Opinion of the European Economic and Social Committee on the 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — Building a European Data Economy'

(COM(2017) 9 final)

(2017/C 345/22)

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1. Conclusions and recommendations

Conclusions

1.1. The EESC welcomes the Communication 'Building a European Data Economy', which concerns maintaining data as a central and critical enabler of the new economy ([1]).

1.2. The Communication discusses non-personal and/or fully anonymised data. Where data qualify as personal data, the data protection framework, in particular the General Data Protection Regulation (GDPR), will apply.

1.3. The main issue is to build a Europe-based data ecosystem as an indispensable vector of economic and social progress, as well as robust competitiveness in a world that is in the process of radical transformation with strong competitors in the United States and Asia. In order to foster connectivity and storage opportunities, public-private investment in infrastructure is greatly needed across the continent.

1.4. Establishing a data ecosystem requires first of all awareness-building in business, public services, in society and among the Member States. There is a need for greater trust and openness and a willingness among all players to share data.

1.5. The EESC underlines that much more is at stake than legal and practical provisions. European core competences must urgently be adjusted in the context of the current transformation process. Europe is trailing in this strategic field. A pro-active mindset in business is needed to open up to increasing flows of data and develop the ability to process big data. Flexible and more adaptable business models must be put in place.

1.6. Instruments to enable innovation, while protecting the legitimate interests of business and citizens, include EU-wide platforms and workshops, field labs, the creation of hubs of excellence, community-building, 'Factories of the Future',

([1]) Communication 'Building a European Data Economy', COM(2017) 9 final, 10 January 2017. See also the motivational letter of 2 December 2016 from 14 heads of state or government on the free movement of data 'Non-paper on the Free Flow of Data initiative'.

testing grounds, exchanges, application programming interfaces, coaching among companies, model contracts, interaction between science and business, and Joint Technology Initiatives, as well as cPPPs in which the public and private sector take part, for instance in large-scale demonstrators.

1.7. Private equity and a more mature European venture capital market are indispensable.

Recommendations

1.8. The Commission should carry out a precise analysis of the state of play and of defensive attitudes to the free flow of data in the Member States in order to remove unjustified barriers by putting the right legal and technical provisions in place. Removing unjustified barriers to free flow of data should be an integral part of a Europe-wide industrial policy. Opening up of national markets should also be covered by the European Semester.

1.9. SMEs and innovation in particular suffer from data localisation. The EESC strongly supports the Commission's proposal that any data storage in the Member States should be guided by the principle of free movement. The EESC asks for a roadmap and deadlines for opening up national markets. The European Semester should also cover this issue.

1.10. Public research is a very important source of data. The Commission should encourage wider dissemination across Europe.

1.11. As a matter of principle, contractual freedom in the private sector should be respected. A general EU framework for standards is desirable but standards should in no way hamper innovation. Portability should be promoted.

1.12. Liability is a thorny issue: revision of the product liability directive may be required and special legal provisions for machine-to-machine (M2M) may have to be considered.

1.13. The Commission should be invited to give due consideration to aspects of data in various languages in the free flow of data and access to data.

1.14. The human factor is crucial. EU programmes must be put in place to prepare employees and young people for future developments. Education and on-the-job training are paramount in order, for example, to meet the overwhelming need for more data analysts.

1.15. These processes must be properly monitored in business, as well as by the Commission and at national level, so that a real European level playing field takes shape.

2. **Context**

2.1. There is a distinction between personal and non-personal data — personal-related and non-specific mass data. Both are part of the digital market but target different areas and are covered by separate EU regulatory provisions ([2]).

2.2. The communication on big data ([3]), a follow-up to the communication 'Towards a thriving data-driven economy' ([4]), discusses non-personal or anonymous data.

2.3. Personal and non-personal data overlap in specific cases due to possible interactions between the two fields and the interaction between the private and the public sector. Take the health sector, for instance, where the personal interests of patients, business interests and the public interest partly overlap.

2.4. The changes are multifaceted and unpredictable. Ongoing processes relating to the vertical and horizontal ramifications of data are generating ever more opportunities to collect, analyse and process data. Big data is a crucial building block for a future 'customer-driven economy'.

([2]) OJ C 71, 24.2.2016, p. 65.
([3]) Communication 'Building a European Data Economy', COM (2017) 9 final, 10 January 2017.
([4]) COM(2014) 442 final, 2 July 2014 (OJ C 242, 23.7.2015, p. 61).

2.5. Data has considerable consequences for production lines, interaction of services and manufacturing, and value chains. It reinforces the fragmentation of value chains.

2.6. Growing numbers of start-ups and scale-ups illustrate the key role of data. SMEs are very much dependent on a conducive international (European) context and on financing.

2.7. A customer-driven economy is the result of big data, machine-to-machine (M2M) communications and the free flow of data. It generates sophisticated products and services. All sectors and all levels within companies are adapting to these changes. But there are considerable differences between sectors, as well as between big and small companies, and different positions of companies in value chains, varying dependencies among companies, different outlooks in manufacturing and servicing, and consequently a variety of views among businesses.

2.8. If the EU fails to realise the full potential of digitalisation, a major part of EUR 605 billion of added value will be at risk in the run-up to 2025. On the other hand, the upsides are even more impressive: a study for the German Federation of Industry projected that EUR 1,25 trillion of additional value could be created in Europe by 2025.

2.9. Similar processes are under way globally. Comparative studies prove that the EU is lagging in this field, despite its current outstanding economic performance worldwide in a number of sectors.

2.10. There are substantial cultural differences between American and European business. In Europe, the main driver of data is mostly in parts of the manufacturing industry ([5]). By contrast, the big data industry in the United States is mainly driven by service and data-based companies, the so-called GAFA, and, since recently, NATU ([6]). The United States has a large and dynamic internal market and excellent financial conditions. Business has a risk-taking mentality. In addition, US businesses have at their disposal fast networks and huge storage capacity. Likewise, the number of big Chinese platforms is steadily rising.

2.11. While Europe is trailing, the EC communication remarkably does not refer to Europe's main international competitors, although they are the main reason why Europe must urgently develop its output and policy coordination. In the US and China, national goals were defined quite recently with a view to gaining and ensuring a dominant economic position worldwide. They are, followed by others, deliberately supporting and promoting big data as a tool to consolidate the competitive edge of American-based and Chinese companies. In the United States, the Obama administration adopted a very clear approach to the American Third Industrial Revolution, the equivalent of Industry 4.0 in the EU, as a basis for reinforcing American competitiveness and economic dominance. An *America first* strategy will probably intensify this policy. Further development of big data must also be considered a geopolitical factor here.

3. **Free flow of data between Member States**

3.1. Among the reasons why the 'European digital economy had been slow in embracing the data revolution compared with the USA and also lacked comparable industrial capacity' ([7]), the Commission points rightly to the link between barriers to free movement of data and trailing European market development.

([5]) The Digital Transformation of Industry, Bundesverband der Deutschen Industrie, 1 February 2015.

([6]) GAFA stands for Google, Apple, Facebook and Amazon, which have a total combined turnover of USD 468 billion. NATU stands for Netflix, Airbnb, Tesla and Uber. GAFA currently has a combined market value of USD 2,3 trillion. This almost matches the market value of the top 50 EURO STOXX companies, or EUR 2,9 trillion. This fact underscores the financial power of the big data/platforms business and its enormous value creation.

([7]) COM (2017) 9 final, p. 2.

3.2. While US data protection is mainly based on the principle of deliberate provision of data and — when it comes to private data — falls within the sphere of consumer protection, most European countries have data protection laws in place and have often enshrined data protection as a constitutional right. On the one hand, Europe's data security approach can be seen as a competitive advantage; on the other, the using and processing of big data seems to be so limited that it is hindering innovation.

3.3. There must come an end to market fragmentation. The Commission must be mandated to examine how and to what extent divergences in approaches between Member States must be removed in order to narrow differences in development and approaches.

3.4. Given the ever-increasing amounts of data due to the 'internet of things' (IoT), 'Factories of the Future' and autonomous connected systems, measures on a European scale are especially necessary and of strategic importance. The legal and technical basis for free flows of data across Europe is a cornerstone for building a vast and robust digital economy ([8]).

3.5. An EU industrial policy must be put in place. Unjustified barriers to the free flow of data must be abolished. An internal market is incompatible with 28 different industrial policies, each with its own tools and objectives. This is not different in the digital age ([9]). The Commission and governments should therefore act as moderators, with a long-term vision defining the playing field and framework conditions on the basis of public-private partnership ([10]).

3.6. The Commission rightly points to arguments used by national authorities to restrict flows of data. Localisation measures that effectively reintroduce digital 'border controls' ([11]) must be replaced by a satisfactory European framework.

3.7. The EESC recommends a detailed analysis be conducted of the current state of play in the Member States and the huge discrepancies that exist in Europe. Leading-edge manufacturing in Germany is most advanced in data production, followed by advanced manufacturing clusters in other — big and small — countries. On the other hand, service-based big data in France and the UK, and some smaller economies, for example, is also growing strongly.

3.8. Free flow of data is seriously hampered by Member States' defensive attitudes. To date at least 50 legal and administrative barriers have been identified. There are also substantial differences in public procurement requirements between the Member States. Different cultures and traditions prevail. National industrial policies generate different legislative environments; there is no common industrial framework. Mistrust around non-personal data may also be engendered by different approaches to the way personal data must be legally treated. Defensive attitudes in government and in business in various countries tend to reinforce each other.

3.9. By contrast, only enhanced trust between Member States will create a single market evolving as a safe haven for data and a fertile ground for innovation.

3.10. National objectives such as promotion of innovation and progressive creation of added value are best served by creating a common market for big data, ensuring secure data storage by state-of-the-art ICT management on a large scale, and pooling of potentialities.

3.11. Besides having a counterproductive impact on transparency and hampering innovation, data localisation has a negative effect mainly on SMEs with cross-border operations. The EESC therefore strongly supports the Commission's proposal that 'any Member State action affecting data storage or processing should be guided by a principle of free movement of data within the EU' ([12]).

([8]) See also the 2016 letter of 14 governments on this issue 'Non-paper on the Free Flow of Data initiative'. Is it a bad omen that none of the big countries except for Britain signed the letter?

([9]) OJ C 71, 24.2.2016, p. 65 and OJ C 389, 21.10.2016, p. 50.

([10]) FME-CWM, a Dutch association for the technology industry, recommends a ministerial top team to coordinate digitalisation in the Netherlands, 16 March 2017.

([11]) COM (2017) 9 final, p. 5.

([12]) COM (2017) 9 final, p. 7.

3.12. The EESC insists that the issue of opening up national markets to Europe-wide data dissemination should also be covered by the annual European Semester, including the country-specific recommendations. Openness of public data across Europe will complete the single market and create a level playing field. The GDPR helps to create common ground ([13]).

3.13. Regions and urban areas also have dynamic data at their disposal. Regional platforms with public and private players will foster regional economies and can strengthen regional clusters in the international context. Regions and cities should be persuaded to act in an open spirit. Here too the EU can play an important role in exchanging best practice and providing state-of-the-art know-how to regional entities.

3.14. Public research is a very important source of data. As taxpayers' money is involved, it is important to ensure that such data is more widely distributed. SMEs in particular can benefit from reservoirs of data resulting from research.

3.15. Such public data often interferes with privately run operations. Contractual arrangements with the commercial sector obviously entail a different treatment of data. Examples include non-personal data produced in transportation, in the energy sector, by satellites, in land registers and in other public services.

3.16. Given the deplorably wide discrepancies in Europe, the EESC points out that an unrestricted flow of data across Europe could also contribute to convergence between national economies, which is of considerable interest for both the more advanced economies and those lagging behind. Public administrations can be asked to support and to coach each other to put the right mechanisms in place.

3.17. The Communication does not discuss aspects of data in various languages related to the free flow of data or data access. As language data could also be only machine-generated, in the view of the EESC the Commission should intensify its efforts to support research and innovation, and deployment for automatic translation of data expressed in various languages in all official EU languages.

3.18. The EESC underlines the need for a holistic approach and to foster a common sense of purpose in the Competitiveness Council and beyond in order to create mutual trust. Trust is essential. Opening the European market to the free flow of non-personal data also has a deep political impact. A wide variety of issues arise here, such as strengthening the basis of the single market and innovation in big and small companies, improving prospects for economic growth and jobs, promoting economic convergence between Member States, and competitiveness.

4. **Data access and transfer of data in the market**

4.1. The communication looks at a large number of possible interactions between companies of all sizes in the field of data (business-to-business, or B2B). Public services should also be taken into account. The diversity of data is endless and its development therefore unpredictable.

4.2. The Commission rightly prioritises the objective of access to large and diverse datasets by market players of any kind. It highlights many obstacles to free access and notes that 'exchange of data currently remains limited' ([14]).

4.3. The reasons for companies keeping data for themselves are self-evident. Products and services are produced on the basis of company production schemes or, more broadly, company strategies, which are not shared with others. Contractual freedom must be respected and ensured as a matter of principle ([15]).

([13]) General Data Protection Regulation, May 2016 (OJ C 229, 31.7.2012, p. 90).
([14]) COM (2017) 9 final, p. 10.
([15]) See also Orgalime's comments on the upcoming European Commission initiative on 'Building the EU Data Economy', 21 September 2016, and 'DIGITALEUROPE's Initial Views on Building the European Data Economy Communication', 14 February 2017.

4.4. The picture is very diverse. Large companies often have their own research at their disposal, with a broad panorama of possible applications. Smaller companies have by definition limited scope. But in all cases the arguments for sharing data with other companies are overwhelming, with direct advantages for all companies involved.

4.5. As a rule, intellectual property rights do not cover M2M data. This being the case, EU law is in force for specific applications that need legal protection. In other cases, this data and the way in which it is handled, remains subject to contractual solutions, for instance ownership of data and prices.

4.6. The legal framework on data should ensure protection of rights of companies to the same extent as the protection of physical goods.

4.7. There is little need for new legislative measures. Existing regulation covers most areas and can, if needed, be redrafted according to the special requirements of the digital era.

4.8. Given the current dynamics and the unpredictability of developments, an eventual general framework of standards should in no way hamper innovation. Existing standards often limit innovations, and new standards can hardly be set without better knowledge of developments. Thus new ways to regulate are necessary. Portability should be promoted.

4.9. Liability is a thorny issue ([16]). Some directives are in place, and as the scope of technology broadens they may have to be revised, for instance to make the Product Liability Directive also fit for the IoT and for Artificial Intelligence. M2M may require special legal provisions on liability. Taking into account the large variety and continuously changing relationships between companies in respect of data, the EESC believes that existing regulation is for a large part satisfactory. Any new regulation should foster innovation and certainly not hinder it.

4.10. A larger flow or transfer of data can be achieved via contracts among businesses, by making use of existing or new platforms and workshops, preferably on an international basis, application programming interfaces ([17]), and by stepping up targeted relations between science and companies. Science should also be represented in platforms and workshops. Many of these are already in place for Industry 4.0, for instance regional field labs. Dissemination of data produced by research centres and financed by public funds should be made mandatory ([18]).

4.11. The EESC favours 'testing grounds' and open market places for data trading to encourage those who are leaning towards greater openness. Areas of common ground can be identified and consolidated. One organisation should be made responsible for identifying needs for testing fields and facilitate fruitful and high-quality cooperation between the agencies involved.

4.12. The EESC draws attention to a very useful initiative launched in 2014 by the Commission and the Big Data Value Association ([19]). A recent statement by both partners highlighted four major instruments to be implemented by PPP:

— large-scale demonstrators ('lighthouse projects') in industrial sectors,

— data integration and experimentation ('innovation spaces'),

— technical projects in key areas,

— networking, community-building and policy support.

([16]) COM (2017) 9 final, pp. 14 and 15.
([17]) COM (2017) 9 final, p. 12.
([18]) The Walloon region is planning a decree on this matter.
([19]) This initiative brings the Commission, industry and research institutes together in a 'Public Private Partnership (PPP) in order to cooperate in data-related research and innovation, enhance community building around data and to set the ground for a thriving data-driven economy in Europe' (joint statement of the European Commission and the Big Data Value Association).

This is an exemplary approach for further European initiatives. As well as research PPPs, there are joint technology initiatives focused on innovation.

4.13. European model contracts for cooperation could be an option.

5. **Awareness and mindset in business**

5.1. Apart from regulatory and practical provisions, a robust digital economy requires a climate of greater openness in European business. It is, above all, a matter of the awareness and mindset to respond proactively to the paradigm shift.

5.2. The world economy as a whole is in deep transformation. All industries — big and small — must be involved in this process, in which no opposition should be made between existing industries and younger sectors, no opposition between 'old' and 'new'. European core competences must be transformed faster and more effectively, and all industries must be empowered to take part in that process.

5.3. The process itself is largely bottom-up and thus a matter for the business sector and companies. In addition to valuable tools the Commission presents ([20]) to make markets more sensitive to making proactive adjustments, the EESC points to the need for a change of mentality in large parts of European business.

5.4. Data is a sensitive issue in companies and will be increasingly so in future. Only a limited number of companies are favourable to open data. A list of examples to be set up by the Commission will be useful. Moreover, many companies still wrongly believe that their current sophisticated manufacturing level will guarantee market positions in the future.

5.5. The differences between the US and Europe are striking. Engineering traditions in Europe tend towards a closed mentality. Advanced engineering and a high level of sophistication in handling data are decisive for competitive advantage. The US is highly advanced in B2C (business-to-consumer), and more open minded about free access. Europe is very advanced in high-quality production and B2B, while companies want to remain in control of their own data.

5.6. Serious consideration must be given to whether Europe has the capacity right now to deal properly with big data. In other words, EU companies have to face the challenge that capacity to transform data into business is largely present in the US, which means that data they will have to deal with are stored on the servers of US companies, including the appropriate algorithms to generate new ideas ([21]).

5.7. There is an urgent need for change. The best way forward is to adopt a strategy of preservation of the current strengths of manufacturing, while increasingly opening up to flows of data. The process of change cannot take place overnight, but only by way of incremental steps. European business must find the most effective European way: not fighting against the tide, but changing in an acceptable way ([22]).

5.8. Many European companies have to catch up both by fostering their ability to work with data and by improving manufacturing. Strange as it may sound, in a number of companies openness and transparency with respect to big data should begin by changing internal procedures and internal company approaches.

5.9. A key issue is that of flexible and more easily adaptable business models that gradually replace the traditional landscape of vertically integrated manufacturing businesses ([23]). Such business models must enable companies to operate more effectively in the environment of an ever-increasing number of products and services and full integration of manufacturing and services. Companies must sometimes accept disadvantages in order to gain more advantages.

([20]) COM (2017) 9 final, pp. 11 to 13.
([21]) A prime example is the car industry, the European powerhouse: by contrast with totally new concepts like Google that will not sell cars, but, in interface with the client, mobility and mobility packages.
([22]) See 'White Paper Digital Platforms — Digital regulatory policy for growth, innovation, competition and participation' White Paper, German government, Federal Ministry for Economic Affairs and Energy, March 2017.
([23]) Future development of the car industry is a telling example: see EESC Report CCMI/148, 22 February 2017.

5.10. Exchanges should be organised to discuss the tension between preserving the company identity of data and the indispensable need for innovation in an international context as well as to look for the most effective approaches in business to open up. The Commission can be most helpful to Europeanise these exchanges.

5.11. Ideas have to be generated to create some hubs of excellence as a counterbalance to Silicon Valley and the big American universities.

5.12. A case in point is the need to deepen the underdeveloped European capital market. Handling big data in a dynamic way requires not only successful start-ups, but notably scaled-ups, of which there are too few. A more dynamic Europe-based venture capital market is therefore indispensable. Measures to enhance and foster its development, following best practices such as the Israeli example, should be explored and adapted.

5.13. The UK has a vibrant data-generating economy. The EESC believes that European and British industry should continue to work closely together on transparent and open data generation.

6. **Society and the labour market**

6.1. Views in previous EESC opinions ([24]) concerning the effects of Industry 4.0 on society and the labour market are as relevant in the era of free flow of data. Some aspects need to be underscored.

6.2. The dynamics of data development and dissemination require full understanding by society, and in particular by workforces across European businesses. Up-to-date communication is needed to promote sufficient knowledge and public acceptance of the deep transformation process. Social partners have their role to play.

6.3. The human factor is crucial. There should be social dialogue at all levels for the necessary adjustments and to put programmes in place that prepare employees and young people for the new reality. Many more data analysts and data scientists are needed.

6.4. This also points to the challenge of developing new kinds of organisations for training and cooperation of workers in all layers of society whose work will diminish. Current social systems are not adapted to these challenges, with a few exceptions such as 'buffer companies' as used, e.g. in Finland, to transfer former white-collar employees to on crowd working and at the same time maintain their social insurance. All have to be aware that we are working in a different landscape now.

6.5. Labour market developments and social inclusion are also part of a wider concept of industrial policy. Studies oscillate between projecting job losses of up to 50 %, especially among white-collar employees, and a 20 % increase in new jobs as a result of digitalisation and state-of-the-art manufacturing. All parties concerned should focus on the transition in order to remove obstacles to adjustment and facilitate outcomes that create new opportunities for people, notably in service development.

6.6. Education and on-the-job training at all levels of the workforce are of great interest in every sector and in every country. This should cover more than just technical areas.

6.7. The EESC points to the supporting role the Commission can play in showing the way forward and identifying problems and opportunities. EU-based workshops and exchanges, including on best practices, should be organised among business, social partners and governments. Common ground and common approaches have to be found and developed amidst the variety of different cultures in Europe.

Brussels, 5 July 2017.

The President
of the European Economic and Social Committee
Georges DASSIS

([24]) OJ C 13, 15.1.2016, p. 161.