

AIDA Working Paper on 'AI and Competitiveness'

following the AIDA public hearing on 23 March 2021



Introduction



On 23 March, the AIDA Committee organised a public hearing on “AI and Competitiveness”. The scope of the hearing addressed AI-related competitiveness and ease of doing business in the EU.

The event looked at how small and large companies research, develop and commercialise AI products and services as well as how they use AI tools to increase their competitiveness.

The first panel on “**AI Governance**” explored the nature of AI and the regulatory frameworks needed for enabling the potential of AI to increase the competitiveness of EU enterprises. It focused on how the EU

could be regulating AI and how it can help Member States steer AI competitiveness.

The second panel on “**The Perspective of Business and Industry**” examined the challenges faced by EU enterprises in using developing/deploying/commercialising AI and data intelligence solutions.

The following document is a synthesis of some of the arguments offered during the hearing, which is explicitly intended to outline some of the pointed positions taken on by the experts.



Key Takeaways on AI Governance

The global perspective

The uptake and governance of AI cannot only be framed in terms of economic competitiveness. The main current deployment of AI is automated or semi-automated decision making (ADM) by increasingly competent machines. Replacing slow-thinking humans with fast-thinking machines can lead to increased productivity and knowledge but may also entail partially losing control over the outcome. This can be problematic under certain circumstances.

The occurrence of unintended bias being coded into AI algorithms and applications stems from bias present in the underlying data. Biased data sets create biased models and lead to biased predictions and decisions. There may be severe discrimination implications, affecting disparate groups, based on discriminatory factors or proxies for discrimination, such as gender, age, or other inherent characteristics. In terms of “data inclusivity” for machine learning purposes, Europe is lagging behind USA and China.

There is not yet a global forum with powers to answer the question “what future do we want with AI and how do we achieve it”. Regulating AI is therefore challenging (also due to the rapidly evolving nature of the

technology). International bodies, such as the World Economic Forum (WEF) or the UN, have developed a number of soft governance frameworks applicable to all types of private and public sector organisations, which may facilitate long-term implementation.

To level the competitive playing field and catch up with the US and China in terms of AI investment, the EU needs to forge strong alliances worldwide with likeminded partners and overcome regulatory divergences revolving around privacy rights, data flows and taxation. Soft governance mechanisms may be more amenable to securing international consensus on AI governance than hard law approaches. The UN, WEF, and OECD have produced a number of soft governance frameworks that could serve as a starting point in building regulatory convergence. In December 2020, European Commission President von der Leyen introduced a new [EU-US agenda for global change](#) where technology and AI are prominently featured, and called for the establishment of a new EU-US Trade and Technology Council. The initiative calls on the EU and the US to seize this once in a generation opportunity to create a global alliance of likeminded democracies to meet the strategic challenge posed by China.

The EU approach

Europe has an excellent community of researchers and a strong industrial base that has successfully harnessed technological advances, especially when it comes to embedded digital solutions. Industrial data will be the next big opportunity for industry-led growth, following the first wave of personal data. Europe is known internationally as a jurisdiction that fosters trustworthy products and services. Legal frameworks like the GDPR reflect strong European values that increase trust in the digital transition. The legislative proposals for a Data Governance Act and for a Digital Market Act, and the announced Data Act, aim to bring legal certainty and implementation guidelines on how data can be shared and how the data economy can flourish.

European legislators could consider making codes of conduct mandatory in upcoming EU legislation on AI, as regards in particular the development of AI applications so that venture capitalists and other investors will realise that AI start-ups cannot be globally competitive without placing importance on ethics, responsible AI and trustworthiness. EU legislation could set a baseline for innovation and create a level playing field, acknowledging that not all technological advances should automatically be defined as progress.

The EU could also consider avoiding over-regulation of AI as it will affect SMEs and start-ups much more than larger companies that adapt more easily. A narrow sector-by-sector approach (like in the US) to regulating may not be the answer for the EU, however. Instead, the EU approach could use objective criteria applicable to different sectors.

The EU approach to AI could facilitate research, innovation and competitiveness by enabling easier access to non-sensitive data or to sensitive data after adequate anonymisation. The EU AI regulatory framework could be risk-driven, not adverse to risk taking. The framework could promote innovation and make risk management easier, not more complicated. The EU could take a risk-based approach, centred on risk mitigation. The EU legislation could possibly distinguish between “AI dealing with objects” and “AI dealing with people” and also consider an adequate level of certification for truly high risk applications while ensuring their adequate “auditability” by independent third parties.

Key takeaways:

The strategic role of public administrations in Member States

Public administrations in Member States could adopt AI solutions to accelerate the uptake of AI in society (by creating possible snowball effects in the private sector). When applicable, AI software components and solutions developed internally by EU governments could be released publicly as re-usable open source resources to help other Member States and EU companies develop AI solutions faster.

Data collected by all EU governments could be more widely available to all EU enterprises. In addition, EU

governments could provide technological mechanisms allowing EU enterprises to process that data easily. The future EU Data Act could therefore address interoperability of shared accessible data as a key priority.

To support R&D in the field of AI across the EU, it is especially important that open governmental data of Member States is transferrable securely across borders and easily reusable.



Key Takeaways on “The perspective of Business and the Industry”

The need for more legal certainty

Legal certainty is essential to create more innovation as otherwise large companies will not risk their R&D budget and venture capital. Once the rules of the game are clear, start-up eco-systems can blossom. Legal certainty helps companies to know where they

stand regarding development and commercialisation of sensitive technologies such as those based on facial recognition. Doubt kills innovation or allows it to flourish in uncontrolled ways.

The EU competency challenge

Most of the novel AI applications that exist today have been created because of advances in machine learning (ML) and big data (BD) systems and technologies. Basic research in the EU is of high quality, but further investments in research are needed to develop next generation ML methods and BD systems, as global competition is fierce. Educating and training in the use of ML methods and BD systems is of vital importance. In particular, basic training in data literacy and ICT skills, such as data programming, data management, and algorithmic modeling, is needed. These subjects need to be taught throughout different educational levels (from elementary through to tertiary education).

The EU could invest in applying AI to all scientific fields and facilitate the exchange of researchers between universities and the private sector.

Internal training and awareness of AI inside companies is essential, as effective AI deployment requires reskilling of most employees of a company, not just the IT staff. SMEs could be made better aware of the value of their industrial data, so that they do not give it away without ensuring proper proprietary control. The general population could be better educated on the functioning of AI algorithms so that they can better spot fake news and deep fakes.

An infrastructure to accelerate the development of a European AI

Data is the fuel of modern economies. The EU could benefit from an independent, technical infrastructure and ecosystem that would enable the creation, sharing and use of both data and algorithms as well as of data storage solutions and computing resources in an open and inclusive way. This way the EU can move beyond North American and Chinese solutions, which may not be suited to European privacy and ethics norms nor to the European social economy model. Through the attainment of technological sovereignty and strategic autonomy, Europe would be able to: (i) maintain digital sovereignty in AI, (ii) retain talent and leadership in academia, (iii) facilitate data-driven business opportunities (iv) compete globally, and (v) shape the future of the digital world through its own industries and not merely be users of BD and ML technologies deployed elsewhere.

The EU could go beyond data exchange and multi-cloud considerations like GAIA-X, and consider the sup-

port of easy-to-use, integrated platforms to store data, host algorithms, and perform processing. The creation of such an ecosystem could avoid the complexity and management constraints of too many stakeholders. Instead, this ecosystem could be based on a single vision, mission and set of objectives. It could leverage economies of scale, follow software-hardware co-design principles, and take recent technological advances in networking, distributed systems, data management, and machine learning into consideration. Moreover, this approach could enable EU startups, companies, and EU citizens to share data and algorithms.

A key objective for Digital Innovation Hubs supported by the EU could be to enable Companies to test and experiment with new AI technologies before investing in them.

The European data challenge

More could be done in the EU to support the development of controversial technology such as AI-based facial recognition. Otherwise such applications will be developed outside the EU without proper regulatory oversight. The EU could promote anonymization and “automated and privacy-preserving technologies”, so that personal data can be made less sensitive and

more easily processed by AI applications (with less privacy risks).

Legal space and legal flexibility could be created to ease AI experiments and innovations (concept of legal sandboxes).

The European acceptance challenge

Governments and public agencies may need to invest more in AI that benefits society so that people can better identify the benefits of willingly sharing data.

Workers and their representatives could be actively involved in deployment and rollout of AI solutions in the companies they work for.

EU legislation on personal data may have to be adapted (as privacy risks mainly depend on the way data is used). In this context, traditional conceptions of due diligence and liability of the processing entity may have to be adapted as well.



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The European People's Party Group (EPP)

The EPP stresses that the EU must have an industrial agenda fit for the digital age and bring together large companies, midcaps, SMEs and start-up companies into powerful innovation networks.

A strong EU industry and sustainable competitiveness requires investing in people and technologies, setting-up a regulatory framework that is innovation-friendly and follows a risk-based approach, as well as building a value-based international techno alliance of like-minded partners.

Likewise, it is key to increase legal certainty for stakeholders and establish guidance on ethical principles and for clear, simple and harmonised European procedures for data collection and data sharing.

The European Commission should also prioritise the development of the European Digital Skills and Jobs Core Platform, which European citizens can access for opportunities to accelerate digital learning.

Finally, the EPP supports the designation of a European AI Lighthouse that can become our pioneering centre of excellence for AI research and development and attract the best and brightest minds, as well as substantial investment, thus being able to compete with regions like Silicon Valley.



The Progressive Alliance of Socialists and Democrats Group (S&D)

EU's global competitive advantage should be rooted in the European social model, based on a highly-skilled and healthy workforce, strong social and economic security and minimal inequalities. We must promote the European excellence in the international context, including skills. The pandemic revealed serious gaps in terms of access to and quality of education. Such a digital divide would only aggravate existing inequalities. Therefore, the Member States must do whatever it takes to close the digital education gap in Europe. An important element to support a competitive ecosystem dealing with AI development is the transfer from academia and basic research to industry. In the context of the Recovery Plan, it is essential to improve the uptake of specialized skills in AI, including interdisciplinary curricula. Addressing the gender gap and the lack of diversity among developers of AI systems is another crucial element in increasing competitiveness. The EU needs greater flexibility for innovation and more investment into AI research and innovative ideas, in particular into AI for green and social projects which promote our democratic values, social justice and solidarity. Europe should foster a culture of experimentation through the use of regulatory sandboxes for pilot projects while mobilising public and private R&I efforts.



The Renew Europe Group

The European Union is at risk of falling behind in the global AI race. Despite Europe's strong industrial base and its leading research institutions, it continues to punch far below its weight when it comes to the funding and widespread adoption of artificial intelligence.

Renew Europe is committed to the creation of a digital ecosystem that ensures Europe's competitiveness. Avoiding the overregulation of businesses and creating a legal framework that promotes innovation and risk-taking are therefore of vital importance. Furthermore, massive investments in the education sector, from elementary training to academic curricula, are necessary to prepare our workforce adequately for the digital future. In this regard, the EU also needs to facilitate further exchanges of researchers between universities and the private sector. Finally, as data is the lifeblood of AI, the European Union must develop a domestic data and cloud infrastructure, with a shared set of technical and legal rules, which will enable European business to thrive and serve as the cornerstone of a single market for data.

The Identity and Democracy Group (ID)

Today, more than ever, technology competition between companies is increasingly aggressive and the successful exploitation and implementation of emerging technology solutions is therefore becoming the key to maintaining leadership positions and speeding up growth. Furthermore, as AI is not effective without large amounts of data and contextual information such as meta-data, companies are now focusing on accumulating such information to improve their competitiveness.

However, to prevent algorithms and AI applications from discriminating against vulnerable groups (women, disabled people, etc.) data sets shall not contain bias.

The challenge for upcoming EU legislation is therefore to take into account all risk factors of AI technologies, the need for European companies to hold large amounts of data to create a level playing field with American and Chinese companies while at the same time look forward to a future where companies will no longer be able to gain advantage simply by adopting AI technologies and the global challenge will shift completely to liability.

AI is one of the major components of a new strategic economic area where power, independence and competitiveness are at stake.

Europe has significant research assets and the start-up ecosystem integrates high-level research expertise. Companies should deploy internally some strategic plans to integrate this, expand their offering and maintain their competitiveness.

Consequently, the best possible choice for an effective and useful AI regulation should be inspired both by legal certainty and by the competitiveness issue



Greens/European Free Alliance

The EU is at a crossroads in the question of how its digital economy should be structured. Some voices in Europe argue that competitiveness results from large, centralized and top-down structures supported by ample public money. For them, competition is a geopolitical race between Europe, US and China.

What this simplistic view of the world misses is that true competitiveness comes from fair and non-discriminatory access to digital markets for actors of all sizes. New, innovative and sustainable outcomes often come from researchers, start-ups or civil society.

Market concentration has taken hold already in data markets. The closed, top-down and centralized vision of the digital economy runs the near certain risk of perpetuating this concentration into the markets for machine-learning based applications and ultimately AI. True competitiveness instead comes from a fair, transparent and rules-based market structure, which breaks down market barriers and allows for good ideas to emerge.



The Left

There is a misconception that promoting fundamental rights prevents AI innovation. However, the EU legal framework can ensure innovation through the promotion of human dignity, personal data protection and non-discrimination. AI must contribute to reduce working hours and lead to a better work-life balance. Workers' rights should be guaranteed and AI should not be an excuse for dismissals. This is possible by consulting with civil society organisations, trade and worker's unions, and rights groups, and not just Big Tech firms. It is not enough to mention rights in upcoming legislation but also ensure compliance by industry and society. [As stated by Diego Naranjo from EDRi](#), "Despite the Justice Commissioner's worrying statement that he sees fundamental rights as something to be balanced with promoting technology development, we reiterate that European businesses can innovate without undermining people's rights and freedoms." We are gravely concerned that the deployment of AI without legal clarity, in sensitive areas such as biometric surveillance and facial recognition will exacerbate biases, inequalities and erosion of rights of European citizens.



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