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Brexit's long and short-term effects on the main UK macroeconomic variables and living standards: focus on the sterling exchange rate dynamics

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“Ai miei genitori, a mio fratello, alle mie nonne

e ai miei amici che mi hanno reso la persona che sono

e mi hanno spinto sempre a dare il meglio di me”

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INTRODUCTION

Brexit is considered one of the most significant and changing economic-political event that has characterized the recent history and has come to dominate British society, becoming part of everyday conversations and newspapers. The term Brexit refers to the decision taken by the United Kingdom citizens, in June 2016, to withdraw from the European Union and the entire political process associated with it. The political process refers, in turn, to the following four years negotiation phases between the British and the European institutions to find new arrangements and agreements, especially regarding trade and migration policies. The term Brexit was coined by Peter Wilding, a pro-Europe political advisor who was appointed by former UK Prime Minister David Cameron as Media and Policy Director of the Conservative Party in the EU from 2005-2008. He used it for the first time in May 2012, eight months before Cameron had announced the Referendum in his famous Bloomberg speech, saying that he took the inspiration from the world "Grexit" used for the Greece's possible exit from the eurozone during the 2012 financial crisis[1].

The choice of leaving the European Union and the following decisions made, agreements reached, and challenges faced in the wake of the referendum have produced substantial and profound changes on the UK economy. These changes have also reverberated through the economies of the United Kingdom's most important trading partners. Moreover, the most predominated sentiment that has characterized the years following the referendum was the uncertainty regarding the future commercial and political relationships between the United Kingdom and the European Union, leading to a sense of instability that influenced the decision-making processes and strategic choices of businesses, especially in terms of capital investments and trades, as well as of policymakers and individuals. This scenario had a severe impact on the UK citizens living standards, as well as on the key British macroeconomic variables, such as GDP growth, productivity, trade dynamics, wages, investments, exchange rates, and inflationary pressures, which underpin the economic health of a country. Based on this background, the ultimate purpose of this thesis is to conduct a detailed and exhaustive analysis of these macroeconomic indicators and the evolution they may have undergone in the aftermath of the referendum result due to both the short-term disruptions and the long-term transformations. By doing so, this research wants to clarify how Brexit transformed the dynamics of the British economy. Moreover, this thesis delves into the various ways in which Brexit has contributed to the deterioration

[1] Steed, L. (February 2020). Who is Peter Wilding? The man who coined Brexit. The Sun. Text available: https://www.thesun.co.uk/news/10869501/who-peter-wilding-brexit/

of living standards for people in the UK. Central to this exploration is an examination of the impact on the prices of UK goods and services, as well as on real wages. In detail, in order to assess the long-term effects of Brexit on the UK's macroeconomic variable, the work focuses on three primary transmission channels which allow to define the impact on the real economy and provide valuable insights into how Brexit has reshaped the economic landscape: trades, investments and migration. Additionally, in the work a great importance is given to the fluctuations of the sterling exchange rate and how the variation in the value of the British currency has influenced the real economy factors such as prices and wages, giving the opportunity to clearly understand whether the decision to exit the European Union has had the effect of diminishing the economic well-being of the UK populace or not, worsening their standards living. Indeed, the central question this dissertation would seek to answer is how the decision taken by the British citizens in 2016 to depart from the European Union has affected the main UK macroeconomic variable and the living standards of businesses and households.

The thesis is divided in three chapters. The first one is characterized by a long excursus about the pathway of the United Kingdom to enter in the European Economic Community (EEC) and, subsequently, becoming member of the EU. This historical excursus goes through the initial and complex negotiations (UK's requests to be part of the EEC have been refused twice) that lead to become member in 1973 and the subsequent of events and Prime Ministers with their decisions, until the Brexit referendum in 2016. In this first part of the first chapter one significant aspect that allows to understand the context in which the Brexit referendum, but also the 1973 one, took place: the Euroscepticism. A sentiment that has always characterized English history and based on which Europe is seen only as a mean to be a power nation rather than a real integration project. This has made the UK a particular EU member and has influenced the relationship with the other EU countries. The second part of this first chapter, instead, is only about the Brexit referendum, starting from the analysis of the vote, continuing with the negotiations process between EU and UK institutions and ending with the post-Brexit agreements.

The second chapter, instead, starts with the analysis of the impact of Brexit decision on the main macroeconomic variables. In particular, in this chapter the focus is on the long-term effects through the examination, as stated previously, of three main transmission channels which are trades, investments and migration. For each one, will be analyzed the changes undergone since after the vote to assess the long-term impact that this event had on UK economy factors, such as productivity, GDP, wages, and on the living standards.

In conclusion, the third and last chapter will focus on the short-term impact with a detailed analysis of the effects on the sterling exchange rate and how the variation of the value of the British currency has impacted the British economy and the well-being of the citizens. After an initial and theoretical degression about the essentials of exchange rates, so how they work, the different regimes and types of quotation, the distinction between nominal and real exchange rates, how their fluctuations influence the main factors of an economy and, finally, how central banks can intervene to leverage exchange rates in order to achieve their monetary policy goals. After this degression, the last part of the work is characterized by the analysis of the sterling exchange rate trend in the aftermath of the referendum and how the significant depreciation of the British pound, caused by the choice to leave the European community has resulted in the UK real economy. Therefore, the analysis will be on the short- term effects of the vote and how they influence the key macroeconomic variables in order to asses if the 2016 decision has been a correct or wrong one in terms of UK citizens living standards and well-being of the UK economy, which is the question of this thesis.

1 CHAPTER 1: HISTORICAL BACKGROUND OF THE COMPLEX UK-EU RELATIONSHIP: FROM JOINING THE EEC TO THE BREXIT VOTE.

1.1 THE PATHWAY TO ACCESS THE EEC

The path that led the United Kingdom to join the European Union was marked by strong contradictions and skepticism. The reasons behind this condition have their roots from the end of World War II and the contradictory political and economic situation that had arisen. Indeed, if on one hand the main European powers saw their political systems challenged and their economies strained by the war, on the other hand the United Kingdom was the only country in Europe that emerged from the conflict as a victor. In particular, a sense of moral superiority over the European countries began to spread in the UK institutions since there was the conviction of being at the same level as the USA and the USSR, the two major powers that came out as victorious. Confirming this was the English foreign policy of the time characterized by the so-called Churchill's three circles doctrine. In other words, the belief that the UK had a distinctive position at the intersection of the three circles of relations with the Western Europe, the USA, and the Commonwealth. This sentiment of standing as a world power, together with the complex economic and social condition in which many European states were in, meant that Europe was not essential nor fundamental to Britain's post-war recovery. Reason why, in the aftermath of the Second World War, Great Britain started to prioritize the relationship with the two new superpowers, especially with the U.S., with whom a special relationship was established that went on to influence British foreign policy[2], whilst the Europe "circle" was ranked as the least important of the three[3]. Consequently, the British Eurosceptic started to spread just at the time when the other European states had begun a process of unification and integration. As stated previously, in 1945, the main continental powers of Europe emerged shattered from the second of the two world wars in terms of human lives and economically speaking and they were struggling to overcome the devastation. Moreover, the conflict changed the dynamics with Europe from being the very heart of the international affairs and politics to be only a factor of a new system involving the U.S and the Soviet Union[4]. In this tragic scenario, the countries of Western Europe felt the need to give rise to "*a closer co-operation among themselves to re-establish collective defense arrangements against threats from outside Western Europe, to prevent future wars between Europe*

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[2] Gowland, D., Turner, A., & Wright, A. (2009). *Britain and European integration since 1945: on the sidelines*. Routledge, pagg. 19-22.

[3] Daddow, O. (2013). *Margaret Thatcher, Tony Blair and the Eurosceptic Tradition in Britain*. The British Journal of Politics and International Relations, 15(2), 210-227, pagg. 212-213.

[4] Kenealy, D. (2016). *How did we get here? A brief history of Britain's Membership of the EU*, pag. 1.

nations, and particularly to replace their economic rivalry with a more productive collaboration"[5]. Based on this necessity, on 9 May 1950, French foreign minister Robert Schuman presented a plan for a deeper cooperation called Schuman Declaration. Through this program, the French minister proposed to pool the coal and steel production of Germany, France, and other European countries under an independent and sovereign authority. It was intended to remove, from national control, industries that were then seen as crucial to warfare. The fundamental goal was to reduce the likelihood that any major European nation would ever go to war with another[6]. Moreover, *"by pooling basic production and by instituting a new High Authority, whose decisions will bind France, Germany and other member countries, this proposal will lead to the realization of the first concrete foundation of a European federation indispensable to the preservation of peace"*[7]. Put simply, was the first of several European supranational organizations that would later become today's "European Union". One year later, on the 18th of April 1851, six countries (Belgium, France, Italy, the Federal Republic of Germany, Luxembourg, and the Netherlands) signed the Treaty of Paris[8] through which the European Coal and Steel Community (ECSC) was established in order to organize the free movement of coal and steel by setting up an High Authority which oversee the market, keep an eye on how the laws of competition are being followed, and guarantee price transparency[9]. If, on one side, the ECSC was considered the first step towards a European integration and the creation of a federal Europe, on the other side it was seen only as an entity created for an economic necessity and political security since the Western Europe countries didn't have the power to pursue a plan for the economic and social reconstruction alone, but they needed an international support[10]. For these among other reasons, the UK opted to stay out from the community since in the British government there was a widespread conviction that Britain would lose its position as the world's preeminent power if it joined new European institutions. British ambitions were more global rather than regional, so the European integration was seen as "*an unnecessary and constrictive regional hindrance to the achievement of Britain's global destiny"*[11]. A controversial figure during this period has been the British Prime

[5] The United Kingdom and the European Communities, presented to Parliament by the Prime Minister by Command of Her Majesty. London: Her Majesty's Stationery Office, July 1971. 45 p. ISBN 10 147150 5.
[6] Kenealy, D. (2016). *How did we get here? A brief history of Britain's Membership of the EU*, pag. 1.
[7] EUROPEAN UNION. Schuman Declaration May 1950 (https://european-union.europa.eu/principles-countries-history/history-eu/1945-59/schuman-declaration-may-1950_en).
[8] The treaty applied from the 23rd of July 1952, it was valid for 50 years and expired on the 23rd of July 2002.
[9] EUROPEAN CENTRAL BANK DOCUMENTS. Treaty establishing the European Coal and Steel Community, ECSC Treaty (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:xy0022).
[10] Dedman, M. (Ed.). (2009). *The Origins & Development of the European Union 1945-2008: A History of European Integration*. Routledge, pagg. 11-12.
[11] Daddow, O. (2013). *Margaret Thatcher, Tony Blair and the Eurosceptic Tradition in Britain*. The British Journal of Politics and International Relations, 15(2), 210-227, pag. 213.

Minister Winston Churchill[12]. Churchill is considered one of the founding fathers of the European Union and, in his famous speech held at the University of Zurich in 1946, stated this willingness affirming that the one and only solution to recover the disastrous effects of World War II is to "*re-create the European family, or as much of it as we can, and provide it with a structure under which it can dwell in peace, in safety and in freedom. We must build a kind of United States of Europe*"[13]. Nevertheless, Churchill initially didn't perceive England part of this integration project, as stated in an article wrote by the Prime Minister himself for the America's Saturday Evening Post in 1930: "*we have our own dream and our own task. We are with Europe, but not of it. We are linked, but not comprised. We are interested and associated, but not absorbed*"[14]. Therefore, Britain institutions refused to join the European Coal and Steel Community to not compromise the privileged relationships with the United States and the British Commonwealth. Similarly, the British had a little influence over the following Rome Treaties of March 1957, through which the same six countries that were part of the European Coal and Steel Community established two new institutions: the European Economic Community (EEC) and the European Atomic Energy Community (EAEC or Euratom)[15]. In detail, the Treaty establishing the European Economic Community was intended to design the very foundations of a deeper integration between European countries. In fact, the main goal of the Community was to build up a common market and provide a unified economic area with free competition and free movement of people, services, goods, and capital. To achieve this stability was necessary to abolish the economic barriers among the countries with the introduction of a common external tariff, that replaced the different ones of the countries, on imports from outside the EEC and a mutual trade policy managed not at a national level[16]. Since the Great Britain was firmly convinced that the introduction of a common tariff could have possibly put trade with its former colonies in danger, decided to stand outside the European Economic Community[17]. Decision that turned out to be a serious and costly mistake. Actually, thanks to the abolition of the national tariffs with the introduction of the European Economic Community, the founding member states were positively affected in terms of prosperity of their economies (CEE productivity increased by 19%

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[12] Winston Churchill He was prime minister of the United Kingdom from 1940 to 1945 and again from 1951 to 1955. He was also a member of Parliament from 1900 to 1922 and from 1924 to 1964. As prime minister, he is best known for leading the United Kingdom to victory in World War II.

[13] EUROPEAN COMMISSION. *Winston Churchill: calling for a United States of Europe* (https://european-union.europa.eu/system/files/2021-06/eu-pioneers-winston-churchill_en.pdf).

[14] INTERNATIONAL CHURCHILL SOCIETY. (https://winstonchurchill.org/publications/finest-hour/finest-hour-102/inside-the-journals-4/).

[15] Dedman, M. (Ed.). (2009). *The Origins & Development of the European Union 1945-2008: A History of European Integration*. Routledge, pag. 10.

[16] EUROPEAN CENTRAL BANK DOCUMENTS. Treaty of Rome (EEC). (https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:xy0023).

[17] Dedman, M. (2006). *The origins and development of the European Union 1945-1995: a history of European integration*. Routledge, pag. 93.

between 1957 and 1961, and the GDP of the Six grew by 27%, a faster growth rate than even that of the United States). The British answer to the creation of the EEC was, initially, the request to transform the Organization for European Economic Co-operation (OEEC)[18] into a common market, ended up with a clear rejection by the member states. Secondly, with the foundation of the European Free Trade Association (EFTA)[19] by the Stockholm Convention[20] in 1960. This intergovernmental organization was founded to encourage open markets and economic integration among its Member States, which at the beginning were the 6 States that didn't join the EEC, to achieve a full liberalization of trade[21]. Even if the EFTA was economically successful and boosted trade among its members from 3.22 to 7.5 billion euro between 1959 and 1967[22], it turned out that small states, such as Switzerland and Sweden, benefited more than Great Britain since they had access to a bigger market mainly represented by the UK. Indeed, economically speaking, between 1960 and 1970, "*the EEC Member States outperformed the British economy which started experiencing significantly lower growth rates than the EEC. In turns, lower growth rates caused a deterioration of the trade balance which is fundamental to generate the large balance of payments surpluses necessary for providing capital to the Sterling Area*"[23]. This led to a devaluation of sterling around 1967. Conforming this situation there are a series of data and economic factors that explain the difference between UK and the EEC member states. For instance, between 1958 and 1969 the average real British earnings increased lees than 40%, while the EEC countries experienced, in the same period, a 75% growth rate. Furthermore, the EEC countries rate of growth of Gross National Product (GNP) per head of population was two times higher than the UK one. Finally, during the period from 1959 to 1969, the six Community countries channeled 24% of their GNP to investments which are necessary for the future growth of a nation, while the UK only 17%[24]. Therefore, it was tangible the mistake made by the UK to not join the Community and, with the intention of restoring its competitive position, the British government started working on a request for entering in the EEC. In detail, the Britain institutions applied for EEC memberships three times. The first one was officially presented

[18] The OEEC was founded on the 16th of April 1968, bringing together 18 Western Europe countries to administer the massive economic and technical assistance of the Marshall Plan coming from the US and Canada for the reconstruction of Europe after World War II. After few years, the OEEC was transformed into the Organization for Economic Co-operation and Development (OECD) on 30 September 1961 which now counts 38 Member states and helped the formulation of advance reforms and multilateral solutions to global challenges.
[19] Chochia, A., & Troitino, D. R. (2015). *Winston Churchill And The European Union*. Baltic Journal of Law & Politics, 8(1), 55-81, pagg. 73-74.
[20] Composed by 7 Member States: United Kingdom, Denmark, Norway, Portugal, Sweden, Switzerland, and Austria.
[21] From the official website of the EFTA (https://www.efta.int/about-efta/european-free-trade-association).
[22] Aitken, N. D. (1973). *The effect of the EEC and EFTA on European trade: A temporal cross-section analysis*. The American Economic Review, 63(5), 881-892.
[23] Kaiser, W. (2022). *Destined to Brexit? British Pathways to Membership in the European Communities 1945–73*. Global Policy, 13, 9-19, pag. 12.
[24] The United Kingdom and the European Communities, presented to Parliament by the Prime Minister by Command of Her Majesty. London: Her Majesty's Stationery Office, July 1971. 45 p. ISBN 10 147150 5, pag. 15.

at the House of Commons in July 1961 by the Prime Minister Harold Macmillan[25] who understood the great benefits coming from joining the European Community and realized that UK had to apply soon[26]. However, negotiations between the Britain government and EEC institutions turned out to be very complex for several reasons. First of all, due to the discussions regarding the taxes to be imposed on goods traded with former British colonies. Secondly, a major obstacle along the British way to join the EEC was the nationalist French President Charles De Gaulle who was firmly convinced about the greatness of France that should be considered as the third superpower, together with US and Soviet Union. Therefore, Charles De Gaulle aim was to restore the prestige of France and he used the European Community as a mean to achieve this goal and benefit France majesty. For this reason, the entrance of the UK in the Community was not well accepted by the French President because it could have endangered De Gaulle's ambition to put France at the center of the European stage, as it was the dominant country in the Community during de Gaulle's period. Consequently, the access of a powerful nation like Great Britain could have represented a threat to the French hegemony. Moreover, the UK was viewed negatively also for the special relationship and close links with the USA since De Gaulle has always been doubtful about them. In particular, he was afraid that with the UK entry in the Community, the doors of the European integrated market were indirectly opened to the US with the consequence that France would have lost its influence on the Community[27]. So, on January 1963, De Gaulle held a press conference and rejected for the first time the British application for membership, declaring that *"Britain is insular, maritime, bound up by its trade, its markets, its food supplies, with the most varied and often the most distant countries (...) the nature, structure, circumstances peculiar to England are very different from those of other continentals. How can Britain, in the way that she lives, produces, trades, be incorporated into the Common Market as it has been conceived and functions? ... It is predictable that the cohesion of all its members, which would soon be very large, very diverse, would not last for very long and that, in fact, it would seem like a colossal Atlantic community under American dependence and direction, and that is not at all what France wanted to do and is doing, which is a strictly European construction"*[28]. After this first refusal, Harold Wilson[29] became Prime Minister. During his first term, the UK was losing its influence in the world. This economic weakness culminated with the devaluation of the sterling between 1966 and 1967, which forced the government to restrict public pending and accelerated the

[25] Harold Macmillan was a Conservative politician and was Prime Minister of the UK from 1957 to 1963.
[26] Kaiser, W. (2022). *Destined to Brexit? British Pathways to Membership in the European Communities 1945–73.* Global Policy, 13, 9-19, pag. 11.
[27] Troitiño, D. R. (2008). *De Gaulle and the European communities.* Proceedings of the Institute for European Studies. Talinn University of Technology, no, 4, 139-152, pagg. 141-146.
[28] Grant, C. (2008). *Why is Britain eurosceptic?*. London: Centre for European Reform, pag.1.
[29] Harold Wilson was a Labour politician and was Prime Minister from October 1964 to June 1970 and again from March 1974 to April 1976.

necessity for Britain to join the Community. Therefore, Wilson presented a second application to enter in the EEC to the House of Commons on 2 May 1967, which received an important support with the Commons that voted a substantial 488 in favour and 62 against. Nevertheless, also this second application was vetoed by the French President De Gaulle in November 1967 who continued to express skepticism about the British entrance, in particular after the financial and economic distress that Great Britain was experiencing[30]. Six years later the first application, the scenario was quite the same, but it was becoming evident how the UK was becoming less Euroskeptic. On 28 April 1969 an important event happened: President Charles De Gaulle submitted the resignation and was succeeded by Georges Pompidou. Thus, a new round of negotiations started on 30 June 1970 in a different scenario from the characterized the first two. Indeed, the EEC had consolidated and demonstrated its competitive position, becoming way more attractive than before. Secondly, Britain relationships with the Commonwealth has become less important and powerful, with a decrease of imported and exported goods between UK and Commonwealth countries. Thirdly, also France turned to be more favorable to the access of the UK in the Community since German was reestablishing its power and influence within Europe as it was before World War II. The entrance of an important country like UK, of course, could have balanced the German power. Therefore, even France started getting interested. This change was demonstrated during the Haute summit held on 10 July 1969, in which the President Pompidou adopted a more pragmatic approach regarding the enlargement topic rather than his predecessor, believing that the accession of the Great Britain could and should have been possible. Based on this context, a new round of negotiations started between the French President Pompidou and the new English Prime Minister Edward Heath. The most complex and controversial topic during the dialogues was the UK's participation to the EU budget. At the time, the budget was based on custom duties on industrial products and levies on agricultural ones. To join the Community, Great Britain was forced to accept hard conditions that "*resulted in making a substantial contribution to the budget, while the community expenditures in the UK remained low: in 1979-1980 the UK contributed 20% of the community revenue but enjoyed only 12% of its expenditures*"[31]. A condition that, in the following years, will be strongly contested. In the end, after years of negotiations, the House of Commons approved the join to the EEC on 28 October 1971 and the Accession Treaty was signed on 20 January1972. Only after the Queen gave the royal assent to the entrance, it came officially into effect on 1 January 1973.

[30] Furby, D. E. (2010). *The revival and success of Britain's second application for membership of the European Community, 1968-71* (Doctoral dissertation, Queen Mary University of London), pagg 20-23.
[31] Spence, J. (2012). *A high price to pay? Britain and the European budget*. International Affairs, 88(6), 1237-1260, pagg. 1241-1243.

1.2 THE 1975 REFERENDUM

After Great Britain became part of the EEC, the English political and economic environment that was characterizing the scene In the February 1974, the prime minister Heath called for an election due to a miner's strike and a diffuse complex economic condition. The overall result of the election was a hung parliament, term referred to the situation in which no single party or coalition have an absolute majority in the House of Commons. In detail, "*of the 635 constituencies in the United Kingdom, Labour gained 14 seats, for a total of 301 Members, while the Conservatives party lost 28 seats for an amount of 297 Members of Parliament, and the Liberals that returned 14 Members of Parliament*"[32]. Thereby, for 17 seats, either party was able to reach a majority. Consequently, Edward Heath remained as Prime Minister for few days while he tried to form a coalition with the Liberal Party, without succeeding in his purpose. This resulted in the resignation of Edward Heath as Prime Minister and the labourist Harold Wilson became Prime Minister for a second time, with a minority government. In October 1974, another general election took place and this time the Labour Party held by Wilson achieved the majority. During his second term, the Prime Minister wanted to renegotiate the terms of UK's entry into the EEC, one year after the country joined. The reasons of this decisions were several: as stated before, Great Britain was suffering economic difficulties: high inflation, with the annual rate that reached 16% and a deteriorating trade balance, with the deficit on the Balance of Payments that worsened from £979 millions in 1973 to £3278 millions in 1974[33]. Moreover, Labour Party criticized the strategy utilized by Heath to join EEC, in particular the contribution to the community budget terms, which was considered excessive in comparison with the share that every year UK received. The commitments and goals for the renegotiation of the entry terms were pointed out in the 1974 Labour Party Manifesto. The most important one regarded "*major changes in the the Common Agricultural Policy and new and fairer methods of financing the Community Budget*"[34]. After a period of negotiations, the major achievements were obtained during the Paris Summit in December 1974 and at the EU Council in Dublin on March 1975. The most important milestone of the renegotiations was the creation of the "correcting mechanism" to the system of the own resources that characterized the EU budget, intended to reduce the unfair situation in which the UK contributed more than what received. The mechanism was based on a system of refunds to all the countries "*bearing an unacceptable financial burden of VAT-based contributions to the EEC budget"*[35].

[32] Rogers, C. (2010). *The economic consequences of a hung parliament: lessons from February 1974*. The Political Quarterly, 81(4), 501-510, pag. 503.
[33] Ibidem
[34] Labour Party (Great Britain). (1974). Labour Party manifesto, October 1974: Britain will win with Labour. [London: Labour Party]
[35] Mourlon-Druol, E. (2015). *The UK's EU vote: The 1975 precedent and today's negotiations* (No. 2015/08). Bruegel Policy Contribution, pag. 6.

Furthermore, as stated in the White Paper of 26 of February 1975, in case the Labour Party had won the October 1974 General election and once the outcome of the renegotiations was known, English people would have decided to stay in the EEC with the new terms or leave the Community through a consultative referendum, the first one in the UK history[36]. The Labour Party was divided about the topic and Wilson was sure that the Referendum could have resolved the issue. Therefore, on 6 June 1975, the Referendum was held and the British had to answer to the question: "*The Government have announced the results of the re-negotiation of the United Kingdom's terms of membership of the European Community. Do you think that the United Kingdom should remain part of the Euro- pean Community (the Common Market)?*"[37]. The result was clear: over 2/3 of the voters (67,23%) were favourable and supported UK's membership in the EEC, while the rest (32,77%) voted no because they were against the membership. This outcome, initially, was a relief especially for the European Community institutions that, from that moment in time, could rely with certainty on another powerful country with whom might have begun to discuss the future of European integration. However, the distance between the British government's demands during the negotiation talks and the outcome was still very important that later governments reviewed many of the requests, like the budgetary contribution topic that came back during the Thatcher's government. All this in a climate of strong Euroscepticism.

1.3 A STRONG UK EUROSCEPTISM FEELING: THE MARGARET THATCHER, JOHN MAJOR AND TONY BLAIR GOVERNMENTS

One year after Edward Heath and the Conservative party lost the general election of 1974, Margaret Thatcher became the new frontrunner of the party and the first woman who led a political party in Europe. Four years later, the Iron Lady, as she was nicknamed for her leadership and politic style, won the 1979 general election with a parliamentary majority of 44 seats over the Labour government of James Callaghan, becoming the first female Prime Minister in UK's history. Thatcher's identity is very controversial: on one hand is related to its Eurosceptic positions and to the idea that Europe should have been considered only as an area where people and goods were free to move and cooperate, and not as a supranational entity that exercises power over the members. This thought was expressed by the Prime Minister herself at the House of Commons, after the European Council held

[36] Great Britain. Lord President of the Council: *Referendum on United Kingdom membership of the European Community*, Presented to Parliament by the Lord President of the Council by Command of Her Majesty. London: Her Majesty's Stationery Office, Febuary 1975, pag. 3.
[37] Ibid., pag. 4.

in Rome in 1990: "*Yes, the Commission wants to increase its powers, Yes, it is a non-elected body and I do not want the Commission to increase its powers at the expense of the House, so of course we differ. The President of the Commission, Mr Delors, said at a press conference the other day that he wanted the European Parliament to be the democratic body of the Community. He wanted the Commission to be the Executive and he wanted the Council of Ministers to be the Senate. No! No! No!"*[38]. On the other hand, Margaret Thatcher's aggressive behavior against Europe clashed against the fact that, before becoming Prime Minister, she assisted Wilson's pro-EEC campaign in the 1975 referendum. In fact, the votes of the member of the Conservative party, which she led, were crucial in ensuring the success of the "YES" votes and the membership in the European Community[39]. But under some conditions that shown up during her long term. Margaret Thatcher became Prime Minister in 1979 and was re-elected three times until she resigned in 1990. During this long period, her Eurosceptic views against European institutions grew constantly. As stated previously, the main topic that has been at the top of Margaret Thatcher's European agenda was the UK contribution to the EU budget. The EEC had its own incomes which consisted of percentage of national VAT (Value Added Tax) or external common taxes of the Common Market. Afterwards, the European Community spent its money in accordance with its policies and gave the money back to the states via the same policies. The major issue of this mechanism for the UK institutions was that, previously, more than 80% of the entire European Budget was absorbed by the Common Agricultural Policy (CAP). Since Great Britain was a country with an underdeveloped agricultural sector in terms of size and production and they imported most of their food through transactions taxed with VAT, consequently the British country was main net contributor of the Member States[40] but received the second lowest benefit from the common agricultural policy[41]. In particular, Margaret Thatcher outlined how powerful countries like France were much more favored and helped by this system. Based on these reasons, the UK Prime Minister started long negotiations with European Institutions to find a compromise. The solution arrived during the European Council held in Fontainebleau on 25 and 26 June 1984 "*where the British delegation, led by Margaret Thatcher, was granted a regular budgetary correction (known as UK rebate) based on a special formula on an exclusive basis to the UK. From 1986 onwards, the United Kingdom became entitled to be reimbursed, by way of a reduction in its VAT-based payments,*

[38] European Council Rome (1990) – Margaret Thatcher speech. Full text available at: https://api.parliament.uk/historic-hansard/commons/1990/oct/30/european-council-rome

[39] Ramiro Troitiño, D. (2022). *Margaret Thatcher: British Strategy in the European Integration. In The European Union and its Political Leaders: Understanding the Integration Process* (pp. 207-218). Cham: Springer International Publishing, pag. 213.

[40] Troitiño, D. R. (2009). *Margaret Thatcher and the EU. European Union: Current Political and Economic Issues.* Tallinn: Tallinn University of Technology, pagg. 126-130.

[41] Stepney, P. (2013). *The legacy of Margaret Thatcher—A critical assessment*. Open Journal of Social Sciences, 2014, pag. 138.

66% of the difference between its share in VAT-bases and its share in total allocated expenditure, ap plied to total allocated expenditure"[42]. In other words, Britain continued to pay more but its net contribution was reduced by 2/3, for an amount of 1 billion ECU in 1984 and more than a billion in 1985 and 1986[43]. Another important moment of Margaret Thatcher's term was represented by the Single European Act, adopted on 28 January 1986, entered in force in July 1987 and is the first important constitutional reform within the EU Community after the ones happened in the 1950s. Even though Margaret Thatcher has consistently expressed firmly Eurosceptic sentiments, she was central during the negotiations because she was looking forward to establishing a pure common market within Europe, with no national trade barriers, based only on cooperation and not integration. However, the result was that "*the unification of the European national markets into a European one meant common legislation in the Communities to harmonize the economic rules, increasing enormously the power of the European institutions*"[44]. Therefore, through the Single European Act, the Prime Minister promoted what she had always been against: the evolution of the EEC into a supranational body with increasing powers that could have put at risk the independent sovereignty of the member states and the creation of a single currency[45]. Moreover, the Single European Act gave more power to the European Commission and set the basis for the creation of a federal Europe, shifting from an economic cooperation to a political integration, something against Margaret Thatcher's ideals. From this point onward, Thatcher's attitude became way more Eurosceptic and certain issues with the European Commission president Jacques Delors, strong supporter of a federal Europe, started to arise. Concerning this aspect, highly renowned was the Bruges Speech held by Margaret Thatcher at the College of Europe in the Belgian city of Bruges, in September 1988, In which she stated: "*we have not successfully rolled back the frontiers of the state in Britain, only to see them re-imposed at a European level with a European super-state exercising a new dominance from Brussels"*[46]. This speech is considered the first manifestation of contemporary Eurosceptics messages, a turning point for the evolution of the Eurosceptic movement, so much so that it became central and permanent in British politics[47]. However, the speech left behind significant divergencies within the Conservative party, between those who were in favor of a federal Europe, as Delors wanted, and those who were against it and supported their leader. Her aggressive opposition to

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[42] Somai, M., & Biedermann, Z. (2016). *Brexit: Reasons and challenges*. Acta Oeconomica, 66(s1), pag. 142.
[43] Moore, L. (1999). *Britain's trade and economic structure: the impact of the European Union.* London: Routledge, p.75
[44] Ramiro Troitiño, D. (2022). *Margaret Thatcher: British Strategy in the European Integration. In The European Union and its Political Leaders: Understanding the Integration Process* (pp. 207-218). Cham: Springer International Publishing, pag. 211.
[45] Wall, S. (2022). *Margaret Thatcher and the Single European Act*. Global Policy, 13, 30-38.
[46] The Bruges Speech (1988). Text available at https://www.margaretthatcher.org/document/107332.
[47] Daddow, O. (2013). *Margaret Thatcher, Tony Blair and the Eurosceptic Tradition in Britain*. The British Journal of Politics and International Relations, 15(2), 210-227, pag. 217.

European integration, together with a strong leadership style, lead to a progressively isolation in the party until she resigned as Prime Minister in November 1990 and was replaced by John Major.
Major was Prime Minister from 1990 to May 1997 and his term was initially characterized by a less Eurosceptic attitude in comparison with the one of his predecessors, as evidenced by the fact that Major succeeded in convincing Mrs. Thatcher, 6 months before she resigned, to join the European Monetary System (EMS), an exchange rate regime set up in 1979 to foster closer monetary policy co-operation between the central banks of the Member States of the EEC and promote monetary stability in Europe. The currency fluctuations were controlled through the Exchange Rate Mechanism (ERM)[48]. This decision represented the flagship of his economic policy during the first two years of his term, but very soon it turned out to be a disaster. Indeed, the years before the entrance in the EMS, UK economy was characterized by high inflation (at 30% in 1975) and high level of unemployment. To reduce both the economic indicators, the UK institutions decided to set a policy based on some monetary targets, meaning that Bank of England had to maintain the money supply within a set range while focusing on its growth. This macroeconomic policy was first introduced by a Labour Chancellor of the Exchequer, named Denis Healey, and then became central under the Conservative government of Margaret Thatcher. However, this approach did not give the desired effects: "*inflation was reduced from 20% in 1980 to 5% in 1985, but the monetary growth outcomes bore little relation to the targets. Between 1980 and 1982, the money supply grew twice as fast as it was supposed to but monetary conditions were exceptionally tight. GDP fell in 1980 and 1981 and, although it started to grow from 1982 onwards, unemployment continued to rise until 1986, reaching a peak of over 3 million unemployed*"[49]. Therefore, this policy was abandoned and to stabilize the currency, the Chancellor of the Exchequer Nigel Lawson, proposed to pursue a policy of "shadowing" the Deutsche Mark, meaning that the Sterling was anchored to a currency like Deutsche Mark which was considered stronger and reliable. To carry out this policy, a series of interest rates cuts were implemented. But, after a disagreement between the Chancellor and the Thatcher's economic adviser Alan Walters, Lawson resigned. His successor was John Major who, as previously stated, was able to convince Mrs. Thatcher to join the ERM as a way to pursue an anti-inflation disciplinary plan. In detail, UK joined the ERM at a fixed exchange rate of 2.95 German Marks with a permitted band of 6% either side, with the Central Bank that was allowed to intervene to preserve the band. However, the rise in German interest rates wanted by the Bundesbank to fight the inflationary impacts associated to the spending on German reunification together with the depreciation of the US dollar,

[48] EUROSTAT STATISTICS EXPLAINED. Glossary: European Monetary System (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:European_Monetary_System_(EMS)).
[49] Budd, A. (2005). *Black Wednesday-A Re-examination of Britain's Experience in the Exchange Rate Mechanism*. IEA Occasional Paper, (135), pag. 18.

a currency to which the sterling was linked since it was often used to price UK exports, caused stress within the ERM system[50]. Actually, by the end of the 1992, sterling fell to its lowest level against the mark. To attract people to the pound, the British government decided to rise the interest rates, but traders continued to short the currency, to sell pounds against Deutsche mark, devaluing the pound even further. This situation forced the Bank of England to intervene by increasing the interest rates up to 15% and buying immense amount of pounds. In April 1992, Britain expended at least $1.3 billion of reserves to keep sterling from falling and the first week in September, the Bank of England borrowed $14.5 billion of foreign reserves to finance further intervention. Results were insufficient and, on 16 September 1992, since it was losing billions, the UK government withdrew from the ERM[51]. This tragic day is also known as "Black Wednesday" and increased the Eurosceptic thoughts within UK, in addition to damage the credibility of Major's second term which began after the surprisingly win of the 1992 general election held on April 1992. During this second term, the Conservative Party was strongly divided over the issue of Europe. Indeed, in February 1992 was signed the foundational document of European Union, the Maastricht Treaty, also known as the Treaty on European Union, through which unified citizenship, along with economic, social, and progress were promoted among Member states. Moreover, the treaty laid down the foundation of an economic and monetary union, including the creation of a single currency. The treaty also established the framework for a monetary and economic union, including the introduction of a single currency, the euro. During the negotiations of the Maastricht Treaty, to satisfy everyone, John Major signed the document securing a few opt-outs from the treaty regarding social policy and membership of the single currency. The term opt-out precisely means the renunciation of a certain country to adopt a certain rule decided by the Union or to take part in a particular field of EU policy. In the case of the UK, the most important opt-out was the one regarding the opportunity to decide whether to join the Economic and Monetary Union and adopt the euro. The reason why the United Kingdom did not want to give up the pound in favor of relying on a single currency occurred due to the great perplexity Britain institutions had over the project of a common currency, especially following the unsuccessful experiment with the European Monetary System. Even though Major was able to negotiate these clauses, the "Black Wednesday" event destroyed the Conservative party reputation for economic management and in general, "*Europe became synonymous of national humiliation*"[52]. Throughout the rest of his term as Prime Minister, he endured constant criticism from his own party and the divisions became so irreversible that Major, firstly, resigned as leader of the Conservative party, even if in the

[50] Dury, H. (2013). *Black Wednesday*. Finance Basics
[51] Eichengreen, B., Wyplosz, C., Branson, W. H., & Dornbusch, R. (1993). *The unstable EMS*. Brookings papers on economic activity, 1993(1), 51-143, pagg. 59-60.
[52] Shrimsley, R. (2018). *Brexit: the Conservatives and their thirty years' war over Europe*. Financial Times.

leadership election in June 1995 he won again. Whilst, in the 1997 general election the Conservative side was defeated by the Labour party, for the first time after 18 years, and John Major was succeeded as Prime Minister by the leader of the Labour Tony Blair.
Labourist Tony Blair was Prime Minister from 1997 to 2007. During these years, Blair turned out to be more sympathetic to the European integration rather than his Conservative predecessors. Blair has consistently backed Britain's continued inclusion into the European Union and has maintained his strong pro-European political position. This new attitude was stated by the "New Labour" concept presented during the 1997 general election by the Labour Party through a political manifesto called "New Labour, New Life for Britain". In this manifesto, Labourist party pledged that they "*will stand up for Britain's interests in Europe after the shambles of the last six years, but, more than that, we will lead a campaign for reform in Europe*"[53]. Shortly after becoming Prime Minister, Blair signed the Treaty of Amsterdam and the Social Chapter of the Treaty on European Union, whereas his conservative predecessor, John Major, had refused to do so. Moreover, Blair Even though Blair was considered one of the most pro-European British Prime Minister and supporter of a further integration in the European Community, he was also linked to an ideology that has always been central in the UK policy in the last 40 years: the British Exceptionalism. This ideology was based on the idea that Great Britain was seen differently from other international countries due to its unique set of values and stood out British exclusiveness from Europe. This consistent commitment to British exceptionalism was demonstrated by Blair's famous expression of Britain as a "*bridge between East and West between the United States and the EU*"[54], even if in the facts the PM manifested to favour more the Atlantic relationship rather than the European one. Indeed, even if most of the European countries were opposed, Tony Blair gave his full support to the foreign policy of the President of USA George W. Bush characterized by the participation in the 2001 Afghanistan intervention and the 2003 Iraq invasion, successive to the Twin Towers terrorist attack occurred in September 2001. This controversial decision caused tensions between UK government and the major EU leaders, as well as increasing the public opposition to Tony Blair's figure and his way of governing and the Eurosceptic ideals in the Britain electorate. The consequence was the drop of Blair's popularity in the last two terms in 2001 and 2005 and, also due to internal conflicts within his party, was forced to step down and resign both as Labour leader and as Prime Minister in September 2007. His successor was Gordon Brown, which served as Chancellor of the Exchequer during Blair's government. Brown government lasted only three years since Labour's popularity was declining more and more and in

[53] LABOUR PARTY MANIFESTO 1997. Full text available at: http://www.labour-party.org.uk/manifestos/1997/1997-labour-manifesto.shtml
[54] Mölder, H. (2018). *British Approach to the European Union: From Tony Blair to David Cameron*. Brexit: History, Reasoning and Perspectives, 153-173, pag. 158.

the 2010 general election the Conservative party, led by David Cameron, won after 13 years since the last time.

1.4 THE BREXIT REFERENDUM

To be more precise, the 2010 general election ended up with a hung parliament. This term refers to the situation in which no single political party or pre-existing coalition has an absolute majority in the House of Commons[55]. Indeed, the seats in the House of Common necessary to reach the majority were 326, whilst the results of this election gave the following situation: the Conservative party leaded by David Cameron won 306 seats, the Labour one with Gordon Brown as leader won 258 seats and the Liberal Democrats party that won 57 seats. Therefore, for only 20 seats the Tory party was not able to reach the absolute majority and, as a consequence, coalition talks started. Firstly, Labour and Liberal Democrats attempted to put together a coalition, failing in their intent. After that, the Conservative Party and Liberal Democrats started negotiating and after five days from the election's result, a deal between the parties was found and on 12 May 2010 the coalition government entered into force, with David Cameron that became Prime Minister. Before becoming Prime Minister, Cameron served as leader of the Conservative party from 2005 and as most Conservatives of his generation marked by the humiliating events of Black Wednesday, considered himself Eurosceptic[56], also due to his loyalty to the former Conservative leader Margaret Thatcher which was considered synonymous with being anti-European. Confirming this Eurosceptic sentiment of Cameron at the beginning of his political career, in his 2001 election campaign for his Oxfordshire seat, he summarised his views on the EU as "*no to the single currency, no to further transfer of powers from Westminster to Brussels, and yes to renegotiation of areas like fish where the EU has been a disaster for the UK"*[57]. Moreover, while running for the party leadership in 2005, to get support from the more explicitly anti-European leadership, Cameron made a promise to remove Conservative MEPs from the European People's Party (EPP)[58] group in the European Parliament because it was too federalist. Promise that was finally delivered in the 2009 European Parliament elections[59]. Despite all this, Cameron's Euroskeptism was often questioned, and when he became Prime Minister he changed his

[55] UK PARLIAMENT – *What is a hung parliament?* (https://www.parliament.uk/about/how/elections-and-voting/general/hung-parliament/).
[56] Smith, J. (2018). *Gambling on Europe: David Cameron and the 2016 referendum.* British Politics, 13, 1-16, pag. 3.
[57] Higazy, A. (2020). *Euroscepticism, Thatcherism and Brexit.* E-International Relations, Available at: https://www. e-ir. info/2020/02/26/euroscepticism-thatcherism-and-brexit/.
[58] The European People's Party (EPP) is the largest and oldest group in the European Parliament composed of Christian-democratic, conservative, and liberal conservative member parties.
[59] Smith, J. (2018). *Gambling on Europe: David Cameron and the 2016 referendum.* British Politics, 13, 1-16, pag. 4.

ideas in favor of European integration. He immediately understood the importance of being part of the European Community and all the economic benefits Britain derived from the EU. Cameron did not become a pro-European politician, but he pragmatically comprehended that the UK-EU relationship was merely an economic calculation based on cost-benefit analysis, as he stated in 2011: "*we will remain in the European Union so long as it is in our interest to do so"*[60]. However, between 2010 and 2013, a mix of events created the situation for the spread of an Eurosceptic strategy in the European policy of Cameron's coalition government, founding expression in the populist right and nationalism and creating divisions within the parties[61]. These events were: the Conservative Party's inability to secure an absolute victory in the 2010 election, forming a coalition with the Europhile Liberal Democrats, which weakened Cameron's leadership. Secondly, the eurozone crisis and its dramatic consequences which further confirmed to the British Eurosceptic the economic and political failure of the European Union and single currency project. Thirdly, the constant rise in support of the Eurosceptic side of the political spectrum[62], like the case of the Union Kingdom Independence Party (UKIP). The UKIP was founded in 1993 and represents a right-wing political party which promotes Eurosceptic traditionalism. From 1999, year in which the party won three seats in the European Parliament, the support to UKIP and its influence increased significantly. In fact, in the following elections to the European Parliament in 2004 and 2009 they were able to win respectively 12 and 13 seats. While in the 2014 elections, UKIP was able to get 24 seats becoming the largest party representing the UK in the European Parliament[63]. Therefore, this strong appearance of an anti-EU party within a European institution strengthened the Eurosceptic stronghold in the Conservative party, causing strong divisions within the party about EU integration. The right-wing and conservative tendency became more dominant and influential within Conservatives, with more and more party members beginning to express their desire to leave the EU through the call for a referendum on UK's membership of the EU, exacerbating the internal spats. Thus, during David Cameron's first years as Prime Minister, the ant-EU wing of the Conservative government skillfully but unwillingly leveraged the momentum of a growing wave of Euroscepticism in the United Kingdom for the goal of leaving the EU[64]. Cameron understood this momentum and opened himself to the idea of a possible UK withdrawal from the UE 40 years after the first 1975 referendum, even if initially he had always been

[60] Copsey, N., & Haughton, T. (2014). *Farewell Britannia: Issue Capture and the Politics of David Cameron's 2013 EU Referendum Pledge*. J. Common Mkt. Stud., 52, 74-89, pag. 81.
[61] Burton, M., & Burton, M. (2022). *Cameron Opts for a Referendum. From Broke To Brexit: Britain's Lost Decade*, 93-106, pag. 93
[62] Copsey, N., & Haughton, T. (2014). *Farewell Britannia: Issue Capture and the Politics of David Cameron's 2013 EU Referendum Pledge*. J. Common Mkt. Stud., 52, 74-89, pag. 86.
[63] Troitiño, D. R., Kerikmäe, T., & Chochia, A. (Eds.). (2018). *Brexit: History, reasoning and perspectives*. Springer, pag. 164.
[64] Ivi, pag.165.

opposed to this solution. Finally, in January 2013 Cameron offered his backbench Eurosceptics a glimmer of hope by announcing the decision to renegotiate the EU membership and later hold an in–out referendum on remaining or leaving the EU. A risky decision which will prove to be a disaster for Cameron's government[65].

1.4.1 PRIME MINISTER DAVID CAMERON BLOOMBERG SPEECH

David Cameron announced his decision to hold a referendum on British withdrawal from EU on 23 January 2013, when he delivered a significant and very famous speech at the Bloomberg European Headquarters in London, known as the "Bloomberg speech". During his announcement, David Cameron firstly emphasized the well-known British exceptionalism and greatness by saying that "*United Kingdom is sometimes seen as an argumentative member of the family of European nations. We have the character of an island nation - independent, forthright, passionate in defence of our sovereignty. we come to the EU with a frame of mind that is more practical. For us, the European Union is a means to an end (...) not an end in itself"*[66]. He also stated that he wanted to be part of Europe in the future, "*a future in which Britain wants, and should want, to play a committed and active part"*[67]. At the same time, Cameron was conscious that a vast majority of British people was unsatisfied about the actual UK membership conditions in the EU and a reform of them was necessary. During his speech, Cameron highlighted three major challenges that EU and all the member states must face and defined 5 principles on which the European community should have been built on: competitiveness, flexibility, return of the power to the member states, democratic accountability, and fairness. Moreover, Cameron stated that he would have fight against one of the guiding principles of the European Treaty which "*commits the Member States to lay the foundations of an ever closer union among the peoples of Europe (...) We understand and respect the right of others to maintain their commitment to this goal. But for Britain - and perhaps for others - it is not the objective"*[68]. It was also reassured that Britain will not join the single currency. Therefore, the Prime Minister through this speech revealed publicly his desire to conduct a referendum on the possibility of the United Kingdom leaving the European Union, taking into account the unhappiness of his fellow citizens with the EU institutions, only after a reform of the membership conditions. If he will be able to re-negotiate better terms for his country, he will campaign to keep Great Britain in

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[65] Smith, J. (2018). *Gambling on Europe: David Cameron and the 2016 referendum.* British Politics, 13, 1-16, pag. 4.
[66] Cameron, D. (2013) *EU Speech at Bloomberg*, 23 January. Available at: https://www.gov.uk/government/speeches/eu-speech-at-bloomberg
[67] Ibid.
[68] Ibid.

the European Union since Cameron was aware of the important role played by the EU for Great Britain. "*If we leave the EU, we cannot of course leave Europe. It will remain for many years our biggest market, and forever our geographical neighborhood (...) We would have to think carefully too about the impact on our influence at the top table of international affairs. There is no doubt that we are more powerful in Washington, in Beijing, in Delhi because we are a powerful player in the European Union"*[69]. David Cameron was quite confident that he could have persuade the EU leaders to make enough concessions and reform the actual conditions to sell them as a success and convince the British electorate to remain in the EU community. As already happened in the 1975 referendum, this represents a classic but risky strategy of party management: use referendums as a means to manage dissent[70].

1.4.2 THE INITIAL CONSULTATIONS BETWEEN UK AND EU INSTITUTIONS

The first step for David Cameron to reach the objectives defined in the Bloomberg speech was to win the 2015 general election, held on 7 May 2015. Political commentators and opinion pools expected that a second straight hung parliament would have occurred from the election results. Surprisingly, the previsions underestimated the Conservative party since they were able to win 330 of the 650 seats in the House of Commons, reaching the absolute majority. Therefore, David Cameron was reelected Prime Minister for a second term and had the opportunity to govern the country alone and not with a coalition government. His political agenda for this second term was announced in the 2015 Conservative party manifesto. One of the main political points regarded the relationship with the European Union and the willingness to deliver a real change of it, negotiating a new settlement for Britain. After that, the British people would have decided to stay or leave the EU with the new conditions through an in/out referendum to be held before the end of 2017[71]. Thus, the Prime Minister started negotiating with the European institutions. On 15 November 2015 he sent a letter to the President of the European Council Donald Tusk entitled "A New Settlement for the United Kingdom in a Reformed European Union". In this letter, Cameron set out four areas where he was seeking reform: economic governance, competitiveness, sovereignty, and immigration. In terms of

[69] Ibid.
[70] Copsey, N., & Haughton, T. (2014). *Farewell Britannia: Issue Capture and the Politics of David Cameron's 2013 EU Referendum Pledge*. J. Common Mkt. Stud., 52, 74-89, pag. 84.
[71] THE CONSERVATIVE PARTY MANIFESTO 2015 – A Strong Leadership A Clear Economic Plan A Brighter , More Secure Future, Available at: https://www.theresavilliers.co.uk/sites/www.theresavilliers.co.uk/files/conservativemanifesto2015.pdf

governance, the British were concerned about how actions taken to protect the common currency may negatively impact the integrity of the common market, which would likely harm relations between eurozone member states and the ones outside the eurozone. For the competitiveness, Cameron proposed new free-trade agreements and a reduction in bureaucracy for businesses in order to improve it. Concerning the sovereignty topic, the British Prime Minister demanded an opt-out about the principle of an "ever closer union" set out in the Treaty and enhance the role of national parliaments. In conclusion, for the immigration topic, the requests were about the introduction of additional immigration controls to reduce the population flow from EU to British country[72]. On 7 December, President Donald Tusk, after analyzing Cameron's requests, wrote a letter to the European Council about UK membership of the EU highlighting the necessity of a political discussion and was sure that concrete proposals would have been prepared and adopted in February. De facto, an intense round of negotiations and consultations started until, at the European Council on 18-19 February, all the 28 member states were able to reach a legally binding and irreversible agreement. The deal reinforced Britain's special status within the EU since "*it was recognised that the United Kingdom is not committed to further political integration in the EU (…) References to ever-closer union do not apply to the United Kingdom*"[73]. Moreover, he achieved a stronger protection for non-Euro countries since the agreement stated that for member states whose currency is not the euro, measures to increase economic and monetary union would have been voluntary. Cameron declared that he was satisfied with the deal he had managed to negotiate and now the last decision would have taken by the British citizens who would decide whether or not to stay in the EU with the new terms through an in/out referendum. Cameron, for his part, would be "*ready to campaign with all my heart and soul to keep Britain inside a reformed European Union that continues to enhance the prosperity and security of all its Member States*"[74].

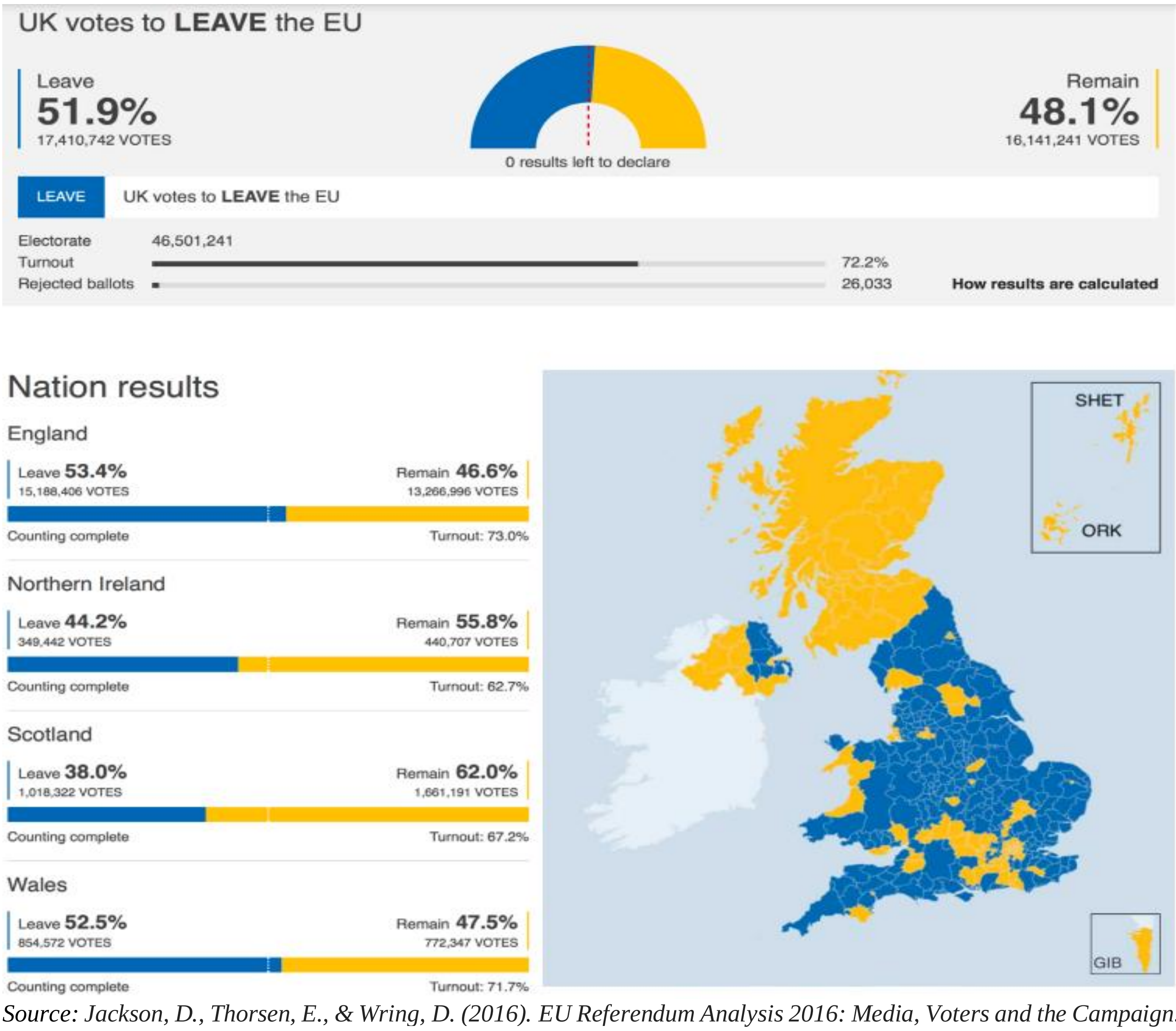
[72] Cameron, D. (2015) A NEW SETTLEMENT FOR THE UNITED KINGDOM IN A REFORMED EUROPEAN UNION, 15 November. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/475679/Donald_Tusk_letter.pdf

[73] The Guardian (2016). *David Cameron's EU deal: what he wanted and what he got*. Full text available at: https://www.theguardian.com/world/2016/feb/19/camerons-eu-deal-what-he-wanted-and-what-he-got

[74] Cameron, D. (2015) A NEW SETTLEMENT FOR THE UNITED KINGDOM IN A REFORMED EUROPEAN UNION, 15 November. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/475679/Donald_Tusk_letter.pdf, pag. 6.

1.4.3 THE BREXIT REFERENDUM: ANALYSIS OF THE VOTE

The day after the deal between UK and EU member states was reached, Cameron announced that the Referendum about UK membership in the European community, also known as Brexit Referendum, would be held on 23 June 2016. The referendum question that British citizens had to answer was: “Should the United Kingdom remain a member of the European Union or leave the European Union?”. The following day, the result of the referendum was communicated, and it was completely unexpected: as shown in the picture below, the total number of ballot papers counted was 33,577,342 and the declaration has confirmed that 48.1% of votes (16,141,241) were cast in favour of REMAIN and 51.9% of votes (17,410,742) were cast in favour of LEAVE. This means that the UK has voted to LEAVE the European Union[75].



Source: Jackson, D., Thorsen, E., & Wring, D. (2016). EU Referendum Analysis 2016: Media, Voters and the Campaign. The Centre for the Study of Journalism, Culture and Community.

[75] THE ELECTORAL COMMISSION (2016) – Official result of the EU Referendum is declared by Electoral Commission in Manchester.

The vote on Britain's membership of the European Union revealed a British society deeply divided regarding the membership topic. This division were, first of all, in terms of geography. The Leave campaign, saw its greatest level of support in the West Midlands (59.3 per cent), followed by the East Midlands (58,8%), the North-East (58%), Yorkshire and the Humber (57,7%) and Eastern England (56,5%). Whilst the remain vote was strong in areas such as the London authority of Lambeth, the City of London, Islington, Wandsworth, Camden, Edinburgh, and Cambridge[76]. It also divided the nations of the UK: while both England and Wales voted 53% Leave, Northern Ireland and Scotland voted Remain (at 56% and 62%). Moreover, the referendum revealed a divided country also along the lines of education: 70% of voters whose educational background was only GCSE or lower voted to Leave, while 68% of voters with a university degree voted to Remain in the EU. Similar differences occurred regarding voter's age: under-25s were more than twice as likely to vote Remain (71%) than Leave (29%). Among over-65s the scenario was quite the opposite, as 64% of over-65s voted to Leave while only 36% voted to Remain. In conclusion, even the main political parties ended up with significant divisions after the vote: as the table below shows, Labour voters (65%) and Liberal Democrats (68%) largely voted for Remain, but relevant minorities voted for Leave (35% and 32% respectively). For the Conservatives, the situation was exactly the opposite while the only the UKIP avoided important internal division, with the 95% of the members that voted for the leave[77].
Therefore, the Brexit referendum has left a portrait of a United Kingdom sharply divided on the issue: Leave voters were mainly concentrated in areas more economically disadvantaged and with larger working-class population with low level of education. Whereas the Leave side was stronger in multicultural cities, like London, and where there were more graduates and young people[78]. The Brexit referendum delivered a low level of public support for the European integration, completely different in comparison with the support received 40 years later during the first referendum in 1975.

[76] Goodwin, M. J., & Heath, O. (2016). *The 2016 referendum, Brexit and the left behind: An aggregate-level analysis of the result*. The Political Quarterly, 87(3), 323-332, pagg. 324-325.
[77] YouGov UK (June 2016) – *How Britain voted at the EU referendum*. Available at: https://yougov.co.uk/topics/politics/articles-reports/2016/06/27/how-britain-voted.
[78] Hobolt, S. B. (2016). *The Brexit vote: a divided nation, a divided continent*. Journal of European public policy, 23(9), 1259-1277, pagg. 1272-1273.

How Britain voted

Older people with fewer formal qualifications most likely to have voted Leave

		Remain	Leave
2015 vote	Conservatives	39	61
	Labour	65	35
	Liberal Democrat	68	32
	UKIP	5	95
	Green	80	20
Age	18-24	71	29
	25-49	54	46
	50-64	40	60
	65+	36	64
Education	GCSE or lower	30	70
	A level	50	50
	Higher below degree	48	52
	Degree	68	32

YouGov | yougov.com June 23-24, 2016

Source: YouGov UK (June 2016) – How Britain voted at the EU referendum. Available at: *https://yougov.co.uk/topics/politics/articles-reports/2016/06/27/how-britain-voted.*

1.4.4 STARTING OF THE NEGOTIATIONS: FROM THE UK TRIGGERS OF ART. 50 OF THE TREATY ON EU TO THE OFFICIAL EXIT FROM EU

Politically speaking, the Brexit vote was a hard defeat for the leader of the Conservative party and Prime Minister James Cameron, since he supported the Remain campaign. For this reason, even if the referendum was not legally binding and the Prime Minister could have hypothetically decided to ignore the will of the people and decided to remain, he stated that the vote would have stick. Thus, the day after the vote, he confirmed that he would have immediately invoked the Article 50 of the Treaty on European Union to begin the process of exiting the EU. At the same time, he announced his resignation from the office of Prime Minister at the start of the Conservative Party leadership election. This election should have been held on October 2016. However, since one of the two candidates withdrew on 11 July 2016, the sole candidate remaining, Theresa May, was declared leader of the Conservative party. Two days later, on 13 July 2016, was appointed Prime Minister by

Queen Elizabeth II, becoming the second female Prime Minister after Margaret Thatcher. Theresa May, before becoming Prime Minister, has been appointed Home Secretary by Cameron as part of his cabinet in 2010. During the Brexit campaign, she supported the Remain vote and when she became PM she had to maintain the promise to deliver Brexit. The first consequence she had to face was that the "New Settlement for the United Kingdom within the European Union" reached by David Cameron in February 2016 would never come into effect and immediately ceased to exist. In the chaotic aftermath of the referendum, with the Conservative party's internal divisions further exacerbated, May government began the process of the United Kingdom's exit from the EU. Since the beginning, May had a clear idea about the referendum result and how to rule the negotiation process for the exiting. As she stated: "*Brexit means Brexit. The campaign was fought, the vote was held, turnout was high, and the public gave their verdict. There must be no attempts to remain inside the EU, no attempts to rejoin it through the back door, and no second referendum"*[79]. Brexit means Brexit became a slogan for the Prime Minister, firm and decisive in implementing the result of the referendum, so much so that on the 2nd of October 2016, during the Conservative party conference in Birmingham, the Prime Minister announced that the Government's plan would be to trigger Article 50 of the Treaty on the European Union by the end of March 2017. The invocation of Article 50 is the mechanism through which a member state may withdraw from the EU. *"The Union shall negotiate and conclude an agreement with that State, setting out the arrangements for its withdrawal, taking account of the framework for its future relationship with the Union. The Treaties shall cease to apply to the State in question from the date of entry into force of the withdrawal agreement or, failing that, two years after the notification, unless the European Council, in agreement with the Member State concerned, unanimously decides to extend this period"*[80]. On 29 March 2017, Theresa May sent a letter to the President of the European Council Tusk in which formally informed the Council the UK's intention to trigger Article 50 to leave the EU and the European Atomic Energy Community. One month later, the 27 EU member states unanimously adopted the guidelines that set out the framework of future Brexit negotiations and which established the principles and positions of the Union during the negotiations. The 27 EU leaders agreed in dividing the negotiation process in two phases: a first one, in which the goal was to find a withdrawal agreement. Whilst the second one, which start only if sufficient progress in the first phase are achieved, regarded the framework for the future relationship between UK and EU[81]. The negotiations started on 19 June 2017, with Michel

[79] Allen, N. (2018). '*Brexit means Brexit': Theresa May and post-referendum British politics*. British Politics, 13, 105-120, pag. 112.
[80] OFFICIAL JOURNAL OF THE EUROPEAN UNION (2016). Consolidated version of the Treaty on European Union. Art. 50.
[81] EUROPEAN COUNCIL (2017) – Remarks by President Donald Tusk on the next steps following the UK notification. Available at: https://www.consilium.europa.eu/en/press/press-releases/2017/03/31/tusk-remarks-meeting-muscat-malta/

Barnier as EU Chief Negotiator and David Davis as Secretary of State for Exiting the European Union. For the following months, rounds of negotiations characterized the relationship between UK and EU. The talks were, in particular, about three issues: citizens' rights, financial settlement and the Northern Irish border. After intense rounds, a first agreement was reached on 8 December 2017, with the European leaders who were satisfied with the progress achieved on the three topics and it was possible to move to the second phase of the negotiations. The progress during the first chapter of talks were recorded in a document published on 8 December 2017 titled Joint Report. During the second phase, a new issue was added regarding the transition period, for which the UK asked for a two-year transitional period in which to remain a member of the customs union and the internal market until 31 December 2020. Moreover, the UK, as already a third country, will no longer participate in the institutions and the decision-making of the EU. Based on this conditions, new rounds of negotiations and informal meetings between UK and EU took place, until on 28 February 2018 the European Commission published the draft Withdrawal Agreement between EU and UK. This important document translated into legal terms the proposals stated in the December 2017 Joint Report from the negotiators of the European Union and the United Kingdom Government. The next step consisted of sending to the Council (Article 50) and the European Parliament's Brexit Steering Group for discussion, before being transmitted to the United Kingdom for negotiation[82]. After intense talks during the European Council that took place from 13 to 19 March 2018, UK and EU reached a partial agreement on the text of the Withdrawal Agreement. The contents of this draft covered different issues:

- CITIZENS' RIGHTS: the deal included the fact that UK citizens Union citizens who legally reside in the UK, and UK nationals who legally reside in an EU27 member state would have retained the right to remain in the "host" territory if they had lived there for more than five years. Moreover, during the transition period, EU citizens who would move to the UK United Kingdom would have the same rights as those who came before.
- FINANCIAL SETTLEMENT: leaving the EU, United Kingdom agreed to pay approximately £39 billions to the EU to cover its existing liabilities.
- TRANSITIONAL PERIOD: as stated before, UK remain a member of the customs union and the internal market, continue to pay into the EU budget, everything without any representation in the EU institutions until 31 December 2020.

[82] EUROPEAN COUNCIL – Timeline The UK-EU withdrawal agreement. Available at: https://www.consilium.europa.eu/en/policies/eu-relations-with-the-united-kingdom/the-eu-uk-withdrawal-agreement/timeline-eu-uk-withdrawal-agreement/

- NORTHERN IRELAND PROTOCOL: This one represented the biggest issue. Both UK and EU wanted to avoid a hard border with physical infrastructures between Ireland and Northern Ireland and wanted to maintain the Common Travel Area (CTA)[83] through the implementation of a legally operative backstop[84].

The backstop is a mechanism part of the Theresa May Brexit deal that should have made sure to keep Northern Ireland's border open, at least until London and Brussels reach a final accord. But UK and EU disagree on what it should be. *"The EU proposed that Northern Ireland remains in the EU Customs Union and aligned with relevant Internal Market rules on goods, to avoid the need for customs and regulatory checks at the Irish border. The EU insists that the backstop would apply 'unless and until' an alternative solution is found. The EU is resolute that there can be no withdrawal agreement without a backstop"*[85]. On 14 November 2018, the Cabinet, after a long meeting, approved Theresa May's 595 pages draft Withdrawal Agreement and the 19 November, the 27 EU Minister of Foreign Affairs gave the green light to the deal on Brexit, with both sides of the agreement satisfied with the outcome. The last step for Theresa May was the House of Commons vote on the Government's Withdrawal Agreement with the EU, that should have been held on December 2018.

The government suggested five days of Commons debate followed by a vote. However, the Prime Minister delayed the vote after only three days of discussion because she understood that the deal would have been a colossal defeat in the Parliament and would have sunk the Brexit plan[86]. The vote took place on 15 January 2019, and, despite the postponement, the Parliament rejected the Withdrawal Agreement and the idea of a "No Deal" scenario became increasingly possible. The same result occurred on 12 March and at on 29f March 2019. The main controversial issue between UK government and EU institutions that caused the rejections was the Irish backstop clause, refused by the majority of parliamentarians, even the Conservative ones that supported Margaret Thatcher. These rejections, occurred in few months, forced the Prime Minister to seek an extension to Article 50. At the beginning, the Britain's deadline for leaving the EU was 29 March 2019, two years later Theresa May triggered Article 50 to leave EU. Following the first two rejections of the original negotiated withdrawal agreement and framework for the future relationship, the UK government took the decision to request for an extension of the Article 50 period twice. The first one happened on 22

[83] The TCA is a special travel zone which enables British and Irish citizens to travel and reside within each other's jurisdictions without the need for a visa, residence permit or proof of resources

[84] EUROPEAN COMMISSION (2018) - Draft Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community, as agreed at negotiators' level on 14 November 2018.

[85] Patel, O. (2018). *The EU and the Brexit negotiations: institutions, strategies and objectives*. UCL European Institute, pagg. 8-9

[86] Russell, M. (2021). *Brexit and parliament: The anatomy of a perfect storm*. Parliamentary Affairs, 74(2), 443-463, pag. 454.

March 2019 and extended the deadline until 12 April 2019, whilst the second one occurred on 11 April 2019 and postponed the Brexit deadline until 31 October 3019[87]. These two extensions took place when Theresa May was Prime Minister. However, the defeats in achieving Parliament support for the legislation needed to implement her Brexit deal reduced May's political credibility, especially within the Conservative Party itself. On 24 May 2019 she understood the situation and announced her resignation as Conservative party leader. During the resignation speech she stated that *it will always remain a matter of deep regret for me that I have not been able to deliver Brexit (...) it is in the best interest of the UK for a new PM to lead that effort"*[88]. She continued to serve as Prime Minister until 24 July, when Boris Johnson was elected PM by the Conservatives. Johnson became PM after having served as Mayor of London from 2008 and 2016, and as Foreign Secretary from 2016 to 2018. The day after he became Prime Minister he immediately made it clear what his government's priorities were with a statement at the House of Commons. He confirmed the intention to leave the EU on 31 October 2019, with a renegotiation of May's Withdrawal Agreement. In, particular, he wanted to remove the controversial Irish backstop from the deal, rejected three times by the Parliament, and opened to the possibility of a "No Deal" if an agreement was not reached by 31 October. In a letter to the President Donald Tusk, Johnsons outlined the reason why he wanted to change the backstop protocol:

- It was anti-democratic and inconsistent with the sovereignty of the UK as a state
- It was inconsistent with the UK's goal of setting a long-term relationship with the EU
- The risks related to the backstop weakened the balance embodied in the Belfast Agreement[89].

Based on these conditions, Johnson started negotiating with the EU institutions, firm about the idea that he would have never asked for an extension of Article 50, increasing the risk of a "No Deal" exit. On 2 October 2019, the government released two documents setting out the new Brexit deal characterized by an alternative to the backstop, called the Northern Ireland Protocol. In the meantime, although Johnson was absolutely opposed to further extension, on 2 September 2019 the Labour party politician Hilary Benn published the European Union (Withdrawal) (No 6) Bill in which was proposed that if the Government had not been able to secure the approval of the Withdrawal Agreement or to leave without a deal before Saturday 19 October, it would have been obliged to ask

[87] Cowie, G. (2019). *Parliament and the three extensions of article 50*. UK PARLIAMENT – HOUSE OF COMMONS LIBRARY, Briefing Paper N° 8725, pagg. 3-4.

[88] The New York Times (2019). *Full text of Theresa May's Resignation Speech*. https://www.nytimes.com/2019/05/24/world/europe/may-speech.html.

[89] Boris, J. (2019). *UNITED KINGDOM'S EXIT FROM THE EUROPEAN UNION*. Full text available at: https://www.gov.uk/government/publications/pm-letter-to-donald-tusk-19-august-2019.

for an extension of the exit util 31 January 2020[90]. After one week, the Benn Bill became law under the name of the European Union (Withdrawal) (No. 2) Bill. During the following months, the Government tried to secure this approval of the Agreement, without succeeding. Therefore, on 19 October 2019, Boris Johnson sent a letter to the European Council President Donald Dusk, formally asking for a third extension of Article 50 until 31 January 2020. On 28 October 2019, the European Council accepted the request, changing one more time the exit day[91]. After rounds of negotiation within the House of Commons, on 23 January 2020, the EU Withdrawal Agreement received the Royal assent and became an Act of Parliament under the name of the European Union (Withdrawal Agreement) Act 2020. During the following two days, previously Presidents Charles Michel and Ursula von der Leyen and then UK PM Boris Johnson, signed the document. On 29 January, the European Parliament approved the deal through a vote and the day after the Withdrawal Agreement was ratified by the EU. In this way, at 11pm on 31 January 2020, UK officially left the EU and entered in a transition period due to last the end of the year.

1.4.5 POST-BREXIT AGREEMENTS

Once UK left the European Union, talks and discussions about the future relationship between UK and EU immediately began. The negotiations started on 2 March 2020, with rounds that took place every two to three weeks in Brussels or London. The spread of COVID-19 influenced the meetings, with some sessions that were held remotely. From that moment onward, UK and EU institutions had intense discussions aimed at setting the key agreements fundamental to govern the future partnership. On 24 December 2020, both parties achieved a deal that established the parameters for their future cooperation, characterized by three agreements that were signed on 30 December 2020, applied provisionally from 1 January 2021, and came into force on 1 May 2021:

- The EU-UK Trade and Cooperation Agreement (TCA);
- The EU-UK security of information agreement;
- The EU-UK agreement for cooperation on the safe and peaceful uses of nuclear energy[92].

Out of the three, the most important one is the EU-UK Trade and Cooperation Agreement. As stated in the first article of the document, the TCA "*establishes the basis for a broad relationship between*

[90] Cowie, G. (2019). *Parliament and the three extensions of article 50*. UK PARLIAMENT – HOUSE OF COMMONS LIBRARY, Briefing Paper N° 8725, pagg. 19-20
[91] Ivi, pagg. 22-23.
[92] EUROPEAN COUNCIL – Post-Brexit agreements. Full text available at: https://www.consilium.europa.eu/en/policies/eu-relations-with-the-united-kingdom/post-brexit-agreements/

the Parties, within an area of prosperity and good neighbourliness characterised by close and peaceful relations based on cooperation, respectful of the Parties' autonomy and sovereignty"[93]. In detail, the agreement guarantees ethical business practices, ongoing collaboration in areas of shared interest, and adherence to fundamental rights. It is divided in three main pillars:

- a free trade agreement with ambitious cooperation on economic, social, environmental and fisheries issues;
- a close partnership on citizens' security;
- an overarching governance framework.

The free trade agreement provides that all the goods which meet the appropriate Rules of Origins[94] defined in the UK-EU TCA are not liable to costume duties and quotas, even if certain customs formalities are required. In addition, both parties have committed to ensuring and maintaining high levels of protection in areas such as the fight against climate change and carbon pricing, social and labour rights or the environmental protection, confirming that there is no free movement of people between UK and EU. In conclusion, the agreement enables the UK to participate to a limited number of flagship EU program for the period 2021-2027, like the Horizon Europe.

The day after TCA was signed, on 31 December 2020 the transition period ended and UK officially left the EU single market and customs union, withal the EU law ceased to apply to the UK.

[93] OFFICIAL JOURNAL OF THE EUROPEAN UNION, (2021). Trade And Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland, of the other part. http://data.europa.eu/eli/agree_internation/2021/689(1)/oj. Art. 1, pag.8

[94] Rules of Origin (ROO) allows an importing country to identify and classify the origin of a product.

2 CHAPTER 2: BREXIT'S LONG-TERM EFFECTS ON THE MAIN UK MACRO-ECONOMIC VARIABLES

2.1 THE SOCIO-ECONOMIC CONSEQUENCES OF THE BREXIT VOTE

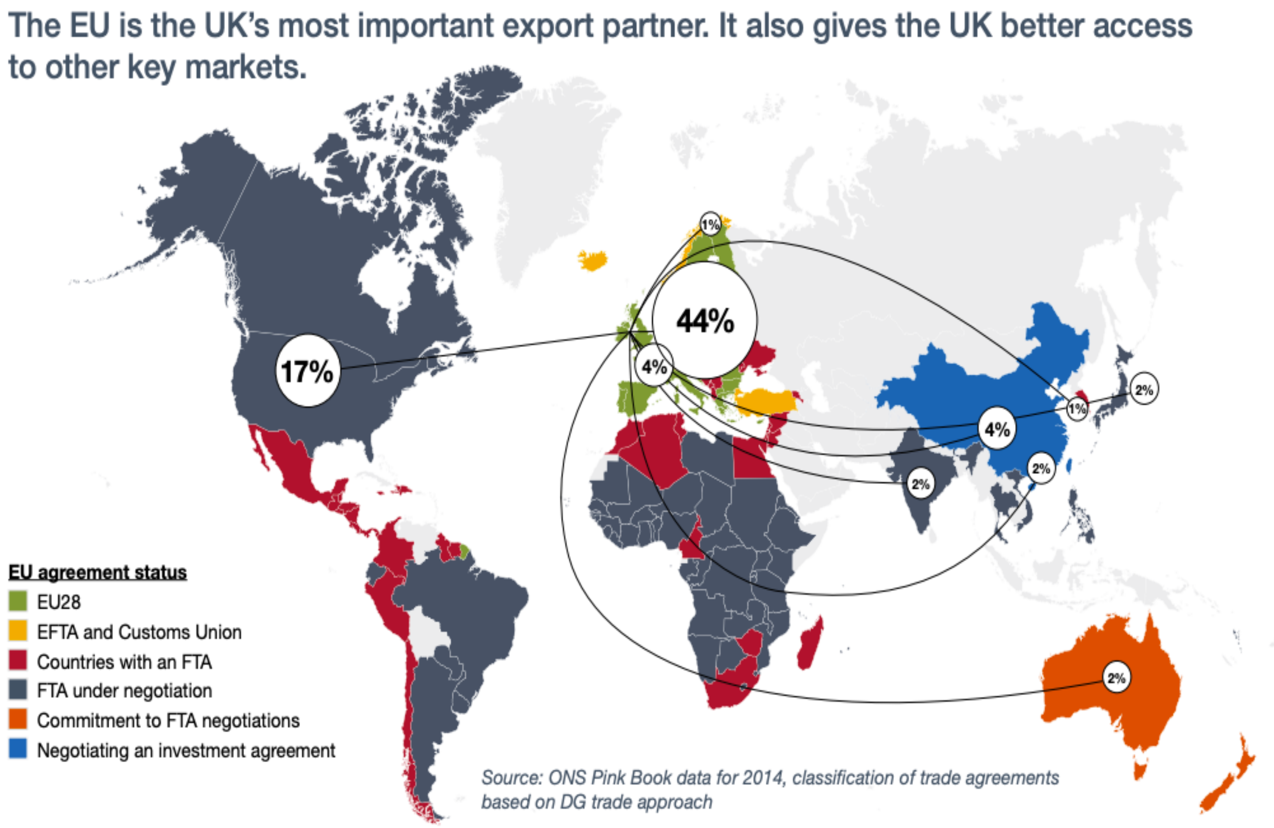
Before analyzing the impacts that the Brexit referendum, resulting in the UK's exit from the European Union and in the establishment of new trade agreements, has had on the British economy, it is crucial to clarify what have been the economic benefits of EU membership for Britain. As stated in the first chapter, Great Britain has always been an awkward member and several times expressed his dissatisfaction and willingness to leave. Despite this Eurosceptic sentiment, there are evidence that explain the great advantages of being part of the EU. To begin with, EU membership provides the access to the EU Single Market which represented the central aim of the European project and was formalized in the Economic and Monetary Union launched in 1992. The Single Market was founded on what are called the "four freedoms": free movement of capital, goods, people, and services throughout Europe. In detail, the Single Market was projected to achieve three goals:

- remove tariffs and quotas on goods trade within the EU;
- create a customs union within the EU;
- creates a level playing field by reducing non-tariff and other barriers to trade within the EU[95].

Thanks to the Single Market, member states saw the reduction of trade costs due to the abolition of tariffs and quotas. Moreover, a second element of the Single Market is the EU customs union which "*ensures a common external trade policy, with a common external most favored nation (MFN) tariff schedules, preferential tariffs on goods imports from third countries, and free trade among EU member states"*[96]. In other words, it means that within the EU all the complex and time-consuming customs controls and checks are eliminated, guaranteeing a free-trade barriers and competitive market where EU member states are able to trade their goods on the same basis and at a competitive price since trade costs are strongly reduced. In return for these facilities, EU states are obliged to respect EU negotiated deals, in addition to contribute to the European budget. Therefore, EU membership which guarantees the participation to the Single Market provides many benefits. UK, which is an open economy mainly based on services rather than manufacturing, has been positively affected and

[95] HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 25.
[96] International Monetary Fund (November 2018). *United Kingdom: selected issue*. IMF Country Report No. 18/317, pag 6.

the outcome of the UK's access to the EU Single Market has been a significant increase of the British commercial trade both with EU member states and non-EU countries. Indeed, prior to the UK joining the European Economic Community (EEC) in 1973, around one third of UK trade was with the EEC[97]. After 1973, UK's trade with the EU has generally increased year-on-year, arriving in 2015, one year before the shock of the Brexit referendum, with a 44% of UK goods and services exports that went to the EU, with a value around 12.0% of UK GDP. On the other side, UK's share in EU total trade was around 5%[98]. Therefore, EU became the most important export partner for UK, as showed in the picture below.



Source: HM GOVERNMENT (April 2016). HM Treasury analysis: the long-term economic impact of EU membership and the alternatives **-** *Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 37.*

In addition, being part of the European Union, which represents the most important and the biggest market in the world, with an economic weight which is five times the size of the UK, gave the opportunity to the Great Britain to access to global markets through multilateral trade agreement and bilateral agreements with other countries, like USA, China, Russia or Australia. Thanks to that, UK opened its economy to the international trade, attracting more and more Foreign Directive

[97] Dhingra, S., Ottaviano, G., Sampson, T., & Van Reenen, J. (2016). *The consequences of Brexit for UK trade and living standards*, CEP Brexit Analysis Papers 02, Centre for Economic Performance, LSE, pag. 1.
[98] HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* **-** Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 25.

Investments (FDI) in the country, improving the productivity, innovation, and competition between firms, resulting in higher living standards for British citizens.

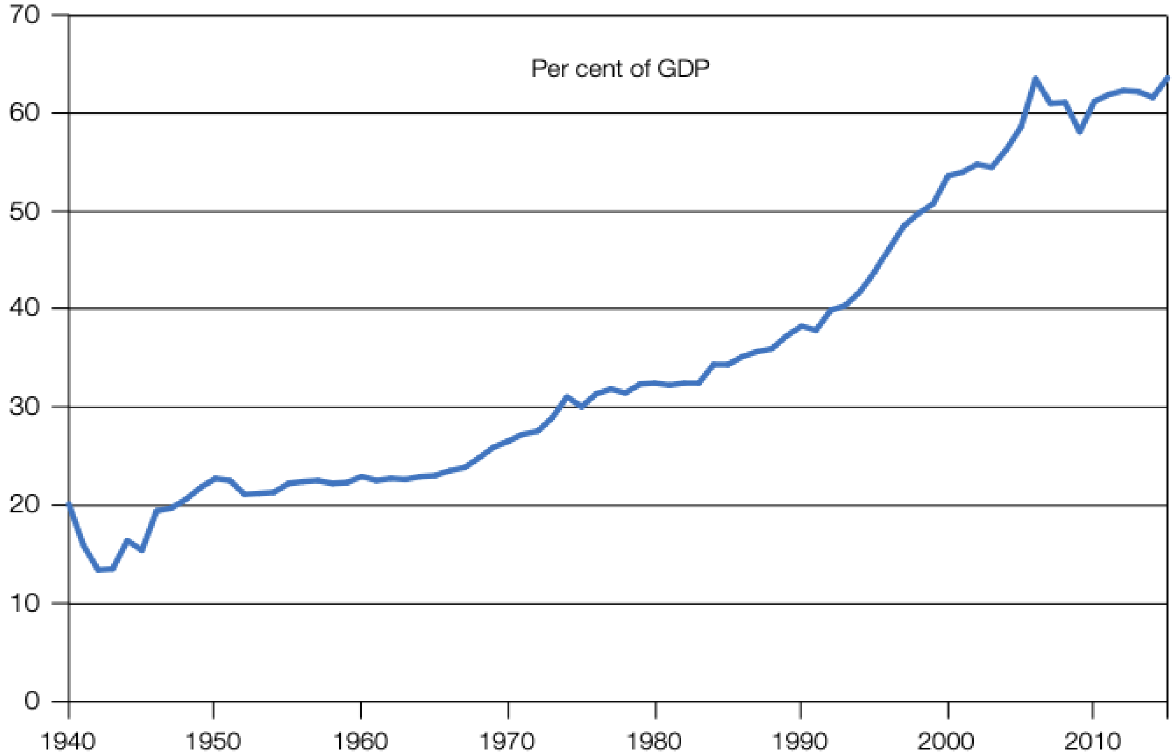
On the basis of these assumptions, is evident that the British decision to leave the EU would have impacted on the UK economy growth and financial openness. Indeed, departing from the European Union signified the most substantial transformation in the United Kingdom's global interactions in nearly fifty years. This monumental shift entails a profound alteration in the economic governance, leading to a recalibration of production priorities from reliance on EU trade towards a focus on the domestic market, impacting on people, regions, and businesses across the country. The most important short-run effect of the Brexit referendum decision has been the uncertainty on the future economic policy and on how the new relationship with EU countries would have influenced the openness of the UK economy, leading to a depreciation of the pound, and in turn an increase of inflation, a hit to real wages and per capita output[99]. However, regarding these impacts, and in particular the depreciation of the pound, the third chapter will mainly focus on. In this chapter, instead, the attention would be on what have been the long-term Brexit effects on three factors: trade, investments, and migration. Before beginning this in-depth analysis, it is necessary to point out two elements that made the analysis itself more complicated. The first one is a discontinuity on the way data on trade in goods between UK and EU are collected. Before UK's transition period ended, trade data were collected via Intrastat, which is he EU's system for collecting data on trade in goods between EU Member States. After January 2021 for exports to the EU, and on imports from the EU since January 2022, data started being collected using the HRMC custom declarations. These two collection methods differs because the second one includes parcel post, smaller traders and non-VAT registered businesses increasing the value of goods exports to the EU in 2021, and the value of goods imports in 2022. Therefore, this move from Intrastat to customs declarations has led to a discontinuity in the data for trade and is necessary to be cautious when interpretating them[100]. The second one, instead, is a contributing and disruptive factor that has strongly impacted on the worldwide economy and caused unprecedent economic disruption: COVID-19. The convergence of these two major disruptions has led to a scenario in which, since the lines between their individual impacts were blurred and the timelines of Brexit and the pandemic aligned in a manner where the consequences of one event frequently intertwined with the aftermath of the other, isolating the effects of Brexit alone became a complex challenge.

[99] Campos, N. F. (2019). *B for Brexit: A survey of the economics academic literature*, pag. 18.
[100] Office for National Statistics (February 2023). *Trading places: How we are producing consistent estimates of trade figures following the UK's EU exit*. Available at: https://blog.ons.gov.uk/2023/02/10/trading-places/.

2.2 TRADE EFFECTS

As stated previously, in this part of the work the focus will be on the long-term Brexit effects thar are going to manifest in the next future. The starting point are the impacts on trade which represents the most important channel through which the UK benefited from EU integration since, in the Art. 2 of the Treaty of Rome, the EU has aimed to establish a unified economic market that facilitates unrestricted flow of goods, services, individuals, and capital across national boundaries. The openness to trade of UK economy, defined as the sum of imports and exports as a shar of UK GDP, experienced an incredible boost right after the join of the EU market, increasing from 23% of GDP in 1965 to 64% in 2015[101].

Chart A: Openness – Total UK trade as a share of GDP[23]

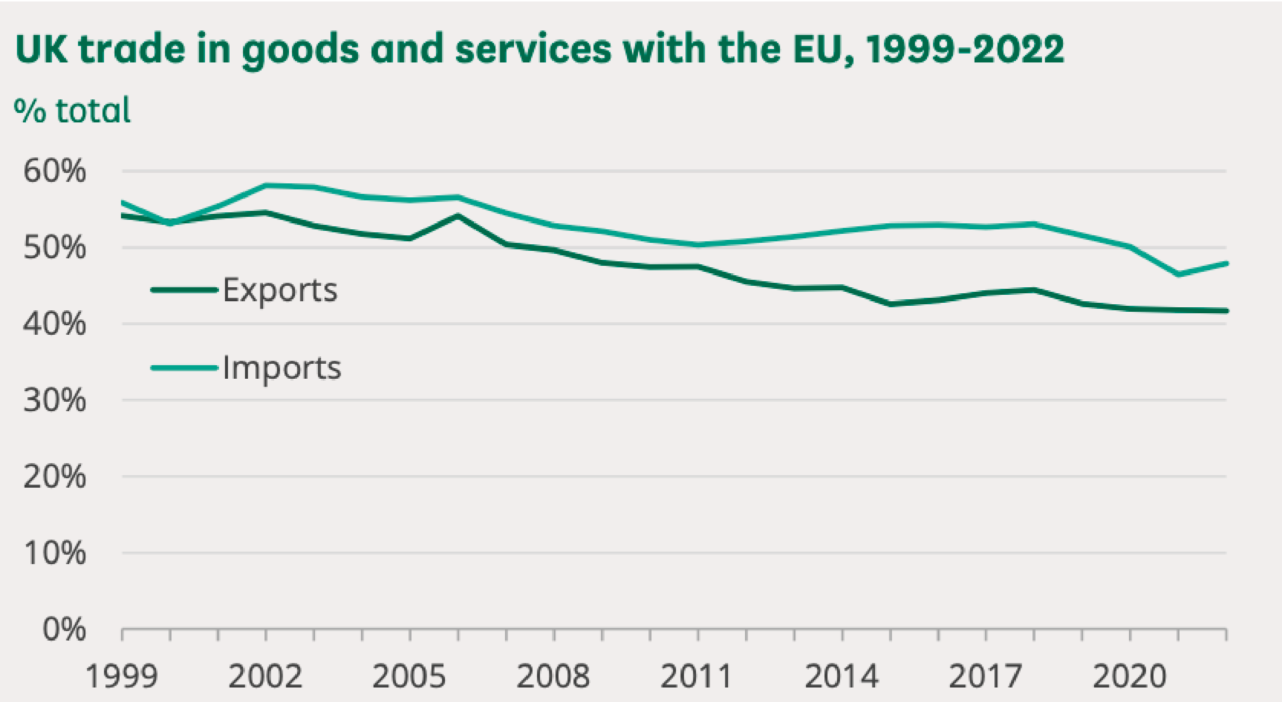


Source: HM GOVERNMENT (April 2016). HM Treasury analysis: the long-term economic impact of EU membership and the alternatives - *Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 18.*

The consequence was an increase of the UK productivity and standard livings, together with the amount of trade, with EU that became main partner of the Britain economy. Before 2016, year of the Brexit referendum, the EU-27 accounted for close to a half of UK imports and exports, precisely 52,4% for goods, and 42,3% for services in 2015, whilst the United Kingdom represented a small

[101] HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 18.

share of EU-27 trade, a round 5%[102]. Reason why, between the two counterparties, the one that was supposed to be much more affected by the effects of the Brexit, in particular from the trade side, was the United Kingdom rather than the EU-27 countries. At the same time, in 2016 the UK economy was the second largest EU economy which contributed around 16% to EU GDP, meaning that a departure of the Great Britain would have influenced EU countries and raised questions about the stability and resilience of the EU community[103].



Source: Ward, M., Webb, D. (2023). Statistics on UK-EU trade. House of Commons Library, Research Briefing. Pag. 14.

Understanding why the UK's membership in the EU market was economically advantageous is crucial before delving into an analysis of the different scenarios for UK-EU future political and trade relationship. Prior to its departure from the EU, as mentioned in the preceding paragraph, the UK enjoyed the privileges of being part of the EU's single market and customs union. The EU represented the UK's most substantial trading partner, accounting for a considerable portion of its overall trade in goods and services. As part of the single market, goods and services were free to move between UK and EU member states without customs checks, tariffs, or significant regulatory barriers. Consequently, trade volumes were substantial. Furthermore, the UK's adherence to EU regulations and standards simplified trade by ensuring consistency in product specifications and requisites, a factor that considerably facilitated business operations. In addition, being part of the EU was

[102] Dhingra, S., Sampson, T. *Expecting Brexit* (2022). CESifo Working Paper No. 9541, pag.28.
[103] Buigut, S., & Kapar, B. (2023). *How did Brexit impact EU trade? Evidence from real data*. The World Economy, 1566-1581, pag.1567.

beneficial for all the UK industries with integrated supply chains all over Europe because components and commodities were able to be moved with no disruptions, enabling efficient production processes. With the decision to leave the EU, most of these benefits were lost introducing changes that impacted the dynamics of UK-EU trade. Indeed, new customs checks, regulatory barriers, rules of origin requirements and paperworks (non-tariff barriers) were introduced, causing delays and disruptions to the flow of goods. So, industries with integrated supply chains, such as automotive, manufacturing, and agricultural experienced disruptions due to delays at borders and new customs procedures. Businesses faced challenges in adapting their supply chain strategies to the new regulatory requirements, rules of origin, and trade documentation, in addition to an increase of costs and administrative burdens which slow down trade. In conclusion, the EU membership gave to the UK the possibility to have a "*preferential access to 53 markets outside the EU with which the EU has Free Trade Agreements. This would take years to renegotiate, with no guarantee that the UK would obtain the same terms"*[104].

Going deep into the analysis of the Brexit effects on the trades between UK and EU, most of the academic works focused their attention on the impact of the vote over three different periods. The first one, already mentioned, is the phase "before the Referendum" which "*corresponds to the status quo of UK membership in the EU's single market and customs union, with no trade barriers which facilitated a seamless flow of goods, services, and trade dynamics within the EU, common external Most-Favored-Nation (MFN) tariffs and common external Non-Tariff Barriers (NTBs) with the rest of the world (ROW)"*[105]. The second one is the transition period, so the phase between the Referendum and the implementation of the Trade and Cooperation Agreement (TCA) (June 2016 – December 2020). This time was characterized by a series of shocks and, above all, by a high uncertainty over the type of new relationship that would have been established between the two entities after the exit. Since there was a large difficulty in estimating exactly the possible post-Brexit deal between the UK and the EU, a serious of hypothesis about the scenarios and the macroeconomic impact were investigated, which later I will analyze. In conclusion, the third period is the one after the transition period, when the TCA entered in force and UK-EU started trading under this new trade agreement.

Focusing on the second period, many academic research and literature papers has been done in order to estimate the effects of the future UK-EU trade relationship on the macroeconomic factors such as GDP, productivity or wages. In detail, one of the most important study was the one conducted by the UK Treasury in 2016, together with the one conducted by the European Brexit Task Force in 2020.

[104] HM Government (March 2016). *Alternatives to membership: possible models for the United Kingdom outside the European Union*, pag. 5.
[105] Freeman, R., Manova, K., Prayer, T., & Sampson, T. (2022). *Unravelling deep integration: UK trade in the wake of Brexit*. Centre for Economic Performance, London School of Economics and Political Science, pag. 7.

In detail, the first one provided a long-term analysis of the impact of being part of the EU compared to the alternatives to EU membership. Most of the studies have been made during the negotiations to define the new relationship between the parties, in a very uncertain environment about the final outcome. The possible scenarios that were considered were three:

- SOFT BREXIT: is the scenario in which UK becomes member of the European Economic Area (EEA), like Norway;
- NEGOTIATED BILATERAL AGREEMENTS: such as the one that characterize the relation between EU and Switzerland, Turkey or Canada;
- HARD BREXIT: is the scenario in which there is no deal between EU and UK, so the partnership is defined by the World Trade Organization (WTO) membership without any form of specific agreement with the EU, like Russia or Brazil[106].

Existing models for the post-Brexit EU-UK relationship (September 2017)

	EU *Free movement of people*	EU *Free movement of goods*	EU *Tariffs*	EU *Non-tariff barriers*	RoW(*) *Tariffs*	RoW(*) *Non-tariff barriers*	EU *Free trade in services*	EU *Foreign investment*	EU *EU budget contribution*
EU	✓	✓	✗	✗	common external tariff	partial and R.O.	✓	✓	✓
EEA	✓	✓	✗	only R.O.	✓	✓	✓	✓	✓
CU(**)	✗	✓	✗	partial without R.O.	common external tariff	✓	✗	✗	possible
Swiss-style bilateral agreements	✓	most	very low	low and R.O.	✓	✓	partial	✗	possible
CETA (Canada)	✗	most	very low	partial and R.O.	✓	✓	partial	partial	✗
WTO	✗	very limited	✓	✓	✓	✓	very limited	✗	✗

Notes: CU stands for customs union arrangement, RoW stands for rest of the world, R.O. stands for rules of origin. (*) Except RoW countries covered by an FTA. (**) CU only covers merchandise trade; WTO rules will apply to trade in services.

Source: Source: European Central Bank, International Relations Committee: Brexit Task Force (October 2020). Occasional Paper Series: A review of economic analyses on the potential impact of Brexit (No 249), pag. 9.

[106] HM Government (March 2016). Alternatives to membership: possible models for the United Kingdom outside theEuropean Union, pag. 8.

2.2.1 SOFT BREXIT

The term Soft Brexit refers to the scenario in which the United Kingdom exits the European Union while preserving a higher degree of economic and regulatory alignment. In other words, the UK continues to be a member of the EU Single Market with a significant but not total access to it, like the non-EU of the Europe Economic Area (EEA), such as Norway. This circumstance represents the perfect trade-off between the aspiration for increased sovereignty, always desired by the British government, while retaining the benefits of being part of the EU's single market. The European Economic Area (EEA) unites the EU Member States with three of the European Free Trade Association (EFTA) States – Iceland, Liechtenstein, and Norway. The EEA's foundation resulted from the signing of the EEA Agreement, an international deal signed in Porto on 2 May 1992, becoming effective on 1 January 1994, with Liechtenstein that became a member on 1 May 1995. This agreement enables the three EFTA member states to participate fully in the Single Market. Finally, The EEA encompasses the fundamental principles of the four freedoms, including the unrestricted mobility of goods, capital, services, and individuals[107]. Moreover, *"EEA membership does not oblige countries to participate in the monetary union, the EU's common foreign and security policy or the EU's justice and home affairs policies. EEA members also do not participate in the Common Agricultural Policy but pay a fee to be part of the Single Market to contribute to the costs of the EU programmes in which they participate*"[108]. Furthermore, EEA members do not participate in the Customs Union, meaning that there are customs checks and administrative costs at the border that firms must face, in addition to prove the origin of the components in their exports. The main example of this alternative partnership is the Norway model. Norway is not part of the EU but is a member of the EEA since the early 1990's and part of the European Free Trade Association (EFTA) since 1960's. As member of the EEA, Norway maintains trade arrangements characterized by tariff-free and quota-free access to the EU for most goods. However, this does not encompass agriculture and fisheries, which lie outside the single market framework, resulting in the application of tariffs to these sectors. Additionally, Norway operates independently from the Customs Union for all goods, necessitating adherence to rules of origin mandates for exports to the EU to qualify for tariff exemptions. This framework contributes to elevated trade costs, notably within industries like the automotive sector, where intricate global supply chains prevail. This condition harmed Norway's

[107] European Free Trade Assoiation official website: https://www.efta.int/eea.

[108] Dhingra, S., Huang, H., Ottaviano, G., Pessoa J. P., Sampson, T., & Van Reenen, J. (2017) *The costs and benefits of leaving the EU: trade effects*, Economic Policy, Volume 32, Issue 92, Pages 651–705, Pages 651–705, pag. 656.

productivity growth[109]. Furthermore, Norway holds no representation or voting rights in shaping EU legislation, resulting in a limited sphere of influence over the EU's political determinations. Norway is also obliged to accept the free movement of individuals from EU and EEA nations and also plays a substantial role in funding EU initiatives and budget. Moreover, the Norwegian government is obligated to independently negotiate trade and investment arrangements with non-EU nations. Its current agreements are all channeled through the European Free Trade Association (EFTA) which has successfully brokered 25 Free Trade Agreements (FTAs), encompassing 36 countries, in contrast to the EU's 53 markets[110]. Based on these conditions, the exit of the UK from EU and the following choice to adopt the Norway model as an alternative membership would, on one hand, minimise the trade costs of Brexit since joining the EEA would maintain considerable access to the Single Market, with most of the UK-EU goods and services trades continue to be tariff free. On the other hand, for UK it would mean paying about 83% as much into the EU budget as currently does[111]. It would also increase trade barriers since UK would not be member of the Customs Union, implying the existence of non-tariffs barriers such as rules of origin requirements and general customs checks at the borders. As well as the introduction of tariffs for agricultural and fisheries products, which represents a great disadvantage for UK since 64% of the UK's fish exports and 73% of vegetable exports go to the EU[112]. Finally, the Norway model would require keeping current EU regulations, allow free movement of people, and contributing financially to the EU without having a role in the European political decisions, giving up an even greater degree of sovereignty compared to EU membership. In the long term, this solution would lead to a contraction of UK productivity, which in turn would cause a reduction of GDP and living standards. The UK Treasury analysis of the long-run implications for the UK of the alternatives to the EU pointed out that the soft Brexit case would have a lower trade impact in comparison with the other scenarios that later will be analyzed. However, also joining the EEA would impose some new trade barriers that in the European Single Market do not exist, having a significant negative impact on UK imports from and exports to EU. The departure from the EU in favor of the EEA alternative is estimated to result in an economic decline varying between 3.4% and 4.3% of GDP over a span of 15 years, compared with remaining in EU. In terms of GDP per households, leaving the EU for the EEA would equate to losing £2,600 a year for each household in

[109] Dhingra, S., Ottaviano, G., Sampson, T., & Van Reenen, J. (2016). *The consequences of Brexit for UK trade and living standards*, CEP Brexit Analysis Papers 02, Centre for Economic Performance, LSE, pag. 3.
[110] HM Government (March 2016). *Alternatives to membership: possible models for the United Kingdom outside the European Union*, pagg. 16-19.
[111] Breinlich, H., Dhingra, S., Estrin, S., Huang, H., Ottaviano, G., Sampson, T., ... & Wadsworth, J. (2016). *BREXIT 2016: policy analysis from the Centre for Economic Performance* (No. 08). Centre for Economic Performance, LSE, pag. 4.
[112] HM Government (March 2016). *Alternatives to membership: possible models for the United Kingdom outside the European Union*, pagg. 17-18.

the UK[113]. Another crucial analysis about the macroeconomic effects of the Brexit vote is the one conducted by Dhingra S. et al (2016) named "The consequences of Brexit for UK trade and living standards". In this study, like all the ones made during the transition period in which it was difficult to understand and precisely predict the exact nature of the UK's post-Brexit relationship with the EU and the trade costs related to this change, the analysis focused on to scenarios: an optimistic and a pessimistic one. The first one assumes a soft-Brexit scenario, with UK choosing the Norway model, with intra-EU trade costs that fall 20% faster than in the rest of the world. The result of the analysis states that in the optimistic scenario, "*there is an overall fall in income of 1.28% that is largely driven by current and future changes in non-tariff barriers, the trade effects is estimated to impact for a 1,37% and, in cash terms, the cost of Brexit to the average UK household is £850 per year"*[114]. These results are based on a static trade model that does not take into account the dynamic effects of trade on productivity and competition. Considering these dynamic effects, the results become even worse, with a reduction of UK income per capita by 6.3% in the optimistic scenario and a loss of 4,200£ per household per year[115].

	Time period	Static/dynamic approach	Alternative arrangement	Impact of leaving EU on UK GDP
Dhingra et al (2016)	10 years	Static	Optimistic: EEA Pessimistic: WTO	**-1.3%** **-2.6%**
		Dynamic	EEA	**-6.3% to -9.5%**
HM Treasury	15 years	Comparable to CEP's 'dynamic' approach	EEA	**-3.4% to -4.3%**

Source: HM GOVERNMENT (April 2016). HM Treasury analysis: the long-term economic impact of EU membership and the alternatives - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 69.

In general, most of the studies conducted from 2016 to 2019, ended up with almost the same results: the findings demonstrate that Brexit would lead to a reduction in UK living standards for any potential deal that would be negotiated, especially due to decreased trade. Notably, the decline in per capita income resulting from reduced trade surpasses any financial benefits accrued from decreased fiscal contributions to the EU budget. In particular, non-tariff barriers have a significant impact on constraining trade in services, which represents a vital sector for UK economy, having a prominent position as major exporter. As shown in the table below, studies often represented this situation, with the extent of the impact that depends on the specific terms governing the UK's departure from the

113 HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pagg. 138-139.
114 Dhingra, S., Ottaviano, G., Sampson, T., & Van Reenen, J. (2016). *The consequences of Brexit for UK trade and living standards*, CEP Brexit Analysis Papers 02, Centre for Economic Performance, LSE, pagg 3-5.
115 Ivi, pag. 7.

EU. Ebell and Warren (2016), using the National Institute Global Econometric Model (NIGEM)[116] like the UK Treasury Analysis (2016), projected a decline of the UK's GDP by between 1.5 per cent and 2.1 per cent relative to the 2030 baseline in a soft Brexit scenario, with real wages for households expected to decrease by 2,2% to 3,2%, and consumption is projected to reduce by 2,4% to 3,3%[117]. Moreover, Hantzche et al (2018) predicted that GDP loss arrived to a 5,5%, while PwC (2017) "*assumed that UK would face a 3.4% GDP decrease, versus a 0.6% decline for the EU27 countries in 2030*"[118].

Table 2

Long-term impact of Brexit on GDP/welfare in a WTO scenario

Percentage point of GDP/welfare deviation from EU-like scenario

Institution	Losses UK	Losses EU-27	Channels	Methodology
LSE (2017)	-2.7	-0.3	Trade, EU budget	Comparative static, trade models
LSE (2018)	-3.3		Trade	
IMF (2018)	-4.0	-0.5		
CAE (2018)	-2.7	-0.8		
IFO (2017)	-1.7	-0.3	Trade	
IFO (2018)	-3.2	-0.6		
CPB (2016)	-4.1	-0.8	Trade	CGE macro model
KUL (2017)	-4.5	-1.5	Trade, global value chains	Comparative static, trade model with sector-level input-output linkages
IMF (2018)		-1.5	Integration	Various methods
NIESR (2016)	-3.2		Trade, tariffs, FDI, EU budget	Macroeconomic model (NiGEM)
	-7.8		Idem + labour productivity shock	
NIESR (2018)	-5.5		Goods and services trade volumes, FDI, net migration, EU budget + limited labour productivity shock	
UK Gov (2018b)	-7.7		Trade, new trade deals, deregulation	CGE macro model (+ gravity)
	-9.3		Idem + migration (zero net inflows of EEA workers)	
	-9.9		Trade, business investment-productivity	Idem (with capital accumulation)
UK Treasury (2016)	-7.5		Trade, FDI, uncertainty persistence	Back-of-the-envelope calculations for trade based on estimates of trade destruction and trade-income elasticity
LSE (2018)	-8.1		Trade	
	-8.7		Trade and migration	

Source: Bisciari (2019).
Note: LSE (2017) = Dhingra et al. (2017); LSE (2018) = Levell et al. (2018); IMF (2018) is a Selected Issue of the Article IV Consultation Report on the euro area in July; CAE (2018) = Vicard (2018); IFO (2017) = Felbermayr et al. (2017); IFO (2018) = Felbermayr et al. (2018b); CPB (2016) = Rojas-Romagosa (2016); KUL (2017) = Vandenbussche et al. (2017); NIESR (2016) = Ebell and Warren (2016); NIESR (2018) = Hantzsche et al. (2018).

Source: European Central Bank, International Relations Committee: Brexit Task Force (October 2020). Occasional Paper Series: A review of economic analyses on the potential impact of Brexit (No 249), pag. 20.

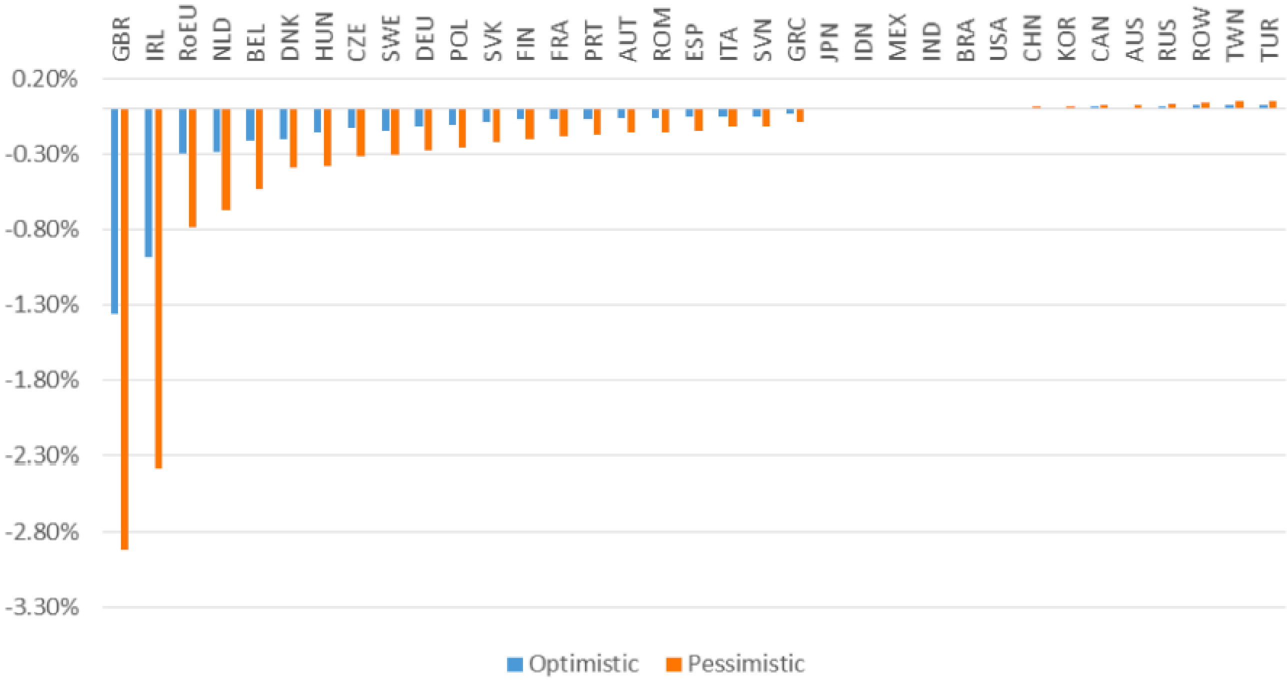
[116] NiGEM holds the distinction of being a preeminent global macroeconomic model. It has a widespread utilization by policymakers and private sector entities worldwide for the purposes of economic forecasting, constructing different scenarios, and conducting stress testing.

[117] Ebell, M., & Warren, J. (2016). The long-term economic impact of leaving the EU. National Institute Economic Review, 236(1), 121-138, pag. 129.

[118] PWC (2017), Brexit Monitor: The Impact of Brexit on (Global) Trade, pag. 9.

However, Brexit is expected to bring uncertainty and losses not only for the UK economy but also the other economies since the fell in trade would negatively affect other countries, and in particular the EU-27 member states, creating a lose-lose situation for both UK and EU economies. At the same time, some countries could benefit from Brexit since the UK trades would be redirected outside EU and towards new and non-European countries. More specifically, as depicted in the following graph, the economic consequences of the trade channel on individual EU nations highlight that smaller open economies with strong ties to the United Kingdom experience more pronounced negative effects compared to the others. This is particularly noticeable in the cases of countries such as Gibraltar, Ireland, the Netherlands, and Belgium, which are closely connected to the UK in terms of trade[119]. Additionally, Luxembourg is impacted due to its specialization in financial services, while Cyprus and Malta, being smaller nations with Commonwealth connections to the UK, also encounter significant challenges[120].

Figure 1: The effect of Brexit on living standards across countries



Source: Dhingra, S., Ottaviano, G., Sampson, T., & Van Reenen, J. (2016). The consequences of Brexit for UK trade and living standards, CEP Brexit Analysis Papers 02, Centre for Economic Performance, LSE, pag. 6.

[119] At the top of this list in terms of shares of total imports and exports there are Ireland and Gibraltar due to their strong connection with the UK economy and to the small size of their economies. Germany is the UK's largest trading partner in the EU by volume, but as a result of its large economy is not the most dependent on UK trade. Other western European countries which are connected with the UK economy and are more impacted by the Brexit are: Netherlands, Belgium and Denmark.

[120] European Central Bank, International Relations Committee: Brexit Task Force (October 2020). Occasional Paper Series: A review of economic analyses on the potential impact of Brexit (No 249), pagg. 21-22.

2.2.2 BILATERAL TRADE AGREEMENTS

The second alternative for UK to the EU membership is the represented by the negotiation of bilateral trade agreements with the EU to find a new arrangement. The term bilateral trade agreements is referred to a whole series of agreements that two nations establish with each other with the aim of facilitating trade and fostering economic collaboration. These agreements have a substantial influence in shaping the dynamics of global trade partnerships, working to diminish barriers, harmonize regulations, and stimulate cooperation across different sectors of the economy. Such agreements generally offer a combination of tariff-free trade, access to the Single market and an assurance of a fair treatment for enterprises participating in these markets. However, these kinds of deals present several limitations. First of all, the current and existing bilateral trade agreements do not provide the exact level of access to the Single Market and benefits that UK is currently enjoying. In particular, they do not provide a complete access to services, greatly affecting the British economy since, of the largest EU economies, the UK has the biggest service sector as a proportion of output, accounting around 80%[121]. Furthermore, this limited access to the EU Single Market is linked to the implementation, by the nation involved in the deal, of EU regulations, making financial contributions to the budget or accepting free movement of people. Yet, if the UK wants to embrace these commitments outside the EU, it would lose its voice and vote over EU rules, giving up its actual influential role in the EU decision-making. This shift holds greater significance for the UK compared to countries like Norway or Switzerland, as their economic influence is less substantial, even if they were EU members[122]. Whilst, for UK it represents a great loss of power and influence. In conclusion, the UK would lose the advantage of the Free Trade Agreements that the EU has established with other nations across the globe: with these conditions, negotiating the new arrangements with both the EU and the rest of the world would be very time-consuming and costly process and cause a considerable period of economic uncertainty about how long it would take, since UK would lose the bargaining power given by being part of the European Community[123].

There are many countries which have negotiated trade agreements with the EU, such as Switzerland, Turkey, and Canada. Switzerland, differently from Norway, even in it was member of the EFTA, when the EU community and the EFTA states decided to establish the EEA, the Swiss government refused the membership. The consequence was that Switzerland is both a non-EU state and had no

[121] HM Government (March 2016). *Alternatives to membership: possible models for the United Kingdom outside the European Union*, pag. 25.
[122] HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 86.
[123] PWC (2017), *Brexit Monitor: The Impact of Brexit on (Global) Trade*, pag. 8.

access to the EU Single Market. Therefore, they adopted a different model based on the negotiation of bilateral trade agreements with EU: "*over the last two decades, Switzerland have negotiated a complex set of over 120 bilateral agreements*"[124], divided in Bilateral I and Bilateral II. Thanks to these agreements, Switzerland:

- has a partial access to the Single Market, with most of the good traded that are not subjected to tariffs apart from the agricultural one;
- is outside the Customs Union, meaning that has to face higher administrative costs;
- has a limited access trade in services, meaning that the agreements cover only some sectors but do not give general access to the EU market in financial services;
- is obliged to accept the free movement of people and to make important financial contributions to the EU budget to found several programmes of the community;
- has no representation within the European institutions and does not participate in the EU's legislative procedures[125].

Turkey's link with EU, instead, is based on a trade-and-economic Association Agreement since 1963, named Ankara Agreement. Moreover, Turkey has been in a Customs Union with the EU since the end of 1995, meaning that the two parties have eliminated most customs duties and trade barriers for goods they trade with each other. However, the Customs Union only covers goods and not services or raw agricultural goods, for which customs checks are applied. The foundation of the Turkish model rests on its identity as an emerging market and its ambition for EU membership. Turkey's desire to join the European Union started membership in 1987, and its status as a candidate country was officially recognized by the European Council in 1999. Accession negotiations between Turkey and the EU formally began in 2005 and are still on-going, likely to take a long time. Even though Turkey can establish trade deals with nations beyond the EU, its participation in the Customs Union mandates that its external tariffs must be in line with those of the EU. Limiting the trade agreements that Turkey can conclude. In conclusion, Turkey has no role in EU decision-making, as Switzerland, but does not contribute to the EU budget.

The third country is Canada. In September 2017, Canada and EU have a free trade agreement (FTA) known as the Comprehensive Economic and Trade Agreement (CETA). FTAs are agreements between two or more nations aimed at lowering or removing tariffs and various barriers to trade. They

[124] HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 89.
[125] Ivi, pag. 86.

are typically formed between non-EU countries and the EU and provide nations with a balanced position between complete sovereignty and complete integration within the European Union. In other words, with these kind of deals countries are free to trade goods and services, promoting cooperation and economic growth, while retaining its independence in areas like domestic regulation and policymaking. The Comprehensive Economic and Trade Agreement is a trade deal that aims to facilitate trade and investment between Canada and the EU member states. It was agreed in September 2014. was provisionally applied as of 21 September 2017, after several years of negotiations. With this FTA, Canada has less access to the Single Market rather than the countries previously described and it doesn't give tariff-free access to all Canadian manufacturer goods, does not cover many service sectors, and requires that Canada complies with EU regulations when engaging in exports to the EU, in addition to enforcing quotas on specific agricultural exports. As a trade-off of this reduced access to the EU's Single Market compared to closer form of integration, Canada maintains more control over their own policies and regulations, does not have to contribute financially to the EU budget, does not have to accept the free movement of people and has no role in the EU decision-making process.

Therefore, is clear that all the existing models related to the negotiated bilateral agreements would lead to higher expenses associated with conducting trade with Europe and none of the available alternatives would grant the UK the complete access to the Single Market it is presently enjoying. Furthermore, a negotiated bilateral agreement would give the UK a partial access to the Single Market in goods than the Norwegian model and a more limited access in the service sector. As stated before, this condition represents a critical situation for an economy like the UK since services are a major channel for the UK economy. Therefore, a bilateral trade agreement or an FTA similar to the one established by UE and Canada, would result in less favorable conditions for UK trade compared to the benefits that is currently enjoying, particularly concerning UK services that would no longer have a complete access to the Single Market. The most important consequence for UK economy would be a reduction of trades and, as analyzed in UK Treasury analysis, if the alternative to the EU membership was represented by the negotiation of a bilateral trade agreement, "*after 15 years, the UK is estimated to be between 4.6% and 7.8% of GDP better off inside the EU than with a negotiated bilateral agreement. In 2015 terms, leaving the EU for a negotiated bilateral agreement would imply a long-term loss of GDP of £4,300 a year for each household in the UK*"[126].

[126] Ivi pag.12.

2.2.3 HARD BREXIT

The worst possible scenario in which the UK departs from the EU without achieving an agreement with the consequence that all the trade interactions with EU and non-EU entities would be regulated by the default rules and regulations set by the World Trade Organization (WTO) is called "hard Brexit". In the WTO scenario, the most important principle is the "Most Favoured Nation" (MFN) treatment based on which if a WTO member country offers to one trading partner favorable trade conditions, incentives, or concessions, it must also offer the same treatment to all other WTO members. This principle ensures that no WTO member is treated more favorably than others. This alternative would be the lowest possible level of economic integration between the UK and the EU. A distinct and clear separation would result from it, causing a massive economic upheaval in the UK, with a severe impact on people, businesses, employment, and pricing. The reasons why are several. First of all, with the Hard Brexit alternative, UK would cease to be a member of both the EU Single Market and Customs Union, leading to significant changes. One of this is represented by the introduction of customs checks and common external tariffs on imports which would result in delays and increased costs. "*As a WTO member, the UK's exports to the EU and other WTO members would be subject to the importing countries' MFN tariffs. This would raise the cost of trade between the UK and the EU"*[127]. Moreover, UK would not have access not only to the Single Market, but also to the 53 markets with which EU has negotiated Free Trade Agreements, reducing even more commercial trades. Also services sector would also experience difficulties. Financial institutions based in the UK might lose their capacity to operate in EU without obtaining separate regulatory approvals in each member state, which would have an impact on their ability to provide services. However, the compensation for the absence of economic integration would come in the form of enhanced political sovereignty. Indeed, not being part of the Single Market and not having preferential bilateral agreement with the EU, would allow UK government to not implement the EU legislation and, on the other hand, to set its own policy and regulatory standards. UK is not compelled to fund the EU budget or to accept the EU's free movement of people. Nevertheless, "*UK businesses would still have to comply with EU rules, such as on the environment or safety, in order to trade with the Single Market"*[128]. Therefore, the WTO scenario, even if it gives the highest level of independency and sovereignty since it would exempt the UK from all the formal obligations associated with the membership in the Single Market, is the alternative that has the major impact in terms of reduction

[127] Dhingra, S., Huang, H., Ottaviano, G., Pessoa J. P., Sampson, T., & Van Reenen, J. (2017) *The costs and benefits of leaving the EU: trade effects,* Economic Policy, Volume 32, Issue 92, Pages 651–705, pag. 658.
[128] HM Government (March 2016). *Alternatives to membership: possible models for the United Kingdom outside the European Union*, pag. 37.

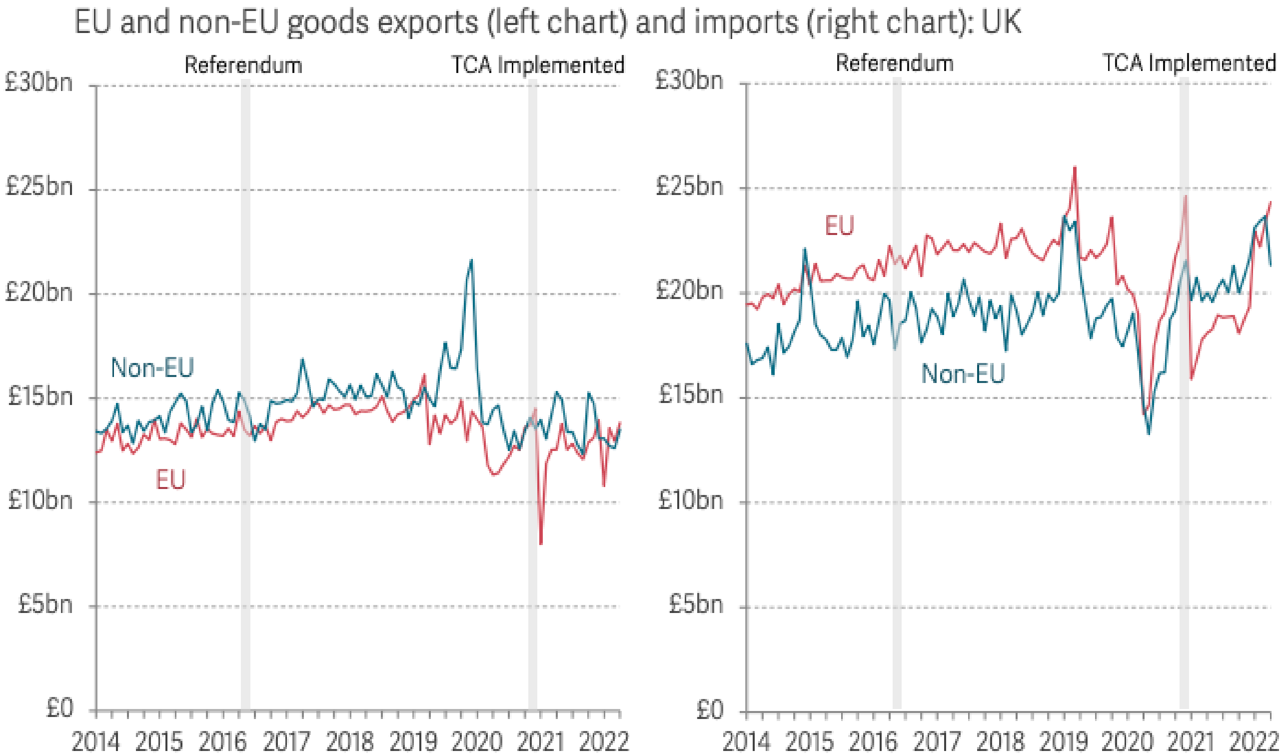
of commercial trades and increase of trade costs between UK and EU. Indeed, the UK Treasury analysis expected that "*the impact of leaving the EU for the WTO alternative implies a loss ranging from 5.4% to 9.5% of GDP after 15 years and a loss of GDP of £5.200 a year for each household"*[129].

2.2.4 TRADE AFTER THE BREXIT VOTE

As soon as Britain citizens decided to leave the European Union through the Brexit vote on June 2016, a complex process of negotiations focused on the withdrawal agreements and on the trade connections that will characterize the future relationship between UK and EU started. This process required a long period of time and lasted until the end of 2020. During this span of time, several types of scenarios were discussed and took in consideration and substantial body of literature examining the potential repercussions of Brexit emerged. This body of work covers a variety of academic fields, including economics, politics, international relations, law, and more, as academics, researchers, decision-makers, and analysts attempted to comprehend and foresee the possible effects of this historic and unprecedent event. As examined previously, the majority of the analysis to assess the potential impact of Brexit made during this time, concluded that in the long-run this event will mainly bring negative consequences to the English economy and beyond by increasing restrictions on immigration, investments and trade between the UK and the EU. The differences in the results are due to the data used or to the methodology applied to conduct the study. In particular, the trade channel and the possible transformations in trade dynamics were frequently studied, mostly taking into consideration the three possible scenarios described before. However, these works were conducted during the negotiations process and so there was still uncertainty about the kind of agreement that would have been reached between the parties. As a matter of fact, these are possible future estimates which depend on this potential agreement. But, as the transition period concluded and UK-EU found a deal, the Trade and Cooperation Agreement (TCA) on 1st January 2021, is possible to observe the impact of Brexit and how trade between UK and EU changed by analyzing the real data and looking to the graphs[130]. With the introduction of the TCA, new non-tariff barriers among UK and EU have been established. "*These barriers include customs checks, rules of origin*

[129] HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 142.
[130] Kren, J., & Lawless, M. (2022). *How has Brexit changed EU-UK trade flows?* (No. 735). ESRI Working Paper, pag. 2

requirements, sanitary and phytosanitary restrictions on trade in animal and plant products, the need to prove regulatory compliance separately in the UK and EU, reduced market access for service providers and the end of passporting rights for financial services"[131]. Is important to underline that before the introduction of the TCA, so during the transition period, UK remained member of the EU Single Market, so nothing changed. Furthermore, the implementation of the TCA coincided with the time in which trade flows have been significantly influenced by the spread of COVID-19, making difficult to disentangle the impacts of Brexit from the ones cause by COVID-19 on trades.



Source: Dhingra, S., Fry, E., Hale, S., & Jia, N. (2022). The Big Brexit: An assessment of the scale of change to come from Brexit, pag. 25.

Looking at the two graphs, the UK's trade dynamics demonstrated a pattern of oscillations in both exports and imports prior to the Brexit referendum. Despite these fluctuations, the aggregate volumes of exports and imports managed to cling to a stable average. This stability implied that the UK's trade relations with its trading partners had reached a certain level of equilibrium prior to the country's decision to exit the European Union[132]. Even after the 2016 Referendum, trade trends have not changed significantly as trade barriers were unchanged before the TCA came into force at the start of 2021. The first important decrease in trade happened at the beginning of the 2020, when COVID-19 and the restrictions to block the spread of the virus hit the economy worldwide through global travel

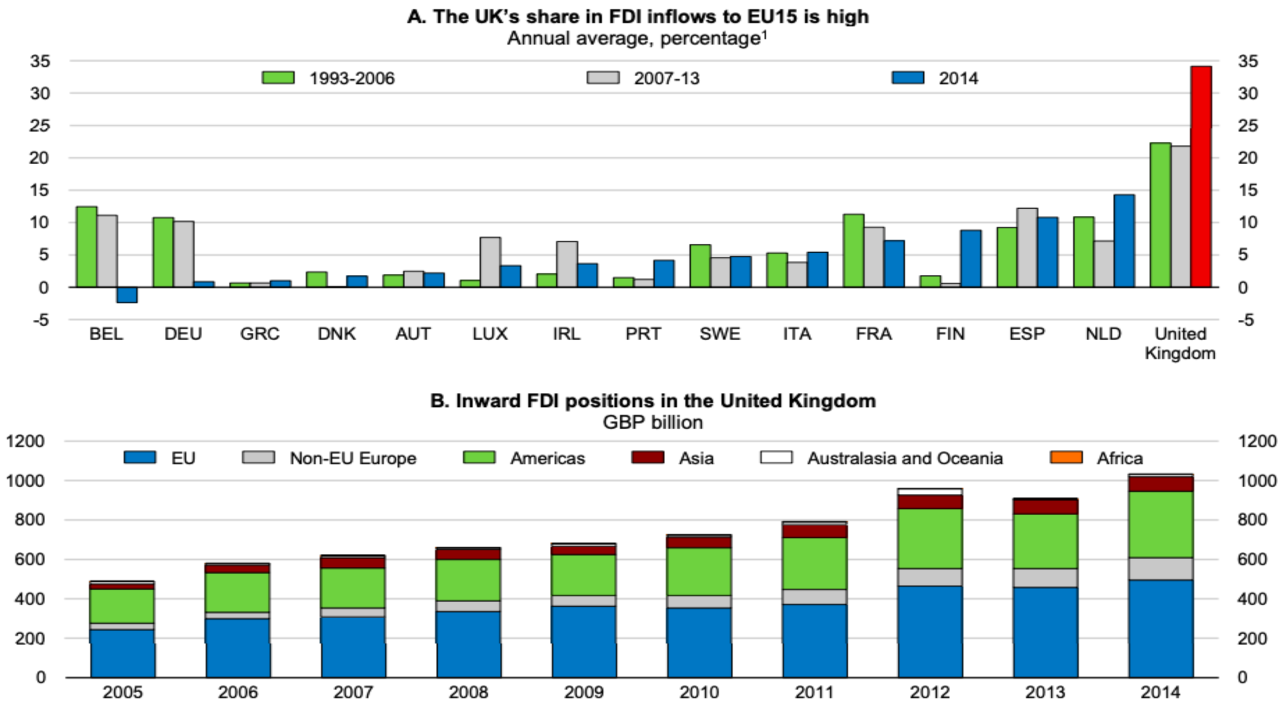
[131] Dhingra, S., Sampson, T. *Expecting Brexit* (2022). CESifo Working Paper No. 9541, pag. 30.
[132] Freeman, R., Manova, K., Prayer, T., & Sampson, T. (2022). *Unravelling deep integration: UK trade in the wake of Brexit.* Centre for Economic Performance, London School of Economics and Political Science, pagg. 14-15.

and supply chains disruptions. "*In 2020, world trade fell by 8.9%, the steepest fall since the financial crisis, with global services trade was disproportionately impacted, falling by more than 20%*"[133]. In detail, In the second quarter of 2020, at the peak of the first wave of the Covid-19 pandemic in the UK, a significant and sudden decline was observed in the United Kingdom's exports to both the European Union (EU) and the rest of the world (ROW). This decline amounted to a decrease of approximately 30%. Furthermore, imports from the EU also experienced a notable reduction during the same period, with a decline of up to 40%, whilst imports from the rest of the world were less affected by the pandemic's initial impact, experiencing a comparatively smaller decline of around 20%. However, both exports and imports of goods returned to the pre-pandemic levels by the end of 2020[134]. A second disruptive moment characterized by a significant drop of UK commercial trades was at the beginning of 2021, with the introduction of the TCA and the exit of UK form the EU, its largest trade partner. Indeed, in January 2021, the first month post-transition, "*the fall in the volume of goods trade in January was stark. Total exports of goods fell by 19.3%, driven by a 40.7% fall in exports to the EU. Total imports fell by 21.6%, with the fall in imports from the EU standing at 28.8%"*[135]. The value of exports fell from £12.5 billion in December 2020 to £7.1 billion in January 2021, suggesting that the TCA has sharply reduced UK trades crating new trade barriers. Indeed, 24% of UK firms that trade with EU reported that Brexit has caused exports to the EU to fall, while 33% reported a decrease of imports, with smaller firms that were more impacted rather than the larger ones. Moreover, 61% of firms experienced at least one issue relating to Brexit, with 37% of firms reporting delays at the border, 36% reporting additional customs and administration costs and 22% reporting regulatory checks. Factors that consequently influenced commercial trades[136]. However, as soon as businesses and logistics networks started to adapt to the new trade realities, the immediate severe impacts gradually recovered. Indeed, exports decrease strongly recovered to the pre-Brexit level during 2021. Whilst imports from the Europe Union, that fell by 40%, remained persistently lower in comparison with the pre-Brexit level.

[133] Dhingra, S., Fry, E., Hale, S., & Jia, N. (2022). *The Big Brexit: An assessment of the scale of change to come from Brexit*, pag. 7.
[134] Freeman, R., Manova, K., Prayer, T., & Sampson, T. (2022). *Unravelling deep integration: UK trade in the wake of Brexit*. Centre for Economic Performance, London School of Economics and Political Science, pag. 15.
[135] De Lyon, J., & Dhingra, S. (2021). *The impacts of Covid-19 and Brexit on the UK economy: early evidence in 2021*. London: Centre for Economic Performance, London School of Economics and Political Science, pag. 2.
[136] Ivi pagg. 8-9.

2.3 INVESTMENT EFFECTS

The second channel through which Brexit vote had mainly impacted the UK economy and thanks to which is possible to analyze the effect of the exit from the European community is the investment one. One of the most important economic benefit of the UK's membership of the EU has always been the support to both trade and investments. The reason is given by the fact that joining the EU gave to the UK the access to the Single Market, which represents the largest market in the world, with over 500 millions of consumers. Therefore, EU membership has made Great Britain an attractive place where domestic and foreign firms are incentivized to invest. This, in turn, have a direct and positive impact on the economic output and productivity growth[137]. Before the Brexit vote, among EU member states, the United Kingdom has always stood out as the most appealing global destination for foreign direct investment (FDI). In detail, as shown in the graphs below, the UK was the most attractive destination for FDI in the EU and accounted for the largest share of FDI inflows into the EU. FDI positions in the UK of both EU and non-EU investors have steadily increased over time[138].



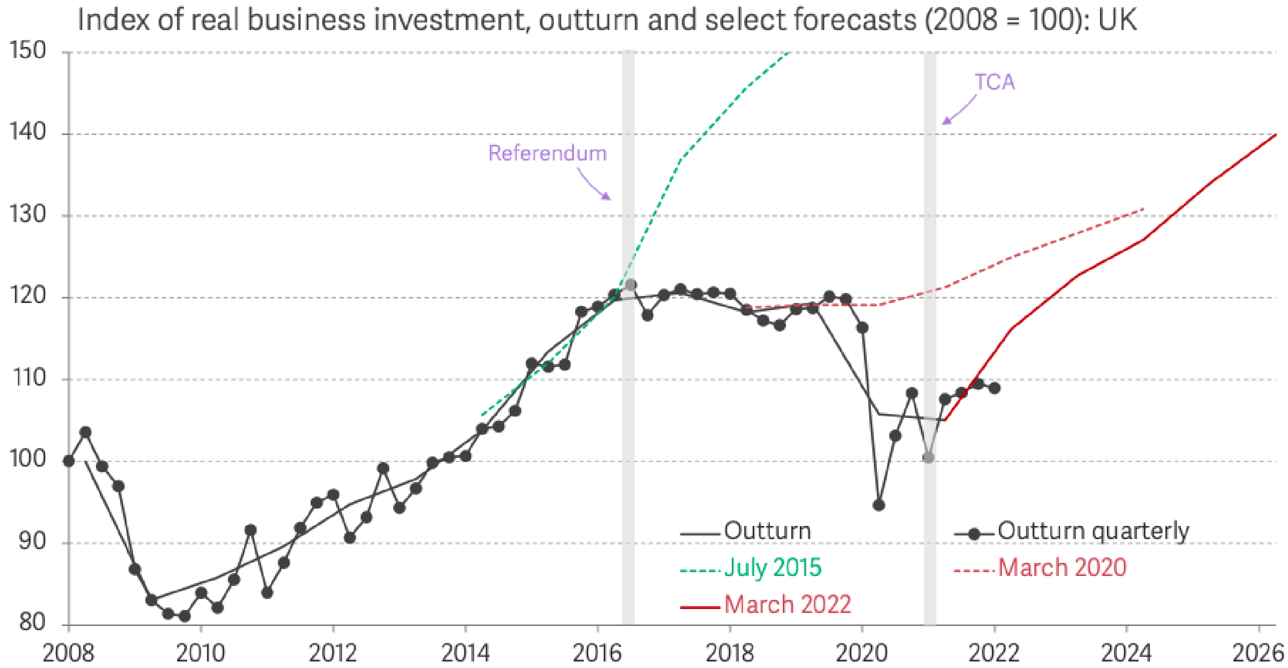
Source: Kierzenkowski, R., Pain, N., Rusticelli, E., & Zwart, S. (2016). The economic consequences of Brexit: a taxing decision, pag. 24.

FDI stimulate technological innovation and competition among enterprises, that consequently gives a boost to the productivity, which in turns raises output and wages. The FDI's advantages can be both

[137] HM GOVERNMENT (April 2016). *HM Treasury analysis: the long-term economic impact of EU membership and the alternatives* - Presented to Parliament by the Chancellor of the Exchequer by Command of Her Majesty, pag. 47.
[138] Kierzenkowski, R., Pain, N., Rusticelli, E., & Zwart, S. (2016). *The economic consequences of Brexit: a taxing decision*, pag. 24.

direct and indirect. The first ones are related to the fact that foreign companies often exhibit higher productivity levels and offer better wage opportunities compared to domestic counterparts. The second ones, instead, are linked to the introduction of new technological expertise and managerial knowledge from foreign firms that can also be assimilated and used by domestic enterprise to improve their business performance[139]. All this results with a positive impact on GDP growth, as evidenced by the work of Alfaro et al (2004), titled "FDI and economic growth: the role of local financial markets", in which using a data set of around 70 countries they found that higher levels of foreign direct investment led to substantial and positive effects on GDP growth, particularly in nations with well-established financial sectors, such as the United Kingdom. Moreover, it has been demonstrated a strong and favorable correlation between inward FDI and productivity in the UK, with a 10% increase in foreign presence increasing productivity by roughly 0.5%[140]. Therefore, the decision to leave the EU influenced negatively the FDI flows into the UK, reducing the benefits described above, as the vote brought uncertainty about the future UK commercial relationships with both EU and non-EU countries. In addition, the decrease in FDI was also driven by the prospect of elevated trade barriers that would raise the cost of exporting to the European Union through the British territory. The consequence of this new condition has been the decision of many multinational or foreign firms with complex supply networks to relocate their business investments from the UK to the EU in order to reduce trade costs or postpone those investments. Obviously, this latter choice was also due to the long wait caused by the negotiations to establish trade relations between EU and UK. When uncertainty prevails, businesses often find it prudent to postpone decisions until future prospects become more defined. This approach enables them to assess whether it is financially viable to incur fixed costs given the prevailing circumstances. For all these reasons, immediately after the Brexit referendum, business investments in UK underperformed: as exhibited in the graph below: "*investments fell by 0,1% per quarter on average in the three years post-referendum, compared to a quarterly growth rate of 1,7% in the three years prior to the referendum*"[141].

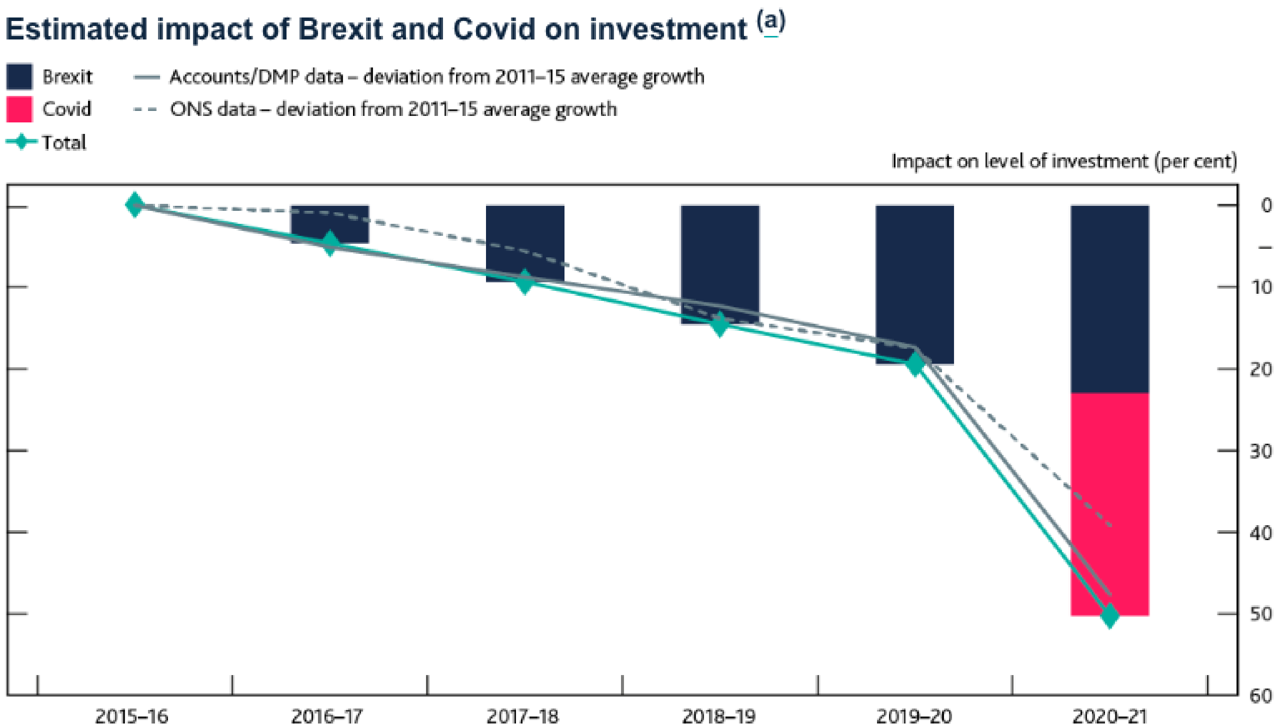
[139] Dhingra, S., Ottaviano, G., Sampson, T., & Van Reenen, J. (2016). *The impact of Brexit on foreign investment in the UK*. BREXIT 2016, 24(2), 1-10, pag. 2.
[140] International Monetary Fund (November 2018). *United Kingdom: selected issue*. IMF Country Report No. 18/317, pagg. 8-9.
[141] Dhingra, S., Fry, E., Hale, S., & Jia, N. (2022). *The Big Brexit: An assessment of the scale of change to come from Brexit,* pag. 21.



Source: *Dhingra, S., Fry, E., Hale, S., & Jia, N. (2022). The Big Brexit: An assessment of the scale of change to come from Brexit, pag. 21.*

Together with Brexit vote, a second element that increased even more the uncertainty for businesses, impacting on the FDI, was COVID-19. Together, the two factors affected significantly business investments and, as we can notice from the graph, the hugest drop of around 20% occurred during the peak of the COVID pandemic in 2020, in conjunction with the ongoing Brexit negotiations to establish a commercial and political deal with EU. Thus, a period of enormous uncertainty and low confidence in the future, with firms that preferred to delay investments. However, even if one of the most complex challenge for researchers that analyzed the impact of Brexit on UK and EU economy has been to isolate the referendum effects from those linked to COVID-19 pandemic, is fundamental to distinguish the different impacts, in terms of investments, of the two episodes. Indeed, both produced substantial uncertainty for businesses. However, the uncertainty brought by COVID-19 mainly determined delay in investments, with companies that preferred to postpone their decisions until the outlook for the future became more certain, allowing them to determine whether the expenditure of fixed costs was worth or not. In addition, COVID effects were estimated to be short-term, with sectors that effectively already recovered during 2022. On the other hand, the uncertainty related to the Brexit shock not only determined delays, but radically changed the structure of commercial trades and supply chain activities in UK. Several companies, particularly in the financial services sector, decided to relocate part of their businesses to maintain access to the EU market, without facing higher costs and delays caused by tariffs barriers and custom checks. This has led to shifts in UK FDI patterns, with some investments being redirected outside the UK, to EU member states, reducing the attractiveness of Great Britain which was the top European destination for inward

FDI. So, UK exit from EU effects are longer term since uncertainty persisted for a long period. In a document published by the Bank of England that analyzed the recent trend of UK business investments using data from the Decision Maker Panel (DMP), a representative survey of UK businesses, is reported that after the referendum, an average of 45% of firms in the DMP have reported that Brexit was in the top three sources of uncertainty for their business, peaking at just under 60%. This uncertainty remained for an incredible long period of five years. Regarding COVID pandemic, instead, numbers increase a lot: in April 2020, an overwhelming 97% of businesses indicated that COVID-19 ranked within the top three factors causing uncertainty for their activities. Additionally, a substantial 86% of businesses identified the pandemic as the foremost source of uncertainty affecting their performance during that period. Starting from 2016, these conditions determined a reduction of investments in UK, arriving in 2020-21 to a decline around 23%, which arrived around 50% considering COVID-19 impact[142].



Source: *Anayi, L., Bloom, N., Bunn, P., Mizen, P., Oikonomou, M., & Thwaites, G. (2021). Influences on investment by UK businesses: evidence from the Decision Maker Panel. Bank of England Quarterly Bulletin, Q2, pag. 7*

However, form the end of 2021 and the beginning of 2022, a recovery in investment began supported by three factors: the first one is that COVID restrictions have eased thanks to the vaccination campaign, reducing uncertainty around the pandemic. Secondly, also the doubts related to the Brexit decision fall thanks to the implementation of the TCA. Indeed, in May 2022, the percentage of

[142] Anayi, L., Bloom, N., Bunn, P., Mizen, P., Oikonomou, M., & Thwaites, G. (2021). *Influences on investment by UK businesses: evidence from the Decision Maker Panel*. Bank of England Quarterly Bulletin, Q2, pagg. 4-8.

businesses assuring that Brexit was in the top three source of uncertainty had reduced around 20%, even if some doubts about the implementation of the new deal remained. Last but not least, in March 2021 Budget announced a set of incentives for businesses to accelerate investments. Therefore, an important recovery in UK investments happened during 2022, without reaching again the pre-referendum levels. Moreover, the capital expenditure that was not realized between 2016 and 2021 due to Brexit is expected to have lasting effects on the United Kingdom's productivity. In fact, the Office for Budget Responsibility (OBR) approximates that 40% of the entire Brexit-induced productivity impact occurred prior to the implementation of the Trade and Cooperation Agreement (TCA). This impact was primarily driven by the uncertainty surrounding Brexit, which led to declines in investment.

2.4 MIGRATION AND LABOUR MARKET EFFECTS

The third and last channel, studied in this chapter, through which Brexit had an impact on the UK economy is the migration channel. Over the past two decades, immigration has witnessed substantial growth in the United Kingdom, with a noteworthy portion of this growth attributed to individuals arriving from other European Union (EU) countries. Particularly, the surge in immigration from EU countries that played a significant role in changing the UK demographic composition and social dynamics started after 2004, when the eight East European countries became member of the EU. Between 1995 and 2015, the number of immigrants coming from other EU countries which decided to live in the UK experienced a remarkable threefold increase, surging from 0.9 million to 3.3 million individuals. In detail, the proportion of EU nationals in the overall UK population expanded notably from 1.5% in 1995 to 5.3% in 2015. This growth was extremely conspicuous within the working-age population segment (typically individuals aged 16 to 64), with the proportion of EU migrants in this group rising from 1.8% in 1995 to 6.3% in 2015. Moreover, immigrants from EU are likely to be more skilled and educated in comparison with UK natives resulting in the fact that, in 2017, the EU migrant's employment rate was around 80%, more than UK-born individuals[143]. This significant inflow of individuals from outside Great Britain represented an important work and economic opportunity within UK. There is a significant amount of research and studies about the great impact on economic growth and productivity that immigration had. Indeed, is well established that "*migration enhances productivity by increasing competition in labor and product markets and by*

[143] Dhingra, S., Ottaviano, G., Van Reenen, J., & Wadsworth, J. (2016). *Brexit and the impact of immigration on the UK* (No. 05). Centre for Economic Performance, LSE, pagg. 2-5.

facilitating the growth of high-productivity clusters"[144]. Migration also allows to address labor market shortages in industries requiring specialized skills, while also facilitating the introduction of new ideas, methodologies, know-how and expertise into the economy. This introduction not only fosters innovation but also encourages competition within sectors, ultimately incentivizing the growth of productivity. Various empirical analysis revealed the strong link between long-run productivity and migration, with a positive effect on the GDP. For example, Boubtane et al. (2015) found that a 50% increase in the net migration rate of the foreign-born produces an increase around 0,44% in UK productivity. At the same time, a 1%-point increase in the migration of foreign-born workers would increase UK productivity growth by 0,32%[145]. Another important contribution is the one given by Jaumotte et al. (2016) which found that a 1% increase in the migrant share of the adult population results in an increase in GDP per capita and productivity of approximately 2%[146]. Although the benefits brought by migratory flows were obvious, one of the main points of the winning Leave campaign was represented by the willingness to regain control over immigration. This element, together with the free movement of people which allowed citizens of EU member states to live and work freely in any other member state, including the UK, significantly influenced the referendum's outcome. With the decision of leaving the European community, the migration policies and patterns in UK were impacted. Indeed, before this event, with the precedent migration system characterized by the free movement of the people, EU citizens were able to be hired for any job without facing any kind of restrictions or hiring burocracy costs. On the other hand, non-EU migrants faced a more complex situation regarding immigration requirements. To be eligible for a 'Tier 2' visa, these migrants had to meet relatively strict criteria related to their skills and salary levels. As a result of these requirements, non-EU migrants tended to be concentrated in specific sectors characterized by higher skill demands, with the Information and Communication Technology (ICT) sector being particularly prominent. However, on January 2021, with the end of the transition period and the implementation of the TCA, a new migration system was introduced, changing the scenario. This new system, based on the end of the free movement of people, was designed with the goal of decreasing the inflow of low-paid and low-skilled migrants, while favoring the admission of higher-skilled workers. Now, the overwhelming majority of individuals migrating to the UK for work, whether they are from EU or from other countries, are required to apply for a 'Skilled Work Visa'. To be eligible for it, migrants must meet specific criteria regarding salary and skill level. Is evident that

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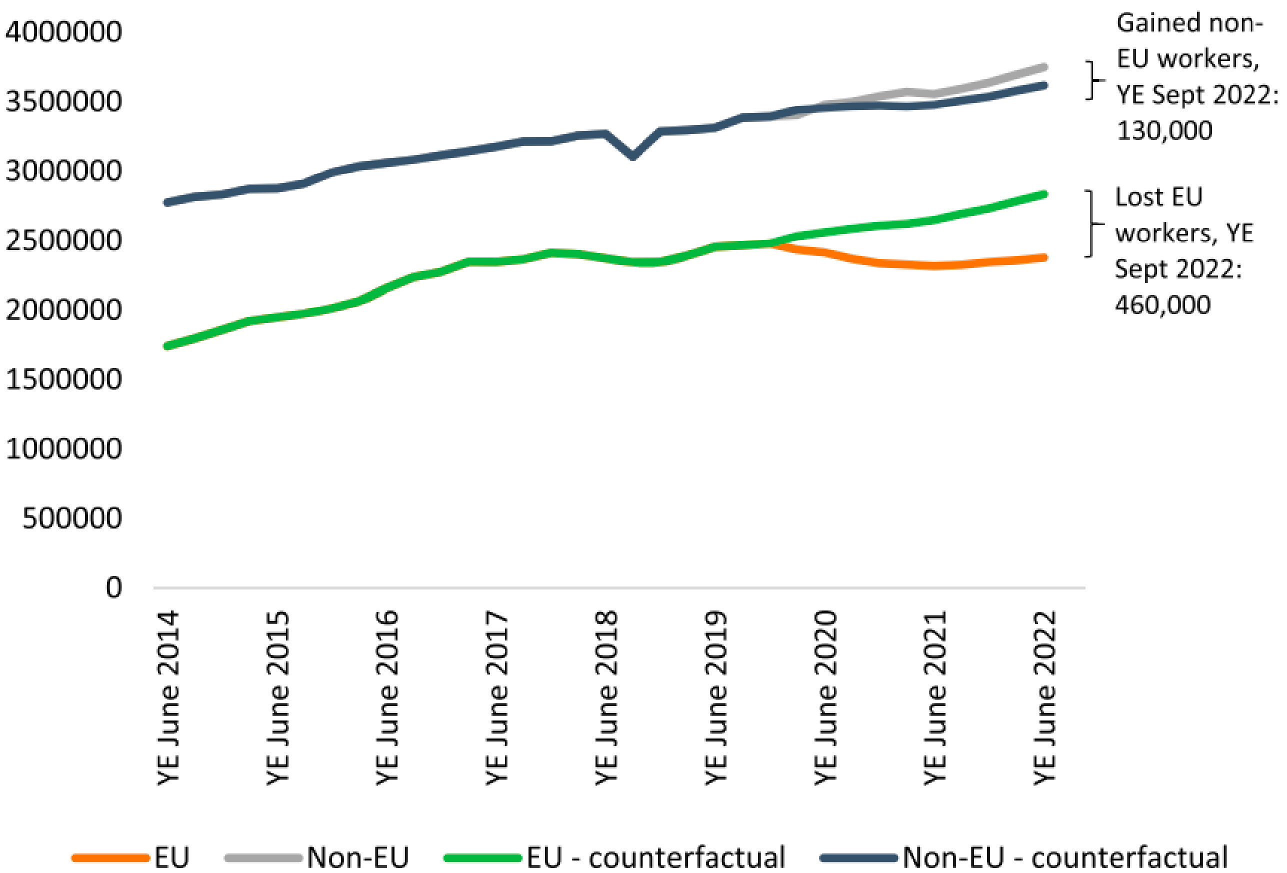
[144] International Monetary Fund (November 2018). *United Kingdom: selected issue*. IMF Country Report No. 18/317, pag. 16.
[145] Boubtane, E., Dumont, J. C., and Rault, C. (2015), '*Immigration and Economic Growth in the OECD Countries 1986–2006*', CESifo Working Paper Series No. 5392, pagg. 16-18.
[146]

the new system underwent liberalization for nationalities that already required a visa, but simultaneously, created new obstacles to migration from European Union countries[147]. Consequently, this new condition, together with the pandemic during which many foreign nationals left the UK and fewer arrived, lead to a significant shortfall of workers and labour shortages in certain sectors. Indeed, as of the third quarter of 2022, Britain was the only member of the G7 group with an employment rate that remains below its pre-pandemic level. Moreover, as represented in the graph below, in June 2022 there was a notable deficit of approximately 460,000 workers from EU countries, and while there was an increment of roughly 130,000 non-EU workers, the overall workforce shortage amounted to around 330,000 individuals, equivalent to approximately 1% of the total labor force[148].



Source: Portes, J., & Springford, J. (2023). The impact of the post-Brexit migration system on the UK labour market. Contemporary Social Science, 18(2), 132-149, pag. 142.

In detail, the largest decline of workers happened in the low-skilled sectors more reliant on EU-workers, such as agriculture, hospitality, transportation, construction or accommodation and food service (it came to record losses as % of total employment in sector due to the new migration system

[147] Portes, J., & Springford, J. (2023). *The impact of the post-Brexit migration system on the UK labour market*. Contemporary Social Science, 18(2), 132-149, pagg. 134-138.
[148] Portes, J., & Springford, J. (2023). *Early impacts of the post-Brexit immigration system on the UK labour market*, pagg. 1-2.

of up to 8%, like in the transportation and storage one[149]). What is happening in this type of industry is that the shortfall of EU-workers has not been covered by the increase of non-EU workers expected with the better hiring conditions under the new system. Vice versa, in high-skilled sectors like information, communication and technology (ITC), or also in the health one, the growth of the non-EU workers has been very consistent, above the pre-pandemic trend, compensating the decline in workers from the (EU) by a greater margin. This shock in the migration trends will produce, in the next years, an impact on the economic growth of Great Britain. A number of studies have already attempted to assess this impact and, in general, the outcomes were the same. The post-Brexit system is going to reduce the EU workers in UK, over the next decade, by between 200.000 and 500.000, in part offset by the raise of new and more skilled non-EU migrants. The effect will be a GDP reduction of 0,2% to 0,6% and an even smaller impact on GDP per capita[150]. Therefore, the economic effect of Brexit through the migration channel is expected to be lower in comparison with the other two channels previously analyzed. However, the three channels evaluated in this chapter allow to understand that the decision taken by Britain citizens in June 2016 has affected the structure of the British economy permanently and the economic impact will be even more clear and tangible in the next future.

[149] Ivi, pag.3.
[150] Portes, J. (2022). *Immigration and the UK Economy after Brexit.* Oxford Review of Economic Policy, 38(1), 82-96, pagg. 89-90.

3 CHAPTER 3: FOCUS ON THE IMPACT OF THE BREXIT REFERENDUM ON THE STERLING EXCHANGE RATE

3.1 EXCHANGE RATES ESSENTIALS: DEFINITION, DIFFERENT TYPOLOGIES AND REGIMES

After conducting an in-depth analysis of the long-term effects of Brexit and its impact on the economic and social landscape of England in the previous chapter, the forthcoming chapter will shift its focus to the short-term consequences of this significant and unprecedent event. Indeed, even though the Brexit referendum took place in 2016, the vote did not result in immediate alterations to the United Kingdom's economic interactions with the European Union or other global entities. As stated previously, until January 2020 Brexit did not take place and UK's economic and commercial relationship with EU remained unchanged until the beginning of 2021, with the introduction of the TCA. However, the vote had an immediate influence on the expectations regarding the economic future of the United Kingdom and the short-term effects were instantly felt after the referendum. In detail, Brexit brought an increase in the uncertainty concerning the future of the UK's economic policies and trade agreements and the long and complex negotiations with EU institutions lead to further uncertainty and volatility. Secondly, *the referendum led to a decline in the expected future openness of the United Kingdom to trade and immigration with the EU. Because economic behavior is* forward looking, these changes in expectations had an immediate impact on financial markets
(THE BREXIT VOTE, INFLATION AND U.K. LIVING STANDARDS). In particular, in this part of the work, the analysis would be on the effect on the sterling exchange rate and its impact on the Britain economy and macroeconomic factors. However, before going deep into this examination understand the complexities of exchange rate management, is crucial to establish a solid foundation in the basics of exchange rates. Exchange rates are at the core of international finance and economics and underpin various aspects of a country's economic health, determining the costs of imports and exports, affecting investment decisions, and influencing capital flows.

Starting from the definition, the exchange rate is a relative price, in other words is the price of something in terms of something else. In the present case, is the price of a foreign currency expressed in terms of a domestic (home) currency. Another definition that can be used to express the exchange rate is the measure of the purchasing power of one currency in relation to another currency. Taking in consideration the Britain exchange rate with the Eurozone ($E_{£x€}$), known also as pound sterling per euro exchange rate, at the present time, on 8 September 2023, is equal to 1,1664. This means that, since exchange rates define how much of the foreign currency is needed to buy one unit of the home currency, right now 1£ can be exchanged for 1,1664€. As represented in the graph below, is possible to look at the past 10-years pattern of the pound sterling per euro exchange rate and it is already possible to see that Brexit, starting in 2016, has had a negative impact on the exchange rate, with the consequent effects on various English macroeconomic factors. However, a more comprehensive analysis of these effects will be conducted in the latter part of this chapter.

Source: Euroepan Central Bank (ECB) – GBP vs. EUR exchange rate. Available at: https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-gbp.it.html.

Returning to the fundamental principles of exchange rates, especially in the context of bilateral rates, making the correct designation of which currency assumes the role of the home currency and which takes the position of the foreign currency is fundamental. This choice is pivotal in avoiding any potential confusion since exchange rates change completely in definition. Considering the previous example, with the sterling per euro exchange rate, the home currency is the sterling, and the foreign currency is the euro. Conversely, reversing this exchange rate, the outcome is a new and different exchange rate: the euro per sterling pound ($E_{€x£}$). In this scenario, the situation is the opposite, with the euro becoming the home currency and the sterling the foreign currency. This reversal completely transforms the nature of the exchange rate. Actually, the euro per sterling exchange rate is equal to 0,8573, which is no more than the simple division 1/1,664, and it means that 1€ is equal to 0,8573£. Therefore, it is crucial to be consistent in choosing which country is considered "the own country" and always think of the exchange rate as the amount of foreign currency required to purchase one unit of the domestic currency. This practice ensures clarity and accuracy in understanding and working with exchange rates, preventing potential confusion in financial transactions and analysis. Linked to this important element, there is the theme of the quotation. Exchange rates can be quoted in two ways:

- DIRECT QUOTATION: Direct quotation of exchange rates involves expressing the price of one unit of foreign currency directly in terms of how many units of domestic currency are needed to buy one unit of foreign currency. In a direct quote, the foreign currency is indeed considered the base currency, while the domestic currency takes the role of the counter currency or quote currency[151].
- INDIRECT QUOTATION: Indirect quotation of exchange rates involves expressing the price of a domestic currency in terms of the number of units of foreign currency that are exchanged. The indirect quotation is often referred to as a "quantity quotation" because it directly expresses the quantity of foreign currency needed to purchase one unit of the domestic currency. In this case, the domestic currency is considered the base currency and the foreign one is the quote currency.

Furthermore, economists distinguish two types of exchange rates. Usually, when referring to the exchange rate between two countries is taken in consideration the nominal exchange rate (NER), which gives the value of one currency in terms of another one. Nominal exchange rates are reported daily in the pages of major newspapers and focus on the relative value of two currencies without taking into account their price levels. Nominal exchange rates are often used for everyday transactions, when people or businesses exchange currencies to buy goods or services, they use the nominal exchange rate to define the value of their own currency in terms of another one. Nominal exchange rates are fundamental also for international trade since they influence the prices of imported and exported goods and services. They are crucial for determining the prices of imported and exported goods and services. Linked to this element, there is an important aspect of exchange rates which is the appreciation and depreciation of currencies. If one currency becomes stronger in comparison to another currency, meaning that the value of that currency increases when compared to another one, is experiencing an appreciation. On the opposite, if a currency becomes weaker and its value falls when it is compared with another one, is experiencing a depreciation. Taking into consideration the two different quotations:

- When an exchange rate in a direct quotation increases, the domestic currency experiences a depreciation and, in turns, the foreign currency appreciates in value. In contrast, if an exchange rate in direct quotation decreases, the domestic currency appreciates and the foreign currency loses its value.

[151] In the Forex market, currencies are quoted in pairs and the first one that appears is called base currency, whilst the second one is called quote currency. The base currency states how much of the quote one is needed to buy one unit of the base currency. The quote currency, instead, shows how many units of this currency are needed to be exchanged for one unit of the base currency.

- In the case of indirect quotations, an increase of the exchange rate led to an appreciation of the domestic currency and a depreciation of foreign one. Whereas a lower exchange rate indicates that the domestic currency is depreciating in value and the foreign currency is appreciating, meaning that it takes more units of the domestic currency to obtain one unit of the foreign currency.

The second type of exchange rate is the real exchange rate (RER) which is the relative price of two countries. In other words, it measures the ratio at which it is possible to exchange a basket of goods produced in one country for those produced in the other one. Therefore, when dealing with the real exchange rate, is necessary to consider the purchasing power of a currency, taking into account changes in relative price levels. Real exchange rates are used to evaluate the competitiveness of a country's goods and services in international markets, providing insights into whether a currency is overvalued or undervalued in relation to its purchasing power parity. It can be calculated through a mathematical formula, which is:

RER = (Nominal Exchange Rate * Domestic Price Level) / Foreign Price Level

As with the nominal exchange rate, the real exchange rate undergoes percentage changes that lead to currency appreciations and depreciations. Similarly, when the real exchange rate increases, the home currency becomes undervalued and experiences a depreciation, since more domestic goods are needed to buy foreign goods. While foreign currency, in turn, appreciates and becomes overvalued. Instead, in the case in which the real exchange rate falls, the scenario is the opposite: fewer home-produced goods are needed to buy foreign one. The consequence is an appreciation of the home currency, which overvalued, and a depreciation of the foreign currency which becomes weaker.

Generally, when a currency appreciates, it strengthens in comparison to another currency, resulting in an increase in its relative value. This, in turn, makes the domestically produced goods more expensive for foreign buyers in the international market. The consequences of this currency appreciation include a decline in a country's exports, as foreign customers find its goods more costly, and a simultaneous increase in imports, as foreign-produced goods become more affordable for domestic consumers. This dynamic can potentially lead to the widening of a trade deficit as the country imports more than it exports. In the converse scenario, the depreciation of a currency makes domestic goods cheaper for foreign buyers since the purchasing power of the home currency has weakened in relation to the foreign currency. On the other hand, foreign-produced goods become relatively more expensive for domestic consumers. The consequences are an increase in a country's exports, as foreign customers find its goods more attractively priced, and a potential decrease in imports. This interplay of factors can potentially lead to an improvement in the trade balance as the country exports more than it imports.

Furthermore, another factor to consider when dealing with exchange rates are the regimes. Exchange rate regimes refer to the policies that governments and central banks use to define how their currency's value is determined in the foreign exchange market. There are different types of regimes. The most important are:

- **FIXED EXCHANGE RATE REGIME:** Under this regime, the government or central bank establishes a set value for the domestic currency by fixing its exchange rate to the one of a foreign currency or a basket of currencies. The majority of the time, the currency that is used as an anchor is the U.S. dollar, given importance in the financial markets to uphold this fixed rate, the government or central bank actively engages in the foreign exchange market, buying or selling the domestic currency or foreign reserves as needed. As an illustration, China operates under this type of regime in which the Yuan's value is pegged to the U.S. dollar. The great benefit of this regime is the stability that it gives, mitigating the uncertainty and volatility associated with fluctuations in exchange rates. Consequently, this encourages investments because investors have a clear understanding of the value of their currency concerning other currencies. The fixed regime also aims to prevent inflation from surging and maintains the affordability of goods and services for citizens, fostering economic stability. On the other hand, the drawback of this regime is that it constrains the government and central bank's flexibility and independence in addressing external economic shocks or domestic imbalances. The reason is that since the government and central bank have to prioritize the stability of the exchange rate, this could go in conflict with the macroeconomic goals of the country.
- **FLEXIBLE EXCHANGE RATE REGIME:** In a flexible or floating exchange rate regime, the government or central bank refrains from intervening in the foreign exchange market. Instead, they allow exchange rate to fluctuate and is determined through the interaction of the market of supply and demand forces in the foreign exchange market. The higher flexibility of this regime gives the possibility the government and the central bank to pursue their macroeconomic objectives, which might include achieving price stability, fostering output growth, or improving employment, without being limited by exchange rate considerations. However, the main disadvantage of this regime is that it introduces greater unpredictability and fluctuation in exchange. This increased uncertainty can potentially discourage international trade and investment. Additionally, it exposes the country to exchange rate risk since the domestic currency's value can undergo significant appreciation or depreciation, impacting competitiveness and profitability. For example, in England, the central bank does

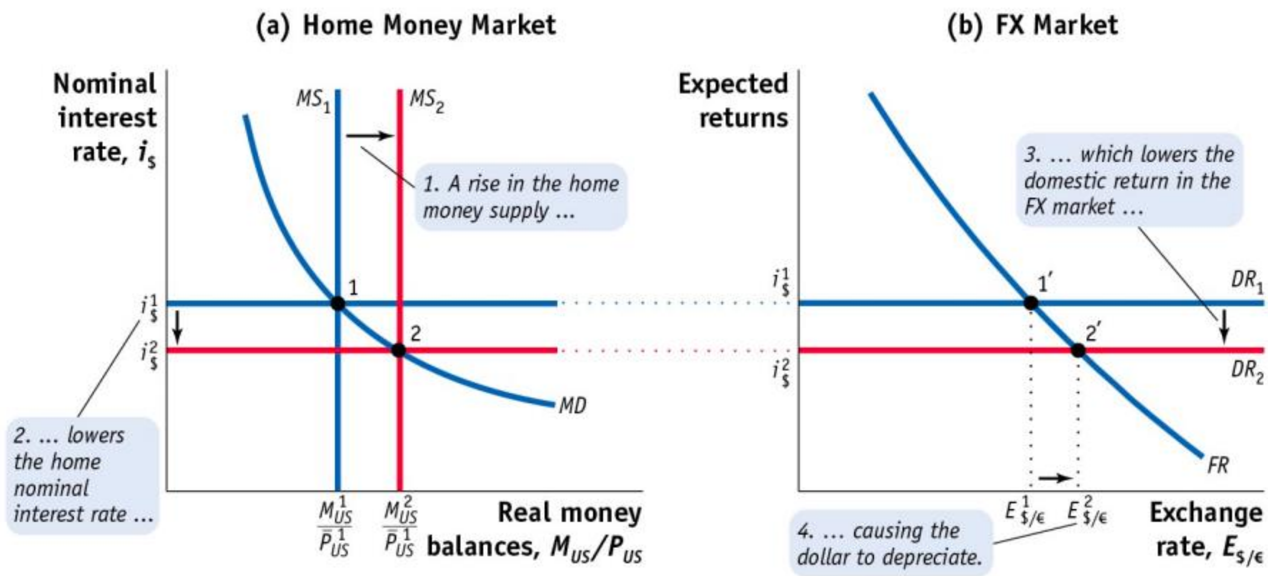
not set the exchange rate for the pound, since it is decided by the supply and demand in the exchange market.

In conclusion, currencies are traded in the foreign exchange market, also known as Forex market, which represents the largest and most liquid market in the world, opened 24 hours for 5 days per week. Every day are traded around trillions of dollars in this market. The individuals that participate in this market and demand/buy currencies are different. Not only banks, central banks, and funds, but also individuals like home importers of goods and services that need foreign currency to pay. Or home investors in foreign assets, willing to buy assets in foreign currency and foreign investors which are unhappy with home assets. Hedgers and arbitragers, which decide to trade currencies for hedging purposes. Finally, speculators (bears and bulls), which are agents that make money out by guessing where pricing are going in the future. Different types of individuals, with different purposes that shift the demand and supply curves of currencies, influencing exchange rates.

3.2 CENTRAL BANKS AND MONETARY POLICY: HOW EXCHANGE RATES ARE INFLUENCED

Between monetary policy and exchange rates there is a strong link. The intervention of central banks or other government institutions and their monetary policy decisions could, directly or indirectly, influence exchange rates. The way through which central banks can impact on exchange rates are many. First of all, one of the most important key tool used by central banks to have an influence on the economy and achieve a financial and price stability is represented by interest rates. By increasing or reducing them, central banks have the capacity to enhance or diminish the appeal of a nation's assets to investors. Central banks have a considerable influence over the money market and, in consequence, exchange rates through their monetary policy actions. One key tool that central banks possess is the adjustment of interest rates, which indirectly affects exchange rates. Indeed, when central banks raise interest rates, a series of events occurred. These higher interest rates translate to increased returns on assets denominated in the domestic currency. Naturally, both domestic and foreign investors who wish to invest in these assets are attracted by these higher returns and to do so is necessary to buy the domestic currency. As a result, the appeal of these higher returns attracts fresh foreign capital in pursuit of greater yields, driving up the demand for the domestic currency. This surge in demand, in turn, leads to the appreciation of the domestic currency's value. The appreciation of the domestic currency subsequently causes a decrease in the exchange rate, as it now requires fewer units of the domestic currency to exchange for a given amount of a foreign currency. Hence, through the strategic use of monetary policy tools, particularly interest rate adjustments, central banks can effectively shape exchange rates by influencing the attractiveness of their currency to investors. Conversely, when central banks opt to lower interest rates as a means to stimulate the economy, the dynamics shift in the opposite direction. The decision to decrease interest rates results in reduced yields on investments making them less attractive to investors. Consequently, due to the decreased appeal of these assets and to the reduction of foreign investments, a potential decline in the value of the home currency may happen, with a consequent raise of the exchange rate. Therefore, when central banks adjust interest rates discouraging or encouraging foreign investments by lowering or increasing returns, they are indirectly affecting the exchange rates by causing a depreciation or appreciation of the domestic currency.

Other methodology through which central banks have an impact on the exchange rates are the open market operations (OMO). Through open market operations, central banks seek to manage the money supply and influence money market rates. These operations can be either expansionary or contractionary. In an expansionary OMO, by purchasing government securities from banks and financial institutions, such as bonds or Treasury bills, central banks inject bank reserves into the economy. The rise in the money supply brought on by this injection of reserves exerts downward pressure on the interest rate. As previously explained, when interest rates fall, the domestic return on assets is impacted, resulting in a fall and foreign investors decide to invest their capital on assets with higher yields, reducing foreign investments. This change in the domestic interest rate triggers a new equilibrium in the foreign exchange market, resulting in the depreciation of the home currency and an increase in the exchange rate, as it is possible to observe in the representation below.



Source: Feenstra, R., Taylor A. (2021). International economics. Macmillan Publishers.

On the other hand, in a contractionary OMO, central banks withdraw bank reserves from the money market by selling government securities to banks and financial institutions in return for liquidity. This operation reduces the money supply, leading to higher interest rates which make domestic assets more attractive for foreign investors that want to invest their capital in assets that give them higher returns. The effects are a raise in the foreign investments and an upward pressure on the domestic currency since want to convert their foreign currency in the domestic one with the goal of achieving these higher yields. The appreciation of the domestic currency lead to a reduction of the exchange rate.

In detail, central banks can directly intervene in the foreign exchange market through the currency intervention. "*Foreign exchange market intervention is any transaction or announcement by an official agent of a government that is intended to influence the value of an exchange rate*"[152]. In most of the countries, intervention operations are normally carried out by the monetary authority, which is frequently the central bank. However, in some cases, the treasury department or the finance minister may also have the authority to decide whether or not to interfere. Depending on the unique institutional framework and rules in existence, this responsibility split may differ from nation to nation[153]. These forex interventions consist of purchasing or selling domestic currency to influence its value to stabilize possible critical fluctuations of the exchange rate which may create uncertainty for investors and activities. These foreign market operations conducted by central banks can be distinguished in "sterilized intervention operations" and "non-sterilized intervention operations". Starting from the latter ones, "*It is generally accepted among economists that non-sterilized interventions affect exchange rates in the same way as domestic open-market operations*"[154], with foreign assets that are bought or sold and with no immediate offsetting transactions in the domestic money market. Non-sterilized interventions alter the supply of domestic base money, consequently affecting monetary aggregates and interest rates. "Sterilized interventions", instead, involve an offsetting domestic asset transaction, such as an open-market purchase or sale of domestic government securities or by granting more or less credit to the commercial banks, that restores the original size of the monetary base[155]. In other words, through sterilized operations central bank impact solely on the currency composition of domestic and foreign assets of the private sector portfolio investments, leaving untouched the money supply. Through this methodology, central banks can affect exchange rates to boost export competitiveness or deal with upsetting currency swings while maintaining a stable money supply and interest rates, avoiding conflicts between monetary policy

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[152] Dominguez, Kathryn M. *Central bank intervention and exchange rate volatility.* Journal of International Money and Finance 17.1 (1998): 161-190, pag. 163.

[153] Ivi, pag. 164.

[154] Aguilar, J., & Nydahl, S. (2000). *Central bank intervention and exchange rates: the case of Sweden*. Journal of International Financial Markets, Institutions and Money, 10(3-4), 303-322, pag. 305

[155] Ibidem.

goals and exchange rate policies. Sterilized intervention may also affect exchange rate by changing market expectations, which is an additional way through which central banks may affect exchange rates. This way is called the signalling or expectations channel and it happens when asymmetric information between market participants and central bank exists. In that case, central banks use intervention operation "*as a means of conveying (or signalling), to the market, inside information, information known to central banks but not the market, about future fundamentals*"[156]. Information that could be about fundamentals of the exchange rate or of the future development of inflation that central banks only have since they have access to kinds of data that usually are not accessible to the public and that can use to communicate their future monetary policy intentions to the market. For example, by purchasing local currency on the foreign exchange market, a central bank can signal its desire to follow a more restrictive monetary policy. Market players will likely see tighter monetary policy in the future as a result of this step. These individuals might then adjust their expectations about future exchange rates in response. Therefore, even though the immediate effects of the intervention on the monetary base are mitigated and actual fundamentals do not change, expectations of future fundamentals will change. When the market changes its assessments of the future fundamentals, it also changes its assessments of the spot exchange rate for the future, which results in a change in the current exchange rate, which is expected to increase[157].

Together with this monetary policy conventional tools, central banks can also use unconventional ones such as the known Quantitative Easing (QE). Through Quantitative Easing, central banks aim is to stimulate the economy in a scenario in which standard monetary policy tools, like adjustments of interest rates, do not have effect anymore. In detail, the Quantitative Easing consists of purchasing a range of assets, like government bonds, corporate bonds, asset-backed securities and covered bonds from the market, injecting new money in the financial system and increasing the price of these assets. In turn, a range of long-term interest rate fall, with people and businesses that manage to borrow more money at a lower cost. As a result, people are able to spend more and businesses to invest more, boosting consumptions, investments and, consequently, economic growth. This scenario puts an upward pressure on prices, with inflation that increases, with central banks that can hit the inflation target that their monetary policy set. In terms of exchange rates, lower interest rates can make domestic assets less attractive to investors, leading to a decrease in demand for the domestic currency. At the same time, investors may look for other assets with higher returns that could lead them to sell

[156] Dominguez, Kathryn M. *Central bank intervention and exchange rate volatility*. Journal of International Money and Finance 17.1 (1998): 161-190, pag. 165.

[157] Aguilar, J., & Nydahl, S. (2000). *Central bank intervention and exchange rates: the case of Sweden*. Journal of International Financial Markets, Institutions and Money, 10(3-4), 303-322, pag. 306.

the domestic currency and buy a foreign one, causing and additional depreciation of the currency, impacting on the exchange rates.

3.3 THE EFFECTS OF EXCHANGE RATES ON THE REAL ECONOMY: INFLATION, TRADES AND LIVING STANDARDS

Exchange rates are essentials to understand how a country's economy operates and policymakers, central banks, financial institutions must take in consideration this element to ensure economic and financial stability. Exchange rates and their fluctuations have a considerable impact on several components of the real economy, such as inflation, trade dynamics, and living standards. Starting from the first one, inflation is a broad increase in the prices of goods and services, reducing the purchasing power of individuals and representing high costs for businesses. The relationship between exchange rates and prices is expressed by two theories, which are linked: the Law of One Price (LOOP) and the Purchasing Power Parity (PPP). Starting from the first one, the microeconomic Law of One Price states that a pair of identical goods, when expressed in the same currency, must have the same price even if they are sold in two different locations. For the case of any good g sold in two locations, the law of one price is represented by the following equation:

$$\underbrace{q^{g}_{US/EUR}}_{\substack{\text{Relative price of good g}\\ \text{in Europe versus U.S.}}} = \underbrace{\left(E_{\$/€}\, P^{g}_{EUR}\right)}_{\substack{\text{European price}\\ \text{of good g in \$}}} \; / \; \underbrace{P^{g}_{US}}_{\substack{\text{U.S. price}\\ \text{of good g in \$}}}$$

Source: Feenstra, R., Taylor A. (2021). International economics. Macmillan Publishers.

This theory, based on an idealized world of frictionless trade where transaction costs can be neglected, with free competition and no arbitrage, holds if and only if the above equation is equal to 1. Therefore, is possible to rearrange the equation multiplying both sides by P^{g}_{US} and obtaining a new equation which explains what the law of one price state: the price of good g in USA is equal to the relative price of g in Europe expressed in dollars.

$$E_{\$/€}\, P^{g}_{EUR} = P^{g}_{US}$$

Source: Feenstra, R., Taylor A. (2021). International economics. Macmillan Publishers.

Dividing both sides of the equation by the price of g in Europe, the result is the formula of the nominal exchange rate which must be equal to the ratio of the prices of good g expressed both in $ and €.

$$\underbrace{E_{\$/€}}_{\text{Exchange rate}} = \underbrace{P^{g}_{US} / P^{g}_{EUR}}_{\text{Ratio of goods' prices}}$$

Source: Feenstra, R., Taylor A. (2021). International economics. Macmillan Publishers.

In this way is possible to understand how exchange rates are linked in the long-run to prices in the real economy, as stated by the theory of the purchasing power. Moving from the single good to a basket of goods, the second theory takes the name of Purchasing Powe Parity (PPP) which is the macroeconomic concept of the microeconomic law of one price. The PPP states that the power of purchasing a basket of good should be equal to the same basket of goods in two different locations, if expressed in the same currency.

$$\underbrace{q_{US/EUR}}_{\substack{\text{Relative price}\\ \text{of basket}\\ \text{in Europe}\\ \text{versus U.S.}}} = \underbrace{(E_{\$/€}\, P_{EUR})}_{\substack{\text{European price}\\ \text{of basket}\\ \text{expressed}\\ \text{in \$}}} / \underbrace{P_{US}}_{\substack{\text{U.S. price}\\ \text{of basket}\\ \text{expressed}\\ \text{in \$}}}$$

Source: Feenstra, R., Taylor A. (2021). International economics. Macmillan Publishers.

Also for this theory, the assumption is that the world considered is an idealized one with no arbitrage, so PPP holds when the equation is equal to 1 and is called absolute PPP. Rearranging the equation, dividing by P_{EUR} and multiplying by P_{US}, the result is the following equation

$$\underbrace{E_{\$/€}}_{\text{Exchange rate}} = \underbrace{P_{US} / P_{EUR}}_{\text{Ratio of price levels}}$$

Source: Feenstra, R., Taylor A. (2021). International economics. Macmillan Publishers.

The purchasing power parity implies that the exchange rate at which two currencies trade equals the relative price levels of the two countries, meaning that goods should cost the same when converted between the two currencies.

Taking into consideration the implication of inflation, is possible to shift from the absolute PPP to a new concept, which is the relative PPP. Relative PPP takes into account inflation, so the changes in price levels over time. Considering the ratio of change of both the exchange rate (left side of the equation) and price levels (right side of the equation), and combining them, the previous equation becomes as illustrated below

$$\frac{\Delta E_{\$/€,t}}{E_{\$/€,t}} = \underbrace{\frac{E_{\$/€,t+1} - E_{\$/€,t}}{E_{\$/€,t}}}_{\substack{\text{Rate of depreciation} \\ \text{of the nominal exchange rate}}}$$

$$\frac{\Delta(P_{US}/P_{EUR})}{(P_{US}/P_{EUR})} = \frac{\Delta P_{US,t}}{P_{US,t}} - \frac{\Delta P_{EUR,t}}{P_{EUR,t}}$$

$$= \underbrace{\left(\frac{P_{US,t+1} - P_{US,t}}{P_{US,t}}\right)}_{\substack{\text{Rate of inflation in U.S.} \\ \pi_{US,t}}} - \underbrace{\left(\frac{P_{EUR,t+1} - P_{EUR,t}}{P_{EUR,t}}\right)}_{\substack{\text{Rate of inflation in Europe} \\ \pi_{EUR,t}}}$$

$$= \pi_{US,t} - \pi_{EUR,t}$$

$$\underbrace{\frac{\Delta E_{\$/€,t}}{E_{\$/€,t}}}_{\substack{\text{Rate of depreciation} \\ \text{of the nominal exchange rate}}} = \underbrace{\pi_{US,t} - \pi_{EUR,t}}_{\text{Inflation differential}}$$

Source: Feenstra, R., Taylor A. (2021). International economics. Macmillan Publishers.

This way of expressing the PPP theory is called relative PPP and states that the rate of depreciation of the nominal exchange rate equals the difference between the inflation rates of two countries. The relative PPP hold in the long run, not in the short, and when it holds is a precious mechanism that explains how to forecast exchange rates and understand their fluctuations. However, not always PPP holds because there can be many factors that lead to persistent deviations from PPP, such as transaction costs, price stickiness, non-traded goods and market speculations. Therefore, exchange rates and inflation are factors that are strictly interconnected in the real economy: changes of one affect the other one. In a country that is experiencing higher inflation, goods and services become more expensive leading to a decrease of export volumes since foreign buyers must spend more amount of money to purchase domestic goods. Conversely, import volumes increases with the demand of home currency that decreases, causing a depreciation of the domestic currency. Moreover, the depreciation of the currency lead to an increase of import costs that can put and additional upward pressure to the inflation in the domestic economy, with businesses that may increase prices to reflect these additional costs to customers, eroding the purchasing power of the domestic consumers. The solution to this negative spiral is given by the raise of interest rates from central banks, that lead to a currency appreciation, as referred previously.

In conclusion, the ultimate connection between exchange rates and inflation through interest rates is explained by the concept of the Fisher effect. This important economic theory provides that a raise in the money supply will lead to an equal increase in the rate of inflation. Based on the Fisher effect, this increase in the expected future inflation will, in turn, lead to an increase of the nominal interest

rates since investors, expecting a higher inflation in the future, will require higher return on their future investments. This effect, consisting in the rise of the expected inflation rate which lead to an equal raise in nominal interest rates, is the Fisher effect.
Therefore, is immediately understandable that exchange rates affect important aspects of the real economy and, at the same time, is affected by the same elements. In particular, exchange rates can have a significant impact on living standards within a country. As seen before, they play crucial role in determining and affecting the purchasing power of the currency, an in turn, of individuals. A currency that appreciates is stronger in comparison to another one, meaning that individuals can buy more foreign goods or services with the same amount of the domestic currency, increasing their purchasing power and their living standards. Conversely, when a domestic currency depreciates it reduces the purchasing power of domestic consumers, with imported goods and services that become more expensive since it takes a higher amount of the weaker domestic currency to purchase the same amount of the foreign one, potentially leading to a reduction of the living standards. Fluctuations of exchange rates impacting also on inflationary pressures and on the prices of imported goods and services can influence not only the purchasing power of individuals, but also their real income. Indeed, a raise in the consumer prices for imported goods due to a depreciation of the domestic currency, may worsen living standards if the inflationary upward pressure is not followed by an economic and wage growth.
Thus, the complex interactions between inflation, interest rates, and exchange rates, emphasizes the significant impact that exchange rates have on key aspects of the real economy, such as people's purchasing power, living standards, and overall economic well-being. These dynamics show how exchange rates not only influence economic factors but also exert major influence on the economy.

3.4 THE BREXIT CASE

After this excursus regarding exchange rates, their fundamentals, and their implications for the economy, the final section of the work will delve into the impact of Brexit on the British pound exchange rate and the resulting effects on several key macroeconomic factors. As analyzed in the previous chapters, is possible to distinguish long and short-term impact of the Brexit referendum. In the second chapter the focus has been on the long-term effects through three transmission channels: trade, investments, and migration. This last part, instead, will be characterized by the analysis of one of the short-term developments that followed the Brexit vote: the depreciation of the pound and its effects on inflation, real wages and living standards. Is important to underline the fact that UK notified the intention to depart from the European Union only on 2017 and Brexit took place in January 2020, with the first real changes in UK's economic relationship with EU that occurred at the beginning of 2021 with the implementation of the Trade and Cooperation Agreement. Therefore, all the consequences that happened in the immediate aftermath of UK's decision to leave the European Union, were characterized by a mix of uncertainty and volatility about the United Kingdom's economic future. In particular, the uncertainty was about the future of U.K. economic policy and its trade agreements, as well as its future openness to trade and immigration with the EU[158]. Together with the sterling depreciation and the consequent impact on the inflationary pressure in the UK, another important short-term effect has been the financial market volatility. Indeed, the day after the Brexit referendum, 24 June 2016, is also known as the "Black Friday" for stock markets since investors reacted immediately by selling of stocks and seeking safer assets as a response to the uncertainty brought by the decision to leave the European community. In detail, when the FTSE 100, which is the stock index of the 100 largest companies listed in the London Stock Exchange, opened at 8am, "it duly experienced one of its biggest opening slumps since the financial crisis, with shares plummeting instantly by 8% and wiping more than £120bn off the value of blue-chip London-listed shares"[159]. At the end of the day, FTSE 100 closed losing 3,15%. The Japanese Nikkei 225 benchmark index closed down 7,92% during Asian trading, while Germany's DAX index and France's CAC 40 lost respectively around 8% and 10% per cent[160]. A very hard and volatile day in the financial markets. In addition, another fundamental short-term effect has been the business uncertainty. Indeed, in spite of the fact that businesses were aware they would remain in the European single market until the UK and EU reached a settlement, some companies, in particular the ones that were strictly linked to EU, made some short-term adjustments. The reason was to re-organize and prepare their businesses to the future new policies and trade arrangements. Moreover, the long and complex negotiations between EU and UK to find a deal did not help the situation and raised even more the uncertainty among businesses, affecting their trades. However, the focus in this section would be solely on the first effect, the sterling depreciation, and its implications on the British economy.

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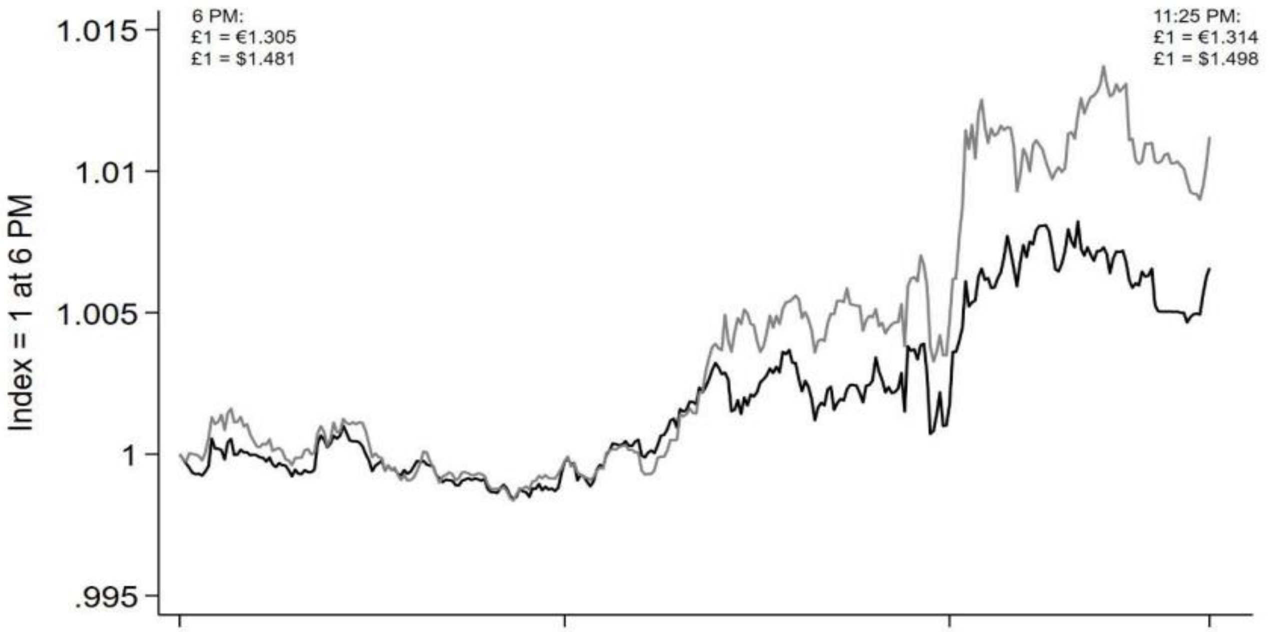
[158] Breinlich, H., Leromain, E., Novy, D., & Sampson, T. (2022). *The Brexit vote, inflation and UK living standards.* International Economic Review, 63(1), 63-93, pag. 66.

[159] Chu, B. (2018, 25 October). *Brexit: 'Black Friday' for financial markets sparked by EU referendum vote*. The Independent. Full text available at: https://www.independent.co.uk/news/business/news/brexit-black-friday-financial-markets-eu-referendum-vote-recession-a7101896.html

[160] Sheffield, H. (2016, 24 June). *FTSE 100 sees £120bn wiped off its value in worst day of losses since financial crisis*. The Independent. Full text available at: https://www.independent.co.uk/news/business/news/ftse-100-eu-referendum-brexit-sterling-pound-bank-housebuilders-a7099951.html

3.4.1 ANALYSIS OF THE STERLING EXCHANGE RATE TREND AFTER THE REFERENDUM

The British pound exchange rate against the major currencies, in particular the British pound per US dollar and the British pound per euro ones, experienced dramatic and extremely volatile movements immediately before and after the Brexit referendum, reflecting the significant uncertainty and volatility that the vote caused in the markets. Indeed, right before the close of the polling stations across the country at 10pm on June 23, most polls and bookmakers had projected that the Remain campaign would have prevailed against the Leave one. In particular, "*betting markets implied around an 85% probability that the United Kingdom would choose to remain in the EU"*[161]. The exchange rate movements then confirmed this expectation. As depicted in the following graph, where are represented the pound/US dollar and the pound/euro exchange rates minute per minute until the close of the polling stations, is possible to see that sterling surged against both the US dollar and euro, rising respectively to very nearly 1,5 dollars and 1,314 Euro[162].

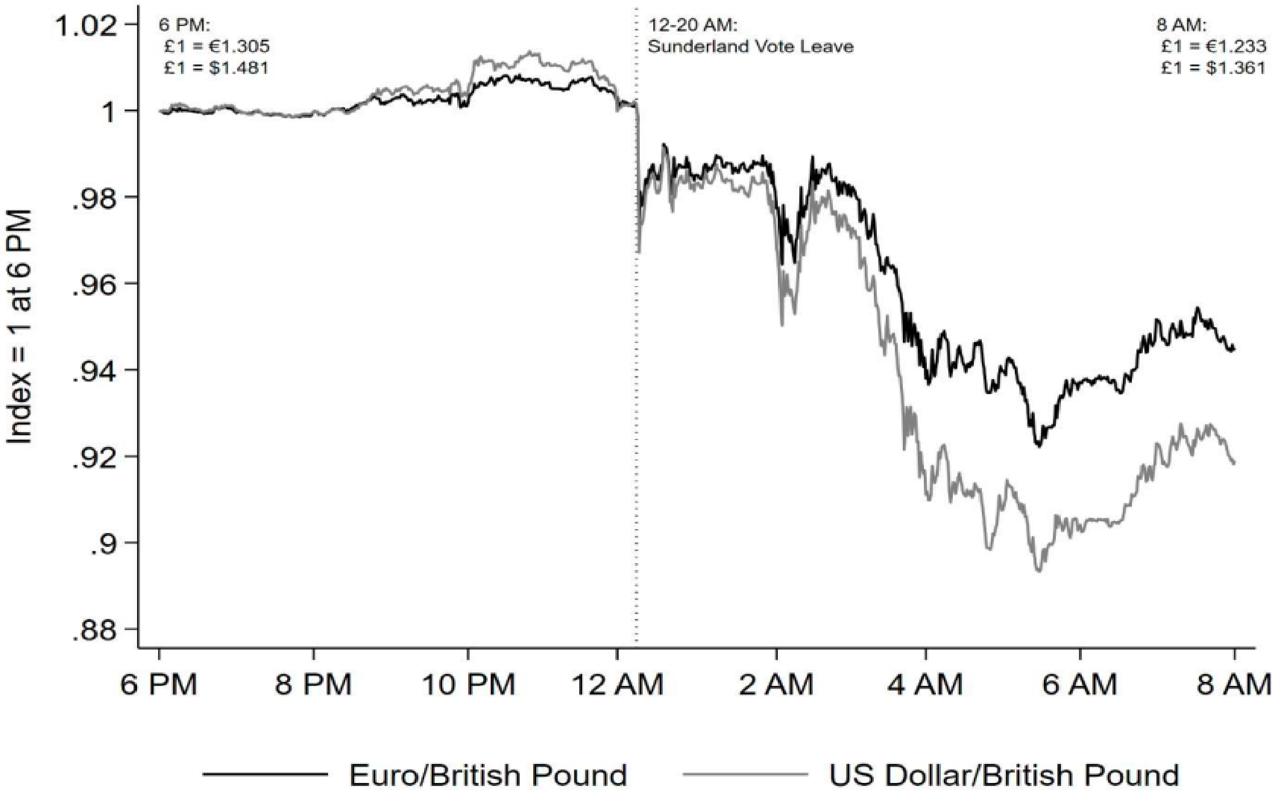


Source: Vieira Marques Da Costa, R., Dhingra, S., & Machin, S. (2022). New dawn fades: trade, labour and the Brexit exchange rate depreciation, pag. 39.

As soon as the first results came out, such as in Sunderland where the Leave campaign won with an important margin of 61% compared to 39%, the scenario completely changed. The optimism of a Remain victory at the end of the vote turned into uncertainty and fear when it started to become clear

[161] Breinlich, H., Leromain, E., Novy, D., & Sampson, T. (2022). *The Brexit vote, inflation and UK living standards*. International Economic Review, 63(1), 63-93, pag. 66.
[162] Vieira Marques Da Costa, R., Dhingra, S., & Machin, S. (2022). *New dawn fades: trade, labour and the Brexit exchange rate depreciation*, pagg. 6-7.

that the Leave campaign was having the necessary support and numbers to win the vote. This new situation created a sentiment of panic in the markets. The first consequence was the sterling pound, which plummeted significantly on the night of June 23-24. By 8am on June 24, the British currency depreciated from its high of the previous night of nearly 1,50 dollars to 1,36 dollars. Against the Euro, instead, the drop was lower passing from 1,314 to 1,23 Euros.



Source: Vieira Marques Da Costa, R., Dhingra, S., & Machin, S. (2022). New dawn fades: trade, labour and the Brexit exchange rate depreciation, pag. 40.

On the next day, when the result became official with the victory of the Leave campaign, the depreciation of the sterling became persistent. In one trading day, the pound lost around 8% against dollar, closing at 1,33$. "*This sterling's slump since Britain voted to leave the European Union is the biggest drop of any of the world's four major currencies that make up the bulk of global hard cash reserves since the collapse of Bretton Woods"*[163]. In detail, in a matter of hours, the pound's exchange rate to the dollar went back 31 years: it had been since 1985 that the dollar/sterling exchange rate had not reached 1.33$ and it is considered the largest one-day fall since the era of free-floating exchange rates was introduced, more than the one occurred during the known "Black Wednesday" in 1992, due to the UK's exit from the European exchange rate mechanism. In the meantime, the panic and uncertainty created by the Brexit event, pushed investors to demand for safer assets such as gold,

[163] McGeever, J. (2018, 7 July). *Sterling's post-Brexit fall is biggest loss in a hard currency.* Reuters. Full text available at: https://www.reuters.com/article/us-britain-markets-sterling-idUKKCN0ZN1R0.

which soared as much as 7%[164]. Against the Euro, as stated before, the drop was less significant but still a notable one. At the end of the trading day following the vote, the pound depreciated by 5,8% against the euro, with the euro/sterling exchange rate that arrived around 1,20€. In the table below are represented the different variation against 26 currencies occurred during the Brexit referendum: sterling depreciated relatively less against the euro, the Norwegian Krone and Swedish Krona since the European currency are more linked to the consequences of this event, While the depreciation against currencies like the US dollar or the Japanese Yen has been more marked.

Country	Currency	Depreciation (Percent)
Japan	Japanese Yen	11.1
United States	US Dollar	8.0
Saudi Arabia	Saudi Riyal	8.0
Hong Kong	Hong Kong Dollar	7.9
Thailand	Thai Baht	7.6
China	Chinese Yuan	7.5
Singapore	Singapore Dollar	7.4
Taiwan	Taiwan Dollar	7.2
Russia	Russian Ruble	7.2
India	Indian Rupee	7.1
New Zealand	New Zealand Dollar	7.1
Australia	Australian Dollar	6.9
Canada	Canadian Dollar	6.9
Israel	New Israeli Sheqel	6.8
Switzerland	Swiss Franc	6.6
Turkey	Turkish Lira	6.5
Malaysia	Malaysian Ringgit	6.3
Denmark	Danish Krone	6.1
Euro Zone	Euro	6.0
Czech Republic	Czech Koruna	5.9
South Korea	Korean Won	5.7
South Africa	South African Rand	5.3
Hungary	Hungarian Forint	5.2
Norway	Norwegian Krone	5.2
Sweden	Swedish Krona	5.1
Poland	Polish Zloty	4.3

Source: Vieira Marques Da Costa, R., Dhingra, S., & Machin, S. (2022). New dawn fades: trade, labour and the Brexit exchange rate depreciation, pag. 49.

[164] Allen, K., Treanor J., Goodley S. (2016, 24 June). *Pound slumps to 31-year low following Brexit vote*. The Guardian. Full text available at: https://www.theguardian.com/business/2016/jun/23/british-pound-given-boost-by-projected-remain-win-in-eu-referendum

Exchange rates are forward-looking and capable of quickly repricing, anticipating the longer-term effects of Brexit on the UK economy, since they are an asset price determined by liquid financial markets. In line with that, financial markets proceeded to analyze the news from the Brexit shock, resulting in sterling stabilizing at a level that was more than 12% below where it had been before the referendum. This reflects the high uncertainty of investors which preferred to sell the British pound and move their investments on safer assets, depreciating even more the sterling value[165].

3.4.2 BANK OF ENGLAND MONETARY POLICY INTERVENTION

Bank of England (BoE), together with the European Central Bank (ECB), the US Federal Reserve (Fed), Bank of Japan (BoJ), is one of the most important central banks worldwide. As described in the first part of this third chapter, central banks in order to achieve their goals and objective can intervene directly or indirectly in the market by adjusting certain macroeconomic factors. This includes managing the money supply or increasing/decreasing interest rates to reach economic goals that can be price stability, economic growth and financial stability. In particular, to ensure the stability of the financial system, in certain condition central banks frequently offer liquidity support to help stabilize financial markets. Each central banks have different goals and objective and different can also be the tools that they use. Focusing on the Bank of England, "*the mission is to promote the good of the people of the United Kingdom by maintaining monetary and financial stability*"[166]. In detail, Bank of England monetary policy objective aimed to reach monetary stability is to maintain price stability in the UK. Price stability is defined by the inflation target, set by the Government, which consists of keeping inflation at 2%. All the actions that are finalized to reach this 2% target are decided by the Monetary Policy Committee, which is a nine-members decision making body within the Bank of England responsible for determining UK's monetary policy. These actions to achieve the monetary policy goals consists of adjusting interest rates or purchasing assets through the unconventional monetary policy tool known as Quantitative Easing. The secondary goal of the Bank of England is to maintain and support the stability of the financial system[167].

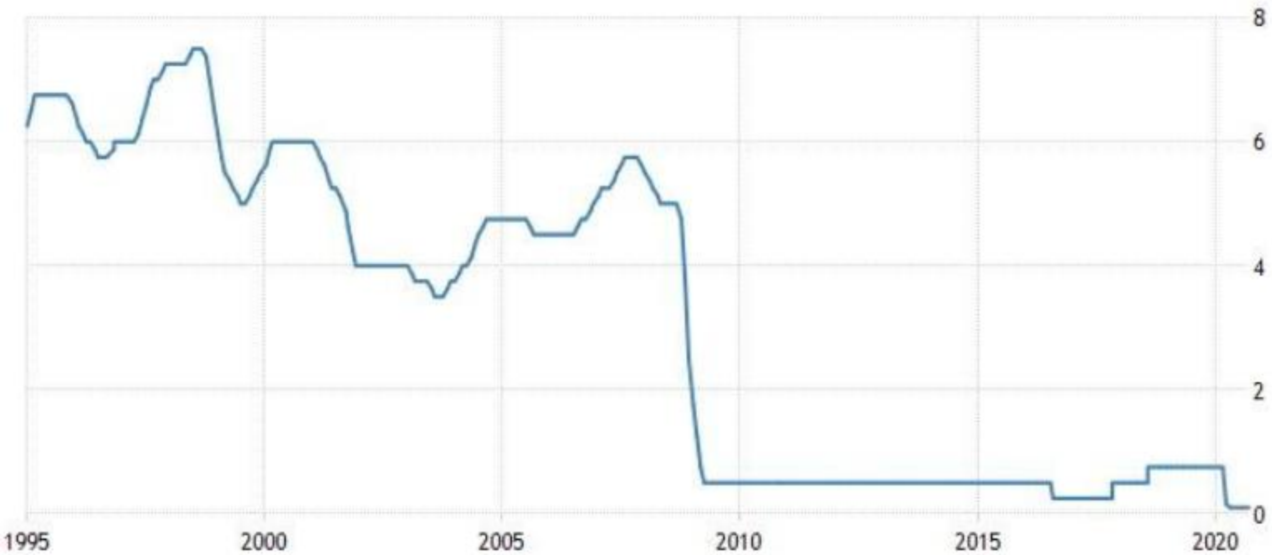
Regarding the response to the unexpected decision to leave the European Union and all the consequences that followed, which are going to be analyzed in the last section of the work, the Bank

[165] Dhingra, S., Fry, E., Hale, S., & Jia, N. (2022). *The Big Brexit: An assessment of the scale of change to come from Brexit.*

[166] Bank of England - *Bank of England Market Operations Guide: Our objectives*. Full text available at: https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide/our-objectives#:~:text=Our%20mission%20is%20to%20promote,maintaining%20monetary%20and%20financial%20stability.

[167] Ibidem.

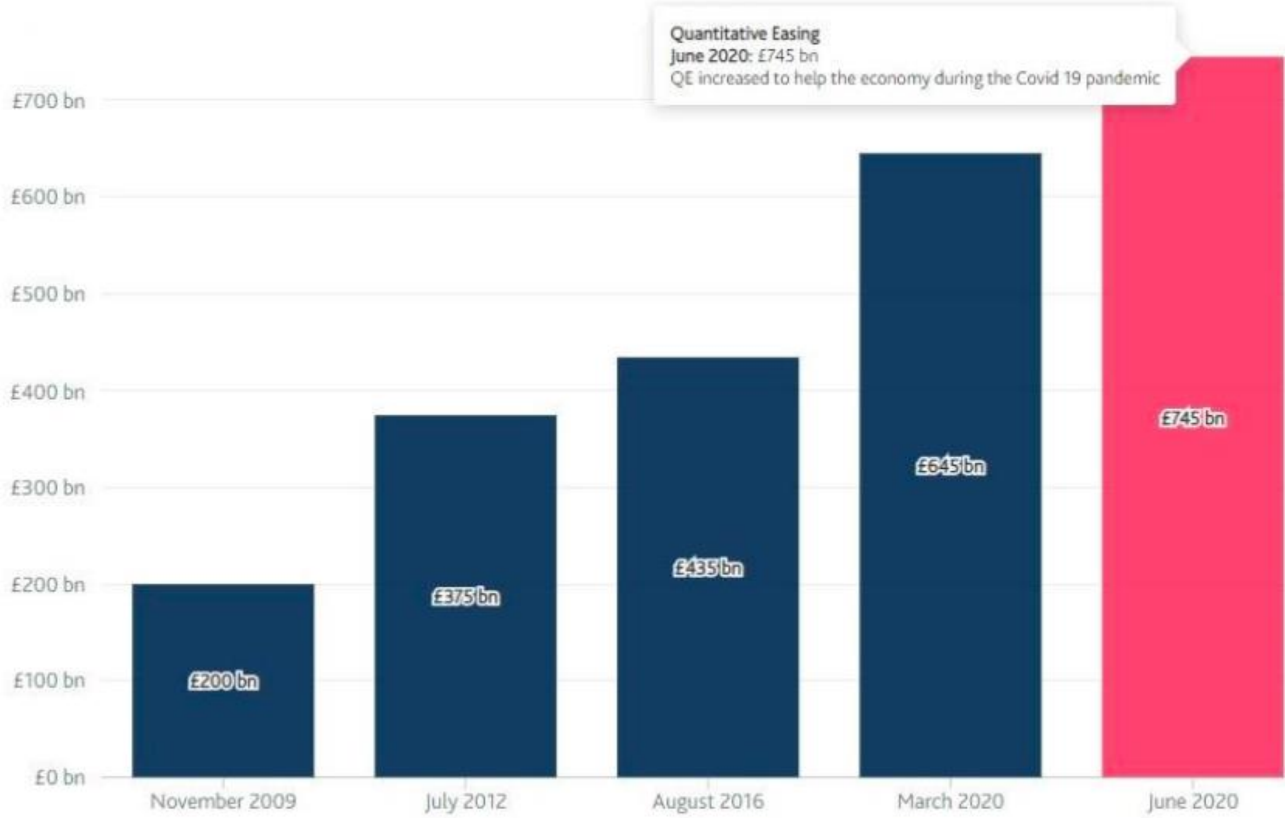
of England decided to act differently compared to the way during the global financial crisis of 2008 and 2009. Indeed, during the great recession, the Bank of England reacted slowly to the events, and wanted to avoid repeating similar actions during the aftermath of the Brexit decision[168]. As soon as the result of the referendum became clear the Governor of the Bank of England, Mark Carney, tried to calm the markets and declared that the Bank was ready to take extraordinary measures if necessary. Indeed, at the end of a meeting held on 3 August 2016, the Bank of England's Monetary Policy Committee "*voted unanimously for a package of measures designed to provide additional support to growth and to achieve a sustainable return of inflation to the 2% target*"[169]. This package consists of different decisions and monetary policy interventions aimed to support the UK economy. The first intervention regarded the adjustment of the key interest rate, called Bank rate. The decision was the reduction of the Bank rate by 25 basis point, moving from 0,5% to 0,25%. This represented the first reduction of the main interest rate after seven years, when in 2009, during the great recession, the Bank of England decided to decrease the key interest rate to 0,5%. However, this decision was not maintained for a long time since at the end of 2017 the BoE increased the rate again to 0,5% and even to 0,75% in August 2018, as represented in the graph below[170]. Right now, the main interest rate stands at 5%, with the Bank of England that is on its 13th consecutive rate hike.



Source: Kolev, Svilen. (2021). BREXIT and COVID-19 challenges: the Bank of England's monetary policy response, 271-278, pag. 273.

[168] Elliot, L. (2016, 4 Aug). *This is the Bank of England's all-action response to Brexit*. The Guardian. Full text available at: https://www.theguardian.com/business/2016/aug/04/bank-of-england-all-action-response-brexit-qe-interest-rate-cut
[169] Bank of England (2016). *Monetary Policy Summary and minutes of the Monetary Policy Committee meeting ending on 3 August 2016*. Full text available at: https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-summary-and-minutes/2016/august-2016.pdf.
[170] Kolev, Svilen. (2021). *BREXIT and COVID-19 challenges: the Bank of England's monetary policy response*, 271-278, pag. 272.

The adjustment of interest rates is considered the most important conventional monetary tool that central banks use to reach their monetary policy goals. The second intervention planned in the package regarded the most known unconventional monetary policy tool that central banks can use to achieve their goals: the Quantitative Easing. The Bank of England Asset Purchase Facility (APF) program, which is a Quantitative Easing program constating of the purchase of UK government bonds through central bank reserves, was launched in 2009. The initial volume was around £75 billion, reaching in 2012 the value of £375 billion. TO face the Brexit decision, the Bank of England "*extended the term and volume of the QE program by purchasing an additional £60 billion of government bonds, raising the target volume to £435 billion, and £10 billion in corporate bonds over an initial period of 18 months*"[171]. With the spread of COVID-19, the English central bank increased the volume of the Quantitative Easing program by additional £300 billion, reaching a total of £754 billion, as represented in the graph below.



Source: Kolev, Svilen. (2021). BREXIT and COVID-19 challenges: the Bank of England's monetary policy response, 271-278, pag. 274.

The reason why Quantitative Easing programs are used by central banks in particular and complex scenarios is that they "*reduce the cost of financing for companies and households and stimulate the*

[171] Ivi, pag. 273.

growth of asset prices in order to support the economy and return the inflation to the targeted level"[172].

In conclusion, the third intervention that characterized this particular package of stimulus for the Uk economy is the introduction of the Term Funding Scheme, financed by the issuance of central bank reserves, that would reinforce the transmission of the cut in Bank Rate. The problem in this case is that low interest rates are, on one hand, optimal for households and firms since reduces their borrowing costs, However, on the other hand, with interest rates near to zero some banks and building societies could find difficult to reduce deposit rates, limiting their ability to cut their lending rates. Therefore, the solution opted by the Monetary Policy Committee has been the introduction of these Term Funding Scheme which provide banks and building societies long-term funding at interest rates that are similar to the Bank rate. In this way, the Bank of England wants to ensure that businesses and firms can benefit from the Monetary Policy Committee decisions aimed to face the negative impact and consequences of the Brexit referendum and a depreciated currency on the UK economy and living standards[173].

3.4.3 BREXIT INFLUENCE ON UK INFLATION AND LIVING STANDARD: WAS IT POSSIBLE TO PREDICT THESE EFFECTS?

As previously explained in the section on exchange rate fundamentals, the depreciation of a currency against another currency has multiple ramifications. To begin with, it signifies that the currency has become weaker in comparison to the other currency. This has several consequences. Firstly, for foreign consumers, goods and services produced in the country where the currency has depreciated become more affordable, as they require a smaller amount of their own currency to buy the same quantity of the weaker currency. This can potentially boost the country's exports. Conversely, a depreciated currency makes foreign goods and services more expensive for domestic consumers, reducing imports into the country. Additionally, a weaker currency can increase the costs of imports, which, in turn, may contribute to rising consumer prices, thereby increasing inflationary pressures within the economy. Alongside this inflationary trend, currency depreciation can result in a decrease in real wages. When combined with rising prices, this can lead to a decline in the overall living standards of the citizens. Therefore, a decrease in a currency's value, on one hand, "*can lead to*

[172] Ibidem.
[173] Bank of England (2016). *Monetary Policy Summary and minutes of the Monetary Policy Committee meeting ending on 3 August 2016.* Full text available at: https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-summary-and-minutes/2016/august-2016.pdf.

improvements in the balance of trade due to an increase in exports or decrease in imports"[174]. On the other hand, it can drive up consumer prices and, when coupled with reduced real wages, potentially lead to a deterioration in living standards. Taking in consideration the effects on UK economy of the Brexit referendum, the factors that need to be analyzed and underlined are many. First thing first, even if the sterling depreciation was expected to boost UK's exports, this scenario never happened. As it is possible to visualize in the graph below, where are represented the UK exports relative to the to the volume of world trade from 1964 to 2018 and six dots which represent the major sterling depreciation occurred, a downward trend has always characterized the UK's exports and after the 2016 depreciation, the situation didn't change. The reasons why are several: because of the UK's major involvement in global value chains, there is a good chance that these effects will be felt in the UK's consumer pricing, potentially resulting in modest gains in exports. A limited response in terms of additional exports may also be expected given the low inelastic demand for UK products. The United Kingdom is among the nations with a lower level of price elasticity of substitution for exports. Furthermore, it is also important to consider that the ambiguity surrounding trade policies might have further limited export reactions[175].

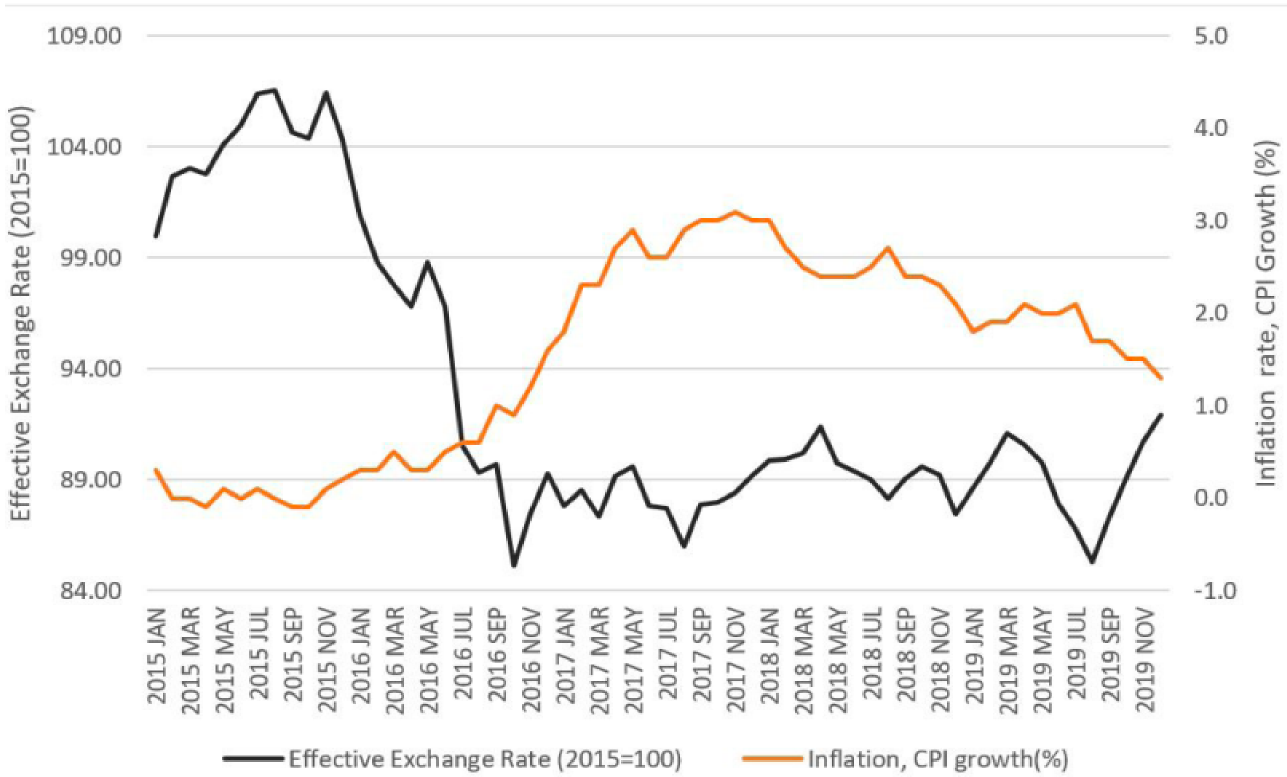
Source: Ayele, Y., & Winters, A. (2020). Should the Brexit sterling depreciation have boosted exports? How exchange rates affect trade and prices. UK Trade Policy Observatory Briefing Paper, 44, pag. 2.

[174] Nasir, M. A., & Simpson, J. (2018). *Brexit associated sharp depreciation and implications for UK's inflation and balance of payments.* Journal of Economic Studies, 45(2), 231-246, pag. 233.

[175] Ayele, Y., & Winters, A. (2020). S*hould the Brexit sterling depreciation have boosted exports? How exchange rates affect trade and prices.* UK Trade Policy Observatory Briefing Paper, 44, pag. 8-10.

Moreover, regarding the increase of prices due to the depreciation of the sterling, data revealed that after the referendum the groups of goods and services which have been highly affected by a weaker sterling are the ones with higher import share, in other words the percentage of a country's total consumption that consists of imported goods and services. For example, groups with higher import exposure are “Clothing and footwear”, “Food and non-alcoholic beverages”, “Transport” and “Furniture and household equipment”. On the other hand, import shares tend to be lower for services like “Education” and “Restaurant and Hotels”. In general, the import share of aggregate UK consumer expenditure is around 29%. This means that consumers and businesses saw prices for those type of products rise faster since they are more exposed to currency depreciation, increasing UK inflation[176]. Furthermore, the graph that is shown below provides important insights on how the decision to leave the European Union and the subsequent rise in prices are related to one another. The graph specifically shows a rapid, significant, and persistent depreciation of the British pound, as previously indicated, beginning in June 2016 after the referendum. Whilst, a year later, from 2017, is possible to notice a determinant increase in the annual rate of inflation, as determined by the Consumer Price Index (CPI). At the time of the vote, this rate was 0.5%; by November 2017, it had reached a peak of 3.1%[177].

THE REAL EFFECTIVE EXCHANGE RATE AND INFLATION



Source: Ayele, Y., & Winters, A. (2020). Should the Brexit sterling depreciation have boosted exports? How exchange rates affect trade and prices. UK Trade Policy Observatory Briefing Paper, 44, pag. 3.

[176] Breinlich, H., Leromain, E., Novy, D., & Sampson, T. (2020). *The Brexit vote and inflation – updated evidence*. Full text available at: https://cepr.org/voxeu/columns/brexit-vote-and-inflation-updated-evidence.

[177] Dhingra, S., Sampson, T. *Expecting Brexit* (2022). CESifo Working Paper No. 9541, pag. 14.

Another data which reinforces the correlation that exists between the Brexit decision and the inflationary pressure in the UK economy caused by the depreciation of the sterling is the comparison between the consumer prices in the Euro area and the consumer prices in UK between 2015 and 2018. In detail, the graph shows the aggregate CPI in both UK and European Union normalized to 100 at the time of the referendum in June 2016. What emerges is a that consumer prices in the UK diverged from those in the Euro area in the years following the vote. In detail, prices in the UK rose more rapidly than in the Eurozone, which may indicate that the depreciation of the pound sterling exacerbated UK inflation. Prices in the United Kingdom rose 1,9% faster between June 2016 and June 2018 than prices in the Eurozone[178]. An additional evidence that supports the idea that Brexit referendum, which caused the depreciation of the British pound and made imports more expensive, played a crucial role in increasing the inflationary impact on the UK economy, eroding the living standards and the purchasing power of British citizens.

BREINLICH ET AL.

Source: Breinlich, H., Leromain, E., Novy, D., & Sampson, T. (2022). The Brexit vote, inflation and UK living standards. International Economic Review, 63(1), 63-93, pag. 76.

[178] Breinlich, H., Leromain, E., Novy, D., & Sampson, T. (2022). *The Brexit vote, inflation and UK living standards.* International Economic Review, 63(1), 63-93, pag. 75.

Giving a real value to the impact of leaving the European Union, Breinlich et al (2022) in their work estimated the intensity of this decision. They considered a 10% depreciation of the sterling as a consequence of the unexpected result of the referendum and the previously cited 29% of the of aggregate UK consumer expenditure. Taking into consideration these two elements, they calculated the increased prices for a class of goods, in this case at the aggregate level, by multiplying them. The outcome is that sterling's fall caused by the Brexit decision lead to an increase of UK CPI, so an increase of price level, by around 2,9%. This increase of price level by 2,9% "*is equivalent to a £870 per year increase in the cost of living for the average household. In aggregate, this corresponds to £23.5 billion per year additional expenditure for the United Kingdom, or £450 million per week"*[179]. A significant impact which demonstrates, once again, the negative effect of the choice to leave the European Union. It is also a convincing illustration of how the currency value and exchange rates, through a variety of transmission channels, in this case including the price level and inflation ones, may represent a significant driver of economic results and living standards conditions.

In conclusion, evidence suggest that the depreciation of the sterling also caused the reduction of real wages. In particular, this fall was particularly consistent in the industries and sectors that are exposed to imports and faced larger cost shock. Recent analysis confirmed that "*workers employed in the most exposed sectors experienced 2,9% lower pay growth than the other sectors in the three years following the referendum, losing wages equivalent to £765 per year on average"*[180]. The graph below illustrates the dynamic between inflation and real wages, revealing that the increase in consumer prices resulting from the currency depreciation lasted for approximately one year. Meanwhile, wages, which turned negative for nearly a year, continued to exhibit slower growth in the affected sectors for an extended period of about three years following the referendum.

[179] Ivi, pag. 88.
[180] Dhingra, S., Fry, E., Hale, S., & Jia, N. (2022). *The Big Brexit: An assessment of the scale of change to come from Brexit*, pag. 20.

Source: Dhingra, S., Fry, E., Hale, S., & Jia, N. (2022). The Big Brexit: An assessment of the scale of change to come from Brexit, pag. 20.

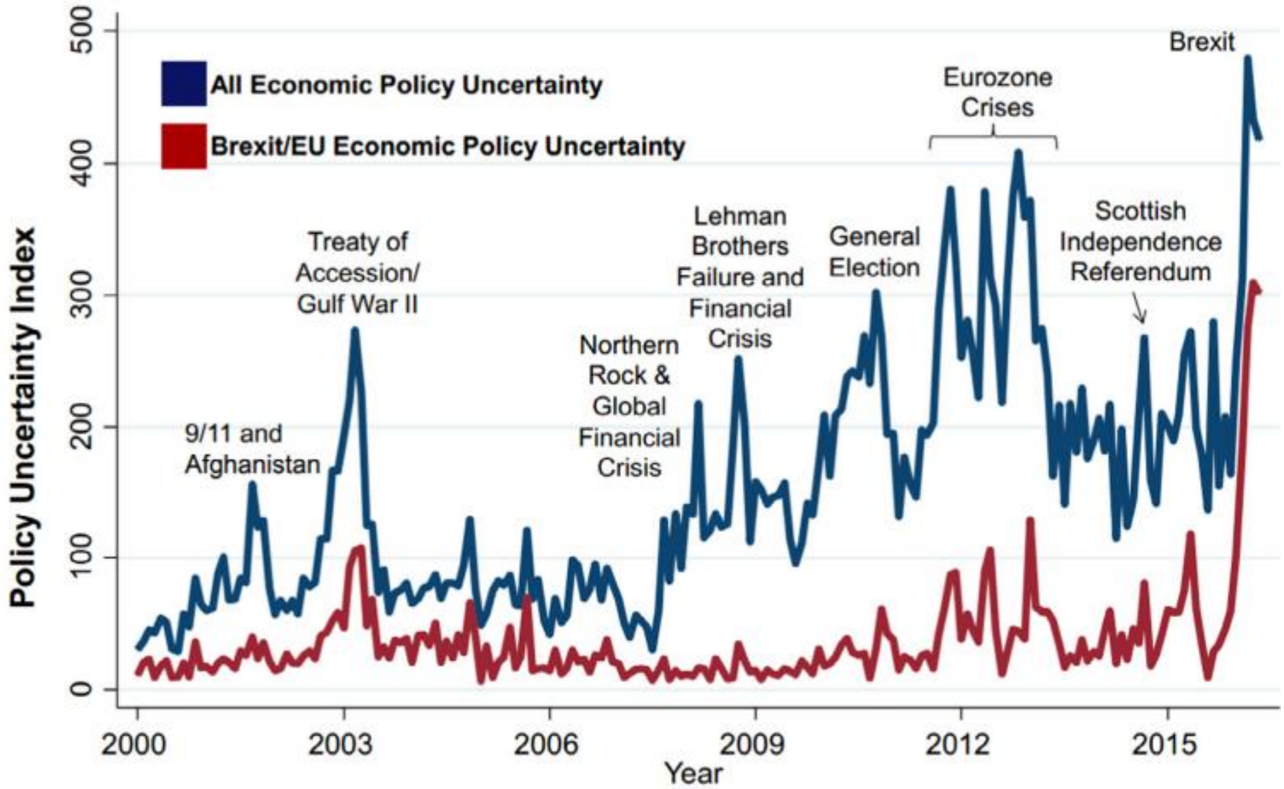
Hence, the rise in the price level coupled with the decline in real wages stands out as the most significant outcome of the depreciation of the British pound. Depreciation of the British currency that is one of the major consequences of the Brexit vote and, as analyzed right now, it has had a negative impact on the living standards of the British population and, in general, on the UK economy.

CONCLUSIONS

In conclusion, having made this excursus regarding the Brexit event, starting from the complicated relationship that has always existed between the UK and the EU and ending with the impacts that the referendum has had and will continue to have on the British economy, it is possible to express some noteworthy observations about it and answer to the central question of the thesis regarding the impact that the long and short-term effects have had on the British economy and on key macroeconomic variables.

Firstly, in my opinion, it cannot but be taken into consideration the special relationship that has always distinguished the relations between UK and EU. A relationship characterized by strong eurosceptic sentiments by the Great Britain, which has always viewed the European project in a uniquely pragmatic way, considering the European Community as a mean to increase its own prosperity, economic growth, and greatness instead of believing and feeling part of a political, social, and economic integration project, as the EU was considered when it was founded. An attitude, that of the United Kingdom, which has always been shaped, since the end of the Second World War, by various factors: nostalgia for the times in which it reigned supreme over the countries of the Commonwealth; the ambition to consolidate the privileged relationship it has always had with the United States of America; the pride of being the unique nation in Europe that emerged victorious from the Second World War. A mix of feelings marked by national pride and by an innate sense of superiority over all other European countries which have characterized the ideals, policies, and governing strategies of all the women and men who led the country, beyond political affiliation. Therefore, if today we have come to this situation where England outside of Europe is a significant economic and political topic, it is also, in part, due to this aspect related to the history and culture of this country that cannot be forgotten.

In addition, a second important factor that has characterized the Brexit event since the aftermath of the vote and has been a crucial aspect of the Brexit process is the uncertainty, which is a term and a concept that has been consistently present throughout the entire work. The uncertainty was one of the sentiments that the victory of the “Leave” campaign has immediately spread in the UK economy. This sentiment was further exacerbated due to the prolonged and complex negotiations required to establish the new trade arrangements between the UK and the EU that arrived at levels never reached in the previous two decades, as depicted in the graph below.



Source: Plakandaras, V., Gupta, R., & Wohar, M. E. (2017). The depreciation of the pound post-Brexit: Could it have been predicted?. Finance research letters, 21, 206-213.

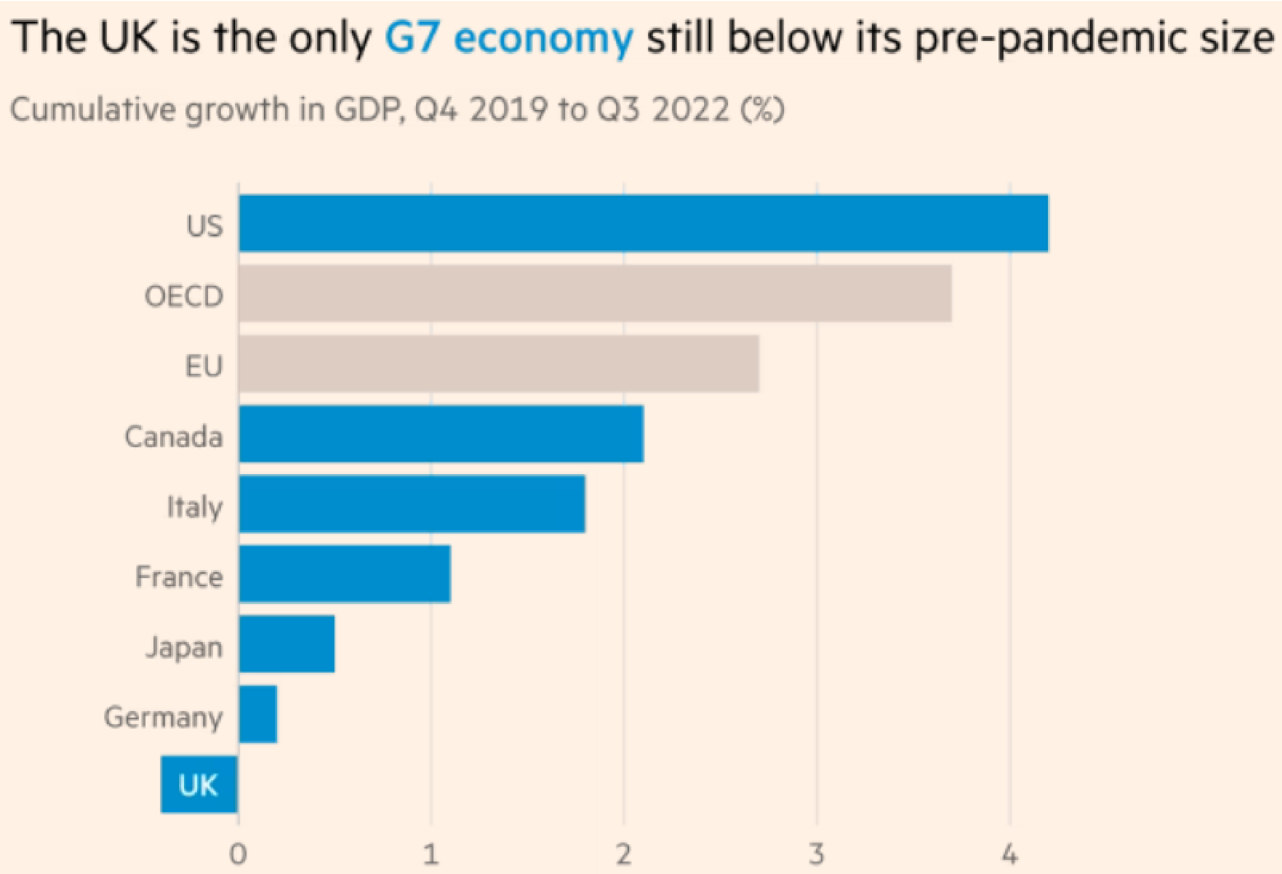
The uncertainty around the United Kingdom's decision to leave the European Union weighted, in particular, on business investment and, as stated in the Bank of England inflation report 2018, firms which ranked Brexit as one of their top three sources of uncertainty have reduced investment spending and the pace of growth of business investments have dampened and have fallen in 2018[181]. Therefore, the transition from being the top EU destination for inward Foreign Direct Investments to experience a fall in the investments due to the uncertainty created by the Brexit decision has had a significant and notable impact on the UK economy and macroeconomic variables. Indeed, with the uncertainty investors and businesses prefer to adopt a cautious approach delaying their investments or even considering to relocate them, like it happened in the UK with some firms that chose to move their investments to maintain the access to the EU single market, a crucial factor in their decision-making process. The reduction of investments has a negative effect on the economy of a country because it reduces competition among companies, that can result in a stagnation of the market, leading to an increase of prices and to a reduction of the goods or services quality. Lower investments and lower competition have a bad effect also on innovation: with a decline of investments, companies could have difficulties to develop new technologies, products, and services. Moreover, reduced investments may cause job growth to stall or possibly result in job losses, which will influence total employment

[181] Bank of England. (August 2018). *Inflation Report*. London: Bank of England.

levels. All these aspects may slow down a country's economic growth and result in lower living standards for its citizens.
Together with investments, uncertainty impacted also throughout a second transmission channel and long-term effect that has been analyzed previously in the second chapter, which is the trade one. In this case the uncertainty was about the future UK-EU trade relationships and the possible introduction of new trade barriers, customs checks and procedures at the border, regulatory alignment that would have made trade exchanges more complicated and expensive both in terms of money and time. In particular, small firms in manufacturing supply chains have faced significant challenges as a result of Brexit. Indeed, the establishment of customs and border check, together with compliance regulatory, between UK and EU can create delays and additional bureaucratic steps for goods crossing borders, making simple exchanges quite complex and time-consuming. Therefore, many firms with sophisticated supply chains were forced to reconfigure their supply chains to adapt to the new trade scenario, potentially resulting in disruptions and added costs, which fosters inflation. Hence, the two main long-term effects of Brexit, trade disruptions and changes in investment dynamics, along with the reduction in jobs in the labor market have collectively had negative repercussions on the economic growth and living standards of the United Kingdom's citizens.

In conclusion, last but not least, is fundamental to take in consideration the most important short-term effect of the Brexit referendum and its consequences on the UK economy: exchange rates. After analyzing, in the third chapter, the fluctuations of the sterling exchange rate and the implications in the economy, it is clear that they are not just abstract financial metrics but have an actual, real, and tangible effects on people's lives and on the overall health of an economy. Understanding these transmission channels is vital for policymakers and analysts when assessing the consequences of major economic events. As stated in the third chapter, the major outcome of the UK's decision to leave the European community has been the sharp depreciation of the sterling, around 10%, and has remained at that level ever since. This incredible and massive drop of the British currency caused a series of effects: it raised import prices and business costs, with companies that were forced to put in the market their products or services at a higher price. In turn, this caused an increase of the UK inflation which, after one year from the referendum, reached its peak at the level of 3,1%, more than the 2% inflation target set by the Bank of England to reach the monetary stability goal. In response to this upward inflationary pressure, the English central bank immediately raised the interest rates. Moreover, the depreciation of the British pound also caused the reduction of real wages, especially in the sectors that were highly exposed to the higher import costs. It has been calculated that real wages fall by 2,9%, which is equivalent to 765£ per year on average. So, the drop of the sterling only raised import costs and inflation, failing to boost exports, reducing wages, and fostering the competitiveness of the UK economy.

Therefore, seven years after the referendum and three years following the United Kingdom's official departure from the European Union, the outcomes have turned out differently from the expectations of Leave supporters that won the vote. Based on the analysis made throughout all this work, it can be asserted that the decision made in 2016 has proven to be a real failure. The combination of long-term effects, represented by trade, investments, and the labor market, alongside with the short-term ones, with the sharp devaluation of the pound, has distinctively exerted a negative influence on British economic growth and key macroeconomic indicators, as well as having deteriorated the standard livings of British citizens due to an increase of prices and a reduction of wages. At the end of 2022, nflation reached its peak at the incredible level of 11%, with the Bank of England raising interest rates to 5%. Percentages that until a few years ago were unthinkable, whilst now underscore the significant economic challenges and difficulties that the country is currently experiencing. It is correct to point out that these values appeared in recent years are not only caused by Brexit but must be considered two historical events that have occurred in the last three years and have impacted and disrupted all world economies: COVID-19 and the invasion of Ukraine by Vladimir Putin's Russia started in February 2022. The first one caused extraordinary declines in GDP and trade in particular, due to the restrictions put in place by governments to limit the spread of the virus and the deaths it was causing. Whilst the second one impacted even more on the upward inflationary pressures. The reason is explained by the fact that the invasion highlighted Europe's great dependence on Russian gas and energy. This reliance on Russian energy sources resulted in increased energy costs when Russia, in response to all the sanctions imposed by Europe and the United States, chose to limit and reduce gas supplies. This disruption in energy supply had a direct and significant effect on inflationary forces, further exacerbating the inflationary challenges that many countries, such as UK since in January 2022 the CPI inflation was at 5,5%, were already facing after COVID-19. Therefore, it would be inaccurate to attribute all the responsibilities for these unprecedented levels of UK inflation and a general economic slowdown solely to the Brexit. On the contrary, as previously mentioned, one of the difficulties encountered by many experts and researchers when assessing the effects of Brexit was to disentangle the impacts related to the decision to leave the EU from those resulting from the COVID-19 pandemic. These two significant events have intertwined and interacted in a way that complicates the task of isolating their respective contributions to the economic conditions observed in the United Kingdom. However, is crucial to underline some data that still confirm how Brexit has significantly worsened the UK's economic performance and citizen's living standards. The first one is that at the end of 2022, since the eve of COVID-19 pandemic, "*the UK's economy has underperformed compared with every other G7 counterpart and it is the only one not to have recovered to its size in late 2019*"[182], as it is possible to see from the graph.



Source: Giles, C. (November 2022). Brexit and the economy: the hit has been substantially negative". Financial Times. Full text available at: https://www.ft.com/content/e39d0315-fd5b-47c8-8560-04bb786f2c13

Moreover, the Office for Budget Responsibility, in its Economic Outlook of November 2022, forecasted the largest fall in the living standards for UK households. In detail, on a fiscal year basis, Real Household Disposal Income (RHDI) per person, which is a measure of living standards, falls by 4,3% in 2022-23, the largest since the Office for National Statistic (ONS) records began in 1956- 57, followed in 2023-2024 by a second largest fall at 2,8%, for a cumulative 7,1% fall, taking RHDI per person to its lowest since 2013-14[183].

Throughout the entire thesis, the primary objective has been to comprehensively examine the impact on the long and short run of the Brexit event on the key macroeconomic variables, such as GDP,

[182] Giles, C. (November 2022). *Brexit and the economy: the hit has been substantially negative".* Financial Times. Full text available at: https://www.ft.com/content/e39d0315-fd5b-47c8-8560-04bb786f2c13

[183] Office for Budget Responsability (November 2022). *Economic and fiscal outlook*. Presented to Parliament by the Exchequer Secretary to the Treasury by Command of His Majesty. CP 749,

productivity, trades, wages, investments, exchange rates or prices, in order to assess the consequences arising from the historical decision of the United Kingdom to leave the European Union. What mainly emerged from the analysis is that the choice made by the British electorate in 2016 has resulted in a decline in living standards, characterized by an escalation in the prices of various goods and a concurrent decrease in real wages, with households that became poorer. Furthermore, it has had adverse effects on most of the key macroeconomic indicators in the UK, signifying a deteriorating economic performance of the UK economy. This impact has persisted even as the country embarked on a post-COVID recovery journey. The decision to leave the EU has had far-reaching consequences, which extend beyond initial expectations, affecting the economic well-being of the population and the overall health of the British economy. And people noticed that. Indeed, a recent survey made by YouGov shows that "*62% of Britons describing Brexit as "more of a failure", and only 9% considering it "more of a success". A further 20% describe it as neither, while the remaining 9% are unsure*". In detail, "*Remain voters overwhelmingly believe Brexit has been a failure (89%), while Leave voters are split: 37% also say it has been more of a failure, while 35% see it as neither a failure nor a success, but only 20% currently consider it mostly a success*"[184]. So, after 7 years only one in five people who had voted to leave are convinced of the success of their decision and are convinced of the goodness of the Brexit. A very low percentage, confirming the momentary failure of the plan to leave the EU. Momentary because the impacts of Brexit continue to evolve and manifest in various ways. Brexit marked a historic turning point with its unexpected outcomes and influence on the UK economy and UK's citizens living standards. It remains a subject of continual study, analysis, and debate as a case study, giving valuable lessons for policymakers, businesses, and economists around the world. The complexities and challenges encountered throughout the Brexit process provide a rich source of insights that can inform future decisions, negotiations, and strategies in an increasingly interconnected and interdependent global landscape.

[184] YouGov UK (May 2023). *Most Britons say Brexit has been "more of a failure"*. Available at: https://yougov.co.uk/politics/articles/45733-most-britons-say-brexit-has-been-more-failure

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