

Economic Effects of Brexit in the United Kingdom

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Table of Contents

Introduction	3
Brexit History and Background	4
European Union.....	6
Why leave the EU?	7
UK's Recent Trading History.....	9
Other Possible Trade Options	10
Norway:.....	10
Comprehensive Economic and Trade Agreement (Canada-style):.....	10
Australia:.....	11
WTO.....	12
Stumbling blocks in Brexit argument.....	13
Brexit and Northern Ireland	14
Sectors of UK economy affected the most	17
Food and agriculture:	17
Motor Vehicles:	18
Chemical and pharmaceuticals:	18
Financial Services:.....	19
Education Sector:.....	19
Global Britain	19
Conclusion.....	20
References	22
Appendix.....	25
Figure 1	25
Figure 2	26
Figure 3:	27
Figure 4:	28

Introduction

The decision for the United Kingdom (UK) to leave the European Union (EU), also known as Brexit, has been a huge talking point over the last five years for a variety of reasons. The UK has the sixth-largest economy in the world with \$2.83 trillion gross domestic product (GDP) (Page, 2020). London, England's capital is a global financial center and attracts business and tourism from all over. Globally, Brexit impacts many countries and citizens and has left a lot of uncertainty in many aspects of the world. The UK had numerous compelling reasons to leave the EU including immigration and wanting a closed border, not wanting to follow EU rules and contribute large sums of money to their annual budget, and wanting to regain a fully independent trade schedule. Trade relationships have been at the forefront of conversations and negotiations as leaving the EU means leaving the customs union and single market with 26 other countries in Europe. Many businesses and industries rely on the free trade they've enjoyed through the EU and fear without it their businesses won't be able to last. That's why the UK has been pressed to make as many new trade agreements with as many countries as they can during this transitional period. However, there have been many main issues that have come up in the Brexit argument that have not easily been negotiated. These include the 'level playing field', the fishing industry, and the geographical border with Ireland. Other countries such as Norway, Canada, and Australia have made trade agreements with the EU that the UK has shown interest in but if no agreement is made by the end of the transition period then they will have to trade under World Trade Organization (WTO) terms. Ultimately, trading under these terms would be very detrimental to a variety of different industries. Regardless of how the UK comes out of the transitional period, they're striving for a vision of 'global Britain'. Plans of action include negotiating their own WTO schedule of commitments, replicating existing EU deals with non-EU countries, and taking steps to pursue a range of new trade deals. Progress has been made on these goals and more agreements are continuing to be

negotiated through; however, the UK still has a lot of work to do before they will fully be able to enjoy their new freedom.

Brexit History and Background

What is now known as the European Union was first established as the European Economic Community (EEC). The EEC was the first attempt to encourage economic cooperation between European nations in wake of World War II. In 1957, France, West Germany, Belgium, Italy, Luxembourg, and the Netherlands signed the Treaty of Rome which established the new Union. The new institution was a customs union and the members agreed to dismantle all tariff barriers during a transitional period while establishing a common tariff for all products coming from third countries (Goldberg, 2003). Another important part of the Treaty of Rome was the adoption of a Common Agriculture Policy (CAP). This enacted a free market of agricultural products inside the EEC and established policies that guaranteed sufficient revenues to European farmers (Goldberg, 2003). To finance the CAP, the European Agricultural Guidance and Guarantee Fund was established in 1962 and has continued to absorb most of the community budget. The Treaty of Rome also established the prohibition of monopolies, some transport common policies, and the grant of some commercial privileges to the colonial territories of the member states (Goldberg, 2003).

The UK first applied for membership in the EEC in 1963, and finally was accepted in 1973 (Pruitt, 2019). Since then, they have had many conflicts and disagreements with the EU. In fact, in 1975 there was a referendum vote asking if the UK should stay in the EEC or if they should leave. 67% voted to stay so the UK remained in the EU (Pruitt, 2019). Further tension came in 1984 when the UK Prime Minister Margaret Thatcher pushed to reduce British payments to the EEC budget. At the time, the UK was the third poorest nation in the community yet was paying a lot more into the budget than other nations due to its lack of farms. At the time, farm subsidies made up 70% of the total EEC expenditures and Britain

received very little (Pruitt, 2019). Farm subsidies were in place to support farmers and ensure reasonable living, improve agricultural productivity, and keep the rural economy alive by promoting jobs in farming, agri-foods industries, and associated sectors (European Commission). Prime Minister Thatcher was able to negotiate a deal that reduced Britain's contributions to the budget and is still in place today (Pruitt, 2019).

On June 23rd, 2016, a referendum was held in England and the majority of those who voted chose to leave the European Union. 52% voted to leave the EU while 48% voted to remain (Walker, 2020). The main issues for those in favor of Brexit will be discussed in more depth later, including the open border and immigration, large contribution to the EU budget, not being able to create their own trade policies, and having to follow EU rules. On March 29th of 2017, the Prime Minister formally began the two-year countdown for the UK to leave the EU (also known as Brexit). The UK expected to leave the EU by March 29th of 2019 however, following a House of Commons vote on March 14th, 2019, the government sought permission from the EU to extend their time and agree to a later date (Walker, 2020). Since then there has been another extension with a final departure date set for the UK of October 31st, 2019. Prime Minister Boris Johnson came up with a deal called the European Union Withdrawal Agreement Bill (WAB). The WAB will set out exactly how the UK will make 'divorce bill' payments to the EU for years to come, it will have to make sure that parts of EU law continue to apply in the UK for as long as a post-Brexit transition period lasts, it will contain language on the new protocol in Ireland – setting up a customs and regulatory border between Northern Ireland and Great Britain – will work in practice, and it will set out areas in which the European Court of Justice still plays a role in the UK, and make the withdrawal agreement in some respects 'supreme over other areas of UK law (Morris, 2020). Johnson failed at his first presentation of the deal on Saturday, October 19th, 2019, and was forced to request an extension to the Brexit process (Walker, 2020). The law required the UK to ask that the deadline of October be extended by three months, to January 31. Unfortunately, Johnson conceded

publicly that he would not deliver on his promise that the UK will exit the EU on October 31. He gave lawmakers until December 12 to debate his Brexit deal (Walker, 2020).

On January 31st, 2020, also known as Brexit Day, the UK officially left the EU and entered into a transitional period. The transition period is set to last until December 31st, 2020 (Pruitt, 2019). The yearlong transition period was set to give time for the UK to form new trade deals with the EU and other countries while still following the EU rules and trading the same way as before. During the transition period, the UK is no longer part of the EU's political institutions so there are no British members in the European Parliament. Once the transitional period is over, the UK will drop out of the EU's main trading agreements (Pruitt, 2019).

European Union

Currently, there are 27 member states of the EU and their goals and values are laid out in the Treaty of Lisbon (European Union, 2020). Article 50 of the Lisbon Treaty is the only legal mechanism for a member state of the EU to leave (Institute for Government). All EU members enjoy a single market and customs union. The UK will remain in these trade agreements until the end of this year when the transition period is over. The customs union makes trade in goods between the UK and other EU members tariff-free, and binds the UK to the EU's common external tariff, which the UK and other EU member states apply to goods imported from outside the customs union (European Union, 2020). Additionally, the single market allows for the free movement of goods, services, capital, and people. All EU citizens have the freedom to choose which EU country they want to study, work in, or retire (European Union, 2020). The EU is governed by the principle of representative democracy, with citizens directly represented at the Union level in the European Parliament and member states represented in the European Council. The EU is the largest trade block in the world, being the biggest exporter of manufactured goods and services and the biggest import market for over 100 countries (European

Union, 2020). Despite this, the UK has many compelling reasons for wanting to leave the EU and form their own trade relationships not aligned with the EU.

Why leave the EU?

A customs union and single market may sound appealing, but the UK has continued to run into issues and have disagreements with the EU since they joined in 1973. There were many attributing factors as to why the UK wanted to leave. Being part of the single market and having an open border to all other EU citizens is one reason for leaving the EU. Additionally, the UK has to follow many rules laid out by the EU and contribute a large amount of money to the EU budget that they don't believe is fair. Lastly, historical factors and isolation due to their physical location also contribute to them wanting to leave the EU.

One of the most prominent issues in the discussion has been regarding immigration. Being part of the EU means that the UK can't exclude any EU citizen's from migrating to Britain. The main issue is seen as a job taken by an immigrant is one less for a British national. That being said, opposition to immigration can be seen as more or less an issue depending on the citizen's social class. Those who are less educated compared to the university-educated tend to be more rooted in their local and national communities – as opposed to the regional or global community and face stiffer labor market competition (Castells, 2018). This accounted for a large degree for the various social divisions in the EU referendum vote. According to a poll conducted on the day of the referendum, 52% of respondents in the lowest social class said immigration is generally a force for ill, compared to only 33% of those in the highest social class (Castells, 2018). Additionally, among those saying immigration is a force for ill, 80% voted to leave the EU. In another study analyzing data from the British Election Study Referendum Survey, 72% of people with no education qualifications voted to leave, compared to only 35% of those with a degree (Castells, 2018).

Another important argument for those in favor of Brexit was for the UK to be able to regain a fully independent trade policy and not be aligned to all of the EU rules. Being fully independent would

allow the UK to tailor agreements to its own specific interests and create new trade relationships outside of EU governance (Derek, 202). The EU block has shown to be drastically declining over the years and its GDP growth has lagged every other region in the world for a generation. In 1999, 61% of the UK trade was within the EU, now it is only 43% and it is estimated to be under 35% by 2025 (Stewart).

Furthermore, leaving the EU would be an immediate cost-saving as the country would not be required to pay the membership fee contributing to the EU budget. In 2018, the UK paid £15.5 billion to the EU (Office for National Statistics). Some of this money does end up coming back to the UK by EU-funded public-sector credits; however, not a very large portion of it is returned. Figure 1 shows the UK's total contributions to the EU budget, highlighting the EU funded public sector credits between the years 2010-2018 (Office for National Statistics). The UK has not been satisfied with these large sums of money they've had to contribute to the EU budget ever since Greece's economic crisis in the early 2000s. When preparing to host the 2004 Olympics, Greece spent far more than allowed causing an economic deficit until 2010. The country declared bankruptcy and the International Monetary Fund, and especially the European Central Bank, were forced to spend huge sums on Greece to avoid further economic collapse (Tien, 2019). Each year, the UK contributes one of the largest amounts to the EU's general fund and after the economic crisis of Greece, they were no longer comfortable with that (Tien, 2019). The UK did not want to have to spend so much money on the EU when they have such a successful economy and could be fully independent.

Lastly, other reasons for the UK leaving the EU can be attributable to historical factors. Figure 2 shows a map of the EU member states, highlighted in blue, and no longer including the UK. As you'll see from the map, the UK is an island whose surrounding waters have partially isolated it from cultural developments on the continent. Setting itself further from the EU, the UK has its own common law legal system, which contrasts with the civil law system of continental Europe (Castells, 2018). Lastly, Britain is the only allied European power not to have been occupied during World War II (Castells, 2018). All of

these reasons contribute to a study that ranked the UK 28th out of the 28 EU member states for European identity. Nearly 60% of Britons do not identify as European at all (Castells, 2018).

UK's Recent Trading History

Despite the many issues that the UK has with the EU, the two share an incredibly important trade relationship. Post Brexit, this relationship may look very different depending on if a trade agreement is made during the transitional period. In 2019, the EU accounted for 47% of the UK's total trade – 43% of exports and 49% of imports. Since 2002, the share of UK exports to the EU has fallen from 54% of all exports to 43% in 2019 (Department for International Trade, 2020). The UK had a trade deficit of -72 billion with the EU but a surplus of 46 billion with non-EU countries. The UK's single largest exports to the EU were petroleum and petroleum products, valued at 20 billion and making up 12% of all UK goods exported to the EU. Financial services, business services, road vehicles, and other transport equipment also account for a large percentage of exports to the EU (Department of International Trade, 2020). The total quantity of trade flows passing between the UK and EU means that any new trade barriers will have a large impact on UK industries and their workers. Without access to a customs union and a single market, these industries would be greatly affected. For example, in the case of border checks, the UK government estimated 50%-85% of freight truckers wouldn't have the correct paperwork to enter the EU via France which would delay cross border shipments by up to 2.5 days and disrupt the EU and UK's tightly integrated supply chains (Baschuk, 2020). Furthermore, the UK's tax-collecting agency estimated that British businesses would spend \$19.6 billion extra per year on paperwork in the event of a 'no deal' Brexit (Baschuk, 2020). The UK has examined a number of other nation's trade policies to find the best one to lessen the burden on their businesses and economy after the transition period.

Other Possible Trade Options

Since the EU is such an important trade partner for the UK, they have looked into many different trade relationships other nations share to try to mimic a successful one for themselves that could be agreed upon. Both Canada and Norway have negotiated strong trade agreements with the EU that appeals to the UK but have some downfalls. If they're unable to negotiate an agreement before the end of the transitional period they will be forced to trade under the WTO rules or an agreement similar to Australia's which would cause major disruption for many industries.

Norway:

Norway is a member state of the European Economic Area (EEA) and the European Free Trade Association (EFTA), giving them full access to the EU single market and allowing for the free movement of goods, persons, services, and capital (European Commission). In addition, the agreement covers cooperation in other important areas such as research and development, education, social policy, the environment, consumer protection, and tourism, and culture. To be a part of these, Norway must follow many rules and laws but has no say in how they are formed and must make contributions to the EU budget. Agriculture and fisheries are not covered by the EEA Agreement which has benefitted Norway as these are large industries for them and they're able to form their own policies (Carswell, 2019). This would also be appealing for the UK as those are important sectors in their own economy. Another part of the Norway deal that would be seen as a positive for those in favor of Brexit is that they're not ruled over by the European Court of Justice (Carswell, 2019). However, for the UK, not having control over their borders and say who it lets into the country is a downfall for an agreement like Norway's. Also, many people who are pro-Brexit would not be in favor of having to follow EU rules without having any say in drafting them.

Comprehensive Economic and Trade Agreement (Canada-style):

CETA is a trade agreement between the EU and Canada. It entered into forces on September 21st, 2017. CETA opens up Canada's goods, services and public procurement markets, helps protect

rights and the environment, and enables smaller EU firms in particular to export more to Canada. By cutting 98% of tariffs between Canada and the EU the deal boosts trade and investment opportunities (European Commissions, 2019).

Prime Minister Johnson has shown interest in an agreement similar to Canada's for the main reasons of not having to contribute to the EU budget, having full control of their border, and regaining full independence (European Commissions, 2019). However, Prime Minister Johnson also recognizes downfalls. For example, it does little for the trade in services, and, in particular, almost nothing for the trade in financial services, which is largely important for the UK economy. Also, it does not remove border checks which can add a lot of extra requirements to importing and exporting. Geographically, the UK and the EU are much closer than Canada which explains why in 2018, 45% of the UK's exports were to other EU countries and Canada's was only 7.9% of its exports (BBC News, 2020).

Australia:

Australia is another country whose trade agreement with the EU has come up in the UK. Prime Minister Johnson made a statement that if the UK is unable to reach a free trade agreement with the EU then they will likely have a trade arrangement similar to Australia's. Australia does not have a comprehensive free trade agreement with the EU so a large majority of their trade is done according to WTO rules (Bevington, 2020). However, they do have some agreements with the EU related to trade and other issues. Some of these agreements include a framework agreement, EU crisis management operations, passenger name records, mutual recognition agreement, classified information, etc. The framework agreement was reached in 2017 and established general principles of cooperation on a wide range of areas including trade, foreign policy and security, and development and humanitarian issues. The EU crisis management was an agreement made in 2015 which allows Australia to participate in EU crisis management operations. The passenger name record agreement was made in an effort to help combat crime and terrorism by transferring EU passenger-name records to Australian border authorities. Additionally, they updated their mutual recognition agreements for conformity

assessments, certifications, and markings. Lastly, Australia and the EU entered an agreement to allow the exchanging of classified information (Bevington, 2020). Despite these agreements, for the UK, an Australia-style deal would be code for no deal. The two countries share very different trade relationships with the EU. The EU comprises 11% of Australian goods trade and 19% of its services trade compared to 52% of the UK's goods trade and 44% of its services trade (Bevington, 2020). UK-EU trade is almost six times Australia-EU trade in terms of value making their trade relationships with the EU hard to compare.

WTO:

If the UK does not come up with a new trade agreement it is likely they will trade under the World Trade Organization (WTO). The WTO currently has 164 members whom which if they don't have a free trade agreement with each other, they trade under the WTO rules (Morris, 2020). Every member has a list of tariffs and quotas that they apply to other countries that they don't have a deal with. The tariffs in the EU are typically pretty low, averaging about 2.8% for non-agriculture products. Under the WTO, some sectors can be quite high. For example, cars would be taxed at 10% when they crossed the UK-EU border after the transitional period. Currently, there is no tax on cars (Morris, 2020). Additionally, agricultural tariffs would be even higher, rising to an average of more than 35% for dairy products (Morris, 2020).

If the UK had to trade under WTO rules with no other deals in place it would be a huge disruption. Tariffs would be applied to most goods that UK businesses send to the EU, making them more expensive and harder to sell. WTO terms also means full border checks for goods which would cause traffic and significant delays at ports (Morris, 2020). In a study by Peterson Institute for International Economic, they analyzed the medium to long-term impacts of Brexit. It was concluded that GDP loss from a hard Brexit (WTO terms) would range from 1.2% to 4.5% whereas GDP loss from a soft Brexit (similar agreement to Norway's) would be roughly half the negative impact as a hard Brexit. (Latorre, 2019)

Stumbling blocks in Brexit argument

As time continues to pass without an agreement being made between the EU and the UK it is likely that they will end up trading under WTO terms starting in 2021. There are many reasons why negotiations are so complex and difficult to agree upon and also connects back to why the referendum vote in 2016 was so close. Numerous stumbling blocks occur in the Brexit. Three of the most prominent issues include; the level playing field, the fishing industry, and the border between Northern Ireland and the Republic of Ireland. The UK wants more freedom in the decisions they make about these topics which is an important reason why they voted to leave the EU in the first place. However, the EU has strong opposing arguments regarding these topics which have made negotiating agreements incredibly difficult.

One main disagreement is known as the 'level playing field' issue. A level playing field is a trade policy term that refers to a set of common rules and standards that are used primarily to prevent businesses in one country from undercutting their rivals in other countries (Stojanovic, 2020). Currently, the UK and the EU share the same rules in areas like workers' rights, competition and state aid, taxation, and social and environmental policy which they are worried about moving forward (Edington, 2020). With leaving the EU, the UK government wants the freedom to move away from these rules but the EU insists they stick to them, so UK businesses don't gain an unfair advantage. The EU believes that given the UK is a large economy that is geographically close to the single market, a level playing field is a prerequisite to avoiding tariffs (Stojanovic, 2020). With competition and state aid, the EU is concerned that the UK, in a close trading relationship, could undercut European businesses by providing great subsidies to British industry – or introducing a more relaxed competition regime. The UK could also introduce looser rules making mergers and acquisitions of businesses easier (Stojanovic, 2020). Related to taxation, the EU is concerned about corporation tax. The UK might cut its already relatively low rate, making the UK a more attractive base for a business while still being able to trade with the EU on

preferential terms. The EU is worried about social and environmental protections because they think the UK could gain a competitive edge from having its own lower standards (Stojanovic, 2020).

Another main argument in coming to a new agreement has to do with the fishing industry. While the UK was a part of the EU, EU companies had open access to UK waters and the UK had open access to EU markets to sell fish (Morris, 2020). This was bound by an EU rule called the Common Fisheries Policy which allowed fishing fleets from all EU member states to have full access to each other's waters, apart from the first 12 nautical miles out from the coast (Morris, 2020). Without an agreement, after the transition period is over at the end of the year the EU companies will not have access to fish in UK waters and the UK will face large tariffs on fish being exported to the EU (Morris, 2020). The UK believes and is negotiating that British fishing grounds are for British boats. Supporters of Brexit see the industry as a symbol of sovereignty that will now be regained. The opposing argument for the EU is that they want the same level of access they are currently enjoying and believe this is important in their consideration of a free trade agreement with the UK in the future (Morris, 2020). Although the UK holds the control in the argument, they know their fishermen will struggle without a deal because a majority of the fish they catch is exported to the EU and will face large tariffs that the industry can't afford.

A further issue in the Brexit argument has to do with the geographical border between Northern Ireland and the Republic of Ireland. Some of the main questions include; the Northern Ireland peace process, underpinned by the Good Friday Agreement, how to operate the border between Northern Ireland and the Republic of Ireland for people and goods, and lastly, preserving co-operation between the North and the Republic, and between the Republic and the UK (Sargeant, 2020).

Brexit and Northern Ireland

Northern Ireland has been one of the biggest question marks in the entire Brexit discussion. As seen in Figure 3, the UK is made up of four individual nations; England, Scotland, Wales, and Northern Ireland (see Figure 3). Northern Ireland and Ireland share the only land border that will separate the UK from the EU after the transitional period is over. Due to the single market and customs union, this border has been tariff-free and people living in Ireland and the UK could travel freely between the two countries without needing a passport due to the Common Travel Area agreement (Tonge). This brings up a lot of questions about how goods, services, and people will be able to move through the border in the future. Additionally, it is important to identify out of Northern Ireland's population, which groups of people voted for and against Brexit, and how Northern Ireland's economy may be affected.

Along with the free flow of people, the impositions of tariffs for goods traveling across the border are likely to happen with an abolition of a customs union. The UK government hopes to negotiate for EU Customs Union and tariff-free trade. This is incredibly important to both Northern Ireland and the Republic of Ireland. 34% of the Republic of Ireland's exports of goods and services go to the EU, of which nearly half go to Britain (Tonge). Additionally, a tariff-free and quota-free trade relationship between Northern Ireland and the Republic of Ireland is highly important as 34% of Northern Ireland's exports go to the Republic of Ireland, making it their largest market. Furthermore, 57% of Northern Ireland's exports go to the EU (Tonge). Specific industries such as food and agriculture, motor vehicles, and financial services could be severely impacted by the imposition of tariffs and will be discussed in more depth later. Many fear that Brexit could lead to a hurt economy by reduced business investment, consumer spending, and trade. Northern Ireland firms may be required to make exit declarations on their exported goods to other areas in the UK which would likely increase costs and administrative burdens. It is also possible that without Northern Ireland's access to the EU single market, they will struggle in attracting foreign direct investments (Tonge).

Brexit has brought up many concerns about conserving the Northern Ireland peace process, underpinned by the Good Friday Agreement. This agreement was signed in 1998 and assumes EU membership for both the UK and Ireland and makes provisions for the UK and Irish governments to cooperate on EU matters and avoid a hard border (including customs controls and any physical infrastructure) (Sargeant, 2020). Luckily, some of the worries surrounding a hard border have been resolved through the Ireland/Northern Ireland protocol negotiated by Prime Minister Johnson. The agreement recognizes the right of the people of Northern Ireland to assert their Irish citizenship and access the rights of EU citizens, as per the 1998 agreement (Sargeant, 2020). The protocol also commits to avoid a hard border, including any physical infrastructure or checks and controls on the island of Ireland (Sargeant, 2020). This is incredibly important because there are over 30,000 concerned citizens living and working on different sides of the Northern Ireland and Republic of Ireland border that will be severely inconvenienced by border checks (Tonge).

Northern Ireland's concerns over the border and other issues were prevalent in their vote count for the 2016 referendum. Although they vote as part of the UK, Northern Ireland itself voted to stay in the EU 55.7% to 44.3% (Tonge). Northern Ireland's ethno-religious divide was apparent in the voting as strong Irish Catholic Nationalist areas voted largely to remain in the EU. 89% of those describing themselves as nationalists, 88% of those identifying as Irish, and 85% of Catholics voted to remain in the EU. This community holds strong feelings for a united Ireland and a delegated government within the UK – but within the context of EU membership. British Unionist areas were far more evenly divided but mainly voted in favor of withdrawal from the EU. Only 35% of those describing themselves as unionists, 38% of those identifying as British and, 41% of Protestants voted to remain in the EU. Despite how the voting resulted, the Northern Ireland Assembly does not hold much power over the UK government and is unable to stop them from withdrawing from the EU (Tonge).

Sectors of UK economy affected the most

It is crucial that the UK and EU come to agreements on the main stumbling blocks discussed earlier; the level playing field, fishing industry, and the geographical border in Ireland. Without these issues being resolved and a trade agreement signed, many sectors of the UK economy are going to be negatively impacted. Examining how new barriers to UK-EU trade would affect different UK industries results in a variety of results depending on the industry. UK industries are expected to be affected in three main ways. First, through impacts on the UK firm's exports to the EU. Trade barriers would raise the cost of UK goods and services in the EU market and likely will reduce demand for UK output in the EU (Levell, P). Second, by raising the UK firm's costs. Most UK firms purchase production inputs from the EU and with new trade barriers production costs in the UK would rise (Levell, P). Lastly, industries would be affected by reducing competition in the UK. EU and UK firms compete with one another and with increased trade barriers this could lower the competition and also allow UK firms to increase their share of the domestic market (Levell, P). This can be seen as a positive for individual firms however reduced competition hurts the consumer in terms of higher prices and reduced variety. Overall, increases in trade barriers after Brexit will make EU products more expensive in the UK and make UK products more expensive in the EU. This will affect the demand and the price paid for different industries output in the UK, EU, and non-EU export destinations (Levell, P). The main sectors expected to be most affected by Brexit are; food and agriculture, motor vehicles, chemicals and pharmaceuticals, financial services, and education.

Food and agriculture:

The short shelf life of many food and agricultural products is a fear when it comes to increased customs checks. Documentation and physical inspections at designated border inspection spots would be incredibly costly in terms of both time and money. Imposing tariffs on agricultural products exported from Northern Ireland would have significant adverse effects on products and would create inflationary pressures (Tonge). Additionally, the agricultural/food sector is uniquely vulnerable in Northern Ireland

because of the farmer's agricultural aid. Northern Ireland receives roughly 375 million pounds annually from EU farm subsidies, losing this funding would be detrimental to farmers. Post Brexit, Northern Ireland also stands to lose EU regional funding which was roughly 1.3 billion dollars between 2014 and 2020 (Derek, 2020).

Motor Vehicles:

In 2018, motor vehicles accounted for 43% of exports and 83% of UK imports and the EU was their largest trading partner (Derek, 2020). In a no-deal scenario, UK auto exports to the EU would face a 10% tariff. Further difficulties would arise from new checks for safety and quality standards. Custom delays and procedures are likely to cause problems for car and aircraft manufactures because they often rely on quick deliveries from suppliers that are made with limited notice to minimize inventory and storage costs. This type of production method with flexible supply chains would be severely frustrated by custom delays. The Society of Motor Manufacturers and Traders (SMMT), warned that new car prices could go up by £1,500 if the UK were not to obtain a free-trade deal with the EU and would put the UK automotive sector at an immediate competitive disadvantage (Finnerty, 2017). The SMMT also estimates that tariffs would add £1.7 billion to the cost of fully assembled cars exported from the UK and £2.7 billion to those imported from the EU (Finnerty, 2017).

Chemical and pharmaceuticals:

The chemical and pharmaceutical industries are highly dependent on the EU as a source of inputs and a market for exported output. About 60% of UK chemical exports are to the EU and about 73% of UK chemical imports are from the EU. UK chemical exports to the EU could face tariffs up to 6.5% without a preferential trade agreement with the EU (Derek, 2020). Chemical trade in the single market is governed by an EEA regulatory framework known as REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals Regulation) (Derek, 2020). If the UK is outside of REACH post-Brexit, it will require companies in both the EU and the UK to duplicate pre-existing rules for a UK-REACH agreement to ensure full regulatory alignment (Derek, 2020).

Financial Services:

One of the most important sectors of the UK economy is its financial services and insurance, making up about one-third of its service exports to the EU (Derek, 2020). Currently, the city of London is the largest financial center in Europe and without new arrangements and agreements, many businesses will have to restructure their operations. Many large financial institutions such as Goldman Sachs, J.P. Morgan, and Citigroup have shifted jobs and assets out of London to other European cities due to concerns about losing the ability to use their UK bases to access EU markets (Derek, 2020). Additionally, in leaving the EU single market, UK service exporters have the potential to lose 'passporting' rights for financial firms. Without these rights, UK financial firms that want to sell services in the EU will be required to seek separate authorization from local banking authorities. They may also be subject to additional regulation applied to third-country financial service providers (Tien, 2019).

Education Sector:

Once the UK officially leaves the EU and no longer enjoys the single market which allows citizens of any member state to travel, live, work or study freely in any parts of the EU they may find their universities struggling (Tien, 2019). The UK is well known for being one of the world's top-quality education systems and attracts a lot of EU students and staff to their universities. Members of the EU have enjoyed incentives for studying in the UK such as tuition reduction, facilitation of a part-time job, and accommodation support. These supports will no longer be available and the option for an EU student to study in the UK will become much more complicated and visas will be required (Tien, 2019). Additionally, EU students who choose to study in the UK will pay international rates from 2021 forward and will not be eligible for student loans. International fees are usually substantially more than the home student rate which EU student enjoyed while the UK was a part of the EU (Corbett, 2020). These new changes are going to keep many EU students from studying in the UK.

Looking to the future, the UK is promoting the vision of 'Global Britain' through the way they engage with foreign policy, international issues, and most importantly, trade. To do so they are working on a number of things such as negotiating their own WTO schedule of commitments on goods, services, and agriculture (Derek, 2020). In WTO terms, schedules are complex documents in which each country identifies the service sectors to which it will apply the market access and national treatment obligations of the GATS (general agreement on trade in services) and any exceptions from those obligations it wishes to maintain (World Trade). Previously, the UK was a member of the WTO; however, it did not have its own schedule of commitments because the EU schedule applies to all its member states. The UK will also work to replicate existing EU deals with non-EU countries. They do not want to lose access to the preferential markets they had with over 70 countries by virtue of their membership with the EU (Derek, 2020). Furthermore, negotiating sector-specific regulatory agreements are highly important for the UK during the transitional period and years to come. The UK has already signed many mutual recognition agreements (MRAs) with different countries to assure continued acceptance of each other's product testing and inspections in certain sectors (Derek, 2020). Lastly, in striving for 'Global Britain', the UK will take steps to pursue a range of new trade deals. The UK has shown interested in forming new deals with the US, China, India, and New Zealand among others. The UK has already made strides at this, recently striking a bilateral free trade agreement with Japan to be implanted on January 1st (BBC News, 2020). This deal was considered the UK's first 'big' post-Brexit trade deal.

Conclusion

The UK has had lasting issues with the EU ever since they joined in 1973 and their decision to leave revolved around a few central arguments. They want to have control over their borders and limit immigration, regain a fully independent trade policy, and not have to contribute such large sums to the EU annual budget, along with many other smaller issues. It took three and a half years after the

referendum in 2016 for Prime Minister Johnson to finally be able to withdraw from the EU and enter into a transition period. Extensions to deadlines continued to be needed as controversial topics could not be agreed upon. These main issues that are still being figured out today include the Northern Ireland border, the level playing field, and the fishing industries. These issues have prevented the UK from being able to make a deal with the EU thus far in the transition period and will likely leave the two trading under WTO terms. This puts a lot of industries at risk as they will face large tariffs and have to deal with border inspections. The sectors most concerned include food and agriculture, motor vehicles, chemicals and pharmaceuticals, financial services, and the education sector. Economically, most studies project that the UK will be worse off due to Brexit, and will be most detrimental under a no-deal scenario and having to trade under WTO terms. In 2019, the Bank of England estimated that the UK economy will shrink by 5.5% in a no-deal Brexit (Bloom, 2019). Since the referendum, Brexit has left a huge amount of uncertainty with both people and businesses which has, in turn, reduced UK investment by around 11% and UK productivity by between 2% and 5% over the last three years since the referendum (Bloom, 2019). The UK needs to continue to push for an agreement with the EU by negotiating through the controversial topics that have shown to be major issues in order to have the least disruption to their economy starting in the new year.

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Appendix

UK contributions to the EU budget (after deducting the abatement), £ billions, 2010 to 2018

Figure 1: Office for National Statistics. *The UK contributions to the EU budget.* September 30, 2019.
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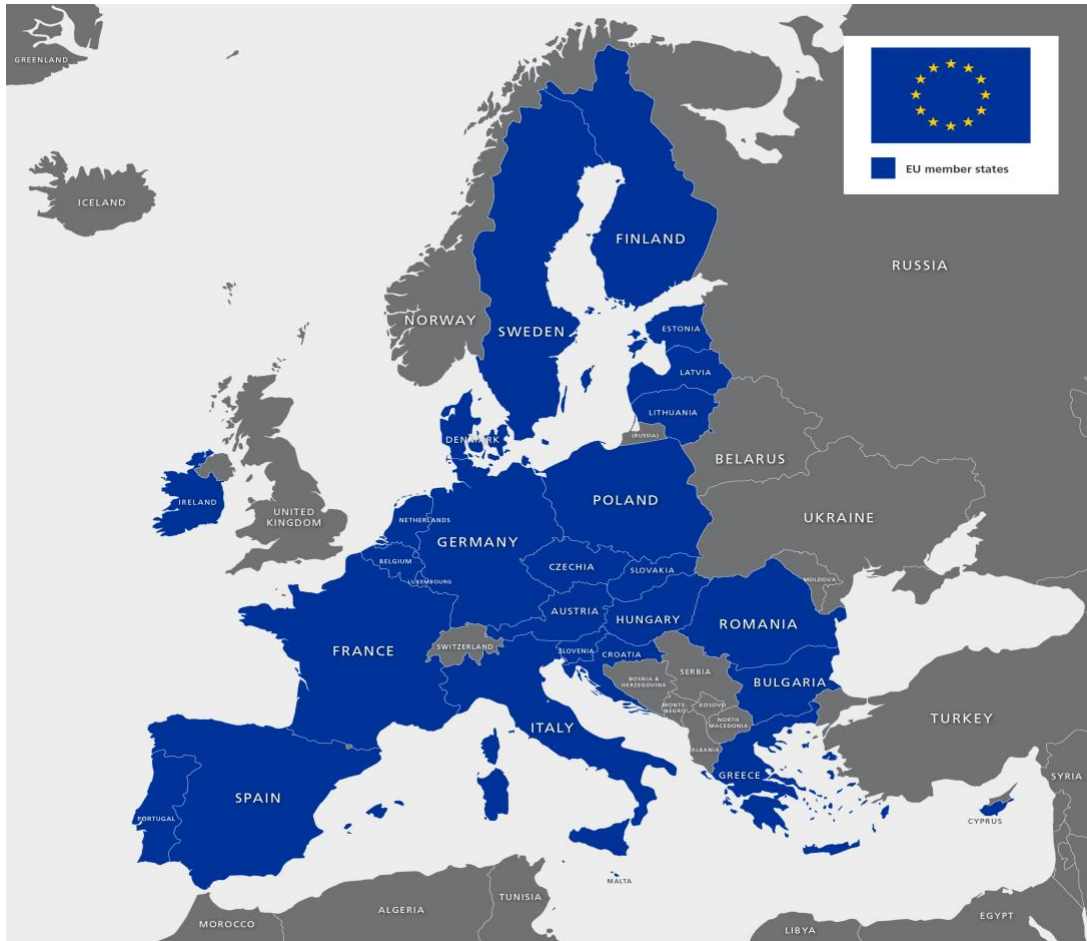


Figure 2: Source: Maproom: *Map of EU Countries After Brexit.* <https://maproom.net/shop/eu-map/>

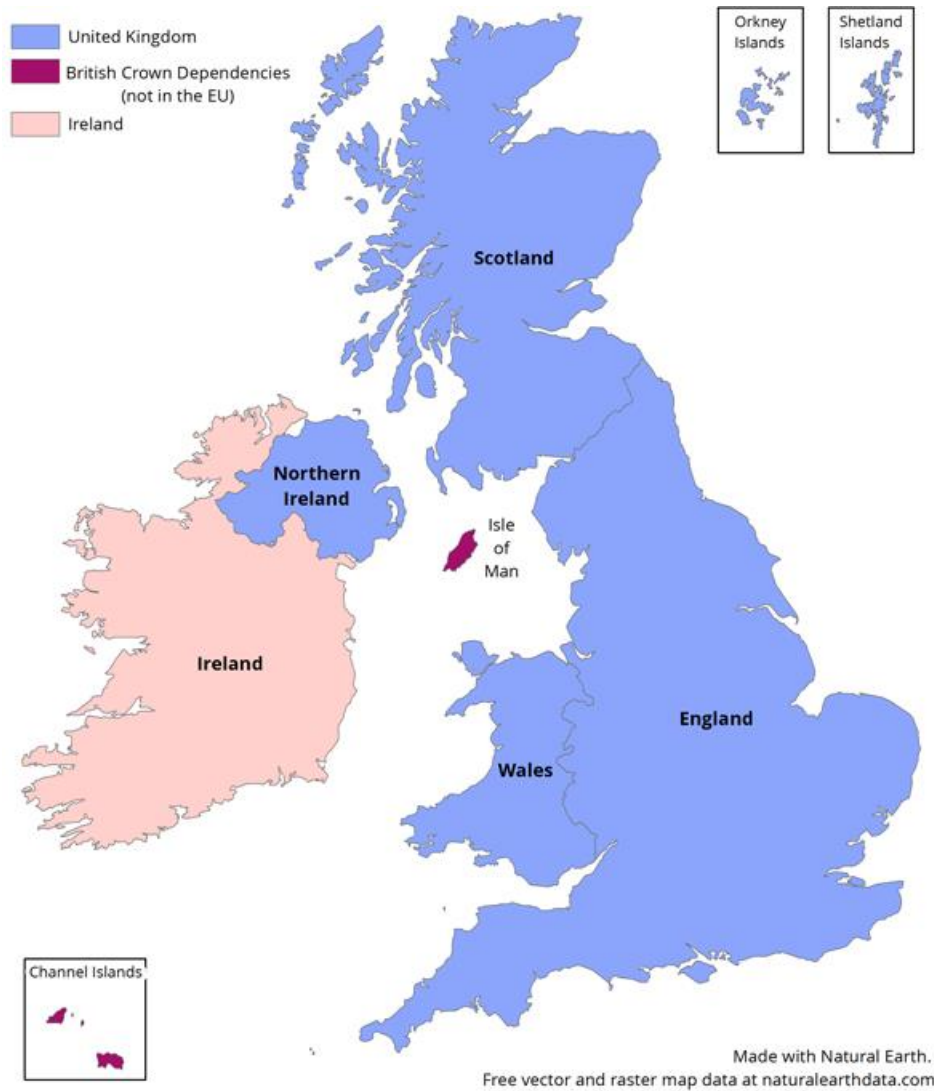


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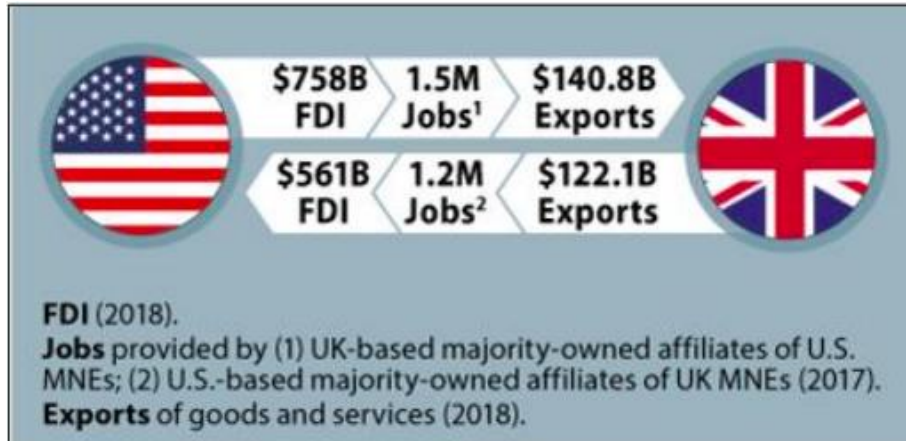


Figure 4:

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