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The Martindale Center for the Study of Private Enterprise was established in 1980 with a gift from alumnus Harry Turner Martindale '27 and his wife Elizabeth Fairchild Martindale. Formed as an interdisciplinary resource in the College of Business and Economics, the Center engages students, faculty, and the business community in active inquiry, tackling questions central to understanding and improving the performance of private enterprises and the economic systems in which they operate.

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Perspectives on Business and Economics is the journal of the Martindale Student Associates Honors Program founded and run by the Martindale Center for the Study of Private Enterprise at Lehigh University. Each year, a faculty panel selects twelve of Lehigh’s finest undergraduate students to become Martindale Student Associates. The students each undertake a research project focusing on an aspect of the economy and business environment of a foreign nation. The country of focus changes each year. During the following year the students complete their research and prepare their articles for publication as a volume of the journal.

The students’ study of the UK began in spring 2017. After several on-campus orientation seminars, the group made its annual trip to Washington, DC, for a series of in-depth country briefings at the European External Action Service, British Embassy, and US Department of State. In May 2017, the Student Associates and faculty advisors traveled to Edinburgh, Nottingham, and London for an intensive ten days of meetings, lectures, briefings, and discussions with leaders from government, business, and academia whose expertise and enthusiastic participation in and support for the program are key to the success of our mission.

Special Thanks

The Martindale Center acknowledges the critical role played by alumni, parents, and friends and the many experts from business, industry, government, and research and academic institutions in the UK and in the USA who gave generously of their time and expertise as advisors, co-organizers, and speakers to help make the 2017–18 program and Volume 36 of this journal a success.

Ross Allen, Director, UK Department for International Trade, North America, and Deputy Consul General at the British Consulate General in New York, authored the introduction to this year’s journal, articulating the complex economic and social context within which the students’ articles were conceived. Ross and the Consulate team visited with us on campus in spring 2017 and have been supportive throughout.

Daniel Marks, Irina Mineva, Andrew Overton, and the team from the British Embassy hosted our group in Washington, DC, and shared privileged insights into the potential economic and social impact of the recent Brexit vote. Ruth Newman, Aaron Feit, Kara Snesko, and M. Allyn Brooks-LaSure from the US Department of State in Washington, DC, hosted a terrific program of talks and discussions about the UK economy, sharing their analysis of the evolving UK-EU situation and the possible repercussions on UK trade and relations worldwide.

Marc Jay, First Secretary for Policy and Planning at the European External Action Service in Washington, DC, graciously met with us just one week after the UK had invoked Article 50 of the Treaty on European Union, triggering a 2-year withdrawal countdown. Michael Russell, Member of the Scottish and European Parliaments—the Minister responsible for negotiating Scotland’s position in the EU—kindly took the time to meet with the group at the Scottish Parliament in Edinburgh to discuss Scotland’s pro-EU Remain position. US Foreign Affairs Officers, Christina Gerhardson, Dustin Salveson, and Richard Stanbridge, met the group at the US Embassy in London to discuss US perspectives on the City’s reactions to Brexit.

Dr. Neville Wylie, Associate Pro Vice Chancellor for Global Engagement (Americas) at the University of Nottingham, organized an informative day of talks and discussions with Nottingham professors and with the university’s partners in the field of public health care.

Martindale alumni Emily Henderson Sears (2003–04, Sweden), head of digital media at Google, London, and Aneesh Varma (2005–06, Hungary), founder of the London-based company Aire, co-organized a dynamic panel of independent entrepreneurs and technology innovators, hosted at Google. Emily also arranged visits with the BBC and The Guardian and accompanied the group throughout this exciting media day.

Lehigh alumnus Griff Welton ’88, a partner with PwC in London, took the time to really understand our needs and organized a terrific morning of talks with his savvy team. Martindale traditionally visits with PwC in each country we study, and we were thrilled to work with Griff and his colleagues who are on the front line in terms of analyzing the potential impact of Brexit across all economic sectors.

Lehigh alumnus Allen Yurko ’73 and his wife Gayle generously hosted a Martindale family gathering at their lovely London apartment and welcomed us all so warmly.
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Finally, on behalf of the Martindale community of students, alumni, faculty, staff, and friends, we acknowledge and express our immense appreciation to Douglas Lane ’67 and Gay Lane for their continuing support of this journal.

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REGULATORY IMPLICATIONS OF CRYPTOCURRENCY ON THE BANK OF ENGLAND
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The Bank of England is tasked with stabilizing one of the world’s most critical financial systems amidst the global proliferation of nascent and untested cryptocurrencies. This article evaluates the Bank of England’s response as a second-mover in cryptocurrency regulation by analyzing its cryptocurrency policies, regulatory tools, and potential indicators for further regulatory action.

CLOSING THE CARBON GAP: THE UK’S PROGRESS IN CLIMATE CHANGE MITIGATION AND INCREASING NEED FOR STRATEGIC POLICY
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The UK has reduced emissions substantially, aiming for an 80% decrease in emissions by 2050. However, a changing energy generation portfolio, growing electricity demand, and wavering political support are forcing the country away from its desired emissions trajectory. By focusing on renewables and nuclear power, efficiency in sectors such as building and transportation, and balance of electricity supply inconsistencies, the UK can meet its ambitious targets.

AFFORDABLE HOUSING IN LONDON
Ian Davis ................................................................. 23

In London, England’s array of opportunities for work, leisure, and education attracts people from diverse backgrounds and experiences. In turn, the city’s population has reached historically high levels and is expected to continue growing. As London’s population grows, affordable housing becomes scarce. This article analyzes the landscape of London’s affordable housing market and the extent to which London Mayor Sadiq Khan’s planned reforms will make living in the city genuinely affordable for years to come.

HOW WILL THE UK FINANCIAL SERVICES SECTOR ADAPT TO CHANGES AS A RESULT OF BREXIT?
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As the UK begins to understand the implications of the Brexit vote, the status of its financial services sector is at risk. This article focuses on the challenges the UK will face when negotiating a new deal with the EU and provides potential likely scenarios that the UK will adopt.

THE CHANGING OF UK STEM HIGHER EDUCATION IN THE WAKE OF BREXIT
Veronica McKinny .......................................................... 39

Scientific research, particularly at the university level, has long been a hallmark of UK economic and technological prosperity. This article analyzes how Brexit will change scientific research at UK universities by examining the flow of people and funds across borders and offers thoughts on researchers’ and Parliament’s role in supporting the future efficacy of the UK scientific domain.

ROOM FOR GROWTH IN A TIME OF UNCERTAINTY: THE UK LUXURY AUTOMOTIVE INDUSTRY AND BREXIT
Gustavo Grinstein ........................................................... 49

The UK has been a dominant hub for the production of luxury consumer vehicles for the past couple of decades. Yet this dominance is likely to wither with the new challenges facing the industry due to Brexit. This article examines how automotive supply chain globalization and foreign direct investment aided the development of the luxury automotive industry in the UK. The article considers the consequences that will result from industry isolation from the EU caused by Brexit.
ECONOMIC CONSEQUENCES OF UK IMMIGRATION REFORM FOLLOWING BREXIT
Katherine Wu

Domestic sentiment toward outsiders in the UK has become fueled with negativity and wariness. A heated Leave campaign succeeded in convincing the public that EU citizens were destroying the economy. This article studies the true economic role of EU citizens in the UK prior to dissecting the proposed immigration policy following Brexit to predict the effect of reduced EU immigration to different sectors of the UK economy.

MAPPING THE FINANCIAL SERVICES SECTOR AFTER BREXIT
Tristan Heffler

The Brexit vote has removed the ability of multinational banks to access the European single market through their London headquarters, forcing them to establish European bases. This article analyzes the drivers of these location decisions. A model created by examining publicized plans suggests that the main factors influencing choices are office space costs, corporate tax rates, business climate, payroll tax rates, quality of life, and housing costs. Results suggest that Frankfurt, Germany, is the most attractive city.

CROSS-BORDER TRADE ON THE ISLAND OF IRELAND IN THE WAKE OF BREXIT
Logan Herr

Cross-border trade is the cornerstone of the Northern Ireland and Republic of Ireland economic relationship and a primary driver of Brexit discussions, which threaten the integrated and currently invisible seams of the border. The UK has simultaneously committed to maintaining frictionless trade and to no hard border post-Brexit. This article analyzes the UK’s proposed solutions for the Irish border as well as the potential impact of these new systems on the economics of cross-border trade on the island of Ireland.

NATIONAL HEALTH SERVICE ENGLAND: AN OVERVIEW AND ANALYSIS OF CHALLENGES
David Eghoimi

In a 2017 study, the UK National Health Service (NHS) was ranked as the highest performing health system when compared with those in ten other wealthy nations. However, protests in England tell a different story. As NHS staff in England cope with rising demands amid insufficient funding, accident and emergency services wait times are increasing and hospitals’ safety ratings are falling. This article examines the strengths and challenges facing England’s NHS and suggests recommendations to prevent its potential collapse.

MAKE GREAT BRITAIN GREAT AGAIN: POPULISM AND NATIONALISM IN BREXIT
Nadine Elsayed

The Brexit vote brought to the surface salient political divisions fortified by economic and cultural anxieties. This article explores how proponents leveraged populist and nationalist sentiment surrounding economic inequalities and immigration to convince the UK to leave the EU.

CONSEQUENCES OF LAX MEDIA OWNERSHIP REGULATION ON FREEDOM AND PLURALITY OF THE UK’S FOURTH ESTATE
Mina Khan

The British media landscape faces a ubiquitous threat, one of both lack of regulation and excessive freedom in terms of concentration and ownership. This article examines the potential effects of unregulated media concentration on political relationships between prominent media owners and the UK government as well as its overall effect on UK citizens’ quality and perception of news.

CONTRIBUTORS

ix
INTRODUCTION

It is an honor and a privilege to be writing the introduction to Volume 36 of Perspectives on Business and Economics, which focuses on the United Kingdom.

From my vantage point as Deputy Consul General in New York, covering the tri-state area, and as Director of the UK Department for International Trade in North America, these extended essays provide a valuable external perspective on what is happening in my home country, written by critical friends. The group traveled extensively in the UK during their visit, speaking to a wide range of informed interlocutors, and brought to each of their areas of study the fresh thinking for which the Martindale Center for the Study of Private Enterprise Student Associates Honors Program is renowned.

I am also pleased to be deepening our partnership with Lehigh University through this introduction. In 2017, I visited the University in its bucolic setting, meeting students from the Martindale Center and other faculties and promoting the UK Marshall Scholars program. We were then delighted to award a Marshall Scholarship to Klaudia Jazwinska '18, a journalism and global studies major at Lehigh. And linking back to the Martindale Center, I was also pleased that Veronica McKinney was chosen out of a strong field to spend time shadowing both our Consul General in New York and our Ambassador to the United Nations in 2018. The British partnership with Lehigh goes from strength to strength.

I write this introduction at a pivotal moment for my country. It is two years since a majority voted for us to leave the European Union, and we will do so in March 2019. This decision and its process have dominated discussion throughout the UK, in the corridors of power and at kitchen tables, ever since. At times, it has generated more heat than light. I therefore welcome the fact that 7 of the 12 scholars this year have titles that refer explicitly to Brexit, and the remainder touch on it to varying degrees. Getting it right matters enormously to my country's long-term future, so critical and informed inputs are welcome.

Nadine Elsayed offers a useful insight into part of the Leave campaign and wider issues of populism and nationalism. Elsayed's analysis suggests a populist, nationalist, and immigration-centered strand to the Leave campaign. Others on the Leave side pitched a more open, free-trading vision of a UK freed from constraints of EU membership and better able to trade globally. Prime Minister Theresa May has made clear that her priority is to deliver what a majority of the British people voted for in terms of sovereignty and control of our borders and money, in a way that maintains a close partnership with European allies and maximizes future prospects in terms of global trade. The role of the team I lead here in the US is to help British companies grow their exports to what is already the UK's single largest bilateral export destination—a big part of seizing those global opportunities.

Lindsay Wilson has researched how the UK's financial services sector will adapt to changes after Brexit. This matters greatly to the UK, given the strong role financial services plays within our whole economy. Here in New York the British message to financial services firms is that the British government will do everything it can to protect and promote this vital sector and to ensure that the UK proposition as a whole remains truly compelling. Clearly Brexit will involve some changes in this sector: the British government's role is to minimize uncertainty and help businesses take advantage of opportunities to grow even further the UK-US financial services relationship.

Tristan Heffler looks at how the financial services sector in Europe might evolve as a result of Brexit. The big US financial services firms unanimously tell us that they expect London to remain one of only two genuinely global financial powerhouses (alongside New York City) and that they want to remain in the UK. Our labor laws, pool of talent, international connectivity, tax rates, regulatory environment, and reputation for innovation count highly, and we have seen a continued flow of US financial technology firms moving to the UK for precisely those reasons. The respected Economist Intelligence Unit has
suggested that London will retain its status as one of the world’s leading financial centers and as Europe’s financial hub after Brexit, noting that there is a mutual interest in achieving a deal that works for both sides.

Veronica McKinny looks in depth at how the UK’s science, technology, engineering, and mathematics (STEM) higher education sector is evolving within a Brexit context. These are crucial fields with the ability to drive innovation and technological development and produce graduates capable of thriving in a modern economy. Many of us hope that Brexit will provide an opportunity to reform our migration system such that talent alone determines who we accept to study in the UK, and the UK Home Secretary has signaled his interest in looking again at exempting students from the migration cap. The UK also wants to continue pan-European collaboration in STEM research and to increase the proportion of female STEM students, graduates, and professionals.

Logan Herr’s essay on the challenge of Brexit and the island of Ireland is a good introduction to some of the historical, geographic, political, and economic challenges posed. Reaching a workable and sustainable solution for the Irish border will be crucial to ensuring the overall success of our departure from the EU. Herr explains why Brexit is as significant to the Republic of Ireland as it is to the UK and why innovative thinking is needed. Herr also highlights the importance of the implementation period (between our departure in March 2019 and the end of 2020) in providing the time and space to find a long-term answer and what he fittingly describes as a “balance between sovereignty and all-island economic stability.”

Gustavo Grinsteins examines the UK’s luxury car industry, again in the context of Brexit. The UK is best known for premium and sports car brands, which alongside several high-production-volume brands have helped increase total vehicle production in the UK significantly. Almost 80% of these vehicles are exported. Grinsteins notes the way in which vehicle production has changed over the years, with many components crossing multiple borders before a final vehicle is produced. For the UK government and our EU negotiating partners, the challenge is to put in place arrangements that will enable the industry as a whole to continue to thrive.

David Morency has studied an area of increasing interest for government and business alike, that of cryptocurrencies (Bitcoin, Ethereum, and so on) and how government should regulate them. He notes that despite the high level of attention paid to cryptocurrencies, they remain a tiny proportion of the overall money supply. The Bank of England has decided up until now to avoid the risk of stifling innovation and to adopt a wait-and-see approach rather than over-regulating too early. I hope Morency’s assessment that there is more opportunity than risk proves correct and would highlight that the general approach of all our UK financial regulators is to encourage innovation and regulate in the interests of consumers.

Courtney Lenzo examines how the UK has met and exceeded its carbon reduction targets to date and how it can maintain its leadership. We are pleased by the progress we have made, which Lenzo describes as “improving faster than many of its fellow low emitters.” Praise indeed! Here in the US, the administration has adopted an “all of the above” approach to energy; in the UK our approach could perhaps be described as “all of the above except coal,” and we are pleased with our progress in renewable electricity generation. Lenzo explains how the UK needs to look beyond just electricity generation to drive further efficiencies. Her essay is also a reminder of the value of respected external organizations that can hold government to account and focus on the very long term, such as the Committee on Climate Change.

Ian Davis examines the challenge of providing sufficient affordable housing in London, a city that continues to boom (from 6.7 million residents in 1988 to a projected 10 million by the early 2030s). High property rents and sale prices can act as a real bar to economic growth, and certain factors in London combine to hinder property development (the green belt of protected land around London, a complex planning system, and predominantly low-rise housing stock). Every government
in living memory has committed to building more houses in the UK, and the current government has ever added “Housing” to the name, Ministry of Housing, Communities and Local Government. Part of the answer has to be better transport links to enable easier commuting and to ensure economic growth is more distributed around the UK, but Davis is right that London housing will remain a challenge for the foreseeable future with no easy solutions.

Katherine Wu writes about the economic consequences of possible UK immigration reform following Brexit. Clearly, migration from Europe was a factor in the referendum outcome, indeed one highlighted by those who ran the Leave campaign. The UK government has since made clear that as part of leaving, we will return to a system of full UK control over who immigrates, including from Europe. Wu notes the significant contribution migrants from the European Economic Area have made, with some research suggesting that EEA migrants are net contributors to the economy. It is interesting to note changing public attitudes in the UK, post-referendum, with some evidence of an overall softening in opposition to economic migration. As with the Committee on Climate Change, mentioned above, I would also on this topic highlight the value of the independent role played by the Migration Advisory Committee.

David Ebhomielen provides a balanced assessment of the English National Health Service, outlining its development and noting both its strengths and weaknesses. This can be a tricky topic in the UK: as Ebhomielen notes, we Brits tend to regard our health system with fierce pride, and while comfortable criticizing it ourselves, we sometimes react badly to external criticism of it. He explains the areas in which it remains world-leading (most obviously, given its foundational basis, equity) and the areas in which a combination of investment and reform are needed. In June 2018, our Prime Minister announced that the NHS budget would rise some £20 billion by 2023, to ensure continued world-class care. Ebhomielen suggests some reforms that might maximize the impact of this extra funding.

Finally, Mina Khan examines the state of the UK’s media market and challenges posed around ownership and plurality, influence, and regulation. Her essay demonstrates some of the challenges for government in this area, in trying to limit regulation (to maintain a free press while ensuring accuracy and fairness) and in trying to ensure a range of voices are heard. Although over-simplified, I would suggest that in the UK we have more-aggressive newspapers than the US but less-partisan TV and radio outlets. US readers will not need to be told that the debate about the media, government, and politics is only getting more fraught, on both sides of the Atlantic.

I conclude by thanking all of the authors for their work and encouraging readers to delve into these articles and to keep the conversation going by letting me know their thoughts on any of the subjects raised. The UK and US are and will continue to be great partners, achieving great things together in almost every field. I am delighted to have had the chance to build the relationship between the British Consulate General and Lehigh University and wish all of the authors the best of luck for the future.

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REGULATORY IMPLICATIONS OF CRYPTOCURRENCY ON THE BANK OF ENGLAND

David S. Morency

The Bank of England is tasked with stabilizing one of the world's most critical financial systems amidst the global proliferation of nascent and untested cryptocurrencies. This article evaluates the Bank of England's response as a second-mover in cryptocurrency regulation by analyzing its cryptocurrency policies, regulatory tools, and potential indicators for further regulatory action.

Introduction

Cryptocurrencies are digital assets that operate independently of central banks. Since the world's first and largest cryptocurrency by market capitalization, Bitcoin, was introduced in 2009, the global market capitalization of an ever-expanding variety of cryptocurrencies has exceeded $700 billion ("Cryptocurrency Market...") and enticed an estimated six million daily users of cryptocurrency wallets (Hileman and Rauchs). The explosive growth of cryptocurrencies, which are now accepted as payment at Microsoft, the Japanese airline Peach Aviation, and even at some Subway sandwich franchises, has garnered attention by financial regulators worldwide.

The three main financial regulators in the UK are the Financial Conduct Authority (FCA), Her Majesty's Revenue and Customs, and the Bank of England (BoE)—overseeing consumer protection, taxation, and financial stability, respectively. Cryptocurrencies present serious and untested risks to each of these institutions and their collective goal to protect the UK economy from crisis. Importantly, as the central bank that unilaterally supplies and backs the British pound sterling, the BoE is the regulator whose mission most directly conflicts with the existence of international, decentralized currencies.

This article evaluates the BoE's current cryptocurrency policies, potential tools for regulating cryptocurrencies, and useful indicators for further regulatory response. Overall, the BoE's prudent posture toward cryptocurrency regulation establishes its position as a progressive second-mover in cryptocurrency central bank policy. In treading the fine line between over-regulation and under-regulation, the BoE is setting a path for measured economic growth via cryptocurrencies and blockchain technology while also hedging systemic risks to the UK financial system.
The UK’s Stake in Cryptocurrencies

The significance of cryptocurrencies in the UK stems from its oversized role in foreign exchange (FX) trading, cryptocurrency exchanges, and financial technology (fintech) more broadly.

Foreign Exchange Trading

The UK has a deep-rooted history in global trade and finance. A central time zone between the opening US financial markets and closing Asian financial markets has allowed the UK to establish itself as a leader in foreign currency exchange in particular. The UK accounts for about 37% of all $5 trillion in daily FX volume—the US is second with about 18% (“Triennial Central...”). The UK’s historic strength in currency exchange suggests an organic interest in establishing itself as a center for cryptocurrency transactions.

Exchanges and Wallets

As a natural outgrowth of its entrenched position as an FX leader, the UK has already established itself as a leader in cryptocurrency exchange and management. A recent study from Cambridge University’s Centre for Alternative Finance defines cryptocurrency exchanges as “entities that allow customers to exchange cryptocurrencies for other forms of money or assets” (Hileman and Rauchs). According to this study, the UK has more exchanges than any other country—accounting for 18% of the world’s total exchanges (Hileman and Rauchs). Often used with exchanges, cryptocurrency wallets are programs that allow users to store, send, and receive cryptocurrencies. The UK is second in the global market share of cryptocurrency wallets, at about 15% (Hileman and Rauchs).

Financial Technology

Due to its dominance in traditional financial services and growing prominence in cryptocurrency exchanges, the UK serves as a natural backdrop for attracting companies and capital in areas that support cryptocurrency technology such as fintech—computer programs and other technology used to support or enable banking and financial services. The UK’s fintech sector is disproportionately competitive on the world stage and vital to the national economy—employing an estimated 60,000 Britons (“UK FinTech...”) and commanding $1 billion in annual venture capital funding, which ranks third only to annual fintech venture capital funding in China and the US (“The Global FinTech...”). In 2016, cryptocurrencies and blockchain technology accounted for 8% of UK fintech venture capital investment (“FinTech Venture...”).

The Bank of England’s Stake in Cryptocurrencies

Given the rapidly growing importance of cryptocurrencies to the UK, the BoE must juggle support for this nascent economy while also upholding its mandate to provide “monetary and financial stability” to the British people. To the BoE, stability is effectively derived from stable prices and confidence in the currency (“What Does...”) and achieved via a combination of setting interest rates in order to achieve a 2% inflation target and by applying directives for financial institution capital requirements and corporate structure. Additionally, the BoE reserves a monopoly on the supply of banknotes, so that in extreme circumstances, such as bank runs, the BoE can assume the role of lender of last resort (“Scottish...”).

The BoE’s centralized oversight regarding the issuance of pound sterling as the national currency is fundamental to the institution’s existence and regulatory mandate. The advent of decentralized cryptocurrencies, which are created and transacted in the absence of a central bank, directly challenges this paradigm of centralized monetary control.

The Bank of England’s Response to Cryptocurrencies

In presenting the potential for a new paradigm shift and unknown stability risks, the BoE might be expected to heavily regulate cryptocurrencies. However, the BoE does not regulate cryptocurrencies. As of January 1, 2018, there is no official statement published
by the BoE regarding its position toward Bitcoin or other cryptocurrencies (Naqvi and Southgate).

The BoE’s restrained approach to cryptocurrency regulation stems from the belief that the cryptocurrency economy—in its current form—does not impede the institution’s mission to provide monetary and financial stability to the UK. The BoE suggests that “digital currencies do not currently pose a material risk to...stability in the United Kingdom, given the small size of such schemes” (“Quarterly Bulletin...”). The BoE is establishing size as grounds for assessing cryptocurrencies’ potential threat and acknowledges that cryptocurrencies lack significant adoption or market value to date.

BoE research economist John Barrdear further defends this position as it relates to both financial and monetary stability. Looking at financial stability Barrdear explains that cryptocurrencies could pose a risk if they achieve critical usage—reflecting a situation where “households, businesses, and the financial sector” would be sufficiently exposed to cryptocurrencies such that a crash in its price could send ripple effects across the financial system. In terms of monetary stability, “so long as items are quoted in sterling pound and pence rather than Bitcoin, and digital currency is only used alongside sterling-based payments, then the bank’s ability to deliver price stability according to a 2% CPI target will not likely be affected” (“Quarterly Bulletin...”). Essentially, cryptocurrencies will only warrant sufficient attention if financial institutions become increasingly exposed and a behavioral shift occurs in which cryptocurrencies are used as an alternative to pound sterling rather than a pure store of value. Importantly, the value of Bitcoin alone increased 18-fold and the number of UK venues that accept Bitcoin as payment has nearly doubled in the three years since the BoE’s latest official statements were published, in 2014. Hence, it is imperative to determine when the BoE might want to reassess its current lack of oversight.

**Potential Indicators of Need for Regulation**

In 2015, the European Central Bank (ECB) published a report that establishes several indicators of the materiality of cryptocurrencies with regard to financial and monetary stability. These indicators include cryptocurrencies’ market capitalization versus the fiat currency in circulation (i.e., M1 money supply) and the relative use of cryptocurrency in payments (“Virtual...”).

Beginning with relative market capitalization, at the end of 2017, the UK M1 money supply was approximately $1.7 trillion. In 2017, the value of all global cryptocurrency in circulation peaked at approximately $700 billion. Given that pound sterling accounts for only 1.2% of total cryptocurrency transaction volume, this optimistically suggests that merely $7 billion of the world’s cryptocurrency holdings were purchased with British currency and are potentially held by British businesses and individuals (“Quarterly Bulletin...”). Therefore, potential cryptocurrency held by all UK businesses and individuals is only 0.46% of the UK’s money supply. In fact, this figure is merely 20% of the median trailing 12 months monthly standard deviation of the UK’s money supply1 (“M1 for..."). By this estimate, even a complete collapse in the price of UK-held cryptocurrency would be less than one-quarter of M1 volatility and thus mere economic noise until global cryptocurrency market value grows four-fold.

Although it sounds considerable, four-fold growth in a year is tame by cryptocurrencies’ standards. Additionally, market capitalization may not be a representative measure of the UK financial system’s exposure to cryptocurrency risk. Julie Maupin—a senior researcher at the Max Planck Institute for Comparative Public Law and International Law and a member of the fintech advisory committee to the German Ministry of Finance—expressed deep concern regarding the introduction of cryptocurrency derivatives by two of the world’s leading derivative exchanges—the CME Group and Chicago Board Options Exchange—in late 2017. Cryptocurrency derivatives create additional, unknown opportunities for investors to use debt to speculate on cryptocurrency prices

1Median monthly standard deviation approximated in dollars from St. Louis FRED data through January 2007 to November 2017.
beyond the market value of cryptocurrencies. This is a potential alarm for the BoE given that the collateralize mortgage obligation—a derivative whose value ultimately stemmed from speculative mortgages—dramatically increased the risk of the global financial system pre-2009 (Mendales).

Nevertheless, cryptocurrencies are far from mainstream in the UK—fewer than 400 venues in the UK accept Bitcoin as payment as of November 2017 ("CoinMap.Org"). This does not compose even one-hundredth of a percent of the more than 5.5 million private sector businesses in the UK ("Business Statistics"). Such weak acceptance of Bitcoin as a legitimate form of payment is consequential in the BoE’s determination that the penetration of cryptocurrency in UK society poses negligible prudential or other risks.

**Key Arguments Regarding Cryptocurrency Regulation**

**Pro-regulation:**

If the BoE were to take action in response to the explosive growth of cryptocurrencies and the introduction of cryptocurrency derivatives, the BoE should consider both pro-regulation and anti-regulation views to determine the extent of regulation required. There are four main reasons that the BoE might champion cryptocurrency regulation. These views are expressed as primary research questions in the BoE’s 2015 paper on central bank digital currencies (CBDCs): 1) monetary stability, 2) financial stability, 3) business cycle implications, and 4) economic growth ("Why Might...").

**Monetary stability**

If alternative forms of currency, such as cryptocurrency, establish widespread use to the extent that a significant portion of household and business activity is driven by cryptocurrency transactions, then the ability of the BoE to influence prices via its resultantly diluted fiat currency would suffer.

**Financial stability**

If major financial institutions owned or provided credit to investors in cryptocurrencies, then the UK’s financial institutions may face increased risk of insolvency. Such failures in the financial system could have significant implications on the broader economy. Additionally, there are fears that in times of panic, customers could transition funds from checking and savings accounts into digital currencies, which could exacerbate potential bank runs (Atkins and Noonan).

**Business cycle implications**

The BoE is unsure of the extent to which digital currency might affect the volatility of the business cycle. For instance, could leveraged, speculative investments in cryptocurrencies via consumer credit cards or other loans prolong contractions and credit needs in the event of a downturn? Writing down non-performing cryptocurrency loans on a bank’s balance sheet could prevent financial institutions from lending within a normal timeline after a financial crisis.

**Economic growth**

Catherine Mulligan, co-director of Imperial College London’s Centre for Cryptocurrency Research and Engineering, believes that insufficient regulation could be holding back start-ups and the growth of fintech rather than creating opportunities. She explains, "We have the situation in the UK where many start-ups are chasing the regulator to say, ‘How are we going to be regulated?’ rather than the other way round" (Rees). Increased regulation is not normally desired within most industries. However, cryptocurrency-based fintech companies may need to be regulated in order to sell their services to regulated clients, such as financial services firms. Thus, regulation may provide the approval and sense of certainty needed to transition from niche market to the mainstream (Robinson).

**Anti-regulation**

The BoE must also consider compelling arguments against regulation of cryptocurrency. These reasons include 1) economic growth, 2) immateriality of the cryptocurrency market,
3) insufficient information to regulate, and 4) international competitiveness.

**Economic growth**

A growing number of cryptocurrencies, such as Ethereum, are not merely currencies but also smart-contract platforms by which commerce is spawned and shared. Regulating the early development of such platforms could impede the development of UK start-ups that might leverage cryptocurrency technology to fundraise and deliver value to the greater economy. For instance, over $3 billion has been raised worldwide across more than 200 initial coin offerings (ICOs) in 2017, including UK-based cryptocurrency start-up Electroneum, which raised $40 million ("Electroneum..."). In extreme regulatory environments where cryptocurrency might be banned, entrepreneurs and investors would not be able to access this roaring, multi-billion-dollar marketplace.

**Immateriality of the cryptocurrency market**

Although growing rapidly, cryptocurrencies are still a nascent asset and technology far from mainstream adoption within the UK. Cryptocurrencies' daily transaction volume of less than $20 billion ("Cryptocurrency Market...") pales in comparison to traditional FX trading's approximately $5 trillion. Moreover, the UK manages a tiny fraction (1.2%) of cryptocurrency trading volume compared to 37% of FX trading volume. As such, the BoE expressed that the scope of cryptocurrency trade does not yet warrant significant risks to financial stability.

**Insufficient information to regulate**

Throughout 2017, the Financial Services Authority (FSA) of Japan—a Japanese financial regulator—acknowledged that it might not have a reasonable framework for deciding the extent to which cryptocurrencies should be regulated ("Japan to..."). Given the nascence of the cryptocurrency industry, the BoE is similarly unsure of the extent to which it might consider imposing regulation and is demonstrating a wait-and-see approach to next steps ("Bitcoin and Beyond...").

**International competitiveness**

Becoming the epicenter of cryptocurrency commerce might provide significant sources of revenue and even strengthen the local currency if the world utilizes the pound sterling to conduct cryptocurrency transactions. If the BoE over-regulates or under-regulates cryptocurrency relative to other countries, the UK might risk losing global competitiveness in a growing, lucrative industry. This phenomenon has already been demonstrated as the Chinese yuan's share of cryptocurrency trade dropped from over 95% to less than 20% of volume amidst Chinese bans on cryptocurrency trading in 2017—ceding the top rank to the Japanese yen (Deng).

**Potential Regulatory Tools Available to the Bank of England**

After determining an appropriate degree of regulation that protects the financial system without stifling innovation or international competitiveness, the BoE must then evaluate which regulatory tools could be applied to cryptocurrency. Potential tools include prudential regulatory requirements for commercial banks, holding cryptocurrency exchange reserves, and introducing a CBDC.

**Prudential Regulatory Requirements**

In the interest of reducing the impact of potentially damaging cryptocurrency events on the UK financial system, the BoE might consider imposing prudential supervision via the Prudential Regulation Authority on financial institutions with exposure to cryptocurrency. Currently, the Prudential Regulation Authority oversees the soundness of over 1,500 financial institutions—specifically, commercial banks and insurance companies—by implementing directives for capital requirements and corporate structure that encourage banks to maintain enough capital to offset risky investments ("Prudential..."). In extending this role to cryptocurrencies, the BoE could
assign the maximum risk weight (150%) to loans provided by banks for cryptocurrency businesses or investors. This maximum risk weight would be reasonable considering the extreme volatility of cryptocurrencies, their absence of backing by sovereigns or corporations, and their lack of regulation.

However, experts such as Mulligan assert that the most prevalent prudential risks exist in the consumer space, such as protecting individuals from hacks at cryptocurrency exchanges and punishing sellers of fraudulent cryptocurrencies. Consumer regulation falls mainly under the jurisdiction of the FCA, but the BoE could promote consumer regulatory responses, as the BoE and FCA cooperate on such issues via the Joint Fraud Taskforce. Potential consumer regulation of cryptocurrency could include requiring exchanges to hold licenses that demonstrate acceptable security and insurance protocols, as is promoted in Japan via the FSA (Southurst). Currently, there are no regulatory requirements for cryptocurrency exchanges in the UK in terms of receiving licenses and related insurance or security risks. This puts the government, traders, and investors at risk of theft and unreported malicious cryptocurrency activity.

**Cryptocurrency Exchange Reserves**

Central banks around the world employ another tool to manage monetary policy and financial stability—FX reserve assets, which are assets, such as government bonds, that are denominated in foreign currency. The BoE is no exception. As of the end of December 2017, the BoE held $25 billion of FX reserve assets ("UK International..."). Holding these assets allows the BoE to potentially influence the exchange rate between the pound sterling and other foreign currencies, which could be used as a monetary policy tool for achieving target inflation.

Theoretically, cryptocurrencies could also be held in the BoE’s reserves and exchanged in the future if and when necessary to prop up the pound sterling. Such reserves would hedge against a monetary future that is uncertain for the UK in which cryptocurrency might continue to grow relentlessly at over 1,000% per annum and proliferate throughout UK households and businesses. Given that China’s central bank (People’s Bank of China [PBoC]) and other central banks are considering the purchase of cryptocurrency reserves, the BoE may soon have a roadmap to use cryptocurrency exchange reserves as a financial stability tool (Maupin).

**Central Bank Digital Currency**

Another way to regulate cryptocurrency is by competing with it. In February 2015, the BoE published a research agenda for RSCoin—a potential CBDC (Evans-Pritchard). A CBDC could provide all the benefits of digital cryptocurrencies, such as low transaction fees and instant transferability, without the risks of no backing by a government. Additionally, in July 2016, the BoE published a staff working paper that outlines why centralized digital currencies might be superior to cryptocurrencies. Specifically, the BoE points to the negative externality of environmental degradation, as the electricity consumption used in a proof-of-work mining system for some cryptocurrencies far exceeds the drain on resources for producing centralized currencies (Barrdear and Rumhof). In fact, Bitcoin transactions alone consume more electricity than does all of Ireland—with each individual Bitcoin transaction requiring 300 kWh of electricity (Hern). Centralizing the production of digital currency would be orders of magnitude more energy efficient.

However, the BoE acknowledges that there may be serious repercussions from introducing a CBDC. In June 2017, the BoE commented on the status of digital currency development—acknowledging several policy implications that may impede adoption of CBDC (Cleland). First is the unknown effect on the transmission of interest rates through a financial system as a result of consumers’ increased access to central bank currency. This is because consumers would be able to directly borrow at interest rates set by the BoE rather than an intermediate commercial bank, which could be potentially destabilizing to the financial system if policy makers were to miscalculate and mistime the effects of monetary policy on inflation. Second is the adoption of digital currency as a substitute
for bank deposits. This could fundamentally change the structure of the financial system if customers of commercial banks had the option to immediately switch all holdings to a digital currency that circumvents commercial bank deposits. Would consumers withdraw all of their money from commercial banks and cause a bank run? The repercussions from introducing a CBDC could be dramatic and are currently unknown. Fortunately, Japan and other countries appear likely to experiment with CBDCs soon, which the BoE could leverage as a second-mover in cryptocurrency policy.

Guiding Principles of Other Central Banks

As a second-mover, the BoE stands to benefit from lessons learned in past cryptocurrency calamities, the international responses of financial regulators, and guiding principles toward cryptocurrency at other central banks.

The central bank whose attitudes and principles might most closely mirror those of the BoE is the ECB. Like the BoE, it does not regulate cryptocurrency, but it is cautious and not overly exuberant so as to accept cryptocurrencies as legal tender. In October 2017, Mario Draghi, ECB President, summarized the ECB’s wait-and-see stance to cryptocurrencies (Kharpal, “Cryptocurrencies…”). Like the BoE, the ECB is waiting for further indication that cryptocurrencies have a strong connection to the real economy before taking further steps to consider them as relevant to monetary policy (“Virtual…”). Hence, the ECB serves as a prudent benchmark for the BoE to postulate cryptocurrency regulation.

Conversely, considered one of the most accepting if not the most accepting central banks of cryptocurrency, the Bank of Japan (BoJ) is beginning to test progressive policies that may be of interest to the BoE. In March 2017, the BoJ recognized cryptocurrency as a legal payment method and also recently approved the 2020 launch of J Coin, an electronic currency that matches the yen 1:1 (Kharpal, “Bitcoin…”). Unsurprisingly, such a progressive central bank facilitated an environment such that approximately 60% of global cryptocurrency trading volume is denominated in Japanese yen. However, this does not come without significant risks. Japan has been the epicenter of the world’s two largest cryptocurrency exchange hacks. In 2014, Mt. Gox—a Japanese cryptocurrency exchange and at that time the largest cryptocurrency exchange in the world—was hacked for nearly $500 million. Similarly, in 2018, Tokyo’s Coincheck was hacked for a record $530 million. The BoE should cautiously consider the BoJ’s experience as a case study on whether and how to expand its own legal definition of cryptocurrency and potentially introduce a CBDC.

At the other extreme, the PBoC is an example of relatively harsh cryptocurrency regulation. In September 2017, the PBoC declared ICOs illegal and issued a ban against cryptocurrency trading on exchanges—a response among the most draconian yet by central banks. Former president of the Bank of China Limited Li Lihui issued a warning that speculative cryptocurrency trading destabilizes markets (Goh). Moreover, there is concern that cryptocurrencies provide an avenue for significant capital flight out of China—potentially exerting downward pressure on the yuan’s value (Wildau). The PBoC’s effectiveness in responding to cryptocurrency fears will help the BoE set an upper bound on a widening spectrum of regulatory actions under consideration.

Conclusion

Undeniably, cryptocurrencies are a growing, high-profile concern for the UK’s financial regulators and central banks around the world. Fundamentally, cryptocurrencies even go so far as to challenge the existence of central banks, including the BoE and its centralized, state-backed currency. However, as of the end of 2017, the BoE has justifiably deemed cryptocurrency’s threat to be immaterial given the relatively insignificant proportion of UK cryptocurrency assets currently held and accepted as payment.

Thus, the BoE has pursued accom-

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2As of end of 2017.
modative cryptocurrency regulation to the extent that it may fulfill its mandate to deliver long-term financial stability while also bolstering the UK’s dominance in FX trading, fintech, and financial services. In doing so, the BoE has positioned itself as a progressive second-mover in cryptocurrency regulation.

Despite cryptocurrency’s immateriality to the BoE as of the end of 2017, leaders in the European cryptocurrency regulatory arena, such as Mulligan and Maupin, have expressed concern and expectations for urgent responses in the near term—namely, protections from fraudulent ICOs and a re-assessment by the BoE of the credit-fueled speculation posed by new cryptocurrency derivatives. As these developments continue and cryptocurrencies exceed the status of mere economic noise, the BoE must prepare to deploy new tools, including prudential regulation, cryptocurrency reserves, and CBDCs, to address potential systemic risks.

Internalizing the varied principles, successes, and failures of its international counterparts will fuel the BoE’s second-mover advantage in cryptocurrency regulation—thus providing necessary calibration and reinforcement for the UK’s finance and technology-driven economic machine.
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CLOSING THE CARBON GAP: 
THE UK’S PROGRESS IN CLIMATE CHANGE 
MITIGATION AND INCREASING 
NEED FOR STRATEGIC POLICY 

Courtney Lenzo

The UK has reduced emissions substantially, aiming for an 80% decrease in emissions by 2050. However, a changing energy generation portfolio, growing electricity demand, and waverimg political support are forcing the country away from its desired emissions trajectory. By focusing on renewables and nuclear power, efficiency in sectors such as building and transportation, and balance of electricity supply inconsistencies, the UK can meet its ambitious targets.

Introduction

As evidence builds that climate change poses a threat to human safety and quality of life, many countries have begun addressing this problem. Wealthy EU countries, in particular the UK, have spearheaded programs and treaties that attempt to mitigate or adapt to climate change. The numerous climate change programs the UK has tried, with varying success, can serve as a learning tool for countries that have been slower to act and help the UK hone environmental policy going forward.

The UK is a world leader in reducing carbon emissions, yet there is a growing gap between the UK’s legislated goals and its projected emissions due to a combination of technical and political challenges. The UK needs to concentrate on improving efficiency in sectors beyond electricity generation, using electricity rather than less efficient fuels to power these sectors, increasing renewable and nuclear generation capacity to meet rising demand, and implementing a mixture of technologies, from pumped hydroelectrical energy storage to smart grids, to balance the fluctuations in supply brought on by renewables. Upgrading regulations and government programs to focus on these targets should provide the necessary support to close the gap.

The UK as a Global Leader in Reducing Greenhouse Gas Emissions

Although other countries have also lowered greenhouse gas (GHG) emissions in the past decade, the UK became a leader by reducing them to a comparatively low level. GHG emissions, the de facto measure of climate-related pollution, are often simplified as carbon dioxide (CO₂) emissions, as this gas dominates GHG footprints (US Environmental Protection Agency, “Greenhouse...”). Since 1990, when GHG emissions from all sectors weighed in at 799 equivalent metric tons of
CO₂ (MtCO₂e), the country has lowered GHG emissions by more than 40% to 466 MtCO₂e in 2016 ("Provisional...").

Figure 1 shows the UK's relative success through CO₂ emissions, adjusted for economic output, compared to countries of varying wealth and size. Some countries, such as China, have greatly reduced emissions but remain large polluters. Others, like France, are the lowest emitters but have improved minimally. The UK resembles France far more than China in its emission history, but in cutting 0.192 kg CO₂ per dollar of GDP versus France's 0.096 reduction, the UK is also improving faster than many of its fellow low emitters. Overall, the UK emerges as a leader when considering both emissions reductions and absolute emissions relative to GDP.

The UK's climate change goals are ambitious. Most countries have minimal climate change policies, such as participation in the Kyoto Protocol or Paris Agreement. Although ratified by an overwhelming number of nations, these international agreements fall short of obligating the entire globe to binding emissions goals (United Nations). The EU goes a step further, with binding short-term targets and a broad goal of reducing emissions by 80% to 95% by 2050 from 1990 levels (European Parliament).

Some ambitious EU countries, notably Germany and the UK, have set even more demanding 2020 targets than those required by the EU. Figure 2 displays various EU countries' 1990 emissions levels, their EU 2020 targets, their 2014 GHG emissions, and, for the UK and Germany, their tighter national 2020 targets.

The UK and Germany, with more stringent 2020 goals, appear most successful at lowering emissions. These two countries have
seen the largest reductions both in absolute numbers and compared to 1990 levels. The UK’s upfront goals and preclusive dedication to climate change efforts are closely connected to emissions reductions to date.

Germany provides an interesting comparison when trying to understand the relationship between self-established goals and the UK’s emissions reductions. Both countries owe much of their reductions to reducing coal-powered electricity. Beyond coal, Germany and the UK vary greatly in how they have improved. Like the UK, Germany relied on reductions from the power sector but through a uniquely decentralized energy generation structure with high municipal and residential ownership. This model depends on local banking institutions to finance the small-scale renewables that abound in Germany. The UK has far less small-scale generation (Chilvers et al.). Germany also decommissioned nearly all nuclear power plants prematurely in response to the 2011 Fukushima accident in Japan. In contrast, nuclear power remains important in the UK (Renn and Marshall).

On the surface the UK and Germany have similar emissions histories—both set ambitious short-term goals, reduced coal, and became two of the lowest GHG emitters in the world. However, given their distinct approaches, multiple paths are apparently feasible. Even so, both cases suggest that clear goals and a commitment to low emissions are prerequisites.

Successful UK Climate Change Policy and Ongoing Challenges

The Climate Change Act of 2008 is integral to the UK’s progressive climate change policy. This act legally committed the UK
to reducing carbon emissions by 80% of the 1990 levels by 2050 (Committee on Climate Change, “Carbon...”) and set budgets for five-year periods in the interim to ensure the UK could meet its goal. The act also established the Committee on Climate Change (CCC) to monitor the UK’s progress. The CCC holds power as a reliable, data-driven source on cost-effective routes to reducing emissions. The CCC proposed the carbon budgets for ratification by Parliament, and the agency provides expertise on developing issues, such as Brexit’s impact on UK climate change goals (UK Parliament). Annually, they report progress and quantify the expected impact of policies on emissions and the economy. For example, the CCC estimates the quantity of CO₂ a program can remove from UK output and the cost to both government and consumers. These publications also suggest key actions which, with government support, could yield large reductions. These suggestions often highlight funding for research and efficiency improvements (Committee on Climate Change, “2017...”). Backed by extensive data, the CCC is an influential voice on UK climate change policy.

CCC recommendations often lead to the government approving subsidies, funded competitions, carbon trading programs, and various other policies. UK climate change programs aim to correct environmental externalities. In other words, the government tries to associate environmental degradation with costs polluters pay immediately and directly so that protecting the environment makes economic sense. This concept appears in countless ways, from payments to households generating renewable energy to a vehicle emissions cap with enforceable fines.

Some aspects of UK climate change strategy are EU-wide. Most notable is the EU Emissions Trading System (ETS), arguably the most effective cap-and-trade system worldwide. The ETS sets a limit on total emissions and allocates allowances to companies. Companies can keep allowances to cover their own emissions or sell to others with excess emissions. Companies emitting more than allowed face steep fines. Over time, the cap is lowered, decreasing total emissions (European Commission). The UK supplements the ETS by removing surplus allowances from the market and forcing the price of carbon to stay above a specified level, thereby enhancing incentives to reduce emissions (Ares and Delebarre). Because the ETS is a substantial piece of UK climate change policy, Brexit could have consequences on emissions progress unless the UK can maintain participation in the program or successfully replace it with a national version.

Many UK programs rely on positive incentives and aim to reduce risk. Consider the power sector where the government encourages large-scale investment in renewables through Contracts for Difference. These contracts guarantee low carbon generators a consistent “strike price” when selling electricity to the grid rather than variable market prices. A government-owned company pays or receives the difference between these prices, making renewables a stable, secure investment for companies (UK Government). Similarly, the former Feed-in Tariffs program supported small generators of solar, hydro, anaerobic, micro-heat, and wind energies through monthly payments based on the technology and quantity of energy (Ofgem). This class of policy incentives aims to make renewables generation economically viable for companies and households.

With so many positive incentives, the UK’s environmental programs are costly. The government tries to maximize value, but there are limits on spending. Two prematurely closed power sector programs exemplify this conflict. In 2015, a carbon capture and storage competition with a £1 billion funding promise was abandoned. The competition was in progress for more than four years, when the Treasury decided it could not afford the offered £1 billion (Carrington). The Renewables Obligation program also ended before its promised deadline. This program required generators to source a percentage of energy from renewables, either by generating their own or buying Renewables Obligation Certificates from an accredited generator. Generators who failed to meet their quota were charged a fee proportional to their unmet obligation. After nearly 15 years, the UK ended
the program early to eliminate the operating cost (Ofgem). As these examples show, the UK has had varying success balancing costs and environmental goals.

Considering the cost to the UK of meeting environmental goals, it is natural to wonder what compels the country to meet these targets. Unlike the EU emissions targets, which carry fines, the "legally binding" UK carbon budgets lack overt consequences. Nevertheless, political and economic implications could be substantial. Failure to meet the targets may prompt political backlash and impede outside investment by disrupting the UK's image as a powerful, innovative nation on climate change mitigation.

Consider the early 2010s, when Parliament wavered over approving the fourth carbon budget. Seven global electricity technology firms responded by writing the Energy Secretary to note that "the UK was in danger of undermining its reputation as a country with low political risk for energy investments" (Lockwood). This same period of political uncertainty increased interest rates on energy project investment by 15% (Harper). When the UK environmental technology market appears uncertain, borrowing to fund investment becomes more expensive, raising the effective price of reducing emissions. The UK depends on a green image to limit uncertainty and win investors. If the image is tarnished, outside funding will decrease, so reducing emissions will require additional government funding. To maintain private investment and keep the cost of climate change mitigation low for taxpayers, the UK must continue meeting its carbon budgets.

The Developing Landscape of UK Climate Change Mitigation

Despite recent advances, progress has slowed. A gap is widening between the UK's trajectory and its ambitious five-year budgets. Figure 3 shows legislated carbon budgets, past emissions, and anticipated emissions over the next 15 years. The two projections indicate the range of emissions that could be expected given the policies either in place or strongly expected to be implemented. It also shows a cost-effective route to the 2050 goal of 80% reduction advised by the CCC.

Although on track to meet and even outperform budgets through 2022, by the 2028-2032 period, projected emissions exceed the budget. The gap is small, but the targets should be comfortably achievable. Meanwhile, the cost-efficient pathway is even lower than the budgets themselves. Considering the CCC's desired trajectory, the minor deviation becomes the ever larger and concerning policy gap highlighted in Figure 3. To close this swelling gap and adhere to goals beyond 2022, policy and market changes are needed in the UK.

Technical Challenges Decelerating UK Emissions Reductions

The changing makeup of the energy sector and a push to substitute electricity for higher carbon sources in other sectors, topped with the political climate and Brexit-related changes to policy, are the main causes of the slowdown in reductions.

Since the Climate Change Act of 2008, emissions due to electricity generation have dropped dramatically. The energy sector is responsible for 50% of emissions reductions between 1990 and 2016, even though it accounted for only 30% of the 1990 GHG emissions ("Provisional..."). Renewables and other technologies provided attainable, cost-effective means of decreasing carbon output, making this outside decrease possible. Coal played a key role. The switch from coal to greener electricity accounts for 75% of UK emissions reductions since 2012. Limiting coal has allowed the UK to quickly lower emissions; but now, even eliminating coal completely would provide less than two years' worth of the emissions reductions needed to stay on target (Committee on Climate Change, "2017...").

Electricity generation has a new composition: natural gas (45%); limited coal (10%); nuclear (21%); and growing renewable generation, including onshore and offshore wind (12%), biomass (9%), hydro (2%), and solar (2%) (Committee on Climate Change, "2017..."). The new makeup means decreasing coal dependence is no longer enough.

A key component in the UK's electricity portfolio is nuclear power. Nuclear power can produce an invariable electricity supply with
relatively low carbon emissions, helping make the UK’s energy sector dependable and robust. But by 2025, half of the nuclear capacity will be decommissioned while only a sixth of the capacity will be replaced by new plants by 2030 (World Nuclear Association), leaving the UK with a diminished capacity for low carbon power generation. Government action is necessary to encourage replacement of this capacity with more nuclear or renewable generation.

Beyond the capacity needed to replace decommissioned nuclear power, additional generation will be required to meet the increasing demand from other sectors. With coal nearly eliminated, natural gas is the dirtiest of common electricity sources. Because natural gas emits fewer tons of $CO_2$ per unit, switching to renewables today reduces fewer emissions per unit of electricity.

Consequently, the cost of subsidizing each ton of reduced emissions through onshore wind in 2016 was nearly double the 2009 cost (Renewable Energy Foundation). Even considering the US EPA’s maximum estimate of the impact to society of each emitted ton of $CO_2$, the cost of subsidizing emissions via onshore wind would be 50% more than the cost to society of not reducing those emissions (US Environmental Protection Agency, “The Social...”). Other renewable technologies are even more expensive; therefore, desired reductions likely cannot come from electricity generation alone. Decoupling carbon from growth in other sectors, such as transportation, buildings, and industry, may be more effective.

The UK’s next steps involve efficiency, from superior insulation that conserves heat to efficiency requirements for new cars.
(Committee on Climate Change, “2017...”). Next steps also likely involve raising electricity demand. Electricity can be produced with limited emissions, so employing electricity rather than oil in technologies, such as electric vehicles or heat pumps, can lower emissions even while increasing electricity demand. Combining the impacts of changes in efficiency and demand, the CCC estimates electricity demand will rise by 7% between 2016 and 2030. If supplied by renewables, the transition would reduce emissions by 62% (Committee on Climate Change, “2017...”).

Political Challenges Compounding Deceleration in UK Emissions Reductions

The technical challenges of climate change in the UK are compounded by waning political support. Political disinterest was particularly evident from 2010 to 2015, when the government needed to approve the fourth carbon budget for 2023–2027. With extensive research to justify their suggestion, the CCC proposes each target 12 years before the budget’s period. However, before the budgets become law, Parliament must approve them (Committee on Climate Change, “Carbon...”). During this process, the fourth budget met substantial resistance from conservative lawmakers. They raised concerns for a variety of reasons: the UK was recovering from a financial crisis, lawmakers were satisfied by the 2008 Climate Change Act, and the fourth budget was the first to extend beyond the UK’s obligations to the EU, making it the first commitment stricter than those of neighboring countries (Lockwood). Additionally, the cost to eliminate emissions was rising as coal generation dropped. These circumstances prompted Parliament to dispute the CCC’s recommendations for more than two years before finally approving the budget. Sound supporting evidence for the CCC’s proposal ultimately convinced Parliament to approve the fourth carbon budget, but the politics surrounding climate change remain lackluster in comparison to the enthusiastic commitment of 2008. Parliament’s discordance on climate change will likely continue impeding progress toward the UK’s emission targets.

Objectives for the UK Going Forward

Combating climate change in the UK is more challenging today compared to a decade ago, when the 2008 Climate Change Act was enacted. Coal-powered generation no longer presents an easy target, governmental support of environmental measures has waned, and electricity demand is predicted to increase while generation capacity decreases. The CCC presented a reasonable path to continued reductions while accounting for these pressures. The following advised objectives incorporate the CCC’s suggestions together with the opinions of other experts.

Improve Beyond the Power Sector and Raise Low Carbon Generation Capacity

In the past decade, the ETS has fostered reductions in the UK by raising the cost of emitting carbon. With Brexit looming, the UK may want to negotiate continued participation in the international program or implement a national version of the ETS. Without a cap-and-trade system to encourage emissions reductions economy-wide, the UK may encounter heightened difficulty in reducing emissions through the more specific areas, discussed as follows.

Efficiency improvements, primarily in buildings, transport, and industry sectors, could play an integral role in the UK’s plan going forward. Specific, targeted policies, for example, the “insulation of all practicable lofts by 2022” or a “32% improvement in efficiency of conventional cars by 2030” advised by the CCC (Committee on Climate Change, “2017...”), would drive these changes. The benefits are clear: higher efficiency means less energy and correspondingly fewer emissions to fulfill needs. Although investment is required, efficiency is one of the most cost-effective avenues to lower emissions. Policies that support individuals improving efficiency in their homes and vehicles or that raise efficiency standards in new buildings and transport would be a valuable step. Even so, efficiency represents only a fraction of the changes needed to meet targets.

Changing the composition of energy
sources in sectors such as building, transport, and industry may also prove important with the power sector holding less potential for reductions. Changes will likely include using biomethane in the gas grid, increasing the proportion of electric vehicles, and transitioning home heating from gas to heat pumps. These changes would raise electrical demand and emissions reductions only realized if the new electricity were generated through low carbon methods.

The UK will likely find renewable technologies and nuclear power the most effective additional low carbon generation sources. Onshore and offshore wind generation; medium-scale to small-scale hydropower, particularly in some areas of Scotland; and small-scale solar power are especially promising technologies. The CCC has already advised the government to expand contracts for renewables so supply can meet demand from sectors transitioning toward electricity (Committee on Climate Change, “2017…”).

Simultaneously, nuclear power can provide a stable baseload. To maintain a nuclear base, the UK would need to invest in nuclear projects promptly to enable new plants to be operational before aging plants are retired. Nuclear is the lowest-emitter among reliable sources, emitting far less CO₂ per unit of electricity generated than either coal or natural gas (Allen) and making it a reasonable choice to supplement renewables and the various sources needed to balance renewables. The Scottish government and some environmental organizations argue that nuclear generation carries inherent safety risks and that the UK should focus support on cleaner technologies, such as offshore wind (Mason and Goodley). Even so, nuclear power will likely prove worthwhile because, unlike renewables, it can provide consistent electricity.

Secure Power with Nuclear, Natural Gas, Batteries, and Flexible Demand

The significant flaw in renewable generation is that the technologies are sporadic and unreliable. Weather causes frequent, substantial fluctuations in the quantity of renewably generated energy. Consider the efficiency of onshore wind: a 2012 study demonstrated that in the best cases, on average wind farms produce 25% of their maximum energy capacity. This efficiency also decreases with age to as low as 10% after 16 years (Hughes). Inadequate electricity supply causes power outages, which are aggravating and dangerous in cold months, so balancing fluctuations in electricity supply is essential.

Effective balancing of fluctuations is also critical to keeping costs down, as Germany’s experience shows. The country rapidly increased renewables to provide nearly 27% of electricity in 2014, decreasing CO₂ emissions while lowering the cost of generating and transmitting electricity. Yet the direct cost of electricity for German households rose due to surcharges resulting from the fluctuation of renewables (Pollitt and Anaya). Renewables would need to be complemented efficiently to ensure adequate electricity and minimize costs to customers.

The UK may find a varied generation portfolio effective. Diverse renewable technologies and a nuclear baseline could be part of a balancing portfolio as well as natural gas and batteries that can meet fluctuations with a rapid release of electricity to the grid. Despite a higher carbon footprint, natural gas could complement renewable generation’s quick, unexpected dips. Natural gas plants can respond quickly to these variations. They can be started and reach full load capacity in as little as ten minutes. In contrast, lower-emitting nuclear plants require up to two days to reach full capacity (Atlinta Energy). Quick adjustment to intermittent renewable output is crucial; consequently, a moderate capacity of natural gas would be useful.

Intermittent renewables can be smoothed further by batteries, such as hydro-batteries, that store energy in high supply/low demand times and quickly regenerate the energy at low supply/peak demand times. Scottish Power’s Cruachan Power Station, a pumped storage hydropower station, is one such battery. Built into a hollowed mountain, it pumps water from the lake at its base to a reservoir partway up the mountain when excess electricity is available. When electricity supply is insufficient to meet demand, water from the elevated reservoir is then released, flowing through generators
within minutes. The overall process generates minimal emissions (Scottish Power). Similar batteries could be implemented where possible to provide swift response to dips in renewable generation or peaks in demand. In short, a combination of natural gas and batteries can promptly accommodate deviations.

Further stabilization can be found in flexible demand. Flexible demand is effective because actions, such as running a washer, charging batteries overnight, and heating a home, do not need to occur immediately. With smarter homes and electrical grids, these activities could occur automatically when electricity demand is low or when supply is in excess. A smart grid is a long-term method of matching supply and demand because it does not require modifications, such as changes in capacity, and it produces fewer emissions than natural gas, the predominant method of balancing fluctuations today. Incorporating this flexibility on the consumer side of the electricity market would accommodate a higher percentage of renewables in the UK’s generating portfolio.

Unfortunately, converting to a smart grid is an enormous infrastructure change that calls for investment now. The UK’s electrical infrastructure was built primarily during the 1950s and 1960s during a rapid expansion of electricity. It is aging and operating near full capacity (Jenkins et al., p. 415). Upgrading the electrical grid will be necessary whether through conventional expansion or modification to a smart grid, and researchers estimated in 2012 that the UK could save £19 billion in the long run by choosing a smart grid (Easton and Byars). The UK began progressing toward a smart grid with a requirement that smart meters, a necessary first step to overhauling the grid, replace conventional meters by 2020. However, concerns about privacy and inaccurate billing caused pushback until the government downgraded the requirement to a suggestion (Meadows and Brodbeck). Stricter smart meter quality standards may be needed to address citizens’ concerns before the government can strengthen policies supporting investment in the smart grid.

Conclusion

The UK has made significant environmental strides, setting ambitious goals, reducing emissions drastically, and becoming a leader in the arena of climate change mitigation. Part of this success can be attributed to the effectiveness of the CCC, a data-driven organization that gives the government updates on climate change concerns and suggests programs and regulations to help keep the UK on track toward an 80% decrease in emissions by 2050. Various programs, many of which focus on correcting externalities, like the EU ETS, or reducing uncertainty to encourage investment, such as Contracts for Difference and Feed-in Tariffs, have also helped the UK to effectively encourage emissions reductions.

Despite the success, the country’s climate change efforts face mounting challenges. With coal successfully reduced, more difficult methods of reducing emissions are necessary. Many nuclear power plants are scheduled to be decommissioned over the next decade without adequate replacements planned, leaving the country with a lower capacity for low carbon generation. Simultaneously, the UK will need to meet growing demand, growth partially caused by sectors beyond power moving toward electricity. Meanwhile, government support of strong climate change policy has wavered over the past five years. Through these rising concerns, it is important that the UK continue meeting self-set targets to keep uncertainty low and encourage outside investment.

To successfully lower emissions amid these challenges, prompt decisive policy with the following objectives would be helpful. In sectors beyond power, efficiency improvements and movement toward electrical power are key first steps. The consequent rising demand could be met primarily by nuclear power and a composite of renewables, including onshore and offshore wind, solar, and hydro generation. Finally, to balance the inconsistencies introduced by a higher ratio of renewables, the UK could look to natural gas power to address demand when renewables lull for hours to days, innovative batteries to provide extremely fast response to fluctuations, and a smart grid to offset discrepancies from the consumer side of the market in the long term.
The UK can meet its ambitious emission targets. However, maintaining its position as a world leader in combating climate change cannot wait five or ten years—it requires governmental action today.

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AFFORDABLE HOUSING IN LONDON

Ian Davis

In London, England's array of opportunities for work, leisure, and education attracts people from diverse backgrounds and experiences. In turn, the city's population has reached historically high levels and is expected to continue growing. As London's population grows, affordable housing becomes scarce. This article analyzes the landscape of London's affordable housing market and the extent to which London Mayor Sadiq Khan's planned reforms will make living in the city genuinely affordable for years to come.

Introduction

A major concern in the UK, particularly in London, is the shortage of affordable housing. First-time buyers at the bottom of the housing ladder struggle to establish steady footing, and both the private and social rent sectors are experiencing rising rents combined with reduced housing subsidies from the government.

In recent years, London has encountered the dilemma of a rising population and a lack of sufficient, affordable housing. London’s population stood at approximately 6.5 million at the turn of the twenty-first century; in 2018, it stands at just under 9 million and is expected to grow to 10 million in the next ten years (Greater London Authority, Housing..., Figure 1.1). Although London has historically had a sufficient housing supply, the surplus of dwellings compared to household demand has narrowed as of late. Since 1997, the numbers of jobs and people in London have grown by 40% and 25%, respectively, while the number of homes built has grown by a mere 15% (Greater London Authority, Housing..., Figure 3.2). Without an adequate number of new homes being built, it is quite possible that London will lack sufficient supply to meet growing demand. As demand continues to grow, it can be expected that prices in the real estate market will continue to soar. Such factors are likely to squeeze out families, particularly those in the lower quintile of earnings.

To address these concerns, London Mayor Sadiq Khan aims to make housing genuinely affordable and reform the planning system for Londoners in the next five years through his Affordable Homes Programme. Failure to confront this housing challenge would have widespread implications. Without adequate, affordable housing, working in London becomes more difficult. Without workers, businesses have trouble functioning. Thus, it is imperative that London resolve this issue and develop a strong foundation on which the economy can
ultimately thrive. Naomi Smith, executive director of campaigns at London First, a business membership organization, explained: “Khan’s #LondonIsOpen campaign isn’t yet a reality, because London is only open to those who can afford to live here. With average rents topping £1,700 a month, too many workers are being priced out of the capital and it’s hurting employers’ ability to recruit and retain talent” (Featherstone). Although Mayor Khan’s plans are a step forward in finding a solution, he should look to free up brownfield land while revising down his 35% threshold for future developments.

The Landscape of Affordable Housing in London

What Is Affordable Housing?

Although the meaning of affordable housing can vary, affordable housing, as defined by the Mayor of London, is “social rented, affordable rented, and intermediate housing, provided to eligible households whose needs are not met by the market...with eligibility determined based on local incomes and local house prices” (Greater London Authority, The London Plan...). Additionally, the following analysis considers the role of the owner-occupied market as well as the private rented sector, as both have experienced dramatic transformations and are likely to see their roles continue to change.

The Owner-occupied Market and Sale-only Products

The owner-occupied sector, which has experienced a dramatic downturn in comparison to the private rented sector, can be broken down into two groups, those who own their home outright with no mortgage and those who currently have a mortgage. As a percentage of the various housing options in consideration (including the rental market and intermediate housing options), homes owned outright (with no mortgage) have remained stable over the past few years, while the percentage of homeowners with a mortgage has decreased dramatically (Greater London Authority, Housing..., Figure 1.5). Despite historically low interest rates, not only do potential homeowners lack the cash on hand to make the upfront payments for a home but also available credit has dwindled. There has been a squeeze on mortgage credit, as lenders are simply being more conservative with lending money (Scanlon and Kochan). The inability to borrow a sufficient amount of money to finance a home has put a strain on home ownership, specifically for those who cannot afford to front a large down payment.

Products such as starter homes and discounted market sales serve as the main for-sale options for affordable home ownership. Starter homes, which were recently brought under the definition of “affordable” in a national government white paper on fixing England’s housing market, are meant to serve first-time buyers between the ages of 23 and 40 who qualify for a mortgage but have a maximum household income of £90,000. These homes should not exceed £450,000 and should be sold at a 20% discount on the market value (Home Builders Federation). Starter homes are a rather new option in the London housing market, as building for these homes has only begun in 2017. Discounted market sales, which are also sold at a 20% discount of the market value, also continue to be tested in London. Affordable housing schemes in London, specifically those that are sold or rented at a discount, typically receive government subsidies during construction.

Although financial strain has clearly served as a deterrent to Londoners taking on home ownership, a shift in consumer tastes toward shorter tenures can serve as an additional explanation for the decline. Londoners, in particular those who are younger and have yet to start a family, may simply prefer the attractiveness of the rented sector and short-lived tenures.

The Rental Market

The financial crisis of 2008 led many home-seekers in the market toward the rented sector rather than the owner-occupied sector. Specifically, the affordable and social rent segments of the rental market have been a dynamic area of affordable housing supply. According to the Department for Communities
and Local Government, social housing is housing rented at below market price to people in housing need. Across England, social housing has made up approximately 17% of all housing (Department for Communities and Local Government, National Statistics). Social rented housing is owned by registered social landlords, specifically local authorities or housing associations. As recently as 2017, housing associations have been considered public, not-for-profit organizations. Through last year, however, there has been a push to reclassify housing associations as private organizations to ramp up public borrowing (Pickard and Williams). Approximately 4 million homes in England are rented from local authorities and housing associations, and there are currently 1.2 million households on the waiting lists for social housing. Those who rent in the social rented sector have typically seen their rents increase faster than earnings, or wages, since 2001–2002 (Department for Communities and Local Government, National Audit Office).

Social rents have steadily been on a decline as a percentage of all tenures. Specifically, around 2008–2009, social rents fell below private rents as a percentage of all tenures (Greater London Authority, Housing..., Figure 1.5). During his final years in office, Boris Johnson began to phase London out of social rents, instead pushing the city toward affordable rents, urging housing associations and local authorities to set rents at approximately 80% of the market value. To many, such as Khan, this is not a feasible approach toward “genuine affordability.” Many felt that the previously utilized social rents were truly affordable because of their formulaic approach, in which rents were set based on the local wages and property values. With such an approach, rents typically lingered around 50% of market values (Wiles).

Private rentals continue to thrive as a source of housing. The private rent sector is primarily composed of landlords who lease to tenants on what are typically short-term tenures. After a steep decline through the 1980s and early 1990s, private rentals have been on the rise and are projected to continue growing over the next ten years as a percentage of all household tenures. By 2025, the private rented sector is expected to converge with and surpass the owner-occupied sector (Greater London Authority, Housing...).

Private rentals are an ideal source of short-term and flexible housing for people across a broad spectrum of earnings. Private rentals are suitable for those who are at a turning point in their lives—starting a new job, starting a family, or continuing education—and serve as a nice stepping stone on the housing ladder (Clark and Huang, p. 325). London has seen a net influx of people in their 20s and a net outflux of people in their 30s, and data suggest these age groups are not residing in the city for long, thus seeking out private rentals for their short-termed tenure and convenience. Moreover, the private rented sector covered the largest range of incomes, whereas owner-occupied housing was restricted to higher-quintile earners, and social housing was typically restricted to lower-quintile earners (Greater London Authority, Housing...).

Private rentals serve as an appealing option to a diverse base of tenants. Specifically, immigrants from foreign nations seek out housing in the private rented sector, as they are neither capable of obtaining the financing for home ownership nor qualifying for social housing via local authorities. Although Brexit policies will likely have a direct impact on immigration, any sustained influx of immigrants will likely have a sustained impact on the demand for housing.

Mayor Khan recognizes that the private rental market is the only sector of housing that has seen growth in recent years, thus is emphasizing continuing to develop the build-to-rent market. The build-to-rent market is driven by professional management groups who can more easily guarantee longer tenancies and thus greater stability. Such long-term stability helps make the build-to-rent market an attractive investment for institutional investors and caters to a recent preference toward renting for long-term tenancy as opposed to making the large investment of purchasing a home (London Councils, London First, and Turley).

**Intermediate Housing**

Between homeownership and rental products lay intermediate housing options.
Table 1
Overview of Mayor Sadiq Khan's Affordable Homes Programme, 2016–2021

<table>
<thead>
<tr>
<th></th>
<th>London Affordable Rent</th>
<th>London Living Rent</th>
<th>London Shared Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is it?</td>
<td>Rents cannot be set at more than 80% of market rents</td>
<td>Ward-specific rent levels based on median gross household income for that borough</td>
<td>Homebuyer purchases a share in a new home; regulated rent on the unsold share</td>
</tr>
<tr>
<td>Rent or own?</td>
<td>Rent</td>
<td>Rent, transition to ownership</td>
<td>Hybrid between rent and ownership</td>
</tr>
<tr>
<td>At whom is it aimed?</td>
<td>Those who are incapable of obtaining housing in the open market</td>
<td>Those who are ultimately looking into obtaining homeownership within ten years</td>
<td>Those who can support an initial purchase of 25%–75% of the property value with a 10% mortgage on the share to be purchased in the future</td>
</tr>
<tr>
<td>Who is eligible?</td>
<td>Homes allocated on the basis of need, in conjunction with waiting lists through local authorities</td>
<td>Existing private and social renters with a maximum household income of £60,000</td>
<td>Those with a maximum household income of £90,000</td>
</tr>
</tbody>
</table>

Source: Greater London Authority, Homes for Londoners...

These are products that have both ownership and rental components and are offered above social rents but still remain below market levels (Dyer). There is an array of products that fall under the category of intermediate housing. Shared ownership and/or equity schemes tend to be the most popular, and discounted market rents serve as an additional alternative.

**A Set of Refined, Affordable Housing Products**

In an effort to meet excess demand by ramping up affordable housing in London, Mayor Khan has introduced his plan, *Homes for Londoners: Affordable Homes Programme 2016–21*, which brings three refined, affordable housing products to market. With these products, Khan is focused on not only providing affordable rental options but also ensuring that Londoners are being set up for long-term security and the opportunity to become homeowners. According to his initial vision, Khan intends for the plan to provide approximately 100,000 new affordable homes through 2021. The three products are London Affordable Rent, London Living Rent, and London Shared Ownership (Table 1). The London Living Rent and London Shared Ownership products will likely make up two-thirds of the newly built homes, while London Affordable Rent products are to make up the rest (Greater London Authority, *Homes for Londoners*...).

London Affordable Rent is aimed at supporting low-income households who are typically unable to secure or sustain housing on the open market. London Affordable Rent homes, per Khan’s policy, cannot be set at more than 80% of market rents and reflect Boris Johnson’s goal of shifting London away from social rents. Khan does not truly believe that 80% of market rents is affordable for the people pursuing this product and thus presumes that rents will be set at a much lower rate by local authorities. To ensure that rents are aligned with inflation, the rents are to be based on benchmarks which reflect formulaic
figures tied to the Consumer Price Index. These benchmarks will be updated each April to ensure consistency over time (Greater London Authority, *Homes for Londoners*...).

The cost of renting in the London Affordable Rent category is likely from £144.26/week for a studio to £178.18/week for a home with five bedrooms, based on a formulaic approach that incorporates social rents uprated by the Consumer Price Index (Greater London Authority, *Homes for Londoners*...). This is, according to the mayor’s plan, the option most affordable to those with the lowest incomes in London. The Social Housing Regulator, whose purpose is to promote a “viable, efficient, and well-governed social housing sector,” will register all landlords (typically housing associations and local authorities) providing these homes and oversee rent-setting guidance (Homes and Communities Agency).

Mairead Carroll, London external affairs manager for the National Housing Federation, which represents housing associations, explained, “housebuilders have always taken a pragmatic approach and currently rent properties at considerably less than 80% so that people can live there” (Marrs). Carroll explains that the mayor’s approach is not new and that housing associations have been engaging in this practice for years. Many people and organizations recognize the substantially high level of rents and are already striving to improve affordability. Thus, it is important to be mindful of the marginal effect of the mayor’s dynamic rent-setting guidance in reducing the cost of housing, as this methodology has been previously utilized by housing associations.

London Living Rent is an “intermediate affordable housing product with locally specified rents” (Greater London Authority, *Homes for Londoners*...). This product is viewed as a rent-to-buy product, where submarket rents are used to help tenants save to eventually buy their own home. Ward-specific, maximum rent levels will be based on one-third of median gross income for each of the boroughs. Although rent levels will be based on each borough’s median income, they may vary based on house prices in the ward and the number of bedrooms in each home. Landlords will have the opportunity to let homes at lower rents if they so choose. Like the providers of London Affordable Rents, providers of London Living Rents must be registered with the Social Housing Regulator (Greater London Authority, *Homes for Londoners*...).

To be eligible for London Living Rent, one must be an existing private and/or social renter with a maximum household income of £60,000 without savings to purchase a home. Providers must assess a tenant’s ability to purchase a home on a shared ownership basis within ten years. However, if no tenant has purchased the home within ten years, the plan requires the provider to sell the home on a shared ownership basis to another eligible household (Greater London Authority, *Homes for Londoners*...).

The third product is London Shared Ownership, which “allows a home buyer to purchase a share in a new home, and pay a regulated rent on the remaining, unsold share” (Greater London Authority, *Homes for Londoners*...). Purchasers pursuing this product should have a household income that can support an initial purchase between 25% and 75% of the property’s value as well as a 10% mortgage on the share purchased. To be eligible, purchasers must have a maximum income of £90,000, which is in accordance with the London Plan (Greater London Authority, *Homes for Londoners*...).

**The Delivery of Affordable Homes**

Khan has moved swiftly, having reached deals with some of London’s largest housing associations, private developers, and London councils to bring approximately 50,000 new affordable homes to the city in the next four years by promising £1.7 billion in funding subsidies from the Greater London Authority (London City Hall, “Mayor Strikes Deal...”). Strategic partnerships were developed with a variety of housing associations, and these groups estimate that they will be capable of providing approximately between 50% and 60% affordable homes in their schemes (London City Hall; “What Is the New...”) Such a deal proves to be a strong foundation for Khan’s vision of approximately 100,000 new genuinely affordable homes through 2021.
However, a significant challenge is the difficulty with which developers and local planning authorities can effectively construct affordable homes through the planning system. Local councils and housing associations serve as the main drivers of social housing development plans. When considering the percentage of affordable homes approved for building to total approvals, however, the number is miniscule. Since 2010, the number of homes falling into the categories of social rent and affordable rent has shrunk to approximately only 10% of all new approvals (Greater London Authority, *Housing in London*..., Figure 3.12). The remainder of new home approvals went on the market at normal market rates. There tend to be a substantially larger number of homes being built by the private sector as opposed to not-for-profit housing associations and the local authorities (Greater London Authority, *Housing in London*..., Figure 1.7). These figures are troubling as they suggest that 1) the private sector has not been held responsible for providing truly affordable housing options to Londoners and 2) those who do choose to provide genuine affordable housing are bogged down in overly bureaucratic and long-winded processes.

Reforming the Planning System

Historically, a lack of transparency between planning authorities and developers and overly bureaucratic procedures have plagued the delivery of affordable homes. These are issues that legislators, housing associations, and authorities agree require reform. In addition to laying out an array of refined products to be offered to Londoners, Khan is looking to address the issues facing the planning system through a set of proposed efficiencies, including the utilization of a threshold approach and the introduction of viability assessments to ensure efficiency in all housing development plans.

The threshold approach introduces two distinct routes by which all developers can have plans approved: the Fast Track route and the Viability Tested route. The route depends on whether or not the developer meets the 35% threshold of affordable housing that will be required for all new residential development. The Fast Track route will apply to any development plans that meet or exceed the 35% affordable housing provision without public subsidy, provide housing on-site, meet the specified tenure mix, and meet other requirements of the mayor's office and the London Planning Authority (LPA) (Greater London Authority, *Affordable Housing*...). The purpose of the Fast Track is a quick path toward beginning development.

The Viability Tested route will be implemented for those plans that do not meet the 35% affordable housing threshold or that require public subsidy to meet this threshold. Schemes under this classification will be required to submit detailed viability information to the mayor and the LPA. Viability assessments, developed by the mayor and the LPA, are meant to provide greater consistency and transparency to both the general public and the developers responsible for delivering affordable homes.

Included in the mayor's rigorous viability assessments are models that "help to assure an accurate appraisal of the plan and all affordable homes being built, the costs associated with building the homes such as professional fees, marketing, and finance costs, developer profit, and an accurate determination of the land's value" (Greater London Authority, *Affordable Housing*...). These models will ultimately increase transparency and urge the developer to think critically about how to maximize land use. Controversy lingers, however, as both housing associations and traditionally private developers worry that additional red tape may slow down the rate at which homes are actually being built.

Recommendations

The mayor's strategic plan creates a path to affordable housing for hundreds of thousands of Londoners in the next five years and beyond. However, two steps must be considered should London effectively deliver the number of affordable homes that it needs: 1) continuing to efficiently utilize space in denser areas of the city through newly devised building approaches and strategically freeing up brownfield land as well as 2) revising downward the newly implemented 35% threshold for affordable
home development.

While research hints at the idea that the inner city is overdeveloped and any remaining affordable housing must shift toward the outskirts of the city (Mace et al.), private developers tend to believe that the costs associated with such a move are outrageously high. Because so many of the Londoners who require affordable housing tend to work in the city center, expanded outward development would require transportation to and from their homes. This means greater infrastructure investment in roads and railways. Moreover, many environmental activist groups, such as the Campaign to Protect Rural England, are concerned with the cost of destroying London’s Green Belt, which is designated rural land on the outskirts of the city that serves as a home to much of the region’s agriculture and wildlife (Campaign...). Khan has expressed a commitment to not only maintain this land but also expand its coverage.

Khan must look to brownfield land, former industrial or retail space, as an additional source of housing. According to the Brownfield Land Registrar, a substantial amount of brownfield space lies scattered across the city’s boroughs. Although much of this space is technically private property, many of the residential developers building on these sites have committed themselves to developing affordable homes as a part of their London City Hall (London City Hall, “Mayor Strikes Deal...”). This is a promising start and should serve as the foundation on which Khan can utilize vacant city space to provide homes to Londoners.

The decision to continue development within the inner city means denser neighborhoods. Although challenging, this is the most appealing option to developers, who strongly prefer to continue development close to the city center. Newly devised building designs are a creative necessary to ensure an efficient use of remaining space. Developers can look to Frankfurt, Germany, a large financial hub that is home to a substantial number of migrants, for an innovative method of affordable housing. According to Nina Adam, who has covered the refugee crisis in Germany, developers in Frankfurt are introducing “homies,” which are small modular homes located in unused building plots (Adam). The majority of the people taking on these homes will be refugees who work in Frankfurt’s service sector. Such designs focusing on low-income, service sector families may be beneficial in a city such as London.

Additional space can be found in what are referred to as “ghost homes,” which have either been abandoned by the international elite or left to younger generations through inheritance but serve as second or third homes. It is estimated that London has slightly more than 20,000 of these homes (Williams-Grut). Khan has discussed taxing these empty homes at an extraordinarily high rate to spur the sale of these vacancies, but any sort of tax may prove ineffective. Although these homes can be used in addition to other housing schemes, they alone are not enough in number to serve as a momentous solution to London’s housing crisis.

Despite housing associations and local authorities appreciating Khan’s vision to catalyze affordable housing through the 35% threshold approach, meeting this threshold may not necessarily be an easy task. One problem with the current threshold is that such a high proportion of below market price housing may not be feasible to investors looking to obtain a solid financial return. Historically, many international investors have looked to London as an opportunity to invest in luxury-style building that could provide lucrative returns. While the threshold approach may be helpful in vetting foreign investment, investors will be fearful as to whether or not they are capable of earning a strong return on genuinely affordable, yet lower-margen homes, ultimately deterring capital away from London.

A second problem is that for those developers who are willing to take on Khan’s new threshold, there may be a struggle in justifying viability should they fail to meet said threshold. Although Khan has been clear in his notions that new homes must be genuinely affordable, housing associations and traditional private developers alike question not only whether the threshold is realistic but also what is to be expected of their schemes with regard to building standards and code.
Many large property developers have asked for, but have yet to receive, clarity on what they are being asked to deliver to meet the threshold (Booth). A spokesman from the Home Builders Federation explained that “If he (Khan) sets the target too high he will potentially see a reduction in overall housing supply at a time when we are only building half of what we need already” (Booth). Much of the proposed building has yet to take place, but it would be worthwhile for the mayor to consider the marginal benefit that could stem from a reduction in the threshold used. For example, if a 30% or even 25% threshold is used, developers may feel more compelled to take on projects, resulting in a larger gross number of affordable homes being built.

**Conclusion**

The struggle to obtain affordable housing is a predicament that has garnered substantial attention on local, regional, and national levels. As a densely populated hub for global business, London in particular has felt this struggle for a prolonged period of time. The reforms that Mayor Khan is looking to implement can have significant implications for local housing authorities, private developers, and many of the city’s inhabitants. While local authorities and affordable housing activist organizations such as Shelter are excited for Khan’s vision to take shape, large traditionally private developers express concern—some over vague frameworks and others over the potential for a heightened level of bureaucracy. Ultimately, the decision to free up private sector land and brownfield land as well as reconsidering the proposed 35% threshold could have a positive impact on the number of affordable homes delivered.

Although it is a complex matter, affordable housing must remain a top priority in London, as it can help improve the lives of those in various local communities. In times of great uncertainty, issues such as housing and infrastructure investment will be critical in positioning London as a city that can foster both national and global growth. Current projections, funding goals, and pen-to-paper agreements all look promising for Khan and his team as they look to curb unaffordability in the UK’s most dynamic city. Nevertheless, the execution of such plans remains the biggest hurdle ahead.
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HOW WILL THE UK FINANCIAL SERVICES
SECTOR ADAPT TO CHANGES
AS A RESULT OF BREXIT?

Lindsay Wilson

As the UK begins to understand the implications of the Brexit vote, the status of its financial services sector is at risk. This article focuses on the challenges the UK will face when negotiating a new deal with the EU and provides potential likely scenarios that the UK will adopt.

Introduction

When Prime Minister (PM) Theresa May triggered Article 50 of the Treaty of Lisbon on May 29, 2017, she set into motion the official withdrawal of the UK from the EU. This unprecedented departure from the EU provoked intense debate among the residents of the UK and the EU about the uncertain future of their relationship. Article 50 provides that any member state may withdraw from the union in accordance with its own constitutional rights (The Lisbon Treaty). Due to this provision, there is considerable uncertainty about what will replace the existing laws that soon will not apply to the UK. The financial services sector is especially conscious with Brexit negotiations as much of that sector’s operations depends on access to the EU single market. The potential denial of unrestricted access to this market presents significant challenges. The currently thriving landscape of the financial services sector will not remain unless the UK is able to negotiate a deal with the EU that allows it access to the single market while maintaining some regulatory sovereignty.

With negotiations under way, PM May announced her plan for the Great Repeal Bill, which essentially converts existing EU laws into domestic UK laws. The ambiguity surrounding how the UK will establish these new laws while maintaining stability has left many businesses and consumers frantic for answers. London is the global hub for the financial services sector, which makes withdrawal from the EU even more complex. This article explores the various challenges the UK faces while trying to negotiate a deal for the financial services sector that allows it to maintain its prominence in the world economy.

"The single market is defined by the European Commission as “one territory without any internal borders or other regulatory obstacles to the free movement of goods and services” (European Commission)."
Financial Services Overview

The financial services sector is a primary contributor to the UK's economic success. John Armour, a Professor at Oxford University, explains this sector: “[f]inancial services comprise[s] all the activities undertaken in the financial system. It includes banks, asset managers, financial markets, and insurance” (Armour). The Global Financial Centres Index ranked London as the world’s leading global finance center in both its 2016 and 2017 reports (Yeandle, p. 2). This index is based on several key factors, including human capital, business environment, infrastructure, reputation, and financial sector development (Yeandle, p. 8). In both reports, London ranked at the top of each of these categories; however, London fell 13 points during 2017 (Yeandle, p. 8). Other than New York City, most cities’ points rose between the 2016 and 2017 reports. The 2017 report named Brexit as a possible reason for London’s fall in the rankings.

In 2014, UK-based financial and related professional services contributed €190 billion to the UK economy (“Key Facts…”). The financial services sector affects the lives of millions of UK citizens: 2.2 million people work in financial or related professional services (“Key Facts…”). One reason the UK achieves success and influence in the financial services sector is the passporting rights it receives as a member of the EU (discussed later).

More than half the world’s financial services firms have chosen to set up their headquarters in London (Magnus et al.). If the UK fails to receive a favorable deal with the EU, it is likely that many of those firms will be forced to move their headquarters elsewhere in the EU. This constantly expanding and consistently profitable sector has played a large role in boosting the status of the UK internationally as well as providing jobs, high incomes, and prestige domestically. As the government continues to grapple with the aftereffects of the Brexit vote, the financial services sector has been placed in a position of uncertainty. Losing access to the single market, coupled with the changing relationship with the EU, could have hugely detrimental effects on the financial services sector in the UK. The access the passporting rights provide to the EU is critical to the state of the financial services sector in the UK.

Passporting Rights and Equivalence

Two key concepts that dominate the financial services-related Brexit discussions are passporting rights and equivalence. Passporting rights allow countries that are members of the EU or the European Economic Area (EEA)² to trade freely among themselves; these rights also allow citizens to operate their businesses in all member countries with limited authorization requirements. Passporting rights are fundamental to the existence and success of the EU single market for financial services (UK Finance, “Brexit Quick Brief #3”). The intricacies of passporting must be fully explored in order to assess how the financial services sector will function after the UK’s withdrawal. It is crucial to recognize that there is not one single “passport” but several passports that the UK must maintain if it wants to preserve its current status with the EU. If the UK were to lose its passporting rights, UK businesses would need to apply for licenses to operate within each EU member country. This would not only lead to a loss of ease in conducting business but also add additional costs to obtain the correct licenses and permits.

UK Finance, a coalition of over 300 firms that focus on finance, banking, markets, and payments-related services in or from the UK, has published several briefing papers on the consequences of Brexit on the financial services sector. The briefing paper focusing on passporting gives a detailed assessment of the complexity and legal uncertainties concerning passporting rights after the withdrawal. This report outlines the nine different passports that banks and other financial services institutions rely on to operate within the EU and the EEA; it also explains consequences that would result from the loss of access that the UK might experience. There are several possible outcomes. If the UK loses its passporting rights, it will not lose its privilege to conduct business in the EU entirely;

²The EEA includes the EU countries as well as Iceland, Liechtenstein, and Norway.
however, the regulations would be stringent and the services UK businesses would be allowed to provide could be highly limited (UK Finance, “Brexit Quick Brief #3”).

UK Finance explains the process of achieving equivalence as “when assessing the operational rights or treatment of foreign banks in the EU the EU assesses whether the standards of regulation and supervision in a bank’s home market are ‘equivalent’ to those of the EU” (UK Finance, “Brexit Quick Brief #4”). The principle of equivalence is pivotal in the context of Brexit negotiations. Failure to achieve equivalence within the EU and the EEA would make preserving London as the world’s financial hub extremely difficult. UK Finance also notes that equivalence and passporting rights are not synonymous; rather, “EU market access rights available under equivalence assessments are narrower, more onerous and more unstable, and many banking services or other financial services cannot be provided at all via equivalence” (UK Finance, “Brexit Quick Brief #4”). Facing the potential loss of passporting rights and the uncertain future status of equivalence for the UK in the EU, the UK’s financial services businesses are in a difficult period of confusion that has prompted businesses to make Brexit contingency plans (Buyck).

The Great Repeal Bill

The House of Commons report on the Great Repeal Bill stipulates the bill’s three main components: the repeal of the European Communities Act (ECA), the transposition of EU law into UK domestic law, and the proposed use of delegated powers. One of the first steps in the official withdrawal process from the EU is repealing the ECA, the act that brought the UK into the EU and established the supremacy of EU law over UK law. PM May and David Davis, Secretary of State for Exiting the European Union, both believe that the most effective withdrawal route is to repeal the ECA while simultaneously passing the Great Repeal Bill (Caird and Lang). This bill hopes to avoid legal uncertainty and chaos by converting all applicable EU law into UK law (Department for Exiting the European Union and Davis).

EU and UK laws have been intertwined for the past several decades, which makes untangling them extremely complex (Mooney, “Extracting…”). There are more than 12,000 EU regulations in force within the UK, which makes the translation of EU law to domestic UK law an arduous task (Smith-Spark). The mass of EU regulations in place makes it incredibly difficult for Parliament to ensure that the Great Repeal Bill does not leave a legal vacuum. Daniel Greenberg, a former Parliamentary office member, said that the transfer of EU law to UK law is “a civil service legal exercise on a scale that has not been encountered at any other time in our recent legal history” (Williams-Grut). Because EU laws applicable in the UK cover all different kinds of regulation, a clear withdrawal plan is important to avoid what is now known as the “cliff-edge effect” (UK Finance, “Brexit Quick Brief #2”). The cliff-edge effect might occur if the UK and the EU fail to reach an agreement about the status of their partnership during the two-year negotiation period, in which case the UK would have to follow the baseline trade rules set by the World Trade Organization (UK Finance, “Brexit Quick Brief #2”).

The UK Finance report on the withdrawal bill outlined three primary challenges for Parliament when attempting to write the Great Repeal Bill (UK Finance, “Brexit Quick Brief #7”). The major goal is to sort through all the EU laws and identify which are applicable to the UK, with an aim to retain the UK laws created through EU regulations and directives. Several different classifications of laws are created for the entirety of the EU. While some of these laws are automatically binding, others are not and must be adopted by each member state. Two of the most important classifications of laws in navigating the Great Repeal Bill are “directives” and “regulations.” Since the EU’s primary role is to create uniform regulation and safety within its member states, preserving those protections remains paramount. The European Parliament defines “regulations” as binding legislative acts that require quick implementation by every member state, whereas “directives” are legislative acts that set goals that the member states must reach but do not give specific timelines or pathways.
of implementation. Instead, countries are left to independently develop their own laws ("Regulations, Directives..."). If the Great Repeal Bill did not exist, then all current EU regulations and laws would cease to have authority within the UK, creating potential havoc from a legal vacuum, or as Brexit news has started to refer to it, a black hole (UK Finance, "Brexit Quick Brief #7").

Another factor that makes writing the Great Repeal Bill so difficult is that each law must be analyzed to see if it needs reworking to apply in the UK. Laws ill-suited to the UK's legal structure require new laws to take their place, adding to the legislative burden. Finally, the most challenging task of creating this bill is to identify any gaps in the law and for Parliament to discern how to manage these gaps and create new laws. Since such legislation has never been necessary before, it will be exceedingly arduous not only to create the withdrawal bill but also to flesh out the details within two years. One way Parliament chose to combat this problem is through granting Henry VIII powers to Ministers. These powers allow the use of secondary legislation to amend the text of primary legislation (Caird and Lang). Davis has implied that changes to law will not require the full force of Parliament. This shift of power away from Parliament to the executive branch has many businesses and consumers worried about their fate.

The Importance of Financial Services Regulation

Financial regulations are arguably the most important type of regulation due to the catastrophic effects that financial market failures can have on the economy, as demonstrated by the 2008 US subprime mortgage crisis, which turned into the global Great Recession (The Warwick Commission). Because London is the world's financial center, it is imperative that Brexit negotiations maintain regulatory standards in the UK. The report of the second Warwick Commission discusses the two main causes of market failure—asymmetric information and social externalities. Asymmetric information occurs when one party in a transaction has relevant information that is either not disclosed to the other party or not known. One of the main responsibilities of the regulatory system is to protect the less knowledgeable consumers from the well informed. For the consumer to be protected, regulation must provide guidelines for how these transactions take place (The Warwick Commission).

In financial services, the social externality stakes are also high: "...[t]he costs of a failure of the financial system are far in excess of the costs to the shareholders of the bank that failed" (The Warwick Commission). While financial services regulation is crucial, those same regulations ideally should not stifle creativity and innovation. Finding the optimal balance of regulation is remarkably difficult within the financial sector. As the UK separates from the EU, the regulatory challenge lies in maintaining high levels of protection while also fostering growth and prosperity and continuing to work with the EU.

Niamh Moloney, a law professor at the London School of Economics, provides insight into the two main reasons financial services regulation is so crucial in the context of Brexit. Moloney ("Bending," p. 1339) writes that EU regulation seeks to do two things: to support the construction of an integrated, single financial system with minimal regulatory frictions, and to regulate that financial system so that the pathologies, notably cross-border risk transmission, are minimized and managed. The single-rulebook of regulations for the EU will no longer apply to the UK after its exit, calling into question how the regulatory environment will change and what will happen to the directives and regulations regarding financial services.

Moloney's analysis demonstrates the imperative that the UK maintains a strong regulatory system comparable with the EU's. Failure to keep an effective system in place could imperil the entire world economy.
Since the 2008 financial crisis, the UK financial services sector has worked toward enacting more effective regulation (The Warwick Commission). EU regulations of financial services have at the same time become stricter. However, the UK and the EU have long disagreed about the intensity of regulation. UK sentiment has always been critical of regulation; many UK residents believe that the EU regulations place too great a burden on businesses. Many UK citizens who voted for Brexit believe that economic regulations will be loosened if the UK reclaims its regulatory sovereignty from Brussels. Thus one of the main points on Brexit and the Great Repeal Bill is how closely the new UK regulations on financial services will reflect these tightened EU regulations.

On February 16, 2018, the Financial Times reported on the UK establishing its goal of “mutual recognition” of financial regulations. The goal of mutual recognition is to allow the UK to access the single market while preserving regulations. Stephen Jones, Chief Executive of UK Finance, is quoted in the article: “Through mutual recognition, closely aligned standards and supervisory cooperation, we can preserve some of the benefits of market access without sacrificing regulatory autonomy” (Parker and Brunsden). While this demonstrates movement toward compromise, it is still too early to say whether the EU will move away from the hard line on financial services and make a deal that will not wound the financial hub in London. To understand the complexity surrounding financial services regulation it is crucial to explore the different regulatory bodies within the UK.

**UK Financial Regulatory Bodies**

Four main bodies comprise the UK financial regulatory system: the Financial Conduct Authority, which works independently from the government; the Bank of England’s Prudential Regulation Authority; the Treasury; and the Financial Policy Committee. The financial crisis that originated in the United States in 2008 prompted a large restructuring of the financial sector (“UK Regulators”). In 2013, Parliament created the Financial Conduct Authority to achieve five main objectives: “enhancing trust in markets, improving how markets operate, delivering benefits through a common approach to regulation, working to prevent harm from occurring, and finally, helping put things right when they go wrong” (“How We Regulate”). Achieving these objectives allows the Financial Conduct Authority to manage financial services and, in turn, protect the public.

The Bank of England is also central to financial stability in the UK; the Prudential Regulation Authority’s main role is to minimize the burden on the rest of the economy when a financial institution fails. In parallel, the Treasury is responsible for monitoring public spending and working on financial services policy (“About Us”). Finally, the Financial Policy Committee established at the Bank of England is tasked with “identifying, monitoring and taking action to remove or reduce systemic risks with a view to protecting and enhancing the resilience of the UK financial system” (Bank of England). The financial services sector is a multifaceted institution, which makes it difficult to envision the best-case scenario after the withdrawal.

**Possible Brexit Scenarios: Which Will Be the Best for UK Financial Services?**

The UK is the first country to ever withdraw from the EU, leaving both sides in a state of speculation about the nature of their future relationship. PM May outlined her vision in a 12-point plan during her first remarks on Brexit. She envisioned a bold and dominant “Global Britain” that was not leaving Europe but instead just leaving the EU (Amur). PM May emphasized the need for certainty, autonomy, a free trade agreement that allows for the greatest access to the single market without membership, and stronger control of immigration (Amur).

The Brexit negotiation period began on March 29, 2017, prompting the UK and the EU to prepare their respective negotiating teams for the first phase of Brexit talks. Six months of heated debate and discussion finally achieved a divorce settlement, enabling progressing to the second round of negotiations (“Brexit Passes…”). The UK and the EU both entered
Brexit talks with very specific intentions; however, the EU had the clear victory during the first phase. According to the Financial Times, the UK was unable to achieve many of the primary objectives of those who voted to leave in the referendum. The leave voters’ dreams of being free of a financial obligation to the EU is far from reality; rather, the UK will end up paying approximately €40 billion to €45 billion to the EU as well as continuing its association with the European Court of Justice (“Brexit Britain…”).

The red lines set by both the EU and the UK permeated Brexit discussions and debate even prior to the referendum vote. The Financial Times argues that maintaining these red lines and failing to compromise will make achieving PM May’s “deep and special partnership difficult” (“Brexit Britain…”). Michel Barnier, European Chief Negotiator for the United Kingdom Exiting the European Union, has made it clear that the city of London and the financial services sector will not be included in a trade deal. It is evident after the second round of Brexit negotiations that PM May and the chief negotiator hold wildly different views on the fate of their relationship. Barnier further emphasized, “[It is the consequence of] the red lines that the British have chosen themselves. In leaving the single market, they lose the financial services passport” (Saeed). PM May, however, believes that the UK can achieve a bespoke, or custom-made, deal that has greater benefits than either of the other models in practice.

The two most likely models for a potential Brexit deal are the Norway Model and the Canada Model. The Norway Model allows membership in the EEA, full access to the single market, and the same free movement rights that apply in the EU. However, the trade-offs of this deal include expected financial contributions to the EU and that EU laws will have force within Norway (BBC News, “Five Models…”). The EU–Canada deal, the Comprehensive Economic and Trade Agreement, is a free trade agreement that eliminates many barriers and fosters greater exports of both goods and services (“EU–Canada…”). Davis, during an interview on the Andrew Marr Show, expressed hopes for a “Canada Plus Plus Plus EU Trade Deal,” which combines all the best parts of trade deals with other countries. He continued to say that “[what we want is a bespoke outcome. We’ll probably start with the best of Canada and the Best of Japan and the best of South Korea and then add that the bit missing which is the services” (BBC News, “The Andrew…”).

As the Brexit negotiations move forward, PM May will need to make contentious comprises about the UK’s level of autonomy while operating within the EU. Emmanuel Macron, the President of France, initially declared that there was no possibility that financial services could have full access to the single market in any EU-UK trade deal; however, he has recently indicated his willingness to possible compromise.

Conclusion

The Brexit deal that PM May and those who voted to leave the EU hoped for is largely impossible, especially with regard to a special deal for the UK financial services sector. Significant compromises need to be made by both sides; however, the UK is evidently in the weaker negotiating position. For London to remain the top global financial services hub, a Brexit deal must be struck that allows the greatest access to the single-market system while keeping the regulatory equivalent to that within the EU.

On January 31, 2018, the Financial Times noted a turning point in the Brexit negotiations that officially ended hope for a “special deal” (Brunsden). This announcement from the EU Brexit negotiators represents a clear departure from May’s ambitions for the EU-UK Brexit trade deal. The EU maintained that the UK knew from the beginning that there was not going to be a special deal and the UK should focus its efforts on equivalence rather than “a wide-ranging new pact.”

Perhaps the most intriguing piece of information in this report was that the European Commission had earlier stated that a smaller financial hub in London might positively benefit Europe. The article stated that Brussels has prepared itself for Brexit by toughening the criteria for achieving equivalence (Brunsden). While negotiators, as of February 2018, are still uncertain about what the trade deal will look
like, it is abundantly clear that the UK financial services sector will be negatively impacted by the departure from the EU.

On June 23, 2016, the UK's citizens voted to leave the EU and in doing so irrevocably changed the fate of the financial services sector. The UK and indeed the rest of the world will continue to discover the implications of this vote for decades to come.

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THE CHANGING OF UK STEM HIGHER EDUCATION IN THE WAKE OF BREXIT

Veronica McKinny

Introduction

The impact of science on today’s world has emerged in large part due to the work of universities in the UK. For the past several hundred years, the UK has forged the field into the acclaimed domain it is today, with UK universities nurturing the minds of notables like Sir Francis Bacon, Sir Isaac Newton, Niels Bohr, and Alan Turing. The prestige of the UK’s scientific program has drawn the best and brightest from all over the globe, leading to the island nation’s domination of modern science. Recent events, however, may threaten the continued success of the UK’s science, technology, engineering, and math (STEM) fields in higher education, all encompassed in the academic scientific community.

With the entirety of the UK set to leave the EU in April 2019, many challenges to science at UK universities arise. Brexit portends a limiting of the freedom of movement essential to maintaining the high quality of UK scientific performance as well as a shift in research funding sources as the UK tries to find money to supplant that anticipated to be lost from EU collaborations. This article explores the consequences that could follow various Brexit outcomes on the movement of people and funds that fuel the UK’s university scientific research.

Pre-Brexit, 1996–2016

From 1996 to 2016, the UK produced the third largest total amount of scientific documents and citations of any country in the world, following the United States and China; in particular, documents authored by at least one UK scientist were cited just under 61 million times in that period (Scimago Lab). Especially when considering the UK’s significantly smaller population size compared to the US and China, these statistics indicate that not only was the UK’s research workforce highly prolific but also the output was of a high enough quality
to garner a hefty number of citations. With a substantial volume of insightful scientific articles produced each year, the UK continues to prove itself a powerhouse of innovation and research.

The outlook of scientific research in the UK post-Brexit, however, begins to change when examining the underlying details of these UK scientific documents. Yes, the UK produces copious cited articles. Yet, of these cited articles, about half of those published within the past decade are co-authored by at least one non-UK partner, of which more than 50% are EU partners (Frenk et al., 2016, pp. 14–15). This statistic is one sign of a strengthening partnership with both the global scientific community and the EU, as shown in Figure 1. When internationally collaborative articles encompass this percentage of UK article output, international partners must therefore be credited with enhancing UK scientific prestige.

The rise of collaboration with EU partners meshes clearly with the growth of the EU's Framework Programmes, run by the European Commission to fund research, technological development, and innovation in EU member states and global partners. The most recently completed Framework Programme 7 (FP7) ran from 2007 to 2013 and contributed to research and development (R&D) by means of competitive grants. Over FP7's seven-year period, the UK received €6.9 billion in FP7 funding, an amount second only to Germany's; the UK also received €1.9 billion of non-competitive structural funds from the EU (Frenk et al., 2015, p. 13). Therefore, in total, €8.8 billion of the EU's €47.5 billion R&D expenditure across the 28 member states (EU-28) during FP7's run went to UK scientists (Frenk et al., 2015, p. 12). Because 71% of this funding went to UK universities (Frenk et al., 2015, p. 18), STEM higher education is clearly a large and important beneficiary of EU investment.

This success in garnering European support for scientific innovation is on track
to continue through the EU’s eighth major Framework Programme, the 2014–2020 program called Horizon 2020. In the most recent (2015) monitoring report for Horizon 2020, statistics show that the UK remains an influential player in the EU’s scientific landscape. For 2015 projects, the UK marked the largest share of participation in signed grants from Horizon 2020, with 13.1%. Organizations based in the UK also received the largest share of Horizon 2020 funds for 2015 projects, with 15.8% (European Commission, “Horizon 2020...,” pp. 210–11). The UK’s high receipt of funding and large participation continue a trend demonstrated in the first Horizon 2020 monitoring report (European Commission, “Horizon 2020...,” pp. 21–22). Indeed, this substantive participation in Horizon 2020 increased from the UK’s already notable involvement in the preceding FP7, marking the UK as a principal player in the EU scientific domain. In turn, collaborations and EU funding have a valuable impact on the nation’s research workforce and article output. The prolific success of citable UK scientific publications in the past few decades owes much to both collaboration with EU scientists and EU funding.

These indicators of the UK’s incredibly strong performance in the scientific domain, as well as UK STEM’s increasing reliance on international partners like the EU, are echoed in the performance of the nation’s universities. UK institutions dominate the list of the top 50 university beneficiaries of Horizon 2020. In 2015, the UK held the top three spots and overall had the most universities at 15 (European Commission, “Horizon 2020...,” p. 20). The UK similarly performs exceedingly well in the National Taiwan University (NTU) ranking, which takes into account a university’s current and past scientific articles alongside metrics like the number of citations. In the 2017 NTU ranking report, the UK had five universities in the top 50 and 36 in the top 500, far outpacing the rest of Europe and once again behind only the leading United States and China (“NTU Ranking...”). Discernably, UK universities contribute considerably to the UK’s status as a global frontrunner of scientific innovation.

Similarly to how many UK scientific articles are co-authored by EU nationals, the EU plays a large role in the STEM-based success of UK universities. Figure 2 shows that, as of 2015, the UK university research workforce is highly international, where 28%
of academic staff and 51% of postgraduate students are non-UK citizens. EU nationals in particular comprise 16% of academic staff and 14% of postgraduate research students (Frenk et al., 2015, p. 8). With such a large portion of the research workforce coming from abroad, the ability to attract talent and funding from an international pool plays a large role in the success of UK universities. Dampening outside interest from joining the UK research workforce is therefore highly detrimental to 1) international collaborations and, in turn, the number of quality scientific articles the UK publishes, and 2) UK universities' provision of high-level contributions to the scientific domain.

Brexit challenges this portrait of an internationally driven UK scientific empire. In June 2016, when the UK voted 52 to 48 to leave the EU, a prevailing platform of populism and nationalism signified to the world that the UK is not a welcoming destination for foreign individuals. This perception leaves the UK's university STEM sector, whose success pulls from an international workforce, in a state of uncertainty. In addition, considerable research funding comes from participation in major EU innovation programs, many of which will be unavailable to UK scientists once they are no longer from an EU member state.

Brexit Negotiations and the Budget

In a period of uncertainty for the country as a whole, the position of Parliament has done little to assuage concerns regarding the continued eminence of UK STEM higher education. When Prime Minister Theresa May called for a snap election that took place in June 2017, UK political parties published manifestos detailing their visions for the UK during Brexit and beyond:

- The Labour Party, which wound up with 261 of 650 members of Parliament, included in its manifesto that the UK should “ensure that the UK maintains [their] leading research role by seeking to stay part of Horizon 2020 and its successor programmes and by welcoming research staff to the UK” as well as maintain membership in similar European organizations like Euratom and the European Medicines Agency (The Labour Party).
- The Scottish National Party, which earned 35 seats in Parliament, pledged to seek replacement funding for that lost from the EU by placing members of Scottish Parliament in parliamentary budgeting committees as well as to negotiate the continuation of programs that allow Scottish students to study anywhere in Europe (Scottish National Party).
- The Liberal Democrats won 12 seats and stated, “the Leave vote has already started to affect existing and proposed research programs.” The party pledged to “reverse the damage to universities and academics by changing the country's course away from a Hard Brexit” (Liberal Democrats).
- Yet, the party with the largest say in the Parliament at 316 seats, although not an absolute majority, is Prime Minister May's Conservative Party. The Conservative manifesto never specifically addresses scientific research, although it does promise to secure entitlements of EU nationals in the UK and UK nationals in the EU, which would help continue collaborative scientific projects. The manifesto also indicates that “there may be specific European programs in which [the UK] might want to participate and if so, it will be reasonable that [Parliament] make a contribution” (The Conservative Party).

This hung Parliament—this Parliament without an absolute majority—is therefore most controlled by the party with the least clear intent to further academic and scientific interests. With the mammoth restructuring the Parliamentary budget must undergo to compensate for renegotiating vast numbers of trade deals, scientific research may not be high on Parliament’s list of funding priorities. Nevertheless, in light of both Brexit and general international trends, there are several indicators and warning signs as to why scientific development should be a focus of Parliament in finalizing Brexit talks.

Over the course of FP7's 2007 to 2013 run,
Figure 3
Distribution of R&D Source Funding, 2008–2014


The €8.8 billion of EU research funding given to the UK made up only a slim 3% portion of the €226.3 billion that the UK spent on R&D, as shown in Figure 3 (Frenk et al., 2015, p. 17). This shockingly small percentage suggests that the EU contributes insignificantly to the overall picture of UK STEM higher education proficiency, thereby meriting Parliamentary budgetary discussions to ignore the loss of EU R&D funding. However, of that 3% sum, 71%, or €6.3 billion, went to academia. In further examining how funding was distributed across sectors, Frenk and colleagues (2015, pp. 17–18) found that business and industry received 64%, or €144.8 billion, of total expenditure, whereas merely 26%, or €54.3 billion, went to academic institutions. Therefore, around 11% of funding for STEM research at UK universities came from the EU between 2007 and 2013. Although the 3% of total UK R&D might be easily replaceable and, therefore, reasonably ignored, this 11% EU contribution to academic funding cannot be readily dismissed. The EU played a critical role in the funding of scientific research at UK universities throughout the duration of FP7 and, as previously demonstrated, has continued its critical role through Horizon 2020. By revoking the continued ability to benefit so significantly from future EU Framework Programmes, Brexit leaves UK STEM higher education in a state of deficient funding, shifting dependency to Parliament. Unfortunately, because the outsized role the EU plays in funding academic innovation is hidden under the guise of a trivial 3% share, it risks going unnoticed by Parliament in their budgetary restructuring, threatening the continued success and prestige of UK universities.

From 1995 to 2012, the money UK universities received for R&D compared to other institutional groups stayed relatively stagnant. The UK Office for National Statistics data suggest UK universities’ R&D funding increased only at the rate of the whole R&D sector. As shown in Figure 4, each sector’s share of government expenditure on research and development (GERD) remained fairly stable over time. During that period, higher education received a minimum of 14.4% and a maximum of 21.5% of total GERD (standard deviation of 1.88) (Office for National Statistics, 2012). As such, academic spending has not really changed over the course of the past few years. Academia, however, will suffer greatly from Brexit. If the UK Parliament continues
its current trend after UK universities lose EU funding, then research at UK universities will suffer an institutional funding squeeze.

This alarming loss of funding that Brexit triggers is exacerbated by the fact that the overall UK government R&D spending has been, in relative terms, falling drastically on the world innovation stage. The UK supports R&D with only a small portion of its GDP. According to the most recent data available from the World Bank, in 2015, only 1.7% of the UK’s total GDP was spent on R&D, including both public and private current and capital expenditures. This amount placed the UK eighteenth, significantly behind its biggest EU competitors, Germany and France, and its biggest global competitors, the US and China (The World Bank, “Research...”). Moreover, from 1996 to 2015, the UK showed little significant increase in GDP expenditure on R&D, as shown in Figure 5 (The World Bank, “Research...”). This fall comes alongside a relatively consistent growth rate in overall UK GDP—the country averaged a growth of 1.7% to 2.5% each year with the exception of a 4.9% fall during the 2009 recession (The World Bank, “GDP...”). As such, the UK is making the task of keeping up with the rest of the world in scientific research, let alone continuing its respected position as a trailblazer, more difficult, putting its academic dominance, already threatened by the loss of EU money, even more at risk.

The slipping ranking on the global R&D stage has been noticed by the House of Commons Science and Technology Committee, which has been calling for increased spending since as early as 2015, yet little has been done (Blackwood et al.). Because R&D encompasses such a small percentage of the total budget under Parliament control, it is sidelined by major discussions concerning bigger expenditures like the National Health Service. Yet, not expanding R&D expenditure, while damaging to the industrial and governmental sectors, will have the most noticeable effect on STEM research at universities. With the future of UK scientific research already so fragile,
and with the current power in Parliament so blase about supporting scientific development, Brexit’s effect on UK universities has the potential to be profoundly devastating. And it is not only a funding problem.

**Another Challenge of Brexit: Freedom of Movement**

One of the benefits of membership in the EU is the freedom of movement of EU citizens across open borders. This benefit enables residents of the EU-28 to travel seamlessly between EU countries, allowing workers to get jobs and students to pursue degrees in other EU member states. Horizon 2020 and other similar programs (e.g., the affiliated Marie Skłodowska-Curie Actions) not only fund research but also further facilitate the travel of scientists and offer limited participation to non-EU members. One of the necessities for these programs to function, even for non-EU-28 participants like Switzerland and the Netherlands, is the existence of those borders open to free movement, something that Brexit threatens (Burns). Indeed, Frenk and colleagues (2016, p. 5) note in their analysis of UK scientific researcher mobility that “any change to the UK’s adherence to the EU free movement of workers principle could adversely affect the UK’s eligibility to take part in EU research funding schemes, as has been seen in Switzerland.” Since one of the major emphases of Brexit is to reduce the flow of people across UK borders, post-Brexit scientific international collaboration would be hurt by the lack of a truly open border.

Depending on the exact terms of the divorce bill, it may become difficult for professors and students at all levels to gain entry into the UK for collaborative projects, fellowships, and studies. If gaining the proper documentation becomes too onerous, the number of students and visiting professors likely will noticeably decrease. A backlash against Brexit has already been seen in the UK’s permanent academic STEM research staff. Michael Arthur, Provost and President of University College London, a premiere research institution, revealed in September 2017 that “95 [percent] of the university’s senior European researchers had been approached with job offers by other European universities” (Warrell). It is likely that other universities have experienced similar poaching. For sake of argument, assume this 95% of European professors in the UK offered jobs by other European universities is universally applied across the UK university network. Since, as
previously discussed, 16% of academic staff in STEM research are from the EU (Frenk et al., 2016, p. 8), this would mean that on the order of 15% of STEM faculty in the UK have been offered jobs at EU universities. While not all of these offers will be accepted, and although this assumption is likely a bit high, if the new immigration policies enacted in the wake of Brexit substantially hinder the mobility researchers currently enjoy, a conceivable result is the exodus of a sizeable chunk of talented international minds from the UK, a modern brain drain.

A matching fall in EU applications to bachelor's degree programs was expected in anticipation of Brexit, and unsurprisingly applications from the EU in this domain fell 7.43% in 2017 (Weale and Barr). However, this downward trend does not appear to have continued into the 2018 application pool. As of the October 2017 deadline for applications to 2018 programs, there was actually a rebound, a 6% increase in applications from the EU for bachelor's degree courses (UCAS, “Number...”). This rise came after the April pledge from the UK government and the Universities and Colleges Admissions Service that EU students who begin their studies in the UK during the 2017-2018 academic year will be eligible for EU costs and grants throughout the entirety of their bachelor's degree course and that these organizations are working to confirm the same arrangement for students entering in the 2018-2019 academic year (UCAS, “Advising...”). Unless more funding becomes guaranteed after the UK officially leaves, and unless the new immigration laws allow for ease of mobility, it is likely that the number of undergraduate students from the EU will again decrease for the 2019 application pool and beyond.

The rise in EU applications during 2018 masks another crucial symptom of the Brexit plague. With the fierce rise of nationalism that led to the Brexit vote comes the promulgation of an unkind message far and wide—that Britain is not a welcome place for foreigners. As such, many foreign students and professors have shied away from applying for positions in specific locations where they fear they will not receive a warm welcome. Many UK universities beyond London or outside the historical prestige bestowed on universities like Oxford and Cambridge have seen declines in rankings. The Times Higher Education (THE) rankings, a system that measures universities based on research strength, showed that just over half of the 31 UK institutions appearing in the 2018 top 200 universities slipped in rankings, which Phil Baty, editorial director of the THE rankings, partly ascribes to Brexit inhibiting international talent from attending schools outside London and outside the most elite, prestigious, and historic institutions in the UK (Bothwell and Grove). Whether or not this development can be attributed to Brexit, to internal quarrels about chancellor pay, to the rise of Asian universities on the global scale, or to other internal aches, and whether or not this trend will endure in the post-Brexit era, many in the media openly lament that the UK's non-elite schools are dropping in quality (Warrell). With the problems that Brexit will create for attracting talent in the future, it is conceivable that many UK universities will suffer a more precipitous drop in ranking and consequently witness a diminution of scientific research success in the coming years.

Apart from the shifting academic research workforce coming to UK universities, Brexit will also affect the ability of UK researchers to travel to EU laboratories and universities. Frenk and colleagues found that, between 1996 and 2011, nearly 70% of UK researchers had worked abroad and subsequently published articles with affiliated non-UK institutions. Furthermore, the study found that 21% of scientific researchers based in the UK had worked abroad for two or more years during the same period (Frenk et al., 2016, p. 9). Additionally, the Organisation for Economic Co-operation and Development notes that “scientists who undertake research abroad and return to the economy in which they first published contribute to raising the overall quality of domestic research by 20 percent on average” (OECD). The numerous scientists from UK institutions who do go abroad to conduct research therefore palpably increase the quality of UK research. With so many international collaborations, so much access to foreign laboratories, and so much
benefit to the quality of domestic research thanks to UK researchers working abroad, making travel to the EU from the UK tedious and paperwork-laden would harm current and future collaborations. This is especially important when considering the UK's top international collaborative partners. While the US tops the list by far, the top five round out with EU-28 countries—Germany, France, Italy, and the Netherlands (Frenk et al., 2016, p. 11). Brexit's potential to hinder the ability of UK researchers to work easily in Europe may be just as damaging to UK scientific research as is the limiting of international talent at UK universities.

Conclusion

For the myriad reasons explored in this article, Brexit has the potential to significantly disrupt the scientific prowess UK universities have enjoyed for so long. Funding for R&D was already in trouble before Brexit, and academic institutions in particular are set to lose a critical portion of their funding on exiting the EU. Additionally, changes in immigration laws likely to be included in the final divorce bill could significantly impede the flow of students and faculty across UK borders, hinder the formation of new international collaborations, and stem the level of talent working on UK-affiliated science. Nevertheless, with the aid of existing and strong international interaction, and with some persuading in Parliament, the academic STEM community could continue to achieve its standard of excellence.

The scientific community in the UK has already begun to show the creativity of thought affiliated with the field and develop interesting work-arounds to avoid the damages of Brexit. In early 2018, Imperial College London, a globally renowned scientific institute, announced the launch of a new joint laboratory in London for mathematics in conjunction with France's governmental body for research, the Centre National de la Recherche Scientifique (CNRS). As a result, any researchers from UK institutions working at the new Unité Mixte Internationale Abraham de Moivre "will have the same funding status as those in France, even after the UK's withdrawal from the EU" (Coughlan). This novel partnership, which came about from the connections that Imperial College already has through its 900 French staff and student members, is heralded by Imperial College President Alice Gast as a way to reinforce "Imperial's exceptionally strong academic ties with France, as well as [Imperial's] determination to deepen collaborations with European partners" (Coughlan). By bolstering relationships that are already strong, UK scientists at Imperial College have found ways to continue collaborating in the face of Brexit.

Solutions to the problems Brexit poses that are similar to those developed by the CNRS and Imperial College may be easier for universities in the London halo or for Oxbridge, where their prestige and endowments will continue to attract international talent regardless of nearly any event. However, using Imperial College's approach as a model, universities throughout the UK can leverage their existent relationships to tailor means for funding and collaboration to their own situations. Furthering collaborations with other countries through established programs like the Gates, Marshall, and Rhodes, which attract bright international students to study in the UK, and developing other similar programs will also help counter the negative effects of Brexit.

The last piece of the puzzle, then, is what the UK government can do to ensure the success of academia, which contributes 2.9% of the country's GDP each year (Jarvis and Hurley). In June 2017, Universities UK, a charity that prides itself as the "voice of universities" to Parliament, laid out priorities for the government during Brexit negotiations aimed at maximizing university success. Encompassing short-term transitional arrangements, exit negotiations, and domestic policy changes, these elements would refine UK immigration regimes to allow foreign scientists in the UK and UK scientists in the EU to maintain current citizenship rights, increase domestic funding to spur academic innovation, and continue UK access to European programs (Jarvis and Hurley). If the UK scientists can successfully lobby Parliament for these changes, then the scientific community in the UK will be on a good path. With hope in the ineffable spirit of humankind, the unwavering curiosity of the groundbreakers, and the
steadfast dedication to the improvement of life that is inherent to the STEM field, I believe the scientists of UK universities will “MacGyver” their way to innovation and discovery, so as to carry on as they always have.

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ROOM FOR GROWTH IN A TIME OF UNCERTAINTY: THE UK LUXURY AUTOMOTIVE INDUSTRY AND BREXIT

Gustavo Grinstein

The UK has been a dominant hub for the production of luxury consumer vehicles for the past couple of decades. Yet this dominance is likely to waver with the new challenges facing the industry due to Brexit. This article examines how automotive supply chain globalization and foreign direct investment aided the development of the luxury automotive industry in the UK. The article considers the consequences that will result from industry isolation from the EU caused by Brexit.

Introduction

The automotive industry accounts for more than 800,000 jobs in the UK and 13% of UK total export goods (SMMT Motor Industry Facts 2017, pp. 6–7). One of the UK's competitive advantages is its ability to create quality products. Premium car companies have been able to develop in the UK because of infrastructure and environment that foster creating high-quality automotive products. Brands, including Land Rover, Jaguar, Aston Martin, Rolls-Royce, Bentley, and McLaren—all based in the UK. Experts inside and outside the UK fear, however, that this sector will forfeit its competitive qualities after Brexit. Foreign direct investment (FDI) that brought capital to the automotive industry has started to slow, and long-term investments are uncertain. Furthermore, most of the parts suppliers to these UK brands are based in the EU thanks to pricing advantages within the single market. To understand the effect of Brexit, it is important to analyze the dynamics of the UK automotive sector and key success factors that make it a leader in the luxury automotive market.

The following analysis focuses on the potential impact of Brexit on the UK luxury car sector. UK automotive manufacturing encompasses large multinational companies that have globalized sales and supply chains in addition to smaller companies that are more localized in the UK. Both types of companies target luxury niche markets. This analysis provides insight into how the two types of companies are approaching Brexit in an age where globalization dominates the automotive market. To make the analysis tangible, one large multinational company, Jaguar Land Rover (JLR), and one smaller national company, McLaren, are examined to understand their contrasting reaction to Brexit.

There are two paths the UK can take during Brexit negotiations: a "hard Brexit," quitting the EU without a deal in place, means the UK would trade with the EU under World Trade
Table 1
UK Automotive Industry at a Glance

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<tr>
<th>Workforce</th>
<th>814,000 of 32 million working people</th>
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<tr>
<td>Total revenue</td>
<td>£77.5 billion</td>
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<td>Exports revenue</td>
<td>£40.1 billion</td>
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<tr>
<td>GDP contribution</td>
<td>13%</td>
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<td>UK suppliers</td>
<td>2,500</td>
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Organization rules; a “soft Brexit” could keep close ties with the EU, possibly through some form of membership in the EU single market, in return for a degree of free movement of people and products. This analysis includes how UK competitiveness might be affected depending on Brexit negotiations. Combining elements of globalized and localized automakers with assessing possible results of Brexit can provide insight into what might happen to the UK auto industry in the near future.

Background of UK Automotive Industry

During the 1950s, the UK was the second-largest manufacturer of cars in the world (after the United States) and the largest exporter. After World War II, the government controlled the supply of steel and was interested in exporting steel to raise foreign income. This decision, mixed with a high demand for motor vehicles in neighboring countries, enabled the UK to become the largest motor vehicle exporter. In 1972, the UK produced a record 1.92 million cars thanks to British industries ramping up their presence in overseas markets by introducing new car models. The UK was producing large quantities, yet many of the cars were notorious for their low quality (Weldon). In 1973, the UK joined the European Economic Community, which later merged with the EU’s framework. Access to the single market made the UK a more attractive investment candidate to foreign industries. As a result, the auto industry changed in the 1980s as foreign car firms began to produce vehicles in the UK (Weldon). Foreign cars sold in the British market increased in popularity. For example, German Volkswagen models gained momentum and Japanese cars started to appear on British highways, with Toyota one of the first Japanese carmakers to import cars to Britain. The introduction of new technology and management techniques from foreign businesses helped the UK develop a global manufacturing infrastructure. With these enhancements, the UK automotive industry continued to grow, improve its product reliability, and remain a leader in the global market.

UK Automotive Industry Today

The UK automotive industry has evolved into a globalized industry. UK original brands have been bought by foreign companies, including BMW, Tata Motors, and Volkswagen Group. Current statistics demonstrating the industry relevance to the UK economy are presented in Table 1 (SMMT..., pp. 5–7).

Automotive manufacturing in the UK stands at thirteenth globally and fourth among the European automotive manufacturers. In 2016, the UK car production reached its highest level in 17 years, getting closer to the all-time high in 1972. The UK automotive industry is not only a mature and beneficial sector for the UK economy but also a possible area where the UK economy can grow and become stronger.

Since the UK joined the European Economic Community in 1973, its automotive industry has been deeply rooted within the EU. For example, currently about 69% of total UK car imports come from the EU and 56% of car exports go to the EU. Additionally, the shares of outsourced components from the EU and UK-built components sent to the EU are 79% and 65%, respectively (SMMT..., p. 32).
Globalization of the Automotive Industry

In today’s automotive industry, high levels of trade between international suppliers serve as a reminder of the worldwide reality of more global interconnections than ever. The assembly lines of UK auto manufacturers have benefited from outsourcing car components. Specifically, in the UK luxury car sector, BMW’s Mini plant at Oxford, for example, outsources 60% of their components from the EU and across the globe. So too, Morgan Motor Company, a privately owned company in the UK, sources engines from BMW for several brands. Similarly, of a sample of 18 parts of the JLR Discovery, only 7 are made in UK and the rest are from various EU countries (Campbell and Pooler). In short, companies and suppliers are benefiting each other across many levels in the single market by exchanging parts and technology.

Because the UK serves as a platform for developing luxury vehicles that have brand value, multinational corporations like BMW and Tata Motors have decided to invest in the UK luxury automotive sector while importing major car components from other countries. Furthermore, the UK attracted these multinational companies because it had a robust but underperforming automotive infrastructure. Companies saw this as a business opportunity where they could buy the infrastructure and the name of the British brand and then improve the manufacturing operations to create the quality products of today. For these reasons, most car companies in the UK are now subsidiaries of foreign manufacturers or investors. Companies like JLR, Mini, and Rolls-Royce were born as UK companies but later bought by other multinational companies.

Foreign Direct Investment

FDI has been the main driver behind the UK luxury auto sector resurgence. According to a report from the Centre of Economic Performance, the UK is a major recipient of FDI in the manufacturing industry. Half of these contributions come from the EU. More specifically, the British automotive industry has attracted record investments, including more than £3 billion in 2015 alone. Professor David Bailey, a UK automotive industry expert at Aston University, maintains that foreign automotive owners are keen in investing in the UK car industry, especially the luxury sector (Tovey, “The Fall...”). For example, Rolls-Royce, now owned by BMW, recently invested millions of pounds in its new plant in Goodwood (Tovey, “Rolls-Royce...”). The continuing stream of investments suggests that foreign investors are confident of the returns the luxury market can bring.

Some of the benefits to the UK from FDI are increased productivity, wages, and competitive pressure. FDI also gives UK subsidiaries access to technologies of the foreign parent company. Therefore, the substantial FDI into the UK’s luxury automotive sector fosters the industry’s hegemony in world markets. In 2016, the industry produced more than 1.7 million cars, approaching its all-time high, 1.9 million cars produced. FDI, much of it from the EU, has been one of the main drivers of the steady production increase through the last decade.

Implications of Brexit

Globalized Manufacturing

With Brexit on the horizon, many automotive experts are concerned about its impact on the UK’s car production. Mark Hawes, head of Britain’s Society of Motor Manufacturers and Traders, emphasizes that the current progress and health of Britain’s automotive industry is due to the single market membership (Katz and Charlton). Furthermore, Simon Sproule, marketing director for Aston Martin, warns that Brexit can have some positive short-term results yet the industry should be focusing on long term global growth (Katz and Charlton). Experts and specialists in the UK automotive industry are aware of the global nature of the automotive industry and the negative effects that isolation from the EU market would create. Therefore, multinational companies likely will start looking at strategic production alternatives to mitigate problems that might surge with Brexit.
Currently, trade between the UK and other EU countries is flowing without problems, but Brexit will bring complications. Arndt Ellinghorst, an analyst with the Evercore international and strategy investment group in London, predicts that as soon as the UK leaves, EU trade will become more complicated given new trade rules will have to be implemented. Ellinghorst further explains that, after Brexit, each UK car with an EU component will need its own trade agreement for that car to leave the country (Katz and Charlton). Given the intricate EU supplier involvement with UK automotive manufacturers, a possible disruption that new trade rules could have in the industry can be anticipated. In the case of a hard Brexit, the UK will most likely have to write their own trade agreements to substitute the ones established by the EU. It will mean negotiation rounds with each country to generate trade deals to benefit the UK automotive industry and its trade of parts and final products. In a highly dynamic industry where quick and effective turnovers are crucial for product development to satisfy customers and other stakeholders, rounds of trade deal negotiations might slow down these processes and become catastrophic.

**Foreign Direct Investment**

Beyond supply chain challenges, Brexit has also brought possible threats to FDI, which might decrease when the UK leaves the EU. As long as the UK remains in the single market, the UK serves as an export platform for countries seeking to avoid large tariff costs when exporting to the rest of the EU. Other EU countries will likely be able to compete away such FDI. To illustrate a case of a multinational taking action due to Brexit, Peter Campbell of the Financial Times recently reported that the BMW electric Mini, an iconic British brand dating to the 1950s, will be produced outside the UK, with BMW explaining that “the result of the EU referendum creates uncertainty for the automotive sector in general and for overseas investors in particular...Uncertainty is not helpful when it comes to making long-term business decisions” (Campbell, “Investment...”). Multinationals cannot afford to wait until the final Brexit deal is signed; they will start implementing contingency plans beforehand.

**Tariffs and Parts Localization**

Problematic as well is that when the UK leaves the single market, tariff barriers might be imposed on UK car exports to and imports from the EU. There is also a concern about tariffs imposed on imported parts from the EU. Possibly defaulting to higher World Trade Organization tariffs after Brexit negotiations is unsettling both to companies in the UK auto industry and to companies from the EU with manufacturing facilities in the UK. The immediate consequence could be a tariff increase of more than 10%. In addition, UK car companies have a comparatively low fraction of parts made in the UK, making the financial impact of tariffs more adverse. Multinationals that have low sourcing of parts from the UK are considering moving their manufacturing sites to other countries in the EU. For example, the General Motors Ellesmere Port facility is at risk because it has the lowest parts localization of any high-volume automaker in the UK, around 25%. Experts believe that General Motors is the most likely manufacturer to shift operations to mainland Europe if costs rise due to the country’s decision to leave the EU (“GM Most Likely to...”). Because multinationals have complex supply chains, supplying of parts would become harder to manage when the UK leaves the EU. In the worst-case scenario, a hard Brexit with imposed tariffs at UK borders will make imports and exports for car manufacturing significantly more expensive and less competitive.

**Company Analyses**

Case studies of two luxury automotive manufacturers in the UK with contrasting production volumes provide insight into how automotive globalization, FDI, and Brexit influence the decisions of major UK luxury automotive manufacturers.

**Jaguar Land Rover and Brexit**

JLR started as two separate car companies in the 1930s (Jaguar) and 1940s (Land Rover). They merged when Ford acquired both companies (Jaguar in 1989 and then Land Rover in 2000), although the brands were
kept distinct. Finally, the two brands were combined in 2013, when India’s Tata Motors bought the UK manufacturers from Ford. Since the acquisition by Tata Motors, JLR has been able to ramp up its production, double annual sales, and nearly triple its revenue (Tovey, “The Fall...”). According to the JLR “Annual Report 2016/2017” (p. 57), 521,571 vehicles and a revenue of £22.2 billion were produced in fiscal year 2015/2016. By comparison, in 2011, the company was producing only 250,000 vehicles, with a revenue of £9.9 billion. It is clear that JLR is looking to increase these numbers even further.

JLR CEO Ralf Speth quotes Adam Smith: “it is free and fair trade, access to the collective knowledge of the best talents globally and removing red tape that lead to greater national prosperity,” emphasizing the contrast between the trajectory JLR sees as the most beneficial for the UK and the trajectory Brexit is taking the country. Speth maintains further that the EU is a business opportunity and there is no credible alternative. He preaches that in the case of a hard Brexit, the export industry will be hit and lose profitability (“Annual Report 2016/2017,” p. 5). Furthermore, Hanno Kirner, the company’s strategy director, fears that trade barriers would “not only affect what we sell, but what we buy and it will ultimately damage our business and British jobs” (Campbell, “Hard Brexit...”). Kirner said JLR supports some 300,000 jobs in the UK through its plants and suppliers and that these are dependent on exports. “Europe has emerged as our biggest market...It is incredibly important to us,” he said, adding that sales of Jaguars to the EU more than doubled last year, while Land Rover sales rose 20%. Parts of the company’s supply chain are in Europe, with 40% of JLR’s purchasing budget spent on the continent. If tariffs are imposed, JLR would be penalized for buying from the EU as well as selling into it (Campbell, “Hard Brexit...”). JLR will become less competitive if the UK leaves the EU and tariff deals will give the upper hand to German car producers.

JLR has initiated a plan for a worst-case scenario in deciding to develop a new plant in Slovakia, a member of the EU. This plant is being built to have capacity for producing 150,000 cars a year. The project is predicted to cost approximately $1.6 billion and the main goal is to start producing Land Rovers in Slovakia by 2018. The plant will employ about 3,000 people when fully functional. This action will also assure that JLR will have at least one car manufacturing facility inside the EU when the UK officially exits the EU. Another sign that the company is looking for certainty is the production of its new electric car, E-Pace, which will be developed and produced in Austria, another member state of the EU. One of the reasons why JLR moved the production of this car outside the UK was that their plants were running at almost full capacity. In addition, another clear reason is that JLR wants to start moving the production of new vehicles outside the UK to mitigate the risk of imposed tariffs (Campbell, “Jaguar...”). General Motors, which owns Vauxhall, and BMW are also following in JLR’s footsteps; they are detaching from the UK to remain within the single market. The partial exodus of these large multinationals will cause jobs to move outside the UK and create jobs and revenue for other countries. Reports say Vauxhall has already announced cutting 650 jobs at its Ellesmere Port car plant in 2018 (“Vauxhall...”). Similarly, JLR announced trimming 1,000 jobs at its UK plant in Solihull in 2018 (Farrell), and BMW has not announced official figures but is threatening to move its Mini production in case of a hard Brexit (Tovey, “BMW...”). In summary, even if the UK ends up with a soft Brexit, actions are already being taken by these multinationals to move work to EU locations with more certainty. The longer and more confusing this process becomes, the more companies will follow.

**McLaren and Brexit**

The second illustrative case is McLaren Automotive, a British manufacturer of sports and luxury cars. Originally called McLaren Cars, it was founded in 1985. In 2010, McLaren Automotive was formed when the founder of McLaren Cars sold his shares to the umbrella company McLaren Group. The firm is much smaller than JLR and focuses on even higher-end vehicles. In 2015, the company sold 1,654 cars, with prices ranging from about £120,000 ($157,000) to more than £800,000 ($1.04 million).
According to the Financial Times, McLaren might be one of the few UK brands that could benefit from Brexit (Ford). McLaren exports more than 30% of its sports cars; therefore, this article argues that the fall of the pound post-Brexit could possibly boost the production numbers for McLaren. In addition, the majority of McLaren's foreign customers are based in the United States rather than in Europe. According to Mike Flewitt, CEO of McLaren, “We sell about 70% of our cars into either dollar markets or dollar-denominated markets so that brings increased income” (Pitas). Of the ten different cars that McLaren produces, only two go to the EU; therefore, McLaren has limited exposure to the EU. “The US is a much more important market for us and tariffs on imported cars there are just 2.5 per cent,” said Paul Buddin, the company’s chief financial officer (Ford). Moreover, Flewitt said McLaren sources 50% of its parts in value from the UK, including engines, with another 20% to 30% imported from continental Europe (Pitas).

McLaren admits that it will be susceptible if tariffs appear on imported components. Yet it is confident that this would not be of great harm to the company. Regarding future uncertainty, Flewitt said, “The key thing is what happens next, and that’s what nobody knows...We need open trade and we need free movement of people” (Ford).

In fact, McLaren has moved part of its supply chain back to the UK. It is investing £50 million in a new technology facility, which, according to the Financial Times, will increase the share of McLaren parts made in the UK from 50% to 58% (Ford). Replacing euros with pounds will help McLaren benefit from the pound’s weakness, thanks to its many overseas sales in US dollars. The government is also offering incentives to increase the domestic content. For McLaren, the biggest positive effect of Brexit is that it has focused the government on supporting the industry. Paul Buddin, the company’s chief financial officer, cites the Faraday Challenge, a government-sponsored competition to support the development of a domestic battery supply industry, to explain how the UK government has collaborated with the company (Ford). McLaren is continuing to push for sourcing more supplies within the UK to remain competitive after Brexit occurs.

Comparison of JLR and McLaren Reactions to Brexit

These case studies demonstrate how two different luxury car companies are reacting to Brexit according to their relative sizes, primary consumer markets, and supplier locations. On one hand, JLR produces 500,000 cars annually with a primary consumer market and supplier relations in the EU. With this volume and the involved supply relations within the EU, JLR will be deeply affected by a hard Brexit tariff policy. Profits will decline and costs will rise, making the company substantially less profitable. As a result, JLR is starting to move production to EU member state locations, thereby removing income and jobs from the UK economy. In addition, FDI, which has significantly helped the automotive industry in the UK, will decline and multinational companies similar to JLR in size and infrastructure will shrink their investments in the UK.

On the other hand, as of 2016, McLaren produces 3,000 cars annually, mainly for the US, with almost half of its suppliers in the UK (and an insignificant number in the EU). McLaren perceives Brexit in a more positive light than JLR. McLaren admits Brexit will have a negative impact on its business but not with the same repercussions as for JLR. McLaren has taken the approach of bringing technology back to the UK and opening new facilities to develop and produce more parts for its cars in country. This will benefit the UK economy by generating more jobs and income, the opposite of JLR’s actions. McLaren has an easier time bringing its business back to the UK due to its production volume, non-EU customer base, and high percentage of UK suppliers. JLR might be able to learn from McLaren and try to mitigate the consequences of Brexit by not outsourcing jobs to other countries and instead increasing reliance on suppliers within the UK, thus generating more local jobs.

Brexit could have positive impacts on the UK economy if companies take McLaren's approach. However, these benefits that Brexit could bring might not be sufficient to balance the downsides.
The Future of the UK Luxury Automotive Sector

Globalization has changed the dynamics of how business works by providing more opportunities for collaboration within international industries. The UK automotive industry today benefits from this collaboration by outsourcing raw materials and subassemblies at competitive prices in order to put these components together within the UK. Given the amazing automotive infrastructure that has been developed over several decades in the UK, this collaboration continues to help bring multinational company investments into the UK to develop and manufacture quality products. By interconnecting international corporations, companies can increase efficiency and productivity, bringing in new sources of management and technology. In addition, as part of the EU single market, the UK has nurtured the global interdependencies of its automotive businesses. Yet, the globalization trend has had the downside of discouraging the sourcing of local raw materials or production of subassemblies in the UK due to the competitive prices that companies can find elsewhere in the EU.

Brexit has already had a colossal impact on the UK’s globalization trajectory. With the UK divorcing the EU, the many benefits from this partnership could be nullified or completely reversed. Furthermore, the fact that the UK has been leveraging and building relationships in this partnership for 45 years will roughen the transition to an environment with an absent partnership. Longstanding supplier relations within the EU may be severed due to possible increases in tariffs. FDI could slow or come to a stop as multinational companies lose confidence in their investments in the UK. Production of cars might fall if new trade agreements need to be negotiated for UK-manufactured cars containing EU components. On the other hand, Brexit brings opportunities for the UK to develop in business areas previously neglected due to the comfort that comes from the single market. This can be an opportunity for UK companies to stop outsourcing and ramp up the percentage of materials acquired within the UK. In addition, smaller national car companies like McLaren can develop their business infrastructure within the UK, creating more jobs and income for the economy. Brexit undeniably has changed the UK luxury automotive industry and it will take a prolonged period of adjustment for it to throttle to full-speed again.
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ECONOMIC CONSEQUENCES OF UK IMMIGRATION REFORM FOLLOWING BREXIT

Katherine Wu

Domestic sentiment toward outsiders in the UK has become fueled with negativity and wariness. A heated Leave campaign succeeded in convincing the public that EU citizens were destroying the economy. This article studies the true economic role of EU citizens in the UK prior to dissecting the proposed immigration policy following Brexit to predict the effect of reduced EU immigration to different sectors of the UK economy.

Introduction

"We must break free of the EU and take back control of our borders." This adamant declaration by Nigel Farage succeeded as an inflammatory and provocative advertisement for the Leave campaign (Stone). On June 23, 2016, with 17 million votes and a 51.9% majority, the UK voted to leave the EU, which the UK had belonged to since 1973 ("EU Referendum Results"). Thus began an era of significant economic, political, and legislative uncertainty in the UK.

Following the vote, Lord Ashcroft, a UK businessman and political figure, conducted a survey exploring the motivations of those who voted to leave; 49% voted to leave the EU because they believe the UK should have more control over its own affairs and 33% voted solely to have more control over immigration and the border (Roff). Thus, much of the incentive to vote for the Leave campaign coincided with an intense fear of outsiders. With independence from the EU, the UK will no longer be required to abide by the EU’s freedom of movement directive. Having triggered Article 50 and begun the “divorce” process, the UK must now form its own policies regarding the inflows and outflows of people across its border. The implications of these policies will be felt by the entire country as the restriction of EU immigrants will, at the very least, dramatically change the make-up of the labor force in key industries within the UK economy.

The goal of this article is to estimate the ultimate economic effects of the UK’s new immigration reform. In order to explore the impact, likely demographic changes to the labor force that will occur within each major industrial sector as a result of this policy are examined. From there, sectors are identified that will likely suffer the hardest blow from immigration reform because they most depend on EU immigrants who fall in the categories that the UK is trying to deter from entering the country.
To fully comprehend the economic impact of a new immigration policy, the previous state of the UK economy must first be understood. Therefore, after an analysis of the state of EU immigrants and the economy prior to Brexit, potential policy options are examined, followed by a breakdown of how these policy changes will alter the previous immigrant economic environment.

The UK Immigration Debate: Its Origins and Importance

Immigration into the UK has substantially increased over the past couple of decades. With a desirable labor market and standard of life, the UK is a major recipient of immigrants looking for residence and work. Figure 1 shows that until 1998, net migration (net immigration minus net emigration) remained below 100,000 annually (ONSb). Then, net migration increased and remained at a higher level, reaching 313,000 in 2014. It is evident that the driving factor for this increased net migration is the rapidly growing immigration, swelling from around 300,000 in 1970 to 632,000 in 2014 (ONSb).

With this rapidly increasing immigration, the demographics in the UK have shifted. The greater number of foreign-born people living in the UK reflects a more globalized country. However, negative sentiments toward “outsiders” and the idea that immigrants are “stealing” public services and jobs have become the overarching ideologies throughout many regions of the UK not accustomed to these different populations. According to the British Social Attitudes survey in 2013, when UK citizens were asked their preference for immigration levels in Britain, an overwhelming 77% chose that immigration should either be “reduced a lot” or “reduced a little,” with more than 56% choosing “reduced a lot” (Blinder).
Table 1
Net Fiscal Contributions to UK Government Based on Country of Origin

<table>
<thead>
<tr>
<th></th>
<th>UK Born</th>
<th>EU10</th>
<th>Other EEA</th>
<th>Non-EEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall fiscal contribution (£ billions)</td>
<td>-616.53</td>
<td>4.96</td>
<td>15.26</td>
<td>5.21</td>
</tr>
<tr>
<td>Ratio (revenues/expenditures)</td>
<td>0.90</td>
<td>1.12</td>
<td>1.64</td>
<td>1.03</td>
</tr>
<tr>
<td>Education contribution (£ billions)</td>
<td>—</td>
<td>4.31</td>
<td>2.50</td>
<td>11.19</td>
</tr>
</tbody>
</table>

Source: Dustmann and Pratinni.

Perhaps most importantly, public opinion regarding the economic impacts of immigrants is overall negative. Many UK citizens hold the belief that people coming into the UK are more expensive than they are contributive. According to the British Social Attitudes survey in 2013, when asked about migrants coming to work, UK citizens thought that their costs to the overall economy substantially outweighed their benefits (Blinder). But is this perception of non-contributive immigrants borne out by the economic evidence?

Economic Influence of EU Nationals Immigrating to the UK Before Brexit

EU workers did not dominate the pre-Brexit UK labor market. According to the Annual Population Survey (APS) conducted by the Office for National Statistics (ONS), EU workers comprised only about 7.2% of the UK labor force in 2016 (ONS). Furthermore, additional data from the ONS document that 45% of incoming EU nationals to the UK already had a definite job while another 24% were coming to look for work (Vargas-Silva). Additionally, a much higher share of EU migrants was considered overqualified for their occupations than native workers, with 40% of EU81 nationals deemed overqualified compared to 15% of UK natives (ONS). Thus, data suggest that a majority of immigrating EU nationals came to the UK to contribute to the economy.

But did these immigrants substantially contribute to the UK economy or did they take more from public services provided than they contributed? Accounting for government costs for immigrants, it becomes clear that immigrants pre-Brexit provided more fiscal benefits to the UK economy than government costs. Data from the annual Labour Force Survey and further data from the ONS enable modeling government expenditures, revenues, and fiscal costs as well as the contributions of individuals to government budgets. In addition, the overall population can be broken down into four sub-groups to calculate the contributions of each: UK-born citizens, EU10 immigrants, other European Economic Area (EEA) immigrants, and non-EEA immigrants. Table 1 presents net fiscal contributions and implicit contributions through education over the years 2001 to 2011 by citizen type, as modeled by Dustmann and Pratinni. Pre-Brexit, UK-born citizens imposed a large economic burden on public sector budgets, costing more in government expenditures than they contributed in taxes and fees, whereas immigrants were, on average, net contributors fiscally. In particular, immigrants from the EEA countries contributed the most of the three immigrant populations. Due to the disproportionate sizes of the various populations, the raw fiscal contribution figures could be misleading. To standardize, Table 1 also shows the ratio of expenditures to contributions. UK-born citizens have the lowest ratio of 0.895. Because this value is below 1,
their expenses outweighed their contributions. On the other hand, EEA countries have the highest ratio at 1.640. Since the EEA ratio is well above 1, their contributions substantially outweighed the costs they imposed on the UK economy. Simply put, UK-born citizens were a drain on public sector budgets, while immigrant populations were contributive.

The implicit costs and benefits that immigrants imposed on the UK pre-Brexit are now addressed. The previous two metrics measure the explicit: revenues and costs of public services: monetary receipts and costs that can be directly calculated by examining the fiscal numbers. Implicit costs or benefits consist of opportunity losses or gains rather than monetary ones. These are often overlooked when considering the balance of economic contributions because they are not as tangible or obvious as actual money exchanges. A thriving economy has not only economically contributive citizens but also intellectually beneficial citizens. Without brainpower, skill, and knowledge, an economy cannot grow. Because the immigrants to the UK, on average, were more educated than UK-born citizens, immigrants provided an even greater fiscal contribution. Immigrants were bringing a valuable commodity with them into the country that the UK did not have to pay for, an opportunity gain for the economy. The implicit educational savings alone between 2001 and 2011 total nearly £18 billion (Dustmann and Frattini).

Another way to evaluate the economic impact of immigrants is to examine the impact of immigrants on GDP per capita. If GDP per capita of immigrants is lower, on average, than that of the UK population, then they may be considered a detriment to the economy, potentially dragging the average down. If immigrants came to the UK as a non-
contributory force, then GDP per capita would plummet faster as the population increases with more immigrants and a stagnant GDP to divide among them. Looking at data from 1971 to 2014 and visualizing GDP per capita in the UK and net migration in the UK as functions of time, however, reveal a strong positive correlation between net migration and GDP per capita (Figure 2). This does not prove that increasing net migration causes this growing GDP per capita, but it provides evidence that the economy likely did not suffer due to the influx of immigrants. There is a small decline in GDP per capita in the UK between the years of 2007 and 2009; although, when the GDP per capita growth in the UK is compared with those of Germany and France, all these countries experience this dip during these years—the global effect of the Financial Crisis of 2008 (FREDa; FREDb; FREDc).

From these calculations, it can be concluded that in recent years, immigrants have contributed significantly more than they have received in benefits. And because these immigrants pay in more than their share of public expenditures, they are in turn reducing the fiscal burden of public services for UK-born citizens. In the wake of Brexit and impending immigration reforms, restricting immigrants from entering could result in a strong negative impact on public budgets and more broadly on the overall growth of the UK economy, given their relatively high education.

Core Concepts of UK Immigration Reform Regarding EU Nationals

In order to forecast the economic impacts of these reforms, it is necessary to understand some core concepts of the UK immigration proposals. The UK is in the midst of reconciling a final immigration policy, so uncertainty remains. However, by analyzing a document leaked from the UK government, the effects of the most influential reform concepts on labor force and economic productivity can be predicted.

To formulate post-Brexit immigration policy, the UK government turned to the Migration Advisory Committee (MAC), an independent, non-statutory public body. On July 27, 2017, MAC was commissioned to advise the government on the impacts of immigration and shortages within industries ("Commissioning..."). After two months of research input from MAC, the government was ready to develop an initial plan.

On September 5, 2017, a leaked document labeled “official sensitive” from the Home Office was released online. The document, titled “Border, Immigration, and Citizenship System,” details a plan with three separate phases to integrate the new immigration policy with the reality of pre-existing EU nationals settled in the UK (Partington et al.).

The first phase seeks to ensure that the EU migration can be regulated through the UK’s legal framework. This involves a grace period of up to two years before a specific date by which EU citizens residing in the UK must apply for settled status, or a temporary residency permit. It proposes reform legislation to turn off the EU’s freedom of movement directive and move EU citizens under the rules and regulations that non-EU citizens are already required to follow in the UK’s pre-existing Immigration Bill of 1971. This first phase of the plan, therefore, would put EU citizens and other non-UK citizens under the same legal framework regarding immigration.

The second phase would occur after the official departure of the UK from the EU and would introduce an Implementation Period, which the document claims "provides a smooth and orderly exit for employers and individuals" through an initial unrestricted phase where EU immigrants can work, study, and reside without previous permission from the Home Office, followed by several periods of increased restrictions and requirements.

The final phase begins a period in which the UK imposes their own rules to control the volume and type of migration from the EU, both temporary and permanent, in the national interest. The exact rules are currently still being debated, but the UK intends to continue utilizing MAC’s research to consider social and economic impacts of immigration reform as the time to make these decisions draws nearer.

Two proposed changes to immigration rules stand out in this Home Office document. The first involves the methodology to decrease the numbers of lower-skilled workers entering
the country. The plan limits the length of temporary work permits to a maximum of two years for EU nationals seeking low-skilled occupations in the UK. Those in high-skilled occupations may be approved for longer expirations of three to five years. The draft also suggests that to limit the number of EU citizens entering the UK to undertake low-skilled work, there should be a salary threshold, some assessment of the skill level of the occupation, or an overall cap on the number of EU citizens allowed to immigrate into the UK. The second major change suggested in the document is requiring UK employers to look for employees from the native UK population whenever possible instead of the migrant population (similar to current policies in the US and Australia) to decrease the overall number of immigrants. This, the document suggests, would encourage employers to invest more in training programs to educate the native population rather than take on already-trained migrants. The government claims that this extra investment will be worthwhile, making the country more prosperous and successful as a cohesive, national unit.

While this leaked government report does not necessarily represent the immigration reform that will eventually evolve out of the Brexit negotiations, it does signal the government’s primary goals for future reform, since the government is already developing that future immigration policy. Using these proposed changes, the impact on the UK economy can be forecasted. This analysis focuses on the potential impact of two main points: decreasing low-skilled worker immigration and decreasing immigration as a whole. This assessment begins by reviewing various studies predicting the impact of post-Brexit immigration reform on the UK economy.

**Prospective Impacts of the New Policy**

The government’s main purpose in the leaked document is to develop an immigration scheme that benefits the UK. It claims that the old system was not sufficient because it allowed EU citizens “a right to reside in the UK regardless of the economic needs of the country.” The new plan aims to cut yearly migration from 250,000 EU citizens to only tens of thousands.

The Confederation of British Industry (CBI) is a business organization in the UK that lobbies for the policy interests of firms and performs research on the potential impacts of reforms on businesses throughout the country. The head of skills and employment policy at CBI, Seamus Nevin, argues that the UK needs an immigration system that “provides control while also enabling employers to access the foreign workers they need at all levels—whether it be short-term seasonal workers, intra-company transfers, or permanent solutions” (Horrocks-Burns). His concern regarding access to foreign workers is directly reflected in the rapidly increasing concerns of businesses. In polls between 2014 and 2015, the share of businesses deeply concerned about their future ability to access this foreign market, for both low-skilled and high-skilled workers, jumped up from 18% to 31%. After the referendum vote, this number rocketed again to 50%. Furthermore, by early 2018, 58% of companies believed that leaving the EU will hinder their access to the high-skilled workers they need to keep business running (Horrocks-Burns). All of this is a clear illustration of UK businesses’ strong apprehension of the new immigration policy.

Research from the Centre for Economics and Business Research (CEBR) finds that if immigration is reduced significantly across sectors, productivity will suffer due to loss of creativity and diversity in the workforce, particularly in knowledge-intensive sectors. The CEBR assumed numbers from the government pledge to reduce migration to tens of thousands. Their economic model studied two different scenarios: 1) a slow reduction plan where the target of 73,000 net migration is achieved by 2027 and 2) a fast reduction plan where the target is achieved by 2021. The models show that by 2025, in the slow plan GDP would be 1.5% lower than without the changes and 3.1% lower in the fast plan. Longer term, by 2040, GDP would be reduced by 8.9% and by 10.4% in the slow plan and fast plan, respectively. After taking into account the reduction in the population due to immigrant cuts, GDP per capita would also be lower.
than without the changes. By 2025, GDP per capita would decline relative to no change by 0.9% and 1.5%, in the slow plan and fast plan, respectively, and by 2040 by 4.1% and 4.9%, respectively (CEBR). Thus, extant research tends to agree that reductions to immigration will likely hinder economic growth.

On the other side of the issue, UK-born citizens have slowly been changing their opinions on immigrants. UK-born citizens are beginning to think that immigrants may be beneficial to the economy. In 2011, 52% of UK-born citizens thought immigrants were “bad” for the economy, but four years later, only 35% viewed them as a negative force (Blinder). The Centre for Economic Performance at the London School of Economics has called the belief that the rising number of immigrants looking for work in the UK has harmed UK workers through increasing job competition the “lump of labour fallacy” (Wadsworth et al.). The Centre for Economic Performance claims the harm would only occur if the number of jobs available was fixed, not fluctuating to accommodate growing demand for services and goods with an increasing population. Par

from stealing jobs away from UK-born citizens, the increased number of migrant workers coming to the UK enables higher wages and a more productive economy.

Expected Changes to Immigration Composition by Industry Post-Brexit

The impact of proposed changes to immigration can best be analyzed by examining the average required skill levels of employees within individual sectors. One of the main policy objectives outlined in the leaked documents is to cut the number of low-skilled immigrants entering the UK. Therefore, by conducting this analysis sector by sector, which sector will absorb the heaviest impact can be assessed.

According to the ONS,² jobs such as “corporate managers and directors,” “science, research, engineering and technology professionals,” “health professionals,” “teaching

²The ONS utilizes Standard Occupational Classification 2010 codes as the basis for defining the skill levels throughout their data.
and educational professionals,” and “business, media, and public service professionals” are high skill. Any occupation other than these falls either into the middle-skill or low-skill levels, with the lowest-skilled classified as “elementary trades and related occupations” and “elementary administration and service occupations.” While the immigrant population spans all skill levels, a large portion does not fall into the highest skill tier. If workers are disaggregated by country of origin (UK, EU14, EU8, EU2, and non-EU) and skill level, 37% of EU14 nationals working in the UK occupy high-skilled jobs (Figure 3). Comparatively, only 8% of EU8 nationals work in jobs that require high skills. On the opposite side of the spectrum, EU8 nationals and EU2 nationals dominate the low-skilled and lower-middle-skilled jobs, with 31% of both EU8 and EU2 nationals working in jobs categorized as these levels (ONSa).

Breaking down the immigrant population by economic sector, immigrants tend to work in lower-level retail and food service jobs as well as construction, manufacturing, and financial and business services. Of the EU immigrant population in the UK in 2016, 24% were employed in the wholesale and retail trade, hotels, and restaurants. An additional 18% of all EU immigrants were employed in financial and business services and 17% worked in public administration, education, and health. Turning to an alternate metric, the manufacturing industry has the highest proportion of workers from the EU, with 11% (Figure 4). Wholesale and retail trade is second, with 9% from the EU, followed by transport and communication with 8.8%. Thus, the proposed new immigration policies are likely to hurt manufacturing and wholesale and retail trade the most in terms of constricting available labor.

Combining the Annual Population Survey statistics for the EU14, EU8, EU2, and other EU immigrants, the most common skill level for EU immigrants entering the UK is “lower middle” at 31.95%, with “upper middle” at 23.43% and “low” close behind at 23.33%.

Dividing the population of EU immigrants in the UK by industry and skill level, 62.92% of EU immigrants in the agriculture, forestry, and fishing industry work in low-skilled jobs (Figure 5). Overall, the majority of the EU immigrants in the wholesale and retail trade
industry consists of low-skilled (38.58%) or lower-middle-skilled (34.87%) workers. As Figure 4 shows, 9% of employees in this industry are EU immigrants, meaning that in total 6.61% of all workers in this industry are lower-skilled EU immigrants. This group, although small, almost certainly will face significant immigration declines within the next few years. Similarly, the transportation and communication, manufacturing, and public administration, education, and health sectors also rely heavily on lower-skilled EU workers: 5.50% in transportation and communication, 6.78% in manufacturing, and 1.54% in public administration, education, and health.

Overall Economic Impact

It is well known that the UK economy is service based. In fact, 79% of GDP derives from service industries, whereas 14% comes from production industries and 1% from agriculture (Booth). Many of the industries identified previously are likely to suffer major setbacks from restrictions on lower-skilled EU immigrants who would have worked in the service sector (transportation and communication, wholesale and retail trade, and public administration, education, and health). With service industries providing nearly four-fifths of the GDP, this could be extremely detrimental to the health of the economy.

A reduction in net migration to tens of thousands will inevitably upset the economy well beyond the impact of lower-skilled workers. The planned cuts to immigration are so large that it will not be possible to only target low-skilled immigrants. There also will be a need to cut high-skilled immigration, although to a lesser extent. In short, then, the diverse array of available evidence uniformly suggests that economic growth is likely to suffer a significant blow following the anticipated immigration reform.

Conclusion

The UK’s decision to leave the EU came from a desire for self-preservation: UK citizens wanted more control over the UK, more control over who comes in and out of their country, and to improve their economy and
public services. These are all rational goals and make logical sense from the standpoint of a UK citizen who believes that the EU is holding the UK back from these opportunities.

But examining the facts and crunching the numbers paint a vastly different picture. Among the many different facets of the divorce bill that will come out of the Brexit proceedings, immigration reform may be one of the most vexing and conflicted. The new immigration policy formulated in the leaked document explicitly aims to take back control of the UK economy and untether it from the EU so it can thrive. Unfortunately, the strict constraints on EU immigration—and low-skilled immigration in particular—will suppress the low-skilled worker supply. Factory workers, waitresses, bus drivers, baristas, and more are critical components of the economy. Because nearly 80% of the economy relies on the service industry, which in turn depends on EU immigrant low-skilled workers, a sudden void of these base workers will inescapably hinder national productivity. Paradoxically, the surprising milestone of Brexit, driven by aspirations of a freer, more affluent country, will likely result in a laggard economy and a less prosperous country.

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MAPPING THE FINANCIAL SERVICES SECTOR AFTER BREXIT

Tristan Heffler

The Brexit vote has removed the ability of multinational banks to access the European single market through their London headquarters, forcing them to establish European bases. This article analyzes the drivers of these location decisions. A model created by examining publicized plans suggests that the main factors influencing choices are office space costs, corporate tax rate, business climate, payroll tax rate, quality of life, and housing costs. Results suggest that Frankfurt, Germany, is the most attractive city.

Introduction

The financial services industry has been instrumental in the British economy for decades, with London serving as one of the world’s top financial centers (Magnus et al.). While the sector flourished thanks in large part to its access to the single market of the EU, this source of success was interrupted on June 24, 2016, by the Brexit vote to leave the EU. Multinational banks have been forced to create contingency plans for a likely “hard Brexit,” in which access to the EU single market would be discontinued without future arrangements for access. In anticipation of this loss of access, multinational banks must establish EU bases to fortify their existing business with EU clients. The decision of where within the EU to locate involves several subjective strategic factors, including both business and social considerations. While many banks have released statements of potential EU bases, they have not publicized the reasoning for their location decisions. This article assesses potential EU locations and explores why banks might be making the choices they have. I argue that corporate tax rate, payroll tax rate, office space costs, business climate, quality of life, and housing costs are proving the most important factors influencing banks in determining their EU locations. I develop a scoring system to evaluate locations and then discuss how various banks appear to have made the decision based on their particular needs. I conclude that, overall, Frankfurt, Germany, is the most attractive city for most banks to set up EU headquarters whereas Paris, France, is the least appealing.

UK Financial Services History

The financial services industry contributes 12% to the UK total GDP (Magnus et al.). The industry generates more than 2 million jobs and is the country’s largest export industry, accounting for approximately half of the UK
£31 billion service trade surplus (Clarence-Smith). British banks lend approximately $1.4 trillion to EU companies and governments annually and serve as the financial heart of the EU (Clarence-Smith). Most EU capital markets activity is handled within the UK directly or indirectly, for example, with 87% of US investment banks’ EU staff employed in London (Clarence-Smith). For many decades, financial institutions have chosen to treat the UK as a springboard to business in Europe to avoid red tape and trade regulation.

The Brexit vote introduced a great deal of uncertainty for multinationals operating within the UK with respect to passporting rights, tariff and non-tariff barriers, organizational restructuring, and regulatory compliance. Banks and financial services companies could be significantly affected by the forecasted relocation of thousands of banking jobs to the EU. As one top banker from a European institution discusses, “What exactly needs to be transferred is a moving target, because things become more complicated with battles on many fronts: the battle with regulators over the exact design of the new entities, with the politicians over the shape of Brexit, and internal debates over the shift in power” (Slodczyk).

Early signs of the impact on UK jobs in the sector were not promising. The number of new finance-related jobs listed in London fell 17% in February of 2017 year-on-year (Moshinsky). Since then, the UK market has recovered, and banks have created contingency plans against the unknown results of the Brexit negotiations.

Passporting Rights

The largest issue facing the operation of multinational financial services companies in the wake of Brexit is the highly likely loss of passporting rights. Passporting is the process whereby all British-based financial institutions—banks, insurance providers, and asset management firms—can sell their products and services to the rest of the EU without needing to obtain licenses, receive regulatory approval, or create local European subsidiaries. A great deal of the success of London and the UK financial services industry can be attributed to the privilege of utilizing passporting rights as a member state of the EU. Many financial institutions established their headquarters in London in part due to the benefits of passporting rights to operate within Europe. Nearly 5,500 firms in the UK rely on passporting rights to conduct business with the rest of the member states of the EU (Arnold). Additionally, more than 8,000 firms in the rest of the EU trade into the UK through passporting (Arnold).

If passporting rights are lost, financial institutions headquartered in the UK will be unable to carry out services to Europe they once offered. Considering statements made in the media, the UK financial services sector is preparing for a hard Brexit regardless of the progression of negotiations (Finch and Arons). It is estimated that approximately 10,000 jobs will be moving to the EU on day one of Brexit (Ali et al.). In April of 2017, Deutsche Bank’s chief regulatory officer Sylvie Matherat told Bloomberg: “For front-office people, if you want to deal with an EU client, you need to be based in the EU. Does it mean I have to move all the front-office people to Germany or not? We’re speaking of 2,000 people. Then you have the local supervisors who rightly say, come on, if you have your client here, you have to stay here. Does it mean another 2,000 people” (McNulty and Ahuja). Ultimately, thousands of staff members may be relocated from their central location in London to the locations chosen by financial institutions to support their European businesses.

Preparing the UK Financial Sector for a Hard Brexit

Most banks have concluded that the UK will likely lose the financial passport, leaving them to question where in the EU to establish new entities. The European Central Bank, the top regulator for lenders in Europe, stated that banks will be subject to a strict assessment before they are given the rights to operate within the continent. Applications for European licenses will be scrutinized closely, and the regulatory process will be strenuous. Sabine Lautenschläger, a vice-chair of the European Central Bank, stated, “We will not accept empty shell companies. Any new entity must have adequate local risk management, sufficient
local staff, and operational independence." No one city in Europe is able to accept all the banks that currently have offices in the UK, due to a lack of office space and supervisory capacity to make such moves feasible. Therefore, banks must spread their operations throughout Europe, potentially costing approximately £500 million per institution (Slootczyk). Each bank began planning for Brexit prior to the vote to exit, publicizing their initial reviews on locations within the EU in the summer of 2017. Table 1 displays publicized relocation of major financial institutions as of January 2018.

The Bank of England Prudential Regulation Authority requested that all firms with cross-border activities between the UK and the EU submit summaries of their Brexit contingency plans by July 14, 2017 (Treaonor). While these plans have not been made public, banks have put a great deal of thought into the planning process, relying significantly on the choices of EU locations to establish their passported businesses.

### Analysis of Top Potential Locations for EU Financial Bases

#### Frankfurt

Analyzing the planned relocation to all prospective EU base location cities in Table 1, Frankfurt, Germany, clearly emerges as the banks' top choice. As detailed later, Frankfurt boasts a positive business environment, low office space costs, and low corporate tax rate. Frankfurt’s positive financial sector development stems from the depth and breadth of its global industry clusters, availability of capital, market liquidity, and economic output (Yeandle). Additionally, investment bankers have reported an increasing interconnectedness of Frankfurt banks with financial services entities in Asian countries as an attractive feature to the financial center (Yeandle). While Frankfurt has won the business of major banks, such as Deutsche Bank, UBS, Citigroup, Goldman Sachs, and Morgan Stanley, due to its low office space costs, low corporate tax rate, and convenient transportation, other metrics (discussed later) suggest the city loses business from other top banks to Dublin as well as Luxembourg due to its high housing costs, payroll taxes, and lack of use of the English language.

#### Dublin

Dublin, Ireland, has emerged as a direct lead competitor with Frankfurt, attracting multinational banks with its low tax rates and high perceived quality of life. Irish leaders have made a great effort to attract bankers to their country after the collapse of the Irish financial system and subsequent international bailout in 2010, creating substantial room for improvement for the country’s business climate (KPMG). Dublin has earned recognition within the Global Financial Centres Index (GFCI) in the category of reputation among financial professionals, indicating a large difference between those professionals’ average assessment and GFCI score. The average assessment score is created by gathering survey responses from finance professionals around the globe and then compared to the GFCI score. The positive differential indicates that financial professionals in the field have a
Table 2
Description of Cities by Factor

<table>
<thead>
<tr>
<th>Factor</th>
<th>Frankfurt</th>
<th>Dublin</th>
<th>Luxembourg</th>
<th>Paris</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office space costs (€m²/y)</td>
<td>474*</td>
<td>646</td>
<td>664</td>
<td>772</td>
</tr>
<tr>
<td>Corporate tax rate (%)</td>
<td>15</td>
<td>13*</td>
<td>19</td>
<td>33</td>
</tr>
<tr>
<td>Business climate (GFCI ranking)</td>
<td>23</td>
<td>33</td>
<td>18*</td>
<td>29</td>
</tr>
<tr>
<td>Payroll tax rate (%)</td>
<td>28</td>
<td>18</td>
<td>16*</td>
<td>47</td>
</tr>
<tr>
<td>Quality of life (score)</td>
<td>7.5</td>
<td>7.7*</td>
<td>7.7*</td>
<td>7.2</td>
</tr>
<tr>
<td>Housing costs (% of disposable income)</td>
<td>50</td>
<td>33</td>
<td>30*</td>
<td>36</td>
</tr>
</tbody>
</table>

* Indicates the top score for the factor.
Sources: Deloitte; "Quality of...; "Rental Prices..."; Yeandle.

more favorable perception of the city than the GFCI independently derived score (Yeandle). Dublin is known for its benefit as a tax haven, having attracted many corporations and financial institutions in the past, continuing its trend of European success. While the metrics indicate that Dublin’s advantageous tax rates, proximity to London, and high quality of life place the city as a strong competitor, the choice of Frankfurt by more banks suggests most but not all banks place more weight on office space costs, and some may have concerns about business climate as well.

Luxembourg

Luxembourg City, Luxembourg, also proves fairly competitive in the wake of Brexit, attracting banks Julius Baer, Northern Trust, Blackstone, M&G, and JGC. Luxembourg earns recognition in the GFCI report in the areas of business environment and human capital; the report notes the competitive nature in its ease of doing business and the quality of personnel available (Yeandle). The business environment of Luxembourg scores highly due to political stability and rule of law, institutional and regulatory environment, and positive macroeconomic environment. The country’s AAA rating with most agencies and low sovereign debt prove extremely attractive to top banks (KPMG). While French is most commonly spoken in the city, Luxembourg’s primary language of English in its financial and EU institutions provides an advantage over Frankfurt and Paris, but its high office space costs and corporate tax rate place it below Frankfurt and Dublin in general terms of competition.

Paris

Paris has viewed Brexit as an opportunity to gain popularity as a financial center and thus has made major lobbying efforts to win business to the French city. While Paris has done a great deal of lobbying, weaknesses in terms of factors considered by multinational banks place it well below the other competing cities. Relative to other non-London options, Paris scores poorly for office space rental prices. Indeed, Paris ranks as the second most expensive European city in terms of office space, behind only London. Corporate and payroll taxes are also high. Consequently, the French government of President Emmanuel Macron has implemented significant tax cuts to lure business from London (Chazan and Samuel). Although Paris falls behind its competition in most considered areas, it is victorious in winning Société Générale, HSBC, and French Banking Federation due to preexisting office space and use of the French language. While Paris has improved how it is perceived by business leaders with considerable lobbying, the French city clearly still falls dramatically below its competitors in the race to become Europe’s financial center post-Brexit. In short,
Table 3
Factor Scores on 1–5 Point Scale by City

<table>
<thead>
<tr>
<th></th>
<th>Frankfurt</th>
<th>Dublin</th>
<th>Luxembourg</th>
<th>Paris</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office space costs</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Corporate tax rate</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Business climate</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Payroll tax rate</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Quality of life</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Housing costs</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

it appears that Paris must do more to win business.

Scoring System Development

To explain the decision-making drivers and subsequently reflect the announced European relocation choices of banks as of 2018, I develop a scoring system that assesses and highlights what appears to be attractive about each potential European location for banks. I identify factors that are significant financially and structurally to the financial services sector. Factors specific to individual entities, such as preexisting office space, are not included and rather discussed separately. I consider the following factors in developing the scoring system: office space costs, corporate tax rate, business climate, payroll tax rate, quality of life, and housing costs.

Table 2 summarizes objective comparative metrics for each prospective city. For example, Frankfurt has low corporate tax rates and low office space costs. In addition, Frankfurt has the second-best business climate according to the GFCI. On the other side of the spectrum, Paris has high corporate tax rates, high payroll taxes, and a relatively lower quality of life.

The office space cost factor is scored based on rental prices of prime office properties (likely targeted by financial services companies) in euros per square meter per year. Lower office space costs lead to a higher office space score. The corporate tax rate factor is scored by the tax rate applied to corporate income. Higher corporate taxes indicate a lower corporate tax rate score. The business climate factor is scored by the twenty-first edition of the GFCI. The GFCI is itself constructed by scoring five factors of competitiveness: regulatory environment, human capital, infrastructure, sector development, and reputation (Yeandle). The payroll tax rate factor is scored by taxes on gross wages. Higher payroll tax rates are associated with lower payroll tax scores. The quality-of-life factor is scored based on the mean life satisfaction of the EU city as per Eurostat surveys (“Quality of Life…”). Finally, the real estate factor is scored by housing costs as a share of disposable income. While this factor remains important to employees moving to the chosen location, the residential real estate factor together with the quality-of-life factor were awarded the lowest weightings in the scoring system because other factors in practice seemed more influential in the banks’ decisions. Each factor and weight is designed to reflect the publicized planned European relocation of major banks and subsequently tease out the drivers in the decision-making process. I assess each city by factor with a 1 through 5-point scale (5—excellent, 4—good, 3—middling, 2—weak, and 1—poor), as shown in Table 3. I then weight the significance of the various factors by assigning points correlating to their importance from preferences already revealed in announced location choices. For simplicity, the sum of the maximum point values of the factors was set to 100. The city’s 1–5 score was then multiplied by the weight assigned for each category, summed, and divided by the maximum total possible (500...
Table 4
Factor Weights and Factor Scores by City

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Frankfurt</th>
<th>Dublin</th>
<th>Luxembourg</th>
<th>Paris</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office space costs</td>
<td>35</td>
<td>175</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Corporate tax rate</td>
<td>33</td>
<td>132</td>
<td>165</td>
<td>99</td>
</tr>
<tr>
<td>Business climate</td>
<td>12</td>
<td>48</td>
<td>24</td>
<td>60</td>
</tr>
<tr>
<td>Payroll tax rate</td>
<td>10</td>
<td>30</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Quality of life</td>
<td>5</td>
<td>20</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Housing costs</td>
<td>5</td>
<td>10</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Total points (of 500)</td>
<td>415</td>
<td>344</td>
<td>329</td>
<td>149</td>
</tr>
<tr>
<td>Overall score (% of 500)</td>
<td>83</td>
<td>69</td>
<td>66</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: Author's calculations.

points) to yield a rounded final percentage total score. These calculations and results can be seen in Table 4.

Scoring Significance to External Stakeholders

The purpose of the scoring system is to reveal—based on planned movement indicated in the media—the thought process of large financial institutions in their selection of EU locations as a result of Brexit. Frankfurt emerges as the most attractive city followed by Dublin, Luxembourg, and Paris. The weighting scheme aims to yield results that match the demonstrated attractiveness of the cities and subsequently highlights which factors are most important to banks. The weighting scheme and scoring system reveal that banks are most interested in office space costs along with corporate tax rate, followed by an emphasis on business climate and payroll tax rate, with the least importance placed on quality of life and housing costs. This information can be useful to policymakers in recognizing the strengths and weaknesses as well as areas for improvement for their cities as financial centers. In the case of Paris specifically, while citizens may dislike Macron's pledge for corporate tax cuts, the scoring system reveals that these changes are necessary to bring business to France.

Additionally, although Frankfurt ranks as the top location, room for improvement exists with respect to its tax rates and housing costs, attention to which may become necessary to remain at the forefront. Policymakers can utilize the scoring system to identify areas of improvement and conditions that must be met to become or remain competitive in the future.

Idiosyncratic Issues

While the scoring system considers factors that apply to the financial services industry in general, several factors are mostly relevant to specific banks rather than the whole sector. These idiosyncratic issues are addressed in the following sections.

Real Estate Owned by Banks Pre-Brexit

One large consideration in choosing an EU location is preexisting office space. Several banks held small office space locations within the EU to conduct some business in Europe, while maintaining their UK-EU headquarters in the major financial center, London. A natural decision for contingency planning in the wake of a hard Brexit for these banks would be to fortify their existing office space and legal entities to avoid lengthy application
processes and provide faster transitions. For example, Deutsche Bank selected Frankfurt because it had existing office space and legal entities there. This factor of preexisting office space in part explains why HSBC and Société Générale chose Paris over the scoring system’s top ranked cities.

Geographical Proximity to London

While regulatory bodies require that legal entities must be matched with the appropriate personnel and business structures to operate within the law, many stakeholders have considered the possibility of financial services firms selecting locations with closer proximity to London to allow for commuting of most essential personnel. While EU regulators have made it clear that they will be stringent in their consideration of applications from financial services entities wishing to operate within the EU, many stakeholders have expressed concern that empty shell companies will be most prevalent, with most essential personnel commuting from London (“Deutsche Bank...”). This presents a problem to EU regulators because these entities will be violating financial regulation, including the EU passport, by creating EU operations that in practice mainly exist in the UK instead of the EU.

To address this concern, the “substance requirement” of the EU banking regulatory supervisors has been put in place, enabling those banking regulatory supervisors to require sufficient substance in the form of management, staff, and internal control systems. At minimum, the EU entities would need to contain autonomous boards, full senior management teams, senior account managers, and traders, although much of the supporting staff may remain in London (Sapir et al.). Regulators in several EU countries have warned against the establishment of empty shell entities; nevertheless, concern remains for the potential of EU bases with little to no substance but with minimal commutes to London. Each of the analyzed cities is a short flight or train ride from the city of London, providing an opportunity for commuting. While Paris has the shortest potential commute to London by train, banks are still not choosing the French location, indicating that although geography is a concern, it is not a high priority to financial services institutions in their relocation choices.

Lobbying Efforts

The scoring system also provides insight into the lobbying and incentives offered by certain cities and/or countries hoping to attract financial services institutions. Seeking to improve their economies, certain countries that have proved less attractive to the financial services industry have made substantial lobbying efforts to attract the business of the UK.

The country at the lobbying and incentive forefront has been France, with lobbying group Paris Europolis sending frequent delegations to London. Paris is seeking the hardest Brexit possible to take advantage of the disruption this would cause to the UK financial center, revealed in a leaked memo from Jeremy Browne, the City of London’s envoy to the EU (Martin). Business leaders in Paris are confident that their city will soon become the future of banking in Europe, attracting 10,000 UK jobs (Martin). France’s rediscovered self-confidence following the election of Macron in May 2017 has translated into redoubled faith in the ability of Paris to win financial services business from London following Brexit. The Macron government has pledged significant tax cuts to lure business from London and promote a more positive image of France from a business perspective. Paris has earned a reputation as a hostile tax location, scoring at the bottom of the model’s categories in both corporate and payroll taxes, which, when coupled with onerous labor laws, forces Paris to lobby and fight harder than other European locations to win UK financial firms (Chazan and Samuel). Proposals to increase attractiveness for Paris include abolition of the highest bracket of a payroll tax levied on each salaried employee and the cancellation of plans to increase France’s 0.3% tax on financial transactions. Paris also pledged to alter the way EU financial regulations are absorbed into French law to ensure that red tape is decreased in comparison to other European countries. An additional large setback for the French city in its competition for UK-based business is the obstacle of doing business in
English for a staff unaccustomed to doing so. The French prime minister, Édouard Philippe, announced that the government has begun work on establishing an international tribunal in Paris that can handle cases in English, the language of the financial world ("France Bets on English..."). The city is also establishing three new international schools in the Paris area by the year 2022 to alleviate concerns of banking staff moving their families to France after Brexit.

Although it is most active, France is not alone in its lobbying efforts. In 2016, a regional politician announced to Wall Street bankers that the banks' presence was desired in Germany by Angela Merkel, Chancellor of Germany (Davies and Halpin). Yet, Merkel has been less vocal than other European political leaders, relying instead on the Prime Minister of the state of Hesse, where Frankfurt is located, to comment on the process. This welcoming and subtle confident sentiment has proved encouraging to multinational banks. Additionally, Frankfurt benefits from the location of the European Central Bank in their city, which also hosts two other key financial authorities: the governing body for the eurozone single monetary policy, called the Single Supervisory Mechanism of the European banking union, and the EU macroprudential supervisor, known as the European Systemic Risk Board. These two regulatory bodies assist organizations in their compliance efforts, making co-locating in Frankfurt an attraction to financial services institutions.

Similarly, Irish leaders have been successful in attracting multinational banks to the EU in preparation for a hard Brexit. Dublin provides a low-tax, English-speaking location and has laws and regulations similar to those in London (Finch et al.). Irish politicians have been more transparent than competing countries about their attempts to attract business, publicizing their efforts throughout social media and web-based outlets. Indeed, Irish leaders have been making a great effort to attract bankers to their country in the aftermath of the collapse of the Irish financial system and subsequent international bailout in 2010. Extra banking jobs and tax revenue are vital for Ireland's small economy, which relies largely on foreign investment for economic success. IDA Ireland, the state agency charged with winning foreign business, began discussions and meetings with banks three months before the Brexit vote took place (Finch et al.).

Luxembourg has been quieter than its competitors in relocation lobbying. The city's affordable and internationally oriented schools, teaching children in German, French, and English, present an opportunity for bankers from the UK to support multilingual families. Businesses have identified Luxembourg as a stable economy with an experienced and well-respected banking regulator. As a result, several banks have placed it above Paris and in some cases other cities in preparation for Brexit. For example, Citigroup's private banking group has chosen to leverage their existing legal vehicle in the city to fortify their presence in Luxembourg, as have Julius Baer, Northern Trust, Blackstone, M&G, and ICG.

**Conclusion**

Multinational banks have been compelled to create contingency plans in the wake of a hard Brexit, in which access to the EU single market will be discontinued without future arrangements for access after spring of 2019. As a result of this loss of access, multinational banks must establish EU locations to strengthen their existing business to the EU. The decision of where to relocate involves several complex factors. The scoring matrix developed in this article evaluates factors most vital to financial services institutions and assesses top potential locations, ranking their competitiveness as indicated by publicized relocation. The assessment of the factors derived from the evidence of the announced choices of multinational financial institutions suggests that the competitiveness is in the following order: Frankfurt, Dublin, Luxembourg, and Paris. Frankfurt has emerged as the leader in the race to become Europe's next largest financial center, with Dublin and Luxembourg close behind; however, the risk inherent in uncertain negotiations encourages financial institutions to spread throughout Europe to the cities that best suit their specific business needs. The model and revealed choices of leading banks show that Frankfurt has established itself as
the best European city for banks in general but without consideration of idiosyncratic choices of specific banks. While Frankfurt will be accepting the most banks after Brexit, given the idiosyncrasies, no singular European financial center will emerge in the wake of Brexit. The resulting competition will create a more geographically diversified multinational financial services industry throughout the UK and the EU.

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CROSS-BORDER TRADE ON THE ISLAND OF IRELAND IN THE WAKE OF BREXIT

Logan Herr

Cross-border trade is the cornerstone of the Northern Ireland and Republic of Ireland economic relationship and a primary driver of Brexit discussions, which threaten the integrated and currently invisible seams of the border. The UK has simultaneously committed to maintaining frictionless trade and to no hard border post-Brexit. This article analyzes the UK’s proposed solutions for the Irish border, as well as the potential impact of these new systems on the economics of cross-border trade on the island of Ireland.

Introduction

Uncertainty presides over the future of cross-border trade on the island of Ireland in the wake of the quickly approaching March 2019 Brexit date. At the time of writing this article, the UK is committed to leaving the customs union and single market of the EU, thereby forcibly erecting a customs border that will need to be managed in the future. A focused examination of the UK’s proposed resolutions for the Irish border post-Brexit provides clarity into the future of cross-border trade and its economic impacts.

Spanning the province of Ulster, the border between Northern Ireland (NI) and the Republic of Ireland (ROI) divides rivers, bridges, towns, and even the occasional farmhouse. Despite a troublesome and violent history, the 310-mile frontier today is nearly invisible. One of the only detectable differences during a crossing is the change in speed limit signs from metric units in the south to imperial units in the north. Each month, roughly 385,000 trucks and vans and 1,850,000 cars cross that border. Additionally, around 35,000 people cross daily because they live and work on opposite sides. One particular east-west road between the towns of Clones and Cavan traverses the border four times within six miles. Unravelling ties as tightly intertwined as these amplifies the challenges Brexit presents for the border (McCann and McSorley).

In this article I first lay out the history of the border and then explore the border’s role at the center of Brexit negotiations and the British position on the border’s future status. I then focus on economic aspects, complete with a snapshot of current trade between NI and the ROI. Finally, I critically analyze, derive the economic impacts of, and develop points for consideration on the proposed solutions from the UK government for the Irish border post-Brexit. Shifting away from a frictionless free trade border will have heavy consequences at the local island level on the two integrated...
economies. Through highlighting the key pitfalls of the UK’s imaginative plans, it is evident that nothing can compare to openness and cooperation in driving seamless trade relations.

**History of the Irish Border**

**Partition**

As a result of the Irish War of Independence, the Anglo-Irish Treaty was signed in 1921. It established the Irish Free State while partitioning 6 of the 9 counties of Ulster in the majority Protestant and pro-British northern region of the island. This northern territory, just one-sixth of the landmass of the island, became NI and remained a member of the UK. The partitioning kept majority Protestant unionist counties within NI, while majority Catholic nationalist counties became part of the Irish Free State (later becoming the Republic of Ireland in 1949). Despite establishing independence, Dr. Katy Hayward, a sociology researcher from Queen’s University Belfast who specializes in studying international borders, describes how the new Irish border was drawn with British contempt:

The colonial high-handedness with which the border was carved is reflected in its route, which cuts through single farm holdings and shows little respect for the natural terrain of the landscape. For the largely rural and impoverished borderlands, there were particularly dire consequences from severing the close social, economic and kinship ties that ran across what had previously been merely a county boundary.

The Common Travel Area was created in 1923, shortly after partition, to allow citizens of the Irish Free State, NI, and mainland Britain to travel throughout and between the island nations without identification or documentation. This significantly eased the burden of separation on people living on either side. In its early stages, the border’s customs checkpoints managed a limited variety of basic goods, including some manufactured products. A short decade later, the border played a pivotal role in a disruptive trade war (Hayward).

**Anglo-Irish Trade War**

In the early years after partition, the Irish Free State and the UK (including NI) were closely tied through trade. The Irish Free State was greatly dependent on UK coal coming across the Irish Sea while nearly 90% of all agricultural products, the largest sector of the Irish economy, was exported to the UK. After a series of financial disputes in 1932, the UK instituted a hefty 20% import duty on all goods coming from Ireland as well as quotas on Irish livestock. Retaliating, the Irish Free State imposed import duties on coal, steel, iron, cement, electrical goods, machinery, and other top British exports (“The Economic War...”). This period offers insight into an uncertain future where import duties and trade boundaries may be established once again.

After 6 years of this economic tug of war, known as the Anglo-Irish Trade War, severe impacts rippled across these nations, underpinned at the same time by the global economic depression. The biggest scars were left on the island of Ireland. The economy of the Irish Free State nearly collapsed with its economic lifeline, the cattle industry, down 35% in exports and many farmers going bankrupt. Unemployment rose over 475% from 1931 to 1935 while, simultaneously, Irish emigration increased to more economically sustainable shores, including Australia, Canada, the United States, and England. The overall cost to the Irish Free State from the trade war was about £48,000,000, an amount worth roughly £3 billion today (“The Economic War...”). NI, a region dependent on cross-border trade, struggled to find new markets, and many industries were hit hard by the duties imposed at the border. Mainland Britain suffered least in comparison but still lost 22% in its share of the Irish Free State market and faced shortages of agriculture products traditionally acquired from the Irish Free State. A treaty ended the trade war in 1938, although the adverse effects echoed in the region much longer. One lasting impact, smuggling, has become an integral part of Irish culture (“The Economic War...”).
A Culture of Smuggling

Smuggling became a day-to-day opportunity not just for organized crime groups funding violent activities but also for families to make ends meet and avoid the effects of duties and fines on small family budgets. This phenomenon was amplified in the borderlands, where even children were sent off by their parents to smuggle butter, bacon, bread, or eggs across the border ("Living with... "). Duties on products coming from one side meant cheaper prices on the other, and smuggling itself became an accepted norm, carrying with it an air of rebellious glamor and humanitarian vindication, where the culture welcomed innovative methods of subverting the border (O'Leary).

Smuggling significantly waned after the joint accession of the UK and the ROI to the European Economic Community (EEC) in 1973. This established access into the EEC customs union and standardized policies and tariffs on goods, which greatly reduced trade barriers and furthered the openness of border relations. Looking forward, a post-Brexit withdrawal from the customs union and a potential return to a hardened border, including tariffs and customs checkpoints, could bring criminal and cultural smuggling back to the forefront (Hayward).

The Irish Troubles Through
Current Day

Despite the progressive step of joining the EEC, the NI-ROI relationship frayed in the bloodshed of the Troubles between the unionists and nationalists. The 30-year conflict was sparked by rioting, political unrest, and intermittent violence. A cease-fire was finally announced in 1994, ultimately ending with the Good Friday Agreement, signed in 1998. The peace process, along with newly established north-south cooperation programs, facilitated all-island prosperity and an integration of the cross-border economies while simultaneously erasing obstacles and burdens to trade (Dorney). During the Troubles, there were only 17 approved border crossing points. Hundreds remained completely closed. As peace progressed and the roads were un-blocked, businesses began cooperating across the border and trade became more fluid (McCann and McSorley).

A Guardian journalist, Sean O'Hagan, journeyed in Spring 2017 along the Irish border, documenting the sentiment of the people living in the borderlands on issues of the border post-Brexit. His discoveries exemplify the threat a hardened border would have on the foundations of peace gained through the Good Friday Agreement:

If one were to imagine a worst-case post-Brexit scenario for Northern Ireland, it would involve the border becoming once again a focus for paramilitary aggression. Dissident republican groups remain sporadically active in Northern Ireland. They are relatively few and have little support among the nationalist population of the north of Ireland, but it is worth remembering that the Provisional IRA occupied a similar position on the margins at the start of the Troubles.

O'Hagan's travels unearthed a heavy sentiment against a return to the border posts of the past. There is a lot at stake. Thanks to the combined effects of the Good Friday Agreement and membership in the EU for both the UK and the ROI, cross-border trade is seamless and the frictions of customs, tariffs, and quotas nonexistent. The economies and people on both sides have benefited from this open, peaceful relationship for over a decade now. Unfortunately, with Brexit, history could well repeat itself. Given the negotiation's uncertainty, it is important to reflect on the history of violence and economic disparity that has burdened its existence over the past century. The after-effects of the Irish War of Independence—the Anglo-Irish trade war, the culture of smuggling, and most recently the violence of the Troubles—suggest there is much to be gained in resolving the border without rekindling those drastic downsides.

Brexit and the Border

Definitions of Terms

In analyzing proposed border solutions, it is helpful to clarify terms that dictate the
Irish border from an economic perspective, including a free trade area, the single market, and the customs union. A free trade area is one in which there are no tariffs, quotas, or taxes on goods and services transferred from one country to another. Negotiating such free trade agreements can take a long time, and there are often exceptions, such as for agri-food products. The single market, a tenet of membership in the EU, is essentially an extension of a free trade area, with additional rules for free movement of goods, services, capital, and people between all the member nations. The customs union, also a tenet of EU membership, treats all EU member states as a single bloc in trade agreements with outside nations. All member states agree to offer the same tariffs on incoming goods from countries outside the EU, meaning that EU members cannot strike trade deals with outside nations on their own. Once foreign products enter any EU nation, they can then be transferred throughout the EU with no further frictions or barriers (Bloom).

Britain will, in leaving the single market and customs union, gain sovereignty over forging trade agreements with other nations, determination of its own product and service regulations and standards, and managing immigration and other flows across its borders. Despite these benefits, there are serious risks and concerns that the economic damage for Britain will far outweigh the benefits (Bloom).

The British Position

In her manifesto released before the June 2017 general election, UK Prime Minister Theresa May stated her full intention to lead the UK out of the customs union and the single market: “As we leave the European Union, we will no longer be members of the single market or customs union but, we will seek a deep and special partnership including a comprehensive free trade and customs agreement” (Osborne). Later, in the same manifesto, May stated one of the pinnacle goals is to maintain a frictionless and economically fluid border on the island of Ireland. These principles were affirmed in the joint agreement issued December 8, 2017, resulting from the first phase of Brexit negotiations. However, these aims differ at their very core. Brigid Laffan, Director of the Global Governance Program at the European University Institute, puts it this way: “The sentiment in Ireland is that the decision to opt for a Brexit model that involves leaving both the single market and customs union undermines the credibility of the UK’s stated commitment to no hard border on the island of Ireland, and to frictionless trade” (Laffan). If the UK does not secure access to the EU single market and customs union, thereby forcibly erecting barriers in the form of tariffs and customs controls, trade relations between the UK and the EU, more specifically NI and the ROI, will fundamentally change.

To decrease the immediate impact of these changes, May committed to a transitional period after the March 2019 Brexit date in which the UK and EU will adhere to current trade terms and remain partners in the single market and customs union for around two additional years (Stone). While this may delay the cliff-edge of Brexit and smooth the transition, it remains that the UK will ultimately depart both the single market and customs union. At the time of this writing, with the December 8, 2017, EU-UK joint agreement stating the farthest-reaching progress in Brexit negotiations, the unity on the desired future state of the Irish border is overshadowed by the risks of extremely adverse economic effects that British sovereignty entails.

Northern Ireland–Republic of Ireland Trade Relations

NI sent 31% of its goods directly to the ROI in 2016 (55% of goods went to the EU as a whole). Conversely, a mere 2% of the ROI’s goods was exported to NI. Despite this small percentage going to NI, the ROI’s largest export destination is the UK at 13% of total goods. While NI may not be the end destination for goods that cross the Irish border from the south, more than £33 billion of goods in 2014 alone made the trek over the divide headed toward the UK (Stennett). The UK as a whole is significant to the ROI in terms of trade, but the ROI has broader export destinations than its northern neighbor. Thus, the biggest threat from frictions to cross-border trade clearly falls on NI due to its heavy reliance on direct
trading links with the south, accounting for nearly a third of its export economy ("Brexit and UK-Irish Relations").

Cross-border trade is the cornerstone of the NI-ROI economic relationship and is a primary driver of Brexit discussions. The fact remains that withdrawal from the single market and customs union means managing a land border on the island of Ireland. The real questions are, What will be the constitution and scope of the control systems enforced at the external frontier for goods? and How will they affect the economics of cross-border trade on the island (Dougan)? The analysis of proposed border solutions in this article focuses on the economic perspective of the physical frontier for goods.

Analysis of Proposed Border Solutions

The planned system of border controls post-Brexit is outlined in the NI and the ROI position paper released by the UK government on August 16, 2017. Plans include but are not limited to

- Establishing a new UK-EU customs partnership and trade agreement
- Utilizing extensive technology tools to reduce frictions to trade and ease the burden of complying with customs procedures
- Exempting small and medium-sized enterprises (SMEs) from customs processes and establishing mutual recognition for trusted traders among larger enterprises
- Approving select roads as official customs crossing points
- Maintaining absolute regulatory equivalence in the agri-food sector with no border checks on these types of goods to stabilize the economic lifeblood of the island

While the details are left to future negotiations, the position paper lays out the UK’s desired means and end state. The critical assessment below highlights the considerable gap between what the position paper calls “flexible and imaginative solutions” and reality ("Northern Ireland...").

Customs Partnership and Trade Agreement

The most important of the UK’s proposed solutions is a new customs partnership and potential free trade agreement with the EU after removal from the single market and customs union. If this paramount goal is not met, EU-UK trade relations would revert to World Trade Organization standards. Extreme barriers to trade—including border posts, tariffs, and duties—would once again become the norm, potentially tearing apart integrated cross-border supply chains and trading networks, especially for products in the agri-food sector, where the average EU tariff is 22.5%. Coinciding with these frictions are serious security risks resulting from sophisticated smuggling by paramilitary networks and criminal gangs seizing opportunities to evade tariffs and using these funds to fuel their violent and aggressive tendencies. Additionally, new border posts could become direct targets for dissenting republican paramilitary groups looking to instill fear through bloodshed (Anderson). As evidenced by the violent history of the border, especially in the relatively recent times of the Troubles, re-erecting physical border posts threatens to unravel many decades of peace process work. Both the EU and UK would need to invest significant resources to manage and police this hardened border while the economic damage to the all-island economy, especially on a local scale, could be deep and widespread (Burke).

This scenario—failure to reach a free trade agreement or customs arrangement—must be strongly avoided. The UK government has expressed that the ideal solution would involve “aligning our approach to the customs border” and treating goods essentially the same way they are today for customs purposes, thereby eliminating the need for any additional customs processes on the border. Maintaining seamless custom relations is high in priority but not without difficulties, as the UK admits its planned approach is the first of its kind and bears unparalleled challenges for implementation (“Northern Ireland...

For instance, this new customs partnership would require that Britain mirror EU tariffs for goods arriving from third
countries, while also agreeing to maintain EU product standards. However, this goes directly against the Brexiteers’ strong imperatives for sovereignty in striking Britain’s own trade deals. The directives would only erase trade borders if they completely cover all areas of commerce (Taylor). Additionally, to maintain border security and regulatory consistency there would need to be absolute and robust traceability of all goods, from origin to endpoint, across all sectors.

Technology to Reduce Frictions

As outlined in its position paper, the UK plans to mix technology and reduced documentation requirements to create post-Brexit customs control mechanisms. Elements of this technology-based approach include online pre-departure customs declarations by the trader, origin and destination traceability, and automatically registering vehicular border crossings through plate recognition cameras. These components would then be integrated into user-friendly and reliable software accessible on both sides of the border (Hayward et al.). While more streamlined than traditional border posts, there will still need to be occasional physical checks to ensure that any vehicles that raise red flags could be inspected. To avoid lengthy delays at these crossings, the UK and EU would need to jointly operate a single customs window where either entity’s customs representatives have the right to carry out physical checks on any vehicle.

The divide between the US and Canada has been touted as an example of a successful technology implementation of border management, complete with a single window system and unified software for declarations. Deep cooperation and flexibility on both sides, such as eliminating differences in standards and regulations on trade goods, ease the hard border experience. However, reliance on technology alone is not enough and has its faults, including software implementation failures leading to border crossing delays and heavy resource expenditures to continually resolve system errors and technical issues as they arise. The US-Canada system could be useful as a model for the Irish border, but consideration should be given to the fact that new technology often introduces more problems than expected (Tannous and Hayward).

Cracks exist in this plan to achieve an invisible border through technology. The costs of following online customs declaration procedures would hit SMEs hard, because SMEs are responsible for the majority of cross-border trade. These companies, with already thin profit margins, could not afford the information technology resources and staff necessary for full compliance with rules and absolute traceability for all their traded goods. Therefore, even with intelligently implemented technologies for customs management, both physical border controls and exceptional effort from traders remain imperative to uphold the integrity of legitimate trade while also mitigating security risks (Hayward et al.).

Special Trader Exemptions

To mitigate adverse impacts, Britain proposes special arrangements for SMEs and larger enterprises alike. SMEs include businesses with fewer than 250 employees. In 2015, of the more than 5,000 NI businesses that shipped goods south to the ROI, 99.8% were SMEs, and SMEs accounted for 80% of the value of those exports (“Additional Data…”). SMEs are clearly the foundation of local economies and cross-border trade on the island. Most of these smaller traders are not individually significant enough to be categorized in international trade but rather trade largely in local markets. The UK plan includes special cross-border trade exemptions from all new customs processes for certified SMEs. Upon acceptance via an extensive application, these local traders could operate as seamlessly as they do today (“Northern Ireland…”).

Conversely, larger enterprises with greater than 250 employees account for 20% of the value of NI to the ROI trade in goods. Businesses falling into this category could submit a similar application and be labeled trusted traders. Trusted traders could access simplified customs procedures and streamlined online customs declarations. In combination, these two proposed programs aim to further reduce the physical infrastructure needed at
the border ("Northern Ireland...").

The problems here lie with the administrative costs to the businesses for registration and application for these special exemption programs. Additionally, the burden on the government to manage the programs, including the vetting process, would be substantial. Risks exist too of sophisticated smuggling and sub-standard products leaking through open channels should small traders have zero physical barriers to cross-border trade. While the intention behind special exemptions is right—a softened border—the inherent costs and risks must be considered and mitigated by both the UK and the EU in the system’s detailed design and implementation, a step far from even beginning at the time of this writing.

Approved Roads for Border Crossings

On average, more than 12,500 heavy goods vehicles and light vans cross the Irish border per day. The UK Department for Transport estimates that during 2015 over 7 million tons of total freight were shipped back and forth, with the largest portion from the agri-food industry. Of the various shipping routes, half are concentrated within the Newry-Dundalk corridor ("Additional Data..."). Designating specific approved border crossings, especially on heavily trafficked throughways like Newry-Dundalk, would limit the number of physical border posts needed, as all goods trade would then be required to enter and exit through these defined checkpoints.

A system like this currently exists between Norway, not a member of the EU, and Sweden, an EU member state. A comprehensive EU-Norway trade agreement and customs partnership covers manufactured goods and some agri-food products. Goods cross over a limited number of approved roads where jointly operated customs posts check goods only once, using customs staff from either side. Thanks to electronic detection of plate numbers and online declarations, delays average only a few minutes. At the same time, comparing this Scandinavian border to the Irish border is unrealistic. The land border between Norway and Sweden contains only a few passable roads in sparsely populated areas. Ireland, on the contrary, has well over 200 roads crossing the border, dozens of which are small and may crisscross the border many times. It is in these intertwined borderlands where organized smuggling and criminal activity are most present, challenges that are foreign to the Norway-Sweden border (Matthews).

A stark choice for the UK remains: establish a select group of approved roads with physical customs posts, which potentially become targets for violence from dissident paramilitary groups and back doors for increased smuggling, or allow traders to traverse all cross-border roads and face the high logistics costs of tracking and managing legitimate and illegitimate trade across these routes. Neither option at this point seems feasible. In developing a solution, the UK will again need to utilize "flexible and imaginative" methods in an "unprecedented" scenario, because for certain, straightforward approved roads are no easy answer ("Northern Ireland...").

Considerations for the Agri-food Sector

The agri-food sector dominates the cross-border trade economies on the island of Ireland. Supply chains for farming, livestock, food, and beverage production are deeply integrated, flowing back and forth across the border and accounting for 56% of cross-border trade on the island in total. Reliance on exports in these lifeblood industries is above average. For example, 42% of dairy sales are exports, 37% with sheep, 39% with fish, and 44% with drinks. Additionally, in the flow of a product's life, production and processing can occur on differing sides of the border; for instance, 27% of the milk from NI's farms (nearly 600 million liters) is processed in the ROI ("Additional Data..."). Furthermore, due to extreme health risks from sub-standard agri-food products, regulations on this sector are strict and require extensive physical quality inspections. The current EU standards that apply to agri-food imports from any non-EU nation require official physical inspection on departure and entry into the EU via certified border inspection posts as well as manual documentation and identity checks 100% of the time. The sudden
shock of a transition from today’s seamless agri-food trade and supply chains over the border to this new system of hardened delays and extensive checks potentially could plunge small agricultural businesses into an economic downward spiral (Matthews).

The only effective method to sustain the regulatory-sensitive agri-food sector is to ensure that UK products continue to comply with EU single market regulations (Hayward and Campbell). This frictionless end-state is entirely contingent on the post-Brexit customs partnership and trade agreement. British officials stress that from day one after Brexit, thanks to the Great Repeal Bill, UK and EU regulations will be identical. This commitment requires substantial compromise by hardline Brexiteers, as the UK would have to follow EU regulations in the future even as adapted and changed, in turn limiting their ability to enter free trade agreements with any third countries demanding access into UK markets for food products incompatible with EU rules (Matthews). Regardless of the approach, the agri-food sector is a top priority to be protected, for the alternative is widespread economic suffering of the people relying on these integrated trade networks.

Conclusion

Every parameter of the UK’s strategy for border solutions poses a difficult balance between sovereignty and all-island economic stability. For Brexit negotiators, there is no perfect design. Simply following the models of non-member countries currently in partnership with the EU is not a cut-and-dried option, due to the especially intertwined social, political, cultural, and economic ties on the island of Ireland. Rather, an innovative approach is necessary, which creatively amalgamates components from successful border models tailored to the unique needs of the UK, NI, the EU, and the ROI altogether. Lessons from the contentious history of the Irish border, from its partition to the smuggling and violence of the Troubles, must be combined with a forward-looking approach to ensure the all-island economy can continue to grow and flourish while minimizing any regression in the peace process. The two-year transitional period beyond the March 2019 Brexit date gives bureaucrats and negotiators from both sides a much-needed time buffer to arrive at a comprehensive solution for future cross-border trade. Perhaps the greatest takeaway from this analysis of the story of the Irish border and the quest for seamless trade is that freedom from EU membership does not alter the timeless tools that support truly frictionless trade relations: regulatory commonality, deeply coordinated efforts, and cooperation through compromise.
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NATIONAL HEALTH SERVICE ENGLAND: 
AN OVERVIEW AND ANALYSIS 
OF CHALLENGES 

David Ebhomielem

In a 2017 study, the UK National Health Service (NHS) was ranked as the highest performing health system when compared with those in ten other wealthy nations. However, protests in England tell a different story. As NHS staff in England cope with rising demands amid insufficient funding, accident and emergency services wait times are increasing and hospitals’ safety ratings are falling. This article examines the strengths and challenges facing England’s NHS and suggests recommendations to prevent its potential collapse.

Introduction

The UK National Health Service (NHS) is considered one of the most reputable health care systems in the world. Its exemplary performance can be attributed to its core values: it is free at the point of access; it meets the needs of everyone; and it is based on need, not ability to pay (“The Principles…”). However, the translation of these values to practical policy has proved difficult in the last decade, resulting in problems such as longer wait times, overcrowded lobbies, and hospitals closing. According to the Care Quality Commission (CQC), a monitoring board inspecting financial stability and safety of care, 54% of acute hospitals in England were rated as requiring improvement or as inadequate in 2016/2017 (“The State of Health…”). The NHS in England hit its lowest point with the Mid Staffordshire scandal, when between 400 and 1,200 patients died as a result of poor care between 2005 and 2009 (Campbell, “Mid Staffs…”). “Crisis,” “catastrophe,” and “breaking point” have all been used to describe the NHS England in the media. Yet statistics show a less horrific reality. In this article, I discuss the challenges of England’s NHS specifically and their underlying causes. I begin by presenting the history and current structure of the system. Next, I outline its strengths and shortcomings and offer recommendations of my own. Finally, I conclude that the NHS in England has its strengths but is still facing challenges that, if unaddressed, could lead to a breakdown of the system.

NHS History

Britain Before the NHS

The establishment of the NHS in 1948 came after several decades of discussion on how to provide health care in the UK. Ultimately, the casualties of World War II served as a catalyst for change. Prior to the NHS, British
citizens were under a patchwork health system. Pre–World War II, the British had three ways to obtain health care: 1) employment funds, which were primarily available to men; 2) the private sector, which only the rich could afford; and 3) the Poor Law, for the poorest. This structure resulted in approximately 40% of the UK being insured (Timmons).

Employment funds were a system built for the working citizen earning below a certain level of income, where both employee and employer contributed a small fee to the government. In exchange, individuals were allowed free but limited access to hospitals (Berridge). Alternatively, in the private sector, health care providers were paid out of pocket at the point of treatment by simply relying on individual finances. Doctors sometimes helped poorer patients by waiving the fee completely. Lastly, the Poor Law Amendment Act of 1834 was for the most desperate of people. The poor would labor in workhouses, performing rudimentary yet cruel work, often in deplorable conditions, to ensure they received treatment when ill (“History: People and Poverty”).

The casualties and devastation of World War II were pivotal in spurring the government to amend many aspects of society, including health care. Sir William Beveridge emphasized the need for change in the Beveridge Report (1942), but he gave only a brief explanation on how the new social health service would be funded. It was Aneurin Bevan, a Welsh Labour Party politician and Minister of Health from 1945 to 1951, who presented the actual framework for the National Health Service Act of 1946.

Creation of the NHS, the Internal Market, and the New Labour System

When it was launched by Bevan, the NHS was founded on three core principles: it would meet the needs of everyone, provide services free at the point of delivery, and be based on clinical need, not ability to pay (“The Principles...”). The NHS came into effect on July 5, 1948, guaranteeing everyone medical treatment when needed and at no cost.¹ This assurance was made possible by general taxation, including income taxes, value-added taxes, and National Insurance contributions. The new service covered the three branches of health care: hospital services, community health services, and primary care (Rivett). As Minister of Health, Bevan established regional boards, local health authorities, committees, and councils as regulators to monitor the decision making within these prongs. General practitioners (GPs) and dentists were considered private contractors to the NHS and they were on a standard salary, not paid per service.

Despite all these positive changes established by the NHS, problems emerged. Initially, when the NHS bill was brought to Parliament in 1946, the annual cost was projected to be £110 million. This budget was quickly increased as the years passed, and by 1951, the actual cost was £384 million (Rivett). The cost kept increasing and the Conservatives grew more indignant toward Bevan’s Labour Party. When Labour lost the general election to the Conservatives in 1951, the new party in power imposed a five-pence prescription charge in an attempt to reduce expenditure (Rivett). Over the next few decades, the NHS produced increasingly positive results as new drugs were introduced, and more health centers were built to keep the public healthy. Drugs for more complex diseases, however, such as cancer and AIDS, increased costs.

In 1990 the NHS underwent its largest reform yet through the National Health Service and Community Care Act. The bill introduced the “internal market,” meaning that local health authorities and GPs were now responsible for managing their own budgets (provided by the Department of Health) while making contracts with other health providers (“History of the NHS”). The Conservative government presented the internal market as a solution, although controversially, to the problem of growing waiting lists. They hoped that introducing this type of competition among NHS trusts (independent organizations providing several medicine-related services) would urge them to provide better quality and NHS Wales. The specifics of this article refer to NHS England.

¹The UK NHS comprises 4 branches: Health and Social Care in Northern Ireland, NHS England, NHS Scotland,
care more quickly ("History of the NHS"). An analysis done by the King’s Fund (a charity involved with shaping health policy and practice in England) concluded that the “reforms had largely failed to live up to the claims of their proponents and the fears of their critics, principally because the incentives of the internal market were too weak, and the constraints imposed too strong" (Mays). After almost a decade of adjustments, the new government sought to make changes.

The English Labour party reformed its internal market in the NHS Plan 2000, leading to a period in NHS history from 2000 to 2007 guided by this plan. The key elements that categorized this era were the creation of foundation trusts (providers similar to NHS trusts but with more local responsibility and authority), implementation of payment by results, emphasis on patient choice, and inclusion of the private sector among providers the NHS covered. This New Labour system, most importantly, was marked by a continual increase in funds (Rivett).

To develop a more quality-based NHS, payment by results was introduced to give hospitals greater incentive to improve patients’ health. Hospitals would receive payment only for services performed as opposed to block contracts (a set amount given at the start of every year). Thus, hospitals ventured to generate more revenue by attracting more patients who exercised their patient choice (Dragoons). These reforms were designed to create an NHS with higher quality, improved responsiveness, greater equity of access, and better value for money (Mays). However, the effects of the 2000 reforms were slower and less significant than hoped. Ultimately, the financial crisis of 2007/2008 throttled funding increases and provided the impetus for the Health and Social Care Act passed in 2012.

2012 Reforms

The 2012 reforms laid out a plan for several complicated changes. The most significant reform was the creation of NHS England. Its primary role is to determine the priorities and direction of the NHS and to ameliorate health care quality and outcomes for those in England. Most of the budget NHS England receives from the Department of Health goes directly to Clinical Commissioning Groups (CCGs). The 207 CCGs in England consist primarily of GPs, public health practitioners, and other medical practitioners including nurses and hospital doctors. They are tasked with improving the health of their local population by choosing and buying the services from hospitals, community services, and private and voluntary sectors.

NHS Improvement and the CQC are bodies created to monitor finances and inspect the quality of care of all NHS services in England and the UK, respectively. NHS Improvement consults NHS trusts and foundation trusts on ways to meet and maintain safety, quality, and financial targets. They hold providers accountable and intervene where necessary to ensure that the NHS meets its short-term goals by providing more direct support and potentially requesting a change in a trust’s management (“NHS Improvement...”). Additionally, the CQC inspects, surveils, and rates services based on safety, care, leadership, effectiveness, and responsiveness (“CQC: Who We Are”). Overall, the new NHS in England, under the Health and Social Care Act, was designed to emphasize local decision making, put GPs in control of commissioning as CCGs, encourage patient choice, and improve quality of care and patient safety (Ham et al.). These changes led to the NHS being recognized as one of the best health care systems in the world.

NHS Performance

Strengths

Despite the complaints and calls for reform, people living in England have generally enjoyed the benefits of a world-renowned health care system. A study by the Commonwealth Fund in July 2017 places the UK NHS, as a whole, as the highest-ranked health care system based on five domain areas (Table 1).² Impressively, the UK ranks first in two areas

²Data sources included Commonwealth Fund international surveys of patients and physicians together with selected measures from the Organisation for Economic Co-operation and Development (OECD), World Health Organization, and the European Observatory on Health Systems and Policies (Schneider et al., p. 3).
### Table 1
Health Care System Performance Rankings

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*Source: Schneider et al., p. 5.*

### Table 2
Eleven-Country Summary Score on Health System Performance

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*Source: Schneider et al., p. 18.*
and third in two other areas. In the detailed scores shown in Table 2, a positive performance score indicates the country performs above the 11-country average, whereas a negative score falls below average performance. The scores are measured in standard deviations. The score for the “preventive care” area (0.46) is calculated based on individual scores from specific indicators. Examples of such indicators include “talked with provider about healthy diet, exercise, and physical activity in the past two years” and “avoidable hospital admissions for congestive heart failure” (Schneider et al., p. 18). For both these indicators, the UK received a positive performance score. The “safe care” score (1.63) is also comprised of multiple indicators, one of which includes “experienced a medical, medication, or lab mistake in the past two years.” The NHS is also applauded for its equity. To calculate scores in “equity,” several indicators from other domains were separated as “below-average income” and “above-average income” among respondents, and the performance score was determined from the percentage point difference between respondents from these two categories. The UK emerged with the highest domain score for equity at 0.93.

Overall, the Commonwealth Fund presents the NHS as a worthy role model when analyzed according to these measures. Secretary of State for Health Jeremy Hunt welcomed the study, saying, “These outstanding results are a testament to the dedication of the NHS staff, who despite pressure on the frontline are delivering safer, more compassionate care than ever” (Triggle). The study, along with Hunt’s remarks, was only able to calm a small fraction of those worried about their beloved NHS.

Nonetheless, the NHS faces challenges in the “health care outcomes” domain (see Tables 1 and 2). Strikingly, the UK ranks second to last in this area. Within that domain, the UK scores poorly in “mortality amenable to health care.” Nevertheless, because of the efforts made to strengthen its service, the UK also has the largest 10-year decline in mortality amenable to health care (37%) (Schneider et al., p. 24). Above all, this information depicts the strengths of the British health care system and also its dedication to improve.

**Weaknesses**

As patients’ needs changed, the NHS in England developed shortcomings and inadequacies. The organization addressed these issues in the NHS 2014 report, “Five Year Forward View,” which outlines the ways in which the health service must change and sets forth specific actions. In March 2017, a follow-up report, “Next Steps on the NHS Five Year Forward View,” covered the headway made since the initial report and laid out practical steps for achieving better results for the remaining two years. One target for 2017/2018 under the Primary Care section reads, “Boost GP numbers.” The Government has set an objective of an extra 5000 doctors working in general practice by 2020” (“Next Steps...”). Additionally, the specific means to reach this goal include increasing funding, encouraging practices to collaborate, and developing a new GP contract.

To assess the NHS’ performance against these goals, the King’s Fund released a Quarterly Monitoring Report (QMR). The report finds that despite the increased funding, meeting finance targets remained unpredictable, and the NHS in 2017 was actually performing worse than in the previous year when measured against a few critical indicators. One of the most salient challenges has been the overpopulation of accident and emergency (A&E) departments. For example, 89.7% of A&E patients were treated, admitted, or transferred within 4 hours in the last quarter of 2017. This missed the 95% standard set in the “Next Steps...” report, despite a £100 million increase in capital funding in the spring of 2017 to enable clinical streamlining in A&E departments and £1 billion to the social care system to facilitate transfer of care from hospitals. Although providers initially expected worse outcomes for the quarter, the fact that the miss was narrower was mostly due to the dedication of the NHS staff at the frontlines but also a reorganization of priority dictated in “Next Steps...”. Compared to the previous year, 700,000 more people spent longer than four hours in A&E in the 2016/2017 year (“The State of Health...”). In comparison, Victoria, Australia; Ontario, Canada; and Stockholm, Sweden all have lower targets and worse
performance for their 4-hour A&E wait times—targets for those cities are set at 75%, 90%, and 71% to 79%, respectively (“International Comparisons...”, p. 41).

To help providers focus more on meeting A&E targets, "Next Steps..." lowered the priority of the 18-week referral-to-treatment target, meaning this target became less important to meet than others. By August 2017, 89.4% of patients waiting to start treatment received treatment within 18 weeks, below the 92% national standard (Anandaciva et al.). The waiting list for elective treatment reached its highest level since August 2007, at 4.1 million patients (Anandaciva et al.). Although it caused an increase in waiting times, this strategy also helped release pressure from CCGs that have to purchase care from providers. To meet performance targets, these providers are now focusing more on unprofitable A&E work while neglecting the profitable elective work. Yet, in doing this, trusts risk missing financial targets and losing access to certain bonuses in pay.

Another example of the stresses the NHS is experiencing can be seen in the CQC account of safety standards. The CQC 2016 annual report, "The State of Health Care and Adult Social Care in England," shows that on re-inspection of services initially rated as good, several have received lower ratings of requires improvement or inadequate. Precisely, 23% of adult social care services, 2% of GP services, 18% of NHS acute hospitals, and 26% of all mental health services have dropped in rating (“The State of Health...”). Regarding NHS acute hospitals, this translates to 54% now rated as requires improvement or inadequate (“The State of Health...”). Despite these ratings, the public still considers their health care very highly, as is evident in the Commonwealth Fund study (see Tables 1 and 2). Combining the reports of the CQC and the Commonwealth Fund, it is clear that the British people simply have high standards for their health care system.

NHS staff across England, as opposed to the system itself, have done more than their share of the work to maintain those standards. In the QMR, Anandaciva and colleagues write, "As frontline staff try their best to improve quality of care and access for patients, it is increasingly apparent that we are setting them an unachievable task." Unfortunately, the main challenges stem from areas largely outside the control of the health providers themselves.

Main Causes of Poor Performance

Growing and Aging Population

There are several factors that contribute to rising demand and sagging performance of the NHS; one is the growing and aging population. Between 2001 and 2015, the population of England rose from 49.5 million to 55.3 million (Office for National Statistics, "Population..."). Additionally, as medical research makes larger strides, people are living longer. In those same 14 years, the number of people aged 65 and over rose from 7.7 million to 9 million (Office for National Statistics, "How Does the UK...?"). People are now more likely to die from chronic diseases than infectious ones, meaning that more money is spent on the continuous and complicated care of each patient. Data show that the average 85-year-old man costs the NHS approximately seven times more money than the average man in his late 30s (Robineau).

Because of the change in demographics, the NHS is experiencing a substantial rise in demand. Between the years 2003/2004 and 2015/2016, attendances at major A&E departments increased by 18%. In addition, hospital admissions through those A&Es have increased by 65% in the same time period. Total referrals for elective care to outpatient services have seen a 62% increase between 2003/2004 and 2016/2017. Ultimately, the rise in A&E usage, elective care, mental health services, and ambulance services has led to a total increase in NHS activity. From 2.5 million patients in the second quarter of 2006/2007 to 5.3 million at the same time in 2016/2017, NHS activity increased by 109%—a 7.4% average annual increase (Maguire et al.).

Decline in Hospital Beds

As demand has been increasing, availability of hospital beds has been decreasing. In fact, over the last 30 years, the number of hospital beds in England has been reduced by over 50% ("The NHS Crisis...").
The largest percentage changes in number of beds have been in learning disability, mental health, and elder care beds, which have fallen by 96.4%, 72.1%, and 50.8%, respectively, since 1978 (Ewbank et al.). At the same time, the number of day-only beds has grown by more than 520% (Ewbank et al.). These numbers reflect the change in policies that aimed to increase support for people as outpatients rather than inpatients. Although, given that A&E departments are struggling to transfer patients from lobbies to wards because of lack of bed space, the reduction seems regrettable. To put this in a wider perspective, the UK has fewer beds per 1,000 people (2.6) than most other developed countries, according to data from the OECD. Compared to rates of beds per 1,000 people in Germany (8.1) and in Belgium (6.2), the UK's lack of beds presents a serious problem for the NHS.

**Funding Restraints**

The leading topic of discussion regarding the NHS is its lack of funding. The proponents of Brexit during the 2016 EU referendum used this issue to sway a multitude of voters, displaying advertisements on buses that read: “We send the EU £350 million a week—let’s fund our NHS instead. Vote leave.” It was later discovered that the statement was inaccurate, but the damage had already been done. The public was crying out for the funding they felt the NHS so desperately needed.

The root issue is simply a matter of supply and demand. While the cost to run the NHS rises 7% and cemand by 3% to 4% on average every year, the rate of increase in NHS funding has been slowing rapidly (Teach Me). Since 2010, NHS funding has been growing an average of only 1.2% per year (“Health and Social...”). In fact, according to the OECD, the UK spends the second lowest on health care per capita compared to other G7 countries (Office for National Statistics, “How Does the UK...”). Several NHS staff continue to raise their concerns that the UK might not be spending enough on health care (Hutt).

The King’s Fund QMR shows just how uncertain the financial stability of the health care system is. Their survey revealed that 43% of trust finance directors expected to overspend their budgets in 2017/2018. NHS trusts and CCGs are utilizing a variety of measures to cope, some of which include delaying payments to suppliers, extending waiting lists or reducing activity for particular elective services, and taking out loans from the Department of Health (Anandaciva et al.). The mounting financial pressures have led to an increase in loans for bills and staff salaries. The survey showed that 52% of trust directors were very concerned with their ability to pay back the loans.

**Staff Retention**

Limited retention of NHS staff is another major factor contributing to NHS challenges. According to the Guardian, the Labour party estimates the NHS in England is in need of 42,855 more nurses; 12,219 more nurse support workers; and 11,187 more doctors (Campbell, “NHS Hospitals...”). In 2016/2017, more than 33,000 nurses left the health care system, resulting in an overall shortage of 3,000 personnel and a 20% increase in nurses leaving since 2012/2013 (Siddique). The 2016 referendum might have worsened the retention issue. In 2014/2015, before Brexit, 2,416 EU nurses quit, while 5,977 joined; comparatively, 3,985 nurses quit and 2,791 joined post Brexit (Siddique). Given the dependence on foreign health care workers, Director of Policy and Strategy at NHS Providers Safron Cordery suggested that uncertainty regarding the rights of EU workers following the Brexit vote is one of the reasons behind this trend (Gallagher).

The more widespread motive for leaving can be attributed to the rising expectations put on staff within the collective health system. As the population and life expectancy increase, more care is required for the elderly. The rising demand combined with vacant posts in hospitals also produce the “weekend effect” statistics indicate that outcomes are worse for patients admitted on the weekends. The government began to combat these problems by working to better integrate the NHS and social care and emphasizing a seven-day work week to decrease amenable deaths over the weekend. The goal was to make care more available for the elderly and fix the disparity in health outcomes for those admitted on the weekend.
This effort ultimately increased pressures on staff (Metcalf). Historically, the Department of Health has mitigated staff shortages by increasing pay. Despite its previous success, that strategy has not been employed by the current administration, a decision that is cause for low morale and further loss of staff. All these factors cause a downward spiral: loss of staff engenders increased pressures, which in turn prompt more staff to leave and then results in even more pressures.

**Recommendations**

Any substantial change that does not include increased funding would be extremely difficult to implement. A survey done by the King’s Fund revealed that “66% of adults are willing to pay more of their own taxes to fund the NHS, underlining growing support among the public for tax rises to increase NHS funding” (Evans and Wellings). This sentiment also comes with heavy support against privatization, revealing it to be an unrealistic solution for the near future.

Instead, a more pragmatic approach might be allocating money to open up more beds. This would help ease conditions in A&E during high demand and allow for more surgeries. Alternatively, to address the bed crisis with current funding levels, more emphasis could be placed on integration of acute hospitals and social care facilities so transfer of care can be streamlined. As opposed to putting increased priority on the A&E waiting numbers, the NHS should focus on more upstream challenges, such as reducing delayed transfers. A final suggestion to keep beds available during high demand is limiting non-essential surgeries during the winter. The NHS is always under greatest pressure during the months of December to February because of the cold weather and seasonal flu outbreak. Withholding certain elective surgeries during that time would certainly open up several bed spaces and operating rooms.

Lastly, without Brexit policies protecting EU immigrant workers, the current trend of a decreasing workforce is expected to continue. Although Hunt promised to boost the number of GPs by 5,000 in 2020, current statistics still show that numbers are declining, and the goal is unlikely to be met (Kafash). To place a Band-Aid on this issue, the government will have to look toward overseas recruitment. Brexit negotiations that guarantee safe immigration status for NHS workers for the next 5 to 10 years may be enough to allow for an increase in local GP numbers.

**Conclusion**

The NHS has seen better days. Once thoroughly revered, it has now come under criticism, internally and externally. Under the current administration, funding has decreased dramatically, and the consequences are clear. The accolades awarded the NHS in the Commonwealth Fund study are an image of a strong but deteriorating system—as can be seen in the missed targets—yet a stellar care process. The UK service was ranked first twice and third twice in four of the five indicators used in the Commonwealth Fund study, an achievement welcomed cheerfully by certain politicians but met with suspicion by others. Hesitation stems from the fact that the British people themselves have experienced a decline in their beloved system firsthand. A&E departments are increasingly overcrowded, waiting lists are growing, and hospitals are dropping in quality rating. Most of these challenges can be attributed to the growing and aging population, loss of hospital beds, fleeing staff, and funding restraints. Despite the challenges, the data suggest the NHS has proved resilient. Due to the already fractured state of the system, substantial improvement requires a substantial increase in funding to at least repair the damage. Hope for further change lies in the hands of the incoming staff the government has promised and a reallocation of existing resources to solve the bed crisis. Although no health care system is perfect, the NHS has the potential to regain its status as a model for other nations.
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MAKE GREAT BRITAIN GREAT AGAIN: POPULISM AND NATIONALISM IN BREXIT

Nadine Elsayed

The Brexit vote brought to the surface salient political divisions fortified by economic and cultural anxieties. This article explores how proponents leveraged populist and nationalist sentiment surrounding economic inequalities and immigration to convince the UK to leave the EU.

Introduction

Prior to the June 23, 2016, referendum vote, European Council president Donald Tusk told the press that a Brexit movement in the UK would inevitably lead to the destruction of Western political civilization in its entirety ("Donald Tusk..."). Although his statements at the time seemed hyperbolic, the historic move to hold a referendum quickly turned into a crusade of autarky as a campaign emerged to "take back control" and revert to times that many viewed as more prosperous and familiar. British voters and political parties were made to believe in deep atavisms of populism and nationalism as necessary steps to their country's success. Subsequently, a war rooted deep in far-right ideology began between the citizen, the state, and the outside world.

The Brexit vote was historic not only due to the magnitude of the decision made by the electorate but also because it brought to surface salient political divisions fortified by economic and cultural anxiety. Brexit, at its core, was a populist revolt. The way proponents framed the discussion and subsequent vote, however, was through a nationalist urge. Populism revolves around a vertical dimension—the down versus the up—where a repressed people, the majority, oppose a corrupt elite, the minority. Nationalism, conversely, works on a horizontal scale, where the likeness of a group is essential to distinguish those who are in from those who are out. Proponents of the Leave campaign intricately combined these two urges during Brexit, arguing for a pull upward while also trying to navigate a horizontal plane in which only certain groups would benefit. Hence, the Leave campaign attempted to alienate the EU by arguing for a pull up and a simultaneous pull far right.

This reasoning holds a certain amount of irony since Britain has always been profoundly internationalist. Therefore, how did the UK Independence Party and its Leave campaign manage to twist and mold that global history
into a basis for the isolationist nationalism known as Brexit? This article explores how the victory of the Leave campaign transcended traditional political ideology by rooting itself in strong populist and nationalist urges that date back to when the UK first joined the EU and even further back into the era of the British Empire. Specifically, the focus is on how proponents leveraged sentiment surrounding issues of economic inequalities and immigration to convince the UK to leave the EU.

What Made Great Britain Great?

Over the span of several centuries, the English government became the British Empire through a worldwide system of dependencies, where colonies, protectorates, dominions, and other territories were brought under their sovereignty and administration. With 1,000 years of history deeply embedded into the current world system, it is imperative to first recognize the historical contingencies that originally allowed the Leave campaign to flourish under the guise of nostalgia.

For much of the eighteenth and nineteenth centuries, the small island approximately the size of California grew to dominate world trade and governance. At its peak, the British Empire was the largest empire in history and held the position of global superpower more times than not. In 1916, the British Empire represented 412 million people: 25% of both the population of the world and the total land area of Earth (Wrong, p. 46). The hegemony became a microcosm of the world itself that included people of every race and creed. Hence, the phrase “the sun never sets on the British Empire” was often used to describe its far-flung nature for the very reason that British nationalism was anchored to the empire, either by exansion of war, trade, or religion (Wrong, p. 48).

As the British gained prominence economically, politically, and culturally, the empire became a vehicle for nationalism as its success abroad translated to pride and glory at home. Such a legacy does not dissipate overnight. Although the British Empire eventually dissolved into autonomous sovereign states, patriotism and love for a united kingdom did not fade away. In fact, it led to many of the difficulties the British government encountered when faced with the decision to join the EU in the twentieth century.

The Awkward Partner

By the 1960s, years after the peak of the British Empire, the economy in continental Europe was performing much better than the UK’s (Menon and Salter, p. 1299). Due to a historical desire to outpace West Germany and France and to prove British exceptionalism once again, the UK applied to join the EU in 1961. It was promptly denied, with French leader Charles de Gaulle denouncing any idea of negotiations on the matter. A second application in 1963 was again denied by the French. It was not until eight years after the UK’s first application that unanimous consent from member nations allowed negotiations for British membership to begin. The UK officially became a part of the EU in 1973.

Labeled infamously the “awkward partner,” the British regularly negotiated privileged positions of opting out of areas in which they had no interest: Protocol 25 of the Maastricht Treaty exempted the UK from participation in the euro; Protocol 36 of the Lisbon Treaty exempted the UK from European fundamental rights legislation regarding home affairs and justice; and Article 4 of the Schengen Agreement exempted the UK from abolished border controls between member states. From the beginning, the EU’s awkward partner carved out an advantaged position for itself, shaping a Europe congruent with its own preferences (Menon and Salter, p. 1298).

Still, the relationship between the UK and the EU remained a necessary partnership. Britain needed Europe to ensure economic stability, especially since the continent is one of Britain’s highest export destinations. In 2016, 44% of the UK’s exports in goods and services went to countries in the EU (Ward, p. 5). At the same time, the EU often felt the benefits of London as one of the world’s top financial capitals, with more than a fifth of Europe’s 500 largest companies headquartered in the capital (Ward, p. 6).

No matter the mutually beneficial symbiotic relationship, Euroscepticism weaved
itself into British public discourse constantly. In fact, critics characterized the very notion of Britain joining a federalized Europe back in 1973 as “the end of a thousand years of history” (Menon and Salter, p. 1301). Overtime (explored in detail later), a majority of the British electorate grew to view the EU as an imposing foreign entity that forced them to surrender their sovereignty and therefore their historic nationhood. Subsequently, deep grievances culminated across the island as political parties began to argue that withdrawal from the EU, rather than continued membership, would be more in line with expressed British identity.

**UK Independence Party and Brexit**

Right-wing Eurosceptic discourse found a voice in the UK Independence Party (UKIP), a party whose sole existence was to promote a British populist and nationalist agenda. UKIP rose to dominance with many British citizens starting to reject conventional parties and a broader political establishment that had too long ignored both their economic and cultural concerns.

Originally formed in 1991 as the Anti-Federalist League, the single-issue Eurosceptic party was primarily led by the well-known Nigel Farage, a member of Parliament of the southeast England constituency. Farage grew the party under his leadership by attempting to influence the government’s decisions on immigration and EU involvement. Hence, when Prime Minister David Cameron attempted to settle an internal party dispute by promising a national referendum on EU membership, UKIP naturally found its way into public discourse.

In January 2013, Cameron promised the public a simple Brexit ballot regarding continued EU membership, yet complex and emotional political campaigns ensued. The Remain side focused mainly on economic stability, citing that Britain would be “stronger, safer, and better off” in the EU (Menon and Salter, p. 1307). The campaign painted leaving the EU as a leap into a dark abyss of unknown that would inevitably hurt British economic prosperity. The City of London agreed, with business leaders from almost 200 companies signing a letter arguing against Brexit a mere 24 hours after Cameron’s original statement on the referendum (Williams-Grut). On the other hand, the Leave side, led by Farage’s UKIP, campaigned heavily by leveraging politics of fear with simple and powerful nationalist messages. Signs stating, “I want my country back” and “take back control,” were plastered across towns in the UK. The campaign represented an equivocation for a loss of national power, as the Leave camp grounded its message in nostalgia for some version of a successful British past.

During the course of the Brexit campaign, the Leave campaigners regularly attacked the Remain campaign by employing many shock and awe public crusades. Farage and UKIP falsely claimed that European migrants were using the National Health Service (NHS) for expensive HIV treatment, told the president of the European Council Herman Van Rompuy that he had the “charisma of a damp rag” and the “appearance of a low-grade bank clerk,” and famously broadcasted a red bus stating that Britain gave Brussels hundreds of millions of pounds a week (“Nigel Farage Insults...”). Even after Farage’s plane crashed due to a UKIP promotional banner becoming entangled in the plane’s propellers, the UKIP leader was dedicated to removing the UK entirely from the EU—in an interview with local media, he said the plane crash made him “more driven than [he ever] was before” (“The Nigel Farage Story”).

Farage, however, was no catch-all nationalist; his appeal was concentrated in specific groups and was utterly alien to others. The Guardian reported that UKIP had virtually no support among the financially secure and the middle-aged university graduates who dominated politics and the media. Essentially, UKIP hosted a revolt dominated by “white faces, blue collars, and gray hair”; support was weak among women, white-collar professionals, and the young, while ethnic minority voters shunned the party totally (Goodwin and Ford).

UKIP was not just a political party. They were a symptom of far deeper social and value divisions in Britain. The eventual results of the Brexit vote—52% Leave to 48% Remain—brought to surface these deep divides in the electorate: young versus old, rural versus urban, college educated versus those without degrees, rich versus poor, and white versus
non-white. The manner in which UKIP framed its Leave campaign—through an intricate weaving of populist and nationalist threads—exacerbated these divisions. The following sections explain how economic inequalities and immigration worry were used as vehicles to scapegoat the EU, the differentiating factor separating the then-glory from the now.

**Those Left Behind Vote for Change**

The roots of the populist revolt can be traced back over decades. Divides in economic experiences left large segments of British voters on the wrong side of developmental change. Many Leave voters struggled with stagnant incomes, felt threatened by the way their communities were changing, and became furious at established political parties that appeared not to understand or even care about their concerns (Gooch and Ford). Together, these factors alienated particular communities, specifically those who benefited the most from the heyday of labor-intensive industry and postwar social democracy. According to the Institute for Public Policy Research Commission on Economic Justice, half of all households in the UK have seen no meaningful improvement in their incomes for more than a decade (IPPR's..., p. 2). The fact that only London and the southeast region of the UK have fully recovered from the 2008 financial crisis ostracizes rural areas that have not seen that type of economic recovery at all. Only a fifth of the public think that the way the British economy works is fair, with average workers' pay dramatically decreasing while directors of companies' pay is increasing by more than 47% (Schmitt et al., p. 74).

Polarized living standards and varied economic lifestyles thus followed citizens into the ballot box. Studies of exit polls made by the British Election Study find that nearly 49% of semi-skilled workers, unskilled workers, and those reliant on state welfare payments voted to leave the EU due to economic anxiety (Schmitt et al.). A similar study by the British Social Attitudes team found that 80% of those with a higher education degree voted to remain whereas those with a General Certificate of Secondary Education or less voted to remain by only 30% (National Centre for Social Research). This demographic pattern reflects an educational divide, as well as a social class divide, that exists in voting patterns. These types of vertical divides combined with economic decline typically incentivize domestic political turnover, yet British citizens took their own country's economic struggles and began to push the blame horizontally onto a susceptible foreign scapegoat: the EU.

UKIP attempted to create an economic enemy out of the EU by leading voters to believe that Britain was somehow subsidizing the rest of Europe. Farage's red bus stating, "we send the EU £350 million a week; let's fund our NHS instead," made its way from town to town during the Brexit campaign ("The Nigel Farage Story"). Its plastered cry to "take back control" by voting to leave the EU insinuated that Britain was no longer benefiting from its historic mercantilist model and instead needed to turn inward for economic success. Nationalist impulse couched in populist concerns dates back approximately five centuries, when the Discourse of the Common Weal of this Realm of England touted that Britain "must always take heed that we buy no more from strangers than we sell them, for so should we impoverish ourselves and enrich them" (Stafford). The Leave campaign attempted to showcase that Brussels and the EU were enriching themselves while impoverishing those in the UK. The apparent lack of autarky fueled the anger behind economic inequalities and drove those who were economically disenfranchised to the ballot box in droves.

Those who find themselves at the sharp end of a series of economic changes and stress unsurprisingly arrive at an antagonistic political self-identification that is couched in negative cultural reaction. UKIP benefited from this populist insurgency by channeling voters' frustrations and promising a populistpull upward. Yet populism, by definition, pits a virtuous and homogenous people against a set of elites or dangerous others who are together depicted as depriving the sovereign people of their rights, values, prosperities, identity, and voices (Albertazzi and McDonnell, p. 2). Farage won over these voters because they felt left behind by Britain's rapid economic and social transformation (as shown by the British
The Dangerous Other

UKIP argued for Great Britain to become "great" again not by removing economic hierarchies or by redressing the economic injustices suffered by many in rural areas but by shifting blame for all ills onto the foreign other. For UKIP, the scapegoat for this type of thinking was often immigrants, especially from the EU. The political party used language, such as "sparking," "floodgates," "besieging," and "swamping," to describe outsiders who had infiltrated their society and threatened the majority's rights (Seaton). This idea of a persecuted majority fuels a type of majoritarian nationalism that claims the UK is under siege by enemies and must be "taken back."

UKIP normalized its politics of fear and exclusion by representing it as a defensive reaction to the threats supposedly posed by European immigrants to the security of the nation as well as the collective British identity. The most effective way UKIP broadcasted these nationalist messages was through media discourse, which was 75% anti-European (Seaton). Having the British press at UKIP's defense changed the dynamic of the Brexit vote, especially with issues of immigration. The readers of the Daily Mail, the Telegraph, and the Sun received intense Leave persuasion and accounted for four times as many readers than the Guardian, the Independent, and the Financial Times, which published opinion articles mainly supporting a Remain vote (Martinson). Therefore, anti-European rhetoric found its way into almost every headline on newspaper stands: the Express featured a story claiming that "half of all rape and murder suspects in some parts of Britain are foreigners" (Sfeidleck) and the Daily Mail included a headline saying that "More Than 30,000 Europeans a Year Are Arrested in London" (Doyle).

If these portrayed criminal immigrants were not stealing physical materials from British citizens, they were presumably stealing their benefits. The Express claimed that "the average family of unskilled migrants cost the UK £30,000 a year, once tax, public service use, and benefit payments are considered" yet the report produced by the Express did not balance their research with the positive effects that migrants have on public finance and how economically beneficial they are to the country as a whole (Ruhs and Vargas-Silva). A study by an Oxford University Migration Observatory research team found that in reality there is no significant impact on unemployment or average wages for British citizens by overall immigration into the UK (Ruhs and Vargas-Silva). (Katherine Wu's article in this volume of Perspectives further explores how incorrect UKIP's presented statistics on immigration were.) Nonetheless, demographic warfare continued as UKIP successfully bracketed millions of immigrants into a single identity, demonizing a collective group as the "other" and constantly painting them as a people beyond an average British person's understanding.

This type of purposeful attack on immigrants had a profound effect. Studies conducted by British Social Attitudes found that issues associated with citizens' sense of national identity and cultural outlook were significantly associated with vote choice. The study found that 73% of those who saw immigration as a "growing concern to Great Britain's culture and identity" voted to leave the EU (National Centre...). Furthermore, the perceived identity of those polled also made a difference in response. The study found that no less than 92% of British citizens who said they identified as European wanted Britain to continue to be a member of the EU. On the other hand, those who identified as strictly English, rather than British or European, had great support for leaving the EU (National Centre...). Remain voter Beverly David told the study that "people in London have a different identity. We are Londoners first, then European, then British" (National Centre...). With some London boroughs voting close to 80% Remain, it is easy to see how identity—
whether foreign or native—made a difference in the attitudes of voters. After the vote results came out, British citizen Julius Beltrame said, “I’ve never felt less British and more Londoner” (National Centre...).

Similarly illustrative of the central importance to the Brexit outcome of national identity and anti-outsider attitudes, the British Election Study created a word cloud of the language used by survey respondents about the reasons for their vote preferences (Figure 1). The size of the text reflects the relative number of times Leave voters used each word when answering, “What matters most to you when deciding how to vote in the EU referendum?” The findings show extraordinary consistency. Immigration leads the list by a long margin, followed by control, country, sovereignty, laws, and borders (Prosser et al.).

At the core of UKIP’s identity politics was a movement in search of a homogenous Britain. Alarmed by the perceived downfalls of heterogeneity and hybridity, nationalists in the party crafted a narrative of us-versus-them that would eventually reconfigure the island as narrowly British while alienating those who did not fit their version of expressed British identity. UKIP knew the importance of aliens and outsiders to the formation of group consciousness; it had existed throughout history. Even Winston Churchill’s son touted that “immigration has to be halted to defend the British way of life” (Story and Childs). As a result, UKIP and other nationalist parties could easily reimagine the nation’s self-identity by promoting the deep, horizontal comradeship that only common language, culture, and customs can arouse in British citizens. By directing the electorate’s economic and populist grievances to the dangerous other, embodied by the EU, UKIP fostered a nationalist culture that no longer resided only in the domain of the far-right. The party brought nationalism from the fringes to the mainstream, continuing to purposefully alienate the EU through negative narratives of immigration that amplified economically rooted populist angst.

The Difficulties of Creating a “Truly Global Britain”

Populist and nationalist sentiment surrounding economic inequalities and immigration was not left at the ballot box after Brexit. Half a year after the vote, newly appointed Prime Minister Theresa May has attempted to maneuver the complicated waters between a “hard” or “soft” Brexit in the midst of bitter civic and political opinions that plague negotiations and planning for the

99
implementation of the UK’s exit from the EU. May has tried to convey to the nation that the result of the referendum was not a decision to turn inward and retreat from the world but rather was “the moment the country chose to build a truly global Britain” (Department for Exiting the European Union). Although she said the UK is proud of its European heritage, she claimed that the nation has always been a country that has looked beyond Europe and to the wider world because “Britain’s history and culture is profoundly internationalist” (Department for Exiting the European Union). Indeed, over several centuries, havens for British ideology have existed all over the world, whether through imperial, religious, or economic expansion. Still, can the UK actually become a global Britain post-Brexit as May hopes the country to become? How does a country position itself to become more globally oriented when populist and nationalist sentiment drove the country to become more isolationist in the first place?

Furthermore, May wants to create this new and equal partnership between Europe and an independent, self-governing, global Britain that is “strong, confident and united at home,” yet the UK is still strongly divided. The Brexit vote exacerbated the social and cultural divisions in British society, leaving the path ahead of May riddled with hurdles to overcome—politically, socially, and economically. Politically, the British Social Attitudes team found that both the Conservative and the Labour parties were virtually equally split on the issue of leaving the EU, whereas the UKIP base voted by almost 100% to leave the EU (National Centre..., p. 86). How will negotiations play out internationally in Brussels if domestically parliamentarians cannot agree on the merits of the very decision they are negotiating? Socially, 75% of voters under the age of 30 voted for a future in Europe whereas 61% over the age of 65 voted against (National Centre..., p. 12). How can the ideological differences between the varying age groups be reconciled? Economically, May must also take into consideration the parliamentary concerns of Scotland, which voted overwhelmingly to stay in the single market of the EU. All aspects considered, inherent populist and nationalist sentiment may serve as restrictions to limit the scope of May’s globalist goals for negotiations.

No Island Is an Island, Entire of Itself

In June 1940, the Evening Standard published a comic by David Low on its front page. The drawing depicted a heroically isolated British soldier on the White Cliffs of Dover, fighting against vicious waves of the channel, and featured a three-word caption: “Very Well, Alone” (Low). The cartoon was commenting on the fall of France to Nazi Germany and the prospect of a war that could end in either “surrender, starvation, or subjugation”; nevertheless, the soldier stood tall...and alone.

This type of national resoluteness resurfaced in the Brexit vote. Popular culture, politics, and economics have always boasted a “finest hour” reflex in British history, but the bouts of populist and nationalist morale present in the Brexit vote took the world by surprise. A barrage of disapproval emanated from the international community: one Swiss newspaper asked, “What in the world has happened to this country?” (Zaschke); a German radio station called Brexit the “biggest political nonsense since the Roman emperor Caligula decided to appoint his horse Incitatus as consul” (Boland); Japanese media called Britain an “outcast”; Poland depicted the nation as “an offended, spoiled child” (Cortazzi); Pakistan headlines described the British lion as possessing “more of a moan than a roar” (Husain); and another German newspaper called the UK “the laughing stock of the world” (Stephens). A nation once lauded by its neighbors for its relentless and impenetrable steadiness now struggles to keep May’s promise of becoming a “strong and stable” UK.

As argued, the victory of the Leave campaign in Britain was underpinned by economic and cultural anxiety that transcended traditional ideological lines. The aversion to international bodies such as the EU was based on populist and nationalist tribalism, drawing on the perception of nationhood, sovereignty, and the need to protect historic British identity. Although UKIP and other right-wing parties often caricatured complex realities, they essentially sold a romantic and exclusive
Downton Abbey age of economic prosperity and traditional values. The problem that May must face now, however, is how to take those anxieties and channeled them into a successful Brexit negotiation. UKIP promised a UK that would benefit from a populist’s pull upward economically and a nationalist’s pull to the right culturally. May will most certainly struggle to keep that promise, especially if it means fundamentally restructuring her government to aid the electorate economically while also alienating the EU from those benefits.

There are only 20 miles of water separating the White Cliffs of Dover from continental Europe. The next two years of negotiations on Brexit will determine whether or not that 20-mile stretch completely severs the island from the proximate continent. In an ever-increasing globalized world, Britain will soon ask itself whether or not an island can truly be an island, entire of itself, alone.

References


“Nigel Farage Insults EU President Herman Van Rompuy.” EURACTIV. February 24, 2010.


CONSEQUENCES OF LAX MEDIA OWNERSHIP REGULATION ON FREEDOM AND PLURALITY OF THE UK'S FOURTH ESTATE

Mina Khan

The British media landscape faces a ubiquitous threat, one of both lack of regulation and excessive freedom in terms of concentration and ownership. This article examines the potential effects of unregulated media concentration on political relationships between prominent media owners and the UK government as well as its overall effect on UK citizens' quality and perception of news.

Introduction

Press freedom in the UK, in reference to both freedom of expression as well as freedom of media ownership and concentration, is an issue of increasing concern due to the rising popularity of media practices such as misinformation and post-reality politics. Historically, threats to press freedom have been concentrated in parts of the world in which democratic presence was weak, but pressures of a different nature have begun to appear in UK's fourth estate (Willems and Puddington). In the past five years, the UK has fallen 12 ranks in the World Press Freedom Index as a result of new regulatory measures, a dip in rankings that does not yet even account for concerns of decreasing plurality and increasing cross-media ownership (Cayle).

The UK has one of the most heavily concentrated media landscapes globally. Lax media regulation over time has led to privatization of media and the formation of giant media conglomerates presenting sizeable threats to freedom of the overall press ("Who Owns the UK Media?"). According to the Harvard Business Review this may be beneficial in some respects, as privatization of British media companies has dramatically improved the economy and generated an estimated £34 billion in additional GDP annually since the sale of the British Telecom by the Thatcher government in 1984, the largest public flotation at that time. Privatization has reversed losses of state-owned industries and improved British citizens' perceptions of free enterprise (Moore). However, despite the clear economic benefits from privatization, its influence on the media industry has arguably been divisive. The rise of media giants headed by some of the wealthiest in the UK, including Rupert Murdoch, Lord Rothermere, and Sirs David and Frederick Barclay, has had major political consequences, most recently culminating in the Brexit vote. Too much freedom of expression paralleled by lack of regulation in
regard to media concentration has become a substantial threat to the UK press’s freedom as a whole due to its consequence on plurality, throttling the diversity of viewpoints. Although some corporations, such as those of the aforementioned men, have substantial freedom, this comes at the direct cost of representation of local news and other smaller outlets and mediums. Journalistic integrity, including public trust in it, is threatened in the UK by concentrated ownership. Freedom of the press is under siege, counterintuitively, because of too much freedom; that is, regulations are too lax in terms of press ownership and market concentration.

Measuring Freedom of the Press in the UK

According to two widely regarded press freedom monitoring groups, Reporters Without Borders (which publishes the World Press Freedom Index) and Freedom House (which publishes Freedom of the Press annual reports), the UK press ranks as “free.” The 2017 World Press Freedom Index ranks the UK as 78% higher in press freedom than the world average. This analysis uses seven qualitative criteria categories and indicators, including pluralism, media independence, and self-censorship, together with quantitative analysis of crimes committed against persons of the media, weighed for violence (“United Kingdom: A Worrying Trend”).

Pluralism, in the context of the World Press Freedom Index, refers to the representation of diverse opinions in the media. It is typically high in regions of the world with media freedom, such as Great Britain, but threatened by densely concentrated media ownership in the press and in television. Concentration of media ownership is conducive to the biased treatment of news and opinions, driven by the political and economic agendas of wealthy media owners. As detailed later, the British media is increasingly concentrated.

Self-censorship, in the World Press Freedom Index methodology, refers to the ability of the press to publish freely, given the environment in which the media platform is operating, without having to censor for fear of punishment. High self-censorship is indicative of less freedom and vice versa. Tabloid media has the least amount of self-censorship in all forms of British media. The tabloids’ ability and willingness to publish whatever they want can be directly seen in the notorious phone-hacking scandal—a controversial issue regarding collusion between British police and journalists employed at newspapers published by News International, including News of the World, which was shut down as a result (“Press ‘Need to Act’ After Leveson”). News International is a subsidiary of News Corporation, owned by Murdoch, whose reach, chronicled later, is one of the greatest in present-day privatized British media. A second ranking system, the Freedom of the Press 2017 report, similarly gives the UK a press freedom status of “free” (“United Kingdom Profile”). The UK scores 25 out of 100 (with 0 “most free”), which is the sum of its performance in the legal environment (9 out of 30), political environment (9 out of 40), and economic environment (7 out of 30). In the legal realm, like the 2017 World Press Freedom Index, the Freedom of the Press report notes that the key development contributing to a status of “less free” recently in the UK is legislation concerning national security, such as the Investigatory Powers Act, which discourages investigative journalism.

As for the British political environment (i.e., interactions between politicians, the government, and other sectors of the economy), it is not considered a threat to British journalists. A separation between the press and political environment is necessary for media freedom of expression, and the UK media is generally independent from political influence (“United Kingdom Profile”). The political environment does not appear to directly pressure the press.

However, the reverse—press pressuring politicians—has become a significant question of influence in the UK that can be traced as far back as the Thatcher government’s assistance in the acquisition, outlined later, of a popular and fairly unbiased newspaper, The Times, by Murdoch’s News Corporation (Evans). The blackmail of politicians by the press, primarily the privately owned sector, has social and economic ramifications, as reflected in policy, laws, and favoritism, such:
Table 1
Weekly (Daily plus Sunday) Market Share of National Newspaper Circulation

<table>
<thead>
<tr>
<th>Publisher</th>
<th>Circulation</th>
<th>Market Share (%)</th>
<th>Cumulative Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>News Corp UK &amp; Ire and Limited</td>
<td>15,818,965</td>
<td>33.6</td>
<td>33.6</td>
</tr>
<tr>
<td>Associated Newspapers (now DMG Media)</td>
<td>11,372,076</td>
<td>24.1</td>
<td>57.7</td>
</tr>
<tr>
<td>Mirror Group Newspapers</td>
<td>6,395,622</td>
<td>13.6</td>
<td>71.3</td>
</tr>
<tr>
<td>Express Newspapers</td>
<td>5,691,767</td>
<td>12.1</td>
<td>83.3</td>
</tr>
<tr>
<td>Telegraph Media Group</td>
<td>3,309,100</td>
<td>7.0</td>
<td>90.4</td>
</tr>
<tr>
<td>Independent Print Limited</td>
<td>2,102,236</td>
<td>4.5</td>
<td>94.8</td>
</tr>
<tr>
<td>The Financial Times Ltd</td>
<td>1,243,074</td>
<td>2.6</td>
<td>97.5</td>
</tr>
<tr>
<td>Guardian News and Media Ltd</td>
<td>1,198,526</td>
<td>2.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>47,131,366</td>
<td>100.0</td>
<td>—</td>
</tr>
</tbody>
</table>

Source: “Who Owns the UK Media?”

As exemptions from requirements and limits on media concentration. As discussed in the case study later, press barons, like Murdoch, are able to manipulate politics to further their political, personal, and business agendas, using the threat of defamation.

In this analysis, the pluralism and self-censorship measures from the Freedom of the Press report and the political environment criteria from the Reporters Without Borders index help illustrate the counterintuitive effect that the lack of ownership regulation has on limiting media freedom of expression. The increasingly concentrated media ownership threatens the ultimate voice of independent media as political ambitions and vested interests become involved.

British Media Ownership

Three companies controlled an estimated cumulative 70% of national British newspaper circulation in 2015: Murdoch’s News Corp UK & Ireland Limited, Rothermere’s DMG Media (formerly Associated Newspapers) group of papers, and the Mirror Group Newspapers (Table 1). Two titles alone, Murdoch’s Sun and Rothermere’s Daily Mail, accounted for a combined 50% share of national newspaper circulation. Similarly, the Sun on Sunday and Mail on Sunday accounted for roughly 50% of the shares of circulation of national Sunday papers (“Who Owns the UK Media?”). In terms of revenue of the various companies (Table 2), Murdoch-owned News Corp UK & Ireland Limited and Rothermere’s DMG Media had a cumulative 57.7% market share (“Who Owns the UK Media?”).

The same issue repeats in television broadcasting. In fact, already high concentration is likely to increase soon. Sky TV and Sky Broadband (Sky plc) lead in terms of revenue (Figure 1), followed by British Broadcasting Corporation (BBC), which is the largest public service broadcaster (“Who Owns the UK Media?”). Although most broadcasters are controlled by UK-based companies or the public (Table 3), a US-based corporation, 21st Century Fox, is steadily expanding its television ownership. Murdoch’s 21st Century Fox has a 39.1% share of Sky plc, and despite its initial failed bid, the corporation is vying for full ownership (“Who Owns the UK Media?”). The impending sale of Channel 5 to US-owned Viacom and the expected privatization of Channel 4 are further pluralism concerns (Sweney, “UK Media...”). So too, BBC’s new license-fee cuts hinder its ability to compete with privatized media. Notably, 21st Century Fox’s last bid for Sky plc, had it succeeded,
would have granted Murdoch's various companies a cumulative 52% reach of the adult UK population across various mediums. Such extraordinary potential control warrants a deeper look into Murdoch's empire building, the history of which illuminates most of the key challenges of the fourth estate in the UK today.

Case Study: Rupert Murdoch

The career and extent of media ownership by Rupert Murdoch are the prime illustration of the larger effects of British media concentration. Murdoch is unique in his holdings across various platforms, including print, broadcast, and digital media.

Background

Born in Melbourne, Australia, in 1931, Murdoch went on to Oxford University. After graduation, at age 22, he inherited his father's newspapers, News and Sunday Mail ("Rupert Murdoch"). Murdoch is credited by many as the "proprietor of the modern tabloid." By adding eye-catching headlines and emphasizing scandal and crime, he thus redefined the tabloid medium, in the process enveloping his publications in controversy ("Rupert Murdoch"). The highly successful transformations of the News and Sunday Mail under Murdoch's leadership created the financial means for his expansion into Perth and Sydney, where he purchased several more newspapers and rejuvenated them. Murdoch's first major breakthrough was his turnaround of the previously struggling Mirror. It later became the best-selling afternoon paper in Sydney ("Rupert Murdoch").

By 1965, Murdoch launched the Australian, Australia's first national daily paper. The Australian solidified Murdoch's reputation in the publishing world, and, by 1968, his net worth was an estimated $50 million ("Rupert Murdoch"). With these funds at his disposal, Murdoch relocated to London, where he continued to add to his media empire, purchasing a ubiquitous tabloid, News of the World, and shortly thereafter the Sun ("Rupert Murdoch").

Then in the early 1970s, roughly 30 years after first gaining ownership of his father's newspaper, Murdoch relocated again to the

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Table 2
Average Daily Circulation, National Newspapers (July 2015)

<table>
<thead>
<tr>
<th>Title</th>
<th>Average Daily Circulation</th>
<th>Year over Year Change (%)</th>
<th>Share of Circulation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
<td>1,856,790</td>
<td>-9.75</td>
<td>27.2</td>
</tr>
<tr>
<td>Daily Mail</td>
<td>1,657,706</td>
<td>-2.82</td>
<td>24.3</td>
</tr>
<tr>
<td>Daily Mirror</td>
<td>878,527</td>
<td>-10.49</td>
<td>12.9</td>
</tr>
<tr>
<td>Daily Telegraph</td>
<td>489,459</td>
<td>-4.75</td>
<td>7.2</td>
</tr>
<tr>
<td>Daily Express</td>
<td>429,810</td>
<td>-10.58</td>
<td>6.3</td>
</tr>
<tr>
<td>Daily Star</td>
<td>411,725</td>
<td>-11.69</td>
<td>6.0</td>
</tr>
<tr>
<td>The Times</td>
<td>394,910</td>
<td>-0.93</td>
<td>5.8</td>
</tr>
<tr>
<td>i</td>
<td>276,137</td>
<td>-0.42</td>
<td>4.0</td>
</tr>
<tr>
<td>Financial Times</td>
<td>207,179</td>
<td>-2.90</td>
<td>3.0</td>
</tr>
<tr>
<td>Guardian</td>
<td>168,369</td>
<td>-7.07</td>
<td>2.5</td>
</tr>
<tr>
<td>Independent</td>
<td>57,930</td>
<td>-8.24</td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>6,828,542</td>
<td>Average: -6.60</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: "Who Owns the UK Media?"
Figure 1
Revenues of Television Broadcasters and Carriers, Digital and Satellite, 2014

Source: Who Owns the UK Media?

Table 3
Ownership of UK TV Broadcasters and Carriers

<table>
<thead>
<tr>
<th>Company</th>
<th>Parent Company (Largest shareholder)</th>
<th>Location of Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sky</td>
<td>Sky plc (21st Century Fox—39.1% share)</td>
<td>UK/USA</td>
</tr>
<tr>
<td>BBC</td>
<td>Publicly owned</td>
<td>UK</td>
</tr>
<tr>
<td>Virgin Media</td>
<td>Liberty Global</td>
<td>USA</td>
</tr>
<tr>
<td>BT Consumer</td>
<td>BT Group</td>
<td>UK</td>
</tr>
<tr>
<td>ITV</td>
<td>ITV plc and STV Group</td>
<td>UK</td>
</tr>
<tr>
<td>Channel 4</td>
<td>Channel Four Television Corporation (publicly owned)</td>
<td>UK</td>
</tr>
<tr>
<td>Channel 5</td>
<td>Viacom International</td>
<td>USA</td>
</tr>
</tbody>
</table>

Source: "Who Owns the UK Media?"

US. He bought the San Antonio News and began expanding to the east coast, purchasing the New York Post. Murdoch’s global holding company, News Corporation, came to include several other newspapers in Australia, the UK, and the US, including the Chicago Sun-Times, New York magazine, and The Times and The Sunday Times of London ("Rupert Murdoch"). He also diversified his media empire to television and entertainment, notably through his 1985 purchase of Twentieth Century Fox Film Corporation (now 21st Century Fox) and other smaller independent television outlets, which he consolidated under the Fox name ("Rupert Murdoch"). Moving into Asia, he established STAR TV in 1990, soon broadcasting to 320 million viewers. By 1990 too, Murdoch had consolidated various reputable academic
and literary publishers in the US and UK into HarperCollins ("Rupert Murdoch"). Murdoch’s investments in sports include part ownership in the Los Angeles Kings NHL franchise, Los Angeles Lakers NBA franchise, Staples Center, Fox Sports 1, and Fox Sports website. In the 2000s, Murdoch purchased Intermix Media, the parent company of MySpace.com, and Dow Jones, the owner of the Wall Street Journal ("Rupert Murdoch").

Murdoch’s Political Reach

Murdoch has attained a reputation as a political kingmaker due to his ability to persuade high-ranking politicians in both the Labour and Conservative parties to pass measures that, according to former deputy Prime Minister Nick Clegg (2010–2015), grant the media “an institutionalized immunity from the basic standards that govern the rest of society” (Mulholland). Thanks to the high levels of media freedom and low levels of regulation present in the UK (especially for print media), Murdoch has—with limited repercussion—been able to coerce British politicians through private agreements for favorable press coverage in exchange for political favors.

Murdoch’s signature method of political exploitation, which he has carried from Australia to the UK and most recently to the US, is character defamation through pointed and heavily biased tabloid headlines and stories. Through a barrage of eye-catching and often fictitious headlines, Murdoch is able to control enough of the general public’s opinion regarding prominent politicians to sway votes in or out of their favor ("Rupert Murdoch"). This medus has spawned various agreements between Murdoch and some of the most powerful men and women of the British government.

In 1981, for instance, Margaret Thatcher became an influential facilitator of Murdoch’s ambitions for upending the relations between British politics and media. Thatcher was approaching the 1981 election behind in the polls and Murdoch’s use of press presented an option for positive publicity (Evans). Their collusion, detailed in documents released by the Thatcher Archive Trust and in a now public personal note sent from Murdoch to Thatcher, demonstrated Murdoch’s ability to influence regulation and law: measures enacted under Thatcher exempted News Corporation from the scrutiny of the Monopolies and Mergers Commission, greatly aiding his acquisition of 40% of the British press. In return for constant positive coverage from his media platforms of her political decisions, Thatcher helped Murdoch gain control of The Times, despite several better-suited bids, by moving the responsibility for scrutinizing the sale to a minister who would favor Murdoch as well as by omitting him from laws that prohibited ownership of both print and broadcast media (Evans). As Judge Brian Leveson later sternly denounced, “That there was a confidential meeting between the then prime minister and Mr. Murdoch, the fact of which did not emerge into the public domain for more than 30 years, is troubling in its lack of transparency. It serves as a reminder of the importance of contemporary practice to make public the fact of such meetings. The perceptions at the time and since of collusive arrangements between the prime minister and the preferred bidder are corrosive of public confidence…” (Evans). It speaks volumes that the meeting was not publicized despite the importance of the subject matter discussed; as a result, there were implications for decades to come.

Through political and financial support, Murdoch likewise exerted pointed influence over the Labour Party’s former Prime Minister Tony Blair, who conveniently decided to omit judicial sentencing requirements for violations of the Data Protection Act from the Criminal Justice and Immigration Bill (Hyland). This lack of punitive teeth became useful for Murdoch during the 2011 scandal, in which a Murdoch tabloid, News of the World, was guilty of phone hacking, police bribery, and other unethical measures used to obtain content (Hyland).

Leveson Inquiry and Suggestions for Media Concentration

The Leveson Inquiry, although a direct response to the phone-hacking scandal, took aim at larger issues, such as media concentration, unethical practices by the press, and lack of regulation in the sector overall.
The power of the press, which Conservative leader Stanley Baldwin in 1931 called “power without responsibility”—in reference to press campaigns run by the Daily Mail and Daily Express at the time—has been a consistent issue throughout UK history. As far back as 1695, newspaper regulation by a statutory body was abolished. More recently, moving to self-regulation, in 1990 newspaper publishers formed the Press Complaints Commission (PCC) for enforcement of industry-wide standards. Throughout its existence, the PCC remained a voluntary self-regulation body, as is its successor, the Independent Press Standards Organisation (IPSO), set up in 2014 in response to the Leveson Report. By contrast for broadcasters, the governmental Office of Communications (Ofcom) is an official legal regulator (“Leveson Report...”). Due to the lack of enforcement power by the PCC and IPSO against publishers, corrupt media practices continued to fester, as exposed by the Leveson Inquiry. It remains unclear if the still self-regulatory IPSO will have greater impact.

Prime Minister David Cameron launched the Leveson Inquiry in 2011. Only the sixth public judicial inquiry since 1945, it investigated issues including the specific hacking into the phone of a missing (and later found murdered) child, Milly Dowler, and the ability of News of the World to continue its culture of hacking without any thorough inquiry from the government, police, or PCC despite accusations by the Guardian in 2009 (Sabbagh). The PCC had publicly claimed that their investigation pinpointed phone hacking to a single reporter, Clive Goodman, only to later admit that News International misinformed them. This tarnished public approval of the PCC and fueled skepticism of self-regulation. The inquiry not only led to closure of News of the World but also brought intense public and judicial attention to the influential power of Murdoch’s companies and other media conglomerates (Sabbagh). It also led the industry to “re-place the PCC with the IPSO, which, although it has more emphasis on external independent board members, remains self-regulated. The launch in 2016 of the first formal statutorily recognized independent regulator, IMPRESS, has so far failed to attract the participation of any national newspaper.

The argument about whether or not self-regulation is enough in the UK can be traced to the lack of a UK equivalent of the US Constitution’s first amendment, which equates statutory regulation with restriction of free speech. One of Leveson’s suggestions included the introduction of legislation to protect free speech with a contingent type of statutory regulation (Sabbagh). Additional suggestions included a whistle-blowing hotline for journalists as well as an arbitration system in which people under duress by the press can forgo the judicial system and still obtain compensation (“Leveson Report...”).

Further, Leveson urged reforming the ethics and culture of the press, including the formation of a new regulation body with—in stark contrast to the PCC and IPSO—no connections to current editors, government employees, or businesspeople. Leveson warned that political figures and the press were engaging in inappropriately close and unethical relationships (“Leveson Report...”). The proposed independent regulatory body would be supported by legislation requiring routine external assessments of its ability to properly mediate the press. The government would also have a continuous legal obligation to take action to protect freedom of the press. Regulatory oversight of press organizations that refused to participate could potentially pass directly to broadcasting regulator Ofcom (“Leveson Report...”). Note that Ofcom maintains a consistent position regarding media plurality. It is staunchly against a market share cap for media ownership, arguing instead that plurality is the better measure and should be addressed in periodic reviews (Sweeney, “Ofcom...”). Indeed, Ofcom has pushed for relaxing cross-media ownership rules. However, such relaxation risks further entrenching the narrow and self-serving agendas of the corporations headed by moguls such as Murdoch, Rothermere, and the Barclay brothers.

The left-leaning Labour and Liberal Democrats parties both came out in support of Leveson’s recommendations. Nonetheless, almost immediately, Cameron rejected the proposals for new legislation in their entirety,
asserting that they were a threat to press freedom. As a result, he was accused of giving into the interests of already increasingly dominant media organizations (O’Carroll). Cameron’s actions were also widely perceived as having been influenced by powerful Conservative Party ministers. Overall, Leveson noted that there was “no credible evidence of bias,” although as exposed during inquiry hearings, “close ties allowed a perception of favoritism,” such as with Murdoch’s newspaper executives (“David Cameron...”).

Beyond Leveson’s recommendations, politicians, various advocates from the media, and the judicial branch similarly proposed assorted other responses to the evident failure of the press to act responsibly. Proposals included not only self-regulation but also independent regulation, judicial regulation, statutory underpinning, and statutory regulation. As shown in Table 4, these alternative regulatory approaches differ mainly in the degrees of independence and legal authority. The proposal that would ensure the highest levels of protection for both the press and public is arguably Leveson’s original recommendation—statutory regulation, for the creation of a press regulatory body similar in function and design to Ofcom, which currently operates with editors, politicians, and businesspeople barred from membership (“Leveson Report...”). For comparison, Norway, which ranks first in the World Press Freedom Index, likewise has dealt with plurality and media diversity issues arising from the changing media landscape. Norway updated its 1997 anti-concentration law (which had banned ownership of more than 40% of shares in cross-media, in reference to shares in companies whose platforms cover multiple segments) with a less restrictive media ownership transparency law enforced by the Norwegian independent media authority, Medietilsynet (“Norway: Faultless or Almost”). Exemplary too, the Netherlands ranks third in the World Press Freedom Index and similarly has an independent body, the Dutch Media Authority, responsible for assessing media independence, plurality, and accessibility on an annual basis and for enforcement through fines, revoking media licenses, and imposing limits on broadcast time (“Netherlands Profile”). For

the UK, Leveson suggested that, in parallel with forming an independent regulatory body, new legislation should protect the freedom of the press as well as cap market shares to prevent further concentration (“Leveson Report...”).

Implications of Unregulated Media Concentration

Media proprietors and editors, such as Murdoch, serving as political kingmakers has had key negative consequences in the UK. In particular, effects on citizens’ trust and on the Brexit vote have been heightened by the failure to implement measures and enforcement mechanisms (e.g., fines) to protect media plurality and diversity.

Trust

The annual trust barometer survey by the public relations firm Edelman has shown the level of trust by UK citizens in institutions across several categories, such as government, business, media, and NGOs, at or near historic lows. Overall only 11% of Britons believe that their current system of government actually works (“Edelman...”). Trust in media, at 28%, is down 8% in the past two years, the lowest since the 2011 phone-hacking trial. Along the same skeptical lines, according to the “Digital News Report 2017” by the Reuters Institute for the Study of Journalism (Newman et al.), fewer than half of Britons—41%—believe that media platforms are adequate for helping differentiate facts from disinformation (Harrison). As Dr. Rasmus Kleis Nielsen of the Institute explains, “The danger is that the influential and the upper classes see journalism as too tabloid and populist, while working-class people think it pays little attention to people like themselves and their lives—and no one is happy” (Harrison). Many media commentators believe that mainstream media has undergone a transition, abandoning the basic journalistic principles of fact-checking and of aiming to be objectively and factually correct to the best of their abilities (Harrison).

Brexit Vote

The recent Brexit referendum, in which the UK voted to leave the EU 51.9% to 48.1%,
<table>
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<th>Response Type</th>
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<td>Self-regulation</td>
<td>Self-regulation would expand the lay membership in the PCC, which the IPSO board now does, as well as require participating newspapers to become long-term members. The caveat of this option is that it would give increased power to prominent press individuals, with no guarantee that publishers will sign up. Prominent supporters of this option value freedom of ownership concentration and do not view it as a threat to plurality but rather as an important part of a free press. Proponents included Lord Hunt, former chairman of the PCC; Lord Black, a press lobbyist; editor in chief of the Daily Mail Paul Dacre; and Boris Johnson, a prominent member of the pro-Brexit Leave campaign.</td>
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<td>Independent regulation</td>
<td>Independent regulation would create a similarly independent regulatory body but to avoid bias instead include few or no current editors on a regulatory board. This proposal includes voluntary long-term contractual membership but with no legal powers or judicial backing or any guarantee that major publishers will sign up. Supporters were members of the government and press who were not linked to major media scandals and who did not believe increased restriction would limit their freedom of expression. These included the Guardian, the Financial Times, Evgeny Lebedev (owner of the Independent and the Evening Standard), Ed Miliband of the Labour Party, and reportedly the Prime Minister at the time, David Cameron.</td>
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<td>Judicial regulation</td>
<td>Judicial regulation would introduce a legal panel, appointed by the Lord Chief Justice. This panel would act as a regulatory enforcement authority and be wholly independent from influence of the press and politicians. A major supporter of this was The Times, owned by Rupert Murdoch. Although Murdoch has not publicly stated the reason for his support, it may be to preempt a legislative approach. A judicial approach might be comparatively less severe in restricting freedom of media concentration.</td>
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<td>Statutory underpinning</td>
<td>Statutory underpinning involves the introduction of a legally supported replacement for self-regulatory bodies like the PCC and IPSO, including a tribunal system for examining complaints that previously had been analyzed by the judicial system. Potential risks include abuse by politicians through future amendments, thereby limiting freedom of speech. Well-known supporters, who helped launch IMPRESS in 2016, included those who believe the media should be heavily regulated and that freedom of concentration leads to the abuse of media, such as Hacked Off, a campaign group for free and accountable press, and National Union of Journalists.</td>
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<td>Statutory regulation</td>
<td>Statutory regulation, the most formal regulatory structure, would be based on the Ofcom model for broadcasters. It would introduce a licensing system for all forms of media, overseen by an official regulator with full legal powers. Ofcom is the model for this proposal because it possesses a good reputation for its complaint system and is publicly accepted as a fair regulatory body yet still allows broadcasters to remain independent. Possible issues include the potential for inadvertently granting the government the power to remove a license as well as setting a precedent globally for countries where media freedom is threatened by the government. No prominent supporters have come out publicly for this option.</td>
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Source: Compiled by the author, consolidated from "Sabbagh."
was won largely thanks to a convincing Leave campaign. The campaign featured highly inaccurate statistics regarding issues such as immigration—a major influence on opinions about leaving the EU (Hunt and Wheeler). The highly partisan nature of editorial control enabled the Leave campaign to dominate a remarkable 82% of media coverage, with views favoring the Remain campaign receiving a mere 18% (Barnett). At least ten major newspaper covers were published with factually incorrect and highly divisive graphics regarding immigration. The *Daily Express* (owned by billionaire Richard Desmond), the *Daily Mail* (owned by Murdoch), and the *Daily Telegraph* (owned by Rothermere) published six. The Murdoch-owned outlets, *The Times* and *Sun*, were both also important in amplifying the Leave message to its target audience (Barnett). In response, the Remain campaign did little to argue about factual inaccuracies, opting instead to promise to reduce immigration. All five of these newspapers were viscerally anti-EU and competed with other tabloids for advertising revenue from a decreasing audience, in a vicious cycle of increasingly polarized publications (Barnett). The owners of these Leave-favoring publications had clear vested interests: in escaping EU oversight, in decreasing regulation and restrictions on concentration of media ownership, and in increasing their capacity for political influence.

**Conclusion**

The prominent issue regarding freedom of the media in the UK is the concentration and domination of the press by a few rich men. Rupert Murdoch is an undeniably key figure in the British media landscape. His mastery of monopoly and cross-platform diversification makes him a highly influential figure in Britain, despite a non-Briton himself. Beyond being a media mogul, Murdoch is a political kingmaker, casting a shadow over Britain for decades. A discussion of British media and politics is impossible without inclusion of Murdoch and his strategic dealings, which have shaped modern Britain. Like Murdoch, other press barons, including the Barclay brothers and Rothermere, have stakes in large media conglomerates that come at the cost of plurality and diversity of opinion. This power extends beyond the ability of self-regulation. Furthermore, Prime Minister Cameron's unequivocally dismissive response to the Leveson Inquiry recommendations about the press's unethical relationship with politicians and police serves as a singular reminder of the power of media concentration.

Some media conglomerates intentionally aim to indoctrinate UK citizens and shape their opinions and decisions toward the vested interests of a few powerful owners, a direct threat to overall press freedoms. Various options for press regulation reform emerged after the phone-hacking trial, including self-regulation, independent regulation, judicial regulation, statutory underpinning, and statutory regulation, yet no major changes have yet been successfully implemented. It is imperative that a cap be placed on the concentration of ownership to preserve plurality concomitantly with mandatory oversight by a regulatory body that is independent of vested interests in order to prevent unethical press agendas and threats to freedom of speech of the press.
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