

BREXIT: THE ECONOMIC IMPACT – A SURVEY

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Introduction

The results of the British referendum in favour of a Brexit have left the British public in dire need of reliable insights into the economic impact of this historical caesura. In the short term, higher uncertainty has already dented investor and consumer sentiment and has also led to a significant fall in the British pound. As far as the impact in the longer term is concerned, the Brexiteers allege that a Brexit will benefit Britain while ‘Remain’-campaigners have warned of considerable economic damage. Such diverging forecasts call for sound economic research to clarify the net effects of a Brexit.

Many analyses attempt to quantify the longer-term economic effects of a Brexit (or of EU membership) for Britain. The results range from significant advantages to marked losses. At one extreme, estimates suggest that Britain would be roughly 11.5 percent of GDP worse-off due to EU membership and would thus benefit from a Brexit to this degree (Congdon 2014). The other extreme is covered by studies that estimate the possible benefits of the Britain’s EU membership to be in the range of 20 percent (GDP per capita) or higher (Henrekson *et al.* 1997; Badinger 2005; Campos *et al.* 2015). Britain stands to lose a sizeable amount of these benefits in the case of a Brexit. Results of up to 30 percentage points certainly appear dissatisfactory and call for a deeper comparative analysis.

With a thorough survey (Busch and Matthes 2016b), we rise to this challenge. Our study portrays the various economic effects of a Brexit in a qualitative way

* Cologne Institute for Economic Research. This article is based on Busch and Matthes (2016b); short articles summarising the study’s results have appeared in two blogs (Busch and Matthes, 2016c; Busch and Matthes 2016e) and a British journal directed at the global (financial) business community (Busch and Matthes 2016d).

and provides a systematic overview of the main studies (published prior to early April 2016). We distinguish between theory-based forward looking (*ex ante*) studies (many, but not all of which are based on our own models) and backward looking (*ex post*) studies. Overall, our comparison shows that the diverging results can be explained by significantly different methods and assumptions, as well as a varying coverage of effects.

Only moderate and manageable effects!?

A sound basis for summarising conclusions is only provided by studies that include the positive and the negative effects of a Brexit. On the positive side, fiscal savings due to the (partial) elimination of EU contributions are possible. In addition, lower economic distortions could be effected because Britain could lower external EU trade barriers and withdraw from the Common Agricultural Policy (CAP) in case of a Brexit. On the negative side, there will be losses due to reduced trade integration. These disadvantages will be augmented by future losses from foregone new EU trade agreements and from foregone reductions in non-tariff barriers in the Internal Market. Our overview portrays the various effects covered (or not covered) by each study. It shows that no forward-looking study covers all relevant aspects at the same time in sufficient detail.

Based on those *ex ante* model-based studies that are considered relatively reliable and comprehensive,¹ a certain consensus seems to have emerged. Firstly, the disadvantages of a Brexit resulting from poorer economic integration appear to outweigh the economic advantages. This is a result of most pertinent *ex ante* models. However, the size of net costs is considered to be only moderate. Several reviews come to similar (mainstream) conclusions that the net economic costs of a Brexit should lie in the lower single digit range of between 1 and mostly significantly below 5 percent of GDP in the longer term (e.g. CEBR 2015; CBI 2013).

¹ See e.g. Ottaviano *et al.* (2014a and 2014b); Open Europe (2015); Aichele and Felbermayr (2015); Dhingra *et al.* (2016) for CGE trade models, and Pain and Young (2004); PwC (2016); Oxford Economics (2016) for general CGE macroeconomic models.



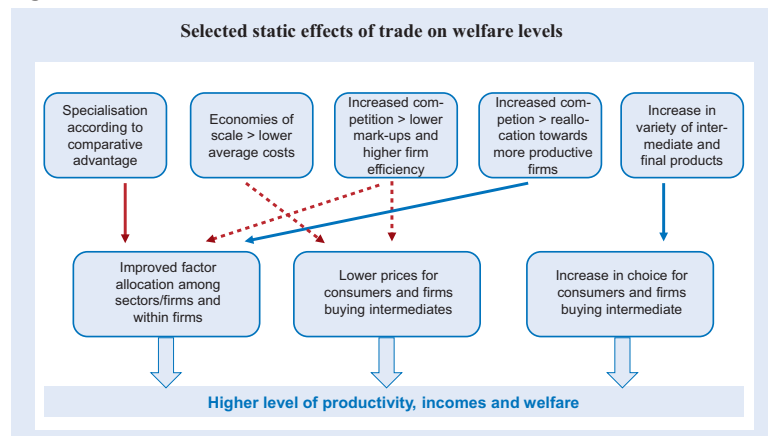
Thus, from this point of view, the economic effects of a Brexit seem manageable and the decision to leave the EU appears to be mainly a political consideration related to sovereignty and self-determination.

Doubts and warnings

We raise serious doubts about this mainstream conclusion, as there are important shortcomings in the mainstream methods that are likely to conceal significantly higher risks. Even the more reliable forward-looking model-based studies are unable to cover all relevant channels by which economic integration raises welfare. Figures 1 to 3 provide an overview of the effects that are hardly covered: positive static and dynamic trade effects on welfare and growth, as well as the additional non-trade effects of economic integration. More specifically, the positive effects from higher competition on innovation and on firm selection induced by more trade and FDI are hardly covered. We thoroughly take stock of the substantial theoretic and empirical support for these additional welfare and growth effects (for details and citations of a selection of the relevant literature, see Busch and Matthes 2016b). In doing so, we point out, however, that the available empirical evidence concerns only each individual effect, and barely focuses on European integration or the case of a Brexit.

Unfortunately, there is no universally accepted theory-based *ex ante* estimation method available to integrate all of these specific effects in a comprehensive way. Going beyond the available for-

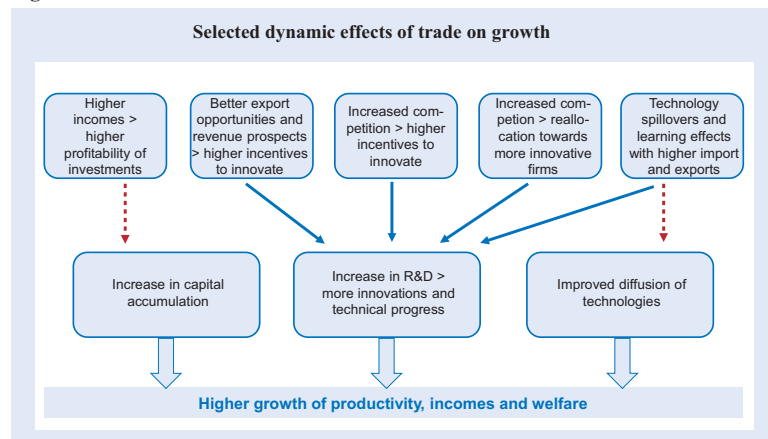
Figure 1



Note: (1) Red arrow: effect covered in most *ex ante* CGE and NQTM trade models (not in non-trade CGE models for UK); (2) Dotted red arrow: effect covered in at least one, but only a few *ex ante* models; these models only cover selected effects; (3) Blue arrow: effect not covered in *ex ante* models.

Source: Authors' conception.

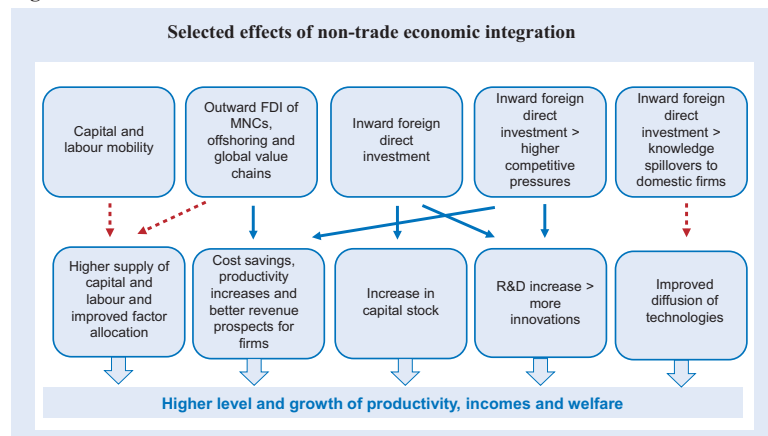
Figure 2



Note: (1) Dotted red arrow: effect covered in at least one, but only a few *ex ante* models; these models only cover selected effects; (2) Blue arrow: effect not covered in *ex ante* models.

Source: Authors' conception.

Figure 3



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Source: Authors' conception.

ward-looking methods towards *ex post* analyses implies moving onto somewhat less solid ground. Nevertheless, we consider it necessary to also include the results from these studies in order to come closer to an objective and realistic view. We therefore present several backward-looking studies that use existing data. These studies attempt to quantify the comprehensive welfare effects of EU integration or of a Brexit. However, they are only able to do so in an implicit and less theoretically explicit way. All of these attempts can be criticised to some extent, because it is notoriously difficult to ascribe welfare effects to EU integration, as many other factors influence welfare at the same time. However, the overall take on backward looking studies suggests that a Brexit could cause a significantly worse economic impact in a more pessimistic scenario than the mainstream conclusions indicate.

Results from backward-looking studies

Trade effects of economic integration tend to be underestimated by theoretical forward-looking trade models. In fact, *ex post* studies tend to find significantly larger trade effects of trade agreements than *ex ante* models, such as CGE models (Rosa and Gilbert 2005; Baier *et al.* 2008; Pelkmans *et al.* 2014). Recently developed methods tend to increase this divergence. A relatively new strand of the literature argues that traditional gravity models – the workhorse for *ex post* analysis of trade agreements – also tend to underestimate trade outcomes (Baier and Bergstrand 2007; Egger *et al.* 2011). A more modern gravity approach finds significantly larger results. For example, Baier *et al.* (2008) estimate that membership of the EU (and of its institutional predecessors) has increased trade between members by 100 to 125 percent over a 15-year period alone.

Based on these insights, Busch and Matthes (2016b) describe three strands of backward-looking studies that attempt to quantify income or growth effects in a more encompassing (but necessarily only implicit) way:

- Using recent forecasts of the negative effects of a Brexit on bilateral trade between Britain and the EU, the induced income decline can be quantified in a tentative way. Based on a general *trade-income-relationship* calculated by recent thorough studies, three studies estimate that Britain's incomes could

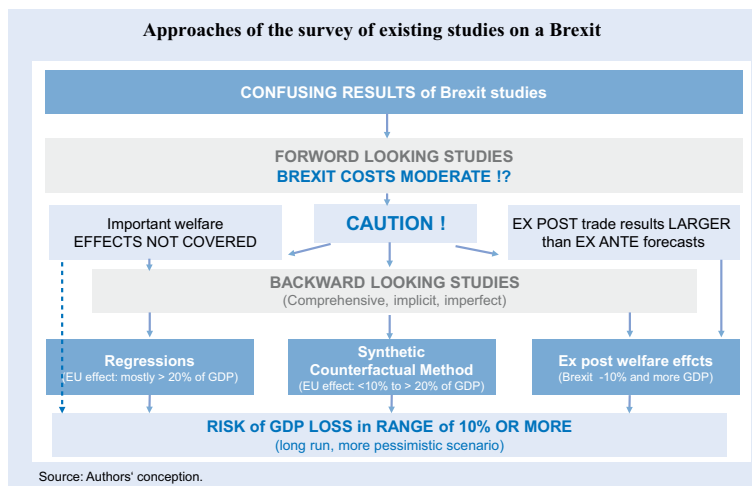
possibly decline by around 10 percent or more in a more pessimistic scenario (Ottaviano *et al.* 2014a and 2014b; Aichele and Felbermayr 2015; Crafts 2015). An important shortcoming of these attempts lies in the fact that the trade-income relationship could not be tailored specifically to Britain.

- Several studies employ *regression analyses* (Henrekson *et al.* 1997; Badinger 2005; Crespo Cuaresma *et al.* 2008). Even although the results differ in their details, these studies identify the sizeable effects of EU membership on the level of GDP in the long term – mostly in the range of 20 percent or more. However, some uncertainties remain, as the results are in part not completely robust and as growth regressions are notoriously difficult to make watertight.
- Campos *et al.* (2014 and 2015) apply a relatively new *synthetic counterfactual method* (SCM), which was developed by Abadie and Gardeazabal (2003). Mimicking the approach of clinical studies, the authors construct an artificial synthetic control group by selecting countries with a similar economic performance to Britain over a longer time before EU accession in 1973 (pre-treatment period). The effect of EU membership (treatment) can be deduced from the difference between the economic outcome for Britain and that for the control group. Campos *et al.* (2015) estimate that in the long run (between EU accession of Britain up to 2008), real GDP per capita in Britain is nearly 24 percent higher than in the synthetic control group. However, this result is not very robust. Focusing on the findings of various robustness checks on productivity increases over a ten year horizon, the respective results lie in the higher single digit range (up to 10 percent). This is still a substantial result, particularly when taking into consideration that benefits may increase further over time.

Summary of the potential net costs of a Brexit

Figure 4 provides an overview of our approach. Based on this approach, we warn that – in a more pessimistic scenario – the risk of Britain sustaining GDP losses in the broad range of 10 percent or more cannot be ruled out in the long run in the case of a Brexit. Such negative effects would be significantly higher than suggested by the moderate net costs estimated by the mainstream studies.

Figure 4



Economic relations to the EU and the impact of a Brexit

The key question arises of whether a more pessimistic scenario is likely. This will depend on legal basis upon which Britain will continue to do business with the EU and with the rest of the world after a Brexit. Different scenarios that will be outlined below should be compared to the current economic relations between Britain and the EU.

In fact, the EU is the main trading partner for the British economy – it is the destination for around 45 percent of all British exports of goods and around 38 percent of total exported British services. While Britain has a significant deficit in goods trade with the EU, it obtains a sizeable bilateral surplus in services trade. Around half of all service exports to the EU are accounted for by financial and other business services. The reliance on service exports renders Britain vulnerable to a loss of access to the internal market of the EU.

Looking solely at the trade shares with the EU, the importance of membership in the EU is underestimated. Around 60 percent of Britain's external trade is with countries either in the EU or with an EU trade agreement (TheCityUK 2014). This share will rise to around 85 percent if current EU trade negotiations are successful. In the case of a Brexit, trade relations with third countries could be negatively affected, as existing trade agreements would no longer be applicable until they were renegotiated.

Depending on the institutional arrangement between Britain and the EU, a Brexit would imply higher EU

trade barriers. Trade transaction costs would rise and customs clearance requirements would lead to delays for British firms exporting to the EU. Thus, EU companies could be inclined to cut British firms out of their (just-in-time) cross border value chains due to higher trade costs and time delays. Moreover, Britain would partially lose access to the EU internal market, which would particularly affect the freedom to provide services and the right of establishment in the EU. Higher

EU trade barriers could also induce British and foreign companies to shift jobs from Britain to the continent. Britain (and in particular the City of London) could suffer from relocations, as especially US companies use this country as a bridgehead for the EU, which would be far more complicated after a Brexit. Moreover, trading in euro-denominated financial transactions is likely to be relocated from London towards the euro area (i.e. to Frankfurt, Paris or Dublin).

Different models for economic integration with the EU after a Brexit

After withdrawal, alternative bilateral institutional arrangements are possible between Britain and the EU. Four options are briefly discussed here (Booth and Howarth 2012; CBI 2013; Etzold 2013; House of Commons 2013; House of Commons Foreign Affairs Committee 2013). Table 1 provides an overview of these options.

As members of the EFTA (European Free Trade Association), Norway, Iceland and Liechtenstein are also members of the EEA and are thus part of the EU's internal market. The EEA is an in-depth free trade area between the EU and has expanded the internal market to these three countries. It guarantees the free movement of goods, persons, services and capital. However, participation in the internal market is not free. The EEA countries are bound by the internal market rules of the EU, but they have no real say in the making of these rules (Booth and Howarth 2012). In addition, the EEA countries have no influence in the European Parliament. According to a re-

Table 1

Possible alternatives to EU membership and their consequences

		Norway (EEA)	Switzerland	Turkey	WTO
Disadvantages of a Brexit for UK					
Loss of access to the single market	No tariffs / free movement of goods	No	Largely	Largely	Yes
	Free movement of persons	No	Largely	Yes	Yes
	Free movement of capital	No	Yes	Yes	Yes
	Free movement of services	No	Partially	Yes	Yes
Renegotiation of FTAs		Yes	Yes	Yes	Yes
Loss of decision making rights in the EU		Very largely	Yes	Yes	Yes
Advantages of a Brexit for UK					
Avoidance of EU protectionism		Possible	Possible	No	Possible
Avoidance of compliance with EU-regulations		Very limited	Limited	Partially	Yes
Avoidance of financial contributions to the EU		Very limited	Limited	Yes	Yes

Source: House of Commons, 2013; Cologne Institute for Economic Research.

port by the Norwegian government, Norway has adopted over 75 percent of all EU laws (ONR 2012).

For Britain, an EEA agreement would mean that it has to maintain social and employment regulations such as the working time directive (CBI 2013), as this area of policy is also part of internal market regulations. Moreover, the country would remain bound by the regulations of the EU financial markets if the City of London were to be allowed free movement of capital in the EU. What is more, the free movement of persons would still apply and Britain would have to continue to finance the EU budget to a sizeable degree (Busch and Matthes 2016b). All in all, the country would have to maintain those arrangements that are seen particularly critically – without the ability and scope to participate in shaping them. Thus, Britain would have to give up even more of its sovereignty if it decided to go for the Norwegian option. Another disadvantage concerns higher trade costs. The EEA is not a customs union. Therefore, rules of origin on goods traded with third countries would have to be complied with and customs procedures are required for trade between Britain and the EU (Oppermann 2009; House of Commons 2013; House of Commons Foreign Affairs Committee 2013).

Switzerland's relationship with the EU is regulated by the free trade agreement of 1972 and a number of sectoral bilateral agreements: Bilateral Agreements I and Bilateral Agreements II. The subjects of Bilateral Agreements I are primarily liberalization and market opening. With Bilateral Agreements II, economic cooperation has been strengthened and extended to cover further areas (Swiss Confederation 2015). Around 120 bilateral agreements and amendments with the

EU are in force, of which 20 are crucial to relations. Overall, the level of EU integration in the case of Switzerland is well below the level that the EEA has reached with the EU (Tobler *et al.* 2010). In particular, a comprehensive agreement between the EU and Switzerland could not be reached with regard to the free movement of services.

Such a situation could prove to be disadvantageous for Britain due to its particular strength in the service sector. With special regard to financial services, there is only one small bilateral agreement between Switzerland and the EU, i.e. on non-life insurance. Swiss banks cannot generally access the internal market for financial services, as the EU obtains regulatory barriers to entry *via* third countries, particularly for cross border service delivery (Booth and Howarth 2012). Therefore, Britain would probably want to negotiate a broader service agreement with the EU focusing on financial and business services. However, as an 'applicant' its negotiating position does not appear very strong. Moreover, Switzerland contributes financially to the EU's cohesion policy.

One advantage of the Swiss option for Britain might be that it would no longer have to comply with the EU social and employment regulations and would not be included in the CAP and regional policy. All in all, the Swiss option is not very popular in the EU. Migration issues pose a serious problem: Switzerland's relations with the EU suffered after the Swiss voted in a referendum (February 2014) against the free movement of persons. It is thus highly questionable whether the EU is willing to accept a similar relationship with Britain.

Since 1996, the EU and Turkey have formed a customs union, which includes the tariff-free movement of manufactured goods and processed agricultural products. Other agricultural products, as well as coal and steel products, are not included. Rules of origin are not required (Booth and Howarth 2012). Compared to the EEA, the institutional arrangements with Turkey include significantly less far-reaching rules on the freedom of persons and services (Tobler *et al.* 2010). Turkey is outside the full internal market (House of Commons Foreign Affairs Committee 2013). The country does not contribute to the EU budget.

The Turkish option can be characterised as a privileged partnership. An important advantage for Britain would be that the free movement of goods could still be maintained. However, the free movement of services, capital and persons is not included in the Turkish option. While this would offer the possibility of restricting immigration from the EU, Britain's service sectors, and especially its financial industry, would be excluded from the internal market of the EU. To tackle this substantial drawback, Britain would have to negotiate an agreement on the freedom of services and capital with the EU, in addition to the customs union.

All in all, it appears doubtful whether economic relations between Britain and the EU would be sufficiently structured with a customs union. Duties have decreased in importance and non-tariff barriers are all the more important. Thus a lack of access to the internal market weighs heavily in many respects. This is all the more relevant, because in contrast to Turkey, the British service sector is much more important. However, a customs union agreement does not cover the service sector. It is also questionable to some degree whether the EU would accept a customs union as an option for an exit; the customs union with Turkey was certainly intended as a precursor for eventual membership (CBI 2013).

Britain's membership of the World Trade Organisation (WTO) would remain as a fall-back position in the case of a withdrawal from the EU. WTO membership offers only limited access to the EU market based on Most Favourite Nation (MFN) treatment. This means that the country's market access is granted under the same rules and conditions as that of all other WTO members without preferential trade agreements with the EU. However, the MFN principle ensures that Britain could not be charged higher tariffs than those

imposed on the same product imported from another WTO member state (CEPR 2013).

British companies would have to pay the EU import tariffs if they wanted to export to the EU. While the average EU external tariffs are relatively low at around 4.2 percent, 90 percent of British export values in the EU would be affected by duties (House of Commons 2013). For some products, EU tariff rates are significantly higher: 10 percent for passenger cars and as much as 15 percent for food products (Springford *et al.* 2014).

Moreover, British exporters would have to comply with new non-tariff barriers due to the limited access for goods to the internal market. The other freedoms of the internal market would also be affected. The GATS of the WTO only allows a much lower degree of market access than the rules of the internal market (CBI 2013). More specifically, British companies would no longer have an automatic right of establishment in a member state of the EU. Moreover, an end to the freedom of movement for persons would hinder both the British citizen and British companies that do business with the European mainland. New rules would also apply to trade with third countries, as Britain would have to renegotiate existing FTAs.

Moreover the conditions of Britain's membership in the WTO would have to be renegotiated, as the Director-General of the Organization recently declared (Azevedo 2016; FT 2016). Britain has to re-establish its commitments with the WTO. A deal would be necessary, *inter alia*, on the customs duties imposed on goods, quotas in the agricultural sector or subsidies to British farmers. As there is no blueprint, these negotiations could take several years to be completed.

On the positive side, Britain would regain full regulatory sovereignty with regard to the competences that are now communal at the EU level and that have been criticised as an unnecessary burden for the country. Moreover, British payments to the EU budget would be brought to an end. The fall-back position of WTO membership could be considered if it proved impossible to negotiate an agreement with the EU within the two-year period of the TEU.

Dangerous misconceptions

Contrary to suggestions by Brexiteers, Britain would not be able to optimally balance the advantages and

disadvantages of a Brexit. It undoubtedly has some freedom to construct a tailor-made solution in the form of a more or less comprehensive preferential trade agreement. However, even with a tailor-made solution, an important trade-off cannot be evaded: the higher the degree of integration between both sides (and the better the market access for British firms to the EU market), the less the perceived burden of EU regulations, migration and financial contributions would be alleviated and the less regulatory sovereignty could be regained by Britain. This clearly shows that in the pre-referendum debate, the Brexiteers dishonestly promised British citizens that they could have their cake and eat it at the same time.

Additional misconceptions have to be highlighted:

- The Brexiteers suggested that the negotiating position of Britain would be not bad due to its merchandise trade balance deficit with the EU and based on the expectation that the EU would want to maintain good political relations. This optimism may be misleading: Britain would probably be in a defensive position, because it would rely far more heavily on access to the much larger EU market than *vice versa*. Moreover, the EU is not likely to offer generous conditions for market access, as this precedent could invite other members to withdraw from the EU. The recent signals from Brussels and several EU capitals have been clear in this respect: ‘cherry picking’ will not be possible for Britain.
- The proponents of a Brexit often argue that Britain can liberalise its trade policy *vis à vis* third countries to the benefit of British consumers and that, at the same time, it can secure attractive market access conditions in these countries for British firms. However, this might appear overly optimistic, because Britain is only able to offer a significantly smaller market than the EU and would be in a defensive position. Moreover, Britain also faces a certain dilemma: in order to reap the welfare benefits of free trade, Britain would have to unilaterally reduce its trade barriers sooner rather than later. Yet, if it does so, it loses important bargaining chips that are necessary to obtain significant market access in the ‘give and take’ of bilateral trade negotiations.

In view of these considerations, a more pessimistic future integration scenario does not seem implausible. We therefore reiterate our warning of sizeable net economic long term costs to Britain.

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