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BREXIT CONSEQUENCES FOR UNITED KINGDOM'S TRADE
CONSECINȚELE BREXIT-ULUI PENTRU COMERȚUL MARII BRITANII

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Annotation: *This article is analyzing the consequences of Brexit for United Kingdom's trade and its living standards. This analysis firstly is quantifying the static effects of the Brexit on trade and income. To overcome this difficulty, it was analyzed two scenarios: first one - optimistic scenario in which the increase in trade costs between the United Kingdom and the European Union is small, and the second one - a pessimistic scenario with a larger rise in trade costs.*

Adnotare: *Acest articol analizează implicațiile Brexit pentru comerțul Regatului Unit și standardul său de viață. Această analiză, pe de o parte, este o evaluare cantitativă a efectelor statice ale Brexit-ului asupra comerțului și veniturilor în ansamblu. Pentru a depăși această dificultate, au fost analizate două scenarii: primul - un scenariu optimist în care creșterea costurilor comerciale între Regatul Unit și Uniunea Europeană este mică, iar al doilea - un scenariu pesimist, cu o creștere mare a costurilor comerciale.*

Keywords: *United Kingdom, European Union, Brexit, trade policy, tariffs, living standards.*

Cuvinte-cheie: *Marea Britanie, Uniunea Europeană, Brexit, politică comercială, tarife, standarde de viață.*

Introduction

The outcome of the United Kingdom's referendum on membership within the European Union will shape country's future trade relations with its largest trade partner – the European Union. Membership of the European Union has reduced trade costs between the United Kingdom and the rest of member-states. There is a customs union between European Union members, which means that all tariff barriers have been removed within the member-states, allowing the goods and services free trade. Also, equally important in reducing the trade costs has been the reduction of non-tariff barrier as a result of the European Union continuous efforts and actions in creation of Single Market. Nontariff barriers include many measures which raise the cost of trade like border control, checks regarding the rules of origin, differences between states in regulations over product standards and safety, as well as the anti-dumping threats. These reductions of trade barriers have increased trade between the United Kingdom and the European Union. Prior to the United Kingdom joining the European Economic Community in 1973, around 1/3 of United Kingdom trade was with the European Economic Community countries. In 2014, the 27 other European Union member-states accounted for 45% of the United Kingdom's exports and 53% of the imports. European Union exports comprise 13% of United Kingdom national income.

Higher trade benefits consumers through lower prices on goods and services and better access on market. At the same time, the United Kingdom's labor and businesses benefit from export opportunities that lead to bigger sales and profits and allow the United Kingdom in specializing in industries in which it has a comparative advantage. By these channels, increased trade raises outputs, incomes as well as living standards in the United Kingdom. Standard static effects of trade remained clear for years since at least the work-paper of David Ricardo. But in recent decades, many studies on trade have identified very large effects on wellbeing through other routes like higher productivity and innovation. This article reports a range of forecasts which are based on alternative estimation methods and different assumptions regarding the way the United Kingdom's relationship with the European Union would change following the Brexit procedure. Primarily focusing on narrow, static trade consequences of Brexit rather than other channels by which Brexit could affect the United Kingdom's economy, like investment and migration. Although it is really hard to assess what may bring the economic future and there are many uncertainties, it was consistently found that by reducing trade, Brexit would have as a result lower living standards in United Kingdom. One important issue, the fall in income per capita results from lower trade more than offsets any savings that the United Kingdom is obtaining from reduced fiscal contributions to the budget of the European Union.

The basic estimations imply that after accounting for tax savings, the effect of Brexit is equivalent to a fall in United Kingdom income of 1.3% - 2.6% – which is, a decline in average annual household income of £850 - £1,700/ year. These basic estimations come from a static model of the global economy. In the article are presented estimations using empirical evidence on the link between the European Union membership, trade and income. This approach is capturing the effects on long-run of leaving the European Union based on productivity growth and leads to much higher estimates. In such case, it is calculated that Brexit can reduce national income by 6.3% - 9.5% – that is, between £4,200 - £6,400/household per year. It is abstracted away from the cost of the political doubt which will result from the negotiations regarding the Brexit. The impact of such doubts has been found to be important in much recent researches [11].

Materials and methods of research

Quantitative and qualitative research methods investigate and explore the different claims to knowledge and both methods are designed to address a specific type of research question. While the quantitative method provides an objective measure of reality, the qualitative method allows the researcher to explore and better understand the complexity of a phenomenon [3].

The research methods used in writing the article: method of economic observations, namely, purposeful and organized perception of economic facts, delivering the primary material for scientific economic research, method of economic measurement, economic analysis and synthesis, method of economic modeling.

Results and considerations

Estimating the Brexit effects. In order to estimate the Brexit effect on the United Kingdom's trade as well as the living standards, it is used a modern quantitative trade model of the global economy. Quantitative trade models is incorporating the channels through which trade affects consumers, companies and labor, and provide a mapping from trade data to welfare. The model provides Figura s for how much the real incomes are changing under different trade policies, using already available information on trade volumes and other potential trade barriers. This model uses the most recent information which divides the world economy in 31 regions and 35 sectors. It allows for trade in both goods and services in both intermediate inputs and final output. The model takes into account the Brexit effects of on the United Kingdom's trade with the European Union and the United Kingdom trade with the rest of the world. To forecast the following consequences of the United Kingdom from leaving the European Union, it must be made an assumption on how trade costs change following the Brexit. It is not exactly known how the United Kingdom's relations with the European Union would change following Brexit, which means that there is not enough clarity over the Brexit consequences over trade costs between the United Kingdom and the European Union.

To overcome this difficulty, it was analyzed two scenarios: first one - optimistic scenario in which the increase of trade costs between the United Kingdom and the European Union is small, and the second one - pessimistic scenario with a higher increase in trade costs. The first one (optimistic scenario) presumes that following Brexit, the United Kingdom's trade relations with the European Union are similar to those currently faced by Norway. In its quality of European Economic Area member, Norway has a free trade agreement with the European Union, which means that there are no trade tariffs between Norway and the European Union.

Norway in its quality of European single market member is adopting policies and regulations designed to reduce non-tariff barriers within the European single market. But at the same time, Norway is not a member of the European Union's customs union, so there exist several non-tariff barriers that do not apply to European Union members like rules of origin requirements and anti-dumping duties. It is found by some scientists that Norway's productivity growth has been harmed by not fully participating within the European Union's programs of market integration. In the second scenario (pessimistic scenario), it is assumed that the United Kingdom is not successful enough in negotiating a new trade agreement with the European Union and, as a result, that trade between the United Kingdom and the European Union following Brexit is governed according to the rules of the World Trade Organization.

This implies larger increases in trade costs than the first (optimistic) scenario because most favored nation tariffs are imposed on United Kingdom-European Union trade and because the World Trade Organization has reached less progress in reduction of nontariff barriers than the European Union. Increases in trade costs between the United Kingdom and the European Union post-Brexit can be divided into three parts: higher tariffs on imports; higher non-tariff barriers to trade (resulting from different regulations, tariffs, border controls, etc.); and the United Kingdom may not take part in future actions that the European Union undertakes towards deeper integration and the reduction of non-tariff barriers within the European Union.

In the first (optimistic) scenario, it is assumed that the United Kingdom and the European Union continue to enjoy a free trade agreement and Brexit does not have as a result any change in tariff barriers. In the second (pessimistic) scenario where trade is governed according to the rules of World Trade Organization, it is assumed most favored nation tariffs are imposed on United Kingdom-European Union goods trade. Regarding non-tariff barriers, in the first (optimistic) scenario, it is assumed that United Kingdom-European Union trade is subject to 25% of the reducible non-tariff barriers that are part of United States-European Union trade. In the second (pessimistic) scenario, it is assumed a larger increase of three quarters of reducible non-tariff barriers [11]. Finally, trade costs between countries within the European Union have been declining approximately 40% faster than trade costs which occur between other OECD countries. In the case of Brexit, the United Kingdom would not benefit from any future reductions in intra-European Union trade costs. In the first (optimistic) scenario, it is assumed that in the ten years following Brexit, intra-European Union trade costs would fall by 20% faster than in the rest of the world, while in the second (pessimistic) scenario, it is assumed that intra-European Union trade costs would continue to fall by 40% faster than in the rest of the world. This implies that in the first (optimistic) case, non-tariff barriers within the European Union would fall by 5,7% over the next decade, while in the second (pessimistic) case they would fall by 12,8%. These estimates also account for fiscal transfers between the United Kingdom and the European Union [11]. Like all European Union member-states, the United Kingdom makes a contribution to the European Union budget. United Kingdom's net fiscal contribution to the European Union budget has been assessed to be approximatively 0,53% of its national income.

One benefit of Brexit for the United Kingdom would be a reduced contribution to the European Union budget. But in this case, the Brexit will not necessarily mean that the United Kingdom will make zero contribution to the European Union budget. In return for access to the single market, the members of the European Economic Community like Norway make substantial contributions (payments) to the European Union. On a per capita basis, Norway's financial contribution to the budget of the European Union is 83% as large as the United Kingdom's payment. Therefore, in the first (optimistic) case it is assumed that the United Kingdom's contribution to the European Union budget would fall by 17% (which constitutes 0.09% of UK national income) [11].

In the second (pessimistic) case where the United Kingdom is outside the European Economic Community, it is assumed that the United Kingdom would save more of its current contribution. The amount of 0.53% saving includes only the public finance components so excludes all the transfers the European Union is making directly to universities, companies and other nongovernmental bodies. Taking into consideration reasonable assumption that after the Brexit, the United Kingdom government does not cut these funding, the saving would be 0.31% according to Eurostat [6]. These costs essentially come from the agricultural subsidies in the Common Agricultural Policy.

In the Table 1 are summarized the results of this analysis. For each case, it is calculated the percentage change in the level of income per capita that has the same effect on living standards in the United Kingdom as Brexit. The reported Figura s should be interpreted as permanent changes in average income per capita in the United Kingdom that occur immediately following the Brexit. In the first (optimistic) scenario, there would be an overall fall in income by 1,28% that is largely related to current and possible future changes in non-tariff barriers. Non-tariff barriers have a particularly important role in restricting trade with services, an area where the United Kingdom is a major exporter. In the second (pessimistic) scenario, the overall loss would increase by 2,61%. The costs of reduced trade far outweigh the fiscal savings in both presented scenarios. In the terms of cash, the cost of Brexit to the average United Kingdom household is £850/year in the first (optimistic) scenario and £1,700/year in the second (pessimistic) scenario [6].

Table 1. The effects of Brexit on United Kingdom's living standards [4]

	Optimistic	Pessimistic
Trade effects	-1.37%	-2.92%
Tax benefit	0.09%	0.31%
Total change in income per capita	-1.28%	-2.61%
Income change per household	-£850	-£1,700

Long-run Brexit effects. The estimates presented in Table 1 are based on a static trade model that does not account for the dynamic effects of trade on productivity. Trade can have positive effects through increasing competition, which reduces excess profits and promotes efficiency. The innovation can also be stimulated by competition, access to superior intermediate goods and a larger export market. Recent research has found that the dynamic effects may double or even triple the size of the static effects reported in the above presented Table. An alternative method to assess the consequences of Brexit is to use the results from empirical studies of reduced form regarding the effects of European Union membership. Some researchers (Baier et al) found that after controlling for other determinants of bilateral trade, European Union member-states trade substantially more with other European Union countries than they do with members of the European Economic Area and European Free Trade Association.

The estimates imply that, if the United Kingdom leaves the European Union and joins European Free Trade Association, its trade with countries in the European Union would fall by approximatively 25%. Combining this with estimates that a 1% decline in trade is reducing income per capita by 0.5% - 0.75% implies that leaving the European Union and joining European Free Trade Association will reduce United Kingdom income per capita by 6.3% - 9.5% (£4,200 - £6,400 per household per year). These estimations are much higher than the costs obtained from the static trade model, suggesting that the dynamic gains from trade may be as well important [11].

Interestingly, these larger long-run effects are in the same ballpark as the benefits that the United Kingdom has gained since 1973 from being part of the European Union. In a recent survey of the evidence of the impact of European Union membership, Crafts (2016) has been concluded that European Union membership have raised United Kingdom GDP per capita by 8.6% - 10.6%. Economists under-estimated the benefits from European Union membership because they were focused on static trade models of the kind which has been employed in Table 1. The bottom line is that in case of Brexit the costs could easily be approximatively three times larger than those in the static analysis shown in Table 1.

Future trade agreements. European Union member-states have a common trade policy and are represented as a whole by the European Union in all internațional trade negotiations. After Brexit, the United Kingdom would become an independent player, free to negotiate its own trade agreements with the rest of the world. The United Kingdom could use this freedom to look for new trade deals with countries such as China, Brazil, India, United States, etc. The model used in this article shows that trade with such non- European Union countries does indeed rise after Brexit. The magnitude and the volume of these increases are not enough to offset the decline in trade with the European. Being part of the European Union does not restrict United Kingdom firms' ability to trade with the rest of the countries, but as the nearest neighbor and the world's largest market, the European Union is the United Kingdom's natural trade partner for centuries. When negotiating post-Brexit trade deals, the United Kingdom would not need to compromise with other European Union countries. On the other hand, the United Kingdom would have to take into account the cost of hiring civil servants to rebuild its capacity to carry out trade negotiations. More importantly, since the United Kingdom is a smaller market than the European Union, it will have less bargaining power in trade negotiations than the European Union does. Has the United Kingdom benefited from past trade deals reached by the European Union?

CEP research (made in 2016 by Breinlich et al) estimates that trade agreements negotiated by the European Union over the last twenty years have reduced the quality-adjusted prices of imports into the United Kingdom by more than 1/3 [4]. Although it is often argued that the European Union does not pursue trade agreements that are beneficial to the United Kingdom, these customer benefits are twice as big as those faced by the 12 other members that joined the European Union before 1995. The European Union is negotiating, at the moment, a major new free trade agreement with the USA - the Transatlantic Trade and Investment Partnership or TTIP, and also an

„economic partnership agreement'' with Japan. If the United Kingdom leaves the European Union, it will not benefit from above mentioned agreements. The scientists estimate that the agreements with United States and Japan would lower prices by 0,4% and 0,2% respectively. The United States has mentioned that it would not sign a trade agreement with the United Kingdom alone.

Other Brexit effects on migration, foreign investment and regulation. In this article has been made a focus on the impact of Brexit on United Kingdom households through trade. Brexit could at the same time affect the United Kingdom economy through changes in regulations, investments as well as migration. These channels will be examined further more closely in the future studies and reports of European economists, but one way of interpreting the findings from this article is that for Brexit to have an economic benefit, these channels must have a sufficiently large positive effect on the United Kingdom economy to outweigh the negative effects which were already identified. This is extremely unlikely to be the case. Brexit is likely to reduce the foreign investments, which has been found to lead to higher productivity capacity. Pain and Young have estimated that European Union membership adds about 2,25% to United Kingdom GDP through the FDI channel. In a similar way, migration is found to aid growth and help to reduce the budget deficit without serious adverse labor market effects. Euro-sceptics often point to the promise of better and less regulation as a big benefit after Brexit. It is important to realize and mention that regulations will not much affect the first (optimistic) scenario. This is because to access the single market, countries like Norway and Switzerland should adopt the same regulations as the rest of the European Union member-states. As a result, the United Kingdom could weaken its social, employment and environmental regulations to some extent. But even if this were politically possible, the United Kingdom already has one of the most flexible product market and employment regulations in the world according to the OECD (UK is the second in product regulation after USA and third after USA and Canada in labor regulations).

Even if the GDP impact of such regulations were large (a point on which there is controversy), further weakening protection to say United States levels would result in a small economic difference. If the United Kingdom were to accept higher trade costs by giving up high levels of access to European Union markets (the second scenario), there would be more scope for regulatory loosening. The scientists have identified 56 regulations derived from European Union legislation where the United Kingdom government's Impact Assessment finds that the costs outweigh the benefits. According to some calculations the cost of these regulations is 0,9% of the United Kingdom's GDP. At the same time, many of these regulations implement policies that the United Kingdom government is committed to follow inside or outside the European Union. As an example, 50% of the total cost comes from just two policies: the Renewable Energy Strategy and the Directive on Working Time.

Scrapping these regulations would mean abandoning the United Kingdom's renewable energy goals and removing labor rights (20 days paid leave per year). Even if the regulatory costs of European Union membership were about 0,9% of GDP, this number is still less than half as large as the estimates of the net cost of Brexit even in the purely static case, and a lot less than the 6.3% - 9.5% costs under the dynamic case. There are many costs of regulation in the United Kingdom, such as their inefficient planning system (as explained by the LSE Growth Commission, 2013) [4]. But these problems are primarily home-grown, rather than imported one from the European Union.

Post-Brexit unilateral liberalization. Following Brexit, the United Kingdom would no longer be bound by the European Union's common external tariff on imports. Proponents of exiting the European Union argued that the United Kingdom could benefit from this change by unilaterally removing all tariffs on imports into the United Kingdom in order to lower the price of imported goods. To analyze the consequences of this unilateral liberalization policy, it should be run once again those two (optimistic and pessimistic) scenarios after including the additional assumption that the United Kingdom removes all tariffs on imports from any country.

Table 2. The effects of Brexit and unilateral trade liberalization on United Kingdom's living standards [4]

	Optimistic	Pessimistic
Brexit trade effects (from Table 1)	-1.37%	-2.92%
Tax benefit (from Table 1)	0.09%	0.31%
Unilateral liberalization	0.30%	0.32%
Total change in income per capita	-0.98%	-2.29%

The results are reported in Table 2. It was found that that unilateral liberalization reduces the costs of Brexit by 0,3% in both scenarios, overall effect of Brexit being still negative. The reason of such small benefits resulting from such a radical move is quite simple. World Trade Organization tariffs are already low, which means that further reductions will not make many differences. Nowadays, integration is not a matter of lowering the tariffs. It is requiring policies, such as hammering out regulatory differences in provision of services that rely on internațional agreements and cannot be achieved in an unilateral way.

Conclusions

The European Union is the United Kingdom's largest partner on trade relations. Approximately 50% of the United Kingdom's trade is with the European Union member-states. European Union membership have reduces trade costs between the United Kingdom and the other European Union members. This made cheaper the goods and services for United Kingdom's consumers and have allowed companies to export more. Leaving the European Union (in the „Brexit'' context) would lower trade between the United Kingdom and the European Union because of higher tariffs and non-tariff barriers to trade between them. Additionally, the United Kingdom would benefit much less from the future market integration within the European Union. The main economic benefit of leaving the European Union would be a lower net contribution to the community budget. This analysis firstly quantifies the static effects of the Brexit on trade and income. In the first (optimistic) scenario, the United Kingdom (like Norway) will obtain full access to the European Union single market. These results were computed in approximatively 1,3% fall in average United Kingdom incomes (£850/household). In the second (pessimistic) scenario with larger increases in trade costs, Brexit lowers income approximatively by 2,6% (£1,700/household) [11].

All European Union member-states lose income after the Brexit. The overall GDP fall in the United Kingdom is between £26 billion - £55 billion, about twice as big as £12 billion - £28 billion income loss in the rest of the European Union combined. Non-European Union states experience some smaller income gains. If the United Kingdom will unilaterally remove all its tariffs on imports from the rest of the countries after Brexit, United Kingdom incomes would fall approximatively by 1% in the first (optimistic) case and approximatively by 2,3% in the second (pessimistic) case. On long run, reduced trade lowers the productivity process. Factoring in these effects substantially increases the costs of Brexit to a loss of between 6,3% - 9,5% of GDP (approximately £4,200 - £6,400/household). Being apart of the European Union, means that the United Kingdom would not automatically benefit from future European Union trade agreements with other countries (e.g. USA and Japan) which are forecasted to improve by 0.6% the real income.

Following Brexit, which are the United Kingdom chances to obtain better trade agreements with non-European Union states? In this situation, the United Kingdom would not have to compromise so much with other European Union member-states, but they (UK) would lose bargaining power as its economy comprises only 18% of the European Union single market. Currently, it's not clear if there exist substantial regulatory benefits from the Brexit. United Kingdom already has one of the OECD's least regulated product and labor markets.

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