

Small Fish, Big Pond: Post-Brexit Challenges and Opportunities for Small Economy Trade Policies

Paul Pounder¹ and Alexander Wollenberg²

ABSTRACT

This research purposefully examines the existing literature on trading blocks, and reviews the trade balances between CARICOM, UK and the EU with a view of determining likeness of a Post-Brexit era and policy framework for CARICOM. The methodology entails a review of Brexit developments; discusses the likely consequences of a Brexit on CARICOM countries using quantitative economic analysis of longitudinal trade data incorporating a summary of several views held by scholars, statutory boards and expert opinions; and finally, the research identifies steps towards the development of a policy framework. The main findings highlight that the impact on CARICOM following a post-Brexit will be substantial owing to its large share of EU-bound trade being with the UK. Post-Brexit, the UK is likely to lose its advantage regarding customs duties, however, some of the impact will be cushioned as re-exports will be channeled to the EU bypassing the UK.

ملخص

يدرس هذا البحث الأدبيات القائمة التي تتناول مسألة التكتلات التجارية، ويستعرض التوازنات التجارية بين الجماعة الكاريبية والمملكة المتحدة والاتحاد الأوروبي بهدف تحديد الصورة العامة لفترة ما بعد خروج بريطانيا من الاتحاد الأوروبي وإطار السياسات الخاص بالجماعة الكاريبية. وتستلزم المنهجية مراجعة التطورات المتعلقة بخروج بريطانيا من الاتحاد الأوروبي، وتناقش العواقب المحتملة لخروج بريطانيا من الاتحاد الأوروبي على دول الجماعة الكاريبية، من خلال التحليل الاقتصادي الكمي للبيانات الطولية للتجارة التي تتضمن ملخصاً لعدد من آراء المتخصصين والمجالس التشريعية والخبراء، وفي الأخير تحدد الدراسة البحثية عدداً من الخطوات بهدف تطوير إطار خاص بالسياسات. وتبرز أهم النتائج أن التأثير على الجماعة الكاريبية جراء خروج بريطانيا من الاتحاد الأوروبي سيكون جلياً بسبب حصتها الكبيرة من التجارة المرتبطة بالاتحاد الأوروبي كونها تابعة للمملكة المتحدة. وبعد خروج بريطانيا من الاتحاد الأوروبي، قد تفقد المملكة

¹ School of Arts and Sciences, Department of Business and Management Studies; St. George's University, Grenada, West Indies.

E-mail: ppounder@sgu.edu

² School of Arts and Sciences, Department of Business and Management Studies; St. George's University, Grenada, West Indies.

E-mail: awollenb@sgu.edu

المتحدة المزايا المتعلقة بالرسوم الجمركية، لكن بعض الأثر سيخف مع مرور عمليات إعادة التصدير إلى الاتحاد الأوروبي عبر المملكة المتحدة.

ABSTRAITE

Cette recherche examine délibérément la littérature existante sur les blocs commerciaux, et passe en revue les balances commerciales entre la CARICOM, le Royaume-Uni et l'UE afin de déterminer la ressemblance d'une ère post-Brexit et d'un cadre politique pour la CARICOM. La méthodologie implique un examen des développements de Brexit ; elle examine les conséquences probables d'un Brexit sur les pays de la CARICOM en utilisant une analyse économique quantitative des données commerciales longitudinales incorporant un résumé de plusieurs points de vue tenus par des universitaires, des conseils statutaires et des avis d'experts ; et enfin, la recherche identifie les étapes vers le développement d'un cadre politique. Les principales conclusions soulignent que l'impact sur la CARICOM à la suite d'un accord post-Brexit sera substantiel en raison de la part importante des échanges commerciaux de l'UE avec le Royaume-Uni. Après la réforme, le Royaume-Uni va probablement perdre son avantage en matière de droits de douane, mais une partie de l'impact sera amortie car les réexportations seront canalisées vers l'UE en contournant le Royaume-Uni.

Keywords: Brexit, CARICOM, European Union, WTO, Gravity Models, Trade Policy

JEL Classification: F13, O11, O24

1. Introduction

Following the United Kingdom (UK) vote to leave the European Union (EU), the paper will discuss implications for small economies of the Caribbean Community (CARICOM) states on their trade relationship with the UK and the EU. Specifically looking at the impact on CARICOM in post-brexit era. Due to the advantageous position of CARICOM having concluded an Economic Partnership Agreement (EPA) with the EU, the paper focuses on trade post-Brexit. The sole intent of the paper is to discuss implications on CARICOM trade with UK and EU.

From the perspective of the UK being a part of the EU trading bloc or to remove itself, the authors consider the pros and cons of trading blocs. In the last two decades, the world has come to see the evolving of many existing trading blocs, especially as membership is changing. Chase (2005, 1), noted that “trading blocs have been dramatically expanding

throughout the world economy.” These trading blocs promote free trade agreements, customs unions, eliminate tariffs and other barriers to trade between the member countries; while leaving trade barriers with excluded countries. Research has shown that motives for trading blocs stem around economics (Viner 1950, 355), protectionism (Krugman 1991), “trade politics” (Krugman 1993, 61), and in more recent times “security externalities” (Gowa 1994, 41). While Levy (1993) argues that regional blocs neither promote nor hinder global trade. In general the characteristics of trading blocs have shown to be similar in economic structures, compatible laws and policies, and closeness in location to each other (Schott 1991; Thoumi 1989). These changes have led to much discussion by academics and practitioners as to the strengths and weaknesses of partnering with other countries to formulate trading blocs. Notably, economists have failed to rationalise trading blocs from a local perspective as they conflict with national wellbeing assumptions which are key to most trading simulations as mentioned by Trebilcock and Howse (2005). While liberals have recognized the positive political context of international trade. Lawrence (1996) states that groups of countries with similar political, institutional, and cultural backgrounds can achieve deeper integration than is feasible multilaterally. Further to this, much has also been said about legitimacy and consequences of trading blocs. Grieco (1988) alluded to the “relative gains argument” to assess the possibility of cooperation between trading partners.

The authors have noted that even though there is still no consensus of preferential trading blocs in the published literature; it is recognized that trading blocs allow for privileged treatment of its members over non-participating members. One sentimental view from Viner (1950) stated that based on the effects of the customs union, the protectionist is right and the free trader is wrong. Lawrence (1991) argues that blocs offer benefits like stimulating growth and enhancing the role of market forces. Further support for trading blocs is established by recognizing that tariffs to non-members and by negotiating as a combined grouping, there is potential to create better economic leverage, than was possible individually (Viner 1950).

The literature also looks at whether trading blocs have promoted trade among themselves while discriminating against other countries or at their expense. Lawrence (1991) expressed the concern that customs unions and free trade agreements would be “stumbling blocks” to multilateral

agreements. Trebilcock and Howse (2005) allude to trade diversions with regard to lower-cost producers who are part of the regional trading bloc and are discriminated against. Though it is thought that members within a bloc are closer and may be expected to trade more, due to lower cost structures related to transportation and supply chain management, this is not always the case. However, little is known about the degree of discrimination arising.

The following sections discuss in detail the key Brexit developments, the CARICOM-UK-EU trade relationship, as well as implications for CARICOM member states post-Brexit.

2. Brexit Developments and Their Significance for CARICOM as a Small Economy

We discuss the area of trade in greater detail as a focus point for this paper, with the CARICOM not wanting to make significant changes in principle to fulfilling its existing trade flows to either the UK or the EU.

In July 2018, the UK published a White Paper on the future relationship between the UK and the European Union post-Brexit in which the UK government outlined its positions regarding the aspects of the economic partnership, security partnership and further institutional arrangements. The highest priority has clearly been the economic partnership with the EU. In the Policy Paper, the UK proposed comprehensive frameworks including a free trade area focused on goods, which will be discussed in further detail in this section. According to the White Paper (2018), the UK proposes establishing a free trade area for goods, where the UK and the EU would maintain a common rulebook for frictionless trade at the border.

The proposal for the phase-in of the free trade area includes the introduction of a new version of a Facilitated Customs Agreement that represents a highly customized and unprecedented customs union. According to the White Paper (2018) it would “remove the need for customs checks and controls between the UK and the EU as if in a combined customs territory, while enabling the UK to control tariffs for its own trade with the rest of the world and ensure businesses pay the right tariff.”

There are several implications for CARICOM arising from the recent Policy Paper, which although initially met with criticism by the chief EU negotiator Michel Barnier, is likely to be adopted in a compromised amended version as the EU since has given further signals in the affirmative. For CARICOM, even a partial adoption of the terms of this Policy Paper would mean that goods could still enter the UK and once entered, be shipped onward to EU countries without further tariffs. With the UK's proposal, therefore, the only potential obstacle for CARICOM would be the UK itself and the speed at which the UK negotiates a new trade deal with CARICOM to replace the existing EU-CARICOM EPA. As a result, CARICOM should be prepared to trade with the UK on World Trade Organization (WTO) terms in the time following Brexit even with the Policy Paper being adopted as an official blueprint for UK-EU relations. Consequently, CARICOM businesses need to proactively start increasing trade links with the EU directly and not rely on the UK for a speedy renegotiation of the EPA with CARICOM (Bishop and Clegg, 2018). As a result, we believe the UK's recent Policy Paper does not change the current situation for CARICOM and its future relationship with the UK. CARICOM thus needs to continue its strategy of focusing on negotiating its future relationship with the UK and establishing new trade and supply chain links with the EU where CARICOM was too reliant on the UK in the past and take advantage of the EPA with the remaining EU-27 members (Bishop and Clegg, 2018).

3. Consequences of Trade (Desires and Losses)

It is recognized that international trade comes with its advantages and disadvantages. However, small island developing states like the ones within CARICOM have disproportionate dependence on international trade and because of their fragile environments are therefore more vulnerable to external shocks. The research has shown that trade creates opportunities for improving overall standing of a nation by spurring competition, increasing quality of life through consumption and improving efficiency within the economy. For instance, Widodo (2009) posits that comparative advantage derived from the efficiency of production can enhance the chances of international trade. With larger economies focussing on standardized and scale-intensive industries (Bastos and Cabral, 2007); while smaller developing countries specialize in standardized products (Bojnec, 2001). Additionally, Melitz (2003) highlighted that lowering barriers and advances in productivity from trade

liberalization may accrue disproportionately to the bigger businesses, thus weeding out smaller less productive local businesses. In more recent research, a paper by Arkolakis et. al. (2012) which reviews a series of heterogeneous and homogeneous trade models highlights that a country's domestic trade share and the elasticity of trade with respect to variable trade costs are adequate statistics for the aggregate gains from trade. Ossa (2015) and Sampson (2016) in conducting further research on trade disparities show that gains from trade can be magnified through differences across industries based on the trade elasticity and by trading in intermediate inputs. Other areas needing consideration that are more specific to CARICOM realities are the distance between trading countries and the number and frequency of practical routes. In addition, the Region has been plagued with many challenges and barriers in the maritime sector. Many problems created through inefficiencies in the maritime sector related to Port fees and inadequate supply of transport lines is the shipment of goods (cargo), transport costs, custom duties of importing countries and port security. Thus making a case for the development of a framework of standards to secure and facilitate global trade between CARICOM, UK and the EU; especially as there is intensification of global competition, and as the Region engages in collaborative and integrated activities to mitigate their inefficiencies (Pounder et. al, 2013).

4. Methodology

This research gives an understanding of the post-Brexit implications to CARICOM trade. The research involved three main stages. Firstly, the paper gives a review of Brexit developments, synthesizing and combining relevant data as highlighted by Grant et al. (2009). Secondly, the paper discusses the likely consequences of a Brexit on CARICOM countries using quantitative economic analysis of longitudinal trade data incorporating a summary of several views held by scholars, statutory boards and expert opinions as purported by Van Steen and Cooke (1989). Thirdly, the paper identifies steps towards the development of a policy framework as advocated by Walt and Gilson (1994).

5. Trade Analysis and impact

5.1. CARICOM's Trade with EU, UK

The following tables represent the value of trade in goods and services between CARICOM and the UK, and EU, respectively. It is worthy to note the high share of trade with the UK.

Table 1: Value of CARICOM Countries' Total Exports to the United Kingdom in USD: 2006-2015

CARICOM COUNTRIES	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CARICOM	540,278,118	731,491,177	839,053,802	806,760,729	498,072,996	670,693,384	569,484,742	470,629,018	495,508,865	195,642,980
MDCs	457,855,817	620,212,923	738,868,410	675,968,560	397,965,143	592,351,648	478,142,472	362,431,480	380,213,815	105,226,861
BARBADOS	33,024,904	28,579,484	41,156,301	32,816,764	52,629,077	55,035,476	31,252,552	8,632,892	16,748,181	14,046,023
GUYANA	99,260,573	151,111,606	140,375,906	111,915,002	48,162,678	77,590,170	114,773,610	116,459,325	97,065,788	91,180,838
JAMAICA	204,667,370	215,994,448	222,793,776	129,649,487	83,925,772	111,617,286	45,086,396	81,769,904	75,903,629	-
SURINAME	-	-	-	-	-	-	-	-	-	-
TRINIDAD & TOBAGO	120,902,970	224,527,385	334,542,427	401,587,307	213,247,616	348,108,716	287,029,914	155,569,359	190,496,217	-
LDCs	82,422,301	111,278,254	100,185,392	130,792,169	100,107,853	78,341,736	91,342,270	108,197,538	115,295,050	90,416,119
BELIZE	44,309,996	47,990,040	58,082,265	79,578,499	71,187,695	66,514,313	78,403,842	86,337,273	89,802,250	81,896,961
OECS	38,112,305	63,288,214	42,103,127	51,213,670	28,920,158	11,827,423	12,938,428	21,860,265	25,492,800	8,519,158
ANTIGUA & BARBUDA	-	4,129,558	3,644,029	9,984,387	6,835,752	2,418,664	5,374,775	6,812,467	6,155,147	6,796,994
DOMINICA	7,653,000	5,186,708	5,325,858	3,841,949	2,676,412	461,791	340,065	405,294	-	-
GRENADA	228,162	298,479	504,223	572,234	250,516	110,330	309,156	471,653	1,479,124	693,709
MONTSERRAT	197,586	166,187	118,555	152,562	-	-	48,378	7,947	1,346	-
ST. KITTS & NEVIS	949,461	1,069,134	2,879,747	426,765	255,601	165,675	83,201	370,273	17,423	-
SAINT LUCIA	19,407,364	43,014,856	24,913,430	31,527,254	14,403,404	7,758,608	6,002,944	13,441,124	16,753,920	-
ST. VINCENT & GRENADINES	9,676,732	9,423,292	4,717,285	4,708,519	4,498,473	912,355	779,909	351,507	1,085,840	1,028,455

5.2. Total exports from CARICOM to the UK 2006-2015

From 2006 to 2008, there were increases of 35.4% and 14.7% respectively in CARICOM exports to the UK. In this pre-financial crisis period many CARICOM economies showed resilience in building trade with the diaspora, building capacity and developing export readiness initiatives. Many countries in the Region streamlined their objectives on increasing their focus on entering new geographic markets in the diaspora and developing new products. This strategy led to a growth pattern during this period as company strategies led to increased exports. However by 2010 decreases in trade dropped by 38.26%. This large drop can be linked to the failure of the free market as we know it. As the secondary credit market, investment banks and unregulated financial market disappeared. This created many challenges for CARICOM countries to export. Though supply of CARICOM products was available, the demand among UK consumers was down as disposable income was reduced among consumers. The relatively weak performance in trading was attributed to high business overall costs.

The period from 2010 to 2013 resulted in gradual fluctuations in trade figures. These fluctuations could have been attributed to the financial volatility, and client uncertainty in the market place. As CARICOM is made up of developing countries, this group is usually more exposed and sensitive to the effects of macroeconomic ups and downs. Therefore it can be stated that concomitant to the severe financial shock in the US and UK, is the trade collapse within the CARICOM region. The major factor explaining the decline in trade during the crisis period is the decline in demand. Reduction in tourism mainly, which is one of the biggest foreign exchange earners for the CARICOM. Post-crisis, the expectation is for growth to continue at pre-crisis rates, however, this is not exactly the case. The period 2014 to 2015 started to show signs of increased growth at 5.29%.

Notably, where there is a short fall off, the following periods had quick spikes. As the individual economies of CARICOM recovered, showing there is a representative bounce back in trade. Further, the increasing difficulty in obtaining trade finance post-crisis was viewed as the main contributing factor to explaining declines and fluctuations. The general consensus was that exporters were less willing to give importers products on credit. However, existing trade agreements have proved to be one of the best ways to open up foreign markets to CARICOM exporters and this is an area to be pursued with the UK.

Table 2: Value of CARICOM Countries' Total Imports to the United Kingdom in USD: 2006-2015

CARICOM COUNTRIES	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CARICOM	588,330,845	671,197,720	613,806,815	511,251,769	474,497,441	495,998,185	520,092,894	590,711,868	591,288,582	205,040,271
MDCs	454,938,650	520,679,975	484,282,693	383,599,341	357,644,026	381,493,171	410,630,748	479,176,943	480,757,498	116,286,583
BARBADOS	94,939,984	101,407,109	92,521,025	67,181,358	64,194,426	71,638,385	66,342,615	71,624,249	69,531,706	68,197,528
GUYANA	42,475,961	61,398,630	51,114,358	41,754,262	58,832,912	62,093,013	48,873,303	45,784,584	48,708,726	40,194,817
JAMAICA	133,030,188	129,290,783	104,571,422	77,930,682	82,424,377	95,923,427	86,053,355	68,132,921	62,723,539	-
SURINAME	5,278,155	5,003,179	5,518,822	6,921,878	9,556,563	7,965,916	8,828,486	9,081,803	5,057,492	7,894,238
TRINIDAD & TOBAGO	179,214,362	223,580,274	230,557,066	189,811,161	142,635,748	143,872,430	200,532,989	284,553,386	294,736,035	-
LDCs	133,392,195	150,517,745	129,524,122	127,652,428	116,853,415	114,505,014	109,462,146	111,534,925	110,531,084	88,753,688
BELIZE	9,074,844	10,288,333	12,793,494	9,446,794	10,869,584	11,990,667	10,545,926	10,621,111	12,872,822	23,626,958
OECS	124,317,351	140,229,412	116,730,628	118,205,634	105,983,831	102,514,347	98,916,220	100,913,814	97,658,262	65,126,730
ANTIGUA & BARBUDA	23,149,560	36,807,370	13,515,520	28,180,467	23,068,323	16,642,991	20,646,861	14,176,886	16,830,903	18,868,042
DOMINICA	9,550,139	10,573,501	10,723,354	11,629,685	8,818,296	9,415,960	8,393,831	8,726,219	9,783,751	9,964,559
GRENADA	16,680,954	15,446,894	16,826,343	11,933,628	13,149,893	12,209,846	9,816,648	12,987,434	9,193,170	12,190,995
MONTSERRAT	1,524,748	1,980,080	1,818,281	1,677,451	1,067,332	1,590,868	1,611,383	1,606,388	1,660,512	-
ST. KITTS & NEVIS	13,152,675	11,060,437	14,555,859	13,018,095	7,412,193	10,113,077	9,997,277	7,041,052	7,773,868	-
SAINT LUCIA	40,806,344	37,255,448	37,150,158	30,528,191	31,504,715	33,293,010	29,585,684	28,991,445	28,709,672	-
ST. VINCENT & GRENADINES	19,452,931	27,105,682	22,141,113	21,238,117	20,963,079	19,248,595	18,864,536	27,384,390	23,706,386	24,103,134

5.3. Total Imports by CARICOM from the UK 2006-2015

The period 2006-2007 showed an increase in imports from the UK at a rate of 14%. The bulk of the imports into CARICOM remain to be fuel and lubricants, followed by food for final consumption. From 2007 to 2010 CARICOM imports from the UK showed a relentless decrease of 9%, 17%, and 7% respectively. The authors believe that imports were reduced in the 2007 to 2010 period as Governments sought to stabilize their Countries' balance of payments mainly through large reductions in consumption goods. From 2011 to 2013, showed a gradual increase 5%, 5% and 14% in trade imports to the CARICOM from the UK. Firms in the UK have been able to reposition to markets further afield and outside EU and this has helped boost overall export growth to the CARICOM Region. Noticeably, the CARICOM industries are struggling to compete against international competitors, especially as Governments remove tariffs to satisfy WTO regulations which may have discouraged consumption of imports and encourage consumption of domestic goods. The gradual increase of CARICOM imports from the UK is linked to the rejuvenation of UK's manufacturing base which is on the up and up.

5.4. Decrease in trade volumes with the UK following Brexit

Table 3 summarises the declines in trading volumes with the UK. For the first scenario, the UK is excluded from the EPA with the EU. It is unlikely that members of CARICOM and the UK would reach an alternative EPA-style agreement since the UK would be more inclined to re-negotiate bilaterals with larger trading partners first (Ebell and Warren 2016). The Commonwealth framework is not a substitute because it is not currently a trading framework that uniformly provides for tariff-free trade as does the EPA. The option of re-exporting CARICOM goods to the EU market would thus become unavailable. Currently, approximately 30% of UK exports to the EU are of non-EU origin. Only a customs union with the EU would solve this problem. However, the outcome is uncertain because neither Norway nor Switzerland are part of a customs union with the EU and therefore do not serve as precedents. The declines in re-exports of CARICOM goods to the EU (via the UK) export market shares would lead to declines in total trade of CARICOM members with the UK as shown in the table 3 below.

As the literature and datasets in this area are not conclusive on the impact of various free trade agreements on trade; we have observed some authors having made strong cases for both positive and negative impacts. Therefore, in addressing the issue of declining trade, we independently examined the impact of free trade agreements on goods and services and obtained estimates based on four of the most pertinent papers as addressed by Ebell and Warren (2016): Baier et al. (2008), van der Marel and Shepherd (2013), Ceglowski (2006), and Egger et al. (2011).

Table 3: Trade impact of leaving the EU on UK’s total trade with CARICOM

Scenario	Declines in UK Export Market Share to EU		Declines in UK’s Total Trade ³ with CARICOM	
	Optimistic	Pessimistic	Optimistic	Pessimistic
WTO	50%	72%	20.7%	29.2%

Source: Ebell and Warren (2016)

5.5. Goods trade

In reference to a panel-data analysis on the goods and services trade within European Free Trade Association (EFTA) spanning 40 years (1960 to 2000) conducted by Baier et al. (2008), Ebell and Warren (2016) give an explanation. Ebell and Warren (2016) state that 1990 marked a turning point in which the value of the UK’s trade in services with EFTA began to exceed the value of trade in goods and the share of services in the UK trade balance has grown since. Therefore, reaching an agreement for the UK that covers services trade is important. Unfortunately, the negative precedent here is Switzerland, which does not have passporting rights for its banks to trade in the EU. Passporting rights allow financial institutions in the UK and its overseas territory of Gibraltar full access to the EU without having to obtain any separate licenses or operating permits in other EU member states (Clegg, 2016). Non-EU members such as Switzerland do not enjoy passporting rights. In the UK and Gibraltar, banks and insurance companies have benefited immensely from this privileged access, giving them an edge over competitors such as

³ Declines in total trade are calculated as $(X_{\text{brexit}} - X_{\text{baseline}}) / X_{\text{baseline}}$

Switzerland (Clegg, 2016). Under a likely WTO scenario, Ebell and Warren (2016) compile findings by several authors with respect to the negative development of trade with the EU. Baier et al.'s (2008) model is based on ordinary least squares (OLS) and gravity modelling using trade data of bilateral trade in goods in areas with any level of trade agreement. The specific model is discussed in the following section in more detail and compared to other predictive methodologies.

Table 4: Trade Impact of Leaving the EU on UK Re-exports to EU Market Shares (declines)

	Goods	Services	Total			
Authors	Baier et al.	Vd Marel, Sheperd	Ceglowski	Baier et al. + v d Marel, Sheperd	Baier + Ceglowski	Egger et al.
WTO	53%	43%	63%	50%	56%	72%

Source: Ebell and Warren (2016)

5.6. Goods and services trade

Ebell and Warren (2016) argue that the most current and likely estimate is provided by Egger et al. (2011) who used a perspective of preferential trade agreements to arrive at their conclusion of 72% trade reduction with no post-Brexit deal. Their model is based on the broader concepts of preferential trade agreements (PTAs) rather than free trade agreements (FTAs) as PTAs call only for the reduction of tariffs between signatories rather than elimination as in FTAs. A PTA is therefore akin to (Most Favoured Nation) MFN status, which we would find under WTO rules. For this reason, the range of inputs used by Egger et al. (2011) covers a higher range of data points compared to using only FTA data, thereby resulting not only in a higher value of the dependent variable (trade decline) and but also a higher confidence interval.

Santos Silva and Tenreiro (2006) use a simplified method to approach this problem. They posit that under weak conditions, e.g. when the gravity model contains only the correct set of explanatory variables - the Poisson pseudo-maximal likelihood estimator provides close estimates of the original nonlinear model. Therefore, it is equivalent to a non-linear least squares model in the original equation. As it is a pseudo-maximum likelihood estimator, the data does not in fact have to be distributed as

Poisson. Although Poisson is appropriate as an estimator for counting data models, it is appropriate to apply; it is also possible to apply it more generally in nonlinear models such as gravity.

Furthermore, the Poisson estimator used by Egger et al. (2011) is realistic in that it includes all trade values including those that are zero. The frequency of a trade value of zero can be high because not all countries trade all goods with other countries. Therefore, in a Pseudo-Maximum Likelihood estimator model, values of zero can be automatically dropped from the OLS regression. The properties of Pseudo-Maximum Model estimators without the Poisson distribution can make the model prone to instability due to the presence of fixed effects. A Poisson estimator adds consistency even in the presence of fixed effects within OLS modelling. Therefore, Egger et al.'s (2011) Poisson Pseudo-Maximum Likelihood estimator, indicating a decline in trade to the extent of 72% in the absence of any preferential trade agreement between EU and UK (ie. The no-deal scenario) can be considered the most realistic value among those shown in table 3.

Even Baier et al. (2008) who use OLS regressions and gravity models and account for endogenous and exogenous macroeconomic effects of changes in the trade of goods, price levels, derive their data from bilateral goods trade from country pairs in a loose concept of economic integration agreements (EIAs), which include customs unions, FTAs, common markets, and economic unions worldwide (not limited Europe).

By contrast, Ceglowski's (2006) study similarly use gravity models but focuses on the services trade while limiting data to Organisation for Economic Co-operation and Development (OECD) countries. Findings by van der Marel and Sheperd (2013) are similarly restricted to the services trade and OECD countries, while a gravity model is used. Therefore, the predictive value of decline in trade is smaller than in the comprehensive study by Egger et al. (2011).

Taking into account the findings of other studies in the table which indicate a smaller extent of decline in trade, we could therefore reasonably expect a decline in trade in the range between maximum and minimum values.

5.7. Tariffs and Macroeconomic Effects

Under WTO rules, MFN status would apply to the UK with all its trading partners who are WTO members including all EU countries unless the UK negotiates other terms on bilateral levels, keeping in mind that no EU member country can enter bilateral trade agreements as the EU negotiates as a whole. Currently, average MFN import tariffs are 9%; while the type of goods the UK produces, however, would average out to a 5% increase in tariffs (HM Treasury 2016). Given these tariffs, some leeway exists for concluding some preferential trading agreements.

The table 5 below shows other studies that give us estimates of effects of reductions of trade on macroeconomic indicators on the UK and CARICOM assuming a prior balance of trade (idealistic). In pessimistic scenarios, we predict a decline of between 3.7% and 9.5% in Gross Domestic Product (GDP) in both CARICOM and UK. An important factor for the decline in GDP can be the decline in productivity due to higher transaction costs and redeployment of trade routes and supply chains, as well as the presence of higher regulation. These factors are difficult to estimate ex-ante, hence the wide range in predictions of GDP decline.

Table 5: Synthesis of recent studies on the impact of Brexit on CARICOM and UK

Estimates by:	OECD	LSE ⁴	TREASURY		NIESR ⁵			NIESR	
	WTO/FTA	EEA/FTA	EEA	FTA	WTO	EEA	FTA	WTO	WTO+
Reduction in total trade (%)	-10 to -20	-12.6	-9	-14 to -19	-17 to -24	-11 to -16	-13 to -18	-21 to -29	-22
Reduction in FDI (%)	-10 to -45	none	-10	-15 to -20	-18 to -26	-10	-17	-24	-24
EU budget savings (% of GDP)	0.3 to 0.4	0.0	0.4	0.4	0.4	0.0	0.3	0.3	0.3
Method	NiGEM	Estimated trade elasticities	NiGEM			NiGEM			NiGEM
GDP (% change)									
Central estimate (%)	-5.1	-7.9	-3.8	-6.2	-7.5	-1.8	-2.1	-3.2	-7.8
Range (%)	-2.7 to -7.7	-6.3 to -9.5	-3.4 to 4.3	-4.6 to 7.8	-5.4 to 9.5	-1.5 to -2.1	-1.9 to -2.3	-2.7 to -3.7	-7.8
Wages (% change)									
Central estimate						-2.7	-3.4	-5.5	-7.0
Ratio of GDP to trade declines	0.27 – 0.39	0.5 – 0.75	0.42	0.33 – 0.41	0.32 – 0.40	0.13	0.14	0.13	0.35
Channels									
Reduced Trade with EU	x	x	x	x	X	x	x	X	x
Productivity losses from reduced trade in CARICOM	x	x	x	x	X				x
Productivity losses from reduced trade in UK	x	x	x	x	X				x
Reduction in FDI (UK and CARICOM)	x		x	x	X	x	x	X	x
Productivity losses from reduced FDI (UK and CARICOM)	x		x	x	X				
Productivity gains from deregulation	x								

Source: Ebell and Warren (2016)

⁴ LSE – London School of Economics⁵ NIESR – National Institute of Economic and Social Research

5.8. Further Considerations and Potential Obstacles

With its recent Policy Paper, the UK seeks to accomplish two things at the same time. It envisages a facilitated customs agreement with the EU, in which the UK would recognize EU rules and tariffs and apply them if goods are destined for the EU (via the UK), but apply its own tariffs if the final destination for the goods is the UK. In the EU, all trade matters, including tariffs, are under the authority of the European Commission and are applied to all non-EU countries equally. The common practice of the EU is to establish common tariffs for goods from outside the EU – in the White Paper, however, the UK is proposing common internal UK-EU tariffs but being able to set its own tariffs to goods from outside the UK.

The above proposal has met with strong rejection by the EU. In the words of Michel Barnier, chief negotiator for the EU: “The EU cannot - and the EU will not - delegate the application of its customs policy and rules, value added tax (VAT) and excise duty collections to a non-member who would not be subject to the EU’s governance structures,” (Bleikinsopp and Bartunek, 2018). The issue is more profound as legislation would need to be changed within the EU to allow for such an arrangement. According to Barnier, “This complex customs system also poses a more fundamental question: How can the Union delegate the application of its customs rules to a non-member of the EU, who would not be subject to governance structures? Would that be acceptable or, simply, legally possible?” as stated by Bleikinsopp and Bartunek (2018).

In summary, the proposal relating to trade as outlined in the UK’s Policy Paper amounts to a customs union in which the UK would benefit from free trade. It will further ask the EU to relinquish its sovereign control of payments of customs duties for goods that arrive from outside the UK-EU customs area to a non-EU party, the UK in this case, for which there are no legal precedents. Barnier has called this an example of British cherry picking as indicated by Bleikinsopp and Bartunek (2018). As part of any customs union with the EU, treaty countries are restricted from negotiating free trade agreements with members outside such customs union. However, the UK’s Policy Paper is proposing just this – namely being part of the customs union while having control over trade with non-members. In other examples, the EU’s customs unions with Turkey, San Marino, and Andorra restrict those countries from engaging in free trade negotiations with non-EU countries due to the common application of

external tariffs. In other words, countries relinquish sovereignty over their trade deals with the rest of the world to the EU to be able to be part of the customs union. As a result, it is difficult to justify why the UK should be any different. Setting a precedent by acceding to the UK's request would put the entire trading structure of the EU into question, although the EU has since given cautious affirmative signals. This discussion therefore highlights the complexity of reaching an agreement relating to trade before the Brexit deadline in March 2019.

6. CARICOM Trade Facilitation Challenges

As CARICOM is a set of developing nations, a series of challenges have been identified that create barriers to trade facilitation. Some of the broad areas of concern are identified below:

- Excessive Government bureaucracy
- Inadequate customs procedures
- Poor utilization of information technology
- Lack of transparency
- Minimal cooperation between institutions supporting trade

Thus, any effort going forward must be designed to overcome these challenges and provide the fundamental conditions and tools to support a modern customs administration, which can facilitate international trade. Moreover, any deal and policy put in place must be geared towards promoting and expanding economic and technical cooperation among the developing countries within CARICOM.

7. Steps towards the Development of a Regional Policy Framework for Trade

In order to enhance this research agenda towards guiding future studies, the authors have proposed a framework that incorporates insights from the theoretical literature and practical approaches observed in trade policies. The research highlights that the main rules and regulations that constitute the main components of a trade policy. These are usually derived and implemented by Governments to govern cross border

transactions, however, they are sometimes constrained by international rulings. Thus with the globalization of the trade and the supporting systems, the movement of goods, evolving industrial bases and advances in information and communication technology (ICT), the trade policy framework requires professional operating systems that can be streamlined into new and existing institutions. It is further recognized that any post-Brexit trade policy developed for the CARICOM must involve a series of diverse policy instruments geared towards influencing the physical cross border movements of products, and the provision of services and economic exchange. In addition, such a framework must encompass policies to create a conducive environment for local traders or private companies to produce and trade. Thus the creation of enhanced trade liberalization environment and a reduction in barriers to trade.

For the purpose of this research, a list of concepts is formed, based on combining insights from the three institutional sources (World Bank, World Trade Organization, and the International Trade Centre) and satisfy the purpose of being meaningful to outlining a framework. Six processes are identified as important for the system to be performed effectively: namely, knowledge and capability development; building institutional and infrastructural capacity; developing tariffs, quotas and taxes; managing dispute settlement; coordination and integration of local expediencies; and coordination of private sector development and investment.

7.1. Knowledge and capability development

The demanding requirements of global trade has fundamentally changed the way how trading has been done. As such, there is a need to upgrade the knowledge and capacity of the personnel involved in the trading of goods and services. Building networks can catalyse international knowledge diffusion and provide new opportunities for local capability. Ernst and Lundvall, (2000) discuss the importance of tacit knowledge in managing the uncertainties in globalization. This research is quite relevant in guiding the way how knowledge should be shared.

7.2. Building institutional and infrastructural capacity

The institutional role of government in the process of trade is providing a stable, supportive, and appropriately competitive environment for stimulating trade. Thus building institutional and infrastructural capacity entails the creation of an enabling environment with appropriate policy and legal frameworks. It further involves the development of the resources (human, material and financial) essential for effectively and efficiently managing the institution (White, 2007; Mullins and Christy, 2010).

7.3. Developing of tariffs, quotas and taxes

In general, there are two major techniques utilized to control trade imports; namely tariffs and quotas. A tariff is a tax on imported goods. A quota is a quantity limit. Quotas define the maximum amount that can be imported within a year. In general, the tariff must incorporate the preparation of a technical schedule of duties, or taxes on imported goods. For instance, Rege (2002) highlights the benefits that can accrue to trade as a result of binding of tariffs and the rules that are applied for valuation.

7.4. Managing dispute settlement

Unlike developed countries, the CARICOM region observe several drawbacks in attempting to successfully litigate trade disputes before dispute settlement panels and securing remedies against developed WTO member states. Thus making this part of the framework difficult to navigate. The main processes to be highlighted in the dispute resolution methods should simplify systems of litigation and arbitration which usually pass through the courts. However, prior to such means of dispute settlement, consideration in the framework should highlight less costly and time consuming methods like negotiation, enquiry, mediation, and conciliation

7.5. Coordination and integration of local expediencies.

The framework requires the identification and recruitment of adequate personnel with the required knowledge, expertise, experience, competence and leadership to coordinate and integrate local practicalities. For instance, there is a need for measures for effective cooperation between customs and other trade facilitation institutions. In addition, there

is a need for a joint approach to compliance and audit as methods that can enhance cooperation and coordination between relevant departments.

7.6. Coordination of private sector development and investment

The framework requires the promotion and expansion of the sale of goods between CARICOM – UK and CARICOM – EU, with emphasis on facilitating such imports and exports. Thus from a CARICOM standpoint, there is a need to support investments aimed at taking advantage of the opportunities and strengthening the competitiveness of the CARICOM business community in the UK and EU markets. Such development would inspire the enablement of the creation and operation of regional joint ventures and the development of technical and scientific cooperation activities, which would spur business activities.

8. Conclusion

The impact on CARICOM following a Brexit will be substantial owing to its large share of EU-bound trade being with the UK. Post-Brexit, the UK is likely to lose its advantage regarding customs duties, however, some of the impact will be cushioned as re-exports will be channelled to the EU bypassing the UK.

Owing to CARICOM countries being developing states with low levels of processing industries, CARICOM is more vulnerable to other global events close to home and further afield exposing it to the effects of macroeconomic ups and downs as severe financial crises in the US and UK have shown previously, leading to a fall in trade within the CARICOM region. Overall, the existence of the EPA is advantageous and cushions some of the negative effects of post-Brexit. However, the redeployment of current trade routes to the EU via the UK and a renegotiation of trade terms with the UK following Brexit, will likely lead to further volatility in the region, which is not helped by the fact that currencies are pegged to the US Dollar, meaning reduced demand for CARICOM goods will cannot be compensated for by devaluating local currencies, but rather leading to higher interest rates which may stifle macroeconomic activity in the near to medium term. To reduce negative impact, an EPA with the UK needs to be negotiated and ratified as soon as possible. As an organisation of many states, CARICOM's voice carries some importance and negotiating power.

As the priority for the UK to negotiate an EPA with CARICOM is not currently known following the EU's stance to negotiate the exit first before any future relationship is negotiated, it would be in the best interest of CARICOM to develop its trading relationships with the remaining EU-27 bearing in mind the inevitability of post-Brexit era. In the long term having a strong trading relationship with both the EU and post-Brexit UK would be beneficial for CARICOM. Thus there is definitely a need for the development of a policy framework for trade that maintains a mutually beneficial agreement of wants and needs while trading.

References

Arkolakis, Costas, Costinot, A. and Rodriguez-Clare, A. (2012), “New Trade Models, Same Old Gains,” *American Economic Review*, 102(1), 94-130.

Baier, S., Bergstrand, J., Egger, P. and McLaughlin, P. (2008), “Do economic integration agreements actually work? Issues in understanding the causes and consequences of the growth in regionalism,” *The World Economy*, 31(4), 461–97.

Bastos, P. and Cabral, M. (2007), “The Dynamic of International Trade Pattern,” *Review of World Economics*, 143(3), 391-415.

Bishop, M.L. and Clegg, P. (2018), “Brexit: Challenges and Opportunities for Small Countries and Territories,” *The Round Table: The Commonwealth Journal of International Affairs*, 107(3), 329-339.

Bleikinsopp, P. and Bartunek, R.J. (2018), “UK's Brexit plans useful, but questions remain” – Barnier. Reuters. 20 July 2018. <https://uk.reuters.com/article/uk-britain-eu-barnier/uks-brexit-plans-useful-but-questions-remain-barnier-idUKKBN1KA1RQ> (accessed on 19 September 2018).

Bojnec, Stefen, (2001), “Trade and Revealed Comparative Advantage: Regional and Central and East European agricultural trade,” *Eastern European Economics*, 39(2), 72-98.

CARICOM. (2016). *CARICOM Regional Trade Information System*. <http://caricomstats.info/tradsysonline/Home.aspx> (accessed on 18 October 2016).

Ceglowski, J. (2006), “Does gravity matter in a service economy?” *Review of World Economics*, 142(2), 307–29.

Chase, K. (2005), “Trading Blocs: States, Firms, and Regions in the World Economy,” *Studies in International Political Economy*, University of Michigan Press.

Clegg, P. (2016), “Brexit and the overseas territories: Repercussions for the periphery,” *The Round Table: The Commonwealth Journal of International Affairs*, 105(5), 543-556.

Ebell, M., Warren, A. (2016), “The Long-Term Economic Impact of Leaving the EU,” *National Institute Economic Review*, 236(1), 121-138.

Egger, P., Larch, M., Staub, K. and Winkelmann, R. (2011), "The trade effects of endogenous preferential trade agreements," *American Economic Journal: Economic Policy*, 3, 113–43.

Ernst, D. and Lundvall, B. (2000), "Information Technology in the Learning Economy - Challenges for Developing Countries," in: Erich Reinert (editor), *Evolutionary Economics and Income Inequality*, Edward Elgar Press, London

Gowa, J. (1994), *Allies, Adversaries, and International Trade*. Princeton, NJ: Princeton University Press.

Grant M. J. Booth A. (2009), "A typology of reviews: An analysis of 14 review types and associated methodologies," *Health Information and Libraries Journal*, 26(2), 91–108. 10.1111/j.1471-1842.2009.00848.x19490148

Grieco, J. (1988), "Anarchy and the limits of cooperation: a realist critique of the newest liberal institutionalism," *International Organization*, 42(3), 285-507

HM Government. (2018) *The future relationship between the United Kingdom and the European Union*, Department for Exiting the European Union. July 2018.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725288/The_future_relationship_between_the_United_Kingdom_and_the_European_Union.pdf (accessed on 19 September 2018).

HM Treasury. (2016) HM Treasury analysis: the long-term economic impact of EU membership and the alternatives, Cm9250, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/483344/EU_finances_2015_final_web_09122015.pdf, (accessed on 28 January 2017).

Krugman, P. (1991), "The Move toward Free Trade Zones," *In Federal Reserve Bank of Kansas City, Policy Implications of Trade and Currency Zones*, Kansas City: Federal Reserve Bank, 7-42. <https://www.kansascityfed.org/PUBLICAT/EconRev/EconRevArchive/1991/4q91.pdf> . (accessed on 28 January 2017).

Krugman, ER. (1993), "Regionalism versus multilateralism; analytical notes," in: J. De Melo and A. Panagariya, eds., *New dimensions in regional integration*, Cambridge University Press, Cambridge, UK.

Lawrence, Robert. (1991), "Emerging Regional Arrangements: Building Blocks or Stumbling Blocks?" in *Finance and the International Economy*, The AMEX Bank Review Prize Essays, edited by R.O'Brien. United Kingdom: Oxford University Press.

Lawrence, R. Z. (1996), *Regionalism, Multilateralism, and Deeper Integration*. The Brookings Institution: Washington.

Levy, P. (1993), *A political-economic analysis of free trade agreements*. Stanford University.

Melitz, M. (2003), "The impact of trade on intra-industry reallocations and aggregate industry productivity," *Econometrica*, 71(6), 1695–1725.

Mullins, L.J. and Christy, G. (2010), *Management and organisational behavior*. 9th ed. Harlow: FT/Prentice Hall.

OECD. (2015), FDI flows (indicator), doi: 10.1787/80eca1f9-en, accessed on 18 October 2016.

OECD. (2016), *The economic consequences of Brexit: A taxing decision*. OECD economic policy paper, April 2016 No. 16

Ossa, R. (2015), "Why Trade Matters After All," *Journal of International Economics*, November 2015, 97 (2), 266–277.

Pounder, P., Bovell, G., & Pilgrim-Worrell, S. (2013), "A review of supply chain management and its main external influential factors," *Supply Chain Forum: International Journal*, 14(3), 42-50.

Rege, V. (2002), "Customs Valuation and Customs Report" (Development, Trade and the WTO. A Handbook) B. Hoekman (Ed.), A. Mattoo and P. English, The World Bank, Washington, DC (2002), 128-138

Reuters. (2018), "Brexit deal possible if EU market integrity kept" - EU's Barnier. Market News. 17 September 2018, <https://uk.reuters.com/article/britain-eu-barnier/brexit-deal-possible-if-eu-market-integrity-kept-eus-barnier-idUKL8N1W34F9> (accessed on September 19 2018).

Sampson, T. (2016), "Dynamic Selection: An Idea Flows Theory of Entry, Trade and Growth," *Quarterly Journal of Economics*, 131(1), 315-80

Santos Silva, J. and Tenreyro, S. (2006), "The log of gravity," *Review of Economics and Statistics*, 88(4), 641–58.

Schott, J. (1991), "Trading Blocs and the World Trading System," *The World Economy*, 14(1) (March), 1-17

Thoumi, Francisco E. (1989), "Bilateral Trade Flows and Economic Integration in Latin America and the Caribbean," *World Development*, 17(3), 421-29

Trebilcock, M.J. and Howse, R. (2005), *The Regulation of International Trade*, 3rd Edition. Routledge, Toronto.

Van der Marel, E. and Shepherd, B. (2013), “Services trade, regulation and regional integration: evidence from sectoral data,” *The World Economy*, 1393–1405.

Van Steen J.F.J., Cooke R.M. (1989), “Expert Opinions as Data Source: Methods and Experiences,” In: Colombari V. (eds) *Reliability Data Collection and Use in Risk and Availability Assessment*. Springer, Berlin, Heidelberg

Viner, J. (1950) *The Customs Union issue*. New York: Carnegie Endowment for International Peace.

Walt, G. and Gilson, L. (1994), “Reforming the health sector in developing countries: the central role of policy analysis,” *Health Policy and Planning*, 9, 353-70.

White, M. T. (2007), “A Right To Benefit From International Research: A New Approach To Capacity Building In Less Developed Countries,” *Accountability In Research*, 14, 73–92.

White Paper (2018), “The Future Relationship Between the United Kingdom and the European Union”

Widodo, Tri, (2009), “Comparative Advantage: theory, empirical measures and case studies,” *Review of Economic and Business Studies*. 4, 57-82.