UNIVERSITY OF WUPPERTAL
BERGISCHE UNIVERSITÄT WUPPERTAL

EUROPÄISCHE WIRTSCHAFT
UND
INTERNATIONALE MAKROÖKONOMIK

Paul J.J. Welfens/David Hanrahan

BREXIT: Key Analytical Issues and Insights from Revised Economic Forecasts

Diskussionsbeitrag 235
Discussion Paper 235

Europäische Wirtschaft und Internationale Wirtschaftsbeziehungen
European Economy and International Economic Relations

ISSN 1430-5445

Paul J.J. Welfens/David Hanrahan

BREXIT: Key Analytical Issues and Insights from Revised Economic Forecasts

January 2018

Herausgeber/Editor: Prof. Dr. Paul J.J. Welfens, Jean Monnet Chair in European Economic Integration

EUROPÄISCHES INSTITUT FÜR INTERNATIONALE WIRTSCHAFTSBEZIEHUNGEN (EIIW)/
EUROPEAN INSTITUTE FOR INTERNATIONAL ECONOMIC RELATIONS
Bergische Universität Wuppertal, Campus Freudenberg, Rainer-Gruenter-Straße 21,
D-42119 Wuppertal, Germany
Tel.: (0)202 – 439 13 71
Fax: (0)202 – 439 13 77
E-mail: welfens@eiiw.uni-wuppertal.de
www.eiiw.eu

JEL classification: E00, E60, F5, C5
Key words: Brexit, UK, economic forecasts, revisions

Summary

This contribution takes a look at the forecasts of macroeconomic indicators from 2015, i.e. prior to the BREXIT referendum, and 2017. The revised indicators indeed show that BREXIT has a significant impact on output growth, inflation and foreign exchange dynamics, with lower projected GDP growth already visible in the short term. The findings support the analysis of the Treasury, amongst others, in their study of 2016. Key analytical issues are discussed here including the information deficit during the referendum campaign, but also the policy options and challenges facing the United Kingdom and EU27 as the UK attempts to reinforce output growth in the coming years.

Zusammenfassung

Dieser Beitrag befasst sich mit den Prognosen der makroökonomischen Indikatoren aus dem Jahr 2015, d.h. vor dem BREXIT-Referendum und 2017. Die überarbeiteten Indikatoren zeigen, dass der BREXIT erhebliche Auswirkungen auf das Produktionswachstum, die Inflation und die Wechselkursdynamik hat und das projizierte BIP-Wachstum schon kurzfristig geringer sichtbar ist. Die Ergebnisse stützen die Analyse des Finanzministeriums, unter anderem, die in ihrer Studie von 2016. Hier werden wichtige analytische Fragen erörtert, darunter das Informationsdefizit während der Kampagne für das Referendum, aber auch die politischen Optionen und Herausforderungen, vor denen das Vereinigte Königreich und die EU27, zur Steigerung des Produktionswachstums in den kommenden Jahren, steht.

Prof. Dr. Paul J.J. Welfens, Jean Monnet Professor for European Economic Integration; Chair for Macroeconomics; President of the European Institute for International Economic Relations at the University of Wuppertal, (Rainer-Gruenter-Str. 21, D-42119 Wuppertal; +49 202 4391371), Alfred Grosser Professorship 2007/08, Sciences Po, Paris; Research Fellow, IZA, Bonn; Non-Resident Senior Fellow at AICGS/Johns Hopkins University, Washington DC
Prof. Welfens has testified before the US Senate, the German Parliament, the EP, the IMF etc.
welfens@eiiw.uni-wuppertal.de , www.eiiw.eu

David Hanrahan, M.A., EIIW at the University of Wuppertal and Schumpeter School of Business and Economics. hanrahan@eiiw.uni-wuppertal.de

EIIW 2015 = 20 years of award-winning research

BREXIT: Key Analytical Issues and Insights from Revised Economic Forecasts

Discussion Paper 235

Table of Contents

Table of Contents 3
List of Tables 4
List of Figures 4
1. Introduction 5
2. Economic Forecast Revisions 7
3. Policy Conclusions 14
References 16

List of Tables

Table 1: Difference in GDP (in %) from base by 2030 7

List of Figures

Figure 1: Impact of Revised IMF Forecasts for UK Real GDP 9

Figure 2: Impact of Revised Office for Budget Responsibility Forecasts for UK Real GDP 9

Figure 3: Impact of Revised OECD Forecasts for UK Real GDP 10

Figure 4: Impact of Revised OECD Forecasts for UK Real GDP 10

Figure 5: Impact of Revised OBR Forecasts for UK Inflation 11

Figure 6: Impact of Revised Bank of England Forecasts for UK Inflation 12

Figure 7: Impact of Revised OECD Forecasts for UK Inflation 12

Figure 8: Impact of Revised IMF Forecasts for UK Inflation 13

Figure 9: Impact of Revised European Commission Forecasts for UK Inflation 13

Figure 10: Impact of Revised AMECO Forecasts for Pound to Euro/ECU Exchange Rate... 14

1. Introduction

On June 23, 2016, the British electorate voted by 51.9% to 48.1% in favor of Leave. This result, which entails the United Kingdom leaving the European Union after circa 45 years of membership, was to some extent unexpected by markets. During the period prior to the vote, the Remain campaign was said by those backing leave of engaging in scaremongering – a tactic they referred to as "Project Fear". The Remain campaign were accused of being overly pessimistic in their outlook on the likely effects, including the economic effects, of BREXIT. Michael Gove famously remarked that the 'people have had enough of experts' when faced with the opinions of economists from international bodies such as the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD). Even the UK's Treasury prepared a 201-page study on the long-term effects of British membership of the EU. The results of their analysis show that by leaving the EU, the UK would lose up to 10% of national income over 15 years – comprised of a 6% loss of GDP assuming the UK can negotiate access to the Single Market in future, plus an addition 4% loss associated with forgoing on the benefits of Single Market deepening and the Digital Single Market dynamics which Prime Minister Cameron had negotiated with the EU in early 2016 (HM Treasury, 2016). While such a loss of income would be key for voters, it is noteworthy that there was no mention of the Treasury's projected 10% income loss included in Cameron's 16-page information brochure which was mailed to all households in England between April 11 and 13, 2016; and later to households in other parts of the UK. One can calculate from UK popularity functions – showing the link between economic growth and relative government popularity – that the referendum in 2016 would have obtained a 52% Remain majority if this key finding from the Treasury had been included in the information brochure (Welfens, 2017; Welfens/Hanrahan, 2017). Prior to the 2014 Scottish independence referendum, the Cameron government had indeed indicated that every Scot would lose £1,400 if there was a vote for Scottish independence - plus all the benefits of British EU membership. The £1,800 loss projected as a result of a vote to leave the EU, however, was obviously not worth mentioning to voters in Cameron's information brochure of 2016 – which is strange – or the information was deliberately delayed and thus suppressed by pro-BREXIT supporters within Her Majesty's Treasury. Interestingly, the Treasury study was published by government only a week after the information brochures had been mailed out to households in England.

It seems obvious that the economic aspects of EU membership were not the only set of aspects which voters had to consider in mid-June 2016, but it also seems clear that the economic effects of BREXIT would have to be taken into account since the creation of an EU Customs Union for goods – meaning zero internal tariffs and non-tariff barriers plus a common external EU tariff – had brought such major benefits for the EU countries in the late 1960s that the UK, Denmark and Ireland found the option of EU membership attractive enough to join the then European Economic Community in 1973. Moreover, after the creation of the EU single market in 1993 further benefits had been obtained through the free trade in services plus free capital flows and free labor migration. There were specialization gains related to more trade, benefits from better exploitation of economies of scale, and product as well as process innovations which emerged in more

competitive larger EU markets which thus attracted considerable capital inflows, above all foreign direct investment (FDI) inflows from multinational companies which would also bring international technology transfers. For the UK, the particular benefits from the EU single market was that the United Kingdom could attract high capital inflows, including FDI – the latter reflected the attractiveness of rather deregulated markets since the late 1980s and a growing economy with high levels of multinational foreign investment. After 2004 the UK also became a major host country of emigrants from eastern European EU countries; and immigration, including immigration from Eastern Europe did in fact indeed bring net contribution effects for the UK government as was shown by the OECD (2013).

The May government has suggested that BREXIT should bring major economic benefits in the context of a Global Britain approach, but this approach is doubtful since only with the US does the policy option a major new free trade partner seem to be realistic (Welfens, 2017); there are many other potential small trading partners located geographically far away from the UK and hence an FTA would hardly bring considerable economic benefits. The EU28 concluded a free trade agreement with Japan in December 2017 which could come into force in late 2018. A No-Deal BREXIT is estimated to generate negative real income effects of about 16% (Welfens, 2017b). The Rabobank (Erken et al., 2017) has come up with an estimate of -18% for the UK for the No-Deal case. Leaked information from the May government suggest -8% for that case (Financial Times, 2018), while the negative FDI effects associated with BREXIT are also to be considered (Welfens/Baier, 2018).

As regards the key economic effects of BREXIT most economists would emphasize the following three key points:

- real GDP/national income effects in the UK and in the EU27;
- real exchange rate effects – where one normally would expect a rather strong real depreciation from BREXIT which will weaken the British export position rather strongly while imports from EU countries would become more expensive; at the same time, one would have to expect higher FDI inflows in the context of imperfect capital markets as emphasized by Froot/Stein (1991). A rise in the share of foreign ownership of the British capital stock is to be expected in the context of a Pound depreciation as the equity position of foreign investors – expressed in Pounds – is raised through such a depreciation and hence higher loans for financing leveraged international mergers & acquisitions can be obtained by foreign investors whose bids are thus more likely to prevail.
- there could be a temporary rise of the inflation rate, namely due to a transitory strong depreciation of the British pound. A nominal depreciation should lead to a once-off rise of the inflation rate. If there is a series of Pound depreciations this could bring about a rise of the risk premium for Pound-denominated bonds and thus a higher real capital cost which in turn will dampen output growth. It is unclear whether or not under such circumstances a real depreciation will improve the current account. Since BREXIT means that many UK firms will have to trim EU production networks and to increase value-added in the UK – for sectors that are not part of an EU-UK free trade agreement – the cost disadvantages for UK exporters will raise the structural current account-GDP ratio; this could bring about a long run real deprecation of the British Pound. This could also happen in the context of Scottish independence after BREXIT.

It should also be emphasized that the bargaining weight of the EU28 in international trade negotiations was relatively large to the extent that the size of the EU's GDP or the EU28's trade volume is relevant. The UK GDP is roughly 1/5 of that of the EU28 GDP. By implication the UK would find less favorable trade conditions in independent future free trade treaties than the concessions which could have been obtained under the EU28 umbrella. Within the EU, the UK has also enjoyed political benefits through the strong cooperation that certain countries – such as the Netherlands or Denmark – were seeking with the UK, not least as a counter-balance that could be helpful as a hedge against potential Franco-German dominance.

The conjecture of economic experts of rather high long-term economic losses were dismissed by those in the Leave campaign as being overly negative and associated with talking the UK down. On one hand, it is clear that the large majority of members of the Royal Economic Society (RES) warned of negative economic effects from BREXIT; simple voting at the RES annual meetings in Brighton and Bristol had shown such a BREXIT-skeptical majority. On the other hand, the BBC played a strange role in the BREXIT debate since on TV one would often simply be presented with one pro-Remain economist who faced one pro-BREXIT scientist in the interest of "balance". However, this neutral approach effectively gave the impression that economists were evenly split on the issue.

2. Economic Forecast Revisions

To analyze the BREXIT effect is not a trivial matter since one has to anticipate the outcome of the EU-UK negotiations regarding future trade relations. One negative scenario considered by many analysts is that of a No-Deal BREXIT whereby the UK would face the default fallback position determined by its status as a member of the World Trade Organization (WTO). The UK would face the common external EU tariffs and some quotas in the future. The range of forecasts on BREXIT model analysis is rather large as the following table for the No-Deal case shows (Cambridge Econometrics, 2018):

Table 1: Difference in GDP (in %) from base by 2030

Study	WTO Scenario
Minford et al.	+4
PwC	-3.5
HM Government	-7.5 (-5.4 to -9.5)
NIESR	-3.2 (-2.7 to -3.7)
IMF	-4.5
CPB	-4.1 (-2.7 to -8.7)
Rabobank	-18 to -18.5
Rand	-4.9
E3ME	-3
EIIW*	-15.8

Source: Based on Table 5.3 (pp. 43-44) from Cambridge Econometrics (2018) and Welfens (2017b)

Insights from Forecast Revisions

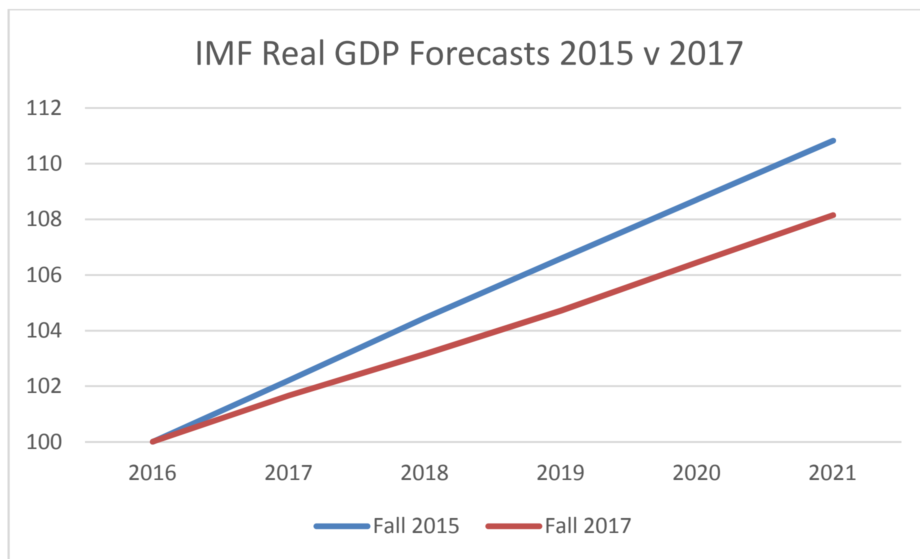
One way to assess the impact of the 2016 vote in a rather simple way is to compare the forecasts of certain macroeconomic indicators published both before the referendum and after it; many international organizations such as the OECD, the IMF or the EU make regular economic forecasts; this also holds for the Office for Budget Responsibility (OBR) or the Bank of England in the UK. In 2015, there was still some optimism in Cameron government circles that there would be no pro-BREXIT majority in 2016. Hence most forecasters were making simulations on the implicit basis of the UK electorate voting that the UK should remain a member of the European Union. However, after June 2016, the forecasters had to revise their analyses since it had turned out that a majority had indeed voted for BREXIT. In the course of 2017 it became largely clear that the UK government and EU could, on one hand, agree on an Exit Treaty (and a one-off payment to the EU to cover existing financial obligations), on the other hand, the EU and UK wanted to negotiate a free trade agreement that would most likely be confined to goods – and thus not include financial services – as the EU's chief negotiator Michel Barnier had explained in December 2017. The range of simulation studies thus could be clearer and forecast revisions had to be made where comparing a 2015 forecast, for example in relation to UK GDP, with an autumn forecast of 2017 could be quite interesting. The difference would indicate a first element of the economic costs of BREXIT.

Here, we have gathered the data from a number of sources on forecasts in relation to real GDP growth made in late 2015 and late 2017. By taking a base year of 2016 (2016 = 100), real GDP growth projections can be compared to see the widening disparity over time of forecasts made before and after the BREXIT referendum. It is clear that in the period between autumn 2015 and autumn 2017 BREXIT was not the only unanticipated event which could have had an effect on aggregate demand and long run growth, respectively, so that a shock decomposition analysis would be required to get a clear-cut picture about the BREXIT impact in particular. One can, of course, also not rule out that the BREXIT-anticipation effects of 2016/17, driving medium-term investment, output, price plus exchange rate dynamics, are actually greater than the forecast comparisons show. This would be the case if other shocks raise output growth in a favorable way. In any case, it is interesting to take a closer look at forecast changes across a broader range of models and to see what the key findings indicate.

The subsequent graphs all show downward revisions for the UK output post-BREXIT and thus indicate a cost of BREXIT beyond the exit payment that could be close to £40 billion. It is also interesting to consider forecast revisions for the inflation rate and the exchange rate, respectively.

According to the forecasts of the IMF's World Economic Outlook (WEO) published in October 2015 (blue line) and October 2017 (orange line), projected real GDP growth in 2020 is already 2.2% lower (see Fig. 1).

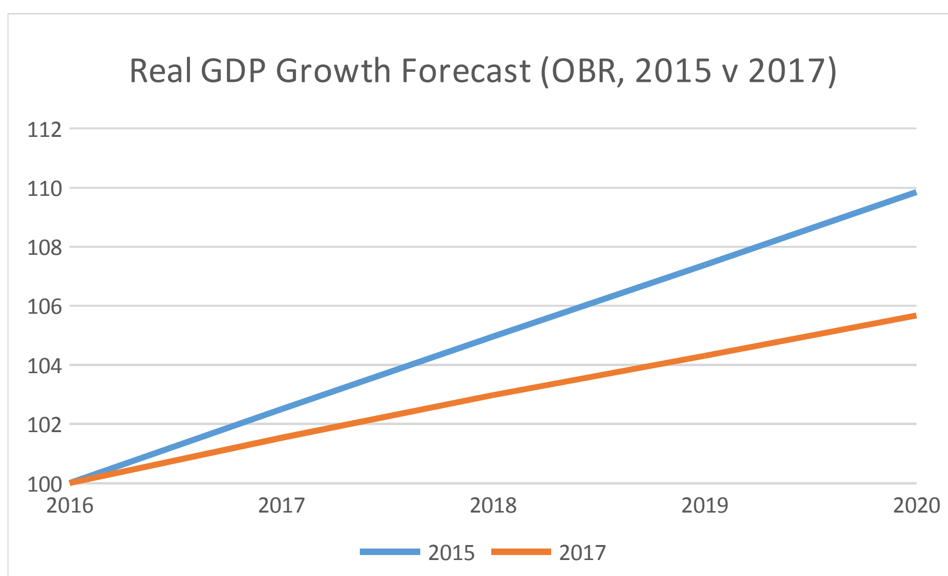
Figure 1: Impact of Revised IMF Forecasts for UK Real GDP



Source: IMF, World Economic Outlook Database, October 2015 and 2017, own calculations, (Base year 2016=100)

Figure 2 shows an even more striking effect from a British perspective. It illustrates the difference in projections of the UK's own Office for Budget Responsibility indicating a significant downward revision made after the BREXIT referendum. In late 2015, the projected real GDP growth in 2020 (again taking 2016 as a base year) was 4.1% higher than the projected growth rate for the same year made in the forecast made in late 2017. An output gap of over 4% within 5 years lends credence to the projected costs of the Treasury study – 6% after 15 years.

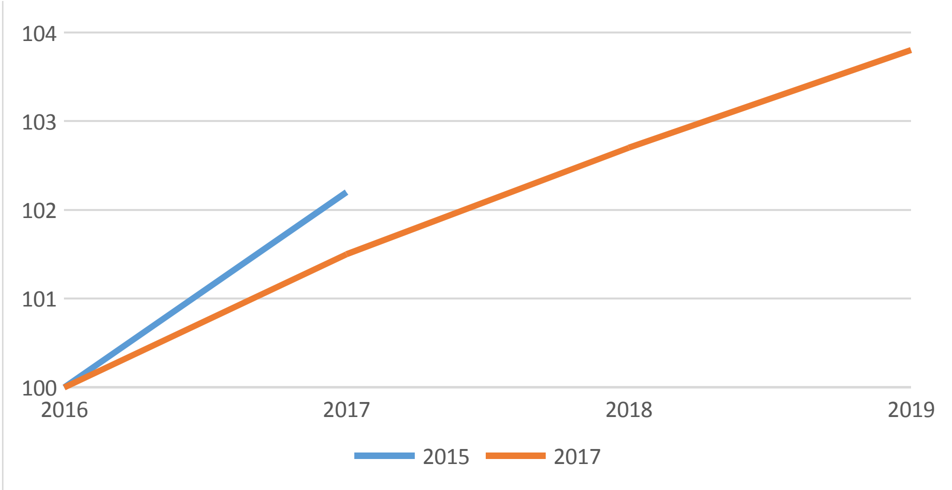
Figure 2: Impact of Revised Office for Budget Responsibility Forecasts for UK Real GDP



Source: Welfens (2017), The True Cost of BREXIT for the UK: A Research Note, EIIW Discussion Paper No. 234, www.eiiw.eu (Base year 2016=100)

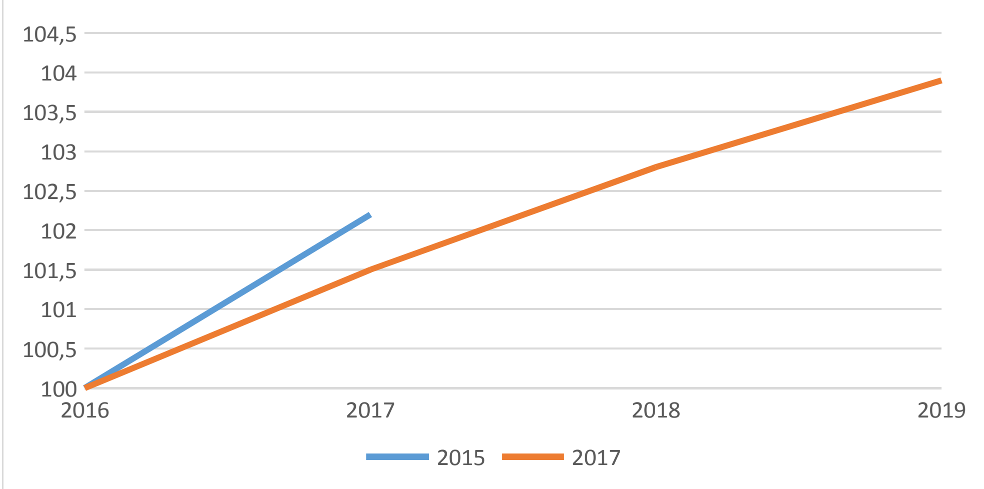
Other real GDP growth projections from the OECD (see Fig. 3) and the European Commission (see Fig. 4) show similar divergent paths in revised forecasts made following the referendum. However, unlike the IMF and OBR, which provided forecasts until at 2020 even prior to the BREXIT referendum, other sources did not provide projections so far into the future in 2015. Thus in the following two examples we look at the 2015 forecasts for 2017 and compare them to the annual real GDP growth forecast for 2017 made in the latter part of that year. For both the OECD and the European Commission projected real GDP growth is lower since the referendum than it was prior to it. In both cases, the level of GDP growth projected for 2017 in 2017 is 0.7% below the projected growth rate of real GDP for the same year made in 2015.

Figure 3: Impact of Revised OECD Forecasts for UK Real GDP



Source: OECD Economic Outlook, 2017 Issue 2 and 2015 Issue 2, own calculations (Base year 2016=100)

Figure 4: Impact of Revised OECD Forecasts for UK Real GDP

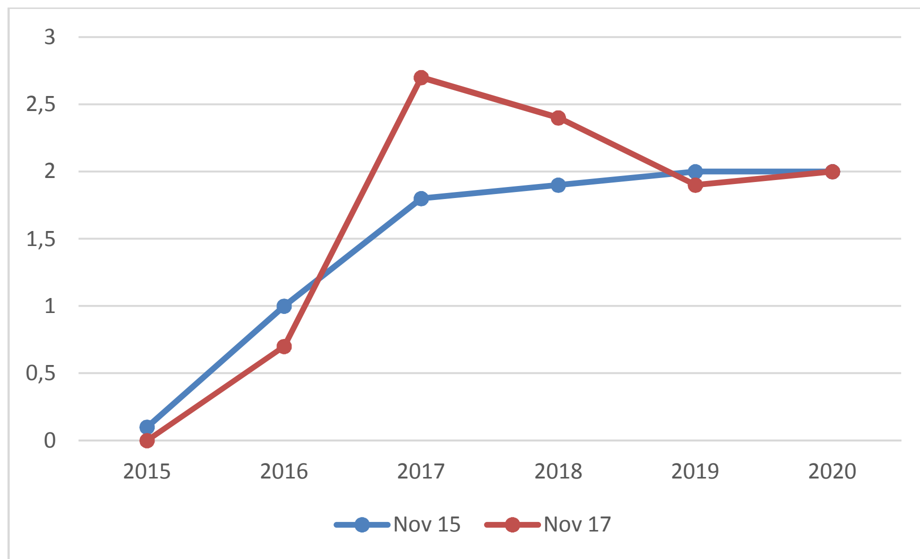


Source: European Commission, European Economic Forecast, Autumn 2015 and Autumn 2017 (Base year 2016=100)

Another indicator which has received a lot of attention, particularly in the United Kingdom, since the referendum is inflation. It is perhaps the indicator which ordinary voters may feel the negative impact of most in the short-term. Here, comparing the forecasts of inflation requires a more straightforward analysis, as the standard approach in such forecasts is for inflation projections to be made only for the short term, with the rate of inflation returning to the Bank of England target of 2% in relation to consumer price indices (CPI or CPIH).

In all of the examples provided here, however, we can see that inflation projections for 2017 made in 2015 consistently were below inflation for the year 2017 as forecast late that year. According to the forecasts provided here, the expert analysis in 2017 was that inflation would peak that year at close to but under 3% while falling back slightly in 2018. In other years, the projections return towards the 2% target. Note, the left-hand side scale reflects the projected rate of inflation in percent. The OBR forecast of inflation for 2017 made in November 2017 is 0.9% higher than was anticipated in November of 2015, this gap falls to 0.5% for 2018 (see Fig. 5).

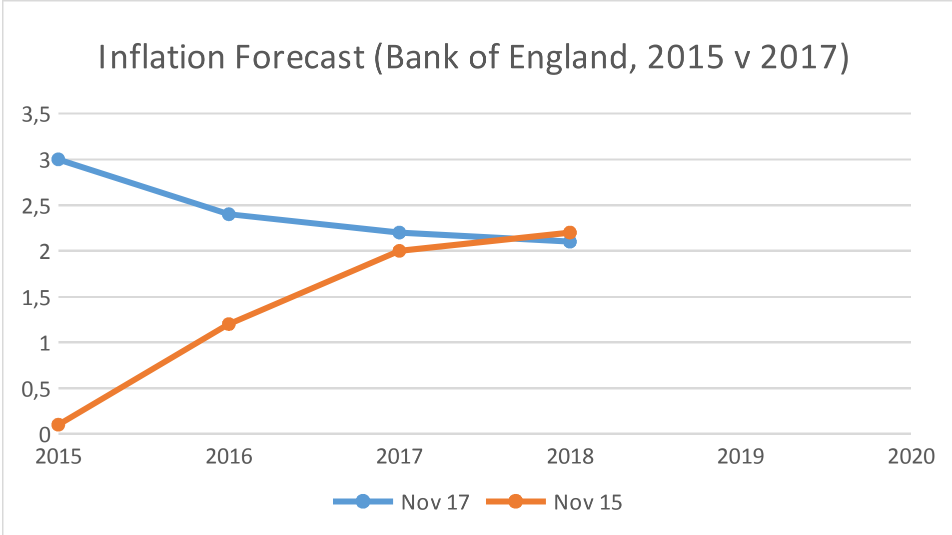
Figure 5: Impact of Revised OBR Forecasts for UK Inflation



Source: OBR, Historical Official Forecast Database, http://budgetresponsibility.org.uk/data/

The Bank of England forecasts for 2017 meanwhile show a 1% difference between 2015 and 2017 projections, with inflation anticipated to be higher in the year after the BREXIT referendum (see Fig. 6 – note, the November 2017 Inflation Report from the Bank of England did not include inflation figures for the years before 2017). Here, it is noteworthy that the two UK-based sources, the Office for Budget Responsibility and the Bank of England project a quicker falling of inflation rates after 2017. For the OBR, the 2017 projection of the level of inflation in 2019 is even lower than that made in 2015 at just under the 2% target.

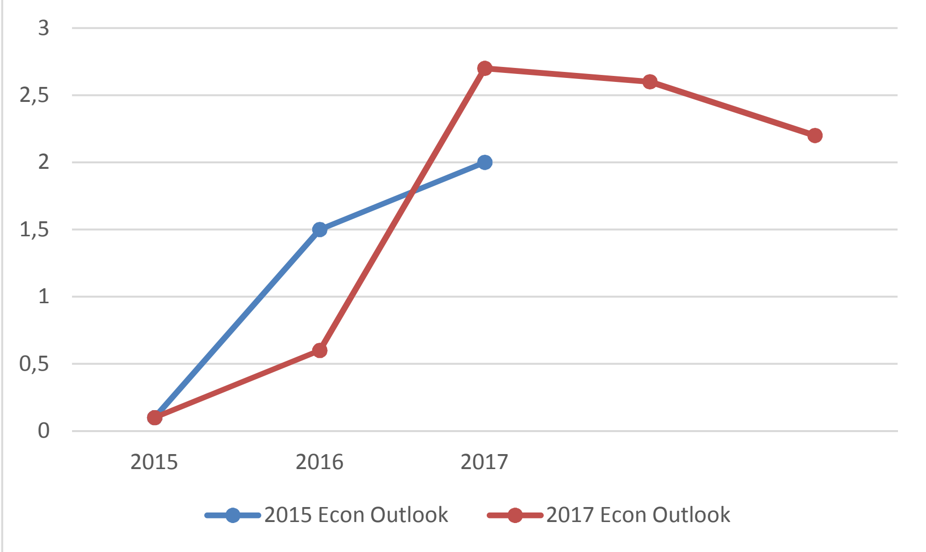
Figure 6: Impact of Revised Bank of England Forecasts for UK Inflation



Source: Bank of England Inflation Report, November 2017, and Bank of England Inflation Report, November 2015

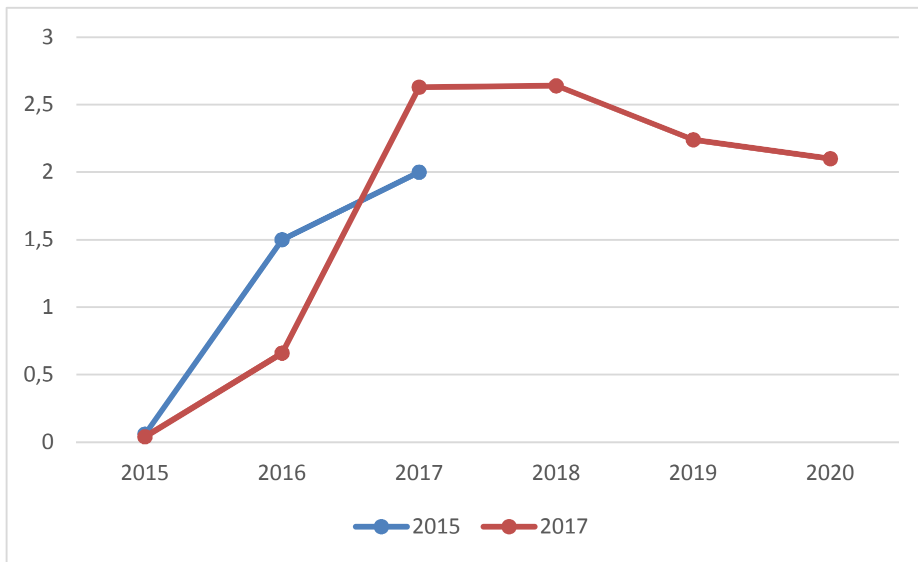
Forecasts from other sources also reflect the fact that inflation for 2017 was forecasted to be higher than had been predicted in 2015. However, projections from the OECD (Fig. 7), IMF (Fig. 8) and European Commission (Fig. 9) all see inflation remaining around the 2.6% mark (compared to the OBR's and BoE's 2.4%) before a more gradual return to the 2% target in the years thereafter.

Figure 7: Impact of Revised OECD Forecasts for UK Inflation



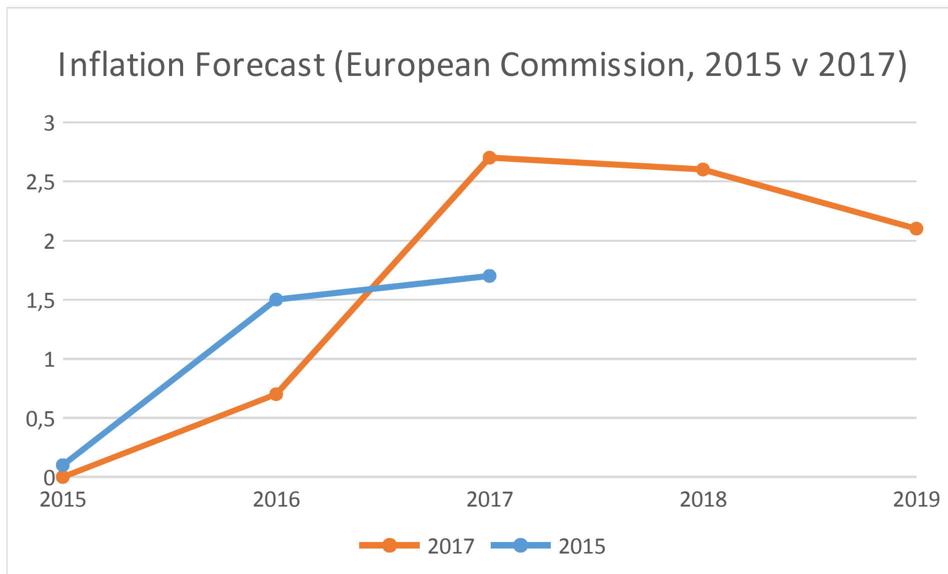
Source: OECD Economic Outlook, 2017 Issue 2 and 2015 Issue 2

Figure 8: Impact of Revised IMF Forecasts for UK Inflation



Source: IMF, World Economic Outlook Database, October 2015 and 2017

Figure 9: Impact of Revised European Commission Forecasts for UK Inflation

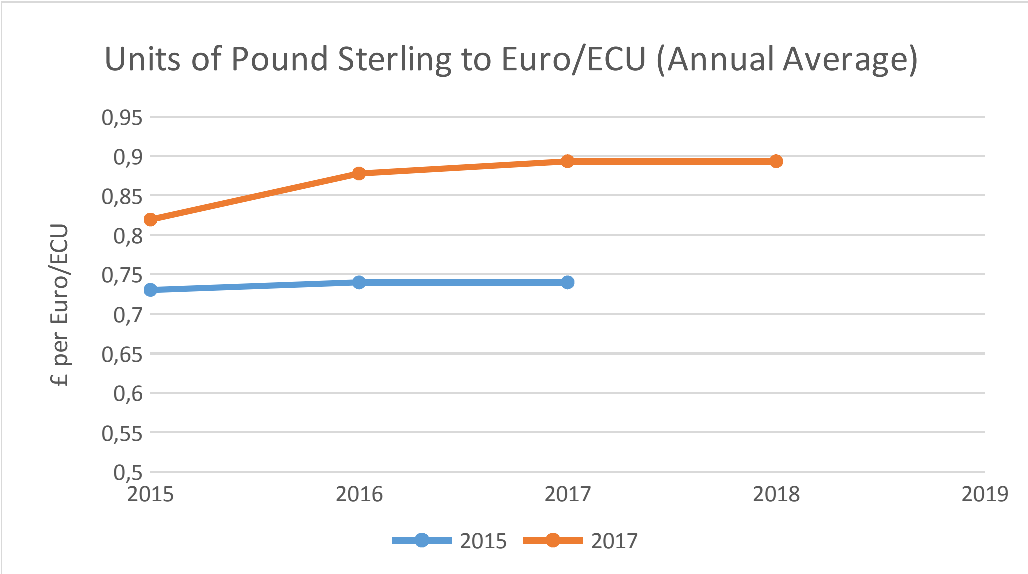


Source: European Commission, European Economic Forecast, Autumn 2015 and Autumn 2017.

A similar pattern can be found in the data relating to foreign exchange from the AMECO database. Forecasts for the Sterling/Euro exchange rates in the Autumn 2015 release foresaw a relatively stable exchange rate for the years ahead to 2017, however the annual average exchange rate in 2016, the year of the referendum, was higher than had been forecast, i.e. more units of Pound Sterling per Euro according to the 2017 updated edition of the database. Indeed Sterling depreciated against the Euro immediately after the vote in June 2016 and has recovered to some extent. However, the Pound is projected to depreciate

further in 2018 and 2019 against the Euro/ECU (see Fig. 10). This depreciation will have a lasting impact on British ownership of the capital stock as UK firms become more attractive targets for investors from abroad looking to participate in mergers and acquisitions thereby reducing national income further (see Welfens, 2017b).

Figure 10: Impact of Revised AMECO Forecasts for Pound to Euro/ECU Exchange Rate



Source: AMECO Database Autumn 2017 and AMECO Autumn 2015

3. Policy Conclusions

A number of conclusions for policy actors can be drawn from the descriptive statistics provided. Firstly, the revised forecasts in the wake of the BREXIT referendum do indeed raise questions about the quality of the pre-referendum campaign and the information which was available to the electorate. Secondly, the revision of forecasts and projections of macroeconomic indicators by institutions both within the UK and abroad do indeed require reflection and consideration in the BREXIT debate in 2018/19. Far from 'Project Fear', these new realities seem to support the pre-referendum findings of the Treasury, which were not adequately communicated to voters, for example. As forecasts are revised and the outlook for real GDP growth worsens and the inflation forecast rises, the calls for a second referendum may grow.

Moreover, the output decline post-BREXIT would represent a considerable problem for the poorest strata of UK society. Those with the lowest incomes can ill afford to lose a large share of their income which would have a disproportionately negative effect. Anything less than 12% medium-term real income loss from BREXIT would be a big surprise for the UK; for the lower strata of society, this figure is a disaster and the government in London has such a tight budget that there is no hope of being in a position to easily increase transfers to poor households in the foreseeable future. A decade of modest growth and high inflation would be critical for median income households and poorer strata.

Furthermore it raises questions about the policy options available to Downing Street in the hopes of raising economic growth. With modest growth forecast in the coming years, the

British government will face increased pressure after 2018 to reduce corporate tax rates – as an impulse to stimulate the investment-output ratio that has started to decline strongly in 2017. A move to significantly lower corporate tax rates would certainly cause friction at a European level as the UK will be seen as engaging in a ‘race to the bottom’ in terms of statutory tax rates. There will also be a new wave of excessive banking deregulation in the UK which has been discussed in government circles. Such a development would, along with US deregulation under President Trump, lead to excessive deregulation pressure for the EU and hence, sooner or later, to the next Transatlantic Banking Crisis. This holds unless the EU and the UK would agree upon continued EU-UK joint banking regulation which is not a likely outcome from the divorce negotiations in Brussels (for more on this, see Welfens, 2017; 2017b; 2017c). This topic should urgently be put on the negotiation agenda. There is also the risk of financial market shocks during the transition 2019-2020 which could undermine growth in the UK and EU27; with less EU27 growth there is an additional negative repercussion effect on the UK.

International organizations and platforms such as the OECD and G20 must play a role in developing coordinated pro-growth policies at an international level which would benefit both the UK and the EU27 as well as others. However, with President Trump favoring a bilateral approach to multilateralism, there may be an opportunity for the UK to capitalize on the “special relationship”. If one assumes that that the UK does indeed conclude a mini-TTIP with the United States, then the UK could expect a real income gain of about 2% - an estimate arrived at on the basis of the TTIP modeling carried out in Jungmittag/Welfens (2016) – a gain which, however, has already been factored into the GDP loss calculated by the EIIW which appears in Table 1.

The message of Brexiteers is often that economists are good at analyzing history, but bad at forecasting future developments; actually, this is to suggest that one should not believe in studies showing a clear negative output effect of Brexit. This conjecture is about as convincing as saying that meteorologists are good at analyzing past meteorological events, but bad at forecasting the weather – but this view is nonsense. Economists are not always good in forecasting short-term business cycle dynamics – medium-term and long-term modelling is, however, more reliable and the revisions to medium-term forecasts from before and after the BREXIT referendum do indeed show at this relatively early stage that there will be a significant price to be paid by the United Kingdom in the years ahead.

References

Cambridge Econometrics (2018), Preparing for Brexit, Final Report for the Greater London Authority, January 2018

Erken, H. et al. (2017), The permanent damage of Brexit, RaboResearch Special, Rabobank, October 12, 2017

Financial Times (2018), Secret Brexit analysis warns of financial hit to Britain, FT online 30.01.2018, last accessed 31.01.2018

Froot, K.; Stein, J. (1991), Exchange Rates and Foreign Direct Investments; *Quarterly Journal of Economics*, 1191-1217

HM Treasury (2016), HM Treasury Analysis: the long-term economic impact of EU membership and the alternatives, April 2016, London, available at www.gov.uk/government/publications/hm-treasury-analysis-the-long-term-economic-impact-of-eu-membership-and-the-alternatives

Jungmittag, A.; Welfens, P.J.J. (2016), Beyond EU-US Trade Dynamics: TTIP Effects Related to Foreign Direct Investment and Innovation, EIIW Discussion Paper No. 212, available at www.eiiw.eu

OECD (2013), International Migration Outlook 2013, Paris: OECD Publishing

Welfens, P.J.J. (2017a), An Accidental BREXIT, London: Palgrave Macmillan

Welfens, P.J.J. (2017b), The True Cost of BREXIT for the UK: A Research Note, EIIW Discussion Paper No. 234, available at www.eiiw.eu

Welfens, P.J.J. (2017c), Foreign Financial Deregulation under Flexible and Fixed Exchange Rates: A New Trilemma, EIIW Discussion Paper No. 238, available at www.eiiw.eu

Welfens, P.J.J.; Baier, F. (2018), BREXIT and FDI: Key Issues and New Empirical Findings, forthcoming as EIIW Discussion Paper No. 241, available at www.eiiw.eu

Welfens, P.J.J.; Hanrahan, D. (2017), The Brexit Dynamics: British and EU27 Challenges After the EU Referendum, Intereconomics, Vol. 52. No. 5, pp. 302-307

EIIW Discussion Papers

ISSN 1430-5445:
Standing orders (usually about 10 issues): academic rate 90 Euro p.a.; normal rate 250 Euro p.a.
Single orders: academic rate 10 Euro per copy; normal rate 30 Euro per copy.

Die Zusammenfassungen der Beiträge finden Sie im Internet unter:
The abstracts of the publications can be found in the internet under:

http://www.eiiw.eu

No. 100 **Gavrilenkov, E.:** Macroeconomic Situation in Russia - Growth, Investment and Capital Flows, October 2002

No. 101 **Agata, K.:** Internet, Economic Growth and Globalization, November 2002

No. 102 **Blind, K.; Jungmittag, A.:** Ausländische Direktinvestitionen, Importe und Innovationen im Dienstleistungsgewerbe, February 2003

No. 103 **Welfens, P.J.J.; Kirn, T.:** Mittelstandsentwicklung, BASEL-II-Kreditmarktprobleme und Kapitalmarktperspektiven, Juli 2003

No. 104 **Standke, K.-H.:** The Impact of International Organisations on National Science and Technology Policy and on Good Governance, March 2003

No. 105 **Welfens, P.J.J.:** Exchange Rate Dynamics and Structural Adjustment in Europe, May 2003

No. 106 **Welfens, P.J.J.; Jungmittag, A.; Kauffmann, A.; Schumann, Ch.:** EU Eastern Enlargement and Structural Change: Specialization Patterns in Accession Countries and Economic Dynamics in the Single Market, May 2003

No. 107 **Welfens, P.J.J.:** Überwindung der Wirtschaftskrise in der Eurozone: Stabilitäts-, Wachstums- und Strukturpolitik, September 2003

No. 108 **Welfens, P.J.J.:** Risk Pricing, Investment and Prudential Supervision: A Critical Evaluation of Basel II Rules, September 2003

No. 109 **Welfens, P.J.J.; Ponder, J.K.:** Digital EU Eastern Enlargement, October 2003

No. 110 **Addison, J.T.; Teixeira, P.:** What Have We Learned About The Employment Effects of Severance Pay? Further Iterations of Lazear et al., October 2003

No. 111 **Gavrilenkov, E.:** Diversification of the Russian Economy and Growth, October 2003

No. 112 **Wiegert, R.:** Russia's Banking System, the Central Bank and the Exchange Rate Regime, November 2003

No. 113 **Shi, S.:** China’s Accession to WTO and its Impacts on Foreign Direct Investment, November 2003

No. 114 **Welfens, P.J.J.:** The End of the Stability Pact: Arguments for a New Treaty, December 2003

No. 115 **Addison, J.T.; Teixeira, P.:** The effect of worker representation on employment behaviour in Germany: another case of -2.5%, January 2004

No. 116 **Borbèly, D.:** EU Export Specialization Patterns in Selected Accession Countries, March 2004

No. 117 **Welfens, P.J.J.:** Auf dem Weg in eine europäische Informations- und Wissensgesellschaft: Probleme, Weichenstellungen, Politikoptionen, Januar 2004

No. 118 **Markova, E.:** Liberalisation of Telecommunications in Russia, December 2003

No. 119 **Welfens, P.J.J.; Markova, E.:** Private and Public Financing of Infrastructure: Theory, International Experience and Policy Implications for Russia, February 2004

No. 120 **Welfens, P.J.J.:** EU Innovation Policy: Analysis and Critique, March 2004

No. 121 **Jungmittag, A.; Welfens, P.J.J.:** Politikberatung und empirische Wirtschaftsforschung: Entwicklungen, Probleme, Optionen für mehr Rationalität in der Wirtschaftspolitik, März 2004

No. 122 **Borbèly, D.:** Competition among Cohesion and Accession Countries: Comparative Analysis of Specialization within the EU Market, June 2004

No. 123 **Welfens, P.J.J.:** Digitale Soziale Marktwirtschaft: Probleme und Reformoptionen im Kontext der Expansion der Informations- und Kommunikationstechnologie, Mai 2004

No. 124 **Welfens, P.J.J.; Kauffmann, A.; Keim, M.:** Liberalization of Electricity Markets in Selected European Countries, July 2004

No. 125 **Bartelmus, P.:** SEEA Revision: Accounting for Sustainability?, August 2004

No. 126 **Welfens, P.J.J.; Borbèly, D.:** Exchange Rate Developments and Stock Market Dynamics in Transition Countries: Theory and Empirical Analysis, November 2004

No. 127 **Welfens, P.J.J.:** Innovations in the Digital Economy: Promotion of R&D and Growth in Open Economies, January 2005

No. 128 **Welfens, P.J.J.:** Savings, Investment and Growth: New Approaches for Macroeconomic Modelling, February 2005

No. 129 **Pospiezna, P.:** The application of EU Common Trade Policy in new Memberstates after Enlargement – Consequences on Russia's Trade with Poland, March 2005

No. 130 **Pospiezna, P.; Welfens, P.J.J.:** Economic Opening up of Russia: Establishment of new EU-RF Trade Relations in View of EU Eastern Enlargement, April 2005

No. 131 **Welfens, P.J.J.:** Significant Market Power in Telecommunications: Theoretical and Practical Aspects, May 2005

No. 132 **Welfens, P.J.J.:** A Quasi-Cobb Douglas Production Function with Sectoral Progress: Theory and Application to the New Economy, May 2005

No. 133 **Jungmittag, A.; Welfens, P.J.J:** Institutions, Telecommunications Dynamics and Policy Challenges: Theory and Empirical Analysis for Germany, May 2005

No. 134 **Libman, A.:** Russia's Integration into the World Economy: An Interjurisdictional Competition View, June 2005

No. 135 **Feiguine, G.:** Beitritt Russlands zur WTO – Probleme und Perspektiven, September 2005

No. 136 **Welfens, P.J.J.:** Rational Regulatory Policy for the Digital Economy: Theory and EU Policy Options, October 2005

No. 137 **Welfens, P.J.J.:** Schattenregulierung in der Telekommunikationswirtschaft, November 2005

No. 138 **Borbèly, D.:** Determinants of Trade Specialization in the New EU Member States, November 2005

No. 139 **Welfens, P.J.J.:** Interdependency of Real Exchange Rate, Trade, Innovation, Structural Change and Growth, December 2005

No. 140 **Borbély D., Welfens, P.J.J.:** Structural Change, Innovation and Growth in the Context of EU Eastern Enlargement, January 2006

No. 141 **Schumann, Ch.:** Financing Studies: Financial Support schemes for students in selected countries, January 2006

No. 142 **Welfens, P.J.J.:** Digitale Innovationen, Neue Märkte und Telekomregulierung, März 2006

No. 143 **Welfens, P.J.J.:** Information and Communication Technology: Dynamics, Integration and Economic Stability, July 2006

No. 144 **Welfens, P.J.J.:** Grundlagen rationaler Transportpolitik bei Integration, August 2006

No. 145 **Jungmittag, A.:** Technological Specialization as a driving Force of Production Specialization, October 2006

No. 146 **Welfens, P.J.J.:** Rational Regulatory Policy for the Digital Economy: Theory and EU-Policy Options, October 2006

No. 147 **Welfens, P.J.J.:** Internationalization of EU ICT Industries: The Case of SAP, December 2006

NO. 148 **WELFENS, P.J.J.:** MARKTWIRTSCHAFTLICHE PERSPEKTIVEN DER ENERGIEPOLITIK IN DER EU: ZIELE, PROBLEME, POLITIKOPTIONEN, DEZEMBER 2006

No. 149 **Vogelsang, M.:** Trade of IT Services in a Macroeconomic General Equilibrium Model, December 2006

NO. 150 **CASSEL, D., WELFENS, P.J.J.:** REGIONAL INTEGRATION, INSTITUTIONAL DYNAMICS AND INTERNATIONAL COMPETITIVENESS, DECEMBER 2006

No. 151 **Welfens, P.J.J., Keim, M.:** Finanzmarktintegration und Wirtschaftsentwicklung im Kontext der EU-Osterweiterung, März 2007

No. 152 **Kutlina, Z.:** Realwirtschaftliche und monetäre Entwicklungen im Transformationsprozess ausgewählter mittel- und osteuropäischer Länder, April 2007

No. 153 **Welfens, P.J.J.; Borbély, D.:** Structural Change, Growth and Bazaar Effects in the Single EU Market, September 2008

No. 154 **Feiguine, G.:** Die Beziehungen zwischen Russland und der EU nach der EU-Osterweiterung: Stand und Entwicklungsperspektiven, Oktober 2008

No. 155 **Welfens, P.J.J.:** Ungelöste Probleme der Bankenaufsicht, Oktober 2008

No. 156 **Addison J.T.:** The Performance Effects of Unions. Codetermination, and Employee Involvement: Comparing the United States and Germany (With an Addendum on the United Kingdom), November 2008

No. 157 **Welfens, P.J.J.:** Portfoliomodell und langfristiges Wachstum: Neue Makroperspektiven, November 2008

No. 158 **Welfens, P.J.J.:** Growth, Structural Dynamics and EU Integration in the Context of the Lisbon Agenda, November 2008

No. 159 **Welfens, P.J.J.:** Growth, Innovation and Natural Resources, December 2008

No. 160 **Islami, M.:** Interdependence Between Foreign Exchange Markets and Stock Markets in Selected European Countries, December 2008

No. 161 **Welfens, P.J.J.:** Portfolio Modelling and Growth, January 2009

No. 162 **Bartelmus, P.:** Sustainable Development – Has It Run Its Course?, January 2009

No. 163 **Welfens, P.J.J.:** Intégration Européenne et Mondialisation: Défis, Débats, Options, February 2009

No. 164 **Welfens, P.J.J.:** ЭКОНОМИЧЕСКИЙ РОСТ, ИННОВАЦИИ И ПРИРОДНЫЕ РЕСУРСЫ, February 2009

No. 165 **Welfens, P.J.J.; Vogelsang, M.:** Regulierung und Innovationsdynamik in der EU-Telekommunikationswirtschaft, February 2009

No. 166 **Welfens, P.J.J.:** The International Banking Crisis: Lessons and EU Reforms, February 2009

No. 167 **Schröder, C.:** Financial System and Innovations: Determinants of Early Stage Venture Capital in Europe, March 2009

No. 168 **Welfens, P.J.J.:** Marshall-Lerner Condition and Economic Globalization, April 2009

No. 169 **Welfens, P.J.J.:** Explaining Oil Price Dynamics, May 2009

No. 170 **Welfens, P.J.J.; Borbély, D.:** Structural Change, Innovation and Growth in the Single EU Market, August 2009

No. 171 **Welfens, P.J.J.:** Innovationen und Transatlantische Bankenkrise: Eine ordnungspolitische Analyse, August 2009

No. 172 **Erdem, D.; Meyer, K.:** Natural Gas Import Dynamics and Russia´s Role in the Security of Germany´s Supply Strategy, December 2009

No. 173 **Welfens P.J.J; Perret K.J.:** Structural Change, Specialization and Growth in EU 25, January 2010

No. 174 **Welfens P.J.J.; Perret K.J.; Erdem D.:** Global Economic Sustainability Indicator: Analysis and Policy Options for the Copenhagen Process, February 2010

No. 175 **Welfens, P.J.J.:** Rating, Kapitalmarktsignale und Risikomanagement: Reformansätze nach der Transatlantischen Bankenkrise, Februar 2010

No. 176 **Mahmutovic, Z.:** Patendatenbank: Implementierung und Nutzung, Juli 2010

No. 177 **Welfens, P.J.J.:** Toward a New Concept of Universal Services: The Role of Digital Mobile Services and Network Neutrality, November 2010

No. 178 **Perret J.K.:** A Core-Periphery Pattern in Russia – Twin Peaks or a Rat´s Tail, December 2010

No. 179 **Welfens P.J.J.:** New Open Economy Policy Perspectives: Modified Golden Rule and Hybrid Welfare, December 2010

No. 180 **Welfens P.J.J.:** European and Global Reform Requirements for Overcoming the Banking Crisis, December 2010

No. 181 **Szanyi, M.:** Industrial Clusters: Concepts and Empirical Evidence from East-Central Europe, December 2010

No. 182 **Szalavetz, A.:** The Hungarian automotive sector – a comparative CEE perspective with special emphasis on structural change, December 2010

No. 183 **Welfens, P.J.J.; Perret, K.J.; Erdem, D.:** The Hungarian ICT sector – a comparative CEE perspective with special emphasis on structural change, December 2010

No. 184 **Lengyel, B.:** Regional clustering tendencies of the Hungarian automotive and ICT industries in the first half of the 2000's, December 2010

No. 185 **Schröder, C.:** Regionale und unternehmensspezifische Faktoren einer hohen Wachstumsdynamik von IKT Unternehmen in Deutschland; Dezember 2010

No. 186 **Emons, O.:** Innovation and Specialization Dynamics in the European Automotive Sector: Comparative Analysis of Cooperation & Application Network, October 2010

No. 187 **Welfens, P.J.J.:** The Twin Crisis: From the Transatlantic Banking Crisis to the Euro Crisis? January 2011

No. 188 **Welfens, P.J.J.:** Green ICT Dynamics: Key Issues and Findings for Germany, March 2012

No. 189 **Erdem, D.:** Foreign Direct Investments, Energy Efficiency and Innovation Dynamics, July 2011

No. 190 **Welfens, P.J.J.:** Atomstromkosten und -risiken: Haftpflichtfragen und Optionen rationaler Wirtschaftspolitik, Mai 2011

No. 191 **Welfens, P.J.J.:** Towards a Euro Fiscal Union: Reinforced Fiscal and Macroeconomic Coordination and Surveillance is Not Enough, January 2012

No. 192 **Irawan, Tony:** ICT and economic development: Conclusion from IO Analysis for Selected ASEAN Member States, November 2013

No. 193 **Welfens, P.J.J.; Perret, J.:** Information & Communication Technology and True Real GDP: Economic Analysis and Findings for Selected Countries, February 2014

No. 194 **Schröder, C.:** Dynamics of ICT Cooperation Networks in Selected German ICT Clusters, August 2013

No. 195 **Welfens, P.J.J.; Jungmittag, A.:** Telecommunications Dynamics, Output and Employment, September 2013

No. 196 **Feiguine, G.; Solojova, J.:** ICT Investment and Internationalization of the Russian Economy, Septemper 2013

No. 197 **Kubielas, S.; Olender-Skorek, M.:** ICT Modernization in Central and Eastern Europe, May 2014 Trade and Foreign Direct Investment New Theoretical Approach and Empirical Findings for US Exports & European Exports

No. 198 **Feiguine, G.; Solovjova, J.:** Significance of Foreign Direct Investment for the Development of Russian ICT sector, May 2014

No. 199 **Feiguine, G.; Solovjova, J.:** ICT Modernization and Globalization: Russian Perspectives, May 2014

No. 200 **Syraya, O.:** Mobile Telecommunications and Digital Innovations, May 2014

No. 201 **Tan, A.:** Harnessing the Power if ICT and Innovation Case Study Singapore, June 2014

No. 202 **Udalov, V.:** Political-Economic Aspects of Renewable Energy: Voting on the Level of Renewable Energy Support, November 2014

No. 203 **Welfens, P.J.J.:** Overcoming the EU Crisis and Prospects for a Political Union, November 2014

No. 204 **Welfens, P.J.J.; Irawan, T.:** Trade and Foreign Direct Investment: New Theoretical Approach and Empirical Findings for US Exports and European Exports, November 2014

No. 205 **Welfens, P.J.J.:** Competition in Telecommunications and Internet Services: Problems with Asymmetric Regulations, Dezember 2014

No. 206 **Welfens, P.J.J.:** Innovation, Inequality and a Golden Rule for Growth in an Economy with Cobb-Douglas Function and an R&D Sector, März 2015

No. 207 **Perret, J.K.:** Comments on the Impact of Knowledge on Economic Growth across the Regions of the Russian Federation

No. 208 **Welfens, P.J.J.; Irawan T.:** European Innovations Dynamics and US Economic Impact: Theory and Empirical Analysis, June 2015

No. 209 **Welfens, P.J.J.:** Transatlantisches Freihandelsabkommen EU-USA: Befunde zu den TTIP-Vorteilen und Anmerkungen zur TTIP-Debatte, Juni 2015

No. 210 **Welfens, P.J.J.:** Overcoming the Euro Crisis and Prospects for a Political Union, July 2015

No. 211 **Welfens, P.J.J.:** Schumpeterian Macroeconomic Production Function for Open Economies: A New Endogenous Knowledge and Output Analysis, January 2016

No. 212 **Jungmittag, A.; Welfens, P.J.J.:** Beyond EU-US Trade Dynamics: TTIP Effects Related to Foreign Direct Investment and Innovation, February 2016

No. 213 **Welfens, P.J.J.:** Misleading TTIP analysis in the 6th/7th May 2016 issue of DER SPIEGEL, May 2016

No. 214 **Welfens, P.J.J.:** TTIP-Fehlanalyse im SPIEGEL Heft 6. Mai 2016, Mai 2016

No. 215 **Welfens, P.J.J.; Irawan, T.; Perret, J.K.:** True Investment-GDP Ratio in a World Economy with Investment in Information & Communication Technology, June 2016

No. 216 **Welfens, P.J.J.:** EU-Osterweiterung: Anpassungsprozesse, Binnenmarktdynamik und Euro-Perspektiven, August 2016

No. 217 **Perret, J.K.:** A Spatial Knowledge Production Function Approach for the Regions of the Russian Federation, June 2016

No. 218 **Korus, A.:** Currency Overvaluation and R&D Spending, September 2016

No. 219 **Welfens, P.J.J.:** Cameron's Information Disaster in the Referendum of 2016: An Exit from Brexit? September 2016

No. 220 **Welfens, P.J.J.:** Qualitätswettbewerb, Produktinnovationen und Schumpetersche Prozesse in internationalen Märkten, October 2016

No. 221 **Jungmittag, A.:** Techno-Globalisierung, October 2016

No. 222 **Dachs, B.:** Techno-Globalisierung als Motor des Aufholprozesses im österreichischen Innovationssystem, October 2016

No. 223 **Perret, Jens K.:** Strukturwandel in der Europäischen Union am Beispiel ausgewählter Leitmärkte mit besonderem Bezug auf die Innovationstätigkeit der Mitgliedsländer, October 2016

No. 224 **Irawan, T.; Welfens, P.J.J.:** ICT Dynamics and Regional Trade Bias in Asia: Theory and Empirical Aspects, October 2016

No. 225 **Korus, A.:** Erneuerbare Energien und Leitmärkte in der EU und Deutschland, October 2016

No. 226 **Dachs, B.; Budde, B.:** Fallstudie Nachhaltiges Bauen und Lead Markets in Österreich, October 2016

No. 227 **Welfens, P.J.J.:** eHealth: Grundlagen der Digitalen Gesundheitswirtschaft und Leitmarktperspektiven, October 2016

No. 228 **Korus, A.:** Innovationsorientierte öffentliche Beschaffung und Leitmärkte: Politische Initiativen in der EU, October 2016

No. 229 **Irawan, T.; Welfens, P.J.J.:** IKT Dynamik und regionale Handelsverzerrungen in Asien: Theorie und empirische Aspekte, Oktober 2016

No. 230 **Nan, Yu:** Innovation of renewable energy generation technologies at a regional level in China: A study based on patent data analysis, December 2016

No. 231 **Welfens, P.J.J.:** Knowledge Creation and Enhanced Investment Dynamics in a Europe with New Institutions, March 2017

No. 232 **Welfens, P.J.J.:** Negative Welfare Effects from Enhanced International M&As in the Post-BREXIT-Referendum UK, April 2017

No. 233 **Udalov, V.; Welfens, P.J.J.:** Digital and Competing Information Sources: Impact on Environmental Concern und Prospects for Cooperation, April 2017

No. 234 **Welfens, Paul J.J.:** The True Cost of BREXIT for the UK: A Research Note, October 2017

No. 235 **Welfens, Paul J.J.; Hanrahan, D.:** BREXIT: Key Analytical Issues and Insights from Revised Economic Forecasts, January 2018

No. 236 **Welfens, Paul J.J.:** Techno-Globalisierung, Leitmärkte und Strukturwandel in

wirtschaftspolitischer Sicht, August 2017

No. 238 **Welfens, P.J.J.:** Foreign Financial Deregulation under Flexible and Fixed Exchange Rates, June 2017

No. 239 **Welfens, P.J.J.; Kadiric, S.:** Neuere Finanzmarktaspekte von Bankenkrise, QE-Politik und EU-Bankenaufsicht, July 2017

No. 240 **Welfens, P.J.J.; Hanrahan, D**.: The BREXIT Dynamics: British and EU27 Challenges after the EU Referendum, May 2017

No. 241 **Welfens, P.J.J.; Baier, F**.: BREXIT and FDI: Key Issues and New Empirical Findings, January 2018

Weitere Beiträge von Interesse:

Titels of related interest:

Paul J.J. Welfens (2017), An Accidental BREXIT, New EU and Transatlantic Economic Perspectives, Palgrave Macmillan

Paul J.J. Welfens (2017), Macro Innovation Dynamics and the Golden Age
New Insights into Schumpeterian Dynamics, Inequality and Economic Growth, Springer Heidelberg

Paul J.J. Welfens (Nov. 2016), Brexit aus Versehen: Europäische Union zwischen Desintegration und neuer EU, Springer Heidelberg

Paul J.J. Welfens; Jens K. Perret; Tony Irawan; Evgeniya Yushkova (2015), Towards Global Sustainability, Springer Berlin Heidelberg

Paul J.J. Welfens; A. Korus; T. Irawan (2014), Transatlantisches Handels- und Investitionsabkommen: Handels-, Wachstums- und industrielle Beschäftigungsdynamik in Deutschland, den USA und Europa**,** Lucius & Lucius Stuttgart

Paul J.J. Welfens (2013), Grundlagen der Wirtschaftspolitik, 5. Auflage, Springer Berlin Heidelberg

Paul J.J. Welfens (2013), Social Security and Economic Globalization, Springer Berlin Heidelberg

Paul J.J. Welfens (2012), Clusters in Automotive and Information & Communication Technology, Springer Berlin Heidelberg

Paul J.J. Welfens (2011), Innovations in Macroeconomics, 3rd revised and enlarged edition, Springer Berlin Heidelberg

Paul J.J. Welfens (2011), Zukunftsfähige Wirtschaftspolitik für Deutschland und Europa, Springer Berlin Heidelberg

Paul J.J. Welfens; Cillian Ryan, eds. (2011), Financial Market Integration and Growth, Springer Berlin Heidelberg

Raimund Bleischwitz; Paul J.J. Welfens; Zhong Xiang Zhang (2011), International Economics of Resource Efficiency, Physica-Verlag Heidelberg

Paul J.J. Welfens; John T. Addison (2009), Innovation, Employment and Growth Policy Issues in the EU and the US, Springer Berlin Heidelberg

Paul J.J. Welfens; Suthiphand Chirathivat; Franz Knipping (2009), EU – ASEAN, Springer Berlin Heidelberg

Paul J.J. Welfens; Ellen Walther-Klaus (2008), Digital Excellence, Springer Berlin Heidelberg

Huub Meijers; Bernhard Dachs; Paul J.J. Welfens (2008), Internationalisation of European ICT Activities, Springer Berlin Heidelberg

Richard Tilly; Paul J.J. Welfens; Michael Heise (2007), 50 Years of EU Economic Dynamics, Springer Berlin Heidelberg

Paul J.J. Welfens; Mathias Weske (2007), Digital Economic Dynamics, Springer Berlin Heidelberg

Paul J.J. Welfens; Franz Knipping; Suthiphand Chirathivat (2006), Integration in Asia and Europe, Springer Berlin Heidelberg

Edward M. Graham; Nina Oding; Paul J.J. Welfens (2005), Internationalization and Economic Policy Reforms in Transition Countries, Springer Berlin Heidelberg

Paul J.J. Welfens; Anna Wziatek-Kubiak (2005), Structural Change and Exchange Rate Dynamics, Springer Berlin Heidelberg

Paul J.J. Welfens; Peter Zoche; Andre Jungmittag; Bernd Beckert; Martina Joisten (2005), Internetwirtschaft 2010, Physica-Verlag Heidelberg

Evgeny Gavrilenkov; Paul J.J. Welfens; Ralf Wiegert (2004), Economic Opening Up and Growth in Russia, Springer Berlin Heidelberg

John T. Addison; Paul J.J. Welfens (2003), Labor Markets and Social Security, Springer Berlin Heidelberg

Timothy Lane; Nina Oding; Paul J.J. Welfens (2003), Real and Financial Economic Dynamics in Russia and Eastern Europe, Springer Berlin Heidelberg

Claude E. Barfield; Günter S. Heiduk; Paul J.J. Welfens (2003), Internet, Economic Growth and Globalization, Springer Berlin Heidelberg

Thomas Gries; Andre Jungmittag; Paul J.J. Welfens (2003), Neue Wachstums- und Innovationspolitik in Deutschland und Europa, Physica-Verlag Heidelberg

Hermann-Josef Bunte; Paul J.J. Welfens (2002), Wettbewerbsdynamik und Marktabgrenzung auf Telekommunikationsmärkten, Springer Berlin Heidelberg

Paul J.J. Welfens; Ralf Wiegert (2002), Transformationskrise und neue Wirtschaftsreformen in Russland, Physica-Verlag Heidelberg

Paul J.J. Welfens; Andre Jungmittag (2002), Internet, Telekomliberalisierung und Wirtschaftswachstum, Springer Berlin Heidelberg

Paul J.J. Welfens (2002), Interneteconomics.net, Springer Berlin Heidelberg

David B. Audretsch; Paul J.J. Welfens (2002), The New Economy and Economic Growth in Europe and the US, Springer Berlin Heidelberg

Paul J.J. Welfens (2001), European Monetary Union and Exchange Rate Dynamics, Springer Berlin Heidelberg

Paul J.J. Welfens (2001), Internationalization of the Economy and Environmental Policy Options, Springer Berlin Heidelberg

Paul J.J. Welfens (2001), Stabilizing and Integrating the Balkans, Springer Berlin Heidelberg

Richard Tilly; Paul J.J. Welfens (2000), Economic Globalization, International Organizations and Crisis Management, Springer Berlin Heidelberg

Paul J.J. Welfens; Evgeny Gavrilenkov (2000), Restructuring, Stabilizing and Modernizing the New Russia, Springer Berlin Heidelberg

Paul J.J. Welfens; Klaus Gloede; Hans Gerhard Strohe; Dieter Wagner (1999), Systemtransformation in Deutschland und Rußland, Physica-Verlag Heidelberg

Paul J.J. Welfens; Cornelius Graack (1999), Technologieorientierte Unternehmensgründungen und Mittelstandspolitik in Europa, Physica-Verlag Heidelberg

Paul J.J. Welfens; George Yarrow; Ruslan Grinberg; Cornelius Graack (1999), Towards Competition in Network Industries, Springer Berlin Heidelberg

Paul J.J. Welfens (1999), Globalization of the Economy, Unemployment and Innovation, Springer Berlin Heidelberg

Paul J.J. Welfens (1999), EU Eastern Enlargement and the Russian Transformation Crisis, Springer Berlin Heidelberg

Paul J.J. Welfens; S. Jungbluth; H. Meyer; John T. Addison; David B. Audretsch; Thomas Gries; Hariolf Grupp (1999), Globalization, Economic Growth and Innovation Dynamics, Springer Berlin Heidelberg

Paul J.J. Welfens; David B. Audretsch; John T. Addison; Hariolf Grupp (1998), Technological Competition, Employment and Innovation Policies in OECD Countries, Springer Berlin Heidelberg

John T. Addison; Paul J.J. Welfens (1998), Labor Markets and Social Security, Springer Berlin Heidelberg

Axel Börsch-Supan; Jürgen von Hagen; Paul J.J. Welfens (1997), Wirtschaftspolitik und Weltwirtschaft, Springer Berlin Heidelberg

Paul J.J. Welfens; George Yarrow (1997), Telecommunications and Energy in Systemic Transformation, Springer Berlin Heidelberg

Jürgen v. Hagen; Paul J.J. Welfens; Axel Börsch-Supan (1997), Springers Handbuch der Volkswirtschaftslehre 2, Springer Berlin Heidelberg

Paul J.J. Welfens; Holger C. Wolf (1997), Banking, International Capital Flows and Growth in Europe, Springer Berlin Heidelberg

Paul J.J. Welfens (1997), European Monetary Union, Springer Berlin Heidelberg

Richard Tilly; Paul J.J. Welfens (1996), European Economic Integration as a Challenge to Industry and Government, Springer Berlin Heidelberg

Jürgen v. Hagen; Axel Börsch-Supan; Paul J.J. Welfens (1996), Springers Handbuch der Volkswirtschaftslehre 1, Springer Berlin Heidelberg

Paul J.J. Welfens (1996), Economic Aspects of German Unification, Springer Berlin Heidelberg

Paul J.J. Welfens; Cornelius Graack (1996), Telekommunikationswirtschaft, Springer Berlin Heidelberg

Paul J.J. Welfens (1996), European Monetary Integration , Springer Berlin Heidelberg

Michael W. Klein; Paul J.J. Welfens (1992), Multinationals in the New Europe and Global Trade, Springer Berlin Heidelberg

Paul J.J. Welfens (1992), Economic Aspects of German Unification, Springer Berlin Heidelberg

Paul J.J. Welfens (1992), Market-oriented Systemic Transformations in Eastern Europe, Springer Berlin Heidelberg

Paul J.J. Welfens (1990), Internationalisierung von Wirtschaft und Wirtschaftspolitik, Springer Berlin Heidelberg

Paul J.J. Welfens; Leszek Balcerowicz (1988), Innovationsdynamik im Systemvergleich, Physica-Verlag Heidelberg