermediaries) who connect various users such as customers, producers, service providers or advertisers to one common space where commercial or even non-commercial exchange takes place and is recorded. A platform provider records data that its users provide or simply "leave" as digital tracks of their behaviour - and uses them to enable fast, effective, even personalised advertising, sales or predictions. A platform often leaves room for others to further create their own services or marketplaces based on the underlying platform, in such a way platforms and applications get interconnected or grow on other platforms.

Various types of electronic platforms operate nowadays: those which focus primarily on targeted advertising, on selling goods and devices, on turning traditional manufacturing and sale of goods (e.g. cars) into services, on renting of software and hardware services to those in need, on provision of services through data analytics and software with or without owning any major physical assets. As this field develops dynamically, new types of services and platforms can proliferate or integrate.



While the first platforms appeared with use of Internet in PCs, they have spread even further with the introduction of mobile communication devices which we now use and carry around in our everyday lives. It is now expected that the Internet of Things and accompanying multiple sensors and computer-mediated transactions will enable the platforms to enter our homes.3 For example, shopping from home, possibly with a help of personal assistants such as Alexa or Siri, has become widespread in many countries and may become a norm in the future. The platforms of Tesco, Ocado, or the Chinese Meituan are just a few examples making a convenient option of home shopping possible. Not only will our homes be transformed, but also our workspaces, cities, and other places which we inhabit and even things we use and possess, such as our bodies. For instance, a sensor applied to a human body can recommend a personalised medical treatment, while the datagathered knowledge stemming from one individual case can serve to improve the treatment of other similar cases.

A "value gap" and tension arises in those situations where platforms mediate contents to which others claim their copyright or other rights. Some argue that this is a kind of illegitimate free ride, while others argue that any regulation impedes the free Internet, as exemplified by the copyright law reform in the EU.⁴

As more and more segments of the economy become digitalised, we may expect further spread of platform business model in the upcoming years with all the risks and challenges it poses to incumbent businesses, media, established labour relations ("gig economy"), stability of public finance and even public security and private safety. There is a risk that (public) institutions will respond either too late or too strictly. Regulatory tools, competition rules and international initiatives aimed at taxing of platforms in place where activities are taking place and value is created will be among those tools used by governments and cities, with some pioneering efforts and cases already in place.⁵

Conclusions and recommendations

- ▶ With digital platforms operating on a large scale and across various jurisdictions, a multilateral approach to their regulation may mitigate the risk of a widening gap between various parts of the world: those advancing and those lagging.
- ▶ While the world seems to be fragmenting in its regulatory framework for Internet and digital platforms for now, incentivization of desired mutual coordination and cooperation may not necessarily
- be directly connected to the regulation of digital platforms themselves. Creative consideration and use of other, seemingly unconnected, (foreign) policies such as trade, demography/migration, security or environment could be employed to achieve the right motivation or even constructive pressure to cooperate.
- ➤ The platform economy will continue to be one of the key drivers of economic development, including in countries with outstanding potential such as China. ●

"WHAT IF?"

▶ What if traditional banks will be replaced by one "super app"?

technologies, the financial sector is already undergoing a transformation. Banking branches and ATMs are being increasingly replaced by e-banking and e-payments, possibly even by digital currencies. Online loan applications are being developed and P2P lending replaces inperson loan applications and approvals, removing banking intermediaries. Personal bankers can be substituted by automated robo advisors, which are being already tested. Traditional banks are still the dominant actors in both personal and corporate finance in many markets, but what if they will be completely overtaken? They will either disappear from the market, which is not very likely, or adjust to the new circumstances by developing their own new tools or partnering up with some of the new tech providers. There are corporate banking activities that could be hardly eliminated or transformed completely, but they could be merged in large banking centres, or could be provided through virtual working spaces and negotiation rooms.

Reply:

▶ If some "super app" of WeChat type (developed in China) manages to completely integrate all our payments, purchases, and lending in our mobile device, it could completely replace many current typical traditional banking activities.

- Thanks to network connection and advanced technologies, the financial sector is already undergoing a transformation. Banking branches and ATMs are being increasingly replaced by e-banking and e-payments, possibly even by digital currencies. Online loan applications are being developed and P2P lending replaces in-
 - ▶ To that end, a new type of thinking and analysis of competitive market power may be inevitable. We need a new approach which considers the value of data collection/concentration as well its various possible uses as a relevant factor. We may even need to develop a completely new type of multidisciplinary assessment looking at the possible impacts of apps on systemic institutions and values in society.
 - ▶ Guarantees of effective oversight of quality of services need to be kept or introduced, and the competent authorities upgraded with relevant skills and capacities. The mode of governance may need to change, going in "real-time" and interactive direction, to be capable of instant response.
 - ▶ Over and above all, adequate security standards and data protection requirements need to be required and enforced, and well-thought checks and mechanisms introduced to provide a timely response.

TREND 2: AI CRAWLS OUT FROM OUR MONITORS AND INTO OUR PHYSICAL WORLD

▶ By Juraj Čorba (Tech and Society Fellow)

MESSAGE: Expect a continuing imbalance between the pace of Al development and commercialisation on the one hand and conscious oversight and regulation on the other. Although we are dealing with a technological change, this remains primarily a test of human capabilities in finding a common consensus on security, conflict prevention, and legitimate Al-driven business.

Governments, business, and citizens face a new challenge: how to orient themselves and remain competitive. (Semi-) autonomous agents, programs, and systems are likely to achieve a new speed of analysis and decision-making or to multiplicate effects of human intentions and actions.

Intelligent systems which use data to learn, adapt, and make decisions in new circumstances are spreading into new environments. While we hardly got used to them in our search engines, social networks, and our smart phones,6 now with the combination of AI, Internet of Things, and advanced robotics, machine engineering is opening a range of new possibilities of Al deployment.7 Recognition of patterns, pictures, and language, and other specific perception or cognition capabilities are expected to influence production planning, logistics, further development of human-machine interface, quality controls and many other areas of industrial production and services. Moreover, it is arguably a proper combination of human minds and intelligent machines that will offer the biggest value and will rapidly change the way businesses execute their most important processes.8

The intelligent systems depend not only on advanced hardware, but also on quantity and

quality of data. Only with proper data can they excel human capabilities by finding patterns and making predictions, without being explicitly programmed to do so.9 The availability of vast data and functioning data infrastructures is becoming critical to be able to stay competitive. As AI requires more computing power and good data, it increases the risks of concentration of expertise, wealth, and power. Open databanks and ecosystems are increasingly recommended as necessary preconditions for those who are not favoured by their economic and financial disposition or data availability.10 Governments around the globe equip themselves with Al strategies in effort to not be overtaken by the new disruptive developments and to harness the opportunities these bring. 11 Artificial intelligence is already bringing visible results and benefits in areas such as knowledge access, health, transport, and environmental protection.¹²

Although these systems are called "intelligent", they currently perform only in certain tasks, primarily based on data/environment perception, reasoning, processing, and decision making. Even if we keep ourselves sober in our expectations and do not mix sci-fi with reality, Al is already reshaping many services and industries. For instance, the world of finance has been transforming with sophisticated automated tools such as automated assessment of insurance claims.¹³ Supply chains begin to examine

new opportunities brought about by intelligent systems.¹⁴ New intelligent factories catch the imagination of those willing to stay competitive.¹⁵ The automotive and transport industry is expected to change dramatically if the pitfalls of (semi-) autonomous driving are overcome.¹⁶ Healthcare diagnostics and drug production are already using Al to improve or develop new approaches.¹⁷ While virtual agents or smart speakers keep improving customer services and recommendation tools,¹⁸ the retail sector started to test unmanned vision-enhanced checkouts.¹⁹

Al already influences the way people are screened, hired, perform in work, and redirected for a different job. New working spaces adopt Al systems in their new collaboration architectures.²⁰ It is expected that Al will redefine many human jobs,²¹ while some argue that even a new type of (human) leadership and firm organisation will be required in an Al driven business and working environment.²²

Al emulates human capabilities in ways very different from how us, humans, would use them, and does it in a way that is often difficult to explain.²³ Al products can therefore behave in ways that we do not intend nor can anticipate. Embedded problems may be hard to detect or foresee. While companies or even public authorities²⁴ start to employ intelligent systems worldwide, the complex ethical and regulatory framework is just being sought.²⁵ The risks are most obvious in the field of autonomous weapons where a number of initiatives highlights the need for multilateral effective safeguards and standards.²⁶ Even if we take existential threats as overblown for now,²⁷ the real benefits of AI will be decided by the ability of governments, businesses, and societies to prevent malicious and uncontrolled use of the new technology.

Conclusions and recommendations

- ▶ Even if slightly overhyped, Al represents a new and significant extension of specific human capabilities. At the same time, it is ultimately a human challenge to find a global consensus on its development and use.
- ▶ To meet that challenge, a huge diplomatic, scientific and governmental effort (in its widest sense) will be required. All should be taken not as a field on its own, but rather as an integral component of various public policies.
- ▶ Although the Al-related know-how is likely to be concentrated due to the differing availability of human capacities and hardware, decisive steps towards mitigating a widening gap should be taken. Support of open platforms and encouragement of collaborative ecosytems can be of particular relevance in that regard. ●



"WHAT IF?"

▶ What if we let artificial intelligence merge and play with synthetic biology?

Imagine artificial intelligence which recognises and learns patterns in living organisms and helps the synthetic biology or some other similar scientific field to create new forms of life, not currently present on the planet. Although the road to this is far from clear and certain, and the synthetic biology industry is itself only nascent, the possible implications would be profound.

Reply:

- ▶ Although humans would finally be able to claim their truly transformative powers, the risks (and side effects) of such achievement could hardly be properly assessed beforehand.
- As documented by the recent (alleged) manipulation of human genome, 28 the scientific community and governments are facing a major challenge in securing a "watchful eye" and a "determined hand" on human attempts to "recode" natural organisms and systems. As human curiosity and desire to overcome our own limitations appears to be limitless, all attempts to transform life as such should be monitored and brought into regulated sandboxes.
- ▶ Even in the segment of current AI research which focuses on understanding and utilising the natural capabilities and characteristics of (natural) brains, clear and enforceable guidelines need to be set globally to prevent possible misuse or unexpected side effects of tech blending with,or building upon organic systems.

GLOBSEC MEGATRENDS 2019 GLOBSEC MEGATRENDS 2019 (11

TREND 3: **POLITICAL PROCESSES ARE INCREASINGLY COMPROMISED**

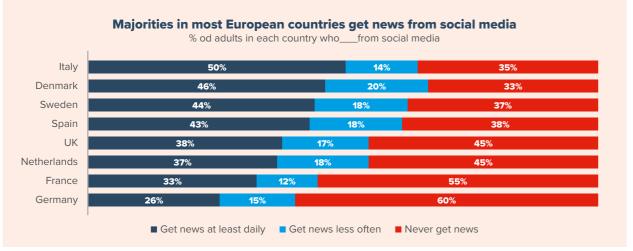
▶ By **Daniel Milo** (Head of STRATCOM Programme)

Issues related to disinformation and interference in the political processes remain on top of the EU agenda. Information is power; therefore, the more information we gain about the creators and disseminators of disinformation in the upcoming years, the stronger resilience strategies will be developed against them.

The pattern of consuming news has drastically changed in the past few years. The pattern is not only simply from offline to online, but also in social media platforms. This phenomenon is not new, but it has intensified in the last couple of years with implications on the political processes. This trend indicates that this is the direction we are heading towards in the future.

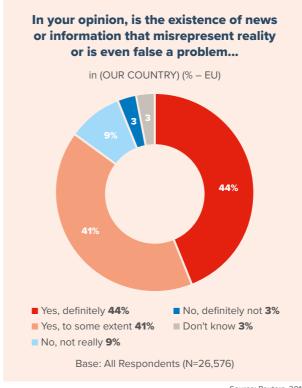
The ever-increasing impact of social media on forming opinion, including political opinions, is well documented as the Pew Research Center demonstrates. This trend is not unique to Europe; however, the situation in the US is similar, since

social media outperformed printed newspaper in 2018.29 When it comes to young people, the share of those who use social media as their primary source of information is even bigger. While large segments of the population consume news via social media, significant portions do not pay attention to the source of news; and thus, are open to manipulation by disinformation and information operations carried out by domestic or foreign actors. The level of exposure to false information is alarming. The 2018 Eurobarometer survey showed that more than a third of the respondents (37%) say they come across fake news every day or almost every day, and a further 31% claim that this happens at least once a week.30



Source: Pew Research Center. 2018

It seems that people are concerned about this potential manipulation. According to Reuters Institute 2018 Digital news report, more than half of the respondents in 37 countries are concerned about what is real and false on the Internet.31 Europeans are aware of the threat of disinformation and 83% perceive it as a danger to democracy.32



Source: Reuters, 2018

Europeans are worried and rightly so. As research by the Oxford Internet Institute suggests,33 the number of state actors using computerized propaganda is increasing across the globe and spans from established democracies to the developing world. The advent of mobile Internet and encrypted communication platforms only adds to the complexity of this issue.

One practical example of the corroding impact of disinformation on public discourse and attitudes was documented by 2018 GLOBSEC Trends, according to which every third Central European trusts some kind of conspiracy theory and in some cases, it is even every second citizen.34

Advances in Artificial Intelligence and democratization of automated amplification and manipulation techniques on social media threaten to undermine the very notion of civilized political discourse on social media. Not only are these techniques being used by state actors (as documented for example in the indictment of 13 Russian operatives by Special counsel Robert Mueller), but also by non-state actors- fringe political groups and roque PR operators hired for nefarious purposes.

The synergic impact of all these developments is further compounded by incentivization of emotionally charged content on social media platforms and the inability of state authorities to effectively address polarization of society caused by the so-called information bubbles.

Although, this is still a relatively new field to study techniques and proved cases in detail, but there are already cases of interferences in elections, including the US, Russian, and European elections. The Central Eastern European region is not an exception either. The recent Slovak presidential elections witnessed disinformation and manipulated content on several social media channels.³⁵ Such tactics may directly impact elections and endanger undermining the citizens' faith in established political processes. Battling disinformation is on the top of the EU agenda, and will likely remain there in the upcoming years.

Conclusions and recommendations

- ▶ Political processes are increasingly compromised by meddling. Interference has been observed in many European countries and in the US as well.
- ▶ There remains to be a risk that disinformation and various forms of manipulation of public opinion undermines democratic processes and trust in the system.
- ▶ Developing resilience against disinformation techniques needs to remain a top priority in the upcoming years.

"WHAT IF?"

Imagine a country, where the society is highly polarized along political lines, but also along cultural and geopolitical issues. The level of Internet penetration is very high, with almost every adult having a smart phone, resulting in more than half of the population receiving their daily news via social media. Elections of the head of state polarizes the society even further pitting rural vs. urban, conservative vs. liberal voters.

Hostile state actors decide to further increase these divides and interferences in the election. It does so by adopting a multi-vectored approach: setting up or supporting proxy media channels, seeding of narratives on social media, spreading of disinformation on social media, conducting astroturfing operations, using trolls and amplification of content on social media by bots.

Imagine that shortly before the election day, an anonymous source published a cache of documents purportedly obtained from a hack of the election campaign of one of the candidates. The leak included hundreds of pages of emails, including some pointing to illicit funding and violation of election campaign regulations. Moreover, some parts of the election system were attacked by cyber-attacks, leading to a widespread discussion about the integrity of the election results. The resulting situation was a paralysis of the country, embroiled in internal conflict and division.

Reply

► Information operations and impact of disinformation

- a. Develop robust national Stratcom capacities to identify and counter information operations
- b. Identify and publicly name actors involved in information operations including their links to foreign hostile actors
- c. Develop automated solutions enabling real-life monitoring and identification of infoops, closing the reaction gap

▶ Elections and election campaign financing

- a. Establish Election Security task force combining cybersecurity, strategic communication, and election administration
- Enact legislation enforcing transparent financing of online election campaigns, including ads by third parties in support of a particular candidate
- c. Ban foreign funded election ads on all social media platforms

► Media ownership and transparency

- a. Establish clear and transparent ownership of media
- b. Ban media ownership by offshore companies

▶ Cybersecurity

- a. Audit cybersecurity of all parts of the election system and carry out penetration tests
- b. Provide cybersecurity training and equipment to all election campaign teams

TREND 4: NEW POLITICAL FORCES ARE ON THE RISE IN EUROPE

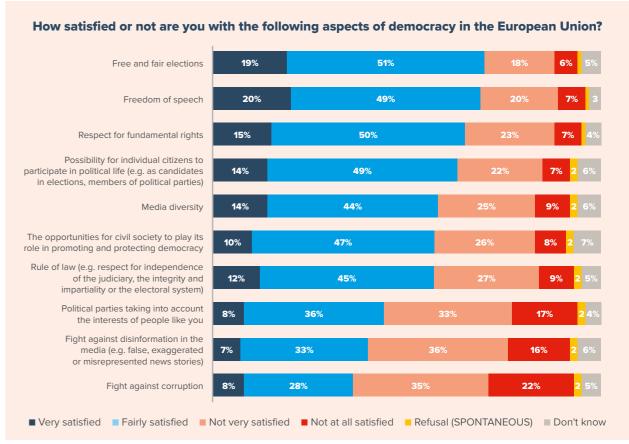
▶ By Kinga Brudzińska, PhD (Senior Research Fellow, Future of Europe Programme)

MESSAGE: The traditional two-party system is challenged both on the Member State – and on the EU-level, increasing the likelihood of disrupting the EU agenda in 2019, and in the upcoming years.

The rise of Eurosceptics and Populists is not a new phenomenon in Europe, but it has become a clear trend in the past years. The rise of such relatively new forces in politics inevitably creates risks for established traditional parties, with potential long-term damages on both representatives, parties, and party families. The results of recent elections indicate that the rise of unconventional forces will remain a key trend in years to come.

Political parties have become among the least trusted institutions in society. Only a minority were satisfied with political parties taking into account the interests of the people (44%), according to the latest Special Eurobarometer (Democracy and elections).³⁶ For each of these aspects fewer than one in ten said they were "very satisfied".

There are currently at least two registered trends across Europe at the national level when it comes



Source: Special Eurobarometer: Democracy and elections, September 2018

to party politics. First, the decline of the two-party system in which traditional parties are losing ground to new movements, second, the increase in support for far-right and centrist parties.³⁷ The last election results or last developments in France, Germany, Italy, the Netherlands, Spain, Slovakia or Austria back this trend.

In Austria, the coalition of the centre-right Austrian People's Party (ÖVP) and the centre-left Social Democratic Party (SPÖ) dominated the political scene in the post-war period. In 2017, the ÖVP instead formed a coalition with the far-right Freedom Party (FPÖ). What is even more interesting, in contrast to recent electoral

Decline of the two-party system (% vote share of two/three traditional parties in the last two elections)		
	Previous	2017-2018
Germany	67.2%	53.4%
Sweden	54.4%	48.1%
France	55.8%	26.4%
The Netherlands	51.4%	27%
Italy	62.7%	34.3%
Poland ³⁸	62.2%	55% (in January 2018)
Spain	55.6%	45.4%
Slovakia	55.9%	43.4%

Source: The Economist Intelligence Unit Limited 2018, A new political phase for Europe; Kantar Millward Brown Support for Political Parties in Poland, The Economist Intelligence Unit country briefs.

If we take Germany as an example, the two parties Christian Democratic Union (CDU) and its sister party the Christian Social Union in Bavaria (CSU) together with the Social Democratic Party (SPD) in 2002 had a backing of 77% of voters, while in 2017 they received only 53.7% of the votes. While the Green Party (The Greens/Alliance 90) of the Free Democratic Party (FDP) had maintained the support on a more or less similar level, it was the far-right party Alternative for Germany (AfD) that was strengthened the most. In 2013, it was voted by 4.7% of the population but in 2017 its level of support increased by 2.5 times to 12.6%.

In Spain, the Popular Party (PP) and Spanish Socialist Workers' Party (PSOE), which are both traditional parties, are at their lowest level of support since the 1980s. In contrast, two emerging political formations, the radical, leftist Podemos (We Can) and the centrist, liberal Ciudadanos (Citizens), have made much of the political weather since 2014 and have secured a sizeable place in parliament. Today, Vox, which is the first Spanish far-right party in the democratic history of Spain, is getting stronger. It received 10.3% votes in the last general elections, which means 24 seats in Congress.

successes of the Greens in Germany, in Austria they failed to win enough votes to share for the first time since 1986.

In a world where tweets shape the political discourse and politicians promise easy solutions to complex issues, the ideas of anti-establishment movements or political parties are much more appealing to disappointed or angry voters. What is more, "populism" has become a new buzz word in traditional media and social networks. For example, the Guardian admits that while in 1998 about 300 of its articles mentioned a word "populism," by 2016 about 2000 articles had mentioned it.39 Finally, support for and coordination of anti-European voices were growing: for example under the umbrella of the pan-European organizations called "the Movement" set up by Steven Bannon, a mastermind behind the last U.S. elections, or the gatherings of Eurosceptics parties (nearly 50 participated) organized by the Italian Interior Minister Matteo Salvini ahead of the elections for the European Parliament in May. All this shows that European politics will change significantly in the upcoming months.40

What is already clear is that there will be different shades of grey regarding the Member States of the European Union post 2019. Given the fact that much of the power in the EU is, in fact, held by elected governments in the European Council, it will mainly depend on them, how the future EU agenda will look like. The more anti-European capitals are, the less consensus at the EU level may be reached. 41 Instead of finding joint solutions, the leaders may push for solutions that would benefit them domestically. This is already visible, for example in case of France as President Macron has recently been tough in EU councils (on Brexit, trade talk with the US or statement on Libya) in many cases to profit at home (on the expense of far right party led by Marine Le Pen).⁴² Another example is Hungary or Italy that prefer to keep some issues unsolved, such as lack of progress on the EU common migration policy or reform of the Dublin system, to gain politically at home. At the end, the EU may turn more inward looking.

When it comes to EU institutions, the new European Commission will be more colourful but also sceptical of the European project. For example, if the ruling parties of the Czech Republic, Hungary, Italy, Poland or Romania are successful in May, they may send more expressive representatives to Brussels.⁴³ The European Parliament will also be more fragmented. What follows is more troublesome, which will be reflected in weaker legislative activity and could prove crucial in respect of timely approval of the EU's 2021-27 budget.⁴⁴

Conclusions and recommendations

- ▶ The Eurosceptics' ability to disrupt the European agenda will depend on whether they can unite and put aside their differences. It is worth remembering that EU relations with Russia, the Italian' League party, and Polish Law and Justice Party are approached on extremely different ends. On the future of Schengen, the Italians call for the redistribution of refugees among other Member States, while the voices from Central Europe or Scandinavia prefer to treat the root causes of migration.
- ► The level of disruption of the EU agenda will depend on the outcomes of Brexit. Most Eurosceptics have already limited their anti-EU

rhetoric, because there is no public support for other Member States, despite criticism to leave the EU. For example, in Slovakia, as of March, the vote for "remain" in case of the referendum increased by 10% in comparison with the results in September 2018. In Finland and Estonia, the support grew by 7% and 6% respectively.

- ▶ The lesson learnt from Brexit or from the situation in Spain with Catalonia show that mobilising power on the rejection of the status quo in the current political climate is easier than winning on a pro-issue agenda. Therefore, the positive narrative about the benefits of the EU should be constantly cultivated. It refers to traditional media, education system, and political class.
- ▶ New and different does not equal bad when it comes to party politics. Bigger competition for ideas on the future of the EU in both national and the EU level can, for example, mobilise the forces with a pro-European agenda and to increase the public interest in the EU project.
- ▶ The traditional parties should not be on offensive and seek new programs that would distinguish them more from other parties and will be more appealing to the voters who lost faith in them.
- ▶ In order for a peaceful coexistence, both traditional parties and Eurosceptics should learn how to talk to each other in order to push the European project forward and not backwards.
- ► The Eurosceptics' alliance that seeks to destroy the EU from inside should be avoided by all costs. •



"WHAT IF?"

What if the Eurosceptics overtake the EU agenda?

It is difficult to predict what happens if Eurosceptics overtake the agenda. First, Eurosceptic parties differ in goals and strategies. Second, the extent of power of the majority in the Council and/or the Parliament will determine their outreach and influence on the EU agenda. However, the following scenarios should be counted with to build resilience in the future.

Reply:

▶ The European integration will be impacted

- a. European integration will slowdown
- b. European integration will stagnate
- c. European integration will be reversed

► Cooperation among Member States will have a different form

- a. Cooperation will be minimized
- b. Cooperation will remain only at the official level
- c. Cooperation will be strictly intergovernmental

► Structural changes

- a. The EU rulebook will be rewritten (for example minimal fiscal contribution to the EU budget will be put in place)
- b. The EU institutions will be downgraded radically
- c. Transfer towards Member State competencies will be radical

► Top risks and worst-case scenarios

- a. Member States will start to exit the EU
- b. The EU will eventually collapse
- c. Cooperation between states will be back to pre-EU levels with only a few upgrades

TREND 5: EUROPE REMAINS AN IMPORTANT FRONT OF GLOBAL JIHAD?

▶ By Kacper Rekawek, PhD (Head of National Security Programme)

MESSAGE: The threat connected to "foreign terrorist fighters" is now less direct but in fact might be equally dangerous.

As they were returning home or sought refuge in Europe, veterans of previous Middle Eastern or South Asian wars left their mark on the history of global jihad and furthered its cause and goals in the West. Europe is now faced with a similar threat as its citizens both have been returning (on their own) or could be returned (via Syrian Democratic Forces, SDF, run camps, and possibly Iraq) home. Not all will face jail time, and some might instigate another wave of global jihad in Europe.

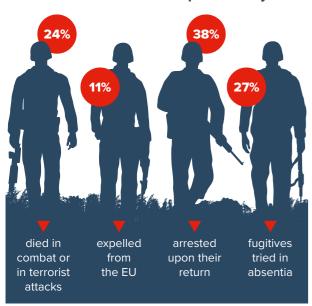
Between 2011 and 2019, close to 6,000 Western Europeans (out of 41,000 people in total) journeyed to Syria in order to take part in its civil war.45 Nowadays, they are all rather misleadingly referred to as "foreign terrorist fighters" (FTFs). Not all of them actually fought and some, at least initially, not necessarily gravitated towards jihadist entities. What is more, not all had been committed violent Islamists upon leaving Europe – some left for humanitarian reasons (to help Syrian civilians). others trekked to Syria emboldened by their governments then rhetoric of "Assad must fall" or "Assad must go." Nonetheless, the majority of them had actually left Europe with the intention of joining jihadist entities and their travel to, or return from Syria, to e.g. stage terrorist attacks in Europe, should be seen as the biggest "output" or activity/ goal of European jihadism the 21st century's second decade. This decade effectively saw European jihadism first and foremost predominantly focused on issues outside Europe (the war in Syria) and preoccupied with its adherents' travel to the Middle East. Secondly, however, as ISIS was turning its attention towards taking its campaign

outside the so-called "Caliphate" and its fortunes were waning, European jihadism and its disciples returned to plotting and staging terrorist attacks in Europe.

Today, approximately 3,000 FTFs as well as their wives and children are detained in camps by the SDF.⁴⁶ Some of the returnees, including individuals in GLOBSEC crime-terror nexus database (2017-2019),⁴⁷ contributed to what has been called "the peak year of jihadism in Europe" (2015) when 148 people died in terrorist attacks.⁴⁸ Interestingly, studies show that the threat of terrorist involvement by jihadi returnees is severely reduced within a year – this theory is partly vindicated by the much reduced terrorist threat to Europe after 2017.⁴⁹ This, however, does not mean that the threat connected to FTFs is over. It might be less direct in nature, but it could be equally dangerous.

GLOBSEC research on the subject⁵⁰ reveals that the veterans or returnees, or former FTFs, could play the role of jihadi "entrepreneurs,"⁵¹ i.e. role models, recruiters, and radicalisers of future generations of jihadis. Their stories and exploits, plus their networks and know-how, constitute an invaluable boon for global jihadi organisations such as Al-Qaeda or ISIS. Thus, future strategies on minimizing the global jihadi threat in Europe must focus on such individuals.

CASE STUDY: Fate of 80 FTFs from 10 EU countries after their departure to Syria.



Source: GLOBSEC From Criminals to Terrorists and Back? dataset and From Criminals to Terrorists, and Back? presentation.

Conclusions and recommendations

To build up resilience in relation to the threat of global jihad in Europe:⁵²

- ➤ Vigorously pursue the aforementioned jihadi "entrepreneurs" so that they are jailed or deported to their countries of origin;
- Maintain vigilance and monitor families with a track record of jihadi radicalization, including the families of the "entrepreneurs," as European jihadism is often a family affair or collegial affair;
- ➤ Sustain increases in funding for counter-terrorism activities introduced in the aftermath of the ISIS' most famous European attacks of 2015 and simultaneously perform the process of devolving one's counterterrorism to regional levels so that non-security and local actors could be involved in its development. •

"WHAT IF?"

What if ISIS and other jihadist groups were not to weaponize the skills of their former members who had already returned to Europe, but utilized the plight of those languishing in camps in Syria run by SDF or transferred for judicial proceedings to Baghdad and later on also to Damascus as a rallying call for the European jihadis of the future?

In this sense, European jihad would be less about the contributions of veterans from the civil war in Syria, but more about revenge for "brothers" and "sisters" forgotten or left for their own devices in the Middle East. Unfortunately, ISIS and co. could use numerous examples of Europeans, especially females, former "jihadi brides," as they are often euphemistically called, and their children born in Iraq and or Syria who have been e.g. stripped of their citizenship or refused any consular assistance by different European countries. Stories of their hardships, deaths, executions, in the face of European indifference, could be transformed into powerful jihadi narratives which would then be added to the radicalizing arsenal of ISIS connected recruiters operating in Europe.

Such exploits might carry more weight with future generations of jihadis than ISIS' propaganda of success, especially when the "Caliphate" lost its territorial possessions in Iraq and Syria.

Reply:

- ▶ Immediate repatriation of children with a European parent held in the camps administered by the SDF in effort to deny ISIS the possibility of using the stories of their suffering to mobilise future generations of jihadis;
- ▶ Provision of financial assistance to SDF run camps so that their conditions could improve to mitigate humanitarian concerns about the plight of Europeans in the camps, and to limit their recruitment value for jihadi organisations;
- ▶ Reach an agreement with the Iraqi government in relation to the fate of individuals sent by the SDF to stand trial in Baghdad, i.e. a moratorium on death penalty and opening of negotiations on e.g. future transfer of female detainees to European prisons.

TREND 6: GROWING CONFUSION ABOUT THE ROLE OF THE TRANSATLANTIC

BOND CONTINUES

▶ By Michal Čubrík (Security and Defence Fellow)* and Orsolya Ráczová (Senior Research Fellow)

MESSAGE: Tensions between the members have intensified while the Alliance continues to face challenges fuelled by the external security environment in the neighbourhood and by the creation of potentially parallel defence structures in Europe.

Internal structural challenges, differing viewpoints on strategic priorities, and last but not least, the debate on burden sharing between the members of the Alliance has continued. The current political rhetoric in parallel with a potentially transforming European security structure indicates that this trend on the growing confusion about the role of the Alliance is likely to continue beyond 2019.

Since Donald Trump took the office of the President of the United States, almost all high-level meetings in NATO have been dominated by headlines raising questions about the internal unity in the Alliance, relations between Europe and America, and the willingness of the US to defend its European allies. The debate on internal cohesion and the Alliance's unity is thus reduced to the figures that individual European NATO members spend on defence.

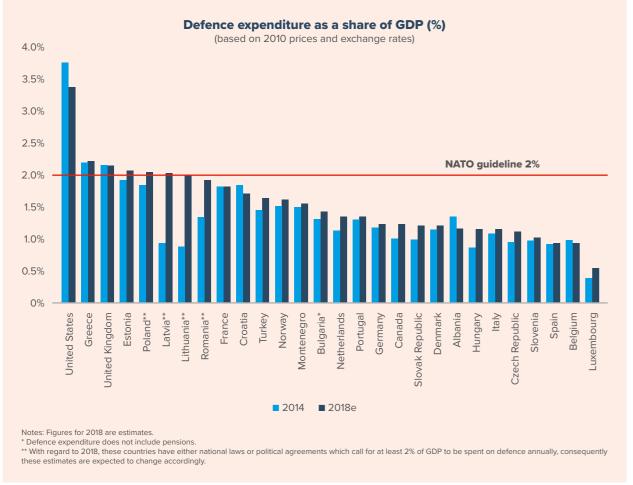
It has to be admitted that numbers are a powerful tool to point out the grave differences in burden sharing. The US outperforms even its highest spending European partners by almost twice in defence spending. Not to mention that only a few countries on the continent reach the expenditure on defence equal to 2% of the country's GDP. It has been pointed out that to reach the critical 2% is not

an official requirement for the members, and the spending is rather based on willingness and ability.⁵³ Although some states managed to slightly increase their defence spending in 2018, the gap between the US and the rest of the Alliance remains.

Moreover, the dispute should not exclusively centre around the sum, but also around how that money is spent: Greece is one of the few European countries that meets the expenditure requirement, but instead of building a strong and effective fighting force, most of the money is actually spent on pension liabilities, salaries, and maintenance. In order to build an Alliance resilient to external and especially new types of hybrid threats, the partners need to not only increase but rationalize their defence expenditures.

President Trump's statements have already weakened the transatlantic bond in some sense; if you must explain repeatedly that the agreements are in place and the allies are united, the very emphasis itself allows doubts to rise. While it appears the era of free riding has ended, European members still have so far managed to downplay Trump's complaints about the Alliance by substantial increases in their defence expenditures, especially those from Central and Eastern Europe. Not just

^{*} The author was working at GLOBSEC at the time of writing the report.



Source: NATO, 2019⁵

because of Trump, mostly because of Russia's war against Ukraine and its aggressive behaviour in the neighbourhood. At the same time, Europe as well as the US are bilaterally doing all the right things to uphold the deterrence and defence of the Eastern border of Europe against resurgent Russia.

However, the unity among Allies continues to be challenged by two other major issues. The first major challenge is the ever-present dispute between the Eastern and Southern members on which strategic direction should be the priority for the Alliance and how much time, effort, and money to spend on each. For the Eastern members it is obviously the territorial defence of the Eastern border of the Alliance and facing the Russian threat, either conventional or cyber and hybrid. Southern members prefer to focus more attention on the Southern periphery, MENA region, with failing states, international terrorist groups, and migration flows. At the same

time, all Allies agree that NATO cannot deal with all the Southern problems and its role remains limited to providing assistance and training of local forces.

This dispute is very closely connected to the way different members view Russia and all the "Russia-sensitive" topics like enlargement or support to Eastern partners, like Ukraine or Georgia. It is no secret that Western and Southern Allies are less enthusiastic about these countries' membership prospects than the new members in Central and Eastern Europe. As a result, so far, the Alliance has not been able to craft a comprehensive strategy on Russia, which would describe more granularity what are its goals vis-a-vis Russia and how to achieve these goals.

The second major challenge is internal, the ongoing efforts by the EU aiming to create a European Defence Union. Despite the constant reassuring statements by its major proponents asserting the elements of this process, PESCO (Permanent Structured Cooperation),⁵⁶ CARD (Coordinated Annual Review on Defence),⁵⁷ or EDF (European Defence Fund)⁵⁸ are not meant to create duplications or parallel structures to NATO, it is also clear that they are not fully deconflicted and coordinated with those of NATO either. It remains to be seen how the various avenues of European defence integration will develop and whether they have the potential to dramatically change the European security architecture.

Conclusions and recommendations

- ▶ Doubts about the role of the transatlantic bond have sharply risen since President Trump took office based on the often-unfair overemphasis on financial contribution by individual Member States.
- ▶ Burden sharing should not be discussed in purely financial terms.
- ➤ The trend of the ever-present dispute between the East and the South primarily over the Alliance's strategic priorities continues.
- ▶ It still remains to be seen how the European defence integration will develop and how it will potentially impact the transatlantic bond. The risks of creating parallel structures remain, but without clarification or a more active coordination between the Alliance and the EU on such specificities. The future of potentially parallel defence structures is still unclear. ●

TREND 7: CALL FOR CYBER SOVEREIGNTY THREATENS THE DEMOCRATIC NATURE OF THE INTERNET

▶ By **Anushka Kaushik** (Research Fellow, Cyber Resilience Programme)

MESSAGE: Freedom of expression, access and global e-commerce economy are under threat as nation-states continue to call for "cyber sovereignty".

While "cyber sovereignty" may sound like an oxymoron, several states are undertaking technical, policy, and legislative measures to regulate Internet traffic over their borders for reasons ranging from national security to controlling the spread of misinformation.

The term "sovereignty" implies the right of a state to govern itself without any external influence or interference. There has been a resurgence of the term in the context of the cyberspace, despite the scope of state sovereignty being challenged in recent years, due to forces of globalization and the unprecedented level of interconnectedness in economies.

In February 2019, a new bill titled "Digital Economy National Program" passed the first reading in the Russian Parliament which seeks to essentially cut the state off from international connectivity to the Internet, thereby mandating that all data passing between Russian citizens stays within the nation, without being routed internationally.⁵⁹ By creating a central choke point for all incoming/outgoing traffic, the Russian state would be granting Roskomnazdor (Russia's state regulator for communications) the capability to disconnect the RuNet from the external web; and therefore, filter all traffic.⁶⁰ On a technical level, Russia would have to ensure that routing and exchanges could occur domestically and while the project is technically possible, its financial feasibility remains in question given the vast resources required to put in place infrastructure that such a project necessitates.

China, with its notorious Great Firewall, has managed to develop a multi-layered and complex censorship system through a combination of IP blocking, =61=, and keyword content inspection and allowing only a handful of ISPs (Internet Service Providers) to provide Internet services in the country. 62 China's, or rather Xi Jingping's philosophy, seeks to extend the same political values and ideals of state sovereignty that the country has championed in the real world to the virtual world. Through a slew of technical and legislative measures, including 2 million people employed to censor content online according to 2013 estimates, China has successfully restricted foreign websites' access without serious consequences to its digital economy.63

Internet fragmentation is not a desirable outcome. The Internet works on a decentralized model, without a central authority that controls the infrastructure. Core infrastructure of the Internet, including satellites and undersea cables is interconnected, which contributes to the strength of the networks. Simply put, to a large extent the decentralization of the Internet infrastructure makes it more cyber-secure and allows for a collaborative environment where flaws and vulnerabilities can be worked on. In Russia's case, there can be a host of unanticipated issues if they go ahead with disconnecting from the global Internet, not just because it will be difficult for ISPs to gauge their reliance on every piece of infrastructure outside their borders.⁶⁴ Our lack

of ability to predict the full scale impact that shutdowns or kill switches can have should act as a deterrent.

In addition to the detrimental impact on global e-commerce and digital trade flows, and the security risks, the calls for cyber sovereignty are problematic for another reason. Initiatives or programmes that emerge from that narrative, exemplified in China's and Russia's case, allow greater access and control over citizens' communications, which can set a dangerous precedent for other states to follow.

Conclusions and recommendations

In order to prevent such trends from recurring, solutions have to be catered toward the broader aim of reducing cyber insecurity, which can be achieved

"WHAT IF?"

What if the Internet "kill switches" become a tool for governments to exercise complete information control?

Country A eradicates all possibility of citizens communicating online without supervision and surveillance of the content, resulting in a pattern of arbitrary citizen arrests.

Reply:

▶ The government's version of reality prevails as they have complete and effective monopoly on which websites and content citizens can access. Curbing digital and cross-border data flows has a detrimental impact on domestic businesses and drastically affects their ability to conduct business internationally. In the longrun, innovation levels in the country dwindle and there are severe economic losses.

through a combination of technical, legislative, and policy-oriented tools at a multilateral level:

- ▶ Global norms development in cyberspace to actively avoid polarization of states on Internet governance-driven by the contentious issue of cyber sovereignty, must be continued and made priority at the IGO level (for example, the UN Group of Governmental Experts).
- ▶ Governments must explore the possibilities of cyber deterrence strategies to reduce insecurities and facilitate trust using tools of cyber diplomacy.
- ► Undertaking an exhaustive review of policy tools like the cyber sanctions regime, which can do more harm than good to global cyber stability, if used precipitously. ●



TREND 8: A WIDENING URBAN-RURAL GAP CONTINUES TO CAUSE CONCERNS

▶ By Orsolya Ráczová (Senior Research Fellow)

MESSAGE: The increasing gap between rural and urban areas is a largely irreversible long-term trend in need of constant political attention not to let rural areas fall completely behind.

While we live in an increasingly urbanized world, rural areas quickly fall behind in both economic development and living standards. This trend has been observed in developed countries, but it is particularly visible in some of those still developing countries that have achieved an unprecedented economic growth in less than a decade. Evidence, particularly from newly industrialized countries points towards the continuation of this trend for not only years but also for decades to come.

Currently, Sub-Saharan Africa has been identified as the fastest urbanizing region in the world, while 70% of the population in Europe, North America, and Latin America is already based in cities. 65 Therefore, urbanization as a trend is characteristic to both developed and developing countries. Urbanization in simple terms refers to the ever growing and developing cities and megacities, attracting people from surrounding areas and purely rural areas to leave villages and small towns behind, which potentially leads to the decay of such rural areas in the long-run.

When it comes to the urban-rural divide, the gap is particularly visible in developing countries that have achieved an unprecedented economic growth. While the level of urbanization in such countries is still often relatively low, due to its rapid nature, the urban-rural gaps are already concerning.

India's pace of economic growth has particularly been impressive: it jumped from the 11th place to 6th place in just 5 years in the world economic rankings.66 As a result, India is now one of the fastest growing economies in the world, accounting for about 15% of the global growth.⁶⁷ However, about two-thirds of the population still lives in rural areas. While there have been some developments, India's rural-urban income gap has narrowed,68 the majority of the rural population's living standards are still low. Typically, in rural areas poverty has decreased with a much lower pace compared to urban areas: 25.7% of the rural population still lives below the poverty line, while this number is only at 13.7% in urban areas.⁶⁹ Poor living conditions and limited access to amenities is still very much the reality in the countryside.



The limitations of fighting against widening ruralurban gaps is related to the natural incentives causing people to migrate. Cities offer opportunities the rural areas cannot, including better employment prospects, higher salaries, and access to amenities and services. Simply, cities offer access to better opportunities and often higher living conditions. Thus, to incentivize people either to stay or return and contribute to the development of rural areas has been a widely applied policy tool. A few years ago the Chinese Government announced a set of new policies to encourage people to return to their hometowns in rural areas from the cities and start businesses by utilizing the knowledge and skills such migrants learned while residing and working in the cities.70 Such concrete measures include the reduction of taxes and cutting red tape, as well as financial support for future entrepreneurs.

Moreover, in order to make rural areas a desirable place to stay or even migrate to, the EU has put a wide range of policy tools in place. In general, such tools can be used to increase the competitiveness of the agriculture sector, to provide financial support to local farmers or to foster knowledge transfer. The Common Agriculture Policy's (CAP) so called second pillar, the rural development policy of the EU, funded through the European Agricultural Fund for Rural Development (EAFRD) has € 100 billion allocated for the period 2014-2020.71 Moreover, there is a cross-institutional and in-country cooperation framework in place to better coordinate funding allocation. Therefore, the trend has been recognized on an EU level, and policy tools as well as financial instruments to support rural areas already have their tradition. To have the right tools in place is crucial: however, further efforts are needed in the future to make these tools more accessible by reducing red tape and transmitting information better to those based in rural areas often relatively isolated from central policy-planning and decision-making.

Conclusions and recommendations

- ▶ Urbanization, a term with a positive connotation, creates larger cities and megacities with vast economic potential.
- ► Such cities attract talent and ambition, driving migration from the country towards the city.

As a result, rural areas find themselves facing growing challenges.

- Developed countries, such as countries of the EU and the US, have numerous policy tools in place to assist the countryside. In developing countries; however, the challenges related to the growing urban-rural gap are arguably even bigger. Here we are not only talking about less favourable living standards, but often living standards below the poverty line.
- ▶ Measures to fight the rural-urban gap in developing countries will remain a challenge and new tools and measures are needed.
- ➤ The trend of both urbanization and the ever wider rural-urban gap are here to stay in the long-term and effective measures will be crucial to mitigate the negative effects in the long-run. •

"WHAT IF?"

▶ What if an environmental disaster was to destroy the existing agriculture in the EU?

Extreme weather conditions and environmental disasters are ever more frequent, but fortunately are not likely to destroy agriculture in the entire territory of the EU.

Reply:

► However, in such an extreme hypothetical case, unprecedented efforts would be needed in the form of in-country, cross-country, and EU-level cooperation in parallel to major financial allocation towards rebuilding what was lost. In the meantime, an interim temporary framework is to be put in place, first, in the form of the necessary imports, and second, urgent financial as well as other type of assistance to those completely or highly dependent on agriculture will be crucial.

- 1 Samsung strengthens innovative wearables with enhanced under armour fitness apps, Samsung Newsoorm, January 2017, https://news.samsung.com/ global/samsung-strengthens-innovative-wearables-with-enhanced-underarmour-fitness-apps
- 2 For various views on the rise of the platforms and their business, see for instance José van Dijck Thomas Poell Martijn de de Waal: The Platform Society (Oxford University Press, 2018), Nick Smicek: Platform Capitalism (Polity Press, 2017), Shoshana Zuboff: The Age of Surveillance Capitalism (Public Affairs, 2019). See also https://medium.com/platform-hunt/the-platform-business-model-guide-6e86f5c5679b
- 3 For IoT, see for instance 2015 Oliver Wyman report: https://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2015/jun/2015_OliverWyman_Internet-of-Things.pdf. For IoT in Europe, see for instance Ipsos, London Economics and Deloitte 2018 study (https://ec.europa.eu/info/publications/consumer-market-study-online-market-segmentation-throughpersonalised-pricing-offers-european-union_en, p. 96 et seq.)
- 4 EU Parliament approves controversial copyright reform, DW, March 2019, https://www.dw.com/en/eu-parliament-approves-controversial-copyright-reform/a-48062142
- 5 E.g. the recent progress in OECD BEPS initiative on taxation of digital economy (http://www.oecd.org/tax/beps/international-community-makes-important-progress-on-the-tax-challenges-of-digitalisation. htm); the decision of the German Competition Authority (February 2019) https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Pressemitteilungen/2019/07_02_2019_Facebook_FAQs.pdf?__blob=publicationFile&v=6); the recent Report of the UK's Digital Competition Expert Panel (March 2019) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf
- 6 For a brief overview of new possibilities of deployment of Al in smartphones, see e.g. the specialised Le Monde coverage of World Mobile Congress, Barcelona 2018. https://www.lemonde.fr/pixels/visuel/2018/03/03/i-intelligence-artificielle-un-enjeu-pour-les-constructeurs-de-smartphones_5265260_4408996.html
- 7 Hannover Messe 2019 has focused on the topic of intersection of Al and industries: https://www.hannovermesse.de/en/register-plan/for-journalists/press-services/press-releases/pressreleases-deutsche-messe/hannovermesse-2019-industry-4.0-meets-ai.xhtm, See also e.g. https://www.mckinsey.com/featured-insights/artificial-intelligence/the-promise-and-challenge-of-the-age-of-artificial-intelligence?reload; https://www.mckinsey.com/featured-insights/artificial-intelligence/ai-adoption-advances-but-foundational-barriers-remain?reload; https://sloanreview.mit.edu/projects/artificial-intelligence-in-business-qets-real; https://alindex.org/
- 8 Andrew McAfee Erik Brynjolfsson: Machine, Platform, Cloud (Harnessing our Digital Future), W. W. Norton & Company, 2017
- 9 For further description of AI see for instance Machines That Think, New Scientist Instant Expert, 2017; https://ec.europa.eu/digital-single-market/ en/news/definition-artificial-intelligence-main-capabilities-and-scientificdisciplines; http://publications.jrc.ec.europa.eu/repository/bitstream/ JRC113826/ai-flagship-report-online.pdf; https://publications.parliament.uk/ pa/Id201719/Idselect/Idai/100/100.pdf
- 10 E.g. Plattform Industrie 4.0, Bain, Accenture, For a possible "European" approach, see e.g. https://www.stiftung-nv.de/sites/default/files/ wettbewerb_um_daten.pdf., https://etno.eu/datas/digital-age/leadorlose.pdf. For managerial thinking on new ecosystems, see e.g. https://www.accenture.com/_acnmedia/PDF-56/Accenture-Strategy-Your-Role-in-the-Ecosystem.pdf#zoom=50.
- 11 For a global overview of recent governmental strategies and actions, see e.g. https://aiindex.org/
- 12 A brief overview of concrete examples in Europe can be accessed at https://ec.europa.eu/digital-single-market/en/news/artificial-intelligence-real-benefits. Examples of how AI can help global SDGs can be found at https://www.itu.int/en/ITU-T/AI/Pages/ai-repository.aspx
 13 For one of the earliest publicised examples, see: https://www.theguardian.
- 13 For one of the earliest publicised examples, see: https://www.theguardian.com/technology/2017/jan/05/japanese-company-replaces-office-workers-artificial-intelligence-ai-fukoku-mutual-life-insurance; for general overview see e.g. https://appliedai.com/financial-services/; https://www.chartis-research.com/ai-machine-learning/artificial-intelligence-financial-services-market-and-vendor-landscape-2019-10721
- 14 See e.g. https://www.accenture.com/_acnmedia/PDF-88/Accenture-Supply-Chain-Research-Infographic-Optimization.pdf#zoom=50
- 15 See e.g. https://www.mckinsey.com/business-functions/operations/our-insights/lighthouse-manufacturers-lead-the-way?reload; http://image-src.bcg.com/lmages/BCG-Al-in-the-Factory-of-the-Future-Apr-2018_tcm9-188726.pdf; https://enterpriseiotinsights.com/20181128/channels/news/siemens-bolsters-digital-factory
- 16 Ayoub Aouad, The Al in transportation report: How automakers can use artificial intelligence to cut costs, open new revenue streams, and adapt to the digital age, Business Insider, March 2019, http://static4.businessinsider. com/ai-in-transportation-report-2019-3
- 17 The Al Industry Series: Top healthcare Al trends to watch, Research Report, CBInsights, https://www.cbinsights.com/research/report/ai-trends-healthcare/
- 18 11 Al Usecases in Customer Service in 2019: In-depth Guide, Almultiple.com, January 2019, https://blog.aimultiple.com/customer-service-ai/
- 19 See e.g. https://www.forbes.com/sites/ralphjennings/2018/05/14/why-chinais-uniquely-well-placed-to-develop-fully-automated-retail-stores/

- 20 See e.g. https://internetofbusiness.com/exclusive-cisco-ai-in-the-office-and-the-future-of-work/
- 21 See e.g. http://publications.jrc.ec.europa.eu/repository/bitstream/JRC113826/ai-flagship-report-online.pdf (p. 77)
- 22 Erik Brynjolfson Andrew McAfee, Le Business de L'Intelligence Artificielle, Harvard Business Review France, Hors-Série Printemps 2018
- 23 Machines That Think, 2017
- 24 See for instance: "Australian regulators cautiously embrace AI to boost compliance", Financial Times, 8 April 2019 (https://www.ft.com/ content/33eb5934-4519-11e9-b168-96a37d002cd3)
- 25 For instance http://www.oecd.org/going-digital/ai/oecd-moves-forward-on-developing-guidelines-for-artificial-intelligence.htm; https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai; https://standards.ieee.org/industry-connections/ec/autonomous-systems.html;
- 26 Campaign to stop killer robots, https://www.stopkillerrobots.org/
- 27 See for instance Nick Bostrom: Superintelligence: Paths, Dangers, Strategies, Oxford University Press, 2014
- 28 See for instance "Chinese scientist claims to have created genetically edited babies", Financial Times, 26 November 2018. https://www.ft.com/ content/4bc28f80-f142-11e8-ae55-df4bf40f9d0d
- 29 Elisa Shearer, Social media outpaces print newspapers in the U.S. as a news source, Pew Research Center, 10 December 2018, https://www.pewresearch. org/fact-tank/2018/12/10/social-media-outpaces-print-newspapers-in-the-u-sas-a-news-source/
- 30 Flash Eurobarometer 464, April 2018, http://ec.europa.eu/commfrontoffice/ publicopinion/index.cfm/survey/getsurveydetail/instruments/flash/ surveyky/2183
- 31 Digital News report 2018, Reuters Institute for the Study of Journalism, http://media.digitalnewsreport.org/wp-content/uploads/2018/06/digital-news-report-2018.pdf?x89475
- 32 Flash Eurobarometer 464, April 2018, http://ec.europa.eu/commfrontoffice/ publicopinion/index.cfm/survey/getsurveydetail/instruments/flash/ surveyky/2183
- 33 Challenging Truth and Trust: A global inventory of organized social media manipulation, Oxford Internet Institute, 2018 https://comprop.oii.ox.ac.uk/ research/cybertroops2018/
- 34 GLOBSEC Trends 2018, Central Europe: One region, different perspectives, GLOBSEC, 2018, https://www.globsec.org/wp-content/uploads/2018/05/GLOBSEC-Trends-2018.pdf
- 35 Character assassination, conspiracies and manipulation: Slovak presidential election through the lens of disinformation channels on Facebook, GLOBSEC 2019, https://www.globsec.org/wp-content/uploads/2019/04/Presidential-Election-Monitoring-report.pdf
- Presidential-Election-Monitoring-report.pdf
 36 Special Eurobarometer: Democracy and elections, September 2018, http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/ResultDoc/download/DocumentKy/84538
- 37 A new political phase for Europe, the Economist Intelligence Unit Limited 2018, https://www.eiu.com/public/topical_report.aspx?campaignid=EuropeNewPhase2018
- 38 Support for political parties in Poland, Kantar Millward Brown, 15 January 2019, https://www.wnp.pl/parlamentarny/sondaze/spada-poparcie-dla-pis-u-413.html
- 39 Matthijs Rooduijn, Why is populism suddenly all the rage?, The Guardian, November 2018, https://www.theguardian.com/world/political-science/2018/nov/20/why-is-populism-suddenly-so-sexy-the-reasons-are-many
- 40 Kay-Alexander Scholz, Euroskeptic, anti-immigrant parties team up for EU election, DW, April 2019, https://www.dw.com/cda/en/euroskeptic-anti-immigrant-parties-team-up-for-eu-election/a-48233168
- 41 Jakub Wisniewski, Populism isn't the biggest threat to the EU it's the eastwest divide, the Guardian, 15 May 2019, https://www.theguardian.com/ commentisfree/2019/may/15/populism-biggest-threat-eu-east-wide-divide
- 42 Charles Grant, The Brussels view of Brexit, Center for European Reform, Insight, 14 May 2019, https://www.cer.eu/sites/default/files/insight_ CG 14.5.19 0.pdf
- 43 B. Wieliński, After the elections, the Commission will certainly be more colourful, Euractiv, 25 October 2018, https://www.euractiv.com/section/ eu-elections-2019/news/researcher-after-the-elections-the-commission-willcertainly-be-more-colourful/
- 44 A new political phase for Europe, the Economist Intelligence Unit Limited 2018, https://www.eiu.com/public/topical_report.aspx?campaignid=EuropeNewPhase2018
- 45 How many IS foreign fighters are left in Iraq and Syria?, BBC, 20 February 2019, https://www.bbc.com/news/world-middle-east-47286935
 46 Ellen Francis and Philip Blenkinsop, U.S.-backed Syria force seeks help
- 46 Ellen Francis and Philip Blenkinsop, U.S.-backed Syria force seeks help with Islamic State prisoner 'time bomb', Reuters, 18 February 2019, https:// uk.reuters.com/article/uk-mideast-crisis-islamicstate-detainees/u-s-backedsyria-force-seeks-help-with-islamic-state-prisoner-time-bomb-idUKKCN1Q71E0
- 47 GLOBSEC, 2017-2019., From Criminals to Terrorists and Back?, https://www.globsec.org/projects/criminals-terrorists-back/
- 48 Terrorism Situation & Trend Report (Te-Sat) 2016, Europol, 2016, https://www.europol.europa.eu/activities-services/main-reports/european-union-terrorism-situation-and-trend-report-te-sat-2016
- 49 David Malet and Rachel Hayes, Foreign Fighter Returnees: An indefinite threat?, Terrorism and Political Violence, DOI: 10.1080/09546553.2018.1497987, https://www.tandfonline.com/doi/abs/10.10 80/09546553.2018.1497987

- 50 The Input: Pathways to Jihad. A Thematic Analysis of 310 Cases, GLOBSEC, 2019, https://www.globsec.org/wp-content/uploads/2019/04/The-Input-Pathways-to-Jihad.pdf
- 51 Petter Nesser, Islamist Terrorism in Europe: A History, London: Hurst, 2016. 52 The Input: Pathways to Jihad. A Thematic Analysis of 310 Cases. GLOBSEC.
- 52 The Input: Pathways to Jihad. A Thematic Analysis of 310 Cases, GLOBSEC 2019, https://www.globsec.org/wp-content/uploads/2019/04/The-Input-Pathways-to-Jihad.pdf
- 53 Stephen M. Walt, NATO isn't what you think it is: An attack on one isn't really an attack on all and four other misunderstood facts about the Western defense alliance, Foreign Policy, 2018, https://foreignpolicy.com/2018/07/26/ nato-isnt-what-you-think-it-is/
- 54 Press Release, Defence expenditure of NATO countries (2011-2018), NATO Public Diplomacy Division, 2019, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2019_03/190314-pr2018-34-eng.pdf
- 55 Jonathan Eyal, The real problems with NATO: What Trump gets right, and wrong, Foreign Affairs 2017, https://www.foreignaffairs.com/articles/ europe/2017-03-02/real-problems-nato
- 56 Permanent Structured Cooperation (PESCO) Factsheet, European Union External Action, 2018, https://eeas.europa.eu/headquarters/headquarters-Homepage/34226/permanent-structured-cooperation-pesco-factsheet_en
- 57 Coordinated Annual Review on Defence (CARD), European Defence Agency, 2018, https://eda.europa.eu/docs/default-source/edafactsheets/2018-11-26-factsheet_card
- 58 European Commission Statement, European Defence Fund: Statement by Commissioner Bieńkowska on the European Parliament's vote, European Commission, 2019, http://europa.eu/rapid/press-release_STATEMENT-19-2470_en.htm
- 59 Russia considers 'unplugging' from internet, BBC, 11 February 2019, https://
- www.bbc.com/news/technology-47198426
 60 Mariya Lipman & Tanya Lokot, Disconnecting the Russian Internet:
 Implications of the new "Digital Sovereignty" Bill, 21 Feb 2019, http://www.ponarseurasia.org/point-counter/article/disconnecting-russian-internet-implications-new-digital-sovereignty-bill
 61 IP address blocking or ban prevents a user from connecting to a certain
- 61 IP address blocking or ban prevents a user from connecting to a certain web host, this method can be easily used to prevent entire swathes of population from accessing specific cwebsites online. DNS hijacking
- 62 The Great Firewall of China, 15 March 2013, Open Democracy, https://www.opendemocracy.net/en/great-firewall-of-china/
 63 The great firewall of China: Xi Jinping's internet shutdown, The Guardian,
- 29 June, 2019, https://www.theguardian.com/news/2018/jun/29/the-great-firewall-of-china-xi-jinpings-internet-shutdown
- 64 Louise Matsakis, What happens if Russia cuts Itself off from the Internet, Wired, 12 February 2019, https://www.wired.com/story/russia-internetdisconnect-what-happens/
- 65 Ken Simler and Nora Dudwick (and team), Urbanization and rural-urban welfare inequalities, Draft for discussion, This work is part of a joint work program between PRMPR and FEUSE, http://siteresources.worldbank.org/ INTPOVERTY/Resources/060310_Simler_Dudwick_Rural-Urban_Welfare_ Inequalities.pdf
- 66 India needs to sustain high level of growth in economy: Indian envoy, The Economic Times, 2019, https://economictimes.indiatimes.com/news/ economy/indicators/india-needs-to-sustain-high-level-of-growth-ineconomy-indian-envoy/articleshow/68761095.cms
- 67 IMF Country Focus, India's strong economy continues to lead Ilobal growth, IMF, 2018, https://www.imf.org/en/News/Articles/2018/08/07/NA080818-India-Strong-Economy-Continues-to-Lead-Global-Growth
- 68 Katsushi S. IMAI and Bilal MALAEB, Asia's rural-urban disparity in the context of growing inequality, Discussion Paper Series, RIEB, Kobe University, 2016, https://www.rieb.kobe-u.ac.jp/academic/ra/dp/English/DP2016-29.pdf
- 69 Surajit Deb, Globalization and the rural-urban divide: An Inquiry on the health, education and basic amenities in India, Paper prepared for the 35th IARIW General Conference, Aryabhatta College, University of Delhi, India, 2018, http://www.iariw.org/copenhagen/deb.pdf
- 70 Guest Blogger for Net Politics, Guest Post: China's "Back to the countryside" Policy: A Step toward reducing rural-urban disparity, Council on Foreign Relations, 2015, https://www.cfr.org/blog/guest-post-chinas-back-countryside-policy-step-toward-reducing-rural-urban-disparity
- countryside-policy-step-toward-reducing-rural-urban-disparity
 71 Rural development 2014-2020, European Commission, https://ec.europa.eu/agriculture/rural-development-2014-2020 en

