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Symposium Article

EU Membership, Mrs Thatcher's Reforms and Britain's Economic Decline

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This paper presents a dissonant view on post-war British economic performance. A defining feature is the decline of the UK relative to the six founding members of the European Union after 1945. However, this relative decline stopped. The conventional view is that a turning point occurs in the mid-1980s when Mrs Thatcher implements far-reaching structural reforms. This paper asks whether econometric evidence supports this conventional view and finds it does not. We then examine an alternative hypothesis: this turning point occurs around 1970 when the UK joined the European Community. We find strong econometric support for this view. The intuition we offer is that EU membership signalled the prominence of business groups that chose to compete at the high-tech end of the common European market against those business groups that preferred comparative advantage-driven Commonwealth markets (mostly former colonies). Those pro-Europe business groups later become the constituency that provides support for Mrs Thatcher's reforms. Without this vital support, we argue Mrs Thatcher's structural reforms would not have been nearly as effective, if proposed and implemented at all.

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INTRODUCTION

The former British Prime Minister David Cameron was determined to change the relationship between the United Kingdom (UK) and the European Union (EU). His Conservative Party's outright and largely unexpected victory in the May 2015 general election meant that one key manifesto pledge would have to be implemented. The UK would embark on a renegotiation of the terms of its EU membership and these new terms would then be submitted to a popular vote, a "remain or leave" referendum. He also promised that voting would take place before the end of 2017 (Copsey and Haughton, 2014). This renegotiation concluded in February 2016 with an agreed "new settlement", and the referendum was set for June 23, 2016. The Leave campaign won with about 52% of the votes. A new Prime Minister, Theresa May, took office twenty days later, pledging to make the UK the first country ever to leave the EU.

Why should economists pay attention to the British exit from the EU ("Brexit")? Brexit is one of the multiple crises currently affecting the largest experiment of voluntary economic integration in human history. The European integration project faces a financial crisis, a debt crisis, an economic crisis, a Greek crisis, a populism crisis, a productivity crisis, a terrorism crisis, a refugee crisis and a democratic deficit crisis, to name a few. But the Brexit crisis is an intrinsically different type of crisis. Brexit raises fundamental questions about the existence of the integration project. This was a one-way process towards a well-defined goal, but that "new settlement" had already changed the notion of ever closer union.

Brexit is different because it asks questions about the value of being in the union, about the value of membership, about the value of being integrated and interconnected in the world, about the dynamics and distribution of the benefits and costs of trying to do so and about the type of integration that can sustain (and hopefully increase) the substantial benefits we have seen since the start of the project in the 1950s (Eichengreen, 2008). These are existential questions, and they must be answered if the EU is to be after this crisis.

In this paper, we try to answer two main questions: did EU membership significantly affect UK economic performance? And if so, how? We believe these are important questions. If EU membership turns out to have no discernible economic effect, the case for membership would be weaker. However, because of the chequered history of the UK–EU relation, if one can show that European integration played a role there, it is likely it played a substantial role everywhere else.



We first briefly discuss the historical context in which the European economic integration project took-off to assess to what extent one can claim that delayed membership was relatively costly to the UK and whether the UK joining the EU was ultimately beneficial.

We argue that a fundamental yet relatively unappreciated feature of the relationship between Britain and the European Union is a turning point. The ratio of UK's per capita GDP to the EU founding members' declines steadily from 1945 until around 1970 but has been relatively stable since. Such prominent structural break (which, to the best of our knowledge, has not been previously detected and analysed) suggests substantial benefits from EU membership especially considering that, by sponsoring an overpowered integration model, Britain joined too late, at a bad moment in time and at an avoidably larger cost.

The conventional wisdom is that this turning point occurs in the mid-1980s when Mrs Thatcher implements her package of far-reaching structural reforms (Walters, 1986; Minford, 2015). This view retains currency despite economists' detailed scrutiny (Bean and Symons, 1989; Broadberry and Wagner, 1996; Layard and Nickell, 1989).¹ In this paper, we ask whether econometric evidence is supportive of such view. We find it is not. We examine an alternative hypothesis: the turning point occurs when the UK joined the European Union. Structural break tests provide substantial econometric support for this alternative view.

If EU membership has made a difference, the next question is how? To address this issue, we discuss the key potential mechanisms through which benefits from membership took root (chiefly finance, foreign direct investment and trade). The chosen mode of integration (deep instead of shallow) played a key role. While international trade may have been the most important driver until the Single Market in the early 1990s, foreign investment may well have taken its place since.

Is it possible to reconcile or relate Mrs Thatcher's reforms and EU membership in terms of understanding the great British reversal? We believe these are somewhat complementary explanations. The intuition we provide is that EU accession signals the prominence of business groups that wanted to

¹Card and Freeman note that "For much of the nineteenth and twentieth centuries, the British economy, which pioneered the Industrial Revolution, had a disappointing growth record, falling markedly from the top ranks in the league economic tables. In 1979, the United Kingdom was twelfth in per capita gross domestic product (GDP) among advanced Organization for Economic Cooperation and Development (OECD) member countries, well below Germany, France, and other European Union (EU) economies. In response to this weak economic performance, successive U.K. governments adopted policies designed to move the economy back to "premiere league" status. Beginning with Margaret Thatcher and continuing under John Major and Tony Blair, these reforms sought to increase the efficacy of labor and product markets and limit government and institutional involvement in economic decision making" (2004, p. 9).



compete at the high-tech end of the common European market against those business groups that preferred the comparative advantage-driven mostly former colonies (Commonwealth) markets. These pro-Europe business groups later become the constituency that supported Mrs Thatcher's reforms. Without such support, we argue those reforms would not have been nearly as effective.

This paper is organized as follows. Section "[Why Did Britain Join the EU?](#)" discusses the British relative economic decline and investigates what may have been the main causes of its reversal. It presents structural breaks econometric evidence that favours EU membership instead of the Mrs Thatcher's structural reforms explanation. In Section "[How and Why Did Britain Benefit from EU Integration?](#)", we examine various channels through which EU membership may have benefitted the UK economy (chiefly finance, FDI and trade). Section "[A Political Economy Explanation](#)" presents a political economy story that links the UK's EU membership to the design, implementation and (more importantly) effectiveness of Mrs. Thatcher's reforms. Section "[Conclusions](#)" concludes.

WHY DID BRITAIN JOIN THE EU?

An examination of European economic history provides valuable insights into the costs and benefits of UK's eventual accession into the EU. One prominent area of economic history scholarship is the study of "British relative economic decline" (Bean and Crafts, 1996). Economic historians offer a careful discussion of key turning points in British economic history since the early 1800s. Yet, this long-term perspective fails to give WWII and European integration (including gains from liberalization and increased competition) due credit as important factors, albeit more contemporary, in the most recent developments in this process, particularly to what we have here called the great British reversal (a notable exception is Crafts, 2012).

UK per capita GDP was one of the few in Europe to grow during WWII. Compared to the average of the six founding nations of what would become the European Union – France, West Germany, Italy, Belgium, the Netherlands and Luxembourg (the EU6), the UK's GDP per capita was roughly 90 percent larger in 1945. Figure 1 displays per capita GDP levels in the UK and an average for the original EU6 less Luxembourg from 1850 to 2015 to highlight four important issues.² (1) The UK had a higher per capita income from 1850

²For international comparisons, the Penn World Tables (PWT) is considered the superior data source. However, it starts in 1950. Maddison and Bergeaud *et al.* (2016) data go back much further. Note that the behaviour of the UK-EU6 ratio of per capita GDPs between 1950 and 2010 is unsurprisingly similar in these two data sources and that, differently from PWT, the Maddison and Bergeaud *et al.* data sets do not include Luxembourg.



Figure 1: UK and EU Founding Members: GDP per capita from 1850 to 2015 (USD 2010 PPP; EU founding members: Belgium, France, Germany, Italy and Netherlands). Data from Bergeaud *et al.* (2016)

until about 1970. (2) The per capita GDP gap between the UK and EU founding members increased abnormally during WWI and probably even more so during WWII. (3) The reconstruction period after the WWII shock (or, in other words, the return to the pre-war steady-state path) seems to have already been largely completed by 1950. (4) However, after WWII, trend growth in the UK and EU differs in that they are no longer “parallel” (as they seem to have been until then). Using the 1945–1973 data (the last year of the WWII conflict and the year the UK joined the EU, respectively) to linearly extrapolate (forecast) GDP per capita 30 years ahead, we find per capita GDP would be have been about 18 percent lower by year 2000 in the UK vis-à-vis that in the EU founding members. This justifies the suspicion that something significant happened in the 1970s and invites a closer re-inspection of the period.

The unprecedented destruction of WWII resulted in a similarly unprecedented recovery effort, which was largely completed by 1950. The period that followed, until 1973, is commonly referred to by economic historians as the Golden Age of European Economic Growth. If reconstruction and catch-up with pre-war levels were broadly completed by 1950, other factors were at play. Temin (2003) convincingly argues that structural change (labour shifts out of agriculture) was a leading factor.

The Marshall Plan was important in the immediate post-WWII period. A requisite for Marshall Plan aid was economic coordination among recipient countries. It was clear at the outset that there were many areas of agreement but one of discord. The French favoured a customs union, the British a free



trade area. Of course, a customs union entails deeper integration, and it requires a “huge political step” (Sapir, 2011). Also worth noting is that “the United States supported the idea of a customs union in 1947, and continue to give backing to French schemes for West European regional organizations” (George, 1994, p. 18).

The UK decided not to participate in the European Coal and Steel Community (ECSC), which was a result of the proposed Schuman Plan in 1950 (Dell 1995). The ECSC created a set of institutions to coordinate and integrate coal and steel production among the participating nations (EU6): a “High Authority to monitor compliance with the terms of the agreement, a Common Assembly of parliamentarians to hold the High Authority accountable and a Community Court to adjudicate disputes between the High Authority and member states” (Eichengreen, 2008). With the EU6’s economic recovery almost completed by 1950, per capita GDP in the UK was about 28 percent above EU6 average.

By the time the Treaty of Rome was signed by the EU6 in 1957, that figure was reduced to about 15 percent. The integration efforts embodied in these agreements had successes and failures. The primary failures were the proposed political and defence unions; the expansion of the ECSC to become the European Economic Community (EEC) and the creation of a European atomic energy community (Euratom) in the Treaty of Rome are the major successes. The UK government was not a party to either of these agreements and in 1960 proposed an alternative organization, the European Free Trade Area (EFTA).

The EFTA treaty was signed in Stockholm in 1960 by Austria, Denmark, Norway, Portugal, Sweden, Switzerland and the UK.³ Yet, and revealingly, the UK began negotiations to enter the EEC in 1961. At that point the per capita GDP gap between the UK and the EU6 average had fallen to roughly 10 percent. Nonetheless, French President De Gaulle vetoed the British application after drawn out negotiations in 1963.

Around this time the UK started to realize the long-term limitations of the economic viability of Commonwealth markets. It became apparent that they were less competitive and demanding than the developed markets of Western Europe. Indeed, it became more than apparent that the EEC was economically superior to the EFTA (Aitken, 1973; Bayoumi and Eichengreen, 1997). Moreover, the decline over time was faster for the ratio of the UK to the EU6 than for either Denmark (an EFTA member) or Ireland (not an EFTA member), which were the two countries that joined the EU at the same time as

³ These were often referred to as the Outer Seven so as to contrast with the Communities’ Inner Six.



the UK in 1973. In 1964, Harold Wilson was elected prime minister in the UK and made another failed attempt to revive the Commonwealth-based economy.⁴ Subsequently, Britain reapplied for EEC membership in 1967 (Tatham, 2009). Again De Gaulle vetoes. By this time per capita GDP in the UK was only 6 percent larger than the EU6 average.

Georges Pompidou succeeded Charles De Gaulle in 1969 and immediately encouraged Britain to reapply for a third time for EEC membership (Young, 1998). Pompidou is also recognized as the creator of a system of individual contributions to the Community budget. In 1969, when the UK officially applies to join the European Community for the third time, its per capita GDP had shrunk to 2 percent smaller than the average of the EU6.

Edward Heath succeeded Wilson in 1970. He was perhaps the staunchest European federalist among all British prime ministers. When the UK joins the EEC in 1973, the EEC funding system operated by collecting revenues from levies on food imports and tariffs on industrial goods. Because the UK was more urbanized and imported more than continental Europe nations, the policy did not exactly suit British interests. Of course 1973 also opens a volatile period with the collapse of the Bretton Woods system and the first oil shock. At this point, the UK's per capita GDP had fallen to a level 7 percent smaller than the average of the EU6.

The special relationship with the USA, the Commonwealth and the belief that purely economic integration (FTA) would be superior to deeper, politico-economic alternatives, are often cited as the main reasons for the delay in British membership. Special relation or not, the US was a resolute supporter of European integration from the outset. With the independence of India, the Suez crisis and African decolonization, Commonwealth links taper (Darwin, 2011; Garavini, 2012). Applying for EC membership one year after the creation of EFTA reveals which alternative was perceived as superior.

For the majority of European countries, structural change as identified by Temin (2003) may well be a satisfactory explanation for Golden Age growth and catch-up with the USA and perhaps even more so than EU membership. Yet, there seems to be a different and important turning point in the trajectory of the per capita GDP ratio of Britain to the EU6. The steady decline in the ratio of the UK's per capita GDP to the average of the EU6 from 1945 to around 1970 and the relative stability of that ratio since suggest considerable benefits from

⁴ Euroscepticism was then influential in both the Conservative and Labour parties. During the 1961 parliamentary debate, Harold Wilson is famously on record as saying: "if there has to be a choice we are not entitled to sell our friends and kinsmen down the river for a problematical and marginal advantage in selling washing machines in Dusseldorf" (Gowland and Turner, 1999). Young (1998) argues that euroscepticism still resonates within the Conservative party, while for Labour it loses steam in the 1990s.



membership in the EEC/EU. Furthermore, the overpowered integration model employed by Britain suggests the UK joined the EEC too late, in a bad period of time, and at an unnecessarily high price. For these reasons, EU membership is an explanation that deserves more careful scrutiny.

We further develop this hypothesis using a standard econometric approach, namely we study whether there is evidence for structural breaks or turning points at specific points in time that are often identified as key to understand British relative economic decline. In particular, we like to see whether breaks could be detected in the run-up to EU accession as well as during the Mrs Thatcher government so as to draw comparisons between them.

Using data from the Penn World Tables, version 8, we study the GDP, GDP per capita and total factor productivity series, by looking at both the individual UK and EU6 countries series and at the ratios of UK to the average for the EU6 founding members.

We subject these data series to a whole range of structural break tests, that is to the Chow, Zivot–Andrews and Bai–Perron tests (Hansen, 2001 provides a non-technical discussion). The classic Chow framework assumes a pre-specified date for the break. The Zivot–Andrews test is able to detect multiple breaks simultaneously but still requires that the econometrician knows the exact dates of the turning points. The current and most widely used framework is that by Bai–Perron, which allows the identification of multiple structural breaks and it does not require these to be chosen a priori. It allows the estimation of multiple unknown breakpoints.

The main message from the Bai–Perron results for the ratio between the UK and the EU6 in per capita GDP between 1950 and 2011 is that at conventional levels of statistical significance these results support a main structural break around year 1969.⁵ This is the year De Gaulle resigned and consequently the year in which the UK successfully applied to join the European Community. Unsurprisingly, we obtain similar results using both the Chow and Zivot–Andrews tests. Moreover, within the Bai–Perron framework, this result also receives support from different approaches to determining the number of breaks. For instance, the “sequential” result obtains from performing tests from 1 to the maximum number until the null hypothesis cannot be rejected anymore, while another chooses the largest statistically significant number of breakpoints. Both multiple breakpoint tests indicate that there seem to be 5 breaks in the annual series of the ratio of the UK per capita GDP to the EU6 per capita GDP between 1950 and 2011. The unweighted maximized statistic indicates one single break, while the

⁵ Further details are provided in the electronic supplementary material.



weighted maximized statistic suggest at most three breakpoints. These latter statistics warn against more than three breakpoints. These results are also invariant to using original, scaled and weighted test statistics. In each of these cases, the statistics considerably exceed the critical value thus supporting the rejection of the null of no breaks. Overall, 1969 remains the main finding.

The Bai–Perron framework generates global optimizers for the breakpoints for each number of breaks (Hansen, 2001). It shows for example that if set to detect one and only one break in the per capita GDP ratio series that breakpoint would correspond to year 1969. This means that there is indeed a break in this series and it is most likely to be around year 1969 (and not around 1979 when Thatcher comes to power nor around 1983 when she starts her second term in government and actually implements her far-reaching structural reforms). If one allows only two structural breaks to be detected, the Bai–Perron test indicates that these would be 1960 and 1969, again giving little credence to conventional views that entrust 1979 or 1983 or even 1986 which is when Mrs. Thatcher big-bang financial reforms are completed (Young, 1998). Moreover, 1960 is the year in which the EFTA Stockholm treaty is signed and 1969 is when De Gaulle finally resigns and Pompidou, his successor, invites the UK to apply for EU membership for a third time, indicating that third time around France would welcome and support the UK application. Interestingly, if one allows three breaks to be detected, 1990 is identified as the third most important break (after 1969 and 1960, respectively), again not 1979 (start of Thatcher's first term) or 1983 (start of Thatcher's second term) or 1986 (big-bang reforms), which could be more naturally associated with Mrs Thatcher effects especially given that 1990 is the year Thatcher actually resigns. Keeping in mind the above caveat of not attaching too much weight to more than three detected breaks, it is only when one allows for four breakpoints that one year within her time in office appears as an important break and that is for year 1981.

These results are robust to various sensitivity checks. We analyse whether results were sensitive to the choice of different maximum number of breaks (the default value of 5 breaks is used below but we also generated results using values above and below), to different levels of statistical significance for detection of breakpoints (we here discuss the results using the conventional 5% but using 1% or 10% generates similar conclusions), to allowing the error distributions to differ across breaks (below we focus on results allowing for this but relaxing it does not change our conclusions), to the trimming parameter (the default value we used is 15% but we run results using values above and below again without generating different conclusions) and to the choice of sequential versus global set-up. We find that none of these affect our main conclusions: 1969 remains the year in which there is a key turning point.



In summary, our results provide scant support for the notion that Mrs Thatcher and her structural reforms were the main reason for the reversal in the trajectory of the British relative economic decline. Instead, focusing on the dynamics of per capita GDP they point to EU membership as a more powerful explanation.

The results discussed above for per capita GDP ratios are very much like those we obtain for GDP ratios as well as for the series for the individual countries. Yet these are imperfect measures of productivity, which is a concern given the common expectation that the effects from deep integration are mostly in productivity rather than in gross output terms (Campos *et al.*, 2014). In this light, we try to complement the analysis above by replicating it for a productivity measure.

Here we use the measure of total factor productivity (TFP) available from the Penn World Tables version 8, which is reported as a percentage of the USA TFP level. Table 1 shows eight “snapshots” between 1950 and 2014 of the level of TFP in the UK and in each of the EU6 countries with respect to the USA.

Table 1 highlights various interesting features. Chiefly among them is that although it is well established that between the end of World War II and the 1973 accession to the European Community, per capita GDP growth in the UK was faster than that in the USA but slower than in France or Germany, the figures from TFP reveal a much more nuanced picture. Productivity growth in the UK before 1970 is flat and shows practically no signs of closing the gap with the USA. Notice that this is not the case for any of the EU6 with France productivity gains before 1970 deserving special attention (Adams, 1989). Overall, the leading European economies starting from 1950 until the mid-1990s were able to close their productivity gap with respect to the USA, although it can be seen how this gap has again opened up since.

Table 1 also shows that except for Luxemburg and the UK there is a visible acceleration of relative TFP gains between 1950 and 1980. This is

Table 1: Total factor productivity (USA = 1) for UK and EU6 between 1950 and 2014

	1950	1960	1970	1980	1990	2000	2010	2014
Great Britain	0.68	0.69	0.71	0.89	0.86	0.92	0.74	0.73
France	0.51	0.68	0.87	1.07	1.02	1.01	0.94	0.95
Belgium	0.71	0.73	0.89	1.21	1.07	1.11	0.91	0.92
Germany	0.41	0.56	0.62	0.81	0.81	0.88	0.82	0.82
Italy	0.57	0.64	0.86	1.14	0.98	0.94	0.81	0.71
Netherlands	0.67	0.72	0.84	1.07	0.95	1.02	0.83	0.81
Luxembourg	0.97	0.99	1.02	1.12	1.12	1.11	0.79	0.78

Data source is PWT 8.



followed by a flattening out of the gaps, with some countries registering levels below their 1970 figures. In particular, for Germany and France the 2010 or 2014 level is clearly above that for 1970, while for Belgium it is barely above but only for these three countries these positive gains were not fully reversed between 1970 and 2010. Moreover, the least productive economy by this measure in 2010 is the UK, which for 2014 is only beaten, barely, by Italy.

Given these developments in terms of TFP and the assumption that most gains from deep integration are in productivity not in gross output terms, it would be particularly valuable to investigate whether there are also detectable turning points or structural breaks in the TFP series. Moreover, it would be useful to examine this issue focusing both on the individual countries and on the ratios between UK and EU6. The latter of course indicates how close, below or above, is the comparative performance of the UK vis-à-vis the EU6 countries.

Figure 2 displays the ratios of TFP for the three countries that joined the EU in 1973 (UK, Denmark and Ireland) to the EU6 founding members between 1950 and 2011. If one is searching for turning points, the contrast between the per capita GDP and TFP UK ratios to EU6 countries is extremely revealing. The mere existence of such structural breaks is clearer than in the case of per capita GDP. Although it seems that the turning point for productivity in Ireland occurs basically with the Single Market, that for both the UK and Denmark seem to have taken place much earlier and coinciding with when they joined the EEC in 1973.

We have subjected these TFP ratios to the exactly same Bai-Perron structural break estimation exercise as conducted above for per capita GDP.⁶ If anything, the conclusions emerging here are richer and even stronger regarding the prominence of the structural break in 1969 especially vis-à-vis the 1979, 1983 or 1986 alternatives (which represent various key moments of Thatcher's administration). If the latter are so powerful and distinctive to so many analysts, we do not believe it would be unfair to expect these tests to reveal two or more dominant breaks during her years in power. For all the data series we have examined, we find no evidence of such an outcome.

It is worth mentioning that differently from the case of per capita GDP, for TFP all of our estimates suggest the existence of five structural breaks but again with 1969 being the dominant turning point. Another similarity with the per capita GDP results is that 1960 again appears as a significant break. Once again, the results for more than three breakpoints suggest that years 1986 or 1985 also support a structural break but just as before these results are also

⁶Further details are provided in the electronic supplementary material.

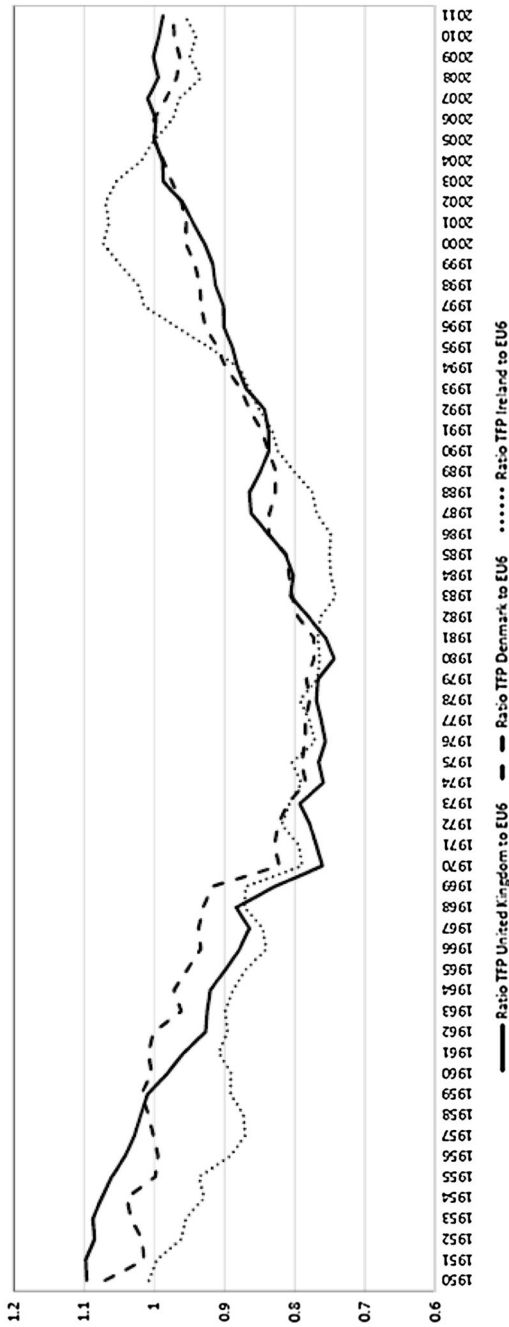


Figure 2: Total factor productivity 1950–2010: 1973 enlargement countries ratios to EU6 (2005 = 1)



dominated by 1969. We have subjected these results to the same sensitivity checks we applied to per capita GDP above.

In summary, the full set of results regarding per capita GDP and total factor productivity provide strong evidence supporting the notion that as far as the British relative economic decline is concerned the key date is 1969. This is the year when De Gaulle resigns and his resignation opens the way to the UK and other EFTA members to successfully apply for EEC membership (Tatham, 2009). If this is indeed the case, one has to ask why? How substantial are the benefits to the UK from EU membership? What are the channels or mechanisms at play? We turn to these questions next.

HOW AND WHY DID BRITAIN BENEFIT FROM EU INTEGRATION?

If membership in the EU has indeed made a substantial difference to British economic performance (perhaps even more than Mrs Thatcher's reforms), the next logical question is how. Even though the UK is not a founding member, it is one of the three largest economies in Europe, is a powerful military and diplomatic force and has a history of being an awkward partner (George, 1994). Thus, this is an important question because if one can convincingly establish how EU membership benefited the UK, it would strengthen the case that EU membership can generate significant benefits elsewhere.

Campos *et al.* (2014) estimate that the net benefits of EU membership to the UK are positive, but small until around 1986 when the Single Market was introduced. This estimate is derived from the econometric construction of a hypothetical UK that did not join the EU in 1973. Comparing the outcomes from the actual UK experience with the estimated outcomes from the synthetic control model indicates whether EU membership (which is the specified, post-1973 treatment) generates positive or negative net benefits. These results allow considering whether membership paid off, whether these returns were temporary or permanent and whether and how they changed over time.

Figure 3 shows that, when measured by per capita output, net benefits were at their maximum in the early 1990s and have remained constant since. Conversely, productivity benefits (GDP per worker) increased continually on an annual basis over the same time period. The international evidence on productivity suggests an upward trend break for the USA in the mid-1990s and, at around the same time, a downward break for the euro area (Bergeaud *et al.*, 2016).

Table 2 shows the averages of these estimated benefits for the whole period after accession, as well as for its first 5 and 10 years. For comparison purposes, it is advisable to focus on the latter. The results summarized in

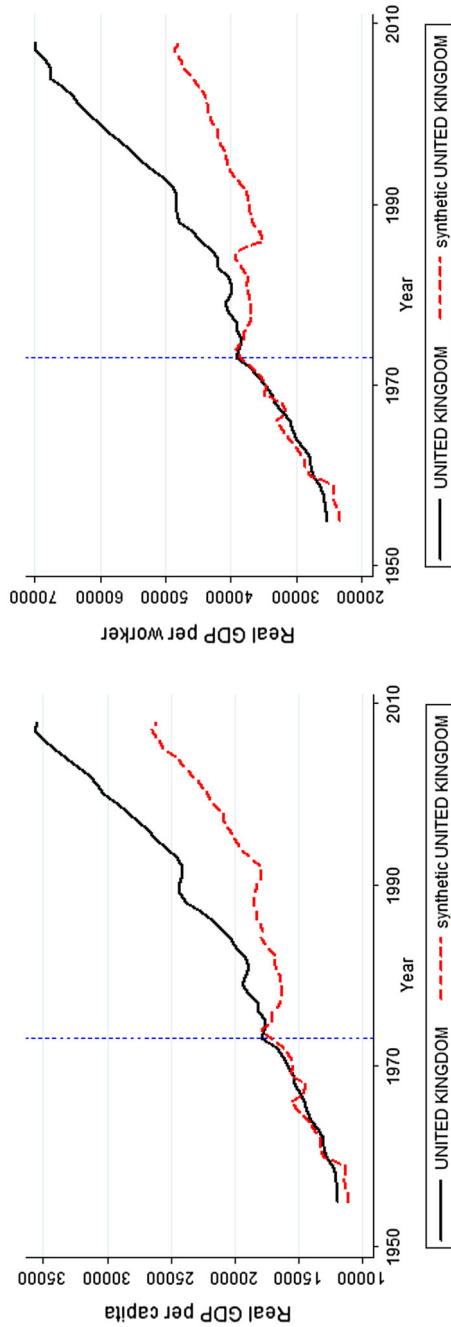


Figure 3: UK net benefits from EU membership: per capita GDP and labour productivity. Source: Campos *et al.* (2014)



Table 2: Average effects of EU membership

	All post-treatment	10 years after treatment	5 years after treatment
United Kingdom	23.694	8.586	4.824
Northern enlargement 1973	32.152	10.760	6.786
Southern enlargement 1981 and 1986	6.133	4.288	3.164
Southern enlargement 1986	19.078	15.099	10.541
Northern enlargement 1995	4.915	4.244	2.491
Eastern enlargement 1998 (anticipation)	14.803	14.803	9.858

Difference (%) in post-treatment average GDP pc LEVEL between actual and synthetic.

Source: Campos *et al.* (2014)

Table 2 indicate that per capita GDP in the UK would be 8.5% or 4.8% lower ten or five years after accession (i.e. in 1983 and in 1978, respectively) had the UK not joined the EEC in 1973. These offer a mixed comparison with latter accessions. They are below the average benefits for the 1973, 1986 and 2004 enlargements, but they are above the average for the 1995 enlargement (Campos *et al.*, 2014). In terms of their economic significance, these benefits are substantial and exceed related estimates. In what follows we argue that some of the main factors responsible for these benefits are trade, FDI and finance and that these are intrinsically related to European integration.

Article 2 of the 1957 Treaty of Rome stipulates that a common market between member states is the primary objective of European Integration (Sapir, 2011). The common market was to facilitate trade between member states and in turn prevent future conflicts through economic interdependence, thus simultaneously contributing to economic growth (Martin *et al.*, 2012). Most believe free trade increases competition and innovation, which, in turn, raises welfare and growth.

The UK's accession to the EU increased trade openness but not in ways one would normally expect. Based on Penn World Tables (PWT) trade openness data, the UK experienced a significant increase in its *level* of trade openness after EEC membership. These data indicate that from the late 1950s to 1970, UK's trade openness was roughly at 40 percent and jumped to roughly 55 percent from 1973 to 2010. Precisely, the 1972 value of this ratio is 42.46 percent, while for 1974 it is 58.82 percent. Note that both PWT and United Nations Conference on Trade and Development (UNCTAD) data support this "level" effect. Note that PWT data indicate that although trade openness in the UK shows no trend since 1973, for Germany it shoots up especially after 1999. One explanation is that the economy specialized in services. However, the latest UNCTAD data reveal some problems with this idea. Trade in services in the UK grew in lockstep (from rather similar initial



levels) with Eurozone countries despite the noticeable differences in growth of trade in goods.

The answer to the overall growth in trade openness for the UK may be found in intra-industry trade.⁷ Overall trade openness among the EU6 grew (from roughly 35 percent in 1958 to 50 percent in 1973) but intra-industry trade increased substantially more. Over the same time period intra-industry trade in Italy grew from 42 percent to 57 percent and in the Benelux countries from 62 percent to 72 percent. Western Europe's growth in this regard is impressive despite the fact that intra-industry trade was growing globally. UK intra-industry trade saw massive growth after its accession in 1973. In the 1960s, it was below 50 percent and grew to more than 70 percent in the late 1970s and after (OECD, 1987).

The traditional argument is that trade is beneficial, but inter-industry trade may be even more so. This point has been largely overlooked in the UK debate about European integration, in general. Of course, trade with the Commonwealth adds to the UK's GDP, but trade with the EU has the added benefit of increasing UK's productivity. Trade with the Commonwealth is primarily inter-industry, driven by comparative advantage (gains are derived from specialization and scale), while trade with the EU is primarily intra-industry (gains are derived from competition and innovation). Therefore, the effects of the latter on UK productivity growth are likely to be more extensive and resilient.

Another important channel for these benefits from EU membership is foreign direct investment (FDI). Not only FDI contributes to the diffusion of frontier management practices, increases competition and shores up technological innovation, but it does all this in a relatively more resilient and sustainable fashion (than for example portfolio investment).

The UK is one of the main FDI recipients in Europe. Net FDI inflows were small until the mid-1990s but exhibit two periods of rapid expansion, one in the second half of the 1990s and the other before the financial crisis (Figure 4). Meanwhile, the share of FDI into services has increased. Despite the obvious importance of the subject and the availability of evidence contrasting the rationale of European and non-European intra-EU FDI (Basile *et al.*, 2008), the literature focusing on potential reasons for foreign investors to choose the UK vis-à-vis say Germany or Ireland remains scarce. Yet,

⁷See Baldwin and Lopez-Gonzalez (2015), Brühlhart (2009), Alfaro *et al.* (2015) and references therein. Note that Frankel and Rose (1998) argue the appropriate criteria for (endogenous) optimal currency area membership are intra-industry not bilateral trade (Fidrmuc, 2004) offers supporting econometric evidence).

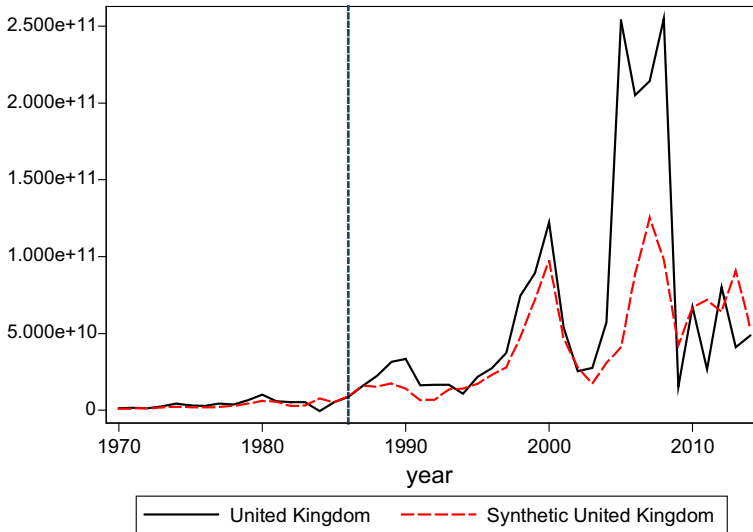


Figure 4: What would UK FDI net inflows look like had the UK opted-out of the Single Market in 1986? *Source:* Campos and Coricelli (2015)

European integration seems to have played a significant role if not with EU membership per se, at least thanks to the establishment of the Single Market.

Figure 4 also presents estimates of the effects of the launch of the Single Market in 1986 on UK FDI net inflows.⁸ The red line shows our estimates for what would have been FDI net inflows after 1986 if the UK had decided to opt-out of the Single Market. The results show that the Single Market played a key role in mobilizing FDI to and from the UK. Perhaps even more interesting is the suggestion that the bulk of these benefits (in terms of additional UK FDI had the UK chosen to opt-out instead) happens after the introduction of the common currency (the euro) and, more specifically, between the dot-com bubble and the financial crisis. These results also indicate that the Single Market stops being such a powerful magnet after 2009, although the net costs since are small vis-à-vis previous gains. Finally, it is very important to note from Figure 4 that net FDI inflows to the UK seem much more volatile than one would expect. The main reason for this may be that these figures reflect the high share of the more “footloose” service sector, especially finance.

⁸These are estimates from the Synthetic Counterfactual Method pioneered by Abadie and Gardeazabal (2003). These results are based on a simple model focusing on market size, per capita GDP and trade openness as key determinants of location choice. Larger weights were estimated for USA, Canada and New Zealand.



Let us now turn to finance because we believe this is also one of the important channels through which the positive effects of EU membership filter through the UK economy. One of the least discussed features of the financial sector in the UK is that its relative importance to the British economy hugely outdates the mid-1980s. As pointed out by Burgess (2011) and Haldane *et al.* (2010), the time period in which the growth of aggregate gross value added (GVA) in finance exceeds that of the aggregate economy the most is the period before World War I. Haldane *et al.* (2010) calculate that this difference for 1856–1913 is of 5 percentage points, with the average aggregate value at 2%. Conversely, between 1914 and 1970, the average annual growth rate of aggregate GVA was 1.9%, while that of financial intermediation was 1.5%. Interestingly, between 1970 and 2008 finance GVA again grows faster than that of the overall economy (3.8% against 2.4%). The message that these figures tell is that finance has always been an important sector for the UK economy, it is one of its most dynamic, and when it grows faster it seem to be able to pull the rest of the economy. Schumpeter indeed may have been right, as these figures support the notion that the UK benefited from EU membership through the positive impact of EU integration on the development of the UK financial sector. Access to the EU Single Market contributed to strengthening the position of the UK as leading international financial centre.

London has traditionally been the main centre for foreign exchange transactions. However, since the beginning of the 1990s, the share of the UK in foreign exchange transactions has sharply increased, from 25 to more than 40 percent of the world market.⁹ Note that foreign exchange, with daily transactions of more than 6 trillion US\$ in 2013, accounts for the largest amount of overall global financial transactions. Although the US dollar still dominates, the Euro accounts for more than one-third of foreign exchange transactions. BIS (2015) shows that the UK has gained shares in foreign exchange at the expense of the main Euro area members, Germany and France, but also of Switzerland. Technological factors may explain such phenomenon, but the fact the UK is a EU member certainly played a role.

Clearly, access to the EU Single Market has been one main factor in consolidating the role of the UK as an international financial centre. The comparative advantages of the UK financial sector (tradition, flexible regulation, product diversification, human capital, language, time zone, etc.) help the UK to exploit the benefits of EU integration. It is worth noting that, despite being outside the common currency, the UK remains by far the largest player in euro-denominated transactions in the EU.

⁹ Lane and Milesi-Ferretti (2007) corroborate this point.



One other last and final channel that has not received due attention in the current debate on European Integration is monetary integration, in particular the relation between the euro-ins and euro-outs. We think that one way to start looking into this issue is business cycle synchronization. We want to make two observations. One is that synchronization has increased hugely after the introduction of the euro even for those countries outside of the Eurozone. The second, and related, point is that the effect of the Economic and Monetary Union (EMU) integration is to pull in the euro-outs, thus reducing the cost of membership (or conversely, increasing the cost of leaving).

The degree of synchronization of supply shocks indicates that the EU6 plus Denmark constitutes the “core” of the EEC economies, whereas the remaining “periphery” countries display a lower degree of synchronization – as argued by Bayoumi and Eichengreen (1993). It should also be noted that demand shocks are lower in all countries, both in and outside of the core (Figure 5).

Although the European Monetary system removed individual monetary policies as a cause of demand shocks, fiscal policies remain independent and contribute to differences between nations. Therefore, it may be valuable to update the famous Bayoumi and Eichengreen exercise by reassessing the extent to which the European Monetary Union has affected the core–periphery dichotomy identified by the data set, which ended in 1988, before the European Monetary Union was implemented.

The results displayed in Figure 5 indicate that the European Monetary Union has mitigated the trend of core–periphery differences in supply and demand (Campos and Macchiarelli 2016). The European Monetary Union

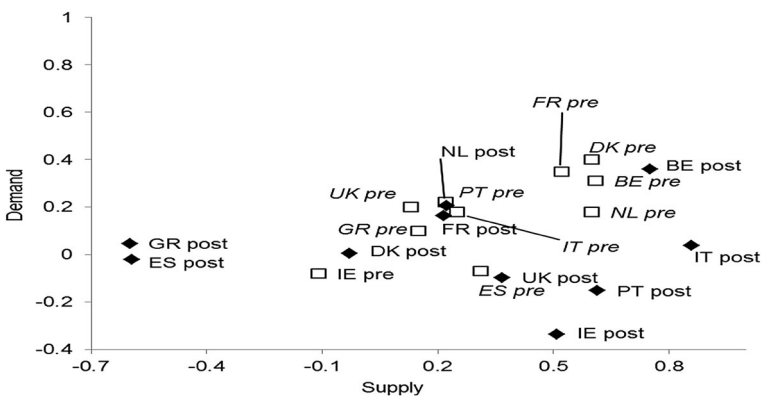


Figure 5: The dynamics of the correlation of supply and demand disturbances between pre-EMU (1963–1988) from Bayoumi-Eichengreen (1993) and post-EMU (Campos-Macchiarelli for 1991–2014). Source: Campos and Macchiarelli (2016)



successfully further integrated the entirety of the European Union, including the UK. After the introduction of the Euro, UK business cycles became more synchronized with the business cycle of the rest of the EU.

A POLITICAL ECONOMY EXPLANATION

Two of the most powerful myths about the relationship between the UK and the European integration project are that the European Single Market (ESM) was a British idea and that Mrs Thatcher's structural reforms caused the revival of the British economy. Our results above provide new evidence contrary to these myths. We argue that a crucial factor in the British relative economic revival was membership in the European Community such that, without EU membership, Mrs Thatcher's reforms would perhaps have been less effective.

The European Single Market (ESM) and Mrs Thatcher's reforms are closely related myths because they form the basis of the view (widespread in the UK) that those reforms were not only good for the UK but also good for Europe. These supply-side structural reforms are widely seen as the utmost British contribution to the European project. The fact that the European Single Market is one of the clearly stated goals of the 1957 Treaty of Rome, which the UK of course refused to sign, should be suggestive in this case (Sapir, 2011).

Mrs Thatcher's reforms were implemented in her second term in office. Her June 1983 general election victory was the most decisive since Labour's in 1945. Her first term was marked by the second oil shock and by the Falklands War. The main structural reforms that defined her second term were privatization, labour, financial and product markets liberalization, and greater openness to foreign investment (Card and Freeman, 2004).

Our analysis combines the empirical identification of turning points (structural breaks) with an analysis of how and why the benefits from EU membership changed over time using econometric counterfactuals.

One of the main empirical findings is that the turning point around 1969 is significantly more powerful than the 1983 or 1986 turning points (which correspond to the launch of the programme of structural reforms in the UK). The UK's per capita GDP relative to the EU founding members' declined steadily from 1945 to around 1970, but it became relatively stable onwards. If Britain joined the EU in an attempt to stop its relative economic decline, it worked. Moreover, it laid the ground for future improvements in relative economic performance (which come to fruition in the Single Market).

One possible explanation is that the success of Mrs Thatcher's reforms required EU integration. These structural reforms could not have taken place



without a large and powerful constituency. In this case, these were British entrepreneurs who would benefit from a much larger, more innovative and more demanding market place (contrast the EU and the Commonwealth in this respect). These entrepreneurs also realized that to be competitive they would need to tap in deeper capital and labour markets and would need a clear set of common standards and regulations so as to guarantee a level playing field. Without the support of such powerful constituencies, Mrs Thatcher's reforms would not have been proposed or fully implemented and clearly would not have been nearly as successful or influential.

This explanation draws parallels with the French experience in the post-World War II period (Adams, 1989). Between 1945 and 1957, there was conflict of interest between powerful groups of entrepreneurs against and in favour of furthering European economic integration. Those against tended to export mostly to the former French colonies. Yet these groups lost influence in the run-up to the Treaty of Rome and found themselves locked-in the European integration project even after regaining considerable political influence with De Gaulle appointment in 1958. At that point, they could slow down but could not reverse the process.

Mrs Thatcher's reforms were clearly important and together with the Single Market have played an important role in buttressing British economic performance. The results and the interpretation above basically challenge the exclusive prominence of this explanation for the reversal in the long-standing UK relative economic decline. This is because it makes little sense to argue that Mrs Thatcher reforms were implemented in a vacuum, that is, without the support of powerful constituencies that would benefit from them in the very long term. EU membership in 1973 marks the undisputable arrival of such constituencies to the centre stage of British politics and policy-making.

One further drawback of the dominance of the Mrs Thatcher and her reforms explanation is that it crowded out research on the emergence of such constituencies. For example, Bean and Crafts write in 1996 that "we also anticipate that much more will eventually be written on the implications for growth of the interplay between government and producer interests" (p. 162). Unfortunately, this crucial area of research remains to this day still to be fully developed.

CONCLUSIONS

Why did Britain join the EU? For various reasons. Because De Gaulle left. Because the Commonwealth trade could not compete. Because Heath defeated Wilson. Because the free trade area integration model sunk. But above all,



Britain joined because joining the European project was perceived to be a way to stop its relative economic decline. In 1950, UK's per capita GDP was almost a third larger than the EU6 average; in 1973, it was about 10 percent below; it has been comparatively stable ever since. On this basis, joining the EU worked: it helped to halt Britain relative economic decline vis-à-vis the EU6.

UK economic performance is of course complex and driven by multiple (not a single) causes. Yet European integration has so far been broadly dismissed as a potential explanatory factor of the UK post-WW2 economic performance rebound. We argue it should not and that showing that European integration played a key role in one of its most reluctant partners implies that if it can work there, it can work elsewhere (and probably anywhere). Time may be ripe to paraphrase Churchill: European may be the worst form of integration, except for all the others.

Our analysis of four major areas of the economy – trade, FDI, finance and EMU – indicates that the UK gained significantly from EU integration. A “Brexit” will likely result in heavy losses (Ottaviano *et al.*, 2014) and we expect them to compound once the consequences on intra-industry trade, FDI and financial integration are accounted for. Losses may be even greater after the interactions among these are considered. We expect interaction effects between these three relationships to be particularly substantial. FDI and trade will be heavily affected because of the involvement of FDI in intra-industry trade. Similarly, the credit-intensive nature of intra-industry trade is likely to affect financial integration and trade (Giannetti *et al.*, 2011). Finally, because a significant amount of FDI in the UK focuses on the financial sector, the relationship between financial integration and FDI will be key. It is no coincidence that the benefits for these sectors seem to have increased after the introduction of the common currency. These areas urgently require greater attention because current economic analysis on the potential effects of Brexit almost exclusively focuses on the UK–EU import–export relationship and underestimate the true cost of Brexit, due to the narrow scope of analysis.

The effects of Brexit would likely be strongest on the UK's financial sector, which would, in turn, affect trade and FDI. Although there are already efforts in the EU to diversify away from London as the primary hub for Euro transactions, exiting the EU would minimize the UK's ability to influence such efforts in the future. The UK's legal victory in March 2015 against the ECB regarding the location of euro clearinghouses was undoubtedly influenced by its EU membership. The UK as non-EU member should not expect to hold such sway in similar matters.



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