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# Brexit and Bangladesh: Implications for Trade and Market Access

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## Abstract

This paper has attempted to capture trade related implications of the UK referendum on leaving the EU (Brexit) for Bangladesh. The UK is a key trading partner of Bangladesh and over the past years the country has benefitted significantly from duty-free and quota-free market access to the UK under the Everything But Arms (EBA) initiative of the EU. However, when Brexit takes effect in March 2019, the scenario is set to change. The post-Brexit market access scenario will hinge on a number of factors including the terms of Brexit, UK's policy towards the LDCs, the new rules of origin, and exchange rate movements. The paper anticipates the terms of Brexit and the attendant implications from the perspective of Bangladesh's trading relations with the UK. It has tried to capture the likely fallouts of Brexit for exports from Bangladesh to the UK with help of a gravity model exercise. The results indicate that in the absence of duty-free market access, for UK not being a member of the EU and in view of the appreciation of Taka vis-à-vis the Pound, Bangladesh's exports to the UK market will be adversely affected, to varying degrees. The paper has underpinned the importance of taking necessary preparatory steps and negotiating with the UK to help secure Bangladesh's market presence in post-Brexit UK.

## 1 Introduction

The British electorate's decision to leave the European Union (EU), popularly known as Brexit, is likely to have far reaching consequences beyond the borders of the United Kingdom (UK) and the EU. Brexit will undoubtedly pose significant economic, political and geo-political challenges at various levels - UK domestic, EU-wide, as well as global. In the context of this evolving scenario, it is important that developing countries such as Bangladesh remain informed and alert about the developments of the Brexit negotiations, the final withdrawal decision and its possible consequences.

Bangladesh maintains a diverse range of economic relationship both with the UK and the rest of the EU. The overall impact of Brexit for Bangladesh will be both direct, through interfaces of the Bangladesh economy with the UK economy, and indirect, owing to EU-wide and world-wide impacts triggered by Brexit that could have significant implications for the Bangladesh economy. However, to what extent Brexit will affect or benefit the Bangladesh economy remains unclear. This will depend significantly on the final terms of separation of the UK from the EU; which will most likely be known when the withdrawal agreement will be finalised.

The ramifications for Bangladesh will hinge on its preparedness to tackle the fallout of Brexit when it happens on March 29, 2019. It is when the two-year period to complete a mutually-agreed withdrawal agreement, which started upon invocation of Article 50, will come to an end.<sup>1</sup>

The UK is a major economic partner of Bangladesh, with the bilateral relationship spanning a wide range of areas including trade and commerce, business, source of foreign direct investment (FDI), remittance, aid and development support, and people-to-people contact. Table 1 presents some relevant information in this connection. Among the many facets of the UK-Bangladesh bilateral relationship, the one most important to Bangladesh is that of trade, more particularly, exports. Hence, it is of vital interest to Bangladesh to anticipate how market access in the UK would be affected following Brexit. UK Government officials visiting Bangladesh have consistently assured Bangladesh of the UK's interest in continuing the strong bilateral relationship. This assurance can only be materialized if Bangladesh is prepared to conduct negotiations under the new dispensation, keeping its interests as a graduating LDC and as a member of the Commonwealth.

**Table 1:** Economic Importance of the UK for Bangladesh<sup>2</sup>

	FY2015	FY2016	FY2017	FY2018
Exports to the UK (billion USD)	3.2	3.8	3.6	4.0
Exports to the UK as % of total global exports	10.9	10.6	9.9	10.9
Exports to the UK as % of total EU-exports	20.2	19.0	19.0	18.7
Exports to the EU as % of total exports	53.8	55.9	52.0	58.2
Imports from the UK (billion USD)	0.32	0.27	0.33	0.38
Imports from the UK as a % of total imports	0.8	0.7	0.8	0.7
Remittance received from the UK (billion USD)	0.8	0.9	0.8	1.1
Remittance as a % of total	5.3	5.8	6.3	7.4
Stock of FDI received from the UK (billion USD)	1.4	1.5	1.6	1.5
as % of total FDI stock	10.9	10.4	11.2	9.6

*Source:* Authors' compilation from the data available from the EPB. (n.d.) and Bangladesh Bank (n.d.)

The motivation of this paper is to anticipate how Brexit will affect Bangladesh's trade interests. The objective is to quantify the possible impacts of Brexit on the export performance of Bangladesh by deploying an analytical technique (augmented gravity model) and coming up with some policy suggestions to better equip Bangladesh to address the attendant challenges.

The next section examines the possible impacts of Brexit for Bangladesh's trade relationship with the UK, followed by an econometric exercise which was undertaken to capture Brexit's impact on Bangladesh's exports. The conclusions follow.

## 2 Potential Impact of Brexit for Bangladesh's Trade

The UK is a major player in the export scene of Bangladesh. Exports to the UK accounted for about 10.9 per cent of Bangladesh's total global exports in FY2017-18; 18.7 per cent of export to the EU went to the UK (Table 1). Bangladesh's exports to the EU enjoy duty-free, quota-free (DFQF) market access for all exports but arms.<sup>3</sup> An analysis of the product-wise export receipts (at 6-digit Harmonised System (HS) code level) for FY2017-18 from the UK was carried out to identify top-20 exports, which accounted for 76.5 per cent of total export earnings from the UK (EPB, n.d.). Top-20 products have an export earning of USD 3.1 billion, and includes readymade garment (RMG) manufactures mostly (19 items) and shrimp and prawn. Since the overwhelming part of Bangladesh's export to the UK is consumer items, demand of which tends to be price elastic, duty-free access has a considerable positive effect on both demand and competitive strength of Bangladeshi exports to the UK.

There is a need for scenario buildings in the above context since in spite of the prolonged UK-EU negotiations nothing decisive has come out of the discussions yet.<sup>4</sup> The UK and the EU have set out different terms at different points in time in the course of the negotiations. However, one or the other party has ruled out key elements on the ground of those being potentially harmful to respective national interests or on the ground of erosion of sovereignty in case of the UK. The following subsection helps assess some of the possible arrangements and the likeliness of their post-Brexit implementation. This will help contextualize the strategy Bangladesh need to adopt for tackling the situation.

### 2.1 Potential Arrangements Between the UK and EU

The current architecture as regards the various arrangements available within the EU has been reviewed to get a deeper understanding of the possible deals that the UK can make with the EU. The existing relationship between the UK and the EU is a special one — it allows the UK to access the EU Single Market<sup>5</sup> without being obliged to join the Eurozone or the Schengen border-free area. Several options could finally emerge from the negotiations between the UK and the EU; Table 2 elaborates these possible scenarios. The arrangements with the EU are presented in descending order of economic integration and increasing order of political flexibility. The type of trade deal UK will be able to strike in the end will depend on the EU's stance in the negotiations. It is normal that the EU would want to signal to other possible *exiters* that any disassociation will entail a heavy price to be paid for leaving the EU.

**Table 2:** Potential Scenarios that could Emerge Following Brexit Negotiations

Potential scenario	Arrangement and Obligation	Comment
Norway–type arrangement: European Economic Area (EEA) member	<ul style="list-style-type: none"> <li>• Non-EU EEA<sup>a</sup> member</li> <li>• Significant access to the EU Single Market (but lower than that available under EU-membership)<sup>a</sup></li> <li>• Exports have to satisfy the rules of origin requirements</li> <li>• High ‘passporting rights’ but not full (only for banks and insurers)<sup>a</sup></li> <li>• Makes a significant contribution to the EU spending</li> <li>• Is a signatory of the Schengen Agreement</li> <li>• Norwegian laws incorporate approximately 75% of EU-laws<sup>b</sup></li> <li>• Has a limited vote or veto power (only via some formal engagement) in the formation of the EU rules and regulations</li> </ul>	Fails to secure the UK independence of courts, freedom to strike new trade deals and also limit immigration.
Switzerland–EU bilateral approach	<ul style="list-style-type: none"> <li>• Switzerland is a member of the European Free Trade Area (EFTA<sup>c</sup>)</li> <li>• Has bilateral treaty arrangements with the EU, which allow flexibility in choosing particular EU initiatives in which it is willing to participate</li> <li>• Moderate level of market access (lower than Norway) to the EU Single Market</li> <li>• Does not have ‘passporting right’</li> <li>• As is the case with Norway, Switzerland has to contribute to EU spending and allow free movement of people under Schengen Agreement</li> <li>• Switzerland is obliged to adhere to a significant share of the EU-obligations but has no say as regards their design and formulation</li> </ul>	This option provides more freedom in view of the above-mentioned concerns. However, may not be appealing to the UK on the grounds of rights and obligations that will come with this.
Turkish-style Customs Union Agreement	<ul style="list-style-type: none"> <li>• The EU is in a customs union with Andorra, San Marino, and Turkey through agreements which do not offer complete coverage for all the sectors</li> <li>• There is no internal tariff within the countries</li> <li>• The UK, if in a similar customs union agreement, has to apply EU external tariffs and will need to abide by the EU product market regulations without influence or guaranteed access to third markets</li> </ul>	May not be a preferred option for the UK as market access to EU will be curtailed.
Free Trade Agreement (FTA) [UK-EU FTA]	<ul style="list-style-type: none"> <li>• The UK will be free to negotiate FTAs independently with current trading partners including the EU</li> <li>• Tariff barriers are unlikely under this scenario; however, non-tariff barriers are likely to surface. For example, in the CETA<sup>d</sup> many Canadian exports are subject to standard requirements which were set and imposed by the EU.</li> <li>• No guaranteed full access to the single market</li> </ul>	A possible option that may prove to be beneficial for the UK subject to certain changes.
World Trade Organization (WTO) - MFN arrangement	<ul style="list-style-type: none"> <li>• Under this scenario the UK-EU trade is governed by the WTO regulations, i.e. the UK’s exports to the EU and other WTO members will be subject to importing countries’ MFN tariffs. The UK is likely to lose competitive advantage.</li> <li>• The UK will lose preferential access to the EU single market.</li> <li>• All the EU trade agreements will cease to apply for the UK, thus generating the need to negotiate new trade deals with over 50 countries</li> <li>• The UK will have full freedom to negotiate a new immigration policy, and will no longer be obligated to adhere to the EU rules.</li> </ul>	The most disruptive and conservative case. Both EU and UK markets will be significantly affected.

*Sources:* Authors’ compilation based on information provided in the International Monetary Fund (IMF, 2016), World Bank (2016), GOV.UK. (2016) and European Commission. (n.d.a).

*Notes:* <sup>a</sup> EEA comprises of Iceland, Liechtenstein and Norway with the EU. EEA-type arrangement will provide partial access to the EU Single Market (lower than that available under EU membership). The EEA agreement does not cover agriculture or fisheries, and non-EU EEA countries are outside the customs union which means that these are open to non-tariff barriers (NTBs) such as rules of origin (RoO) requirement and trade rules such as anti-dumping duties.

<sup>b</sup> Calculated by an independent study commissioned by the Norwegian Government (2012).

<sup>c</sup> EFTA is an intergovernmental organization set up for the promotion of free trade and economic integration between its four Member States—Iceland, Liechtenstein, Norway, and Switzerland.

<sup>d</sup> The Comprehensive Economic and Trade Agreement (CETA) is a freshly negotiated deal between Canada and the EU, which is set to cut 98 per cent of the tariffs.



The 'Norway' scenario will result in least disruption in terms of trade and investment consequences, and, thus, can also be termed as 'Soft Brexit'. However, this may not serve the UK Government's political objective to break free of the EU regulations. Several of UK's current proposals are in line with the Norway-model. Hardline Brexiters have opposed this, arguing that a Norway-like arrangement will turn the UK into a 'vassal state' which will have to pay contributions to the EU but will have no say in the policymaking (The Economist, 2018). Norway is part of both the EEA and EFTA arrangements; so a Norway-style Brexit can be an arrangement where the UK leaves the EU, joins the EFTA and then can be the 31<sup>st</sup> full member of the EEA (Payne and Biekov, 2018).

**Comprehensive Customs Union:** The opposition Labour Party supports the policy of remaining within the EU Customs Union following the Brexit.<sup>6</sup> Confederation of British Industry has supported this stance. Although by voting for Brexit the UK has voted to leave the existing EU Customs Union, this does not preclude the possibility of forming 'a new customs union' with the EU. As distinct from an FTA, a customs union does not only abolish tariffs and quota for members, but it also stipulates common customs duties and hence, there is no need for the costly and cumbersome rules of origin requirements. Unlike Single Market, a customs union does not entail free movement of people; neither does it require being directly subject to the European Court of Justice (ECJ) or contributing to the EU budget. However, one major obstacle with a potential customs union is that it will curtail UK's freedom to strike free trade deals for goods or commodities with other countries. On the other hand, if the EU makes such deals with others, the UK market will be automatically open for duty-free import, without giving the UK a reciprocal right. UK may negotiate a comprehensive customs union, which at the same time will give her the right to do trade deals with other nations and also have a say in any further EU free-trade negotiation.

**Free Trade Agreement:** The UK can propose a free trade arrangement with the EU in line with either the CETA or the EFTA. However, as Magntorn and Winters (2018) points out, though CETA does offer liberalization of trade in services, trade in some sectors of high importance to the UK remains very restricted, for instance, the financial services and transport.<sup>7</sup> Moreover, Canadian manufactures exporting to the EU under CETA are subject to a range of bureaucratic costs and many agricultural exports are subject to quotas and tariffs. Thus, the UK may seek for a free trade arrangement which facilitates trade in goods as well as services, and offers better trading arrangements than CETA or EFTA. In absence of such arrangements, pursuing the 'Hard Brexit' route would mean settling for a WTO-MFN scenario. This will ensure maximum level

of control over immigration policies, trade deals and overall economic decision-making for the UK; but, with high costs and uncertainties (Global Counsel, 2015; Dhingra et al., 2016; World Bank, 2016).

**Possible arrangements in the WTO:** One may expect complex negotiations to take place in the WTO since the UK will be required to accede to the WTO anew following its exit from the EU (Ungphakorn, 2016; Miles, 2016); the same can be said of the EU. Both the EU and the UK will have to renegotiate with all the WTO members to formulate and modify their separate WTO-membership agreements. The EU is unique in having 29 members in the WTO (27-member states, UK and the EU itself) with combined rights and obligations. The UK will have to revisit all current commitments of the EU in the WTO and then determine its commitments in the WTO following the Brexit. Thus, any independent post-withdrawal trade arrangement for the UK will necessitate negotiations between the EU-27, the UK and other WTO members. The UK Government has to balance its trade policy considering the views of domestic stakeholders. For example, a policy of lower tariff and reduced agricultural subsidies is likely to be readily acceptable in the WTO but would face significant domestic opposition in the UK.

Similarly, trade in services is an area where the UK has strong interests. Accordingly, services negotiations, with the EU and in the WTO, will need to be carefully crafted if the UK is to maintain its current preeminent role in services trade. Also, any trade-related agreement must be consistent with the rules and provisions set out in the various WTO Agreements (Soobramanien and Razzaque, 2016). WTO operates by consensus, not voting, and any country that perceives its interest to be affected by the independent trade policy of the UK can disagree and open negotiations. The UK can obviously decide to continue to follow a large part of the EU commitments—for example, bound tariff rates, market-opening pledges in the service sector, product standards and labeling, safety standards regarding food, among others. However, the WTO members will still need confirmation of the new provisions to be agreed through Brexit negotiations.

From the perspective of hierarchy of preference in terms of the UK's market access to the EU, the Norway scenario is reckoned to be more preferable compared to the FTA scenario, which is in turn is more preferable to the MFN scenario that entails least economic integration. As it appears from UK's proposals and the EU's stance in view of this, the two extremes—Norway (EEA) scenario and the WTO-MFN scenario—are both unlikely. The upshot of the above discussion is that UK's partner countries such as Bangladesh will need to carefully follow not only the terms of UK-EU negotiations but also what Brexit will entail regarding

membership and obligations of both the EU and the UK in multilateral organizations such as the WTO.

## 2.2 What could Brexit mean for Bangladesh?

### Brexit and possible options for Bangladesh

The UK is the third largest export destination for Bangladesh after the United States of America (USA) and Germany. Bangladesh is a key beneficiary of the preferential treatment under the EU's Everything But Arms arrangement (EBA) by the countries status as a least developed country (LDC). Since Bangladesh will be graduating from the LDCs group in 2024, it is also pertinent to recall here that the EU has offered a three year extension of the EBA benefits for the graduating LDCs following their graduation.

In case the UK is not part of the EU Single Market, but remains in an EU-FTA, one option is for the former to adopt a version of market access similar to the EBA, including the three-year extension clause. LDCs have a collective interest to continue to gain market access in the UK under the EBA terms. As a leading member of the LDCs, Bangladesh should exercise leadership in negotiations with the UK in this regard. The possible trade diversion, if the UK is not in the European Customs Union, needs to be taken cognizance of. If the UK decides to go for a separate trade deal, it will be in the interest of the LDCs to negotiate as a bloc, for maintaining the EBA terms. Of critical interest will be to retain the Rules of Origin (RoO) as stipulated in the EBA, particularly the prevailing one-stage RoO for exports of apparels applicable for the knit and the woven items.<sup>8</sup>

Special treatment enjoyed by Bangladesh as an LDC will not be there in most of the partner countries following Bangladesh's LDC graduation. It is likely that the UK may come up with a preferential scheme for the graduating LDCs such as the EU's GSP+. However, this type of preferential treatment will likely be extended only with stringent conditionalities.<sup>9</sup> Bangladesh should start thinking about building a bilateral relationship with the UK on a new foundation in the backdrop of the Brexit referendum. Of key significance here will be post-Brexit trade relationship with the UK.

Besides, by taking advantage of the EU-wide free trade area, many EU importers tend to import by transiting the goods through the UK for onward shipment to the other EU countries (duty-free market access under the EU Customs Union). The future dynamics of this practice will depend on how the EU-UK trade deal is negotiated. Indeed, the supply chain with British retail brands importing goods from Bangladeshi producers, and then exporting onward to other European destinations, will be significantly

impacted by the nature and content of the UK-EU trade deal and dynamics of changes in the UK-EU bilateral relations. It is, thus, in Bangladesh's interest to approach and negotiate a deal with the UK a deal which takes care of all the details in this connection. The UK can also decide to go for a Pan-Commonwealth trade pact.

### Implications of preference erosion

Exports to the UK will also depend on how the post-Brexit UK economy fares in terms of the likely impact on consumer behavior, consumer confidence and overall GDP growth. With regard to market access conditions, several scenarios may be envisaged, ranging from maintaining an EBA-type scheme for the LDCs to applying the MFN rates, and something in between. It is found from an analysis of the FY2017-18 product-wise export receipts of Bangladesh from the UK that, had there not been any preferential market access under the EBA, UK importers would have to pay an estimated amount of USD 366.2 million as duties for importing the top-20 items with highest share (that is, if the exports had to face the most favored nation (MFN) customs tariffs in the UK).<sup>10</sup> A study by Stevens and Kennan (2016) cautions that, if the UK adopts the most favored nation (MFN) regime similar to that of the EU Customs Union, Bangladesh will be the country which will be the hardest hit among all the countries which receive "better-than-MFN" market access facilities from the EU.<sup>11</sup> The likely additional import duties to be imposed on UK importers is estimated to be equivalent to 11.7 per cent of UK's total import payments, in the case of Bangladesh.<sup>12</sup> If the UK does not offer any preferential market access to the LDCs, and in case LDCs such as Bangladesh have to face MFN duties, there is likely to be a serious loss of export competitiveness.

UK officials have assured Bangladesh and other beneficiaries of the EU's EBA that the UK will continue to provide preferential market access to these countries following the Brexit (Department for International Development and Department for International Trade, Government of UK, 2017). This is a welcome and reassuring commitment which has been appreciated by all. However, trade deals are never simple, and the devil lies in the details. Thus, Bangladesh should be prepared for negotiations with the UK so that terms for preferential market access remain unchanged (does not become more stringent), which uphold the current benefits or offer better arrangements. The RoO is particularly relevant, since the RoO under the EBA is for most products, and particularly for the RMG items is highly LDC-friendly.

### Effects of exchange rate volatility in view of Brexit

Initial post-referendum appreciation of Bangladeshi Taka (BDT) against the Great Britain Pound (GBP) made Bangladeshi products more expensive for UK importers. The consequent 'price effect' had negative

implications for Bangladesh's export to the UK market. Though Bangladeshi goods do not face competition from the UK's domestically produced goods, the appreciation of BDT against GBP, when compared to other competitor countries' currencies (Table 3) had affected the competitiveness of Bangladeshi exports to the UK market. This was reflected in the 7.1 per cent fall in exports in July 2016 immediately following the EU-referendum. Indeed, exports to the UK faced negative growth all through FY2016-17 when compared to FY2015-16.<sup>13</sup> Immediate impacts of Brexit in the currency market and the fall in the value of the GBP have had negative implications for Bangladesh in several areas: export, remittance, and the amount of aid received.

Table 3 shows the appreciation of BDT along with some of its competitor countries' national currencies. It is interesting to note that only BDT appreciated by 1.5 per cent on the day of the EU-referendum, while Indian Rupee (INR) and Chinese Yuan (CNY) experienced depreciation, and Vietnamese Dong (VND) remained unchanged. On the other hand, immediately after the referendum (on 24 June 2016), VND appreciated the highest. It is seen that, INR experienced the highest appreciation (25 per cent), followed by BDT (23.6 per cent), and CNY experienced the lowest (18 per cent) appreciation against the GBP. BDT's highest appreciation was to the tune of 9.7 per cent against Euro (EUR); in case of India, this was 12.2 per cent.

**Table 3:** Appreciation of Currencies of Bangladesh, China, India, and Vietnam

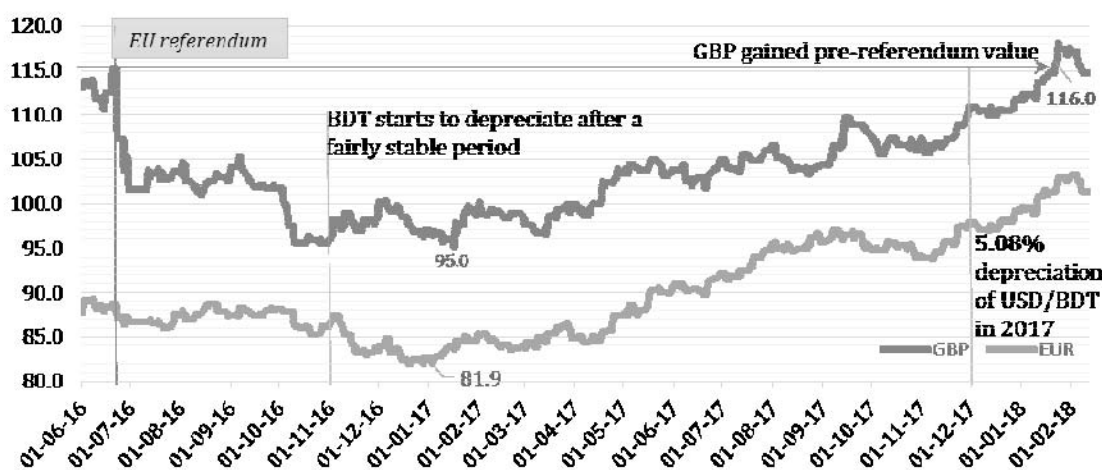
Time	BDT	CNY	INR	VND
Day of EU-referendum: 23 June 2016 <sup>a</sup>	1.5	(-) 0.8	(-) 0.6	0.0
Comparing values on the day immediately after EU-referendum (24 June 2016) <sup>a</sup>	6.0	5.1	5.2	6.7
Comparing average values for the week before and following EU-referendum <sup>b</sup>	7.0	6.0	5.9	6.5
Comparing average values for the month prior and following EU-referendum <sup>c</sup>	7.6	6.1	9.1	9.1
On 24 October 2016 <sup>a</sup>	20.9	17.0	21.6	20.0
On 31 March 2017 <sup>a</sup>	15.7	12.4	22.8	16.7
On 14 February 2018	2.4	11.4	9.6	6.7
Highest Appreciation against GBP <sup>a</sup>	23.6	18.0	25.0	23.3
Highest appreciation against EUR <sup>d</sup>	9.7	2.9	12.2	7.7

Source: Authors' calculation based on exchange rate data obtained from Oanda (n.d.)

Note: <sup>a</sup>The value on this date has been compared to that of the day immediately before the referendum, 22 June 2016

<sup>b</sup>The week before EU-referendum is from 16 to 22 June 2016, and the week post EU-referendum is from 24 to 30 June 2016. The average for these two weeks was calculated and then compared to check the week-wise appreciation of the local currencies.

<sup>d</sup>Only calculation for EUR, all other calculations are for GBP



Source: Authors' calculation based on exchange rate data obtained from Bangladesh Bank (n.d.).

**Figure 1:** Shift in the exchange rate: BDT, GBP, and EUR



The analysis presented in Table 3 shows that the response in the currency market was not just a knee-jerk reaction; there are deeper anxieties embedded in the market behavior. The value of GBP is rather volatile post EU-referendum; GBP tends to plunge deep or rise depending on the state of UK-EU negotiations (Figure 1). This volatility does not fare well for exports of Bangladesh to the UK since most of the Bangladeshi exports to the UK are highly price-sensitive. Hence, the apprehension about the loss in export earnings.<sup>14</sup> If a favorable Brexit deal is not finalised, then this downfall in the value of the GBP and subsequent negative reactions may happen again.

In case of imports from the UK, the depreciation of GBP has meant that imports from the UK have become more competitive in Bangladesh. Indeed, importers and consumers in Bangladesh have gained from the appreciation of BDT vis-à-vis the GBP. This will make imports from the UK a relatively more lucrative business proposition. Consumers and importers of intermediate inputs from the UK will stand to benefit from this.

Bangladesh exchange rate policy should take into consideration exchange rate policies pursued by her key competitors. It needs to be conceded that Bangladesh's exchange rate policy will need to be pursued not only by considering the movement of GBP but from a broader perspective. Nonetheless, the UK being a major trading partner, the Taka-GBP exchange rate ought to remain an important area of monitoring and review. Now may also be a good time to raise funds through the issuance of GBP-backed bonds, perhaps to underwrite large scale infrastructure financing. Consultations may also be held with the UK Government about safeguarding the value of aid money by hedging the currency (GBP) fluctuations. The currency market, though it has somewhat returned to the normal after the initial volatile reactions, is yet to stabilise fully. It is conceivable that there will be uncertainties till the time the Brexit deal is sealed. Bangladesh should pursue forward looking strategies such as hedging against currency (GBP) fluctuations.

Furthermore, UK investors in Bangladesh, a significant part of whose products are destined to the UK and EU, and who enjoy duty-free market access, will be watching the emerging scenario very closely. Any possibility of changes in market access conditions in the UK and the EU will be closely monitored by the current and potential investors (for instance, currency gains).

#### **Possibility of confronting new non-tariff measures**

Exports from Bangladesh are produced and marketed according to the product standards and certification procedures applicable under the current trading arrangements with the EU. If the UK imposes different or more stringent standards after the separation, with regard to intellectual property rights (IPR) or sanitary and phyto-

sanitary (SPS) measures applicable under the trading specifications of the UK, this may negatively affect Bangladesh's exports to the UK. If the non-tariff measures are drastically different or stringent, then they may emerge as non-tariff barriers which will affect the exports of Bangladeshi products to the UK. Therefore, the market access conditions, rules of origin, IPRs regimes, SPS, Technical Barriers to Trade (TBT) standards—all these may need to be negotiated anew.

From the above discussion, it is evident that exports of Bangladesh to the UK will be significantly affected if the current regulations including terms of market access, RoO, and IPR enforcement undergo significant changes following Brexit. In the following section results of an econometric exercise using an augmented gravity model has been presented. The objective of the analysis here is to have a more in-depth understanding and to provide evidence-based direction about the implications of Brexit for exports from Bangladesh if the preferential regime is changed.

### **3 An Econometric Analysis of the Implications of Brexit on Bangladesh's Exports**

An augmented gravity model has been used to estimate the impact of Brexit on Bangladesh's exports. Fournier et al. (2015), Great Britain Treasury (2016), and IMF (2016) reveal the significant positive impact of EU-membership on trade. Bruno et al. (2016) and Great Britain Treasury (2016) have found on the basis of their analyses that EU-membership has a positive impact on FDI received by the UK. The current analysis examines the ramifications of Brexit for exports of Bangladesh.

The study uses a fixed and balanced panel data framework. The panel is arranged across 58 countries<sup>15</sup> for 25 years (1991 to 2015). The total number of observations is 1450. The analytical framework offered by the panel data helps to understand the relationship of the explanatory variables and the dependent variable over time, separating it from the possible effects of time-specific and individual-specific factors. In the regression model, Bangladesh's annual export data for selected 58 countries have been taken as a dependent variable. As explanatory variables, the standard gravity model variables - incomes of both trading partners, contiguity of the border between the trading partners, the presence of common language, the distance between Dhaka and the capital of partner countries, were taken. This general gravity model was then augmented by using the explanatory variables - real exchange rate, tariff rates faced by Bangladeshi exports and EU dummy (takes the value of 1 if the importing countries is a member of the



EU at the considered period, otherwise zero). These are the three objective variables for this particular analysis.

Panel data estimations were carried out in the study by using the following techniques: pooled OLS regression, random effects model (REM), fixed effects model (FEM) and Poisson Pseudo Maximum Likelihood estimation (PPMLE). On the basis of post estimation results (after controlling for heterocedasticity, multicollinearity, model specification test) the specified models discussed in the paper were found to be best explained. We have run the REM and then carried out the Breusch-Pagan Lagrangian Multiplier test for testing the presence of random effects. Rejecting the null hypothesis of the test (Ho: The individual or time-specific error variance components are zero) the data confirms to have individual or time-specific effects. If these individual effects are random and not correlated with the explanatory variables, then REM is preferred; however, if they happen to be correlated with the explanatory variables, then FEM needs to be employed to capture the net influences of the explanatory variables. This distinction is made by the Hausman specification test, in which the rejection of the null hypothesis (Ho: No correlation between the individual effects and the regressors) suggests preferring the FEM. Once FEM was chosen and tested by the F-test, we have run Least Square Dummy Variable (LSDV) model to correct for the characteristic inability of FEM to estimate time-invariant variables like distance, contiguity, etc. Moreover, it was observed in the results that, LSDV model improves all the measures of the goodness-of-fit like F-test, R<sup>2</sup>, etc. and absorbs the individual or time-specific effects. We have controlled for dyadic fixed effects and time dummies.

The underlying equations for the gravity model regressions are as follows:

#### [Equation I]

$$\begin{aligned} \ln(\text{export volume}_{ij,t}) &= \alpha_{ij} + \beta_1 \ln(\text{GDP}_{j,t}) + \beta_2 \ln(\text{GDP}_{i,t}) \\ &+ \beta_3 \ln(\text{population}_{i,t}) + \beta_4 \ln(\text{population}_{j,t}) \\ &+ \beta_5 \ln(\text{distance}_{ij}) + \beta_6 \ln(\text{tariff}_{j,t}) \\ &+ \beta_7 \text{eu}_{dummy\ if\ EU=1} + \beta_8 \ln(RERE_{i/j,t}) + u_{ij,t} \end{aligned}$$

#### [Equation II]

$$\begin{aligned} \ln(\text{export volume}_{ij,t}) &= \alpha_{ij} + \beta_1 \ln(\text{GDPPC}_{j,t}) + \beta_2 \ln(\text{GDPPC}_{i,t}) \\ &+ \beta_5 \ln(\text{contiguity}_{ij}) + \beta_5 \ln(\text{distance}_{ij}) \\ &+ \beta_6 \ln(\text{tariff}_{j,t}) + \beta_7 \text{eu}_{dummy\ if\ EU=1} \\ &+ \beta_8 \ln(RERE_{i/j,t}) + u_{ij,t} \end{aligned}$$

#### [Equation III]

$$\begin{aligned} \ln(\text{export volume}_{ij,t}) &= \alpha_{ij} + \beta_1 \ln(\text{GDPPC}_{j,t}) + \beta_2 \ln(\text{GDPPC}_{i,t}) \\ &+ \beta_5 \ln(\text{contiguity}_{ij}) + \beta_5 \ln(\text{distance}_{ij}) \\ &+ \beta_6 \ln(\text{tariff}_{j,t}) + \beta_6 \ln(\text{tcost}_{ij,t}) \\ &+ \beta_7 \text{eu}_{dummy\ if\ EU=1} + \beta_8 \ln(RERE_{i/j,t}) + u_{ij,t} \end{aligned}$$

**Table 4:** Data Definition and Sources

Variable	Description	Source
export volume <sub>ij,t</sub>	Exports from Bangladesh (i) to importing partner j	Trade Map (n.d.)
GDP <sub>j,t</sub>	GDP of importer country	World Bank (2017)
GDP <sub>i,t</sub>	GDP of Bangladesh	World Bank (2017)
GDPPC <sub>j,t</sub>	GDP per capita of importer country	World Bank (2017)
GDPPC <sub>i,t</sub>	GDP per capita of Bangladesh	World Bank (2017)
population <sub>i,t</sub>	Population of Bangladesh	World Bank (2017)
population <sub>j,t</sub>	Population of importing country	World Bank (2017)
distance <sub>ij</sub>	Geographical distance between the capitals of the two trading countries.	CEPII (n.d.)
contiguity	This is a dummy variable which takes the value of 1 if the trading countries have a common border	CEPII (n.d.)
tariff <sub>j,t</sub>	Applied tariff rate of importing country	World Bank (2017)
eu <sub>dummy</sub>	Dummy variable which takes the value 1 if importing country is EU member	European Union (n.d.)
$RERE_{i/j,t}$	Real exchange rate with Euro incorporated. It shows the amount of BDT available per unit of importing country's currency (LCU-Local Currency Unit)	Authors' calculation <sup>17</sup>
tcost <sub>ij,t</sub>	This is the ad valorem trade cost between country i and j	ESCAP-World Bank (n.d.)

In the above equations,  $i$  and  $j$  denote country of origin, i.e. Bangladesh and the importing country respectively, and  $t$  denotes time. Here,  $\alpha_{ij}$  stands for the individual country pair (origin-destination) effects and  $u_{ij,t}$  is the error term. Equation I is the basic augmented gravity model equation with the variables as discussed before<sup>16</sup>. Equation II and III consider the per capita incomes for both trading countries instead of considering income and population separately. Equation III includes the variable  $tcost_{ij,t}$  which is the ad valorem trade cost between country  $i$  and  $j$ . Data description of the model is presented in Table 4.

The analysis shows that in general, the income of the importing country has a positive and significant impact on the exports of Bangladesh – a more developed economy with a higher GDP tends to import more due to high aggregate demand (Column A and B). Higher GDP per capita indicates more purchasing power and hence,

higher demand for imported goods (Column C-E). This implies that if after Brexit the UK economy has sluggish GDP growth or consumer confidence suffers, the growth of exports from Bangladesh to the UK is likely to fall. In standard gravity models, distance is considered a logical proxy for trade costs regarding transportation costs. Analogous to literature-based expectations, one finds an increase in distance to have a negative and significant<sup>18</sup> impact on the exports of Bangladesh. This is not completely applicable in case of Bangladesh though. An examination of export trends of Bangladesh indicates that most of her exports are destined to non-contiguous<sup>19</sup>, distant countries such as the US, Canada, and EU member countries; this may partly be on account of preferential market access in these markets. But distance may prove to be a significant constraining factor in trading with the UK if the currently available generous GSP scheme is no longer in place.

**Table 5: Regression Results for the Gravity Model**

Explanatory Variable	Dependent variable: Log of export value in USD				
	Equation I		Equation II		Equation III
	LSDV Fixed Effect Model	PPML Estimation	LSDV Fixed Effect Model	PPML Estimation	LSDV Fixed Effect Model
	(A)	(B)	(C)	(D)	(E)
Log of GDP of importing country	0.42 (1.92)	0.05 (11.01)**	-	-	-
Log of GDP of Bangladesh	1.34 (5.66)**	0.07 (5.26)**	-	-	-
Log of per capita GDP of importing country	-	-	0.67 (5.45)**	0.01 (2.33)*	0.63 (3.28)**
Log of per capita GDP of Bangladesh	-	-	1.50 (8.16)**	0.10 (15.54)**	-
Log of population of Bangladesh	-	-0.11 (1.58)	-	-	-
Log of population of importing country	-0.59 (1.21)	0.01 (2.20)*	-	-	-
Contiguity of borders	-	-	-1.20 (2.23)*	0.01 (0.57)	2.14 (6.10)**
Log of distance between Dhaka and respective capitals of importing countries	-1.36 (2.24)*	-0.05 (9.55)**	-1.16 (5.09)**	-0.01 (2.51)*	-0.04 (0.23)
Log of tariff rates	0.09 (0.66)	-0.01 (2.25)*	-0.002 (0.02)	0.003 (0.57)	0.01 (0.13)
Log of ad valorem trade cost	-	-	-	-	-3.07 (10.45)**
EU dummy	0.43 (2.06)*	0.05 (10.79)**	0.71 (5.09)**	0.04 (7.39)**	0.48 (1.98)*
Log of real exchange rate	0.28 (9.01)**	0.01 (9.17)**	0.18 (8.74)**	0.02 (19.95)**	0.09 (3.35)**
Constant	-5.97 (0.52)	2.22 (2.22)*	11.69 (5.08)**	2.32 (37.20)**	27.35 (16.33)**
N	621	621	1113	1113	745
R <sup>2</sup>	0.88	0.79	0.90	0.57	0.90
Adjusted R <sup>2</sup>	0.87	-	0.89	-	-
F test	66.50**	-	103.12**	-	-
Pseudo log-likelihood	-	-1480.50	-	-2690.64	-

Notes: 1. LSDV Model: Least Square Dummy Model

2. \* and \*\* denotes that the coefficients are significant at 95 per cent and 99 per cent confidence intervals respectively.

3. Time and country-pair effect dummies for LSDV model are not included.

The estimated coefficient of the variable real exchange rate ( $RERE_{ijt}$ ) is significant and positive in all the regressions. Column (A) shows that 1 per cent increase in real exchange rate (because of depreciation of Bangladeshi Taka or appreciation of the importer country's local currency unit) will, on an average, cause an increase of 0.28 per cent in the export value of Bangladesh to that country (*ceteris paribus*). The result strongly indicates a reduction in exports to the UK as a result of the recent significant fall in the value of GBP and the consequent appreciation of the BDT.

Tariff ( $tariff_{jt}$ ) is a continuous trade policy variable and is supposed to have a significant and negative impact on the value of exports. However, in the current analysis, only PPML estimation of Equation I (column B) suggests the presence of adverse effects of tariff on Bangladesh's exports<sup>20</sup>. It may thus be concluded that if Bangladesh does not negotiate favorable and "better-than-MFN" tariff rates after the UK leaves the EU, exports to the UK could suffer a significant decline.

The negative and significant coefficient estimate of the trade policy variable—ad valorem trade cost ( $tcost_{ijt}$ ), suggests that a 1 per cent increase in trade cost would lead to a decrease of exports of Bangladesh to the tune of 3.1 per cent (column E). Thus, if the new UK-Bangladesh trade arrangement has more stringent regulations and higher tariff rates leading to a 1 per cent increase in trade cost then this would mean a loss of USD 122 million, considering the export figure to the UK for FY 2018. The loss can increase if we consider the fact that the UK acts as the hub for import of Bangladeshi goods to other EU countries; any unfavorable change in UK-Bangladesh trade relations will affect exports to these EU countries as well.

The coefficient of the EU dummy variable  $eu_{dummy_{if EU=1}}$  is statistically significant for all the equations, under all estimation techniques. This implies that EU-membership of the importing country has a significant and positive effect on the exports of Bangladesh, boosts exports by 4.1 per cent to 61.6 per cent.<sup>21</sup> From a reverse point of view, this would indicate the possible negative effect of termination of EU-membership of an importer country. It is obtained from further calculations<sup>22</sup> that Bangladesh could lose approximately USD 5.7 to 85.9 million of export earnings on average (which is 0.14 to 2.2 per cent of FY2017-18 export earnings from the UK) in absence of the provisions under EU-membership of the UK. The preceding analysis reveals that Bangladesh has reasons to be worried on account of the Brexit, this emphasises the importance of negotiating a suitable trade deal with the UK, with an appropriate compensatory preferential market access mechanism in place, in view of the Brexit.

## 4 Concluding Remarks and Policy Recommendations

The looming uncertainties as a result of Brexit referendum and their consequent impacts ought to be carefully examined and weighed by Bangladesh's policymakers. With the Brexit negotiations now coming to an end, it is important that Bangladesh follows the final terms of separation with keen interest. This is more so because of the traditionally strong ties between the two countries. The UK is also a key development partner of Bangladesh. One also hopes that the UK will not deviate from her resolve to adhere to the aid commitment of 0.7 per cent of GNI. Indeed, the ties between the two countries cover a wide range of areas—trade and commerce, business and investment, aid and development support and people-to-people contact. Thus, it is only in Bangladesh's interest to remain engaged with the UK in view of the emerging scenario. Bangladesh's negotiations with the UK, on a bilateral basis or as part of the LDC group, must be informed by the likely adverse implications of Brexit on Bangladesh and other low-income economies. Bangladesh needs to develop an appropriate strategy to address the emergent concerns by pursuing a proactive policy in relation to the UK.

Brexit negotiations are likely to continue till March 2019 (and even beyond, subject to the concurrence of all the parties). While UK is keen to maintain 'deep and special' relations with the EU, the EU will likely drive a hard bargain. While it is still uncertain whether it is going to be 'Hard Brexit' or 'Soft Brexit', the signs are that negotiations are moving towards a not-so-soft Brexit. In view of the evolving scenario, it is suggested that Bangladesh sets up a Task Force to study the possible impacts of Brexit on the Bangladesh economy, and to design appropriate strategies in this connection. The mandate of the Task Force may be to (a) study the terms of Brexit, its implications and ramifications, for Bangladesh (market access, RoO, standards, IPR regime, migration remittance, investment aid), (b) to examine the developments in the UK economy, demand situation and currency movements, and financial markets dynamics and their relevance for Bangladesh (BDT exchange rate remittance flow, UK demand), (c) to study UK's dealings in multilateral fora such as the WTO (adoption of schedule of concessions in the WTO, negotiations with other members, aid for trade commitments etc.) and mega-regionals (likely regional trade agreements with UK participation, with US and other countries, their terms, preference erosion for Bangladesh etc.), and (d) to provide strategic guidance to the government of Bangladesh to build Bangladesh-UK bilateral relationship for the emerging post-Brexit era (trade and market access, investment,

aid, migration to name a few) as also to contribute to designing to Bangladesh's stance as a leading member of the LDCs to help protect the benefits currently being enjoyed by the LDCs group with respect to the UK.

Our analysis indicates that Brexit will have a significant impact on Bangladesh's export to the UK. Whilst we have attempted to anticipate the outcomes of the negotiations, and what these will mean for Bangladesh's export performance in the UK, the likely impacts will also be transmitted through other, non-trade, channels. Bangladesh should be ready to take the necessary steps in view of the evolving scenario as the Brexit negotiations enter into uncertain terrain.

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## Endnotes

1. Article 50 of the Lisbon Treaty was introduced in 2009 to empower a member state with a notification mechanism in case it was no more willing to stay in the EU. It was evoked for the first time by the UK on 29 March 2017, following the EU-referendum decision of leaving the EU on 23 June 2016. According to the rules, the timeline to complete the process of withdrawal from the EU is two years from the date on which Article 50 is invoked. So for the UK, EU Agreement treaties will cease to apply on 29 March 2019 if there is no Brexit withdrawal deal. However, the time may be extended subject to mutual consent established by simple majority voting (at least 20 member countries with 65 per cent of the EU population have to agree). A transition period has been agreed till 31 December 2020, which is only due if the UK and the EU agrees on a withdrawal deal within the stipulated time.
2. Some of the other important dynamics of UK-Bangladesh bilateral relationship are: (a) Bangladesh is the seventh most common country of birth and nationality in the UK - 2.8 per cent of the foreign-born in the UK originate from Bangladesh; (b) Bangladesh is the country of birth for 4.6 per cent of all foreign-born persons living in London – ranking third in the list to India (8.9 per cent) and Poland (5 per cent). (The Migration Observatory, 2018); (c) The cumulative UK aid received by Bangladesh since its independence till FY2015-16 is USD 2.7 billion. (ERD, n.d.)
3. Excluding chapter 93 (arms) exports under all 7220 tariff lines from the LDCs are duty-free.
4. As is known, the version of withdrawal agreement that Prime Minister Theresa May took to the UK Parliament for voting, on 15 January 2019, was resoundingly defeated. The options now are to come up with a new deal, to have a no-deal Brexit, or to request the EU for an extension of the Article 50. While some would like the UK to remain in the EU Customs Union others are against it. Whether to have Soft or Hard Border with the Republic of Ireland, jurisdiction of the European Court of Justice (ECJ), to what extent compliance with EU standards will be maintained and migration issues remain sticking points as the UK moves into an uncertain terrain.
5. The Single Market refers to the EU as one territory without any internal borders or other regulatory obstacles to the free movement of goods and services. ("European Single Market- Growth – European Commission," 2018).
6. Mr Jeremy Corbyn in his Coventry speech on 26 February 2018 has remarked that if elected, a Labour government would go for a new comprehensive UK-EU customs union, but out of the single market, this was later backed by the Scottish Labour members. (Burns, 2018, February 27)
7. Indeed, CETA does not give Canada access to the EU Single Market in important areas like air travel, broadcasting, and banking.
8. Any change (to say two or three stage transformation) will be harmful for Bangladesh's RMG exporters even if the DFQF market access to the UK is continued. Indeed, the UK exporters could also face additional challenges if stringent RoO are imposed in case of exports to the EU, as was pointed out in a post published by the UK Trade Policy Observatory (Winters and Tambari, 2018).
9. EU GSP+ requires beneficiary countries to comply with three conditions including ratification and strict implementation and monitor of the 27 International Labour Organization (ILO) core labour standards.
10. Calculation made by authors, using data of export receipts, at 6 digit HS code level, from EPB (n.d.) and MFN tariff data from Market Access Database of the European Commission website (European Commission, n.d.b).
11. UK importers importing from Bangladesh will have to pay duties worth EUR 247 million (USD 305.9 million) at the prevailing MFN rates. In Stevens and Kennan (2016), the calculation of potential calculable tax hike is done based only on highest applicable ad valorem element (8 digit trade code) with data collected from the EU's 2015 schedules in



the TRAINS database of the United Nations Conference on Trade and Development (UNCTAD). The average annual imports in 2013–2015 from the Commonwealth countries were used for this analysis.

12. Bangladesh comes third relative to Seychelles (23.4 percent) and Malta (14.3 percent). The extra import duty payment amounts to 1.7, 9.2 and 2.3 per cent of their respective exports to the UK for other Asian Commonwealth members, India, Pakistan and Sri Lanka. (Stevens and Kennan, 2016) This amount is 8.6 per cent of Bangladesh's total exports to the UK in FY2016-17. (EPB, n.d.)
13. On the other hand, imports from the UK will be cheaper for Bangladeshi importers if BDT appreciates. This will make imports from the UK a relatively more lucrative business proposition. Consumers and importers of intermediate inputs from the UK will stand to benefit from this.
14. According to Mendez-Parra et al. (2016), Bangladesh's exports to the UK could fall by 1.2 per cent as a result of the appreciation of BDT (weaker pound – a 10 per cent depreciation). Expected export downfall is 0.9 per cent for Cambodia, 0.4 per cent for India and 0.6 per cent for LDCs (estimate based on the assumption of unit elasticity). This ODI-UKTPO study projects that Bangladesh will experience a fall in exports equivalent to USD 299.8 million.
15. The top 58 export destinations based on the export figures of FY 2015-16 (EPB, n.d.)
16. In Equation I, the usual gravity dummy variables used to describe country pair effect characteristics such as, common language, distance and contiguous border were considered initially. However, variables common language and common coloniser got omitted from the regression because of collinearity. The model was subsequently re-run without these variables.
17. The variable  $RERE_{i/j,t}$  has been calculated using the following formula as used by Khatoon and Rahman (2009):

$$RER_{i/j,t} = E_{i,t} \left[ \alpha_{j,t} \left\{ \frac{CPI_{j,t}/(e_{j,t})}{CPI_{i,t}} \right\} \right]$$

Here,

$RER_{i/j,t}$  = Real exchange rate (BDT/LCU) in period t

$E_{i,t}$  = Nominal exchange rate of Bangladesh against USD (BDT/USD)

$\alpha_{j,t}$  = trade ratio of country j in year t =  $\frac{\text{trade with country j in year t}}{\text{total trade in year t}}$

$CPI_{j,t}$  = Consumer price index (CPI) of country j in year t

$e_{j,t}$  = Nominal exchange rate of country j's currency against USD (BDT/USD)

$CPI_{i,t}$  = CPI of Bangladesh in year t

As is known, the European common currency, the Euro, was introduced as a Europe-wide medium of exchange (though not all EU members joined the move). To address this change, real exchange rate of EUR against BDT has been incorporated in the equation, and the new variable  $RERE_{i/j,t}$  has been introduced.

18. The coefficient of the variable 'distance' is significant in all results except in column E where 'trade cost' is actually considered.
19. This also explains the inconsistency observed in the estimates obtained for the variable 'contiguity of borders'.
20. One viable explanation, as per Cipollina and Salvatici (2013), is that using aggregated trade flows (as has been used in the current analysis) to analyse the impacts of trade policy measures such as tariff which are applied at disaggregated levels (at product levels) can give misleading results. They showed in their work that the coefficient of tariff variable gets significant once product level disaggregation (at HS 6 digit level) is considered. It suggests that product-level disaggregated data can better capture the supply capacity, utilisation of preferential market and sectoral erosion.
21. Authors' calculation using the coefficients of the EU dummy ( $\beta_{EU \text{ dummy}}$ ) in Column B, D, and E of Table 5, and the formula:  $((e^{\beta_{EU \text{ dummy}}} - 1) * 100)\%$
22. Authors' calculation based on the coefficient obtained from the gravity model estimation and EPB (n.d.) data on exports for FY 2017-18.

loss in exports =

$$\begin{aligned} & \frac{\sum_{EU(\text{selected } 19) \text{ exports}}}{\sum_{EU(28) \text{ exports}} \text{total exports to the UK}} \\ & * \frac{\sum_{EU(\text{selected } 19), \text{ exports}}}{\sum_{EU(28) \text{ exports}} \text{total exports to the UK}} * \text{exports}_{UK} \\ & * ((e^{\beta_{EU \text{ dummy}}} - 1) * 100)\% \end{aligned}$$

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