



How Will the Post-Brexit “Data Wall” Affect the European Union?

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SUMMARY

The absence of a data adequacy agreement could create a post-Brexit "data wall" between the United Kingdom and the European Union. Clear the UK will be badly hurt, but the EU has much at stake as well. First, a data adequacy agreement will enable UK digital workers and firms to continue to contribute to the scale of the EU digital sector.

Second, the technological resources of the UK digital sector in areas such as artificial intelligence can help the EU keep up with the U.S. and China--but only with the right rules in place. All told, we believe that the lack of a data adequacy agreement could effectively slow the development and absorption of new technologies in the EU by a year or more while alternative data transmission channels are put into place.

INTRODUCTION

As of March 2019, the United Kingdom will have the status of a "third country" from the perspective of the European Union and the General Data Protection Regulation (GDPR). Will the EU accept that UK data protection standards are high enough to grant them the status of "adequacy," which will allow data to flow more easily between the UK and the EU? Or will a "data wall" appear overnight between the UK and the EU? The answers to these questions obviously matter to the UK. These data-related issues

arise at a crucial moment in the development of the EU economy, which will be badly hurt by a post-Brexit data wall. The UK finance and tech sectors are at special risk, since they require a firehose of cross-border data transfers.

On the one hand, the region's digital sector has been growing at a rapid pace, fed in part by the strength of UK tech. As of April 2018, for example, the UK led Europe with 353,000 App Economy jobs, followed by Germany and France with 327,000 and 314,000 App Economy jobs, respectively.¹ Overall, the UK had 960,000 information and communications technology professionals as of 2016 – almost as many as France and Germany combined (1.1 million).²

On the other hand, the growth of the EU digital sector has been lagging that of the U.S. Between 2007 and 2016, the last date when a full set of data is available, the EU digital sector grew by 29 percent. That's strong growth, but less than the 43 percent gain reported by the U.S. digital sector.³

Looking beyond the tech/telecom industries, digitization has been essential for financial services and professional services such as accounting – dramatically changing the nature of the business. Small and medium-size enterprises now have access to services that were formerly too expensive.

Even more important, the benefits of digitization are just now spreading to “physical” industries such as manufacturing, agriculture, distribution and healthcare, which still make up the great majority of employment in both the EU and the U.S. Manufacturing is a particular problem, where productivity growth in the EU has slowed to a crawl in recent years. Similarly, productivity gains in much of the service sector, including

wholesale and retail trade and transportation, have been weak.

In this paper we will make the case that the way the EU handles post-Brexit data flows could significantly affect future EU growth. First, a data adequacy agreement will enable UK digital workers and firms to continue to contribute to the scale of the EU digital sector. Particularly important are fast growth so-called tech 'startups' who would be at higher risk if the EU and the UK agreed to a different kind of structure for data transfers. That, in turn, will boost the productivity of financial and professional services, and accelerate the digitization of physical industries and the development of “manufacturing platforms” that could pull the EU ahead of the U.S.⁴

A data adequacy agreement will enable UK digital workers and firms to continue to contribute to the scale of the EU digital sector.

Second, the technological resources of the UK digital sector in areas such as artificial intelligence can help the EU keep up with the U.S. and China – but only with a data adequacy agreement.

Conversely, the lack of a data adequacy agreement between the UK and the EU will significantly slow technological progress – not just in the digital sector, but across the entire EU economy. We don't want to exaggerate the damage – the nature of the Internet and the global economy is that information will eventually get through the Brexit “data wall,” especially for the biggest global firms. But small and medium-size businesses will find themselves falling further behind the global standard, especially high-growth companies from Europe's startup sector.

All told, we believe that the lack of a data adequacy agreement could effectively slow the development and absorption of new technologies in the EU by a year or more while alternative data transmission channels are put into place. A year may not sound like much, but it's a delay the EU can ill afford at this critical juncture. The United States and China are leading a massive global push to apply digitization to the physical sector, and the EU doesn't want to fall behind.

BROAD TRENDS

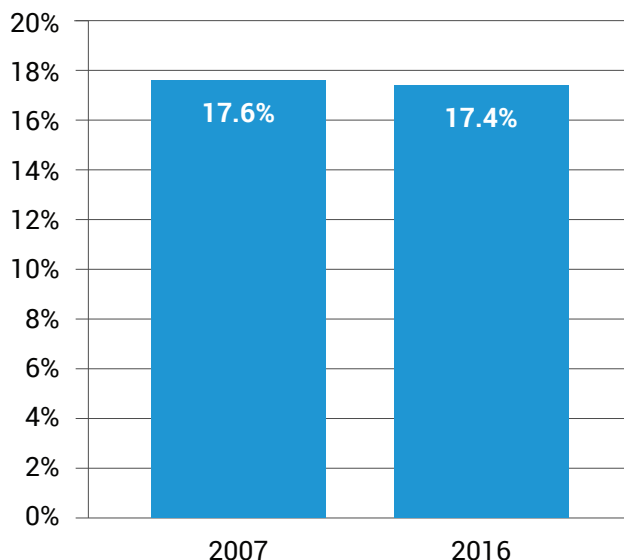
There's a conundrum when examining the impact of an event like Brexit on cross-border data flows. On the one hand, data seems to have taken a central role in today's economy. On the other hand, the apparent importance of data does not seem to be driving faster growth. If anything, productivity growth in the EU is still stuck in low gear, averaging less than 1 percent per year over the past five years.

This conundrum is resolved by realizing that digitization so far has profoundly affected a limited number of industries – namely, communications, entertainment, finance, professional services, and, to a growing extent, shopping. Depending on how we measure it, only

about 20 percent of the EU economy has been digitized, and that percentage has not risen over the past decade.⁵

The rest of the economy – "physical industries" such as manufacturing, distribution, agriculture, healthcare, and the like – are still in the early stages of digitization, despite the overeager use of terms like "Industry 4.0."

EUROPEAN UNION digitized industries (share of total value added)*



**Manufacture of computer and electronic products; information and communications; finance and insurance; professional, scientific, and technical activities. Data: Eurostat*

In the United States, there are signs that the process of digitizing the physical sector has begun, with positive impacts for workers and consumers. The leading edge of change is retail and distribution, where the shift to ecommerce has boosted productivity, raised wages, and created hundreds of thousands of new jobs.

Consumers who used to spend hours parking, walking aisles, and standing on line are now shopping online and paying truck driver and fulfillment center workers good wages to take their place. Wages in the U.S. ecommerce sector are 30 percent higher than wages in brick-and-mortar retail.⁶

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The process of digitizing physical industries is not an easy one, requiring the application of new technologies such as machine learning and artificial intelligence. But the EU cannot afford to be left behind. This is why getting data arrangements right between the UK and the EU is of critical importance.

IMPACT ON THE UK: THE POST-BREXIT DATA WALL

Against the backdrop of the broad trends, the question of Brexit and data adequacy takes on special importance. Countries that benefit from an adequacy decision are considered to have laws essentially equivalent to those that safeguard personal data inside the EU. Where an adequacy decision has been issued, data transfers between the EU and those third countries are treated as compliant with EU data protection laws. For example, Canada, Switzerland and New Zealand are among the countries that benefit from a Commission adequacy decision.

Brexit negotiators have treated data and information flows between the United Kingdom and the European Union as a secondary problem, to be kicked down the road. Indeed, the EU does not want to start considering the question of data adequacy until the UK actually separates officially from the EU. After that, getting a data adequacy agreement between the UK and the EU could take several years, based on recent experience negotiating the Privacy Shield with the United States and a data adequacy agreement with Japan, which is close to fully approved.

In particular, the data adequacy agreement with Japan included special provisions for EU personal data transferred to Japan, and carefully negotiated agreements covering law

enforcement and national security purposes. There is a special process for investigating and resolving complaints from Europeans regarding access to their data by Japanese public authorities.

As a current member of the EU, the United Kingdom government has implemented the full set of standards of the GDPR. Many people expected that, having already met the standards, the UK would easily be granted data adequacy. However, in March 2018, EU chief negotiator Michel Barnier said that, "in the absence of EU law that can override national law, in the absence of common supervision and a common court, there can be no mutual recognition of standards." In other words, the key to data adequacy is not simply meeting the GDPR standards, but having the right governance structure as well.

In reaction, the UK government told companies to draft standard contractual clauses (SCC) that could partly take the place of a post-Brexit data adequacy agreement, if one is not reached.

For the majority of organisations the most relevant alternative legal basis would be standard contractual clauses. These are model data protection clauses that have been approved by the European Commission and enable the free flow of personal data when embedded in a contract.⁷

But SCCs are not likely to be a useful answer, especially for small UK businesses.

According to one recent article:⁸

BT's Brexit boss Stephen Hurley told MPs that, with more than 18,000 suppliers, setting up SCCs would be very cumbersome, especially as the set text

“isn't necessarily designed to deal with the modern ways of doing business, and the way flows of data occur in practice.”

The committee concluded that the “considerable change from the status quo would place a bureaucratic burden on individual businesses, a burden which would be prohibitive for many small businesses.”

Indeed, the importance of a data adequacy agreement is that it would effectively align the UK and EU data protection regimes at the national level. As long as individual companies follow their national rules, they can freely move data across national borders.

The key to data adequacy is not simply meeting the GDPR standards, but having the right governance structure as well.

By contrast, the absence of a data adequacy agreement places a much heavier burden on individual companies to monitor their cross-data information flows. Small and medium-size businesses, in particular, will err on the side of transferring less data to avoid potential problems, crippling businesses, particularly in the tech sector, that rely on data transfers between the UK and the EU.

In other words, the lack of a post-Brexit data adequacy agreement will have the effect of creating a “data wall” between the UK and the EU. The lack of a data adequacy agreement functions as an extra level of “regulatory accumulation,” forcing businesses to devote more resources to compliance.

Consider: The term “data” makes us think about easily quantifiable packets of information,

like employee characteristics and customer information. And, certainly, global corporations will make sure these mission-critical pieces of information are still transferable across borders if needed – or processed in place.

But there's a deeper problem. The definition of personal data is quite broad, including any piece of information that could conceivably be associated with a particular person, such as an IP address. In the absence of a data adequacy agreement, all cross-border transactions will be closely scrutinized for possibly illegal transfers of personal information. The flow of information will slow from a flood to well-defined streams.

The shift to contracts rather than a broad data adequacy framework would have a wide variety of impacts. For example, it becomes more important to anonymize data. The use of machine learning to improve fraud detection becomes not impossible, but more difficult. Similarly, in order to identify money laundering and other abuses, UK-based financial firms must be able to exchange customer information with their subsidiaries in Frankfurt, Paris, and other non-UK financial centers. Big banks will almost certainly be able to find a work-around, but smaller financial institutions may struggle.

Or take manufacturing. In a post-Brexit world without a data adequacy agreement, the growing idea of customized production becomes more difficult. Conceivably, even something as simple as sending an order is problematic.

IMPACT ON THE EU: SCALE

Why should the EU pay more attention to post-Brexit data flows? In this section we consider the role of scale. The UK accounts for 16 percent of EU gross domestic product. But, more important,

25 percent of EU information technology and communications professionals work and live in the UK, according to data from the ILO.

The implication is that withholding the adequacy designation from the UK will effectively shrink the EU digital talent footprint by 25 percent. To put this in context, a data wall between the UK and the EU is equivalent to the United States losing the tech workforce of California, Massachusetts and New York combined. That would put a deep dent in the U.S. ability to compete.

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Scale is more important to the EU than ever before. The whole point of the Digital Single Market was to increase the scale of the EU economy. By “tearing down regulatory walls and moving from 28 national markets to a single one,” the European Commission argued that the Digital Single Market “could contribute €415 billion per year to [the European] economy and create hundreds of thousands of new jobs.”¹⁰

Moreover, having a larger internal market is a sizable benefit for building digital platforms for physical industries such as manufacturing, transport, and healthcare. The cost of the software development gets distributed over a bigger base, allowing the platform owner to charge less. Similarly, the aggregation of data – raw production data in the case of a manufacturing platform, health records in the case of a healthcare platform – is easier in a larger market.

For example, Berlin-based Ada Health, a venture-funded startup with a hot new healthcare

diagnostic app, also opened offices in London very early in its growth. The company's AI-powered chatbot is now scaling globally, perhaps aided by its roots in both Germany and the UK.

The scale effects of software development are augmented by economies of scale in financing. A venture capital firm looking to fund the next manufacturing or healthcare platform will prefer larger markets. To the degree the UK participates actively with the EU, that will provide extra scale.

Finally, the success of the GDPR itself as a privacy platform depends on getting as much scale as possible. The European Union passed the new regulation under the assumption that strong data protection standards will prove to be attractive to users. However, the EU is competing against two enormous economies, the United States and China, with very different privacy regimes.

At least for now, the UK is devoted to following the GDPR standard, which adds incentive for U.S. and Asian companies to follow the same model. But, in the absence of a data adequacy agreement, it will be easier for the UK to draft away from the EU version of the GDPR.

Moreover, a data adequacy agreement would be the first step in ensuring that the well-funded UK Information Commissioner's Office (ICO), the UK data regulator, could continue to engage on a whole range of issues to support the European Data Protection Board (EDPB).

Without a data adequacy agreement, and the potential for more substantial collaboration in the future, ICO will obviously not be in position to provide intellectual and personnel support to

the EDPB. Moreover, it will be easier for the UK to drift away from the EU version of the GDPR.

IMPACT ON THE EU:

KEEPING UP WITH GLOBAL INNOVATION

A recent report from KPMG ranked the UK as the third most promising market for innovation, disruption and technology breakthroughs, after the U.S. and China. Leaving aside Silicon Valley, EMEA survey respondents put London first, followed by Shanghai, New York, and Tokyo.¹¹ Meanwhile, one analysis puts the UK as the fourth leading country for published papers on artificial intelligence, despite being considerably smaller than the first three (China, the U.S., and Japan).¹²

A post-Brexit data wall will make it harder for the EU to keep up with global innovation. The ability to make use of technological advances elsewhere is directly connected with the number of skilled professionals available to absorb and implement those innovations.

From that perspective, the fact that the UK has 25 percent of the information and communications professionals in the EU means the country is an important conduit for technological advances from Japan, the U.S., and China.

That's not to say the post-Brexit EU will be cut off from global innovation. Even if there is a data wall between the EU and the UK, countries such as Germany and France are still powerful magnets for technological advances. Moreover, the data adequacy agreement with Japan will make EU-Japan data flows more straightforward. Nevertheless, from the perspective of innovation, the EU would be better off if the UK was part of the same framework for data protection.

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AGGREGATE IMPACT

Europe was slow reacting to the Information Revolution of the 1990s.¹³ In France, for example, productivity growth showed no signs of accelerating in the second half of the 1990s compared to the first half.

The issue was not whether European countries were adopting information technology – obviously they were. It was just that it took time for companies to change the way they did business to take advantage of the new technologies. That meant companies such as Google and Facebook grew up in the United States, not in the European Union.

The danger is that the same thing will happen again. The next wave of the information revolution will transform physical industries such as manufacturing, distribution, and agriculture – industries that are very important to Europe. European companies such as Siemens AG and Schneider Electric SE are and should be leaders in the digitization of physical industries. But the combination of Brexit and the GDPR could set up a data wall that reduces access to the UK tech hub and slows the diffusion of new technologies.

In the absence of a post-Brexit data adequacy agreement, it would not be unreasonable to expect a delay of a year or two in the application of new technologies such as artificial intelligence to the physical sectors, as European

companies have to rebuild UK expertise within the borders of the smaller EU, or work out new ways of collaborating. One or two years doesn't sound like much, but that creates a window for aggressive competitors in the U.S. and China, such as happened in the early part of the 2000s.

We will not attempt to quantify the loss further, except to note that, in earlier work, we estimated that digitization of the U.S. physical sector could add 0.7 percentage points to the country's annual economic growth rate over the next 15 years. That may not sound like much, but it would add \$2.7 trillion to annual U.S. economic output by 2031, in 2016 dollars.¹⁴ Similar gains in the European Union could add tk trillion euros to output.

CONCLUSION

The EU and the UK are involved in a complicated negotiation over the terms of Brexit. In our view, both sides are underestimating the potential damage from putting up a “data wall” between the EU and the UK after March 2019. Without being a doomsayer, the inability to come to a data adequacy agreement could slow the EU adoption of new technology by a year or more, since the UK is a major player in critical areas such as artificial intelligence.

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