

EU Membership: A Cost-Benefit Analysis for the UK

By Nicholas CRAFTS

Emeritus Professor of Economic History, University of Warwick

This paper reviews the evidence on the economic implications of the UK's accession to the European Economic Community and subsequent EU membership. The benefits were much greater than the costs, probably by a ratio of about 6 to 1. The UK benefited from lower trade costs and higher volumes of trade with other member countries and this raised productivity. Different estimation methods point to permanent gains in the level of real GDP of 8.6 per cent after 10 or 15 years. The costs to the UK were a net contribution to the EU budget which averaged about 0.5 per cent of GDP per year and the adoption of regulations for which compliance costs exceeded benefits, estimated at about 0.9 per cent of GDP per year. Voters in favour of Brexit who were protesting about government policies gave little or no weight to its productivity implications.

Introduction

The economics of EU membership for the UK can be viewed as the payment of a "membership fee" in return for improved macroeconomic performance, the key components of which are the rate of inflation, the rate of unemployment, and the level of GDP. The fee comprises the costs of acceptance of the rules of the club notably through the UK's net contribution to the EU budget, other costs from the Common Agricultural Policy, and net costs of EU regulations including on freedom of movement.

In a modern OECD economy, in the medium term it is reasonable to think that the rate of inflation is determined by monetary policy which is under the control of an inflation-targeting central bank. Since the UK has remained outside the Euro this means that inflation outcomes are not affected by EU membership. Similarly, in the medium term the (equilibrium) level of unemployment depends on labour market institutions and policies, such as the conduct of industrial relations and the design of the system of unemployment benefits, and these are decided by domestic politics rather than EU regulations. In the shorter term, the level of aggregate demand may also affect unemployment but policies to influence this are also under UK control. There are, however, several ways in which EU membership has impacted on UK productivity performance and thus the level of real GDP per person. These potential benefits can be compared with the membership fee.

The accession of the UK into the EEC reduced the costs and increased the volume of international trade as both tariff and non-tariff barriers to trade decreased, increasingly so as the original customs union progressed into the European

Single Market which represents a significantly greater degree of economic integration than the European Free Trade Area (EFTA) to which the UK belonged prior to 1973. Trade liberalization along these lines can be expected to increase productivity both by the realisation of gains from specialisation along lines of competitive advantage and also by lowering production costs. The latter might reflect economies of scale in a larger market but, perhaps more importantly, could result from an increase in the pressure of competition which improves managerial performance. Greater competition also reduces market power and encourages innovation by firms fearful that their profits will be eroded. In a longer-term perspective, investment may be stimulated by better market access and expectations of greater profitability. The deep economic integration of the EU entailed constraints on UK policymakers, notably in the areas of competition and state aid. As this limited the scope for damaging policies this was also beneficial.

This paper reviews the available evidence with the principal aim of addressing two questions:

- How much has EU membership increased real GDP per person in the UK?
- How have the income gains compared with the "membership fee"?

This also prompts some reflections on a related issue, namely, why did voters choose Brexit?

The "Membership Fee"

EU membership comes with conditions which are often thought of as costs that are incurred in order to obtain the income gains described above. These include having no control over immigration from the EU, unwanted



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Canary Wharf shopping centre, located on the banks of the Thames, 31st January 2014.

“Joining the EEC reduced trade costs for UK trade with member countries. This raised both trade volumes and the level of GDP per person.”

regulations, and the UK’s net budgetary contribution (a substantial part of which derives from the CAP).

Migration has only been significant since the mid-1990s and has only become controversial since the accession of (relatively poor) new member states from 2004. The stock of EEA immigrants (excluding Ireland) in the UK rose from 1.5 per cent of the population in 2004 to 5.1 per cent in 2017. A key issue is the impact of migration on the productivity of the domestic labour force and thus on the income of the resident population. Making reliable estimates is challenging but the evidence points to positive effects. An increase of 1 percentage point in the share of migrants in the labour force is estimated to raise total factor productivity (TFP) by 1.6 per cent which would imply that the larger stock of EEA immigrants may have increased TFP by about 5.8 per cent in 2017 relative to 2004. A further important aspect is the net fiscal contribution of migrants. Contrary to much political discourse, EEA immigrants made a net fiscal contribution estimated at £4.7 billion in 2016/17 compared with - £41.4 billion for UK-born and - £9 billion for other immigrants. In sum, it appears that migration from the EU has delivered an economic benefit rather than a cost and does not add to the EU membership fee ⁽¹⁾.

Eurosceptic voices frequently complain about the costs of EU regulation. A review by Open Europe of the regulatory impact assessments of this legislation from 1998 onwards found that on average there was a benefit-cost ratio of 1.02. Nevertheless, there are a significant number of regulations for which either there are no benefits or recurring benefits are less than recurring costs. Open Europe (2015) listed 56 such regulations for which the total annual net cost in 2014 was £16.5 billion (0.9 per cent of GDP)⁽²⁾. Regulations which affect decisions to invest or innovate can impair productivity performance and thus impose welfare losses far in excess of compliance costs. In this regard, however, it should be recognized that the UK has maintained very light levels of regulation as measured by key OECD indicators such as PMR (Product Market Regulation) and EPL (Employment Protection Legislation) for which high scores have been shown to have significant detrimental effects. The UK had a PMR score of 0.78 in 2018 and an EPL score of 1.74 in 2019, the best and sixth lightest in the OECD, respectively. On the World Bank’s ‘Ease of Doing Business’ indicator the UK ranked 8/190 countries in 2019.

The net budgetary contribution is the most visible component of the EU membership fee. Since the rebate

(1) The discussion in this paragraph is based on Migration Advisory Committee (2018).

(2) Since there was less regulation in earlier years these regulatory costs would presumably have been lower.

was agreed in 1984, this has averaged about 0.5 per cent of GDP per year. This includes the main component of the costs of the CAP which have been relatively heavy for the UK because of its small agricultural sector. The net budgetary contribution, after allowing for the UK rebate and EU spending in the UK, is much less than the gross contribution. The average of 2015 and 2016 for the former was £18.3 billion and for the latter was £10.2 billion. The gross figure was, however, used by the Leave campaign to claim that the UK was handing £350 million per week to Brussels which could otherwise be spent on the National Health Service.

In sum, the “membership fee” has probably been no more than about 1.4 per cent of GDP per year comprising the net budgetary contribution and the cost of EU regulations.

The Impact of EU Accession on UK GDP

Joining the EEC reduced trade costs for UK trade with member countries. This raised both trade volumes and the level of GDP per person. These effects can be quantified by using a gravity model to estimate the impact of EU membership for the volume of trade and then quantifying the effect of expanded trade on the level of income using the estimated relationship in Feyrer (2019) that the elasticity of income to trade is probably between 0.5 and 0.75. This estimate is based on an econometric approach to capture impacts working through improved productivity and a larger capital stock which far exceed traditional gains from improved resource allocation.

The gravity model estimates in Baier *et al.* (2008) imply that EU15 trade in 2000 was at least 71.6 per cent higher than if there had been no trade agreement with the implication that total EU trade was raised by 25.4 per cent. Based on the lower bound of Feyrer’s estimated elasticity, the EU had a positive impact on GDP of 12.7 per cent. Similarly, this method predicts that EU membership raised UK trade relative to the counterfactual by 33.0 per cent after 15 years. In 1988, EEC trade was 51.4 per cent of total so the implication is that joining the EEC had raised UK trade by 17.1 per cent. Taking the lower bound of Feyrer’s estimated elasticity, this would have raised UK GDP by 8.6 per cent.

This result can be compared with that obtained by the ‘synthetic counterfactuals’ method used by Campos *et al.* (2019). This compares growth in each post-EU accession country with growth in a weighted combination of other countries which did not accede and which are chosen to match the accession country before its entry to the EU as closely as possible. A difference-in-differences analysis is then performed to compare the actual and synthetic-control series for each country. The results are that EU accession typically has had a substantial and statistically significant impact on growth relative to the counterfactual of staying out. For countries acceding to the EU between 1973 and 1995, the average impact of EU membership after 10 years is estimated to have been a 6.4 per cent income gain with the UK showing an 8.6 per cent gain.

If these “black box” estimates are to be thought plausible, then we need to have some idea of the source of the productivity gains delivered by accession. A key aspect was the increase in competitive pressure associated with the removal of barriers to trade with EU countries which was an important part of the antidote to British relative economic decline. Reductions in market power effectively addressed long-standing obstacles to productivity performance from weak management and industrial relations problems in British firms. There were favourable impacts on productivity performance consequent on stronger competition and entry threats in product markets with a substantial boost to productivity in sectors which experienced a large reduction in protection. Stronger competition was an effective substitute for weak shareholders in disciplining managerial underperformance. There a surge in productivity growth in unionized firms as organizational change took place under pressure of competition⁽³⁾.

A second important contribution to the growth effects of EU accession came through foreign direct investment (FDI). It is a standard result in the literature that EU membership has a strong positive effect on FDI for market-access reasons whereas this does not apply to EFTA membership. There is also evidence that the presence of FDI raises productivity levels in domestic firms. Taking account of both these effects, it has been estimated that EU membership increased the level of GDP through the FDI channel by about 2.25 per cent.

EU membership also constrained supply-side policy choices in important ways that improved productivity especially as the rules became stricter and better enforced over time. Competition policy and selective industrial policy were the most relevant areas.

In the early 1970s competition policy was ineffective. Few investigations took place, very few mergers were prevented, the process was politicized, a variety of “public-interest” defences for anti-competitive activities and mergers were allowed, and there were no penalties for bad behaviour. There was a widespread belief that mergers improved productivity and international competitiveness of British business such that competition policy was subordinated to industrial policy. Yet, the evidence shows that, on average, mergers harmed productivity performance. The “lessening of competition” test on which UK and EU law eventually harmonized was surely preferable.

Selective industrial policies, which were much used in the UK in the 1960s and 1970s but with very disappointing results, are prohibited under EU State Aid rules. Although “picking winners” may have been the aspiration, in practice there was a strong bias towards shoring up declining industries. Moreover, policies to subsidize British high-technology industries and create national champions were notably unsuccessful. So, prohibition of such policies, which tend to obstruct rather than promote creative destruction, was a positive contribution from EU membership.

(3) This experience is reviewed in detail in Crafts (2012).

Interestingly, mainstream estimates of the long-run impact of a hard Brexit, which would have the opposite effect to entry, have similar implications. These range from a reduction of 5.5 to 8.7 per cent in UK GDP (Crafts, 2019). Obviously, circumstances now differ in important respects, notably tariff barriers are lower and competition policy is stronger and it is not yet clear how far the UK will go in the direction of misguided state interventionism post-Brexit. Nevertheless, here is a further reason to think that benefits of EU membership have far outweighed costs.

The bottom line is clear. The decision to enter the EEC in 1973 paid off handsomely in economic terms. The benefit from better productivity performance and a higher level of GDP greatly exceeded the membership fee in terms of the net budgetary contribution and costly regulation. The benefit-cost ratio was probably about 6 to 1 once the economy had reached its new equilibrium⁽⁴⁾.

Why Did Voters Choose Brexit?

So, if at the macroeconomic level EU membership has been economically highly beneficial and Brexit will be costly, why did Leave win the referendum vote? Three big points deserve to be highlighted.

First, while the costs of the UK's net budgetary contribution are a "fact", the costs of reduced trade in terms of a reduced national income are opaque to the person in the street and are, in any case, an estimate which can be portrayed as unreliable or irrelevant to many voters. The seriously misleading claim of £350 million per week for the NHS emblazoned on the side of the Leave battle bus had far more resonance with the average voter than a permanent loss of, say, 7.5 per cent of GDP⁽⁵⁾.

Second, the gains from EU membership were surely not evenly spread across all regions and the relative economic decline of the "north" compared with the "south" may have been exacerbated. Gross value added per head in 2016 in West Midlands was 83.1 per cent of the UK average (101.9 per cent in 1971); for North West, North East and Wales the relativities were 87.4 (95.3), 73.1 (86.1), and 73.0 (87.5), respectively, while London rose to 178.2 (123.4). This primarily reflected adjustment to globalization in the rebalancing of the economy towards financial and business services and away from manufacturing. Over and

above this, however, accession to the EU improved market access more for the South and East than for the North and West; this provoked a shift of economic activity towards the South East.

Third, support for UKIP and Leave was boosted substantially by government austerity policies introduced in the aftermath of the financial crisis which had a big impact on welfare payments in many 'left behind' areas in the regions which were in relative decline. The grievance that this created was the decisive factor which got Leave over the line by adding protest votes to those of core Eurosceptics who did not comprise a majority (Fetzer, 2019).

Conclusions

EU membership has significantly raised the level of GDP per person in the UK through lowering trade costs and increasing the volume of trade. A reasonable estimate is that the gain was over 8 per cent per year. This is about 6 times greater than the "membership fee" resulting from the net budgetary contribution and costly regulation.

References

- CAMPOS N., CORICELLI F. & MORETTI L. (2019), "Institutional Integration and Economic Growth in Europe", *Journal of Monetary Economics*, 103, pp. 88-104.
- CRAFTS N. (2012), "British Relative Economic Decline Revisited: the Role of Competition", *Explorations in Economic History*, 49, pp. 17-29.
- CRAFTS N. (2019), "The Fall in Potential Output due to the Financial Crisis: a Much Bigger Estimate for the UK", *Comparative Economic Studies*, 61, pp. 625-635.
- FETZER T. (2019), "Did Austerity Cause Brexit?", *American Economic Review*, 109, pp. 3849-3886.
- FEYRER J. (2019), "Trade and Income: Exploiting Time Series in Geography", *American Economic Journal: Applied Economics*, 11(4), pp. 1-35.
- Migration Advisory Committee (2018), *EEA Migration in the UK: Final Report*, www.gov.uk/government/publications/migrant-advisory-committee-mac-report-eea-migration
- Open Europe (2015), "Top 100 EU Rules Cost Britain £33.3bn", www.openeurope.org.uk/intelligence/britain-and-the-eu/top-100-eu-rules-cost-britain-33.3bn/
- PAIN N. & YOUNG G. (2004), "The Macroeconomic Impact of UK Withdrawal from the EU", *Economic Modelling*, 21, pp. 387-408.

(4) The magnitude is huge given that this is a *permanent* change in the level of income compared with the counterfactual. Evaluated over 20 years from $t + 5$ to $t + 25$ and assuming 2 per cent year trend growth if the permanent impact is 7.5 per cent of GDP, the total loss equals 182 per cent of initial GDP or a present value of 110 per cent of initial GDP at a discount rate of 3.5 per cent assuming trend growth at 2 per cent per year (Crafts, 2019).

(5) As a heckler in Newcastle-upon-Tyne shouted at a Remain advocate: "That's your bloody GDP. Not ours!"