European Committee of the Regions

Brussels
14 March 2018

ECON
Commission

Assessing the exposure of EU27 regions and cities to the UK's withdrawal from the European Union

---

Disclaimer

This report was produced by the European Committee of the Regions secretariat with a view to assessing the exposure of EU27 regions and cities to the UK's withdrawal, and namely, the potential asymmetrical territorial impact of the UK's withdrawal within the EU27.

The findings of this report are not binding for the European Committee of the Regions and do not prejudice the final content of its opinions. This report is for information purposes only.

Contents

1 Executive Summary

The European Committee of the regions Commission for Economic Policy (ECON) has conducted a comprehensive set of analytical work and started a political dialogue on the possible economic and social impact of the *UK's withdrawal from the EU on EU27 regions and cities.* This report aims to bring together the results of all three strands of this analytical work, i.e. a study, a survey (conducted together with EUROCHAMBRES) and a Territorial Impact Assessment workshop on the *The impact of the UK's withdrawal from the EU on EU27 regions and cities*, as well as recent findings from other relevant sources. The emphasis of the ECON work is placed on the **exposure** of EU27 regions to the UK's leaving by mapping and analysing their most exposed economic sectors and the weight of their economic linkages with the UK in their respective economies.

In all likelihood, increases in trade costs associated with the UK's withdrawal from the EU are expected to affect the UK proportionally more than the EU27[1]. The ECON analytical work indicates that Brexit effects in EU27 will most likely be asymmetrical not only in economic sectors, but also across regions, with some regions and Member States being more exposed to Brexit due to the nature and the scale of their economic linkages (notably trade) with the UK and again with this exposure varying from one sector to another for any single region.

It results from the analytical work that only regions in the Republic of Ireland face exposure levels similar to some regions in the UK. The highest levels of exposure after Irish regions are found in German regions (notably in automotive and manufacturing), in the Netherlands, Belgium, France but also Italy and Spain. Some regions face specific challenges which might not necessarily be captured by statistics alone, for example Brittany and Hauts-de-France when it comes to fishing waters. As for the sectors most likely to be affected it seems that automotive, agriculture, foodstuff, chemicals and industrials are among the ones that will incur the highest impact.

Experts from regions, cities, chambers of commerce, academia and associations representing regions that participated in the CoR TIA workshop highlighted the ‘limitations’ of some of the studies' results. This concerns for instance the fact that the focus on GDP/trade inevitably means regions with higher levels of GDP/trading patterns come out as most affected by Brexit, which can mask and understate the impacts on other regions where economic activities are smaller but more concentrated. It was also underlined that the complexities and interlinkages within and between regions - cultural, economic, and social - do not necessarily get picked up by analyses based on statistics.

Furthermore, the uncertainty with regard to the result of the negotiations and the end-date for an agreement on the future relationship, the potential changes in trade and FDI flows, the dynamic effects triggered by Brexit, with some regions and companies preparing to face the impact (some LRAs have established information desks, newsletters and other communication tools to share information concerning Brexit within their communities), and the complexity of interlinkages that exist in many regions, make the prediction of the actual impact on any given sector or region very difficult. Another important conclusion of the analytical work refers to the fact that the ability to diversify quickly into alternative economic activities/markets is more difficult in smaller, and more remote communities – where alternatives do not exist in the same way as in larger urban areas which are closer to markets.

[1] ROJAS-ROMAGOSA, Hugo, "Trade effects of Brexit for the Netherlands", CPB Netherlands Bureau for Economic Policy Analysis, *CPB Background Document*, June 2016, available here
and also Oliver Wyman and Clifford Chance, "The 'red tape' cost of Brexit", 12 March 2018, available here

From the CoR/EUROCHAMBRES survey it transpires that the responses indicating negative impacts dominate with the most negative impact anticipated in the policy areas of trade (66%) and employment (58%) and in the sectors of tourism (59.5%), services (49%) and manufacturing (47%). Less than a third of the regions have already undertaken actions to prepare for UK's withdrawal. As many as three to four fifths of the respondents are favourable to EU-wide actions that aim at assessing the territorial impacts of the withdrawal of the UK from the EU. The survey also shows that chambers of commerce are more worried than LRAs as regards the impact of the UK leaving from the EU and the Customs Union/Single Market, and also about the impact of the UK leaving on trade and investments.

It can be expected that the scale of the economic effect of the UK's withdrawal from the EU on EU27 regions will depend on the sectors which form the basis of a given local economy, the exposure of those sectors to the UK, and the reallocation of production and exports between sectors which will result from disruptions in trade flows. In that sense, regions with industries and sectors exporting to or importing from the UK would be sensitive and exposed particularly "negatively' to the UK's withdrawal from the EU in case of a disorderly withdrawal.

The way regions, countries and companies understand the risks and opportunities of Brexit, the way they are preparing to deal with the challenges and the degree to which they are able to implement the right plans in a timely fashion will play a key role in mitigating any potential negative impact in their respective economies. The lack of analysis of the impact of Brexit in many regions and the absence of data on the impact inevitably restricts the scope to prepare effectively and take mitigating measures. Hence, the need for more specific, localised impact studies to get a better understanding of the potential impacts of Brexit and of the linkages across and between sectors/activities. It is expected that awareness raising and sharing of information will help businesses, notably SMEs, better prepare to face structural and economic adjustments, and will help public authorities ensure that they are in a position to respond to companies' needs in an agile way, should the need arise. An important conclusion resulting from the analytical work is also the importance of continued cooperation between EU27 and UK regions post-Brexit and the importance of territorial cooperation programmes and macro-regional strategies.

2 Introduction

Following the outcome of the referendum held on 23 June 2016, the UK Government formally invoked Article 50 of the Treaty on European Union on 29 March 2017, which triggered the launch of the two-year period to conclude a withdrawal agreement between the UK and the European Union.

Since the decision on the UK's withdrawal from the EU was taken, a number of studies and reports have looked at the possible consequences of this withdrawal on the socio-economic conditions in the EU. Most of these studies focus on the global or Member State levels whereas the possible socio-economic impact of the withdrawal at local and regional level has not received the same attention, with the important exception of some regions that are looking into what it would mean for their own economies and societies.

The UK withdrawal raises important questions for policy makers who must define and coordinate appropriate regulatory, financial and support frameworks. Local and regional authorities (LRA) face particular challenges as they must develop both a long term, global vision and formulate strategies to address the adverse effects of the UK leaving the EU on their local economies.

Considering the expected repercussions from the UK's withdrawal and the potential asymmetric territorial impact within the EU27 (with some regions substantially affected), the CoR has started a process of analysing and debating the exposure of EU27 regions and cities to the UK's withdrawal from the EU. The process has included a discussion between CoR Members and the chief EU negotiator **Mr Barnier at the level of the Conference of Presidents** in January 2017 as well as the participation of **Mr Barnier at the CoR plenary** in March 2017 and the adoption of a resolution on the Implications for Local and Regional Government of the UK's intention to withdraw from the European Union. The Conference of Presidents (CoP) is closely following the negotiations and possible consequences of Brexit. Where relevant, **CoR rapporteurs** are also continuing to address the expected consequences of the UK's withdrawal from the EU in their respective opinions.

The **CoR ECON Commission** is overseeing a **comprehensive process of analysing the exposure of EU27 regions and cities to the UK's withdrawal from the EU** on the basis of key economic indicators pertaining to the nature and the scale of their trade/economic linkages with the UK. The aim of this work is mainly to provide ECON commission members with information on the economic implications of the UK's withdrawal as well as to contribute to overarching CoR efforts to analyse the wider consequences of the UK's withdrawal:

- ECON commissioned a **study**[2] on *The impact of the UK's withdrawal from the EU on EU27 regions and cities* looking in particular at the exposure of EU27 regions to the UK's leaving by mapping and analysing their most exposed economic sectors and the weight of their trade linkages with the UK in their respective economies. The study was carried out by t33 (hereafter t33 study).

[2] Levarlet François and Seri Paolo, Zingaretti C., Hrelja D., Longeroux E. (t33); contributions from Lüer C (Spatial Foresight) and Derszniak-Noirjean M (ÖIR). Assessing the impact of the UK's withdrawal from the EU on regions and cities in EU27. *European Committee of the Regions*, Specific Contract 7298, implementing framework contract n° CDR/DE/16/2015/1. The study is available here and the PPT presentation of the study is available here

- ECON conducted, in cooperation with EUROCHAMBRES[3], a **survey** on *The impact of the UK's withdrawal from the EU on EU27 regions and cities* which concludes that the responses indicating negative impacts dominate, with the most negative impact anticipated in the policy areas of trade and employment and in the sectors of tourism, services and manufacturing[4].

- ECON organised a **Territorial Impact Assessment (TIA) workshop** on the potential impact of the UK's withdrawal from the EU on EU27 regions and cities. At this workshop, experts from regions, cities, chambers of commerce and associations representing regions deliberated the potential asymmetrical impact of the UK leaving on certain EU27 regions and cities, looked at a great many linkages across and between sectors/activities and shared experiences in assessing the local/regional impact in their respective regions. They also described how they are paving the way for their respective regions to fill the gap that the UK may leave in the Single Market in certain key economic sectors.

This note aims to bring together the results of all three strands of the analytical work conducted by the ECON commission as well as recent findings from other relevant sources. It is built around three main pillars, i.e. the economic, social and governance dimension of the challenges, and provides conclusions and some preliminary recommendations aimed at bringing up some of the complexities and interlinkages within and between regions – cultural, economic, and social – that are not necessarily picked up by analyses based on statistics.

Beyond the executive summary, the introduction and the conclusions, the note comprises three main chapters. Chapter 3 gives an overall picture of the different economic aspects of the UK leaving for EU27 regions (key results of the studies and the CoR/EUROCHAMBRES survey which formed the basis of the analytical work; the impact of customs; the costs of rules of origin; the difference between big companies and SMEs as regards mitigation measures). This chapter looks also into the potential impact of Brexit on the primary, secondary and tertiary sector and places a particular emphasis on customs, transport and FDI. Chapter 4 places the emphasis on some of the expected social effects, namely some issues that are specific to border regions, the question of migration, and education and research. Chapter 5 then focuses on some consequences for regional public administrations, notably the question of EU funding and the administrative burden resulting from possible tariff and non-tariff barriers to trade, and provides, in this regard, some evidence on the views of LRAs and chambers of commerce as reflected in the COR/EUROCHAMBRES survey.

[3] EUROCHAMBRES is the Association of European Chambers of Commerce and Industry and a key representative of businesses to the European institutions. EUROCHAMBRES voices the interests of over 20 million member businesses in 44 European countries through a network of 1700 regional and local Chambers represented by 44 national and 2 transnational organisations. More than 98% of these businesses are small or medium sized enterprises. EUROCHAMBRES is the only European body that serves the interests of every sector and every size of European business. www.eurochambres.eu. Contact person: Ben BUTTERS, Policy Director+32 (0)2 282 08 71, butters@eurochambres.eu

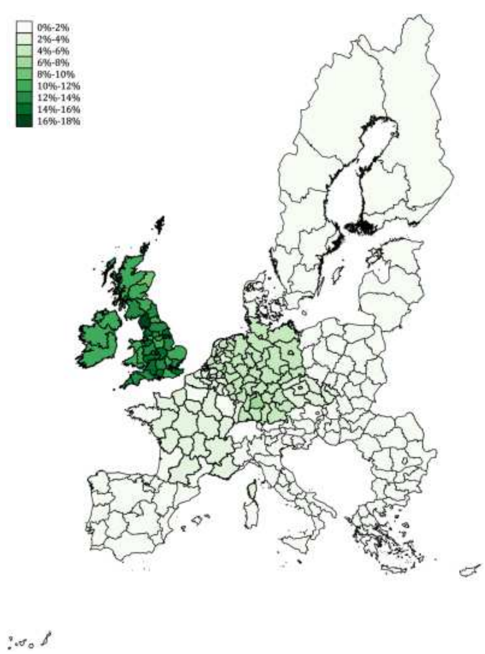
[4] Between 10 November and 15 December 2017, the European Committee of the Regions (CoR), in co-operation with Eurochambers carried out an online consultation on ***The impact of the UK's withdrawal from the EU on EU27 regions and cities***. This survey gathered 277 contributions (134 local and regional authorities (LRAs), 81 chambers of commerce and 59 others (universities or associations, for instance) and with many of the respondents having a significant expertise in the matter, and thus the results offer a useful snapshot of the views expressed by experts regarding the challenges presented by Brexit to LRAs.

3 Expected economic effects

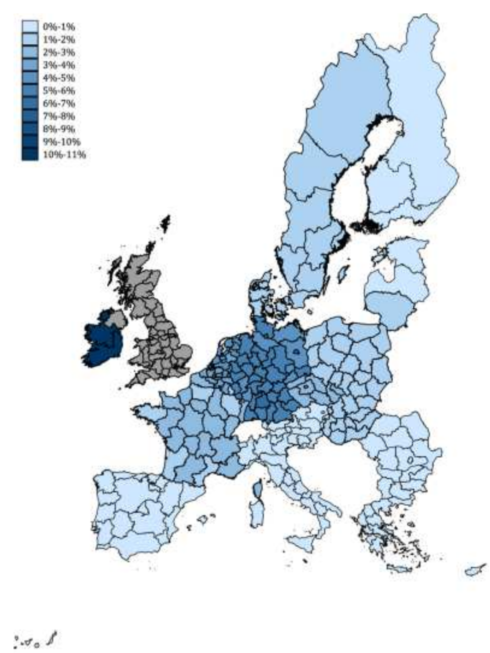
3.1 The different economic aspects of Brexit exposure

A recent study by Chen *et al*[5] developed "an index of (...) exposure (to Brexit), which incorporates all the effects due to geographically fragmented production processes within the UK, the EU and beyond". The exposure of regions, at NUTS2 level, is based on the merging of the information contained in a series of data sources. The main question behind the analysis is how big the required structural and economic adjustments triggered by the UK leaving for any given region are. The study focused on the exposure of European regions to trade related risks of Brexit, having in mind the complex global value-chains which crisscross borders many times. It covered all EU regions, including those in the UK. The authors analysed four areas: primary industries, manufacturing, construction and services. From these elements, they calculated an aggregate economic exposure. It has to be noted that this study served as an important input to the TIA workshop organised by the CoR, along with the t33 study and the CoR/EUROCHAMBRES survey, and Prof. McCann, one of the authors of the study, participated in the TIA workshop.

The findings demonstrate that only regions in the Republic of Ireland face exposure levels similar to some UK regions (UK regions are far more exposed than regions in other EU Member States). Overall, Ireland, with both NUTS 2 regions having an exposure above 10%, is the most affected country. Out of the more than 200 regions analysed in the study, 36 have an exposure of above 5%; of these almost all are German (headed by Stuttgart, Tubingen and Oberbayern). Malta is also one of the most affected countries (5,08% exposure). Dutch regions also have high exposure levels, ranging from the 5,16% for Zeeland to the 3,67% for Utrecht, followed by Belgian regions (ranging from 4,14% for Brabant Walloon to 2,78% for the Region of Brussels-Capital).



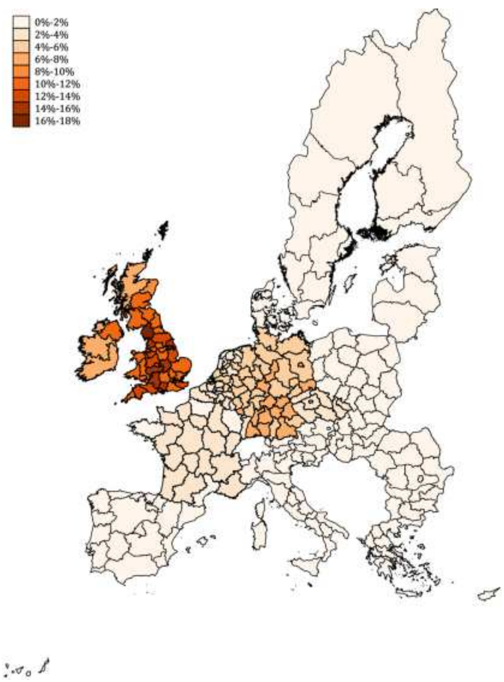
Map 1 - Regional shares of local GDP exposed to Brexit (including the UK). Source: Chen *et al*.



Map 2 - Regional shares of local GDP exposed to Brexit (excluding the UK). Source: Chen *et al*.

[5] Chen W, Los B, McCann P, Ortega-Argilés R, Thissen M, van Oort F. The continental divide? Economic exposure to Brexit in regions and countries on both sides of The Channel. *Pap Reg Sci*. 2018;97:25–54. Available here.

The exposure of labour and income to Brexit-related trade, as visible on map 3, extracted from the aforementioned study by Chen *et al*., is mainly concentrated, in EU 27 terms, in North-Western Europe: Ireland, first and foremost, and then Germany, the Netherlands and Belgium. To a much lesser extent, France is also exposed to it.

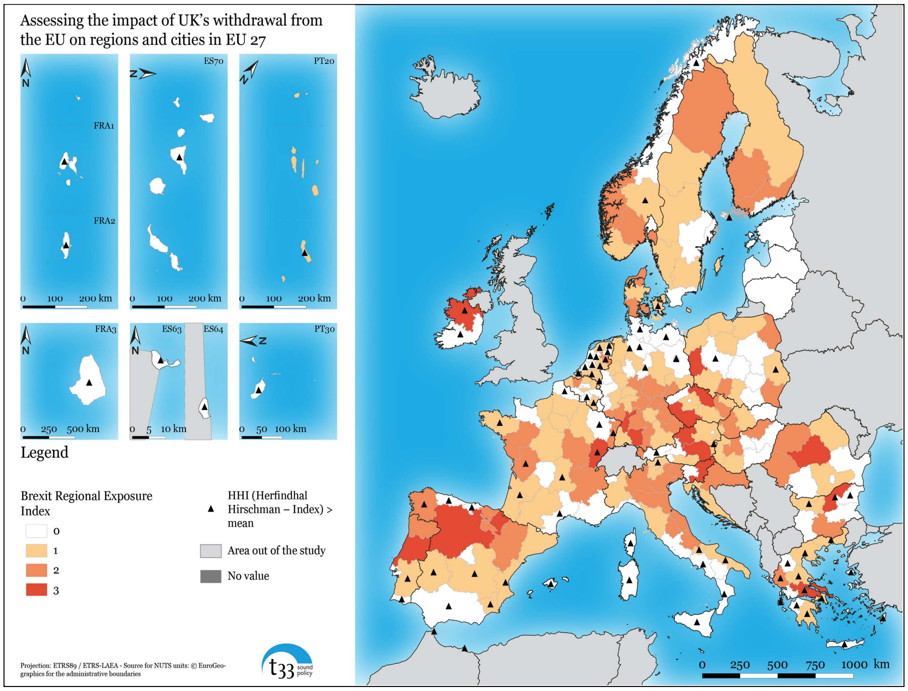


Map 3 - Regional shares of local labour income exposed to Brexit, per NUTS 2 level.

Source: Chen *et al*, p. 35.

The t33 study[6] is mainly based on a literature review, a statistical analysis using (Eurostat) and international databases, while also relying on more qualitative case studies and interviews with local stakeholders. The exposure index covering the EU27 regions is based on updated data on trade flows (exports) considering six key economic sectors in EU27 (i.e. transport vehicles; machinery; electronics; textile and furniture; vegetables; foodstuff and wood; chemical; and plastics). The study concludes that there are no clear winners in terms of new economic opportunities deriving from UK's withdrawal from the EU, whereas many regions are likely to face adjustment costs depending on the scale of their engagement in trade with the UK. Also, there are regions in a 'grey' situation with certain activities losing from UK's withdrawal, while others are benefitting in some way.

[6] Levarlet F, *op. cit*.



Map 4- Brexit regional exposure index, regional level. Source: t33 study

The t33 study concludes that some of the most exposed Member States and regions, by sector, are the following.

- In the "Transport vehicles" sector, the most exposed regions are West Development Region (RO), Stuttgart (DE); Niederbayern (DE) and Midi-Pyrénées (FR). Among smaller countries, Belgium is one of the most exposed.
- In the "Machinery" sector, some of the most exposed regions are Tübingen (DE), and Emilia Romagna (IT), while among smaller countries the most exposed are the Republic of Ireland, the Czech Republic and the Netherlands.
- In the "Electronics" sector, the most exposed regions are Západné Slovensko region (SK), Střední Morava region (CZ), and West Development Region (RO), while among smaller countries the most exposed are the Republic of Ireland and the Netherlands.
- In the "Textile and Furniture" sector, the most exposed regions are Tuscany (IT), Marches (IT), Norte (PT) and Severozapaden (BG). There are no small countries particularly exposed in this sector.
- In the "Vegetables, Foodstuff and Wood" sector, the most exposed regions are Ipeiros (EL) and Brittany (FR). Among smaller countries the most exposed are the Republic of Ireland and Latvia.
- In the "Chemical and Plastics" sector, the most exposed regions are Auvergne (FR), Rheinhessen-Pfalz (DE), Walloon Brabant (BE), Sterea Ellada (EL), and Zeeland (NL). Among smaller countries the most exposed is again the Republic of Ireland.

These conclusions are also largely in line with the findings of a working paper by *Oliver Wyman and Clifford Chance*[7], which underscores that the direct costs of the UK leaving are concentrated in a few sectors across the EU27. Between them, automotive; agriculture; food and drink; chemicals and

[7] Oliver Wyman and Clifford Chance, "The 'red tape' cost of Brexit", 12 March 2018, available here

plastics; consumer goods; and industrials will incur an estimated 75% of the impact despite accounting for just 23% of the EU27's economic output.

Experts from regions, cities, chambers of commerce and associations representing regions that participated in the CoR TIA workshop highlighted the 'limitations' of some of the studies' results. This concerns for instance the fact that the focus on GDP/trade inevitably means regions with higher levels of GDP/trading patterns come out as more affected by Brexit, which can mask and understate the impact in other regions where economic activities are smaller but more concentrated. It was also underlined that the complexities and interlinkages within communities and regions – cultural, economic and social linkages –do not necessarily get picked up by statistics based analyses. Hence the concluding comments of experts about the need for more specific, localised impact studies to get a better understanding of the potential impacts of Brexit.

While looking into the potential impact of the UK leaving, one should also bear in mind the economic benefits of open markets and trade, which if reversed would lead globally to welfare and growth losses; in this context, certain regions would be more affected than others. It can be expected that the scale of the economic effect of the UK's withdrawal from the EU on EU27 regions will depend on the sectors which form the basis of a given local economy, the exposure of those sectors to the UK, the dependence of any given sector on maritime, air or road transport towards and from the UK, which will be affected by a potential end of free-movement, and the reallocation of production and exports between sectors which will result from disruptions in trade flows. In that sense, regions with industries and sectors more heavily engaged in trade with the UK would be particularly sensitive and "negatively' exposed to the UK's withdrawal from the EU.

The exposure as presented by the two aforementioned studies is trade-related only. It gives an image of the risks that each region faces because a disruption in trade could come in multiple forms. If the UK leaves the customs union, higher costs and lengthier procedures would follow. If the UK leaves the Single Market, different standards will imply a rise in production costs and bureaucracy to have products certified.

If the UK leaves the EU customs union and opts for a free trade agreement (FTA) with the EU, the future agreement will require customs controls in order to determine where a good has originated, on the basis of the EU's Rules of Origin (RoO). As explained by Paola Conconi[8], within a customs union, goods cross borders without any checks at all, while under FTAs shipments need to be checked by customs authorities to ensure that they conform to RoO. She also notes that only goods that comply with these rules are considered as originating from member countries and are granted preferential tariff treatment. Satisfying origin criteria is straightforward for simple goods like iron-ore but is much more complicated for goods like cars, which are produced in international value chains using components from around the world[9]. If the UK withdraws from the EU customs union, the border between Northern Ireland and the Republic of Ireland will become the only external land-border of the UK with the EU[10]. In this context, in principle there would need to be checks at the border between Northern Ireland and Ireland, because the UK and the EU would no longer be applying the same law on trade with the outside world[11]. If there were not checks, and the UK had a future free

[8] CONCONI, Paola, *Many multinationals may pull out of the UK if it leaves the Customs Union,* London School of Economics, 28 February 2018, available here
[9] *Ibid.*
[10] Oliver Wyman and Clifford Chance, *op. cit.*
[11] THE CONVERSATION, Should the UK remain in the EU customs union after Brexit?, 28 July 2016, available here

trade deal with China that was different to EU-China's trade relationship, Chinese products could be shipped to Northern Ireland and then cross the border into the EU tariff-free, circumventing the EU rules[12]. Border controls would also affect flows of people and labour.

According to a briefing paper by the House of Commons on the impact of the UK's withdrawal from the EU across policy areas[13], the costs of rules of origin in case the UK leaves the Customs Union will be the following: "*With the UK as a customs union member within the European Union, British firms are saved the compliance and administrative costs linked to proving the origin of products shipped in the European market. With the UK instead taking direct control over its external trade policies, and so operating outside the customs union, rules of origin would become necessary under free trade with the customs union. This means British firms would be exposed to a combination of administrative and compliance costs linked to rules or origin, ranging (based on existing estimates) from 4 percent to perhaps 15 percent of the cost of goods sold".*

The paper by Oliver Wyman and Clifford Chance[14] estimates that the annual 'red tape', or tariff and non-tariff, costs of Brexit for EU27 exporters is around £31 billion and for UK exporters it is around £27 billion even after initial steps to mitigate costs have been taken. This is proportionately 4 times larger for the UK as a percentage of Gross Value Added (GVA).

In this context, the overall economic effect of the UK's withdrawal from the EU on EU27 regions has to be assessed by taking into consideration other factors too, e.g. possible changes in the destination of foreign direct investment. The UK has an FDI stock of over £ 1 trillion, about half of which is from other Member States of the EU[15].

In a similar vein, experts participating in the CoR TIA workshop stressed that knowledge-intensive industries might be able to redirect their products to other markets. Crucially, reduced trade links between the UK and EU27 might, through an effect of substitution, even generate business opportunities for some companies, replacing British goods and services' providers within the internal market. Nevertheless, the maps on page 7, 8 and 9 show the potential scale of the risks for each region, which should not be underestimated.

The type of economic tissue might also have a role to play. SMEs do not have the same resources to prepare for economic shocks as large companies do. Regions with a higher concentration of big companies might thus be more exposed, but possibly also more resistant to Brexit, because big companies are already elaborating on the means to overcome potential trade barriers. This depends also very much on the degree to which small and large companies are integrated into global value chains, or regional value chains.

This aspect is also underscored by *Oliver Wyman and Clifford Chance*[16] paper. It is noted that achieving mitigation is not trivial as it will take time, planning, resourcing, and investment for companies to deliver, and the ability to mitigate the impacts of post-Brexit trade barriers will vary by sector and company size. Small firms will find this especially challenging and may be rendered uncompetitive as

---

[12] *Ibid.*
[13] UNITED KINGDOM, PARLIAMENT, HOUSE OF COMMONS, *Brexit: impact across policy areas*, Briefing paper, 26 August 2016, available here
[14] Oliver Wyman and Clifford Chance, *op.cit.*
[15] DHINGRA *et al*., "The impact of Brexit on foreign investment in the UK", The London School of Economics and Political Science, Centre for Economic Performance, available here
[16] Oliver Wyman and Clifford Chance, *op. cit.*

they seek to make the changes needed. However, even within each industry individual impacts and the appropriate response are highly variable. The differences will depend on things like the mix of goods and services the business sells, where it is based, where its customers are, and how complex its supply chain is.

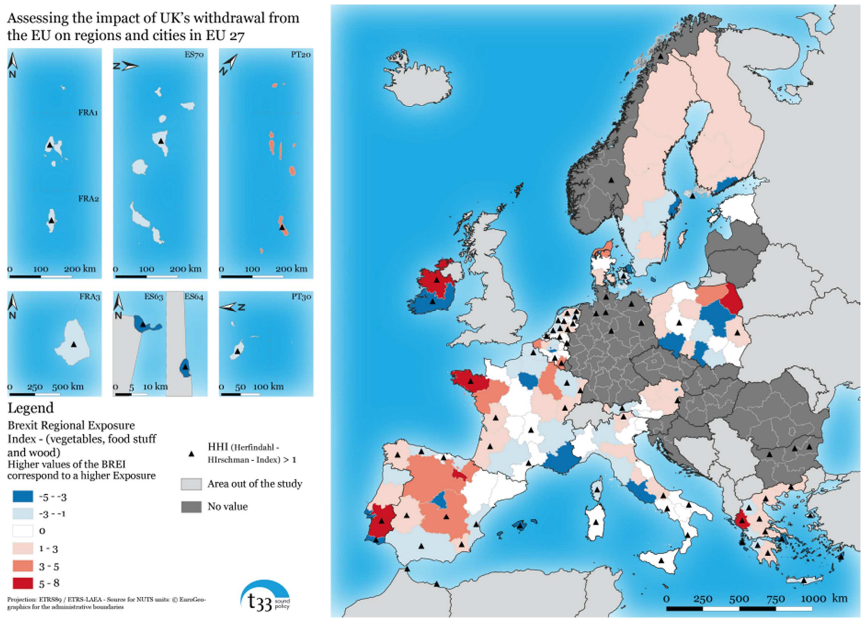
Moreover, regions dependent on economic activities with small added value might suffer a knock-on effect from one sector (agriculture and fisheries, tourism) to others (for example, food-processing industries, real estate) and thus be affected to a much larger extent than what could initially be conceived by a mere static statistical analysis.

The CoR/EUROCHAMBRES survey shows that chambers of commerce are slightly more worried about the impact of the UK leaving from the EU and the Customs Union/Single Market. 68% of respondents representing chambers of commerce expect to be affected to a large or medium extent while this percentage is 53% among LRAs. This is also the case regarding the expected impact in the area of trade where 76,5% of chambers of commerce expect a negative impact while this percentage is slightly lower for LRAs (63,5%) or the area of investments with 54,5% of chambers of commerce and 45% of LRAs expecting a negative impact.

In summary, the uncertainty with regard to both the result of the negotiations and the end-date for an agreement on the future relationship, the interlinkages between the aforementioned dimensions, the dynamic effects triggered by Brexit, the unevenness with respect to how regions and companies are preparing to face the impact, and the complexity of interlinkages that exist in many regions- together these make the prediction of the actual impact on any given sector or region very difficult. Also it has to be taken into account that the ability to diversify quickly into alternative economic activities/markets is more difficult in smaller, and more remote communities – where alternatives do not exist to the same extent as in larger urban areas which are closer to markets. The way regions, countries and companies understand the risks and opportunities of Brexit, the way they are preparing to deal with the challenges and the degree to which they are able to implement the right plans at the right time will play a key role in mitigating any potential negative impacts in their respective economies.

3.2 Primary Sector

As regards the primary sector (vegetables, food stuff (including fisheries) and wood) the study conducted by t33 indicates high exposure in Western French (especially Brittany), Central and Northern Spanish and Flemish regions.



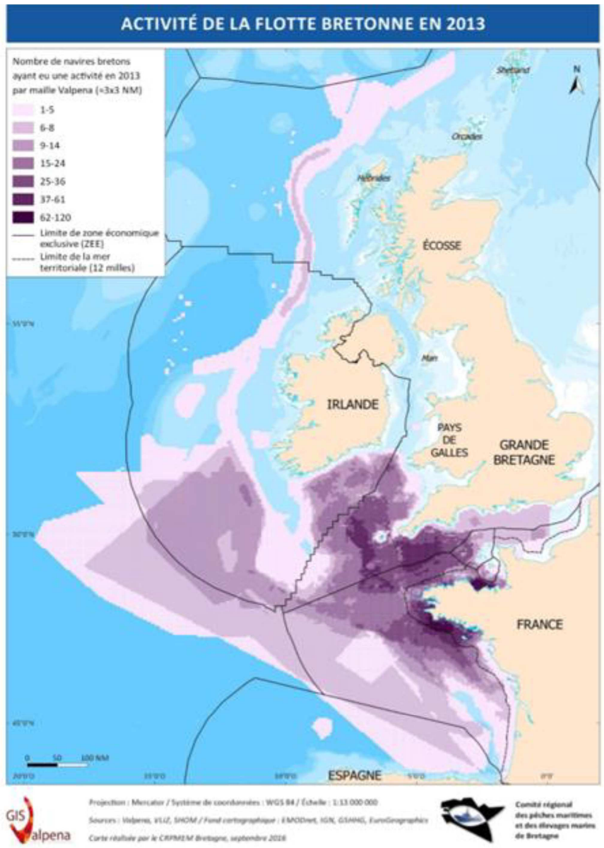
Map 5- Exposure index for Vegetables, Foodstuff and Wood, regional level. Source: t33 study

With a different methodology (see page 7) the study by Chen *et al.* reveals a strong impact throughout the whole of Ireland, followed at considerable distance by the Netherlands and Belgium.

Table 1 – The 20 most exposed NUTS2 regions in primary industries. Source, Chen *et al.*

Region	Country	Exposure	Region	Country	Exposure
Border Midlands and Western	Ireland	30,1%	Zeeland	Netherlands	9,6%
Southern and Eastern	Ireland	23,8%	Friesland	Netherlands	9,1%
Noord Holland	Netherlands	12,3%	Groningen	Netherlands	8,6%
Flevoland	Netherlands	12,3%	Hovedstadsreg	Denmark	8,4%
Noord Brabant	Netherlands	12,2%	Drenthe	Netherlands	8,3%
Limburg NL	Netherlands	11,4%	Prov Luxembourg	Belgium	7,7%
Gelderland	Netherlands	11,4%	Prov WestVlaanderen	Belgium	7,0%
Zuid Holland	Netherlands	11,1%	Prov Limburg	Belgium	6,8%
Overijssel	Netherlands	11,0%	Prov Namur	Belgium	6,3%
Utrecht	Netherlands	10,4%	Prov Antwerpen	Belgium	6,2%

Besides these data, for regions such as Brittany or Galicia, as well as for the whole of Ireland, a potential closure of access to the Exclusive Economic Zone of Great Britain and Northern Ireland and also that of British dependencies, such as the Falkland Islands, would present considerable risks. As fisheries are the drivers of many local economies, the impact could be multiplied throughout the secondary (food industries) and tertiary (tourism, trade) sectors.



Map 6 – Activity of the fishing fleet of Britanny, 2013

Source: *Consequences of "Brexit" for the Atlantic Arc Regions*, Atlantic Arc Commission

On the map above we can see one of the potential impacts of the UK's withdrawal from the EU. As explained by the CPRM Atlantic Arc Commission, one of the principles of the Common Fisheries Policy states that vessels registered with the EU fishing fleet register have equal access to EU waters and their resources. British waters are accessible to EU fishermen without any restrictions. At present, Breton vessels conduct 50% of their activities in the UK's Exclusive Economic Zone (EEZ). The Irish realize 30% of their catch in British waters. If the United Kingdom were to choose to renationalise its territorial waters following Brexit, it would have a big impact on the fishing activity of French and Irish vessels. This would lead to **reduced catches** and make it difficult for certain vessels to continue to operate, with an **impact on employment** in an already fragile sector. Indeed, the clear majority of fishermen have no other work opportunities, therefore few alternatives in the short term.[17]

3.3 Secondary Sector

The exposure for manufacturing is extremely high, when compared to primary industries. Indeed, there are fifty NUTS2 regions that, according to Chen *et al.* have an exposure to the withdrawal of the UK from the EU of 10% or more.

Table 2 – NUTS2 regions with 10% or more of Brexit Exposure.

Source: Chen *et al*.

[17] "Consequences of "Brexit" for the Atlantic Arc Regions" Technical note from the Atlantic Arc Commission, 20 February 2017.

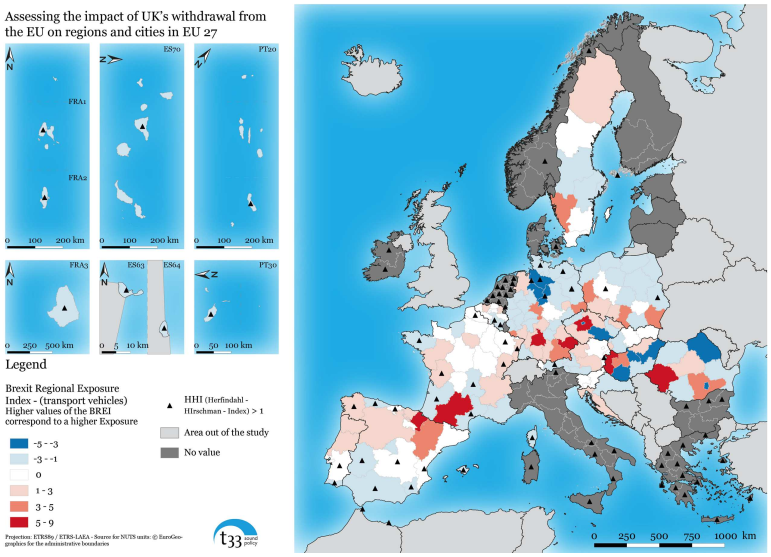
Region	Country	Exposur	Region	Country	Exposur
Southern and Eastern	Ireland	18,8%	Dresden	Germany	13,8%
Border Midlands and	Ireland	18,0%	Brandenburg Nordost	Germany	13,6%
Hamburg	German	17,5%	Thuringen	Germany	13,6%
Berlin	German	17,2%	Tubingen	Germany	13,6%
Koln	German	16,8%	Oberfranken	Germany	13,6%
Dusseldorf	German	16,7%	Luneburg	Germany	13,6%
Darmstadt	German	16,2%	WeserEms	Germany	13,6%
Schleswig Holstein	German	16,1%	Giessen	Germany	13,5%
Halle	German	16,0%	Niederbayern	Germany	13,5%
Brandenburg Sudwest	German	15,6%	Koblenz	Germany	13,4%
Magdeburg	German	15,6%	Mittelfranken	Germany	13,4%
Munster	German	15,0%	Detmold	Germany	13,4%
Mecklenburg Vorpommern	German	15,0%	Trier	Germany	13,4%
Chemnitz	German	15,0%	Karlsruhe	Germany	13,3%
Oberbayern	German	15,0%	Oberpfalz	Germany	13,0%
Rheinhessen Pfalz	German	14,9%	Schwaben	Germany	13,0%
Bremen	German	14,9%	Saarland	Germany	13,0%
Dessau	German	14,8%	Freiburg	Germany	12,7%
Arnsberg	German	14,5%	Zuid Holland	Netherland	11,4%
Stuttgart	German	14,5%	Ile de France	France	10,7%
Hannover	German	14,5%	Flevoland	Netherland	10,5%
Leipzig	German	14,4%	Region de Bruxelles Capitale	Belgium	10,3%
Kassel	German	14,0%	Groningen	Netherland	10,2%
Braunschweig	German	14,0%	Noord Holland	Netherland	10,2%
Unterfranken	German	14,0%	Overijssel	Netherland	10,0%

Again, Ireland is the most exposed country, with both NUTS2 regions being equally affected. The second most affected country is Germany, with cities of Hamburg, Berlin, and in the state of Rheinland-Westfallen, Köln and Düsseldorf, having similar levels of exposure to those of the Irish regions. At some distance, the Dutch Randstad regions, as well as Île de France and Brussels are also above the 10% level of exposure.

The study conducted by t33 analysed several sectors:

- in transport vehicles, West Development region (Romania), Stuttgart and Niederbayern (Germany) and Midi-Pyrénées (France) are likely to be the most affected;
- in other sectors, the results are more diffused. In textiles, one region that seems severely affected is Northern Portugal; in chemicals and plastics, several regions across Spain, France and Germany, as well as Ireland and Bulgaria could be negatively impacted;
- in machinery, the regions between Southern Germany and Northern Italy seem most exposed.

It is worth noting here that even less exposed countries can contain very exposed regions. This is the case, for example, with the West region or the North-West region in Romania, which are among the regions likely to be exposed in the sector of "transport vehicles", as the following map shows.



Map 7 – Exposure to Brexit in the transport vehicles sector
Source: t33 study

3.4 Tertiary Sector

The exposure to Brexit in the tertiary sector is much more complex to measure but it is possible that it will present new opportunities for some of the most central regions of the EU27 in the banking and finances sector, since Paris, Frankfurt, Dublin and Luxembourg are vying to attract financial services from London that want continued access to EU markets after Brexit. A relocation of at least part of the British financial sector to Ireland or the continent could thus have a positive impact on the economies of the EU27.

According to a study by the European Parliament[18], the establishment of a financial centre on the European mainland would involve costs in the short run in increasing capacity, infrastructure and technology and in the relocation of firms, but these costs would be one-off and not insurmountable. The benefits lay in the long run, in economic growth, the attraction of a skilled workforce and increased tax earnings. Such a financial centre is recommended to be physically centralised, just as London is today since this nourishes its growth, as firms will be able to easily find both employees and clients, and vice versa. Furthermore, economies of scale apply, to infrastructure for example. Economies of scope are even more significant, e.g. in knowledge spill over effects.

When it comes to the expected impact in certain sectors (manufacturing, general services, financial services, tourism and agriculture), the CoR/ EUROCHAMBRES survey shows that while the respondents expect a negative impact more often than a positive one, the expectations of positive impact were higher in financial services (13%) in comparison with other sectors. However, if we look into the replies by chambers of commerce the results are slightly more positive since almost 19% of them expect a positive impact on financial services.

[18] European Research Centre for Economic and Financial Governance (EURO-CEFG) of the Leiden University, TU Delft and Erasmus University Rotterdam with contributions from Prof. Dr. Casper De Vries, Peggy Bracco Gartner, Prof. Dr. Matthias Haentjens, Joop Korteweg, Menelaos Markakis, Dr. René Repasi, Jouke Tegelaar, *Implications of Brexit on EU Financial Services*, Directorate General for Internal Policies, Policy Department A: Economic and Scientific Policy, June 2017, available here

It has to be also noted that according to the recent working paper by *Oliver Wyman and Clifford Chance*[19], the largest absolute impact for the UK due to extra costs arising from trade barriers will come from financial services by virtue of London's role as Europe's financial centre and the fact that it will be hard to mitigate impacts in this sector. It is also underscored that EU27 firms are better positioned to mitigate cost increases because a larger proportion of their exports are in goods rather than services, and they also typically have a wider range of alternative suppliers to choose from within the EU27.

On the other hand, regions strongly dependent on tourism might suffer future effects of Brexit, especially if a disorderly withdrawal hinders the movement of passengers. This is especially true for traditional, popular destinations of British tourists, in the Mediterranean and the Atlantic coastal regions of Portugal and France.

As it transpires from the CoR/EUROCHAMBRES survey the most negative impact is expected in tourism (59.5%) and services (49%).Respondents from several countries (e.g. Ireland, Greece, Cyprus, Italy, Spain, Hungary, France, Portugal, Czech Republic, Austria, Croatia) expect a negative impact on tourism. It has to be noted also that some countries have strong tourism links with the UK due to historical reasons e.g. Flanders has the largest number of British Commonwealth graves in the world outside the UK and receives throughout the year many UK and Commonwealth visitors and school children in the area around Ieper and Passchendaele.

The t33 study notes that the top country of origin for visitors to Hauts-de-France and Brittany is the UK (e.g. in Brittany, 22% of foreign stays in hostels and 38% of foreign stays in camping sites are from the UK).

3.5 Transport and Customs

The T33 study, as well as the deliberations at the TIA workshop, indicates that the withdrawal of the UK will have widespread effects on transport. Without free movement of people and with potentially high barriers to trade (which would be the case under a WTO-scenario), new challenges will arise. In particular, ports, airports and other transport hubs will have to implement a new regulatory framework in the transport of goods and people between the UK and EU27. This will imply investment in machinery, software, staff and personnel training, as well as hiring new staff to comply with the newly-applicable regulations. However, since there remains much uncertainty regarding the processes of trade after the UK leaves, authorities and companies cannot proceed to significant financial expenditure at this stage.

A relevant case study presented in the t33 study concerns the region of Flanders and the ports of Belgium. Continental ports are worried since it is not clear whether they will have to reorganise ports to do the border checks. It is not very clear either how important these additional checks will be. It is noted that in 2013, industry accounted for 20% of the gross value-added in the Flemish region, while trade, transport and restaurants accounted for 21.7%. Flanders is also an important logistic hub, due to its central location and its dense and integrated multimodal transport infrastructure. Exports from Flanders have a value of 80% of Belgian GDP, mostly due to the trade of goods transiting through Belgian ports. Based on 2013-2015 data, Belgian exports to the United Kingdom consist mainly of motor vehicles, tractors, cycles and other land vehicles. This sector accounted for 24.1% of total

[19] Oliver Wyman and Clifford Chance, *op.cit.*

Belgian exports to the United Kingdom over the period.[20] Exports through the four ports of Antwerp, Ghent, Zeebrugge and Ostend have traditionally been oriented towards the British Isles. One of the most exposed is the Belgian port of Zeebrugge, which does 45% of its trade with the UK. The automotive sector is of particular interest to Flanders, representing the third largest industry in the region and being at the heart of the logistics hub of the Port of Zeebrugge (the world's largest hub for new cars, handling 2.7 million units in 2016). The UK is the first Flemish market, accounting for 24.16% of the total Flemish export of vehicles for land transport.

Considering these aspects, a possible exit of the UK from the customs union would result in making the Belgian coast an important border of the EU with the UK. Under a WTO scenario[21], the enforcement of customs duties (up to 10% for passenger cars according to current WTO tariffs) and the introduction of customs procedures between the EU and the UK could significantly affect demand and the fluidity of freight flows. As a consequence, Flemish ports could potentially lose an important share of their traffic, affecting port activities and employment in the sector and wider geographical area.

The creation of a new external border on the Belgian coast would also entail the need to find logistical and political solutions to manage migration flows: Flemish ports would have to build border crossing points and cooperate with the UK authorities to prevent access to the port by illegal migrants trying to enter the UK[22].

On a smaller scale, the t33 study notes, providing a concrete case study that La Línea de la Concepción (a municipality of the area Campo de Gibraltar, situated in the south of the province of Cadiz and next to the Gibraltar) is an area which would most likely be negatively affected by a disorderly withdrawal of the UK. It is noted that in 2016 the unemployment rate in La Línea de la Concepcion, where labour supply largely exceeds local demand, was 35.2% compared with 1% in Gibraltar. For this reason, many Spanish citizens of La Línea work in Gibraltar. This group of workers suffered the most immediate consequence of Brexit: a reduction of almost 20% of their real wages caused by the GBP depreciation in the days following the referendum.

However, this is not the only effect of Brexit on Spanish workers in the area. In fact, considering a EU27-UK trade relationship under the WTO scenario, many Spanish workers there could lose their jobs. Taking into account that almost one in five citizens of La Línea is employed in Gibraltar, the impact on families would be dramatic, causing a significant migration toward areas with more favourable employment conditions. Brexit would have a negative impact also on Gibraltarians living in La Línea de la Concepcion who could be forced to move back to Gibraltar, where the cost of living is much higher. Citizens of La Línea and Gibraltarians constitute a significant portion of the 10,000 people commuting every day for work. Considering that Spanish and non-Spanish commuters in Campo de Gibraltar spend about 118 million GBP per year, the consequences in lost revenue due to Brexit would be especially detrimental for the municipality of La Línea.

[20] Towards an Economic Brexit Strategy–position of the Belgian Employers' Federations, Belgian Government, 2017
[21] A scenario where the UK exits the single market and the customs union
[22] T33 study, *op. cit.*

3.6 Foreign Direct Investment

Turning to the potential impact on FDI flows, it has to be noted that the UK had the third highest stock of inward FDI in the world in 2014, behind the US and China[23]. DHINGRA *et al.*[24] note that there is always a statistically significant positive effect of being in the EU on inward FDI. The magnitude ranges from a 14% to 38% increase in FDI depending on the exact statistical method used with an average of 28%. The authors conclude that since leaving the EU will likely have a smaller proportionate effect than joining, Brexit is likely to reduce FDI inflows to the UK by about 22%.

An empirical work on intra-European FDI flows has been recently conducted by ESPON[25] which underscores that "*Brexit is likely to have an impact on intra-European FDI. If more frictions arise in trade between the EU and the UK, Brexit may cause reallocations of FDI between the UK and other EU member states. European owned firms located in the UK that are dependent on access to the Internal Market may choose to relocate to another EU Member State following Brexit. Likewise, firms located in an EU Member State that sell a large share of their production on the UK market may wish to relocate to the UK in order to avoid tariffs and non-tariff barriers to trade which might arise in the future. The extent to which Brexit will influence the location of future FDI flows within Europe and cause relocations of existing investments remains to be seen."*

A very relevant example, in this regard, is the car industry. Cars are a successful part of UK manufacturing[26]. The UK is now the world's fourth largest producer and KPMG (2014)[27] argues that 'much of the recent investment by car manufacturers is in new vehicles which will be predominantly for sale to the EU market.' In 2014, the car industry contributed around 5.1% to UK exports, and about 40% of its car exports were to the EU[28]. Multinational companies like Honda and Nissan have used the UK as their base to serve the European market. For example, almost 80% of the cars manufactured by Nissan in its plant in Sunderland are currently sold to consumers in the rest of Europe. Koji Tsuruoka, Japan's ambassador to the UK in February 2018 reiterated the warning that his country's firms will leave Britain if Brexit makes it "unprofitable" to stay[29].

A recent study by Conconi *et al.*[30] explains how the rules of origin in FTAs distort global value chains, deterring final goods producers from importing inputs from non-member countries. The study[31] helps to explain why Japanese multinationals may pull out of the UK in case of a hard Brexit. Companies like Honda and Nissan rely on global supply chains. For example, key components for the models they produce in the UK are imported from Japan. At present, they can automatically sell the cars they produce in the UK to the rest of the EU without tariffs. In the case of a UK-EU free trade agreement, and if they decide to remain in the UK, they will face a trade-off: stop importing key components from Japan and other non-member countries, to comply with rules of origin and obtain duty free treatment; or keep their global value chains in place, but face a 10% tariff when exporting their cars from the UK

[23] House of Commons Library, *In brief: UK-EU economic relations*, Briefing Paper, 13 June 2016, available here
[24] DHINGRA *et* al., "The impact of Brexit on foreign investment in the UK", The London School of Economics and Political Science, Centre for Economic Performance, available here
[25] ESPON, "The World in Europe: global FDI flows towards Europe"
[26] DHINGRA *et* al., *op. cit*.
[27] KPMG (2014) "The UK Automotive Industry and the EU", report for the Society for Motor Manufacturers and Traders.
[28] DHINGRA *et* al., *op. cit*.
[29] CONCONI, Paola, *op. cit.*
[30] CONCONI *et al*., Internalizing Global Value Chains: A Firm-Level Analysis, 2018.
[31] CONCONI, Paola, *op. cit.*

to the EU. Relocating to continental Europe would allow them to remain in the customs union, avoiding this trade-off[32].

In a similar vein, a paper by the London School of Economics and Political Science looks into the impact of Brexit on foreign investment in the UK[33]. The authors refer to a *Head and Mayer* working paper[34] which is based on data that contains information on the headquarters and assembly location of motor cars. The analysis accounts for how the headquarters decide where to locate their production – for example, why BMW chooses to produce Minis in the UK when selling to France. According to the analysis they estimate the impact of Brexit on plant location as well as the levels of car production and prices. In their work, Brexit has two main disadvantages:

- First, as trade costs rise (due to non-tariff and possibly tariff barriers), locating production in the UK is less attractive because it becomes more costly to ship to the rest of Europe.

- Second, there is an increase in the co-ordination costs between headquarters and the local production plants. Transfers of key staff within the firm may be harder if migration controls are put in place. Different regulatory standards can make coordination of engineering, R&D and consultancy services trickier.

Generally, it is noted that all the things that make trade more costly between firms in different countries will also make trade across countries within multinationals more costly.

It should also be stressed that EU Member States may try and seize opportunities to take over from the UK as a popular destination for foreign direct investment. Over the past 15 years, the UK has received more than 20% of inward EU FDI, but without full access to the EU's internal market, future FDI flows into car factories or financial services hubs that would have gone into the UK had it remained a member of the EU might be redirected and create growth elsewhere in the EU[35].

In relation to the positive impact that FDI may have on a given country or region, it is noted that FDI tends to raise productivity, which increases output and wages. FDI brings *direct* benefits as foreign firms are typically more productive and pay higher wages than domestic firms. But FDI also brings *indirect* benefits as the new technological and managerial know-how in foreign firms can be adopted by domestic firms, often through multinationals' supply chains (Harrison and Rodriguez-Clare, 2009). FDI can also increase competitive pressure, which forces managers to improve their performance[36].

In the assessment of various regions, the t33 study found evidence that local actors regard FDI changes as both an opportunity and a threat. Opportunity exists in such areas as, for instance, Berlin, Cork and Amsterdam, where the competitiveness of the economic context could enhance localization of firms previously based in the UK now seeking to have a new operations base or corporate seat located within EU27 borders.

[32] CONCONI, Paola, *op. cit.*
[33] DHINGRA *et* al., *op. cit.*
[34] Head, K. and T. Mayer (2015) "Brands in Motion: How Frictions Shape Multinational Production", UBC Working Paper.
[35] BUITER, Willem et al., "The implications of Brexit for the rest of the EU", *CEPR's* (Centre for Economic Policy Research) *policy portal*, 2 March 2016, available here
[36] DHINGRA *et al.*, *op. cit.*

Threats are most likely in areas such as the Canary Islands, Andalusia, Baleares and Valencia, where UK purchases in the real estate sector could slow down as a result of potentially diminished access to healthcare and insurance due to change in the status of British citizens in the EU27.

Moreover, almost half of the respondents to the survey conducted by CoR and EUROCHAMBRES believe there might be negative consequences for their regions in the area of investment.

Figure 1 – Survey on the UK's withdrawal from the EU: almost 47% of respondents fear negative consequences in terms of investment

What kind of impact do you expect that the UK's withdrawal from the EU will have on your region/city in the following areas? : Investments

		Answers	**Ratio**
No impact		66	23.83 %
Positive impact/Opportunity		25	9.03 %
Negative impact/Threat		130	46.93 %
Don't know		44	15.88 %
No Answer		12	4.33 %

4 Expected social effects

4.1 Social effects in border regions

Border regions with the UK (maritime included) are likely to be severely affected by Brexit. This is true especially for the border between Northern Ireland and the Republic of Ireland. Tens of thousands of students and workers need to cross the border (sometimes more than once in each trip) in their daily commute. A hard border between the two territories would make such travels harder and introduce new costs, and the synergies that have been created in the business and academic sectors in both sides of the border very difficult to maintain.

Crucially, the peace process could be severely damaged. Also the European funds that support local government and its communities could be at risk, adding an economic element to the political tensions. The PEACE Programme was initially created in 1995 as a direct result of the EU's desire to make a positive response to the paramilitary ceasefires of 1994. It has persisted in his support to the results of the Good Friday Agreement and the PEACE IV Programme for 2014-2020 includes 270 million Euros, of which €229m is provided through the European Regional Development Fund (ERDF).

Also problematic are the consequences for the border region of Gibraltar and La Línea de la Concepción, in the Andalucia region of Spain, deeply interdependent in labour. The French regions of Brittany and Hauts-de-France may also see their tourism and the transport of passengers affected.

4.1 Migration

The uncertainty over the future of British residents is obviously a concern for regions with a high percentage of British residents. The uncertainties with regards to the UK's plans for hororing the current citizenship's agreement (Joint declaration of December 2017) remain an issue for those British residents who choose to live in EU member states for professional reasons or others. The reverse is equally challenging as UK citizens might find themselves in legal limbo after March 2019.

As the table below shows regions in Spain have the highest numbers of UK citizens living in their territories. Ireland is also potentially one of the most affected countries, though this might be mitigated by the fact that many citizens have double British and Irish nationality. The Mediterranean coast of Spain, with hundreds of thousands of British residents, or Malta, with British residents constituting three fifths of their EU migrants, might be more drastically affected in case of a disorderly withdrawal in which the rights of residence would not be secured.

In absolute numbers				As a relative share ([1])			
Rank	People living in ...	... but born in	(persons)	Rank	People living in ...	... but born in	(%)
1	Germany	Poland	2.749.670	1	Czech Republic	Slovakia	74,8
2	Italy	Romania	768.634	2	Slovenia	Croatia	69,9
3	Spain	Romania	690.505	3	Slovakia	Czech Republic	68,9
4	United Kingdom	Poland	654.010	4	Hungary	Romania	66,1
5	France	Portugal	617.235	5	Latvia	Lithuania	65,9
6	United Kingdom	Ireland	468.185	6	**Malta**	**United Kingdom**	**59,5**
7	Germany	Romania	449.920	7	**Ireland**	**United Kingdom**	**51,8**
8	Germany	Czech Republic	441.640	8	Lithuania	Latvia	51,4
9	France	Italy	345.038	9	Germany	Poland	51,1
10	Germany	Italy	330.730	10	Italy	Romania	49,1
11	United Kingdom	Germany	299.745	11	Croatia	Germany	47,7
12	**Spain**	**United Kingdom**	**296.220**	12	Portugal	France	45,3

13	Czech Republic	Slovakia	289.573	13	Luxembourg	Portugal	37,8
14	France	Spain	288.168	14	Spain	Romania	36,5
15	**Ireland**	**United Kingdom**	**287.600**	15	Finland	Sweden	36,2

Table 3- Largest 20 communities of people born in one EU Member State and living in another, 2011.

Source, Eurostat

Concerning EU27 citizens in the UK, as of 2017 there were, according to the British Office of National Statistics, 3.6 million EU-migrants in the country. Of these, more than half (1.9 million) come from the most recent Member States and in recent years the influx of migrants from Member States of the last enlargement processes has been especially big.

Total UK pop.	British citizens	Total Migrants	EU citizens					Rest of the World
			Total	EU14	EU8	EU2	Other	
64.952	55.614	9.317	3.635	1.659	1.445	431	101	5.682

Table 4 - Population in the UK, divided by origins, in thousands.

Source: Office of National Statistics [37]

Of the five most common non-British nationalities for usual residents in the UK, four were from EU27 Member States: Poland (916,000), Republic of Ireland (332,000), Romania (233,000) and Portugal (219,000)[38]. Among the EU27 countries with more than 1% of nationals living in the UK are Poland, Ireland, Cyprus, Malta, Latvia, Lithuania, Romania, Slovakia, and Portugal[39].

Migration affects regions asymmetrically and one of the cases presented in the t33 study is the region of Malopolska. In that region, in 2011, almost 1,5% of the population had migrated to the UK[40], three times more than the population migrating to Germany.

Any change in the rights of residence of EU migrants could have big impacts in their countries of origin, especially in regions where there has been a large flux of departures towards the UK in recent years. Whether such migrants would return home or instead migrate to another EU country, and whether it would be positive or negative were they to return home, would be hard to assess at this stage.

On a national scale, a drop in remittances might occur. Should former migrants return to their regions of origin, an increase in unemployment rates in these regions could also occur. On the other hand, the return of mostly young and well educated workers with additional skills acquired during their career in the UK could be an asset.

Experts at the CoR TIA workshop also noted that it is difficult to discern how the asymmetries would play out at the sub-national level. If a substantial number of Poles and Romanians return from UK after

[37] EU14 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, Netherlands, Portugal, Republic of Ireland, Spain and Sweden); EU8 (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia); EU2 (Bulgaria and Romania); Other (Cyprus, Malta and Croatia).
[38] Source, Office for National Statistics.
[39] Source, Office for National Statistics.
[40] Data available here, p.19.

Brexit, there will be two opposite effects: (i) remittances will diminish, affecting primarily the spending power in the depressed regions of the respective countries from which the migrants originate (mainly, the Eastern parts), and eventually the regional GDP/head; on the other hand, (ii) if qualified personnel return, such as nurses or IT professionals which are already in short supply in Eastern Europe, the mid-term effect may be positive and more evenly spread geographically. It is really hard to anticipate at this point which effect will prevail. Moreover, even if some people in the categories (i) and (ii) were forced to leave Britain, they might relocate to other parts of Northern Europe instead of returning home.

4.2 Education and Research

Brexit is likely to have strong effects on innovation in the economy. While there is large uncertainty on whether or not the UK will participate in programmes such as Horizon 2020, it is clear that the effects will be felt in new cooperation projects.

Participations

	Total participations	UK participations	UK share of total participations	UK ranking
Total	63.685	8.056	12,6%	2

EC Funding

	EC total funding (€ millions)	EC funding to the UK (€ millions)	UK share of EC total funding	UK ranking
Total	26.655	3.974	14,9%	2

Table 5 - Horizon 2020 UK Participation Statistics: UK Totals as of 30th September 2017. Source: UK Government

The UK plays a central role in European Research and Development, capturing a disproportionally high share of the European funds for R&D and hosting in its universities a large number of students and researchers from the EU27.

Respondents to the CoR/EUROCHAMBRES survey, notably from Nordic countries, expressed concern with regard to the impact on cooperation programmes/joint EU projects (e.g. Horizon 2020), research and other knowledge exchange projects, access to academic networks.

An interesting example in this area comes from a case study included in the t33 study regarding Brittany. It is noted that there is a significant integration of research activities between Brittany and the UK, especially when it comes to EU funds. Under the Seventh Framework Programme, for example, research stakeholders from Brittany participated in 256 collaborative projects with the UK (74% of the collaborative projects involved UK partners) for a total amount of EUR 94.5 million. Similarly, in the cross-border field of cooperation, the ETC programmes '2 Seas' and 'France (Channel) England' enable stakeholders from Brittany and Hauts-de-France to collaborate with their British neighbours, sharing funds and experience. Interviewed people expect that financing for research activities and opportunities for student exchanges through participation in the Erasmus programme will be curtailed.

While the UK's withdrawal could thus have an immediate negative impact on European research projects, over time we could see these resources, both financial and, more fundamentally, human, feeding the R&D capabilities of the EU27, and especially those regions with more dynamic economic and educational sectors.

5 Expected effects on public administration

5.1 Consequences for LRAs

Many LRAs face challenges concenring how to plan for and deal with the consequences of the UK's withdrawal from the EU. Whether it concerns public/private initiatives, drafting strategies or the implementation of specific studies, most respondents to the CoR/EUROCHAMBRES survey answered that nothing had so far been started or planned.

The survey asked if the regions have undertaken or are planning to undertake an impact assessment of Brexit. On this question 11.5% say an impact assessment has been undertaken and 20% that it is planned but as many 63% respond that an impact assessment has neither been carried out nor is planned.

Figure 2 – Survey on the UK's withdrawal from the EU: over 60% of respondents have not started nor planned to start a structured answer to Brexit

Impact Assessment/Study	Answers	Ratio
Already implemented	32	11.55 %
Planned/In planning	55	19.86 %
Neither planned nor implemented	175	63.18 %
No Answer	15	5.42 %

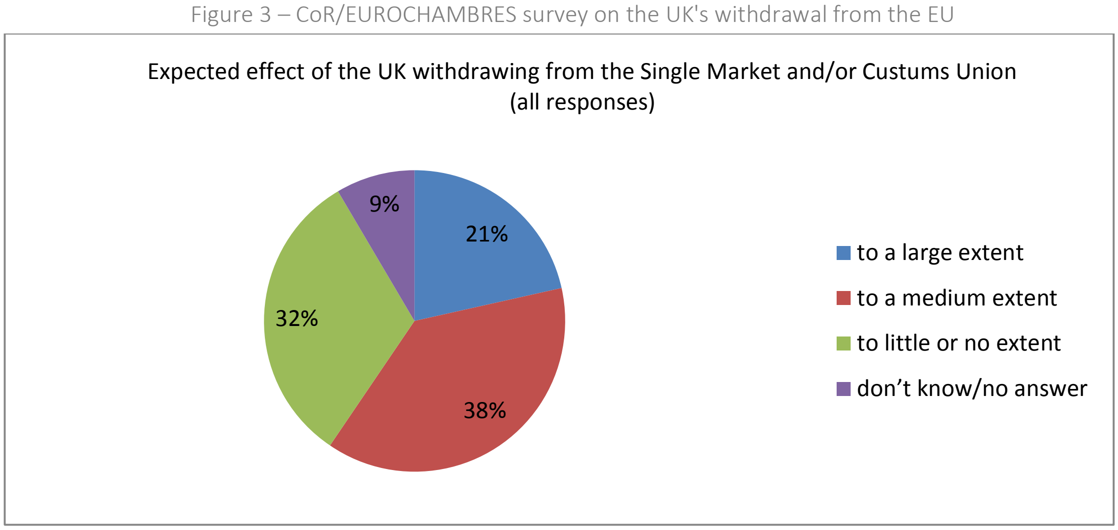
Cooperation actions between public and private sector stakeholders	Answers	Ratio
Already implemented	31	11.19 %
Planned/In planning	54	19.49 %
Neither planned nor implemented	170	61.37 %
No Answer	22	7.94 %

Development of a strategy to address the impact	Answers	Ratio
Already implemented	9	3.25 %
Planned/In planning	68	24.55 %
Neither planned nor implemented	180	64.98 %
No Answer	20	7.22 %

Actions by individual businesses or associations/groups of businesses	Answers	Ratio
Already implemented	35	12.64 %
Planned/In planning	71	25.63 %
Neither planned nor implemented	148	53.43 %
No Answer	23	8.3 %

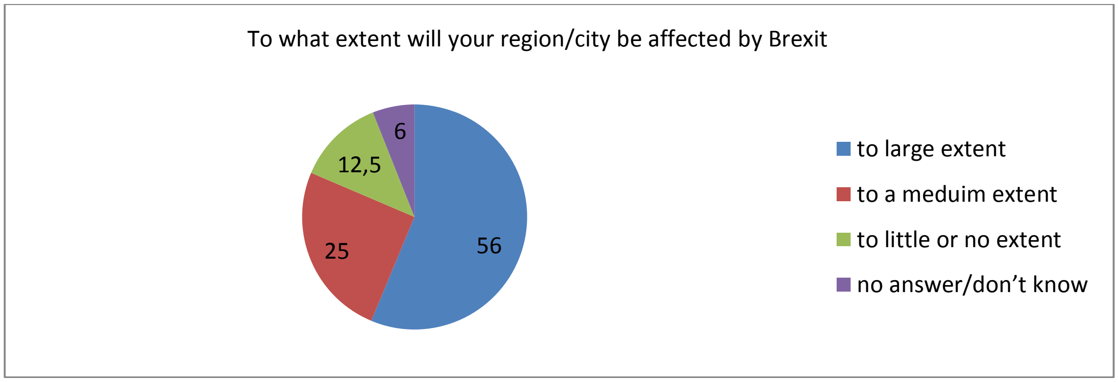
What is surprising is that as many as 85% of **those that plan an impact assessment** expect to be affected to a large or medium extent by the UK's withdrawal from the EU, the Single Market and the Customs Union, compared to 59% for all respondents but only 30% in the case of those who had not and were not planning to undertake an impact assessment.

Figure 3 – CoR/EUROCHAMBRES survey on the UK's withdrawal from the EU



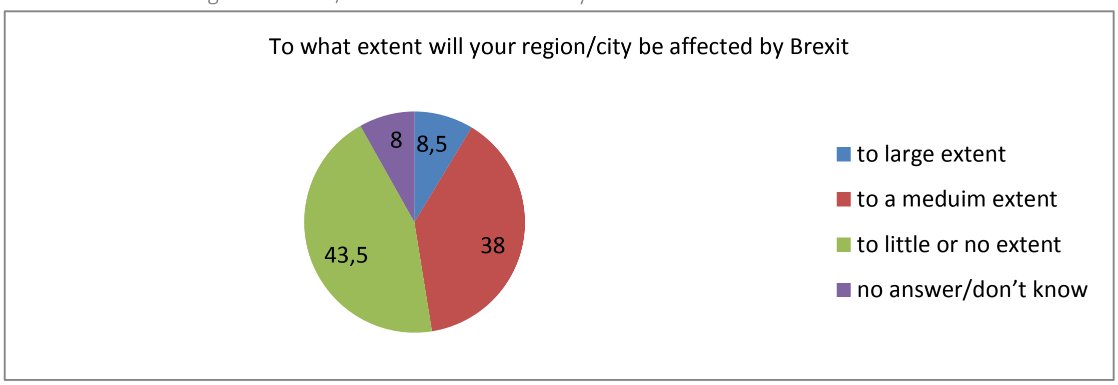
Of the regions that have carried out an impact assessment, 81% expect to be affected to a large or medium extent by the UK's withdrawal from the EU, the Single Market and the Customs Union.

Figure 4 – CoR/EUROCHAMBRES survey on the UK's withdrawal from the EU



Whereas regions/cities **that have not and do not plan to undertake an impact assessment** expect the following impact.

Figure 5 – CoR/EUROCHAMBRES survey on the UK's withdrawal from the EU



It is also interesting to note that of those regions that have made an impact assessment, 84% expect negative impact on trade, 56% on investment and 40% on employment. However, among these regions 25% expect a positive impact on investment and 15% a positive impact on education and research. Finally, 47% answer that healthcare will not be affected and 12.5% that there will be no impact on investment, employment and education and research.

Local and Regional Authorities are not expected to be adversely impacted as regards their internal administration. That said experts participating in the TIA workshop stressed that cuts to the EU budget resulting from the departure of an important net contributor to the EU's finances would have negative impacts on regions that benefit from funds such as European Agricultural Guarantee Fund (EAGF), the European Agricultural Fund for Rural Development (EAFRD), the European Regional Development Fund (ERDF) and the Cohesion fund (CF).

This same conclusion can be drawn from the CoR/EUROCHAMBRES survey. It is clear from the survey that a majority of local and regional authorities are worried about budgetary constraints resulting from the UK's withdrawal from the EU. Almost 60% believe financial losses would be possible because of a reduction in the EU's budget. However, there is also another important dimension which has to be taken into account when looking at the potential impact of cuts to EU budget/funds. This pertains to the potential impact of the UK's withdrawal on the eligibility of regions under Cohesion Policy rules since the UK's departure will lower EU GDP per head and, thus, trigger changes in terms of eligibility/status for some EU27 regions by virtue of the statistical effect (changing their status from less developed regions into transition regions or more developed regions)[41]. Moreover, other decisions will have a bearing on the scale of the actual impact on any given EU27 region or Member State such as a revision of the EU's "own resources decision", the law that enshrines the British rebate, the structure of the new budget for 2021-7, or possible specific EU measures to support regions or sectors affected by the UK's departure (e.g. in November 2017, EU Commissioner for Competition policy, Margrethe Vestager, and the competent Irish authorities agreed to establish a working group on how to help Irish business deal with Brexit. Through this working group, Irish officials will be able to work with Commission officials on an ongoing basis on potential future supports for Irish business[42]).

Public administrations, notably in regions situated across a potential future EU27/UK border, are likely to bear an increased administrative burden since, in case the UK leaves the Customs Union and/or the Single Market, higher costs and lengthier procedures would follow, different standards will imply a vast increase in paperwork and human resources to have products certified, and port authorities might be called on to do border checks pertaining not only to goods but also to people (illegal migration).

It should also be noted that territorial cooperation, while maybe not disappearing, will have to be re-thought. Currently several programmes involving the UK, such as *Interreg North-West Europe* (NWE)[43], *Interreg V-A - United Kingdom-Ireland* (Ireland-Northern Ireland-Scotland)[44] and *Interreg VA France (Channel) England*[45] are in place. A important conclusion resulting from the analytical work is the importance of continued cooperation between EU27 and UK regions post-Brexit and the importance of territorial cooperation programmes and macro-regional strategies.

Figure 6 – Answers to Survey on the UK's withdrawal from the EU: budgetary effects.

What kind of impact, overall, do you expect that the UK's withdrawal from the EU will have on the budget of your region/city?

		Answers	Ratio
No impact		95	34.3 %
Positive impact		9	3.25 %
Negative impact		146	52.71 %
Don't know		25	9.03 %
No Answer		4	1.44 %

How and to what extent do you expect that the budget of your region/city will be affected by the UK's withdrawal from the EU? : By a decrease in the funding from a smaller EU budget (as the UK is a net contributor)

		Answers	Ratio
To a large extent		61	22.02 %
To a medium extent		104	37.55 %
To little or no extent		78	28.16 %
Don't know		27	9.75 %
No Answer		7	2.53 %

It is also possible that Brexit will have implications in terms of the political dynamics within the EU. The UK has typically been more vocal in opposing protectionist policies. It has been critical of some European policies, such as the Common Agricultural Policy. One could therefore expect a shift in the balance of views and opinions as a result of losing the UK – which could result in a new dynamic. This dynamic could equate to increased support for internal redistribution policies but it is impossible to predict what that new dynamic will be.

[41] EPRC, Brexit and the implications for European Structural and Investment Funds, May 2017, available here
[42] Further information is available here
[43] Further information is available here.
[44] Further information is available here.
[45] Further information is available here.

The departure of the UK could also create a greater sense of unity among EU27 member states. Without a member state that has traditionally been wary about deeper political integration and with the need to answer pressing challenges, a push for integration could occur.

6 Conclusions and Recommendations

6.1 The uncertainty surrounding the UK's withdrawal from the EU

It is generally agreed that the uncertainty surrounding the nature of the future EU27-UK relationship complicates the adjustment processes that many EU regions are undergoing. With the scheduled departure of the UK from the EU only a year away, there is little clarity about the nature/conditions of UK access to the Single Market, its membership of the Customs union or what will happen in relation to the issue of access to financial services post-Brexit.

Research indicates that the economic and social effects of the UK's withdrawal from the EU will most likely be asymmetrical not only across different sectors of the economy, but also across regions and countries, with some regions and Member States being more exposed due to the nature and scale of their trade linkages with the UK and again with this exposure varying from one sector to another for any single region.

Should the UK leave the Customs Union, the effects for the EU27 (and especially for those regions that are more exposed to trade with the UK) will be substantial, since customs equate to a vast increase in paperwork, human resources and physical space requirements at ports and airports. Transaction costs of getting goods across borders could well increase as a result of customs procedures.

However, even as a disruptor of established patterns, Brexit can, if properly managed, open gateways for innovation and development in some parts of the EU27. Two main factors account for this: regions and companies will try to adapt to the new conditions, and seize opportunities to take over from British suppliers within the Single Market; and human and financial resources, some co-funded by the EU's budget, that have been channelled towards R&D in the UK could be re-directed to EU27 businesses and universities. It is however unlikely that positive effects would exceed the negative consequences, certainly in the short/medium run, but also in the long run.

A series of imponderables to which there are currently no obvious answers in sight remain, including: the duration of the transition period; the time needed to negotiate and agree on a deal governing the future EU27-UK relationship; and the new processes and new systems that will underpin this deal. Consequently, it would be unwise to try to state conclusively what the impact on any given region would be.

6.2 Possible consequences for EU27 regions

In **a context of such uncertainty**, what can be projected as a possible scenario is that if no deal is reached between the UK and EU27 on their future relationship, this would equate to the UK falling back on WTO rules. **In this scenario, some tentative conclusions can be drawn**:

1. The benefits of unfettered free trade, such as exists within the Single Market, trickle down to members of the European Union as a whole. Accordingly, any move away from our open markets or any reduction in the size of this space of economic freedom will, overall, mean a reduction in the welfare currently enjoyed by the 500 million citizens of the EU. Many EU27 regions would bear a considerably higher adjustment burden than others, certainly with immediate effect, with the scale of the actual adjustments and impact depending on the weight that the trade linkages of any given region with the UK have in the respective regional economy, and also on the degree of diversification of trade in the given region.

2. It can be expected that regional competitiveness would have a bearing on the magnitude and time period of trade adjustments since it plays a key role in resource reallocation, and greater diversity of activities tends to shelter regions from adverse adjustment costs caused by changes in trade patterns. In this context, the **most developed and richer regions, with the most dynamic economies**, could in time secure important gains, taking over the UK's role in the EU economy in sectors such as ICT or financial services (e.g. possibly regions in the Netherlands, Centre and South Germany, Paris).

3. Regions with **less dynamic economies, that are less diversified and are dependent on low added-value economic activities**, could face greater adjustment costs than other, richer and more exposed regions. This is especially true for regions situated close to the UK. Exposure to trade with the UK, coupled with a low-added value economy, could constitute a major risk factor.

4. With fewer resources available for identifying the changes needed and devising mitigating actions, **SMEs will find it more difficult to cope with the new context**. Larger companies, on the contrary, accustomed to operating in multiple jurisdictions, are generally likely, to be less impacted by the UK's withdrawal from the EU. Nevertheless, and in the case of the regions, the impact in each case very much depends on the actual links (suppliers, clients) each company has with the UK.

5. When it comes to the impact resulting from a potential reduction in the total EU budget and in **European funding** for Cohesion Policy and the Common Agricultural Policy, it could be expected that poorer regions, net recipients of such funding (e.g. many regions in Southern and Eastern Europe) would be adversely affected and thus bear a higher burden of adjustment. However, further research should be done on the impact of the UK's withdrawal on the eligibility of regions under Cohesion Policy rules, since the UK's departure will lower EU GDP per head and consequently trigger changes in terms of eligibility/status for some EU27 regions (less developed regions, transition regions, and more developed regions) by virtue of the statistical effect.

6. The **millions of EU27 citizens who live in the UK and the one million UK citizens** living in EU27 countries are also a factor to be taken into consideration. Though it seems at this stage that an agreement between the two parties will be possible, any further uncertainty could lead to migratory movements with a major impact in certain regions, especially in Poland, Latvia and Lithuania. Similarly, French Atlantic regions and Spanish Mediterranean regions would be adversely affected should British citizens lose their right to live in the EU or at least the right to use public services (such as the healthcare system).

7. Lastly, viewed from any angle, it is **Ireland that will be the country most affected**, irrespective of region. But while Dublin and the southern Irish regions might suffer economically, the **border counties** stand to be affected like no other with, far beyond the economic effects, the potential return of the conflict that affected Northern Ireland particularly but also the Republic of Ireland.

6.3 Future developments concerning the UK's withdrawal from the EU

Looking beyond the mapping of the exposure in terms of economic/trade linkages between EU27 and UK regions, which depicts a static view of the current situation, the dynamic reaction that Brexit has triggered in many EU regions and companies should be highlighted. Regions, cities, chambers of commerce and associations representing regions have taken many initiatives such as:

- Some regions are looking into how to build as of now bridges with British businesses, in order to help ensure a smooth transition and maintain the dialogue and thereby understand the challenges on both sides. Others are setting up information desks so as to raise awareness among their businesses, including SMEs, about the challenges and opportunities triggered by Brexit.

- The majority of regions have not, to date, succeeded in properly assessing the possible impact of Brexit, given in particular the uncertainty surrounding the negotiations and the future relationship. Economic actors in such regions are mostly in that position or are reluctant to undertake an impact assessment since they do not know the conditions under which the UK's withdrawal will actually take place. This lack of analysis of the impact of Brexit in many regions and the absence of data on the impact inevitably restricts the scope to prepare effectively and take mitigating measures.

- Some of them are, nevertheless, considering possible economic opportunities which could arise from Brexit and how any trade obstacles can be overcome. They are also researching how to attract investors, since the UK's withdrawal from the EU is likely to result in some diversion of FDI towards the EU27 – especially in case of a disorderly withdrawal.

Some **preliminary policy recommendations** are set out below:

- Uncertainty could prove more dangerous than any of the possible options/scenarios for a potential deal. **Speeding up Brexit negotiations** and creating planning certainty is consequently an important recommendation for national and European political actors.

- The possibility of allowing **greater flexibility in State aid rules** so that national governments and LRAs can help those businesses that are more strongly affected by Brexit.

- **At regional and inter-regional level**: economic diplomacy and inter-regional cooperation and benchmarking can help minimize negative effects. LRAs can establish alliances of regions facing similar problems, sharing information and pooling resources to assess how to support their economic actors[46]. Experts participating in the TIA workshop also agreed on the need for sharing and producing more specific and detailed local/regional impact studies as well as looking at the linkages across and between sectors/activities.

- **At intra-regional level**: some LRAs have established information desks, newsletters and other communication tools to share information concerning Brexit within their communities. It is expected that awareness raising and sharing of information will help businesses, notably SMEs, to be better prepared to face structural and economic adjustments.

---

[46] The CPMR, for instance, is already working in this way. They have three Brexit Task Forces – one for Atlantic Arc, one for North Sea and one for the Channel. They also adopted the Cardiff Declaration in October 2017 – ahead of Brexit Conference hosted by the Welsh Government in Cardiff on 16 November 2017.

- **Smaller businesses should receive support in ensuring their understanding of and preparedness for Brexit**, particularly in those regions that appear to be most exposed to a negative economic impact.

- **Regions are encouraged to conduct assessments of the economic impact of Brexit**. Although this remains an inexact science given uncertainty about the terms of post Brexit EU27/UK economic relations, such assessments can help guide regions in preparing for the future. Regions should also work with key players in their regions (including companies) to draw up new development strategies, and action plans, to react to the new conditions, but also to react with dynamism to the uncertainty.

7 Annex-The Territorial Impact Assessment (TIA) workshop on the UK's withdrawal from the EU

The workshop on the UK's withdrawal from the European Union organised by the European Committee of the Regions and ESPON EGTC was held on 20th February 2018 in Brussels and brought together number experts from regions, cities, chambers of commerce, academia and associations representing regions.

Experts taking part in the TIA workshop

Anja Gauler	Head of Unit, Hessen Agentur
Antonio Basanta Fernández	Head of Cabinet, Consellería do Mar, Xunta de Galicia
Ben Butters	Policy Director, Eurochambres
Bianca Metzler	Ministry of Economy, Labour and Housing of Baden-Württemberg
Carl-Albert Hjelmborn	Director at Skåne European Office
Fanny Gasc	Regional Council of Brittany
François Levarlet	t33
Gregg Jones	Director of Finance and EU Programmes, CPRM
Ian Talbot	Chief Executive of Chambers Ireland,Eurochambres
Isabel Vázquez Conde	Consellería do Mar, Xunta de Galicia
Jan Van Hove	KBC; Associate Professor, KUL
Matthias Dubbert	DIHK - Referatsleiter Europapolitik
Michael Murphy	Member of the Committee of the Regions, Councillour, Tipperary
Paolo Seri	t33
Patrick Van Cauwenberghe	Director of Business Intelligence, Port of Zeebrugge
Professor Philip McCann	University of Sheffield, Chair in Urban and Regional Economics
Sorin Ionita	Expert Forum (EFOR), Romania
Sylvie Herlem	CCI International Hauts-de-France
Thijs Geijer	Economic Bureau of the ING Bank

Institutions and organisations involved in the territorial impact assessment

Bernd Schuh	OIR
Erich Dallhammer	OIR
Laurent Frideres	ESPON EGTC
Zintis Hermansons	ESPON EGTC
Igor Caldeira	European Committee of the Regions
Slaven Klobucar	European Committee of the Regions
Bert Kuby	European Committee of the Regions
Effrosyni Kossyvaki	European Committee of the Regions
Robert Ronstrom	European Committee of the Regions

The concept of territorial impact assessment (TIA) aims at showing the regional differentiation of the impact of EU policies. The ESPON TIA Tool[47] is an interactive web application that can be used to support policy makers and practitioners with identifying, ex-ante, potential territorial impacts of new EU Legislations, Policies and Directives (LPDs). The ESPON TIA Tool is designed to support the quantitative assessment of potential territorial impacts according to the Better Regulation guidelines.

[47] https://www.espon.eu/main/Menu_ToolsandMaps/TIA/

The ‘ESPON TIA Quick Check’ approach combines a workshop setting for identifying systemic relations between a policy and its territorial consequences with a set of indicators describing the sensitivity of European regions.

It helps to steer an expert discussion about the potential territorial effects of an EU policy proposal by checking all relevant indicators in a workshop setting. The results of the guided expert discussion are judgments about the potential territorial impact of an EU policy considering different thematic fields (economy, society, environment, governance) for a range of indicators. These results are fed into the ESPON TIA Quick Check web tool.

In the first step of the TIA workshop the participating experts discussed about the potential effects of the UK's withdrawal from the EU.

This discussion revealed potential territorial impacts of the UK's withdrawal from the EU considering economy, society, environment and governance related indicators. The participants identified potential linkages between the UK's withdrawal from the EU and the effect on territories including interdependencies and feed-back-loops between different effects.

The ESPON TIA tool provides several regional typologies[48] for analysis taking under consideration the types of territories mentioned in the Lisbon Treaty §174: urban/metropolitan regions; rural regions; sparsely populated regions; regions in industrial transition; cross-border regions; mountainous regions; islands and coastal regions. The experts agreed on two different groups of regions that could be affected differently:

- Type A: All regions of EU27 (= EU 28 without the UK), weighted equally
- Type B: The regions of EU 27 weighted according to the exposure of their GDP to the Brexit

In order to assess the potential effects pictured in the conceptual model suitable indicators were selected related to the parameters that the experts discussed in the fields of economy, environment, society and governance.

The result of the territorial impact assessment is presented in maps based on a combination of the expert judgement on the exposure with the territorial sensitivity of a region, described by an indicator on NUTS3 level. Whereas expert judgement is a qualitative judgement (i.e strong advantageous effect on territorial welfare/weak advantageous effect/no effect/weak disadvantageous effect/strong disadvantageous effect), the sensitivity is a quantitative indicator.

[48] https://www.espon.eu/main/Menu_ToolsandMaps/ESPONTypologies/index.html