Integration of Ukraine into the European Union's Digital Single Market: challenges, opportunities and barriers

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Digital technology is playing an increasingly important role in our economy and social life. It will be key for the development of new economic models (collaborative, functional, circular, sharing). In addition, globalisation, migration, the ageing society, climate change and the need for sustainable solutions will have a major impact on the social environment in general, and on our working life in particular.

Moreover, automation and robots will have a significant impact on the future of work. They can replace monotonous, heavy or dangerous work and a new generation of so-called "collaborative robots" can become physical partners for workers, and can be particularly helpful for people with physical disabilities. While present-day robots are mainly replacing blue-collar work, white-collar professions will also be affected when artificial intelligence is applied. Automation and robots have the potential to stabilise the economy in an ageing society.

A significant number of jobs will be affected by the introduction of more robots into the workplace. We can expect that, as in the past, more wealth in society will lead to growth and new jobs in specific areas such as culture, art, tourism, social work, education, communication, entertainment or health care. However, this development may manifest faster than in the past, which may lead to distortions for which social dialogue will be needed at an early stage.

Digital Europe Programme

As part of the next Multiannual Financial Framework the Commission published a Regulation establishing the Digital Europe programme for the period 2021-2027. The Commission's aim with the Digital Europe programme is to give the Digital Single Market strategy a sound financial framework and to bridge the investment gap, for which purpose it has set aside a total budget of EUR 9.2 billion. The aim is to increase the gains from the digital transformation, to the benefit of all European citizens, public administrations and businesses in the EU.

The Digital Europe programme covers five specific objectives: (1) high performance computing, (2) artificial intelligence, (3) cybersecurity and trust, (4) advanced digital skills, and (5) ensuring widespread use of digital technologies throughout the economy and society. It also deals with the digitalisation of industry.

The "high performance computing" objective involves using supercomputers to create capacities to improve the ability to process the ever-increasing quantities of data. The EESC endorses the industrial approach for developing the next generation of low-power microchips in Europe. This would make the EU less dependent on imports and secure access to top HPC technology. The EESC points out that the development of such microchips also has an impact on small-scale computing because the high-end integrated circuits can be adapted (downscaling) to appliances in the mass market (PCs, smartphones, automotive sector). Cross-border collaboration and access to HPC resources are essential elements of this initiative.

Public administration and the provision of services in areas of public interest will be supported to ensure that the public sector and areas such as health and care, education, transport and the cultural and creative sectors can deploy and access state-of-the-art digital technologies. In addition, especially small and medium-sized enterprises (SMEs) – will be helped through digital innovation hubs.

A large proportion of the budget will go to research projects and innovation programmes funded under the new Horizon Europe programme. The EESC welcomes that the Commission has made it clear that research and innovation must continue to be an essential EU priority. Innovation is key to economic growth and the new instruments will in particular be beneficial for SMEs. A strong and successful programme that brings together excellence, joint research infrastructures, collaboration across borders as well as synergies between academia, industry, SMEs and research organisations is a key policy instrument for achieving sustainable European economic growth and competitiveness and to address the major challenges faced by European society.

The European way

The criticism is often made that the USA and China are currently investing significantly more in AI than Europe. We should, however, make a distinction here, particularly as the new EU General Data Protection Regulation (GDPR) highlights a clear difference in terms of fundamental rights.
- China is massively promoting AI, inter alia in order to carry out comprehensive surveillance of its population and to establish a rating system using highly opaque methods. This is clearly in breach of European values.
- The USA's strengths are based on commercially highly successful companies such as Google, Facebook etc., which use their customers' data mainly to generate advertising revenue. The GDPR will in future offer support to European customers using these services.
- Europe is strong in B2B, particularly in the area of automation and robotics. This is less visible and, moreover, investment in these areas should be included in AI but is generally not, which means that EU investment in this field is underestimated.

The application of European values in the development of AI could one day be a competitive advantage, when people become increasingly aware of third-party data usage methods (USA) and the surveillance potential of AI systems (China).

Data Protection and Trustworthy Artifical Intelligence (AI)

Digitalisation and AI will have large impact on our society and economy. The EU has still to find its place in this field compared to its competitors (USA and China). The aim is to define regulations and rules based on European values such as respect for human dignity, freedom, democracy, equality, the rule of law and human rights, including the rights of persons belonging to minorities and the EU Charter of Fundamental Rights.

Following the strategy on Artificial Intelligence for Europe published in April 2018, the European Commission worked with the Member States to prepare a coordinated plan on AI with the aim of maximising the overall impact of measures, particularly investment, at EU and national levels and ensuring that the EU can cope with global competition. The coordinated plan proposes joint actions in four areas: increasing investment, enhancing data availability and accessibility, fostering talent and skills, and ensuring trust. The coordinated plan also calls on the Member States to put in place their national AI strategies.

The Commission requested a "High-level expert group on AI" to develop ethical guidelines that build on the existing regulatory framework and that should be applied by developers, suppliers and users of AI in the internal market. The Group has recently presented a draft of its Ethics Guidelines for Trustworthy AI , which includes an assessment list that operationalises the key requirements. A targeted piloting phase has been launched in summer 2019 involving stakeholders in order to test the practical implementation of the ethical guidance for AI development and use.

The EESC is pleased that the European institutions intend to build a Human-centric AI approach which is in line with the values underpinning the EU: respect for human dignity, freedom, democracy, equality and non-discrimination, the rule of law and respect for human rights. Privacy and data protection will determine how far citizens and consumers trust AI. The EESC urges the Commission to review the General Data Protection Regulation (GDPR) and related legislation on a frequent basis in the light of developments in technology.

Because decisions made by complex machine learning systems can not be explained by simple means, the EESC recommends developing EU standard testing methods to assess the functionality and limitations of such systems (eg bias, bias, discrimination, resilience, robustness, etc.). We recommend relying on trustworthy companies or professionals rather than on trusted algorithms. It

therefore encourages a European certificate of trustworthy AI companies based on the assessment list of the European Ethics Guidelines.

The EESC welcomes Europe's ethical approach with regard to AI, which should strengthen citizens' trust in digital development and create a competitive advantage for European businesses.

Education and training

Lifelong learning, particularly related to digital skills, will be a necessity for everyone, requiring more and more flexibility from individuals, companies and all education and training systems. Beyond formal education, much more time will have to be devoted to professional training and Basic education should include more interactive digital learning. Digital skills, however, can go beyond programming to include becoming aware of what lies behind a "mouse click": understanding the system, the interconnections, the social impact and privacy and security issues.

Public and private organisations (schools, universities, chambers of commerce, trade unions, training centres) have to provide professional training in new technologies, especially for those who do not have the capacity to organise training themselves, like SMEs, the liberal professions and the self-employed.

Long-term developments, which may lead to new and unpredictable challenges where today's skills can quickly become obsolete, can best be dealt with by general education. The better the general education, the better the preparation for the unknown. A broad general education is also the best basis for learning how to single out reliable information on the internet and for becoming less vulnerable to fake news.

Fight against Disinformation

Disinformation is demonstrably false or misleading information that poses a threat to democracy and causes public harm. The dissemination of disinformation has now become part of a hybrid warfare with a clear political objective. Disinformation is most effective when it is partly truthful. For this reason, providing quality information and raising public awareness requires a variety of actions by all stakeholders.

The EESC considers the disinformation activities of and from the Russian Federation documented by the European External Action Service to be the greatest external threat to the EU. This is the reason for setting up the East StratCom Task Force. However, it considers that disinformation from other third countries, including internal actors, poses a similar threat to the EU and urges the Commission to expand its monitoring and countermeasures accordingly.

To build resilience, all sectors of society need to be involved and, in particular, citizens' media literacy needs to be improved. However, 'awareness-raising and critical thinking start at school' must be continuously enhanced throughout life. There is a need for independent factual auditors and quality journalism. The EESC welcomes the Code of Conduct as a voluntary commitment by social media platforms and advertisers to combat disinformation, but doubts the effectiveness of such voluntary measures.

Conclusions and recommendations

The EESC welcomes the fact that the European Commission has established a **Digital Europe** programme, which underscores the intention to make Europe a leading player in digitalisation and to increase its economic strength and competitiveness on the world stage.

The aim of the Digital Europe programme is to enable a **digital single market** and to shape the digital transformation in a positive way for all citizens of Europe.

Digital technology is playing an increasingly important role in our economy and social life. Significant investment in **digital infrastructure** must be a high priority to remain competitive and allow for new businesses and new jobs.

The EESC encourages external partners to join the European initiative for **high performance computing** (EuroHPC Joint Undertaking) and use it as an opportunity to profit from world-class computing power.

The EESC endorses the industrial approach for developing the next generation of low-power **microchips in Europe**. This would make the EU less dependent on imports and secure access to top HPC technology.

The EESC welcomes that the Commission has made it clear that **research and innovation** (Horizon Europe) must continue to be an essential EU priority. Innovation is key to economic growth. Collaborative research projects should be prioritised, as they provide real European added value and bring benefits for associated countries.

Europe's **General Data Protection Regulation** (GDPR) appears to be a role model for many countries. However, this regulation and related legislation must be reviewed on a frequent basis in the light of developments in technology, in particular with AI.

The EESC recommends to join the **coordinated plan on AI** and to put in place national AI strategies concerning investments, enhancing data availability and accessibility, fostering talent and skills, and ensuring trust.

The EESC welcomes Europe's **ethical approach** with regard to AI, which should strengthen citizens' trust in digital development and create a competitive advantage for European businesses.