Cutting the Gordian knot: A road map for British exit from the European Union

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FINALIST: THE BREXIT PRIZE 2014

IEA BREXIT PRIZE

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Summary

This submission examines the immediate steps and issues that Her Majesty's Government would need to take following a decision to leave the European Union.

The submission examines the various options relating to membership of the European Free Trade Association and the European Economic Area and rejects them as a starting point for the Article 50 negotiations.

Instead the submission recommends a simple bill in Parliament aimed at repealing the European Communities Act 1972 and establishing a Royal Commission on Regulatory Reduction aimed at reducing the burden of EU-imposed regulations and "gold-plated" regulations inspired by the EU. The submission estimates the benefits to such a Royal Commission could be extremely significant.

It goes on to examine several particularly problematic issue areas:

Fisheries and territorial waters
Trade
Immigration
Agriculture
Foreign Direct Investment
Extradition
Energy, Environment, and Transport

The submission estimates the costs and benefits of taking a free-market approach in these areas once freed from EU control and finds in most of them that the benefits far exceed the costs. In immigration and air transport, however, there are potentially significant costs that need to be addressed.

Introduction

A decision to leave the European Union (EU) will require three main actions Her Majesty's Government (HMG).

First, HMG will need to invoke Article 50 of the Treaty of European Union and commence negotiations on the terms of the United Kingdom's (UK) withdrawal.

Secondly, HMG will need to present to Parliament a bill repealing the various laws that have established the UK's membership of the EU and enabled the incorporation of EU law into UK domestic law.

Thirdly, HMG will need to review the body of EU law already incorporated into domestic law to ascertain what can be safely repealed and what should be retained.

This submission will first examine the most important question relating to the Article 50 negotiations: whether the UK should attempt to enter into a relationship with the EU like that of Norway or Switzerland ("The Norway option") within the European Economic Area or a less stringent version of that relationship ("EEA-lite.")

Secondly, this submission suggests that the second and third actions can be combined into a single bill that repeals various acts and on that authority establishes a Royal Commission on Regulatory Reduction with special powers to present packages of reforms to Parliament.

Finally, this submission will outline various policy issue areas where special measures will need to be taken, either in the Article 50 negotiations or requiring separate legislation or other measures. In several cases, withdrawal from the EU will enable HMG to pursue a new course of action that will provide significant benefits for the UK.

While this submission attempts to quantify costs and benefits where possible, it should be recognized that in many cases this is an extremely speculative exercise; putting figures on the costs would merely be pretence of knowledge. In these cases, we estimate whether costs/ benefits would be:

- High: a significant cost or contribution to the nation's economy that would need to be accounted for in extraordinary ways, either by additional appropriations measures or enabling significant savings to government, such as tax cuts or closing down a department of state;

- Medium: a cost that would require some adjustment to the ordinary way of doing things or a benefit that would enable savings within a department or such like; or

- Low: no appreciable disruption or benefit to the economy or government.

Article 50 Negotiations and the Norway/EEA-lite Options

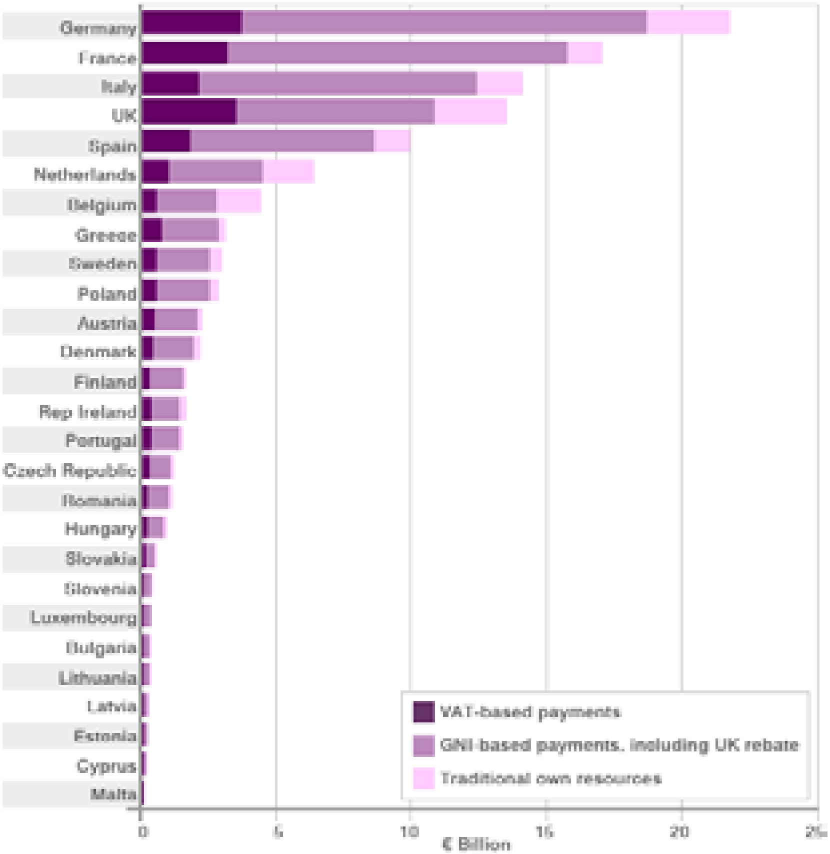
The first question HMG will have to answer for itself is whether the UK should use as its negotiating position a proposal to re-enter the European Free Trade Area (EFTA) alongside Norway, Iceland, and Liechtenstein, or negotiate a similar deal within the European Economic Area (EEA) to that of Switzerland (also a member of EFTA, but with different arrangements discussed below), or leave the EEA entirely and negotiate with the EU as a sovereign entity outside of the EEA.

The EFTA route is unattractive, and would do little to solve the three main reasons for leaving the EU: its democratic deficit, its cost, and its stranglehold over immigration policy.

The democratic deficit argument holds that decisions taken by the EU are unrepresentative. The EU's elected legislature is perhaps unique in the developed world in that it cannot initiate legislation, which is the prerogative of the executive branch, the European Commission. As a result, the democratic deficit argument goes, its decisions are taken remotely from the people, by a clique of unelected technocrats.

This would remain true if Britain were to enter EFTA, but made slightly worse. The laws that govern the functioning of the EEA would still be taken by the same "clique" in Brussels, only without British input at the Parliamentary, Commission, or Ministerial level. What little democratic input UK citizens now have would be lost. In this respect, the Europhile argument about "having a seat at the table" is true, even if the seat is a small one below the salt.

Secondly, the cost would remain high. EFTA nations are expected to contribute to the EU budget according to the relative size of their economies. Indeed, if Norway were included on the chart below (which represents payments from 2007), it would be the tenth-largest contributor.



Source: EU Budget: Who Pays What?, BBC News

There would be a significant savings to the cost of direct contributions to the EU budget, from some £12 billion down to £2 billion per annum (Campbell-Bannerman 2013), but that would be dwarfed by the size of the regulatory burden on the UK economy discussed below. That means the savings could amount to as little as 1.6% of the total cost the EU imposes on the UK.

Finally, there is the question of immigration (discussed further below). Regaining control of immigration flows is a large part of the argument for leaving the EU, and would presumably be part of the motivation for the UK having taken its decision to leave. EFTA membership incorporates the principle of free movement of labour within the EEA. Therefore, EFTA membership would indeed be incompatible with this position if that were the one taken by HMG (we examine reasons why HMG should take this position further below). It should be rejected on those grounds.

Others have proposed an "EEA-lite" deal whereby the UK would negotiate membership of the EEA on its own terms, similar to Switzerland. However, the three arguments above still apply. On Sunday February 9, Switzerland voted by referendum to impose immigration controls on EU citizens. The EU reacted angrily to the Swiss decision. According to the *Irish Times*, the EU Commission's reaction to the vote was, "This goes against the principle of free movement of persons between the EU and Switzerland. The EU will examine the implications of this initiative on EU-Swiss relations as a whole" (Lynch 2014). The *Times* went on to note:

> The introduction of quotas on EU immigrants violates existing treaties between Switzerland and the EU, which also give Switzerland access to the EU's single market. Focus will turn to what changes the EU will demand in a renegotiated treaty, with many believing it will not tolerate challenges to its free movement laws. With anti-immigration feeling on the rise throughout Europe and expected to play a central role in May's European elections, Brussels is also likely to want to take a strong stance on the issue (ibid).

A similar reaction can be expected if the UK were to try to renegotiate terms of membership of the EEA. One can imagine that Brussels' reaction would be, "You're either in the club or you're not." Indeed, senior EU officials have already suggested the bilateral deals governing the Swiss relationship with Europe are "complex, unwieldy to manage and "have clearly reached their limits" (Jonsdotter 2013). There will be little appetite within the EU for another probably far more complex series of arrangements with a former member governing access to the EEA on the UK's terms.

We therefore propose that HMG should reject any option of joining the EEA. Instead, its negotiating position should be that of a sovereign country negotiating a free trade agreement. As the EU has free trade deals with countries like South Africa, and is concluding one with the United States, it is entirely plausible that it would be willing to conclude such a deal with the UK and thereby retain access to the large UK market. We discuss in the trade section below how any increased costs in respect to dampened UK-EU trade with such a deal could be mitigated by the UK becoming a leader in another free trade agreement. While there would be transitional costs, we believe that the benefits of becoming a leader in the free trade movement once again would outweigh these in the long run.

European Communities Act (Repeal) Bill

The first title of the bill to be presented in Parliament can be extremely simple. All that is required is a clause stating, “The European Communities Act (1972) is repealed.”

The second title of the bill should be more complex. Regulations issued by the European Commission have become a major burden on the UK economy. Minford et al. found in 2005 that the cost of “harmonization” (as they then termed EU regulation) was between 6 and 25 percent of GDP.

Area of Cost	**Cost as % of GDP**
Net UK cash contribution	0.4
Costs of Common Agricultural Policy	0.3
EU protection of manufacturing	2.5-3
Regulations	6-25
Bail-out transfers	2-9
Total Costs	11.2-37.7

Source: Minford, Mahambare and Nowell 2005

EU Regulation might therefore be costing the economy £600 billion, or £22,000 per household, each year. Considering that the typical British family has a disposable annual income of just £16,000, reducing that regulatory burden should be regarded as an economic necessity. Even the lower estimate of the burden, at £5,000 a year, should be considered excessive.

Some might dismiss those findings as exaggerated, but they are not out of line with the figures for the UK's direct competitors. According to Wayne Crews of the Competitive Enterprise Institute, the USA faces regulatory costs each year of $1.8 trillion (Crews 2013). That represents about 11 percent of US GDP. While the US has become a much more of a regulated economy in recent years, it is still not as heavily regulated as the EU. For example, it has no Emissions Trading Scheme, Common Agricultural Policy, or the sort of product standards harmonisation that has dulled innovation in the EU.

Moreover, as the current cost of regulation to households in the US amounts to $14,678 per family, which Crews points out is "23 percent of the average household income of $63,685 and 30 percent of the [household] expenditure budget of $49,705" (ibid), there is every reason to suspect that the cost of EU regulation to the average British household is well above 25 percent of its income or expenditure budget.

Withdrawing from the European Union would allow the UK to address this burden by abolishing regulations that add costs but yield few benefits, or where the costs are substantial even where theoretical benefits exist (these benefits are often a trade-off for other benefits, cases where the EU has "picked winners," causing other benefits of less regulation to be foregone).

The think tank Open Europe, for instance, finds that the "top 100" EU regulations cost the UK economy £27.4 billion a year, and that the costs outweigh the benefits in a quarter of the cases (Open Europe 2013). Moreover, the benefits claimed are often clearly over-estimates (as Open Europe points out, "the stated [£20.4 billion] benefit of the EU's climate targets was dependent on a global deal to reduce carbon emissions that was never struck. In fact, Open Europe estimates that up to 95% of the benefits envisaged in the impact assessment have failed to materialize" (ibid).)

However, it is not for nothing that this paper is entitled "Cutting the Gordian Knot." EU regulation now affects virtually every area of business in the UK, and British businesses have adapted to bear the costs as efficiently as possible.

As regulations are a form of legislation, it might seem appropriate for Parliament to debate the appropriateness of each regulation. For example, the draft bill for repeal of the ECA proposed by Philip Hollobone MP says:

> Secondary legislation made under that Act shall continue in force unless it is subsequently amended or repealed, and any such amendments or repeals may be made by statutory instrument subject to annulment in pursuance of a resolution of either House of Parliament. (Hollobone, 2013)

However, the sheer volume of regulations concerned makes this impractical. Between 1998 and 2004, for example, Germany incorporated 750 directives and 18,187 EU regulations into its legal code (Open Europe 2009). Parliament would lack the capacity to give enough weight to the consideration of each regulation and decide whether to abolish it, keep it in place, or amend it to allow for due consideration of the changed needs of the British economy.

Nor would it be appropriate for the reconsideration work to be devolved to government departments. Mr. Hollobone's bill also considers this prospect, suggesting:

> (1) The Secretary of State may by order made by statutory instrument repeal any Act which is rendered obsolete by virtue of the repeal in section 1.
>
> (2) No order may be made under subsection (1) unless a draft of the order has been laid before and approved by a resolution of each House of Parliament. (ibid)

Yet such a provision opens up the departments to focused lobbying by vested interests. Many regulations have concentrated benefits and dispersed costs. Therefore, an ideological pressure group that argued for the restrictions imposed by the regulations might have much more of a voice than a disparate group of affected parties, all of whom carry an inconvenient but bearable cost, and for whom the cost of lobbying would be unaffordable. Similarly, business interests who benefits from barriers to entry that ward off potential competitors would be more able to mount a defence of regulations than a group of potential start-up businesses.

Accordingly, we recommend a third route: the bill should establish a Royal Commission on Regulatory Reduction. This commission would be modelled on the successful Bases Realignment and Closure Commission (BRAC) established in 1988 and given special legal standing by the US Congress in the Defence Base Realignment and Closure Act of 1990.

The BRAC has nine commissioners, appointed by the President, who examine the prospect for closing or realigning US military bases, free form the pressure of Congressional lobbying. They present a package of recommendations to Congress to be voted on yea or nay without possibility of amendment. The process has worked successfully, with packages being approved in 1988, 1991, 1993, 1995, and 2005. Another BRAC round may take place in 2015.

The principle has cross-party support in the US. Former Republican Texas Senator Phil Gramm proposed the idea of using the model to reduce regulation and the liberal Progressive Policy Institute has endorsed a similar idea.

The Royal Commission on Regulatory Reduction would review existing regulations incorporated into law pursuant to the ECA and hold public hearings on their effect. It would also be bound by its terms of reference to consider when regulations had been "gold-plated" for UK purposes—that is, they go beyond the original EU intent—and provide recommendations on dealing with those. Following review, it would annually propose a package of regulatory revisions to be voted on without amendment by Parliament no later than September 30 each year.

Each government department would transmit recommendations for regulatory elimination or modification to the Commission by April 15[1]. After receiving the departments' recommendations, the Commission shall solicit testimony, conduct public hearings, and transmit its recommendations to the Prime Minister by August 15.

If the Prime Minister approves all the recommendations he or she shall submit a Statutory Instrument to Parliament by September 1 containing implementing language. If the Prime Minister requires modification, the Commission must convey revised recommendations to the PM by September 5. If Prime Ministerial approval is not submitted to Parliament by September 10, no regulatory reductions under this process will occur for that year.

The Statutory Instrument laid before Parliament will be subject to annulment in pursuance of resolution of either House of Parliament, pursuant to the Statutory Instruments Act 1946. An instrument so annulled

1 It might be preferable to have these recommendations channeled through the Cabinet Office.

by Parliament shall be referred to the Privy Council, where Her Majesty may by Order in Council revoke the instrument.

Where the Commission recommends primary legislation, the Prime Minister shall refer that recommendation to the appropriate government department for action. It may prove necessary to reserve some government time for such primary legislation to be debated by Parliament.

These provisions should ensure that the package of regulatory reductions recommended by the Royal Commission have the best chance of becoming law without amendment or lobbying interference by special interests. (Of course, in a democratic society like the United Kingdom, a degree of lobbying is to be expected, but we believe that a process like that discussed above would circumvent much of the rent-seeking that is part of the normal political process.)

The Commission would be chaired by a current or former Justice of the Supreme Court of the United Kingdom, nominated by the Prime Minister, and at least six other members, three chosen by the Prime Minister from each of two lists of ten candidates, one provided by Her Majesty's Government, the other provided by Her Majesty's Loyal Opposition. We suggest that membership of the Royal Commission below the chairman should be term-limited, with each member serving for no longer than two calendar years. At least one member should be a representative of the business community.

Meetings of the Commission should be open to the public, except where classified information is discussed. All proceedings, deliberations, and information should be open to the Chairmen of Committees of Parliament.

The Chairman of the Commission should appoint a Secretary to the Committee. This should be a current of former member of the Senior Civil Service, preferably of Deputy Secretary grade or above, who would assemble a staff drawn on secondment from government departments or within a budget agreed with the Chairman. The Commission's expenses could be paid for by a pro-rata transfer of budget from government departments according to the amount of EU regulation they oversee. As Wayne Crews (a former staffer for Senator Gramm) has noted:

> The filtering process of holding hearings combined with the bundling of regulations from across the spectrum of government activity would make the Commission's recommendations more difficult to oppose politically compared with alternatives. As in the base closure model, everybody

> stands a good chance of getting “hit,” thus the bundling provides political cover.(Crews 2013 2)

The Royal Commission will probably need several years to conclude its work. It might be best for the Cabinet office to assemble a rolling schedule of departments to contribute recommendations to the Commission so that the Commission can consider similar regulations at the same time. The departments with the most onerous body of regulation should be first in the queue. (The Commission may prove valuable enough to also consider domestic regulation as well, although this would require additional enabling legislation and is beyond the scope of this paper.)

Cost and Benefits

The costs of a Commission will be low, especially if the Commission is paid for and to a large part staffed out of existing departmental budgets. The benefits are potentially high. If just a quarter of existing EU regulation is abolished as a result of the Commission’s work, the benefit to the UK economy will be an annual saving of £36 billion to £150 billion, or £1,250 to £5,500 per household. Over 20 years, this could represent between £500 billion and £2 trillion in savings[2].

We therefore regard the costs of a regulatory reform commission to be low and the benefits to be high, especially in the medium to long run.

2 Authors’ calculations based on Green Book discount rate of 3.5%

Fisheries and Territorial Waters

One of the most far-reaching changes arising from withdrawal from the European Union and the European Economic Area will be that control of British territorial waters will revert exclusively to the UK, and that the Common Fisheries Policy (CFP) will no longer be in effect. The UK will wish to re-establish control over these waters quickly, which likely will be a particularly contentious element of the Article 50 negotiations. While the British fishing fleet is still quite large by European standards, it is a shadow of its former self. The Grimsby fishing fleet has reduced in size from 400 vessels in 1970 to just five today, although much of this is as a result of disputes with Iceland (Townsend 2013). The Grimsby fish market sold 18,000 tonnes of fresh fish in 2012, but of that 13,000 tonnes originated in Icelandic waters (ibid).

Given the perilous state of many fisheries—with about 30 percent of fish stocks worldwide outside sustainable limits—it will be important to institute a workable fisheries management regime that can help these fish stocks recover, while ensuring that the fishing industries based around places like North Shields, Fraserburgh, and Peterhead avoid collapse. Cod stocks in particular are at critical levels, according to the Marine Management Organization (MMO 2013).

Environmental groups, marine biologists, and free market economists all agree that one of the prime causes of the parlous state of EU fisheries in general is the Common Fisheries Policy. While there has been some recent reform of this program that went into effect on January 1, 2014, it is far too early to say how beneficial these reforms will be. For the purposes of a Brexit discussion, we shall assume that no significant difference will have been noticed by the time of a British withdrawal in 2017.

As the UK territorial waters contain approximately 70% of the fish stocks of the European Union, there will be considerable interest in the fisheries management regime to be established following withdrawal from the CFP. It provides an opportunity to rebalance industry considerations and environmental quality, in order to allow the best possible management of fisheries to enable sustainable and profitable use by the industry.

Under prevailing international law, a UK independent of the EU will have three areas of responsibility for marine resources:

1. Exclusive use of everything at sea up to 12 miles from the coast;

2. An exclusive economic zone (EEZ) governing use of resources up to 200 miles from the coast, depending on other nations' maritime borders; and

3. High seas jurisdiction for its own vessels and freedom to fish in the high seas in line with international commitments.

Certain historic rights to fish for both UK and international fishermen also would need to be respected. A new Management Council for British Fisheries—housed either within the Marine Management Organization or the office of the Secretary of State for the Environment, Food and Rural Affairs—could be charged with creating a new rights-based regime for the management of fisheries. This body would consist of representatives from the industry and academic bodies charged with assessing the state of British fisheries.

A property rights-based fisheries management system is preferable to any of the other solutions for management of fisheries within the EEZ. It provides the best incentives possible to proper stewardship and conservation of the system while avoiding the considerations of public choice that plague politically-based management systems.

However, to work, a property rights system has to have certain features. Case Western Reserve University law professor Jonathan Adler describes them thus:

> For incentives to work, the property right to a resource must be definable, defendable, and divestible. … Even someone indifferent or hostile to environmental protection has an incentive to take environmental concerns into account, because despoiling the resource may reduce its value in the eyes of potential buyers. (Adler 2000)

Private property rights' effectiveness in promoting good stewardship is undermined to the same extent that any element of that "bundle" of rights is undermined. For example, if individuals are barred from selling their fishing rights, they will have less of an incentive to preserve the value of those rights by not overexploiting the share of the resource that belongs to them. If they decide to leave the business and no longer intend on harvesting their share of the resource, they may have an incentive to deplete it. Similarly, if bureaucrats can take away the property right at any time, the right will be less valuable and the attendant incentives will be diminished.

Failure to define property rights generally results in what ecologist Garret Hardin termed the "Tragedy of the Commons" (although H. Scott Gordon of Carleton College, in Ottawa, observed the phenomenon in fishing in the 1950s) (Gordon 1954). A tragedy of the commons occurs when no one has any incentive not to deplete a common resource, in the expectation that someone else will deplete it first. This has been the source of the problems that have bedevilled the CFP.

In the modern context of commercial fishing, the best way forward is for the UK government to create rights with similar characteristics to private property rights. The most effective solution to date has been New Zealand's Individual Transferrable Quota (ITQ) system, which has resulted in the speedy turnaround in the health of that country's fishing stocks.

New Zealand's Individual Transferable Quota System

Individual Transferable Quota systems operate by capping a country or region's total allowable catch (TAC) and guaranteeing fishers a share or quota, often as a percentage of the TAC. Once the initial allocation is made, fishing rights take on the features of property rights. They may be exploited to the degree allowed by the quota, and they may be leased, sold, or otherwise transferred to other fishers. Since the shares are owned in perpetuity, fishers have a strong incentive to harvest as many as possible in accordance with the quota without depleting the fish stock. Owners of the most efficient fishing vessels will have an incentive to buy quotas from those with older, less efficient vessels, thus reducing the total number of vessels in the long run.

Given the novelty of this form of property right, owners of ITQs are likely to be particularly sensitive to the prevailing regulatory climate. Therefore, it is important for government to set up an ITQ market carefully and avoid taxing or interfering with these new property rights in order to maximize their environmental benefits. New Zealand's ITQ arrangement, the most extensive in operation, developed considerably over time. It makes for a useful case study, for it illustrates some of the pitfalls that must be avoided in any effort to introduce private property rights into fishing markets.

New Zealand, beginning in 1960, subsidized the development of fisheries, with the result that stocks were severely depleted by the time the Fisheries Act was passed in 1983. Tradable quotas were created in 1986, but these were only valid for 10 years, and were measured in tonnage, which meant that the Fisheries Ministry had to buy back tonnage whenever the TAC was lowered. Also, the quotas' expiration after 10 years reduced their value as a property right. In 1990, the quota was changed from a measure of tonnage to percentage of TAC.

In 1994, the government scrapped both the quotas' 10-year expiration—transforming them into perpetual rights—and plans to levy significant taxes on the quotas. Although fishers technically only have a right to access the fish rather than a right to the fish themselves, their access rights are for all intents and purposes property rights, analogous to the riparian rights of property owners under the common law.[3] It is important to note that, owing to rights guaranteed to native Maori populations under the 1840 Treaty of Waitangi, these property rights have a strong element of constitutional protection—hence their grant in perpetuity.[4]

The New Zealand ITQ system behaves as a functioning market should, as confirmed by a 2002 analysis by Motu, a New Zealand-based think tank (Newell, Sanchirco,Kerr 2002). The Motu study finds that the markets for quotas are very active, "with more than 120,000 leases and 30,000 sales of quotas as of the end of the 1998 fishing year—an annual average of

3 Property owners do not have an unlimited right to the water that flows through their property. If they divert it or substantially reduce the water flow, they may be compelled to pay damages to those who own land downstream of their property. See Pride of Derby and Derbyshire Angling Association Ltd -v- British Celanese Ltd; CA 1953

4 World Bank Senior Fisheries Specialist Michael Arbuckle makes this point regularly when he discusses the New Zealand scheme. See his presentation, "New Zealand's Catch Share Program," undated, accessed April 23, 2012, http://www.fisheriesforum.org/sites/www.fisheriesforum.org/files/10917_MA%20CSWS%20Arbuckle.pdf.

about 8,700 leases and 2,000” (ibid). The reforms mentioned above led to an increase in transactions: “[T]he total number of leases has risen…from 2,000 in 1986 to 14,500 in 1998 (ibid).” Moreover, the study found that:

> [T]he value of fish is positively associated with quota prices, as evident by the result that the elasticity of the quota type with respect to the fish export price is positive an statistically significant in both lease and sale price equations. … Controlling for other factors, there is evidence of increased profitability of the included fisheries since the establishment of the ITQ system (ibid).

In 2008, researchers Christopher Costello, Steven Gaines, and John Lynham investigated the effects of all 121 fisheries where ITQs and other catch share schemes exist around the world for a study published in *Science* magazine, comparing them to the 11,000 fisheries without property rights and controlling for confounding factors such as fish species and ecosystem characteristics. They found that the existence of catch share rights not only precluded fishery collapse but, as in New Zealand, often helped reverse collapse that was already ongoing (Costello Gaines Lynham 2008).

Moreover, the authors found that if catch shares had been instituted globally from 1970, then incidences of fishery collapse would have been reduced by two-thirds (ibid). Fish stocks, furthermore, would rise rather than fall. The evidence is clear: ITQs represent the best basis for management of the UK’s sovereign fisheries. Failure to follow this path would represent a gross disregard for the future of our marine ecology and resources.

Other considerations that would need to be established by the management council include:

- A rapid and responsive data-collection system;
- A system for the registration of vessels, skippers, and crew;
- A ban on discards—any fish caught that belong to commercial species should be landed;
- Conservation arrangements including permanent and temporary closures;

- A ban on industrial fishing and associated fishing methods that have been shown to be extremely damaging; and
- An absolute prohibition of fishing or vessel subsidies.

With such a system in place, we can be confident that the replacement for the CFP will be responsive to the needs of the UK economy, the fishing industry, and the ecology as a whole.

One final consideration is the management of fish stocks that straddle EEA boundaries, such as with Belgium or Norway. The Article 50 negotiations will need to set up temporary Joint Management agreements based on the "relative stability" of the 1983 agreements that were based on historic practice. The example of a UK ITQ system, however, is likely to prove attractive to environmental groups in the EU—most environmental groups strongly support catch share systems—and thus lead to pressure for adoption of an EU ITQ-based joint management system.

Costs and Benefits

The costs of setting up and running an ITQ system can be substantial, but experience in Iceland and New Zealand suggests that these costs are considerably lower than the current management costs incurred by the UK (Wallis and Flaaten 1999). Moreover, research suggests that an optimal ITQ system is one where the management costs are borne by the industry rather than the public sector (Chavez Rebolledo and Stranlund 2013). Therefore the "cost" to the public purse should be positive in present value terms. Benefits are extremely hard to quantify, as they include assumptions and judgments about the value of a healthy fishery. For comparative purposes, consider that the introduction of ITQs in Chile is estimated to have provided $166 million in benefits to the country from 2001 to 2020 (Gomez-Lobo, Pena-Torres, and Barria 2011). Therefore, it is safe to assume that the introduction of ITQs in British sovereign waters will be beneficial to the UK economy as a whole.

Trade

The United Kingdom has long been a champion of free trade. This position has brought enormous benefits to the UK in the form of increased wealth and innovation and consequentially increased human welfare. Indeed, free trade's benefits to the working man were recognized by both the Chartists and the British Labour Party, which adopted free trade as its policy in 1904 and clung to it against Conservative opposition for almost half a century. As professor Kevin O'Rourke of Trinity College Dublin has noted:

> Economists have shown that this view was correct: the move to free trade, and the globalization of the late 19th century economy, all benefited British labour greatly…[A]lmost one half of the total real wage gains recorded in Britain in the late 19th century can be attributed to the impact of international transport cost declines, and the cheap food which they gave rise to (O'Rourke 2000).

Those concerned about the EU's effects on wages should therefore be buoyed by the prospect of the UK becoming once again a champion of free trade, which it would be able to do once freed from the EU's customs union. UK trade policy should aim at eliminating tariff and non-tariff barriers with its largest trading partners in the post-EU world. It should also look at alternative arrangements for trade associations that would advance the principle of free trade rather than encourage trade cartelisation. We examine some possibilities for this below.

Eliminating Tariff Barriers

The USA is the UK's largest non-EU trading partner in terms of both exports and imports, and existing US-EU tariffs impose a significant burden on both economies. In terms of exports, getting rid of tariffs on merchandise trade between the EU and the US would increase EU exports to the U.S. by up to $69 billion, while U.S. exports to the EU could increase by up to $53 billion, according to estimates by Fredrik Erixon of the European Centre for International Political Economy and Matthias Bauer of Friedrich Schiller University (Erixon and Bauer 2010). The gains to both economies would be substantial—GDP in the EU could rise from $58 billion to $85 billion, while US GDP could increase from $59 billion to $82 billion.

On a simple per capita basis, with a population of 62 million out of the EU's 503 million citizens, many of these benefits would accrue to the UK—in the form of at least $3 billion in increased GDP. However, given the UK's historic trading links with the US, it is reasonable to believe that the UK would gain disproportionately from a relaxation in tariffs between the UK and EU as a whole.

In a free-trade lesson the UK could learn from, in November 2011 Canada announced that, to help spur the economy, it was eliminating tariffs on imports used by Canadian manufacturers (Reuters 2011). Tariffs would be cut on about 70 items, the latest in government moves to get rid of all tariffs by 2015. Canada already has abolished tariffs on more than 1800 items—relief that is expected to add about US $423 million annually to its economy.

However, in a signal that eliminating all tariffs is not in the cards in the Transatlantic Trade and Investment Partnership negotiations, the report of the High Level Working Group (HLWG) twice mentioned that "the most sensitive" products on both sides would continue to be treated differently from other goods and services:

> The HLWG recommends that the goal of the agreement should be to eliminate all duties on bilateral trade, with a substantial elimination of tariffs upon entry into force, and a phasing out of all but the most sensitive tariffs in a short time frame. In the course of negotiations, both sides should consider options for the treatment of the most sensitive products (HLWG 2013).

This should be worrying for British industry. As suggested above, the UK stands to gain disproportionately from any relaxation in tariff barriers with the US. Freeing the UK from the burden of tariff barriers advocated by its European neighbours would significantly increase the benefits of free trade with the US.

Also important for the UK should be the recognition that tariffs on imports are really added taxes on the foreign goods and services purchased by consumers and businesses. Trade agreements should consider the consumer impact. Consumers benefit from imports that reduce prices, increase choices, and provide new technological advances. Eliminating tariffs can provide major “tax cuts” that can help stimulate the economy. Again, the UK is more likely to benefit if it were free to negotiate with the US in a bilateral or non-EU/EEA multilateral framework.

Non-Tariff Trade Barriers

Even as tariff barriers to trade have been reduced, non-tariff trade barriers have increased. These barriers can take many forms, from restrictions on food products based on non-scientific assertions or even cultural practices to costly regulatory regimes. The World Trade Organisation, for instance, has recognised that sanitary and phytosanitary measures that go well beyond what is needed for health and safety can constitute unwarranted barriers to trade (WTO). The EU has proven unusually willing to introduce such barriers. Therefore, it is plausible that the UK, absent EU trade competence, would be less likely to indulge in such trade barriers than the EU as a whole. Such protectionism is expensive. According to French economist Patrick Messerlin, protectionism costs the EU 6-7% of its GDP annually (de Jonquieres, 1999).

Of considerable worry to UK farmers should be the looming problem of agriculture in the TTIP negotiations, based around likely EU/EEA protectionism in this matter. US Senate Finance Committee Chairman Max Baucus (D-Mont.) and Ranking Member Orrin Hatch (R-Utah), in a February 2013 press release and a letter to U.S. Trade Representative Ron Kirk, praised the concept of a trade agreement with the EU but pointed to several EU restrictions on agricultural imports that are not based on sound scientific findings. The Senators urged that those “unwarranted agricultural barriers” be resolved (Baucus 2013).

Broad bipartisan Congressional support for expanding trade with the EU depends, in large part, on lowering trade barriers for American agricultural products. This means increased agricultural market access and firm commitments to base sanitary and phytosanitary measures on sound science. The EU has historically imposed sanitary and phytosanitary measures that act as significant barriers to US-EU/EEA trade, including EU restrictions on genetically engineered crops; a ban on the use of hormones in cattle, restrictions on pathogen reduction treatments in poultry, pork, and beef; unscientific restrictions on the use of safe feed additives such as ractopamine in beef and pork; and other barriers to trade affecting a significant portion of U.S. agricultural exports. It would be unfortunate if the UK were to continue this form of non-tariff protectionism. Any negotiations with the USA on free trade should include such negotiations on both an individual and a systemic basis (ibid).

In the agricultural areas relating to the US and the EU, both parties should rethink their domestic agricultural support programs, especially in these times of budget deficits and the need to cut public expenditures. However, the EU is committed in one form or another to the Common Agricultural Policy (CAP), which was designed to help support the notoriously inefficient French system of agriculture. Without the burden of the CAP, it would make it much easier to reach agreement with the US on agricultural issues in any free-trade arrangements the two countries were to make.

These considerations all make the prospect of an EEA or even EEA-lite arrangement unattractive. They bolster the case for a fully independent UK with its own trade promotion authority.

Free Zones

As a first step to freer trade the UK could immediately expand the use of foreign trade zones or “Free Zones,” which HM Revenue and Customs defines as follows:

> A Free Zone is a designated area in which non-Community goods are treated as being outside the Customs territory of the Community for the purpose of import duties. This means that import duties (including agricultural charges) are not due provided the goods are not released for free circulation. Import VAT is also suspended until the goods are removed to the UK market or used or consumed within the Free Zone.

There are currently five free zones in the UK—Liverpool, Prestwick, Sheerness, Southampton, and Tilbury. Such zones could be established in multiple ports with expanded benefits. Currently, Free Zones are primarily used for warehousing or distribution. In the US, there are 276 active manufacturing and production operations within Foreign Trade Zones, representing 75% of zone activity compared to 25% relating to warehousing.

Free Zones should therefore be expanded to allow for setting up such manufacturing facilities. This would provide an immediate alternative to abandoning manufacturer tariffs *a la* Canada. They could provide significant benefits in the form of:

- Duty deferral: import duties would be paid only if and when goods are transferred out of the zone and into the UK customs area;

- Duty elimination: no duties would be paid on goods exported from the free zone; and

- Duty reduction ; free zone users could elect to pay duties at either the rate of the foreign inputs used or the rate applied to the finished product—which may be lower.

Benefits would accrue to the UK in the form of job creation, increased exports, and foreign direct investment. In the USA, Foreign Trade Zones account for $69 billion of exports, primarily in industries such as oil/ petroleum, vehicle parts, and pharmaceuticals.

It might even be possible to use the expansion of free zones as a bargaining chip in the Article 50 negotiations—suggesting that such zones could remain part of the EEA. One particularly intriguing possibility is for areas like the Nissan plant in Sunderland to be designated Free Zones, thereby significantly reducing the cost of EEA withdrawal on foreign investment as discussed elsewhere.

There is further discussion of the value of an open trade position in the discussion of the particular case of foreign direct investment below.

Feasible Multilateral Trade Formulations with UK Trade Competence

Given the size of the UK economy, a bilateral free-trade deal between the UK and US is not out of the question (many smaller economies have signed such deals). However, there might be concern in the UK that such a deal would be dominated by the US side. Accordingly, it is worth constructing scenarios whereby the UK and the US might both be members of a multilateral trade agreement. This submission postulates two such possible agreements—a North Atlantic Free Trade Area (NAFTA2) and a Global Free Trade Association (GFTA).

North Atlantic Free Trade Area

In 2000, a US Senate report commissioned by then-US Senator Phil Gramm concluded that UK entry into the North American Free Trade Agreement (NAFTA) would be beneficial to the UK. As the *Daily Telegraph* reported at the time:

> The report concluded that if Britain joined NAFTA while remaining in the EU its exports to the US would increase by £1.9 billion per year, while exports to the EU would decrease by £680 million. (Harnden 2000)

Reaction in the US to the report was generally favourable, while it was dismissed as "barmy" by then-UK Foreign Secretary Robin Cook.

It is now feasible to consider a NAFTA2, however. There is a possibility that the Icelandic government might adopt the Canadian Dollar as a national currency, given the close economic relationship between the two countries. It would not be too great a step then for NAFTA to expand to include Iceland. Once that has happened, the continental identity of the current NAFTA would no longer apply, and a precedent would have been set for the inclusion of other North Atlantic countries with similar business cycles.

The UK is one such country. It should therefore be plausible to imagine a NAFTA2 with membership including the US, Canada, Mexico, Iceland, the UK, Ireland (perhaps in a currency union with the UK), Greenland, and Norway. Such a free trade area would incorporate 30 percent of world

GDP[5] and constitute a major step towards the breaking down of trade barriers worldwide. In addition, former Canadian Prime Minister Brian Mulroney has also floated the possibility of Australia and New Zealand joining NAFTA, which would further expand the agreement's reach.

Global Free Trade Association

Another potential idea is for the world's freest economies—those who are by their nature committed to free enterprise and free exchange of goods and services—to come together to form a mutually-beneficial free trade association. Eligibility for membership in a GFTA would be determined by reaching an appropriate score in an index of economic freedom, akin to those compiled each year by the Heritage Foundation in America or the Fraser Institute in Canada.

The inventor of the GFTA idea, Dr. John Hulsman, described it as follows in 2004:

> The GFTA will be founded on a genuine shared commitment to increasing trade between its member states and at a global level. It will serve as a practical advertisement for the enduring global benefits of free trade as the advantages of such an association become apparent; an example all the more precious in the wake of the Seattle WTO debacle. It would presently encompass New Zealand, Hong Kong, Ireland, Chile, Singapore, Denmark, Luxembourg, Estonia, Australia, Finland, Iceland, the UK and the US. The GFTA will be a voluntary and inclusive grouping, whose expanded membership should be based solely on a policy commitment by its member states to a genuinely liberal global trading order. The plan embraces a commitment to a state's sovereignty. Its economic policies (and the choices they represent) will determine whether or not it qualifies for the grouping. This commitment will be characterized by a state's meeting certain numerical targets (such as those used in the methodology employed in The Heritage Foundation and The Wall Street Journals' 2001 Index of Economic Freedom) regarding a country's openness, relating to its trade policy, capital flows and investment, property rights and low level of regulation (for details of the plan, see appendix.)
>
> Members will thus select themselves based on their genuine commitment to a liberal trading order. It is hoped that membership will quickly grow, as a further 19 countries are within sight of the numerical target for accession (including Bahrain, Canada, El Salvador, the Czech Republic,

5 Total GDP of listed countries is c.$21.19 Trillion, out of a Gross World Product of c.$71.8 Trillion

> Italy, Spain, Poland, Hungary, Switzerland, Thailand, and the UAE.) Given my firm belief in the economic superiority of the Anglo–American economic model, such an organization will have a disproportionate number of English-speaking members, certainly in the short- and medium-term. However, the numerical target methodology allows for self-selection, giving the whole project an inclusivity it would otherwise lack, while advancing our common desire to strengthen the ties that bind the English-speaking world together. The Global Free Trade Association's internal initiatives will include: freer movement of capital within the new grouping; establishing common accounting standards; setting uniform numerically-driven very low rates of subsidy, as well as diminishing overt and hidden tariffs. (Hulsman 2004)

Initial enthusiasm for the GFTA idea from a number of smaller countries was dashed on the rock of the EU's sole competence in trade. If the UK regained trade competence, the idea would once again become viable.

In either of these institutional arrangements, the UK would have the advantage of not being the junior partner, and would carry weight according to the success or otherwise of its economy. In both cases, it would have every incentive to remain friendly to free enterprise and to economic freedom. Sadly, such incentives do not exist as long as the UK remains dependent on Brussels for trade negotiations.

The precise costs and benefits of a freer trade system are examined in the section on foreign direct investment.

Immigration

It is important to remember when considering the immigration issue that the vast majority of the non-native born population in the UK still comes from countries outside the EU (see table below). Indeed, of the top 10 non-native population segments in 2011, only two of them were from EU countries (see figure below). Therefore, the immigration issue is not primarily an EU issue. However, owing to the principle of free movement of labour, non-EU immigration policy has become hopelessly interlinked with EU free movement policy, meaning that withdrawal from the EU allows the possibility for rethinking UK immigration policy as a whole.

Fiscal year	Panel A: Total population				
	Natives	EEA	Non EEA	EEA, 2000 on	Non EEA, 2000 on
1995	52,172,016	885,367	3,920,502	-	-
1996	52,053,113	823,820	4,049,663	-	-
1997	52,024,832	953,449	4,178,270	-	-
1998	52,044,969	1,044,056	4,258,364	-	-
1999	52,198,811	1,065,211	4,294,403	-	-
2000	52,167,122	1,054,930	4,509,258	-	-
2001	52,254,626	1,124,239	4,577,880	105,815	334,841
2002	52,221,725	1,161,818	4,762,303	157,264	611,803
2003	52,346,927	1,229,381	4,819,508	205,220	836,533
2004	52,384,909	1,282,428	5,010,460	301,420	1,116,979
2005	51,580,064	1,411,814	5,216,225	469,053	1,345,442
2006	52,191,015	1,677,650	5,543,197	658,519	1,697,557
2007	52,054,165	2,271,159	5,436,642	969,502	1,928,921
2008	52,115,726	2,373,601	5,702,679	1,070,076	2,260,517
2009	52,331,186	2,432,699	5,800,989	1,139,307	2,450,912
2010	52,333,130	2,763,560	5,987,809	1,462,313	2,656,915
2011	52,360,031	2,847,289	6,146,430	1,563,028	2,924,529

Source: Dustmann and Frattini 2013

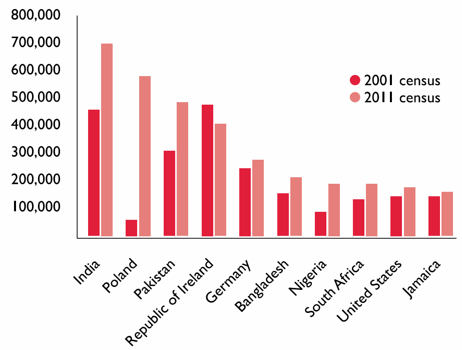
Retaining the Free Movement Principle?

When it comes to immigration policy, the prime problem with suggestions that the UK should aim to remain within the European Economic Area—either as a member of EFTA or with some other affiliation, such as the Norway/Switzerland option—is that it requires adherence to the EU's principle of free movement of labor. This would mean that one of the British public's prime areas of disquiet regarding membership of the EU would remain. It also means that, like Switzerland, the UK would be required to maintain stricter controls on non-EU/EEA immigration. These controls have led to a severing of traditional ties with Commonwealth countries and have caused difficulties for the financial services industry due to the increased difficulty to move staff between the UK and USA.

The prime purpose of immigration policy should be to maintain the best possible pool of labour for the nation, and the firms that use that pool are best placed to decide its make-up without artificial restrictions based on geographic closeness. In a global economy the best person to add value to a firm's activities, or to the nation's culture for that matter, might be a graduate of an Indian technical college rather than a Polish university.

Accordingly, the "Norway/Switzerland option" appears too restrictive as a tool of immigration policy. It should be rejected.

Top 10 non-UK born populations in England and Wales, 2001 and 2011



Source: Regent's University 2013

Transitional problems will abound, of course. With the extraction of the UK from the EEA's labour mobility requirements without adequate replacement in the labour pool, it is likely that wages in many businesses could rise significantly quite quickly, resulting in job losses and companies going out of business. It is therefore essential that the UK retain access to a pool of highly motivated affordable labour beyond the UK's native population[6]. Initially, this could be maintained by an expansion of the current points-based visa scheme for non-EEA nationals, which allow EEA nationals currently employed in the UK to continue to work providing they meet certain standards (UKBA). Skilled workers could be accommodated using the already existing Tier 2 provisions of the points-based system. Low-skilled workers could be accommodated by means of reactivating the currently-suspended Tier 3 of the system, with the government declaring a likely temporary worker shortage following withdrawal from the EU. At the same time Tier 1 (General) could also be reactivated to allow for a quick influx of new highly-skilled workers from outside the EU.

6 This is not the place for a full discussion of immigration policy, but the benefits to the country of immigration are generally agreed by free market economists. One useful recent study of the fiscal benefits of immigration is Dustmann and Frattini 2013:.

Consideration could be given to expedited citizenship for those who have been in the UK for more than 10 years or who have demonstrated that they have started a family with every intention of remaining in the UK.

This temporary measure would come at some cost. More staff and computing capacity would need to be hired to enable the one-off glut of applications to be handled fairly and expeditiously. To avoid public choice concerns over concentrated benefits and diffuse costs that drive rent seeking, this could perhaps be handled best by establishing by a temporary executive agency. Established within the Home Office, it would second staff from the Home Office's UK Border Agency and exist for no more than five years. Such an approach would likely minimize the potential for delay and focus maximum pressure on delivering a target for all current EEA nationals resident in the UK to either have their status transferred to a visa-based system or leave the country within that five-year target.

There would also be a potential repatriation cost. Currently there are 70,000 Spaniards resident in the UK but 411,000 Britons resident in Spain (Regent's University 2013). Having them suddenly left high and dry as regards to their status in Spain would be unjust and could lead to significant burdens on the UK taxpayer if even a substantial proportion were to be forced to repatriate unwillingly. The Article 50 negotiations should attempt to arrange a reciprocal deal at the European level for British residents who wish to remain resident in the EEA similar to the transitional arrangements described above. It might, however, prove necessary for individual negotiations to be conducted with each country.

There is also the possibility that some EU countries might regard UK nationals as an easy scapegoat for the UK's "sin" of leaving the EU and cast them out without regard for any accommodations made by the UK for EEA nationals. HMG should therefore be prudent in setting aside a contingency fund to help such expellees from the EEA.

Ireland and the Commonwealth

A special case is Ireland, which has long had little restriction on its labour mobility with the UK. There is no reason for this not to continue. A simple reversion to the law as it stood before 1973 should suffice.

Going forward, it would be advantageous for the UK to re-establish close labour mobility arrangements with Commonwealth countries such as Australia, Canada, and New Zealand, which historically provided affordable labour to the UK in industries such as hospitality. The law as it stood before 1973 could provide a useful guide. One new way to do this would be to offer “sojourner” status to citizens of these countries. Such a status could allow legal residency for a period of five to 10 years without the restrictions of the points-based scheme, subject to a background check and medical examination to exclude potential terrorists, criminals, and those carrying communicable diseases. Such agreements need not even be reciprocal, as they are likely to be beneficial to the UK, given these countries’ generally high standard of educational achievement.

In addition, the UK should establish a more competitive Visa scheme for entrepreneurs than the current Tier 1 (Entrepreneurs) scheme, which guarantees residence to any entrepreneurs able to demonstrate adequate capital backing for a business they wish to establish in the UK. Only 462 such visas were granted in 2012 (Warwick-Ching 2013). . Canada’s successful scheme for entrepreneurs can provide a guide. It requires funding of C$200,000, which is almost half of the UK requirement of £200,000, or just C$75,000 from an accredited angel investor.

An Immigration Tariff

Finally, the UK should consider moving towards a simple, nationality-neutral immigration tariff. Many immigrants already pay substantial amounts of money to gain the opportunity to work in a dynamic economy like the UK’s. Sadly, many more pay considerable sums to human traffickers and are then forced to work in conditions of near-slavery, such as in sex work, to pay off their traffickers. An immigration tariff, as suggested by Nobel Laureate Gary Becker (Becker and Coyle 2011) and by the Cato Institute’s Alex Nowrasteh (Nowrasteh 2012), would not only turn this criminal income into a government revenue stream but also virtually eliminate the degradation of would-be immigrants exploited by criminal traffickers. It would also significantly reduce the bureaucratic costs of the points-based system and accordingly allow for a reduction in the size of government spending.

Setting the immigration tariff would be a significant exercise beyond the scope of this paper. Politically, it could become subject to aggressive rent-seeking. Academically, it would be open to challenge from different ideological viewpoints. HMG should therefore establish another Royal Commission to identify the figures that will form the basis of calculating the immigration tariff. The most important such figure will be the fiscal Net Present Value (NPV) of the immigrant to the economy. This is generally dependent on the age of arrival of the immigrant and his education level. For instance, in the USA, an immigrant with less than a high school education has an NPV of -$13,000, while one with more than a high school education has an NPV of +$198,000.

A tariff schedule could be established using these figures. That would ensure that those with less to give to the UK economy pay more, but not more than they would pay for unauthorized immigration. Repeated studies have found that the wage premium of working legally in a developed country is significantly large, and thus provides an incentive for potential migrants to pay a tariff when that option is available. Studies have also shown that migrants are able to accumulate surprisingly large amounts of money to pay traffickers to take them to their desired destination, for example by pooling village resources. Workers who have paid a tariff are also less likely to accept the lower wages offered by the black market over legal work.

A tariff schedule would look something like this, assuming similar NPVs to the US.

Education	Age	Rate (in £)
Less than GCSE	Less than 18	5000
	18-21	10000
	22-27	20000
	28-35	35000
	36+	50000

In 2011, net inward migration to the UK was 197,000 people. If that level of migration holds true and immigrants paid an average of £15,000 each, then an annual income stream of around £3 billion could be achieved, more than enough to pay for immigration costs and roughly equal to non-EEA immigrants' net annual use of the welfare system (Dustmann and Frattini 2013)[7]. Assuming a tariff scheme took 2.5 years to develop, the net present value[8] of the income from such a scheme from 2018-2028 would be just under £20 billion.

If it were possible to introduce an immigration tariff sooner—thereby bypassing the points-based system and requiring immediate payments from non-native residents without visas to be able to stay—and assuming a take-up rate of about 50% from EEA nationals that would take two years to process, the income stream would be substantially larger and front-loaded, resulting in a NPV from 2018-2028 of GBP35.5 billion.

Costs and Benefits

Withdrawal from EU with expulsion of EEA workers: Substantial and unquantifiable costs from social disruption, wage rises, job losses and business closures. Likely high repatriation cost as EEA countries retaliate.

Norway/Switzerland option: No noticeable cost but a medium opportunity cost from talent forgone from non-EEA countries. Also continuing political cost.

Points-based system: High transitional costs on a temporary basis as 2 million non-visa residents need to be processed into the points-based Visa-based system. Some possibility of high repatriation costs.

Immigration tariff after points-based system: As above, but with NPV £20 billion revenue stream.

7 Recent EEA immigrants provide a net positive benefit to the UK of a similar amount, meaning that total immigration is roughly cost-neutral to the UK. As the UK has been excluding more qualified non-EEA immigrants recently, we believe the actual cost to the UK of immigrant use of the welfare system will be substantially less than this figure with an immigration tariff.

8 Authors' calculations using Green Book discount rate of 3.5%

Immediate immigration tariff to include current residents: Transitional costs to process 1 million immediate applicants, some costs from wage rises, job losses, and business closures. NPV of 10-year income stream 35.5 billion.

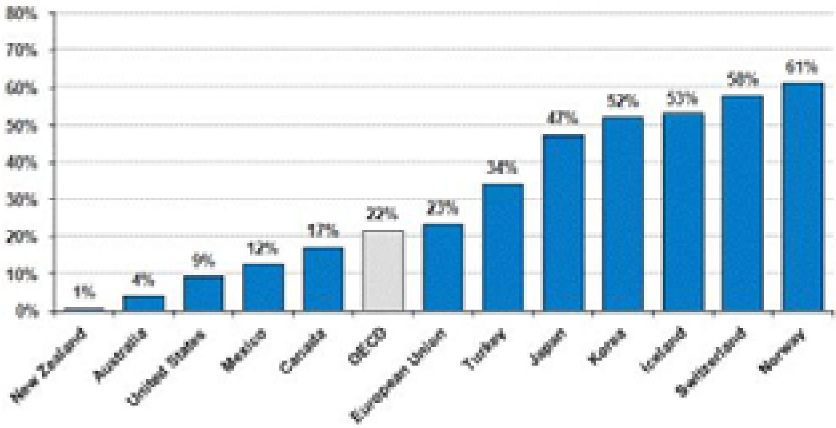
Agriculture

Like other sectors, the United Kingdom's agricultural sector has become increasingly sensitive to regulatory interference by the European Union. Since the UK joined the EEC, the regulatory influence from the EU has grown and now stands at over 40 percent (Yves Bertoncini, 2009). In doing so, it has changed agricultural practices in the UK. With subsidies for programmes such as set-aside land, the Common Agricultural Policy has greatly influenced how much of the United Kingdom's agricultural land is used.

These subsidies will be in question once Article 50 has been invoked. Over the next seven years, the UK is due to receive £17.8 billion in EU direct payments and market investment tools for direct support for farmers and £1.84 billion for environmental preservation and rural development. This represents a significant sum of money that the farming community in the UK would be looking to use.

Proposals to end this level of subsidy have understandably been met with resistance. It has led authors such as Dr. Lee Rotherham to suggest that the UK might keep the respective subsidies in place for a period of up to 10 years, during which time the respective legislation could be changed (Rotherham, 2009, 25). The UK would save money in this scenario as it would cease funding Common Agricultural Policy programmes for other nations. However, this could lead to greater domestic subsidies, as illustrated by Switzerland, which has a higher rate of public support subsidies than the EU. Swiss levels of public support estimates in 2011 reached 54 per cent of farm receipts, compared with an average of 18 per cent across the European Union (Kendall in Regents University, 2013, 128).

Levels of public subsidy for agriculture



When considering reforms to its agricultural sector, the UK should instead look at the example of New Zealand. As evidence that reductions in subsidies can lead to a more competitive, larger and successful agricultural industry, the subsidy reforms made throughout the 1980s have resulted in farmers in that country no longer wanting subsidies which New Zealand farmers now recognize as a form of government involvement.

The reforms have allowed agricultural firms to become leaders in the New Zealand economy as the owners prove themselves to be skilful entrepreneurs. There is no reason why farmers in the UK, after leaving the EU, should not act in a similar way. However, some—including Peter Kendall of the National Farmers Union—argue that ending subsidies would “devastate” the UK farming sector (Kendall in Regents University, 2013, 126). This argument asserts that businesses are unable, or unwilling, to adapt to market environments. New Zealand has shown that this is not the case. As a result of effectively ending the subsidies in the 1980s, agricultural firms in New Zealand now make up over 10 per cent of New Zealand’s top 100 companies.

As a result of effectively ending the subsidies in the 1980s, agricultural firms such as Fonterra have become some of the largest companies in New Zealand. Indeed, there are about 80,000 farm holdings in New Zealand, roughly the same amount as there were in 1984. Furthermore, since 1984, the agricultural sector has increased in New Zealand by 2.4%

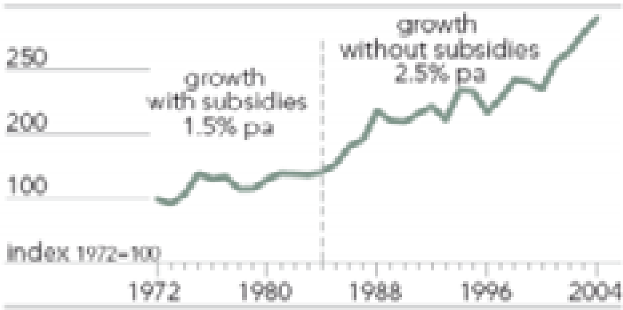
as a proportion of GDP, now accounting for 16.6%, with net agricultural yields almost doubling from 1982 to 2012 (FAOSTAT). If this level of GDP growth were to be replicated in the United Kingdom it would represent a growth of roughly £40 billion within the industry and given this growth and the increased variety of roles within the agricultural sector through the increase tourist activities, the number of people also involved in the agricultural sector also remaining level during the past thirty years (FAOSTAT; Federated Farmers, 2005; Sayre, 2003).

Kendall highlights other concerns, including possible lack of access to the Single Market. This worst-case scenario was addressed by Patrick Minford (2013), who posited that, if the UK were to declare unilateral free trade, there would be no incentive for the European Union to impose taxation on UK farmers, as countervailing duties would become instantly obsolete. Given that imports of food products rose in 2012, coupled with the fact that the UK poses an overall trade deficit in food and drink products (Carr, J et al. 2013), the UK could be in an advantageous position going forward, as neither it nor its trading partners would have any interest in imposing new barriers. Kendall argues that if the UK were to lower its tariff barriers with the rest of the world, it would not be able to apply higher barriers to the EU under WTO rules.

A freer market environment has been proven to benefit those farms that are most willing to adapt. Since subsidies there ended in 1984, farming in New Zealand has seen output and net incomes rise—total lambs produced and lamb carcass weight have increased; the cost of milk production is among the lowest in the world; and horticultural exports have expanded by a factor of five in value and also in terms of diversity of products and destination (10 countries in 1980, 102 in 2002). Although it is a larger market than New Zealand, in 2012 the UK had its largest food deficit in horticultural goods (£7.4 billion) and has prompted the Secretary of State for Agriculture to urge British consumers to buy more British fruit and vegetables (James Kirkup in Daily Telegraph, 2014).

According to New Zealand government statistics, when subsidies were removed farmers diversified, improved efficiency and sometimes subdivided the land to make lifestyle blocks (hobby farms). Furthermore, as a result of a more efficient style of production, FAOSTAT figures show that the net yield of agricultural production doubled from 1982 to 2012 (FAOSTAT).

Figure 2: Total Factor Productivity Before and After the Reforms



Source: New Zealand Ministry of Agriculture and Forestry

The environment was better protected and family farms still make up the majority of farms in New Zealand. Indeed, if population growth is deemed an indication of success, following the New Zealand example would not put the UK farmers at immediate risk: in rural population increased by 4.6% between 1981 and 1986 (New Zealand Government, 2001).

Indeed, Kendall's argument concedes that even if the remaining EU member states wanted to increase their own internal market share at the expense of the UK, WTO rules would prohibit import restrictions solely on the grounds of the production or processing method (restrictions are only allowed on the grounds that a product is objectively different and harmful) (Kendall in Regents University, 2013). This means that there is little chance of British products being refused entry into the Single Market once the UK is outside the EU and. If a situation were to happen such as the BSE scare in the UK in the 1990s, decision making authority would revert to the WTO, not the EU. Nonetheless, as Kendall points out, outside the EU there will still need to be national safeguards on food quality. This can be done by the current bodies that are set up to monitor this and, with oversight from Parliament, can display a greater level of transparency than that seen during the recent horsemeat scandal.

Changes to the Common Agricultural Policy that were intended to make the system "fairer for farmers" (Carr et al. 2013) have in fact led to a requirement for farmers to have to prove that they are, in fact, farmers through an active farmer test. This licensing practice, which can disincentivise smaller producers from farming, is quite astounding at a time when the UK government is trying to boost UK production.

On exiting the EU, the UK could also expect to see a higher rate of smaller farms. Although that may not have a substantial effect on production volumes, given the size of the market place, it may help to lower costs for the consumer for locally-grown produce for those who place a premium on that consideration.

Like New Zealand farmers did with the branding of New Zealand butter and lamb, UK can secure a premium with British Beef and other food stuffs that are notable globally for their quality. In doing so, UK producers of certain goods could benefit from increased volumes and price premiums to reflect their renewed reputation.

Fears that the UK farming industry could not stand without government subsidy are misplaced. Without EU subsidies the UK farming market could become much more adaptive and reactive to market changes.

Costs and Benefits

The result of removing subsidies would initially benefit the UK economy by around £10 billion per year through the removal of payment of CAP subsidies and other costs as outlined in Rotherham (2010). However, over time further benefits would accrue to not just the consumer, but also the farmer as increased efficiency and competition would generate - through the increasingly productive use of the hand – further savings. These savings would be difficult to estimate, given what choices farmers could make; however, if the experience in New Zealand would be replicated, farmers would be able to survive (and thrive) with higher yields and profits whilst consumers would benefit.

Adjustments, like in many other industries, would have to be made. However, opportunities not just for the consumer but also for the farmer are present: outside the EU and within a model of reduced subsidies, farmers would need to adapt to a more competitive marketplace that would quickly diversify. Added to this, there would be further opportunities for farmers to brand their products and connect with their consumers – increasing brand loyalty and long-term growth opportunities. Taking New Zealand as an example, there will be opportunities to be increasingly export led and, given not just domestic but also international demand, food made in the UK could become a globally recognised symbol for excellence.

We therefore regard the benefits to the UK economy as medium in the short run and high in the medium to long run.

FDI and transitional arrangements for the automotive trade

On invoking Article 50, the British government will have to calm the nerves of international investors. In certain industries this should not be a challenge. As Professor Minford points out in “Setting business free: into the global economy”, the UK currently has a number of competitive advantages when it comes to finance, which can be maximised through leaving the EU and its regulatory environment. Nonetheless, other economic sectors could potentially suffer due to the changes in market conditions. In 2013, the Japanese government submitted evidence to the UK Government’s Balance of Competence Review that stated:

> More than 1,300 Japanese companies have invested in the UK, as part of the Single Market of the EU, and have created 130,000 jobs, more than anywhere else in Europe. This fact demonstrates that the advantage of the UK as a gateway to the European market has attracted Japanese investment. The Government of Japan expects the UK to maintain this favourable role. (Government of Japan, 2013)

The jobs in question here are those created by companies such as Honda, Nissan, and Toyota, which base their operations in specific areas of the UK, where they account for high levels of the local employment (Marsh 2013). The fears these companies have expressed are two-fold:

1) Continued access to the single market for their products; and

2) Potential disruption of their supply chains.

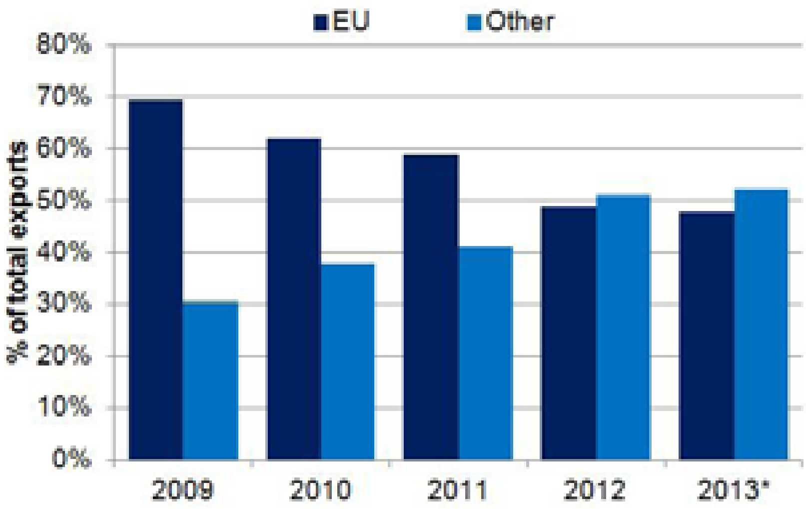
Both could have repercussions on these companies’ ability to sell within the European Union and thus help safeguard jobs. However, this fear is based on the assumption that jobs can only be safeguarded through membership in the EU (Congdon, 2013). Car manufacturers have relocated staff and operations—even with the aid of EU finance—to areas outside the EU because of more suitable environments elsewhere. This illustrates the global nature of car manufacturing and the desire for car companies to find the best business environment. For example, Ford's relocation to Turkey allowed it to take advantage of lower production costs and access to the Single Market, thanks to Turkey's position within the EU's Customs Union.

Proposals to solve the problem of leaving the EU but retaining the UK's status within the Customs Union have been proposed by Business for Britain. It seems appealing on face-value, given the benefits of Single Market access. However, the cumulative detrimental effects of the Customs Union in terms of other areas outweigh the benefits. Indeed, as shown by both Milne (2012) and Minford (2013), the Customs Union adds extra costs onto market prices in the UK. Indeed, as Professor Minford estimates, the total costs of the Customs Union and other mechanisms that seek protection of manufacturing comes to between 2.5-3% of UK GDP per year. This amounts to between £40-£50 billion in 2012 and shows that, as automotive exports to the EU were roughly £12 billion in 2012 (own calculations from SMMT 2012 membership of the Customs Union for this purpose would be to the detriment of a wider benefit to prices elsewhere.

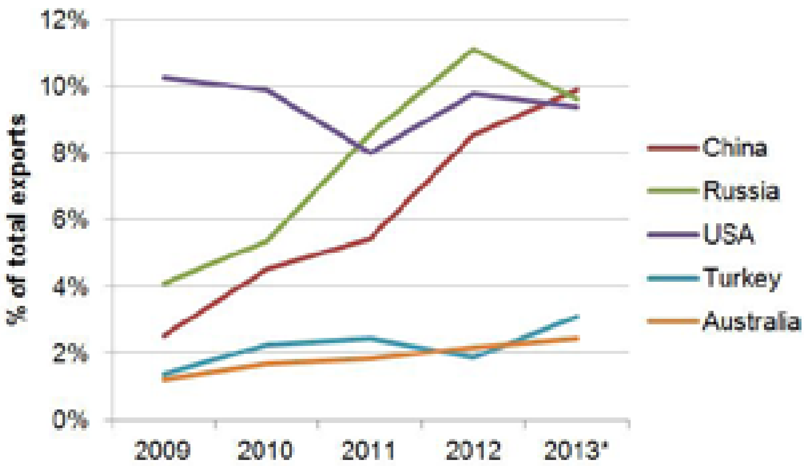
There are fears that, placed outside the EU, barriers will be placed on car exports from the UK to the EU. This would, the argument goes, make the UK less attractive for car manufacturers. Economists such as Minford et al (2005), Milne (2010) and Lea & Binley (2012) have referred to this as a result of the "WTO option" but it has, principally through the work of Iain Milne, been demonstrated as highly unlikely.

Milne's research shows that car manufacturers in the EU were more dependent on car exports to the UK than visa-versa. Although UK car exports to the EU accounted for 661,043 units in 2011, the corresponding flow of cars into the UK from EU countries was over two and half times that at 1,654, 511 (Milne, 2013, 4). Moreover, his research found that, unlike the UK's car market, many of the manufacturers were owned by companies based within their respective EU member states (see Milne & Hamill (2012)).

Cars produced in Nissan's Sunderland based plant were being sold in Australia, as Milne points out. Given the move away from the European market (a fall in exports as illustrated in graphs 1 and 2), UK manufacturers could continue to sell their products elsewhere profitably. Indeed, in 2010, UK exports of cars outside the EU were already worth more—£9.5 billion—than UK exports to EU-26—£7.8 billion (Milne, 2013, 4). This trend is accelerating as demand for car registrations shrinks in the EU and rises elsewhere in the world.



UK Car Exports to EU and other destinations 2009-13 (*2013 is Q1-3 only)



Top five non-EU car export destinations 2009-13 (*2013 is Q1-3 only) (from SMMT, 2014)

However, on exiting the EU, the UK could find that car manufacturers decide that they desire short-term increases to their market share in Europe to price out UK manufacturers—which, in this scenario, would have to pay a 10% premium due to current world tariffs. This scenario is unlikely, given that a concentration on local markets could create opportunities for manufacturers based elsewhere, including the UK, to capitalise on global demand for autos produced outside the EU. Nonetheless, Brussels could hinder British car exports into the EU through increasingly stringent regulatory standards, such as, for example, limits on carbon emissions, which would price many motor vehicles out of the market. However, as demonstrated by its trading relationship with the UK, Germany maintains an export-orientated relationship within this industry. Indeed, despite a recent fall in export growth, Germany exported 3.7 times as many cars to the UK (651,000) than it imported and in 2011 increased its exports by almost half a million (474,000) more cars to the UK (Milne 2013).

Moreover, the EU would have to contend with imports from other countries being affected in the same way, and possible cases at the WTO over the imposition of targets. In this instance, the UK would join others in lobbying against protectionist measures as it would have a seat at this global trade body.

It is possible that the government of the day might still be nervous at the prospect of losing much of the automotive industry. Therefore, it might consider a half-way house of expanding enterprise zones, which we discuss in Annex 1. However, we do not recommend this option, only note that it is available should the government decide to use it.

Rules of Origin

Rules of Origin, which are allowed by the WTO, give regional bodies such as the EU the ability to place restrictions on selling goods if the materials have not been sourced within a defined area. The concern for some car companies, including Nissan, is that if the UK left the EU, then the contractual arrangements with suppliers within the EU would be broken and therefore place the supply chain under potential stress.

A solution for this, proposed by Professor Minford (2013), is for the UK to adopt a non-barrier policy, named the “importance of being unimportant”, which would allow for goods to come into the UK without any import taxes. This would be coupled with a commitment for the UK government to respect the contract and lend short-term subsidies to firms that are unable maintain their previous arrangements. The costs would not be substantial, as few suppliers will have an issue with their contracts. As the UK supply chain has the potential to provide more than 80 per cent of all component types required for local vehicle assembly (SMMT 2013), and the final unit price of the average price of a car exported to the EU in 2011 was £12, 907, or £661 million in total, the price adjustment could be less than £66 million (assuming that half the companies have legal trouble with suppliers based in the EU).

There may be a slight detrimental effect for UK automakers from the fact that other car companies, including BMW, use British made engines for their cars. However, given the UK's global export record, along with the reduction in prices due to less regulation from the EU—estimated to be at least £9 billion by Minford (although, as noted above, we regard this figure as conservative)—the UK could become a beacon for investment within the car industry. Given that three of every four cars made in the UK is exported (SMMT, 2013), and the market for British made cars is growing abroad, car companies will still be in a strong position in the global export market—especially when one considers the added net benefit in cost of being outside the EU's regulatory tangle.

As for the Japanese government's concern of access to the Single Market, under WTO rules, the EU cannot bar manufactured imports from companies based elsewhere, except through the use of Rules of Origin. However, given the UK's trade deficit in cars with EU nations—especially Germany—a 10 percent tariff is unlikely. To calm investors', manufacturers', and workers' nerves in the short-term, the UK government could choose either extend enterprise zones to new areas or offer vouchers for retraining. These do not need to be exhaustive, however, as the UK car market is export-driven and has markets that are increasingly outside the European Union.

By not implementing new trade barriers, the UK is creating an incentive to mitigate the effects of Rules of Origin and other protectionist measures.

These tactics will ensure access to the EU's market and a competitive economy for manufacturers to thrive in within the UK. It will help the UK to become price competitive but also retain a significant presence within this market.

Costs and Benefits

Utilising the recommendation herein of not implementing any trade barriers as an incentive to mitigate the Rules of Origin question would ensure that there is no incentive to ban UK exports to the EU and, even in the worst case scenario whereby the EU blocks car exports from the UK, this could open up compensation routes that could cost the UK taxpayer less than 10 percent of the total market value of UK car exports to the EU. In doing so, however, the UK could benefit from cheaper goods for market in the rest of the world that currently stands at 52 per cent of UK car exports (SMMT, 2014). This saving, according to Minford, could be initially 3 per cent with competition driving down the costs even further. Accordingly, we put the cost estimate of adopting this policy as medium in the short run, and low in the medium to long run.

Extradition

When the UK makes plans to leave the European Union it will also need to address a number criminal and justice measures, including extradition treaties and membership in the European Court of Human Rights (ECHR).

The UK will initially face questions over the continuation of certain legal procedures, such as the European Arrest Warrant (EAW), which allows the extradition of individuals across the European Union. During 2005-2011, 78,785 EAWs issued were received by states, of which 19,841 resulted in arrest and surrender to the issuing state. Of these, the UK received 32,079 requests, issued 1,345, surrendered 3,775, and had 639 individuals surrender to the UK (Carrera, Guild and Hernanz, 2013). This means the UK received 25 per cent of the total amount of the EAWs issued.

Non-member states are able to form fully functioning arrangements with the EU whilst being outside the Union. The EU has extradition agreements with a various non-members, including Switzerland, the USA, and Australia. The EU treaties with Switzerland, Norway, Iceland, South Africa, and other countries were finalized under the European Convention on Extradition, within the Council of Europe, which was signed before the European Union established the EAW.

The Convention gives states much more authority in processing an extradition request and determining if the charges in the request meet with their standards of law. Under the Convention, “a Contracting Party shall have the right to refuse extradition of its nationals”. It allows for much more discretion, and is what the UK operated under with other EU member states before the European Arrest Warrant.

The implementation of the Convention could result in a drop in the amount of extradition requests as the 32 exceptions to the “dual criminality” test would not apply. Therefore, in these cases, the UK could refuse extradition because it did not recognise certain acts as crimes. This could ensure a saving to the court system in the UK: the estimated cost of each EAW case is £20,170 (€25,000) (European Parliament, 2011). There is currently no provision in the EAW for the costs to be passed to the country demanding the extradition, which means that the burden of extradition is particularly acute for the UK.

In 2010 the costs incurred through the implementation of the EAW to the UK were estimated at £27 million. This included £2 million a year on extradition cases by the Crown Prosecution Service, with each case costing on average £3,200 in legal aid, £400 an hour for court time, and suspects being held in prison at a cost of £700 a week (Barrett in Daily Telegraph, 2012). The implementation of the Convention could transfer some of the cost to the other party state and therefore reduce the burden on the taxpayer.

However, if for some reason the EU did not allow for a return to the status quo ante, the UK could negotiate its own agreement with the EU along the lines of the EU's agreements with Australia and the United States of America.

Australia performs extraditions pursuant to its Extradition Act of 1988 in which the extradition relationship between Australia and other countries is subdivided into five groupings:

1. Countries with which Australia has bilateral extradition treaties;

2. Countries that are party to multilateral treaties to which Australia is also party;

3. Countries in the London Scheme for Extradition within the Commonwealth;

4. Countries that had treaties with the UK and which treaties were inherited by Australia; and

5. Countries with which it has no treaty, but instead has regulations in place.

For all of these categories, a magistrate must determine whether a person is eligible for surrender. Exceptions apply if the person is sought for a military offence, the extradition request is politically motivated, or the person could face prejudice at trial or double jeopardy. A similar framework would give the UK courts a greater ability to define the merits of extradition.

A key difference between the Australian arrangement and the EAW is that the Australian extradition process allows a judge to oversee the evidence and see whether there is a *prima facie* case to be answered. This currently does not apply with the EAW, which could potentially pose a problem to EU nations seeking a speedy surrender, and is deeply troubling from a civil liberties perspective.

The US-UK extradition treaty does not require UK courts to make a *prima facie* assessment prior to extradition. This has been rightly criticized because of high-profile cases, such as that of alleged hacker Gary McKinnon. Nevertheless, if the UK could replicate much of what the United States has done with its relationship with the EU, then there would be a greater level of decision making within the UK before surrender takes place. The US has a base Treaty with the EU institutions, but specific treaties with the various member states. This gives the US the ability to meet minimum standards, depending on the legal protections its citizens are liable to encounter in each country, and a greater ability to define the terms of any surrender. This was recently seen in the Amanda Knox case where, despite a guilty verdict in the retrial in Italy, the United States is unlikely to surrender Knox on the basis that her extradition would contravene its treaty with Italy (in addition to possibly placing her in double jeopardy).

As the UK is a “net-extraditer”, under the current terms of the EAW, it seems that it would be in the interests of many other European nations to complete an extradition treaty in good faith and on good terms. Indeed, as illustrated within Jonathan Lindsell’s paper “Why We Should Opt-Out” (Lindsell, 2013), many of the standards placed on signatories to the EAW and in other justice measures are already met through standards already exhibited in national law. This strongly suggests that, unless there is a significant change in domestic legislation, many of the protocols will be manageable and a bilateral UK-EU extradition treaty would be feasible.

Currently, the UK is a member of the ECHR through its membership in the Council of Europe. It means that, if the UK wishes to leave the EU it can, and still remain a member of the ECHR. However, with the experience of both Adu Hamza and Abu Qatada’s cases receiving delays because of ECHR rules, the current Secretary of State, Theresa May, has expressed a desire for the UK to remove itself from the ECHR. The basis of this argument is clear: Contrary to the wishes of the UK courts and Government, deportations have been delayed due to the ECHR and judgments made by the European Court. Indeed, in the case of Abu Qatada, it has been estimated to have cost the UK taxpayer £1.7 million in both court challenges and the length of time Mr. Qatada remained in the UK.

The UK's membership to the ECHR is estimated to cost the UK £2.1 billion, with £1.8 billion one off costs (Rotherham, 2010). However, cases like Abu Qatada illustrate that some cases has increased up the overall cost to the taxpayer considerably. Therefore, HMG should consider leaving the ECHR and the European Court of Human Rights (ECtHR) and continue to establish – like those outside these current structures – laws that protect their own citizens through its own democratic process. In doing so, it can ensure financial benefits to the public alongside the extradition of individuals that pose a threat to UK security and save from the fees against the UK for being a member of the Convention. .

On top of the costs incurred through the ECHR, the UK would also save from not being part of the ECtHR. The cost to the UK taxpayer is estimated at £7.1 billion a year (ibid), with increasing delays due to the increase in caseload (Mendick in the Daily Telegraph, 2013). Given that in the previous five years (2008-2013) there have been over 100 UK cases brought to the ECtHR compared to only five cases in the first five years of the UK's membership to the Court (Miller and Gill, 2009), some of the increased caseload is likely to be transferred to the UK. Nonetheless, the UK Parliament may choose not to adhere to some of the articles within the Convention which may result in the number of UK cases being heard decreasing and the overall costs to the taxpayer reducing.

This means that the UK can: (a): opt-out of the current agreements and replace them, if it wishes, with similar agreement that allow it much more flexibility to define the merits of a case before surrender; (b) can decrease costs through clauses that ensure that dual-criminality is adhered to; (c) in opting out of the ECHR and the ECtHR, the UK will gain increased powers to deport foreign nationals quicker and at less cost to the taxpayer. Indeed, with minor adjustments to extradition treaties, the UK could be able to decrease the burden on both the taxpayer and the court system.

Costs and Benefits

We consider the benefits to the UK of these policies as medium, or high if we leave the ECHR and ECtHR. Transitional costs are likely to be low to negligible.

Energy, Environment, and Transport

These three policy areas have become inextricably linked in recent years as global warming alarmism has largely driven the debate over energy and transport issues and essentially taken over policy making for them at both the EU and national level. That latter inclusion is important to bear in mind as there is an argument that the UK's national policy would not be much different from the EU policies on these issues. However, in freeing itself from the EU straitjacket the UK will have some leeway in a number of areas to introduce more flexibility.

Energy[9]

Current UK energy policy is in large part driven by the Emissions Trading Scheme, which has collapsed repeatedly since the onset of the financial crisis in 2008. As UK national energy policy was dependent on a high carbon price to finance the move to a renewable energy economy, this has proven extremely problematic. Leaving the EU provides an opportunity to leave the ETS and EU-wide renewable energy targets and rethink the longer-term strategy.

Rather than switch over to an expensive and wasteful wind-powered economy, the UK should look to the US and recognize the reasons why horizontal fracturing ("fracking") of oil and gas has revolutionized the US energy supply market without any government intervention in its favour and led to a significant reduction in carbon emissions to boot.

9 All calculations in energy section are authors' own using data from US Energy Information Administration and other sources

Fracking's success is largely based on subsurface property rights, which incentivize both profit—through the exploitation of the right—and conservation—to ensure the right does not become worthless through depletion. In the US, landowners retain property rights to subsurface oil, gas, and other minerals, so any energy company that wants to exploit those resources has to negotiate with the owner of the property right.

The result has been the widespread adoption of lease agreements between energy companies and the property owners (where states have not intervened on largely specious environmental grounds). In consequence, property owners have received royalty payments, providing a steady income stream where none previously existed, in some of the poorest areas of the country. Local and state revenues have received a considerable boost in tax payments. Previously-depressed areas have seen an influx of high-paying jobs. Local industries have benefited as a result, multiplying the effect.

Meanwhile, the price of energy has dropped sharply, offsetting increased costs in other industries. The US has turned from a $100 billion annual importer of natural gas into an exporter. The UK should follow the USA's lead and not only permit fracking, but alter the provisions of the Petroleum Act 1998 that vest the subsurface rights to oil and gas in the Crown. This was not the case before the Petroleum Act 1928 and should therefore be viewed as an usurpation of property rights. Allowing property owners to enjoy full rights to the oil and gas beneath their land will spur development of the industry and secure an income stream for the Treasury from taxation, offsetting the costs associated with losing the Crown rights.

The UK is due to shut down over 7 gigawatts capacity from coal-fired power plants by 2016 (Regents University 2013). Replacing these quickly with lower-emission natural gas plants will enable Britain to reduce carbon emissions considerably while keeping the lights on. A similar story holds for the ageing fleet of nuclear reactors.

To date, the UK—along with Poland—has successfully resisted EU directives aimed at reducing fracking's use. This may not prove to be the case forever. Therefore, for the UK to follow such a strategy it will need to leave the EU eventually. According to the Bowland Shale Gas Study the UK has around 1300 trillion cubic feet (tcf) of shale gas reserves (and possibly up to 2200 tcf), much of it in the north of England and Northern Ireland, areas that could well use the benefits of a new fracking industry

(Bowland 2013). In 2011, the entire US industry produced 8 tcf, meaning that UK reserves could produce that amount for over 100 years, solving the energy problem for the near future. Current US prices are around $4 per thousand cubic feet, valuing the UK's reserves at an astonishing $5 trillion.

At a household level, the US currently benefits to the tune of $1,200 per household annually from the results of fracking. A UK industry would probably not provide the same level of benefits, but they are still likely to be substantial.

Other EU energy regulations such as the Large Combustion Plants Directive can be dealt with through the Royal Commission on Regulatory Reduction described elsewhere.

We therefore view the benefits of withdrawing from the EU and adopting a shale gas energy strategy as high in the medium to long run.

Environment

Most of the environmental regulations imposed by the EU, such as the Environmental Liability Directive, the Water Framework Directive, and the Ambient Air Quality directive can be dealt with in the scope of work of the Royal Commission on Regulatory Reduction.

We recommend dealing separately with the EU directive on Registration, Evaluation, Authorisation and Restriction of Chemicals, known as REACH. This regulation is the most wide-ranging and restrictive in the world on chemical innovation and use. As the UK is a nation that has a long and proud history of chemical development, it should seriously consider abolishing this regulation soon after exit from the EU. It requires chemical companies to *prove that their products are safe*, rather than requiring *governments to prove they are harmful*. A 2006 study by Belgium's Institut Hayek found that its "benefits are highly dubious and the costs to economic freedom and development—even if mitigated by reducing REACH's scope—are likely to remain substantial." (Logomasini 2006)

Furthermore, in order to prove that chemicals that have long been in use are safe, chemical companies have been required to produce test results, the vast majority of which have been conducted on animals. According to the European Coalition to End Animal Experiments (ECEAE), “REACH will require 13 million to 54 million animals for tests conducted between 2009 and 2018, and REACH testing will continue beyond 2018” (Logomasini 2013). Animal testing is necessary in certain conditions, but a huge number of tests required by REACH are unnecessary, as the chemicals being tested have been in use for years without demonstrable harm.

In order to spur innovation in the chemicals industry, to provide competitive advantage for the UK industry over its EU competitors, and to promote animal welfare, a separate bill should be introduced into Parliament after the Brexit Bill to repeal the effects of REACH and to return industry regulation to its pre-2006 levels. Unfortunately, products that would be exported to the EU would still require REACH certification, but the spur to innovation generated by the lifting of REACH requirements should still provide considerable benefits for the UK industry in the global market.

It is difficult to quantify the effects of abolishing REACH requirements, but we suspect they are low-medium in the medium to long term.

Transport

In large part, the regulations governing international transport, with respect to road, rail, and sea travel at least are governed not as much by the EU as by international treaty. As former Department of Transport undersecretary Handley Stevens has noted, “Since 1985 the EU has developed extensive common transport policies. Where these do little more than implement in EU law the terms of international agreements and conventions which the UK has signed as an independent sovereign state (e.g. in road and sea transport), the costs arising from any renegotiation or even withdrawal from the EU would be minimal. The consequences for rail transport would be particularly small, since EU policy is less developed, and there are so few direct rail links” (Stevens in Regents University 2013). Therefore, these regulations can be dealt with by the Royal Commission on Regulatory Reduction.

Air travel is another matter. Internal European air travel is completely governed by EU regulation, and the system of bilateral air travel rights with non-EU countries is being replaced by a series of agreements with the EU, the most important of which is with the USA. In recognition of the difficulty involved in extricating the UK from these arrangements, we propose that the UK should position itself as a world leader in the "open skies" movement, promoting a global initiative to liberalise access to airspace. As Fred Smith and Braden Cox of the Competitive Enterprise Institute have noted:

> A global [airline] industry would work better with a globally minded set of rules that would allow airlines from one country (or investors of any sort) to establish airlines in another country (the right of establishment) and to operate domestic services in the territory of another country (cabotage). (Smith and Cox 2008)

By meeting all ICAO standards the UK as an "open skies" leader would not face any issues with non-standard safety or air traffic communications requirements.

It is likely that disruption to the airline industry would be one of the biggest costs to the UK as a result of withdrawal from the EU should the EU not prove co-operative. In particular, airlines like EasyJet might be so badly hit that they might consider relocation. It would therefore be incumbent on the UK in its Article 50 negotiations to prioritise the continuation of current arrangements long enough for acceptable UK-EU and UK-US air travel deals to be ironed out. The prominence of Heathrow as "the world's favourite airport" and the attraction to foreign airlines of not needing to pay ETS-related fees (assuming the UK does indeed repudiate the ETS as discussed above) should be strong arguments in favour of co-operation between the UK and EU.

Nevertheless, it is possible that the air transport industry might have to bear significant costs as a result of a British withdrawal. It is difficult to quantify these at this stage.

Conclusion

We therefore conclude that in almost every area we have examined the benefit: cost trade-off is positive. This table summarizes our conclusions.

Issue Area	**Costs**	**Benefits**
Regulatory Reduction	Low	High
Fisheries and Territorial Waters	Low	Low-Medium
Immigration: Points-Based System	Medium-High	Low
Immigration: Tariff System	Medium-High	High
Agriculture	Low	Medium-High
Trade/FDI	Medium	Medium
Extradition	Low	Medium-High
Energy	Low	High
Environment	Low	Low-Medium
Transport	High	Low

We can therefore see that costs will be high only in the event of retaliatory action on immigration by EU countries, and in the event of major disruption to aviation agreements. These should therefore be a major focus of the Article 50 negotiations.

Overall, the UK will benefit substantially from a reduction in regulation, a better fisheries management system, a market-based immigration system, a free market in agriculture, a globally-focused free trade policy, control over extradition, and a shale gas-based energy policy.

By following this road map after leaving the EU, the UK will have set itself on the road to becoming once again a global economic powerhouse.

Annex 1: Enterprise Zones

In the meantime, in order to stabilise the environment and ensure stability, the UK government could extend the terms and conditions (as well as the areas in some cases) of the Regional Enterprise Zones (EZ) that it started to offer in 2011. There are currently 25 zones in the UK, having been extended from the original 11. The enterprise zones benefited from a 100% business rate discount worth up to £275,000 over a five year period; a period of at least 25 years will be retained and shared by the local authorities in the LEP area to support their economic priorities; Government and local authority help to develop radically simplified planning approaches in the zone; Government support to ensure superfast broadband is rolled out in the zone (HM Treasury, 2013).

As it currently stands these zones are due to cost the UK taxpayer £95 million over the period 2012-3 to 2016-17 (HMRC Budget 2012 in Ward, 2012) and, before any net reduction in prices has been achieved, the offer of tax breaks to the firms that stay would help. Indeed, many car companies such as Nissan have already benefited from similar schemes in the past. In doing so, this could minimise the “friction” - as termed by Professor Minford - with regards to the adjustment.

The benefit of this scheme would be to stem business uncertainty; however, further assistance could stimulate a degree of rent-seeking. To mitigate this, if offered any scheme should only offer an extension of this scheme in areas where the automobile sector is strong and tailor it to companies that are already involved in the industry. This wouldn’t allow “new entrants” to be included and make it clear that this is only a scheme to assist established operating businesses in the sector.

As the UK already accounts for over 719,000 people employed across manufacturing, retail and aftermarket sectors with about 145,000 people directly employed in 3,200 automotive manufacturing firms (SMMT, 2013), this would be an important step. However, as such an extension could contravene EU State Aid rules (which the UK would be looking to leave in any case), some EU members might object as the negotiations proceed. An alternative would therefore to offer the money as a retraining incentive to workers in the industry. If £95 million were appropriated in this way, the tax-break equivalent would have to be limited to certain areas to give a meaningful amount to retrain. An offering of up to 76,000 people would, for example, give roughly £6,500 per person for training and allow for individuals to move into other areas[10]

10 Relocation and / or training will not apply in all cases: F1 cars for example (principally based in Oxfordshire) Is part of a global industry that does not locate in the UK because of EU membership and employs over 40,000 directly in over 3,500 businesses)

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