



Germany's Geopolitical Role in an Age of Great Power Rivalries

II. Economic and technology policy

by Hanns Koenig, Alexandra Paulus and Benjamin Thake

The authors are members of the Working Group of Young Foreign Policy Experts. The opinions expressed in this article are those of the authors and do not necessarily reflect the opinions of organisations with which they are associated.

- › When formulating their economic and technology policies, Berlin and Brussels should focus on three principles: competitiveness centred on people, resilience, and innovation through digital transformation.
- › They need to give new impetus to economic and technology policy in Germany and the EU. This should be based on human dignity, individual freedoms, and a sustainable economy.
- › Governments can proactively support a European high-tech sector by seeking out innovative applications for modernising their public administration systems. In the long term, the people of Europe will only trust public institutions if their service keeps pace with technological advances in the private sector.

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Germany and the EU increasingly find themselves in a world of great power rivalries and systemic competition. This is affecting almost every aspect of international relations. It is hampering multilateral cooperation, impacting world trade and technology policy, and having an effect on conflict situations linked to security and defence policy. The Covid-19 pandemic has accelerated and intensified the global power shifts and tensions that have been observed over recent years and that posed a challenge to Germany even before the current crisis. This is especially true of the rivalry between the US and China. Germany and Europe cannot remain neutral in this respect. The transatlantic alliance has to remain a cornerstone of German foreign policy. Nevertheless, Berlin will have to find its own way of working with its European partners to find answers to the immense challenges they face in this age of great power rivalries.

In three related papers, members of the Konrad-Adenauer-Stiftung's Working Group of Young Foreign Policy Experts address the question of how Germany can assert itself in a world where competition between the great powers is on the rise. The papers are divided into three areas: strategic foreign policy (I), economic and technological policy (II), and security and defence policy (III), and provide recommendations for action for Germany's policymakers.

Background

The Covid-19 pandemic is the latest in a long line of challenges for German economic policy. These began with the economic stagnation of large swathes of Europe, moving on to the trade war between the US and China and Europe, and the challenges of electromobility faced by German car manufacturers. As a result, Germany and the EU have to come up with some creative answers. We believe Berlin and Brussels should base their strategic economic and technology policy on three principles: competitiveness centred on people, resilience, and innovation through digital transformation – particularly in public administration.

Competitiveness
centred on people,
resilience, and inno-
vation through digital
transformation

1. Innovation and competitiveness centred on people

The coronavirus has turned the spotlight onto Europe's deficits in terms of growth, innovation and competitiveness. The economies of many countries were already weak before the crisis came along, and the digital infrastructure of most European countries was lagging behind that of their Asian counterparts.

It is, therefore, imperative to give new impetus to economic and technology policy in Germany and the EU. The guidelines for this are human dignity, individual freedoms, and a sustainable economy. In the long run, Europe will gain international recognition by establishing standards and norms for responsible new technologies. This is how Europe can shape digital transformation with a focus on people and consolidate its position as a normative power.

New impetus for eco-
nomic and technol-
ogy policy

The example of the General Data Protection Regulation (GDPR) highlights how this could work. Contrary to expectations, it has become a model for the rest of the world to follow. In the US, the GDPR is being discussed as an option for improving data privacy, and it has already been implemented in California. However, it remains to be seen whether it is possible to build a strong digital economy despite stricter data privacy regulations.

In this respect, open source approaches and open standards could play a greater role in Europe as their transparency means they also meet stricter security requirements. The principle of data minimisation – weighing the collection of personal data against necessity and proportionality – may even be a competitive advantage. For example, Germany's coronavirus tracking app with its focus on privacy as a data-minimising alternative to other apps, such as that used in South Korea, could be a model for other countries to follow. It is also important to support all aspects of artificial intelligence without losing sight of European values. In order to reap the benefits, it is imperative to promote confidence in the technology. This includes a fair AI that protects privacy and has transparent decision-making processes. An AI quality seal rooted in European values could help to create the required transparency and trust.

An AI quality seal
rooted in European
values could help to
promote confidence
in technology

In order to stimulate technological innovation, it would be a good idea to create European high-tech areas, comparable to digital special economic zones. These would not necessarily have to be actual regions but could also be virtual ecosystems that provide a regulation-free testbed for new ideas as a way of encouraging innovation. However, it is essential to ensure that the knowledge gained from these sandboxes finds its way into the whole economy, rather than being left to "silt up".

The development of renewable energy sources is an essential element of Europe's future competitiveness. In most of Europe, the cheapest electricity that can be generated from newly built power stations currently comes from renewables. This cost benefit will continue to grow. However, the cost of integrating renewables into the system will go up with increasing penetration, so it is essential to build a system around renewable energy that has maximum flexibility and efficiency. It is also important to increase public acceptance of renewable energy, as there is growing local resistance to certain issues – particularly wind energy, but also grid expansion. This could be done by encouraging economic participation on the part of residents or their communities (as is currently being considered by Germany's Ministry for Economic Affairs and Energy), along with the standardisation and digitalisation of approval processes. These vary considerably, which increases costs and slows down expansion. It would be sensible to put more standardised procedures in place at federal and state level. The principles of the *Planungssicherstellungsgesetz* (German law on ensuring proper planning and approval procedures) should be expanded.

Renewable energies
to improve Europe's
competitiveness

2. Making economies and societies more resilient

Emerging technologies and the increasing use of machine learning are opening up potential for economic growth, but they also provide new opportunities for attacks by criminals and by state and non-state actors. In this respect, Germany and Europe need to make their societies and economies more resilient and hence more crisis-proof. Resilience means being able to withstand crises and quickly return to a pre-crisis state, while ideally learning from the crisis in order to be better prepared for the next one.

Learning from
the crisis

In concrete terms, building resilience means that policymakers in Germany and the EU should focus more strongly on providing appropriate incentives to share information within the private sector and with authorities, particularly with regard to capacity building.

This normally costs money, so extensive public debate is needed to identify in which cases and to what extent such costs are justified. Discussions about establishing and building strategic reserves of pharmaceutical products in the wake of the Covid-19 pandemic is an example here.

Based on this, building resilience necessitates taking stock of potential vulnerabilities to attack. Pan-European crisis drills are needed in the area of critical infrastructure. These should not be limited to rehearsing limited scenarios as in the past but should also address major disasters. Strategic simulations should be used where it is not possible to conduct real-life exercises. The European Union Agency for Cybersecurity (ENISA) has the expertise to take the lead in this respect.

Reward mechanisms should also be established for companies who demonstrate that they regularly assess their cybersecurity risks, take appropriate adaptation and training measures, and share information on incidents at European level. This particularly applies to key sectors of the German and European economy. There should also be a critical examination of the crisis resilience of the extremely globalised supply chains for high-tech products, as these are particularly susceptible to interruption due to trade wars, natural disasters or the current health crisis.

In the energy sector, it is vital to ensure security of supply. As part of the energy transition, Europe's electricity supply will be based less on controllable power plant capacities and more on fluctuating wind and solar energy. The countries of Europe will be even more closely interlinked, meaning that output from domestic power plants will become less important. Consequently, monitoring supply security and procuring extra supply capacity should be done at European level, rather than at the current national level.

We need clearly defined German, and ideally European, vulnerability management processes for IT products to ensure cybersecurity in our economy and society. It is essential that each Member State appoints a national institution as a contact point and invests it with the necessary competencies. In Germany, this function should be performed by the Federal Office for Information Security (BSI). This would require consideration about whether to give the BSI greater institutional independence.

All these measures for building resilience will reduce the attractiveness of attacks because they involve fewer benefits and higher costs. As a result, cyber activities for financial gain and sabotage operations will become less lucrative. Secondly, there are fewer incentive problems for joint action in the area of building resilience, since many measures will certainly increase resilience to crises, even if some pioneers are further ahead or certain countries or companies decide to drop out.

3. A proactive state that is open to innovation as a digital role model

The social market economy and its regulatory principles guarantee our prosperity and high-quality jobs. In the public debate about building European champions, it is therefore essential that we avoid overburdening Germany and the EU in terms of industrial policy, including in times of crisis. Instead, it is important to create the right framework conditions for growth and innovation in Germany and Europe. Germany has already established an agency for breakthrough innovation, which will provide significant support for the commercialisation of high-risk and effective technologies. At European level, the European Innovation Council (EIC) could be developed into a European agency for breakthrough innovation. The American Defence Advanced Research Projects Agency (DARPA) could serve as a model here. The EU should also enter into research collaborations at international level to work on cut-

Resilience requires taking stock of sectors that are critical for economic survival and the provision of basic services to the population

Ensuring security of supply in the energy sector

Building crisis resilience

Developing the European Innovation Council into a European agency for breakthrough innovation

ting-edge technologies such as AI, biotechnology and clean technology. Its natural partners in this endeavour would be like-minded states such as Japan, Australia and Canada – all countries that share our understanding of fair rules consistent with a broad base of values and standards. In order to take account of highly globalised innovation and research networks, while avoiding targeted technology transfer and forced joint ventures, more intensive efforts are needed to achieve a clear, common stance within the EU towards critical foreign investment behaviour.

Need for a common
EU line on foreign
investment

The proactive promotion of a European high-tech sector could be stimulated by public demand for innovative applications for modernising public administration. In the long run, the European public will only trust public institutions whose services keep pace with technological advances in the private sector. Through the targeted use of advanced European technology for political and administrative purposes, the modern state can expand its digital capabilities in the service of economy and society and act as a digital role model.

Whether it is the application of advanced technology for the public sector, improving the capacity for innovation in public administration, or recruiting scarce IT personnel – within Europe, more emphasis has to be placed on learning from each other and sharing best practices in order to make public administrations fit for the future. Efficient, digitised and citizen-oriented public authorities are part of an overall package of attractive conditions that will also help to strengthen Europe as a business location. Combined talent pools at European level or on the basis of intergovernmental partnerships are a suitable instrument. In order to provide additional incentives, these talent pools could be combined with an EU bonus for workers to promote mobility between the public and private sectors and between EU Member States.

Creation of European
talent pools

The recent hackathons during the coronavirus pandemic at national and European level have shown that the use of digital technologies can generate enormous support among citizens and make a major contribution to solving complex supranational challenges. The perpetuation of hackathons in the sense of institutionalising European digital crowdsourcing with consistent use of open data should be accompanied by a structured process for the practical implementation of the most promising ideas. The use of innovative results for public purposes or in public/private partnerships should be supported by adequate public funding to ensure the timely implementation of technological improvements for the public sector. In order to support these processes, we recommend establishing Tech4EU European innovation task forces under the auspices of a decentralised EU agency.

Editorial information

The authors

For more information (German only) on the Working Group of Young Foreign Policy Experts, see: www.kas.de/jungeaussepolitiker

Konrad-Adenauer-Stiftung e. V.

Daniela Braun

Policy Advisor Foreign and Security Affairs
Division Analysis and Consulting
T +49 30 / 26 996-3399
daniela.braun@kas.de

Postal address: Konrad-Adenauer-Stiftung, 10907 Berlin

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