Title: Ecuador Accession to the EU-Andean Free Trade Agreement	**Impact Assessment (IA)**
IA No: DIT0004	**Date**: 17/07/2018
RPC Reference No: RPC-4236(2)-DIT	**Stage:** Final
Lead department or agency: Department for International Trade	**Source of intervention:** EU
Other departments or agencies:	**Type of measure:** Other
	Contact for enquiries: enquiries@trade.gsi.gov.uk

Summary: Intervention and Options

RPC Opinion: Green

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANDCB in 2014 prices)	**One-In, Three-Out**	**Business Impact Target Status**
+£288m	N/A	N/A	No	Not a regulatory provision

What is the problem under consideration? Why is government intervention necessary?

The EU, Ecuador, Colombia and Peru, signed the Protocol of Accession of Ecuador to the EU-Andean Free Trade Agreement (known as the EU-Andean FTA) on 11 November 2016. The protocol has been provisionally applied since 1 January 2017. In order for the agreement to enter into force permanently, all EU Member States must ratify the agreement and notify the European Commission of their ratification. Were a Member State government to notify the Commission that they were unable to ratify the agreement this would mean that the agreement could not enter into force and its provisional application would be ended. In the UK, the Government is required to lay the treaty before Parliament for 21 sitting days during which either the House of Commons or the House of Lords (or both) may pass a motion to object to ratification. If neither House objects, the UK may proceed to ratify the treaty. Parliament must also pass an affirmative statutory instrument designating it as an EU treaty as the agreement has provisions that need to have effect in UK law.

What are the policy objectives and the intended effects?

The policy objectives of the EU-Andean FTA are to liberalise trade in goods and services and to promote international trade to the benefit of both parties. Including Ecuador in the agreement aims to further benefit UK exporters and UK consumers. Ratification will provide additional certainty to businesses about the future of EU-Ecuador trade relations. The UK's ratification would also provide a practical demonstration to the EU of the UK's commitment to support EU free trade activity whilst still a Member State.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

The policy options are to ratify or not to ratify the agreement. The agreement for Ecuador to join the EU-Andean FTA has already been negotiated and agreed between the EU, Ecuador, Colombia and Peru. The UK has no scope to change the EU-Andean FTA.

The options are:

1. Ratify Ecuador's Accession. The UK Government proposes ratifying the agreement as the preferred option, to ensure the UK benefits from the trade liberalisation under the agreement. This is the Governments preferred option.
2. Do not ratify the agreement and notify the European Commission that the UK is unable to ratify the agreement. This would mean that the agreement could not enter into force and its provisional application would be terminated.

Will the policy be reviewed? It will not be reviewed. **If applicable, set review date:** N/A

Does implementation go beyond minimum EU requirements?		No		
Are any of these organisations in scope?	**Micro** Yes	**Small** Yes	**Medium** Yes	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)		**Traded:** N/Q		**Non-traded:** N/Q

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible SELECT SIGNATORY: Date: 17/07/18

Summary: Analysis & Evidence

Policy Option 1

Description: Ratifying Ecuador's Accession to the EU-Andean Free Trade Agreement

FULL ECONOMIC ASSESSMENT

Price Base Year 2017	PV Base Year 2017	Time Period Years 15	Net Benefit (Present Value (PV)) (£m)		
			Low: 230	**High:** 345	**Best Estimate:** 288

COSTS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Cost** (Present Value)
Low	0.0		-	**0.0**
High	0.4		-	**0.3**
Best Estimate	0.3		-	**0.3**

Description and scale of key monetised costs by 'main affected groups'

UK businesses are not expected to incur costs if they do not utilise the preferences set out in the EU-Andean Agreement. Where a business chooses to trade under preferences they will incur a one-off familiarisation cost associated with reading the guidance and across all businesses using the agreement, in total, these are estimated at between £32,000 and £353,000.

Other key non-monetised costs by 'main affected groups'

UK Businesses will face some increased competition from Ecuadorian firms. These impacts are expected to be negligible.

BENEFITS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Benefit** (Present Value)
Low	-		21	**230**
High	-		31	**345**
Best Estimate	-		26	**288**

Description and scale of key monetised benefits by 'main affected groups'

The benefits above result from increases in UK real Gross Domestic Product (GDP) from the elimination of tariffs and the elimination of other measures that impede trade. The best estimate represents a £37 million net increase in UK real GDP per year once the agreement is fully implemented.

Other key non-monetised benefits by 'main affected groups'

Increase in choice and decreased prices of goods and services for consumers.

Key assumptions/sensitivities/risks **Discount rate** 3.5%

2017 is the base year. The analysis assumes that the UK will continue trading with Ecuador on equivalent terms as this agreement after EU exit. The benefits from the FTA have been assumed to come in gradually, being fully felt several years after the agreement were provisionally applied. For simplicity, this is modelled as increasing by 10% each year until all benefits are flowing in Year 10.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			**Score for Business Impact Target (qualifying provisions only) £m:**
Costs: **N/A**	Benefits: N/A	Net: N/A	N/A

Evidence Base

The structure of this Impact Assessment is as follows:

1. Economic background
2. Problem under consideration
3. Rationale for intervention
4. Policy objective
5. Description of options considered
6. Monetised and non-monetised costs and benefits of each option
7. Impact Tests (including Small and Micro Business Impact Test - SAMBA)

1. Economic Background

Introduction

1.1 Under the UK's current membership of the EU, decisions on trade policy are taken by the Council of the European Union and European Parliament, and the day to day conduct of EU trade relations, including the negotiation of free trade agreements, is led by the European Commission.

1.2 While a member of the EU, the UK will continue to cooperate fully and constructively with its partners. Once the UK has left, it will remain committed to working collaboratively with the EU. The UK will then also have the opportunity to take forward its interests, priorities and ambitions through a new independent trade policy.

The world in which the UK trades

1.3 Free and fair trade is fundamental to the prosperity of the EU, the UK and the world economy. Trade has historically been an important part of the UK economy. Excluding major shocks such as the Great Depression and two World Wars, both exports and imports have accounted for over 20% of UK GDP for the last 160 years.[1]

1.4 A substantial proportion of the growth in global trade in recent decades has been driven by growth in intra-industry trade and the development of cross-border supply chains, where different stages of production for a particular good are located in different countries. Well-functioning global trade relationships help businesses to manage their supply chains effectively and source the imports they need for their business. Over 70% of global trade is now in intermediate products, or in capital goods (many of which will be employed in the production of other goods).[2] Intra-industry trade (the import and export of the same or similar goods) has increased; between 1997 and 2008, over 80% of UK manufacturing trade was intra-industry, having increased from around 70% in the late 1980s.[3] This has driven significant shifts in shares of world trade. Developed economies' share of global exports fell from 69% in 1980 to 54% in 2013.[4]

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[1] DIT using Bank of England research datasets: Three centuries of macroeconomic data. see http://www.bankofengland.co.uk/research/Pages/datasets/default.aspx

[2] OECD, see for example https://www.oecd.org/tad/gvc_report_g20_july_2014.pdf

[3] 'Economic Globalisation Indicators', (2012) and OECD, 'Intra Industry and Intra Firm Trade and the Internationalisation of Production', Economic Outlook, (2002)

[4] DIT estimated based on UNCTAD trade data.

1.5 Services are also an important, and growing, component of supply chains. Firms increasingly use logistics, communications services, and business services to enable the efficient functioning of their supply chains. Almost one third of the value of manufactured exports of developed countries represents service value added.[5] Digital technology is continuing to rapidly develop, facilitating economic growth and making more and more services tradable.[6]

1.6 Trade agreements at the multilateral, plurilateral and bilateral level help to facilitate international trade.

The benefits of international trade

1.7 An open and rules-based international trading environment enables economic integration, encourages predictable behaviour by states and the peaceful settlement of disputes. It can lead states to develop political and economic arrangements at home which favour open markets, the rule of law, participation accountability.

Growth, prosperity and jobs

1.8 Empirical studies generally suggest a positive relationship between trade openness and economic growth. The dramatic fall in China's poverty rate since it opened up its economy provides a striking example, and analysis by the OECD suggests that a 10% increase in openness is associated with a 4% increase in income per head.[7]

1.9 Trade enables countries, firms and individuals to specialise in economic activities that play to their relative strengths, resources and expertise, and to buy from and sell to other countries doing likewise. Specialisation increases global output and increases the quality and value of goods and services for consumers.

1.10 Free trade also allows businesses to benefit from access and exposure to ideas, innovation, talent and technology across borders, and so become more competitive. Businesses that export into new markets can access more customers, increasing overall UK exports which contribute to growth in the UK economy.

Choice, value and quality for consumers

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[5] World Trade Organisation working paper see https://www.wto.org/english/res_e/reser_e/ersd201503_e.pdf

[6] UK Office of National Statistics, Pink book (2017)

[7] OECD (2003), Sources of Economic Growth in OECD Countries, 'https://www.oecd.org/eco/growth/2505752.pdf

1.11 Free trade and imports have a significant impact on consumers, through the variety of choice and price of goods available, and thereby on overall living standards.

1.12 Trade benefits consumers and households directly through lower tariffs on imported final consumption goods and indirectly through the associated productivity gains of domestic and foreign firms. For example, during 1996 – 2006 import prices for textiles and clothing fell by 27% and 38% respectively in real terms, in large part as a result of the phasing out of quotas which had limited the ability of consumers in developed countries to import textiles and clothing.

The Impact of Free Trade Agreements

1.13 There are numerous studies into the impact of FTA's, which in general suggest that FTAs enhance bilateral trade. By example, Head & Mayer[8] considered the impact across a wide range of studies (with a total of 2,508 estimates obtained from 159 papers) and found the median impact of a regional trade agreement or FTA on bilateral trade flows to be an increase of 32 per cent. A wider range of evidence suggests a range of estimated impacts could be 8% to 32%.

1.14 The impacts will tend to depend on the precise provisions of the FTA, the characteristics of the partners and the existing degree of liberalisation. Several factors affect the trade effects of FTAs including:

- The scale of existing trade flows between country partners within an FTA.
- Specific provisions within the FTA, including how deep and broad its chapters are, how much policy change they inspire and how quickly changes are implemented;

1.15 The coverage of FTAs has widened over time: Reviews of 'modern' FTAs show that the majority go beyond the removal of tariff barriers to address non-tariff impediments to trade and investment. These non-tariff impediments include custom procedures, regulation of domestic production which discriminates against foreigners, product standards which differ from international norms (or where testing of products is complex and often exclusionary), regulation of inward investments, competition policy, intellectual property protection and rules surrounding access to government procurement.

[8] Head & Mayer (2013) 'Gravity Equations - Workhorse, toolkit and cookbook', p33-34, http://www.cepii.fr/pdf_pub/wp/2013/wp2013-27.pdf Looking specifically at structural gravity models, which refers to using country fixed effects or a ratio-type method.

1.16 The evidence suggests that FTAs bring greater benefits if non-tariff measures (NTMs) are addressed.[9] For example:

- Deeper agreements lead to larger increases in trade flows. The evidence suggests that deeper agreements (which address NTMs) lead to greater increases in trade flows than shallow agreements (which include less liberalisation in fewer areas).
- The relative importance of NTMs to goods trade, in relation to tariffs, has increased in light of the longer-term decline in 'Most Favoured Nation' tariffs (applied to all World Trade Organisation (WTO) members).
- Addressing NTMs is essential to boost trade in services. This trade is particularly important for the UK; the UK is the second largest exporter of services in the world and around 35 per cent of total UK trade (exports and imports) were services in 2015.[10]

1.17 **Overall, the evidence suggests that FTAs enhance trade flows: The impact on trade flows and benefits for businesses can be greater for agreements which address NTMs.**

[9] 1) Egger et al. (2015) 'Non-tariff barriers, integration and the transatlantic economy'.
2) WTO (2011) 'World Trade Report 2011.The WTO and preferential trade agreements: From co-existence to coherence', p6-7,7 https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report11_e.pdf

[10] Source: ONS UK Balance of Payments, The Pink Book: 2016

Trade between the EU and Ecuador

1.18 Ecuador is a middle-income country. It has a nominal GDP of around £75bn[11] (compared to around £2trn for the UK) and a GDP per capita of around £4,500 (compared to around £30,000 for the UK). After an economic growth period of over 4% between 2000 and 2014, Ecuador has been in recession for the last two years. The World Bank predicts that Ecuador will return to growth in 2019.[12]

1.19 Total EU trade with Ecuador has been around £5bn per annum over the last 5 years. Specifically, in 2015, the last full year for which services data is available, total EU trade with Ecuador is estimated at £4.4bn, lower than previous years.

1.20 UK trade with Ecuador represents around 0.1% of total UK trade. Trade was decreasing in the years immediately before Ecuador provisionally joined the FTA in 2017. Total UK trade in goods with Ecuador was worth £153m in 2016.[13] UK goods exports were worth £41m. Exports were most commonly chemical products and machines. Goods imports were worth £112m, almost exclusively in agricultural products (vegetable products, foodstuffs and animal products). UK service exports to Ecuador were worth £26m and imports worth £8m in 2016.

Table A: Trade between Ecuador and the EU, 2012 to 2016

Trade Between the European Union and Ecuador (£m)					
	Goods		Services		
	Imports	Exports	Imports	Exports	Total
2012	2,026	1,864	328	934	5,153
2013	2,208	1,953	319	975	5,454
2014	2,095	1,773	327	1,021	5,216
2015	1,887	1,451	271	769	4,436
2016	2,207	1,308	371	1,463	5,349

Eurostat figures converted to £ sterling at Annual Average Spot Exchange Rate

[11] IMF World Economic Outlook, October 2017. Nominal GDP in Current Prices in US Dollars converted at the 2017 annual Sterling-Dollar exchange rate of 1.28 (Bank of England)
[12] World Bank: Global Economic Prospects, available here: https://data.worldbank.org/country/ecuador
[13] See ONS Source: ONS UK Balance of Payments, The Pink Book: 2016 – Updated Balance of Payments annual geographical data tables.

Table B: Trade between the UK and Ecuador, 2012 to 2016

Trade Between the UK and Ecuador (£m)					
	Goods		Services		
	Imports	Exports	Imports	Exports	Total
2012	144	313	41	93	591
2013	152	267	6	159	584
2014	130	111	10	221	472
2015	111	123	4	39	277
2016	112	41	8	26	187

ONS Figures, available in the Pink Book Geographical Breakdown Tables

Table C: UK-Ecuador Trade as a Share of EU-Ecuador Trade, 2012 to 2016

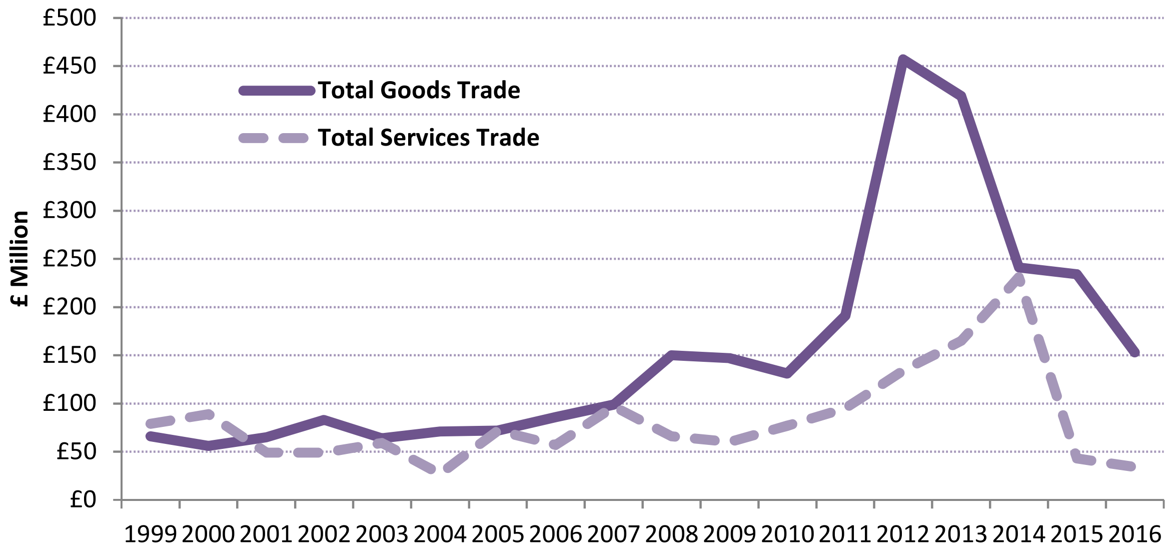
Share of UK Trade in EU Total	
2012	11%
2013	11%
2014	9%
2015	6%
2016	3%
5 Year Average	8%

1.21 Although UK exports to Ecuador have fallen sharply in the last few years, (goods exports peaked in 2012 and services exports in 2014),[14] more recent data suggests that this downward trend in goods trade has been partially reversed since Ecuador provisionally joined the EU-Andean FTA in January 2017.[15] The chart below shows total UK trade in goods and services (exports + imports) since 1999:

[14] Initial DIT analysis of HMRC data on goods trade

[15] Source: HMRC data, see paragraph 6.26

Chart A: Total Goods and Services Trade Between the UK and Ecuador 1999 to 2016



The impact of the EU-Andean FTA to date

1.22 The EU has also conducted three annual reports on the implementation of the agreement with Colombia and Peru, and observed that trade increased in the sectors that were partially or fully liberalised under the agreement.[16] Although no analysis has been done to assess what proportion of the trade increases was due to wider economic factors, there were some observations that support our assessment that this agreement will increase UK/Ecuador trade. On the basis of the latest Third Annual Report published on 10 October 2017, the EU found that:

- **Peru**: In 2016, trade between Peru and the EU slightly declined, mainly due to the reduction in external demand and the fall in global prices of raw materials. Peru's overall trade with the rest of the world decreased by 18% between 2012 and 2016, compared to 11% with the EU. According to data from the Peruvian Export and Tourism Promotion Board, 2,269 new companies now export to the EU since 2012 with a large proportion (95.3%) being small or medium sized enterprises (SMEs).

- **Colombia:** Following an increase between 2012 and 2014, total trade between the EU and Colombia declined in the past two years. This appears mainly due to a slowdown in external demand in Colombia and the fall in international commodity prices, which affected Colombia's export of mineral products. While bilateral trade in

[16] 'Report from the Commission to the European Parliament and the Council – Third Annual Report on the Implementation of the EU-Colombia/Peru Trade Agreement', 10 October 2017 (EU document 13094/17)

2016 was 23.5% lower than in 2012, Colombia's total trade with the rest of the world decreased by about 36% during the same period. As with Peru, according to Colombian data, 2,002 companies exported to the EU in 2016, including more SME companies. For instance, since 2012, 81% of Colombian micro enterprises increased exports to the EU.

1.23 The Commission’s overall assessment of the Agreement is that the existing agreement is functioning well overall, despite the economic downturn, and the agreement has helped to diversify exports from both Peru and Colombia and providing new export opportunities for both markets, notably agricultural products. The commission noted that these new opportunities led to an expansion of new exporters, notably small and medium size businesses in agricultural products.

1.24 Ecuador acceded to the agreement on 1 January 2017 and therefore has not been covered by the Commission’s reports, including the Third Annual Report published in October 2017. The Fourth Annual Report on the agreement is expected later this year, covering 2017 and therefore the inclusion of Ecuador in the agreement. As with previous annual reports we expect to present the Fourth Annual Report to Parliament accompanied by an Explanatory Memorandum setting out implications for the UK from the agreement.

2 Problem Under Consideration: The Protocol of Accession of Ecuador to the EU-Andean Free Trade Agreement

2.1 Trade flows between the EU and the Andean countries under World Trade Organization (WTO) rules have historically been restricted by a variety of tariff and non-tariff measures. To reduce the adverse impacts on 9trade, in June 2012, the EU and Colombia and Peru signed a Free Trade Agreement (FTA) which has been provisionally applied with Peru since 1 March 2013 and with Colombia since 1 August 2013 (known as the EU-Andean FTA). The UK notified the EU Commission that it had completed its ratification procedures of the original agreement on 13 May 2014. The UK Government published a Consultation Stage Impact Assessment supporting the process.[17]

2.2 The EU, together with Ecuador, Colombia and Peru, signed the Protocol of Accession of Ecuador to the Trade Agreement with Colombia and Peru on 11 November 2016. The protocol has been provisionally applied since 1 January 2017 and is still subject to EU ratification.[18] A few elements of Ecuador's accession have not yet been applied and will not do so until the agreement has been ratified by all member states. Were a Member State government to notify the European Commission that it was unable to ratify the agreement, the protocol of accession could not be brought fully into force and its provisional application would be terminated.

[17] Impact assessment of a Free Trade Agreement between the European Union and Signatory Countries of the Andean Community (Columbia and Peru), available on legislation.gov (http://www.legislation.gov.uk/ukia/2013/151/pdfs/ukia_20130151_en.pdf)
[18] The agreement with all three countries is known as the EU-Andean FTA

3 Rationale for Intervention

3.1 The UK has always been deeply committed to free and open international trade and investment as drivers of growth, prosperity, jobs and consumer choice. Ecuador's accession to the existing EU-Andean FTA benefits UK firms by full tariff liberalisation on wines and spirits, as well as significant increases in market access for automotive, dairy, pork, machinery and chemicals goods. For instance, in terms of market access for goods, via this agreement, Ecuador agreed to liberalise 96.8% of tariff lines within 10 years. The agreement matches the scope of the existing agreement with Colombia and Peru in relation to public procurement and market access for services, again providing for UK interests to take advantage of the trading opportunities offered by greater liberalisation.

3.2 Until the UK and other EU member states have ratified Ecuador's accession to the agreement, there is uncertainty for businesses as to the future of EU trade relations with Ecuador. The UK supports ratification to provide some additional certainty to businesses and to bring the agreement fully into force.

3.3 The UK seeks continuity in its existing trade and investment relations, including continuity of existing EU FTAs such as the EU-Andean FTA (with the inclusion of Ecuador), to avoid disruption for businesses and consumers as the UK leaves the EU. Ratification of Ecuador's accession will demonstrate the UK's commitment to this agreement and provide a clear endorsement that its provisions are positive for the UK.

4 Policy Objective

4.1 The UK has always been deeply committed to free and open international trade and investment as drivers of growth, prosperity, jobs, and consumer choice. Trade has lifted millions out of poverty and supports peace and promotes security. It is well established that trade is mutually beneficial, through:

- more consumer choice in the variety and quality of goods and services,
- lower prices through increased competition and efficiency
- higher productivity and,
- higher real wages and living standards for the countries engaged.

4.2 Free trade agreements, such as the EU-Andean FTA aim to increase trade and reduce trade barriers.

4.3 The UK's policy objectives are to provide UK support for the EU's ambitious trade agenda and as part of this support the ratification and full implementation of Ecuador's accession to the agreement, to promote bilateral trade and increase economic growth by a) eliminating most tariffs and b) reducing non-tariff measures that businesses face when trading goods and services and when investing abroad.

5 Description of options considered

5.1 In 2016, the EU negotiated for Ecuador to join the EU-Andean FTA. The agreement to accede was signed on 11 November 2016 and has been provisionally applied since 1 January 2017. As of February 2018, nine Member States have already notified the Commission that they have ratified the agreement.[19] There is no scope for the UK government to change the FTA that is already provisionally applied.

5.2 If the UK Government and the remaining EU member states that have not ratified the agreement were to take no action whatsoever, the agreement would remain provisionally applied until the UK left the European Union. This option has not been considered in this IA. The options for the UK Government are:

Option 1: Ratify Ecuador's Accession to the EU-Andean Free Trade Agreement.

5.3 The agreement has been negotiated by the European Commission and has been provisionally applied since 1 January 2017. The agreement will fully enter into force after all EU member states have ratified the agreement. The UK was a strong supporter of the agreement throughout the negotiating process. This option is also consistent with our support and ratification of the original agreement between the European Union and Colombia/Peru.

5.4 This is the government's preferred option as it aims to increase the available export opportunities of EU businesses and reduce prices to the benefit of consumers. The agreement also intends to lock in binding legislation on sustainable development, intellectual property rights, sanitary and phytosanitary standards and public procurement into WTO law. These are expected to generate welfare gains both in the EU and Ecuador.

5.5 The analysis for this option assumes that the UK will continue trading with Ecuador on equivalent terms as this agreement after EU exit. This is based on the Government's stated policy intention to seek continuity of effect in relation to the EU-Andean FTA as the UK leaves the EU, and therefore ensure similar trade preferences in the long run between the UK and Ecuador.

5.6 **These justifications mean that option 1 is the UK Government's preferred option.**

[19] See: http://www.consilium.europa.eu/en/documents-publications/treaties-agreements/agreement/?id=2016044 – the nine Member States who have so far notified the Commission that they have ratified the agreement are the Czech Republic, Germany, Denmark, Estonia, France, Hungary, Lithuania, Latvia, Finland

Option 2: Do not ratify Ecuador's accession to the agreement and return to the status quo

5.7 The UK Government could choose to reject ratification of the agreement. If it did so, it would then notify the European Commission. This would lead to the termination of the protocol's provisional application and trade restrictions that have been provisionally removed would be reintroduced. Ecuador's trading arrangement with the EU would move to WTO, Most Favoured Nation (MFN) rules. This is not the Government's preferred option, as it runs counter to the Government's policies in relation to free trade and its support for an ambitious EU trade policy. This could also damage the UK's bilateral relations with Ecuador and with the EU, which could make negotiations over future trading arrangements more challenging.

5.8 The main analysis for this option assumes that the UK will continue trading with Ecuador on terms equivalent to this trade agreement after the UK's exit from the EU. This is based on the Government's stated policy intention to seek continuity of existing trade arrangements as the UK leaves the EU, and therefore ensure similar trade preferences in the long run between the UK and Ecuador. It also reflects an assumption of no change to the level of friction in UK-EU trade: whilst UK-EU access to each other's markets may, in certain ways, be less than it is now, it is not currently possible to model how that would change the baseline.

5.9 At the March European Council the UK agreed with the EU that the UK is to be treated as a Member State for the purposes of international agreements for the duration of the implementation period. The EU will formally notify other parties of this approach in due course.

6 Monetised and non-monetised costs and benefits of each option

6.1 In June 2016, the European Commission assessed the economic impact of Ecuador's accession to the EU-Andean FTA.[20] This assessment used a dynamic computable general equilibrium model[21] to estimate the economic impacts of Ecuador joining the agreement. DIT is content that the methodology and results are appropriate.

6.2 DIT considered the ***Proportionality*** for this IA and decided to use the EU analysis as the main evidence base for this IA rather than produce new economic modelling of the impact of Ecuador's accession to the agreement. This IA provides an assessment of what portion of the benefits that are estimated for the EU could be attributed to the UK. Where possible, we have provided some additional information about trade patterns since the agreement was provisionally applied, to supplement this analysis.

6.3 While considering proportionality, DIT noted that the original form of the EU-Andean FTA (between the EU, Colombia and Peru) has already been scrutinised by the European Union, including by the UK during the original negotiations. As part of the UK's scrutiny procedures, the EU Parliamentary Committees in both Houses cleared the proposal for Council Decisions on conclusion and signature of the Trade Agreement between the EU and Colombia and Peru.[22] The EU Parliament gave its consent to the original agreement on 11 December 2012. The UK completed its ratification procedures of the EU-Andean FTA and notified the EU accordingly on 13 May 2014.

6.4 The EU published Council Decisions on proposals to conclude, sign and provisionally apply Ecuador's protocol of accession to the EU-Andean FTA in April 2016. The Agreement was signed and concluded by all parties on 26 June 2016. The EU Parliamentary Committees in both Houses have previously cleared these proposed Council Decisions.[23] The EU Parliament gave its consent to Ecuador joining the Agreement on 14 December 2016. MEPs voted to approve the Agreement by 544 votes to 114 with 44 abstentions.

6.5 This IA uses a **baseline** in which of Ecuador is not party to the EU-Andean FTA and provides a quantification of the costs and benefits of Ecuador accession to the agreement. This reflects the total benefits of the agreement should it not have been provisionally applied, as an approximation for the benefits of ratification.

[20] 'Assessing the economic impact of the accession of Ecuador to the EU-Colombia/Peru Trade Agreement', published June 2016, prepared by the European Commission's Directorate-General for Trade.
[21] See Annex A for an explanation of Dynamic Computable Equilibrium Models.
[22] The Commons European Scrutiny Committee cleared both documents in (Report 57, Session 2011/12) and the Lords Select Committee cleared both documents on 14 December 2011 (Sift 1443, Session 2011/12).
[23] The Lords European Select Committee cleared at Sift on 3 May 2016 (Session 2016/17) whilst the Commons European Scrutiny Committee cleared on (Report 36, 22 March 2017, Session 2016/17).

6.6 Further, as Ecuador is now classified as a middle-income country by the World Bank, it no longer qualifies for the EU's Generalised Scheme of Preferences that gave access to lower tariff rates for Ecuadorian producers exporting to the EU. As a result, in absence of the EU-Andean FTA, Ecuador and European trading firms would be required to pay tariffs at most favoured nation (MFN) rates. The baseline for the EU analysis and, therefore, this impact assessment, uses MFN tariff rates and trading relationship as its baseline.

6.7 ***Key Assumptions:***

- The benefits and costs are assessed over a 15-year period from provisional application in 2017, using the same methodology that is outlined in the Impact Assessment that accompanied the UK Government's Ratification of the EU-Canada Comprehensive Economic and Trade Agreement (CETA).
- A key assumption is that the UK and Ecuador continue to trade on the preferential terms of the agreement for the duration of the assessment period between Ecuador and the EU as part of a UK-Andean FTA after the UK has exited the EU.
- The analysis conducted by the European Commission estimated impacts to the EU in 2035, in 2011 prices (the base year of the CGE model). These have been inflated in line with HM Treasury GDP into 2017 prices.
- Where prices are in non-sterling currency values, these have been adjusted in line with a five-year average of spot prices between Sterling and US Dollar or Euro where appropriate.
- This IA, in line with HMT Green Book appraisal advice, only assesses the impacts on the UK population. We have excluded quantified and qualitative assessments of the benefits that would accrue to the Ecuadorian population or third countries.
- The exact impacts of FTAs are uncertain, as they depend upon a wider range of behavioural responses by businesses and individuals. In this IA, to reflect that uncertainty, we make a number of assumptions on the apportionment of EU impacts to the UK (see paragraph 6.19) and the number of businesses that trade with Ecuador (see paragraph 6.8) and adjust these to generate a high, low and central scenario, reflecting a range of potential outcomes.

Option 1 (ratify the agreement):

Overall Impact on the UK Economy

6.8 Benefits to the UK from the agreement will come from bringing down the existing trade barriers that restrict free and efficient trade. This will result in increased export opportunities for UK businesses, creating greater competition and thus lower prices, more innovation, investment in R&D, more jobs and a greater variety of goods and services for consumers.

6.9 The following estimated impacts of Ecuador acceding to the agreement are derived from the European Commission economic assessment.[24] A full discussion of how these benefits are accrued can be found in that economic assessment.

6.10 The European Commission describe their analysis as showing annual GDP gains from the impact of Ecuador's accession to the EU- Andean FTA in 2035 compared to not having the trade agreement in 2035. [25] This corresponds to a gain of $600 million (around £405 million) which equates to a 0.002% increase in GDP per year. This net gain is a result of an expansion of exports of services, efficiency gains from an effective re-allocation of production factors away from agriculture to manufacturing and lower prices from increased imports of agricultural products.

6.11 From the EU's modelling, it is not possible to disaggregate the costs and benefits for individual countries from the overall impact. The report did not estimate the impact on the UK or any other Member State individually.

6.12 It is uncertain how much of the estimated benefit may be attributable to the UK, given the complex patterns of global trade. In order to present the expected magnitude of these benefits, this IA has assumed that the UK will benefit from a portion of the agreement that is comparable to the UK's proportion of EU trade with Ecuador. Our justification is that the Free Trade Agreement is designed to change trade patterns by liberalising trade barriers between the countries involved. It is therefore appropriate to use the current pattern of trade to represent the magnitude of the impacts:

- ***Central Scenario****: We have assumed that the UK pro rata share of the EU benefit from the agreement is 8%; the average of the UK's proportion of EU*

[24] 'Assessing the economic impact of the accession of Ecuador to the EU-Andean Trade Agreement', published June 2016, prepared by the European Commission's Directorate-General for Trade.

[25] The majority of products from Ecuador and the EU are benefitting from free access from the beginning of the agreement, but a very small number of products will not be added until 17 years later. As such the EU's assessment only quantifies assessments in 2035 after all parts of the agreement are in force.

trade over 2012 and 2016.[26] *Our central scenario estimates that these benefits are worth £37m per year to UK GDP (2017 prices).*

- **Low and High Scenarios:** There is a high level of uncertainty around this estimate. To reflect this uncertainty, we have assumed that the impact could be 20% lower (low scenario) and 20% higher (high scenario) than the 8% central scenario. This suggests that a plausible range in the impact on UK GDP is between £30m and £44m (2017 prices).
- **Alternative Assumptions:** We have considered what other options could also be used to estimate the UK specific impact of the agreement. One example would be to use GDP as the relevant benchmark share, rather than trade. Assuming that the UK will receive a pro rata share of the EU's benefits, based on the UK's share of EU 28 GDP, averaging 15% over 2008-2017, the impact on UK GDP is estimated would be around £69 million per year (central scenario - 2017 prices). However, we believe that this is likely to overstate the impacts on the UK.

6.13 The majority of products will benefit immediately from tariff free access after Ecuador enters the agreement. A very small number of other products will benefit gradually until full liberalisation is achieved over a somewhat longer period of up to 17 years.

6.14 In the UK Government's assessment of the impact of Ecuador's accession, we have assumed that benefits from the agreement would increase gradually across the 15-year assessment horizon. This is for simplicity; the vast majority of the changes in tariff barriers would occur in the first year, but it takes time for an economy to adjust. The benefits have therefore been assumed to rise by 10% each year from 2017, when the agreement took effect, so that they reach 100% in year 10 (10 years after the agreement came into force). Although at this time, a small number of tariff changes will not have been finalised, we assume these final changes are negligible when compared to the impacts of the initial changes in tariff barriers. Discounted at 3.5%, the Net Present value benefit to UK GDP is estimated to be between £230 and £345 million over 15 years.

6.15 It should also be noted that some of the gains in GDP are attributable to reductions of non-tariff barriers. It is likely to take time for such measures to take effect; therefore, despite the

[26] UK GDP gains are based on the UK's share of EU28 total trade with Ecuador using trade flow data from 2012 to 2016. This method was applied in DIT's EU-Singapore and EU-Japan EPA impact assessments. It was not proportionate to weight the UK GDP gains based on the sectoral pattern of UK trade a) the data is not readily available, b) the value of Ecuador's accession to the EU-Andean FTA to the UK economy (£37 million) is relatively small compared to recently concluded trade agreements with Canada, where the gains to the UK economy is £730 million, and Japan where the gains to the UK economy ranges from £2.1 to £3 billion per annum and c) given the relatively small value of these gains, we do not expect this alternative approach would significantly change the gains to the UK economy

relatively rapid reduction in tariffs the benefits of the FTA are only assumed to gradually materialise over the 10-year period. The agreement also provides for more secure market access for services, reductions in non-tariff measures for agricultural & industrial goods and improved trade facilitation measures, which will take time to impact the economy.

Impacts on Businesses

Direct Costs to UK Businesses: Transitional Costs resulting from Reading and Understanding the Agreement

6.16 There will be some transitional costs to businesses that have been trading with Ecuador, as they adjust to the agreement. This will entail reading and understanding the agreements terms. The UK Government does not publish statistics on how many UK firms trade with Ecuador. Her Majesty's Revenue and Customs publishes experimental statistics that estimate the number of business that export and import from certain countries but does not include Ecuador.[27] We assume the total number is probably small:

- UK trade with Ecuador represented significantly less than 0.1% of total UK trade in 2015.[28] In 2016, a total 305,000 businesses imported and/or exported from the UK.[29] If it was assumed that the UK share of businesses is similar to the share of UK trade, then around 100 firms currently trade with Ecuador. We use this estimate as a lower bound on the total number of UK firms trading with Ecuador.
- By comparison, Mexico, a market that is of broadly similar geographical distance accounts for around 0.3% of UK trade. HMRC statistics suggest that an upper bound estimate of the number of UK businesses that imported or exported to Mexico was around 4,500.[30] We use this estimate as an upper bound on the total number of UK firms trading with Ecuador.
- We therefore assume that between 100 and 1,500 UK firms were trading with Ecuador before it acceded to the agreement.

6.17 As such, we assume the costs to UK firms will be very small. Annex B sets out one method of calculating these costs and estimates that the total costs to UK businesses may be around £32,000 to £353,000. We believe that this is an overestimate of the actual costs.

6.18 Not all firms may face these costs in the first year. To reflect this, we have assumed that 60% of costs accrue in year 1, 25% in year 2 and 15% in year 3.

Direct Costs to UK Businesses: Rules of Origin

[27] HMRC: UK trade in goods by business characteristics 2016: Interdepartmental Business Register overseas trade statistics country data tables.
[28] In 2015, total trade with Ecuador was £261m, approximately 0.025% of total UK World Trade of over £1trn. See ONS Source: ONS UK Balance of Payments, The Pink Book: 2016 – Updated Balance of Payments annual geographical data tables.
[29] Source: ONS Annual Business Survey, Importers and Exporters.
[30] The experimental statistics separate importers and exporters to/from the UK. It is likely that a number of these firms are counted twice as they are both importers from Ecuador and exporters from the UK to Ecuador. Therefore, we speculate that 1,500 is an overestimate of the total number of firms affected.

6.19 To trade under the preferences outlined in the agreement, businesses are required to produce a certificate to confirm the origin of the export content meets the rules of origin requirements.

6.20 Businesses can submit rules of origin forms to HMRC to process free of charge however this could take several days to process. Alternatively businesses can choose to get an origins certificate from the British Chambers of Commerce which processes the certificate in a shorter period of time for a fee of £46.80.[31]

6.21 Recent academic studies (World Bank 2014, Ciuriak & Xiao 2014) estimate the tariff equivalent trade costs associated with rules of origin administration and compliance requirements ranges between 2% to 6%. These estimates vary considerably depending on the methodology, time period, and the countries under consideration. Further research (Keck and Lendle 2012) has shown that utilisation of agreements can be very high, even where there are very small preferential margins, which could not be the case in the presence of high administrative costs.

Indirect Costs to UK Businesses

6.22 There will be adjustment costs to EU (including UK) businesses from the increased competition coming from Ecuador because of the Trade Agreement. This will be both in the UK and wider EU markets. But the market power of Ecuadorian firms is not expected to be significant relative to UK firms, so we consider it unlikely that UK firms will be significantly affected. These have not been quantified and are assumed to be negligible.

6.23 In addition, there will be one-off minimal costs to customs and government officials from reading and understanding the text of this agreement. These have not been quantified.

Direct Benefits to UK Businesses: Reduced Tariffs and Regulatory Barriers

6.24 UK Businesses currently trading with Ecuador will benefit from reduced tariffs and a decline in regulatory barriers in Ecuador's market. These benefits are accounted for in the assessment of the impact on GDP of the agreement. The benefits below are therefore not included explicitly in the NPV calculation.

6.25 The agreement will reduce the scale of regulatory barriers faced by UK firms exporting goods and services. As per the assumptions made in the European Commission's assessment, we assume the direct impact on UK businesses to be as follows:

[31] https://www.londonchamber.co.uk/LCCI/media/media/Export%20Docs/Prices/Export-Document-Price-List.pdf

- The equivalent of a reduction in tariffs of around 3% on all goods trade[32]
- The equivalent of a reduction in tariffs of between 3.2% and 3.9% in services trade
- The equivalent of a further reduction in tariffs of 2% on textiles trade.

6.26 Subsequently, we estimate that the direct benefit to businesses from a decrease in regulatory barriers is around £8.4m per annum (this figure is used in our central scenario). As outlined in paragraph 6.14, these benefits will accrue over time to businesses as the agreement takes effect and businesses adjust. To represent this, we have assumed that the benefits rise by 10% each year and reach 100% in year 10.

6.27 There is a level of uncertainty around this estimate. To reflect this uncertainty, we have assumed that the impact could be 20% lower (low scenario) and 20% higher (high scenario) than the 10% central scenario. This suggests that a plausible range in the impact on UK GDP is between £6.7m and £10.1m (2017 prices).

6.28 The impact of reduced tariffs will also benefit UK importers and UK consumers. Where UK and Ecuadorian businesses are trading directly with each other, the benefits of tariff reductions will likely be borne by businesses. This will most commonly be the trade of intermediate goods. However, where consumers buy directly from Ecuadorian firms, the benefits of tariff liberalisation will likely be borne by consumers.

Indirect Benefits to UK Businesses:

6.29 The agreement is expected to increase the level of trade between the UK and Ecuador. We consider that the change in the level of trade is an indirect impact of the trade agreement itself, as firms are required to change their behaviours following the liberalisation of tariffs and non-tariff barriers. Subsequently are not included explicitly in the NPV calculation (as they are already incorporated in the GDP calculation).

6.30 The EU's analysis estimates that the Trade Agreement will lead to the following bilateral trade effects by 2035[33]:

- EU's exports to Ecuador will increase by 42%, most notably in chemicals and machinery.
- EU's imports from Ecuador will increase by 30%, most notably in vegetables, fruit and other food products.

[32] Decreux and Fontagné (2011), when modelling the impact of the Doha Development Agenda, estimate the binding of service sector protection to equate to a 3% tariff equivalent reduction in costs. The methodology to calculate this 3% reduction is not stated in this study. The European Commission have deemed this 3% reduction to be applicable in the context of the EU-Ecuador FTA for both goods and services NTM reductions (Assessing the economic impact of the Trade Agreement between the European Union and Ecuador, 2016, http://trade.ec.europa.eu/doclib/docs/2016/september/tradoc_154964.pdf)

[33] See Annex C for an explanation on factors affecting GDP.

6.31 UK firms will almost certainly account for some of this increase as the expected increase in exports is most notable in sectors which represent a large portion of current UK exports. However, the exact portion of new trade that UK firms and consumers contribute to total EU-Ecuador trade is uncertain and will depend on both the behavioural choices by UK firms and competition from non-UK firms.

6.32 Further, although the agreement has only been provisionally applied since January 2017, trade in goods data provides some additional evidence that the agreement will benefit trade. UK exports to Ecuador were significantly higher between January and November 2017 when compared to the year before (although slightly smaller than the same period the year before). Similarly, UK imports of goods were nearly 50% higher in 2017 than the same periods in 2015 and 2016. It is not possible to determine at this time what portion of this increase in trade is due to the agreement or is in part a reflection of wider factors.

Total Net Present Value Impacts on the UK Population

6.33 In total, net benefits to the UK are estimated to equal £288m over a 15 year period in our central scenario.

6.34 As these impacts are highly uncertain, the table below sets out a range of possible estimated impacts. Para 6.18 above sets out how the different benefits have been calculated for these scenarios and are provided to give an indication of the potential variation in benefits over the next 15 years.

Table D: The estimated Net Present Value (NPV) of the agreement across 15 years: Central Scenario

Total Impacts on the UK (£m)	*Y1*	*Y2*	*Y3*	*Y4*	*Y5*	*Y6*	*Y7*	*Y8*	*Y9*	*Y10*	*Y11*	*Y12*	*Y13*	*Y14*	*Y15*
Costs															
(2017 Real Prices)															
One-off familiarisation costs	*0.2*	*0.1*	*0.1*												
Benefits															
(2017 Real Prices)															
Increase in UK GDP	*3.7*	*7.4*	*11.1*	*14.8*	*18.4*	*22.1*	*25.8*	*29.5*	*33.2*	*36.9*	*36.9*	*36.9*	*36.9*	*36.9*	*36.9*
Total NPV Costs	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total NPV Benefits	3.7	7.1	10.3	13.3	16.1	18.6	21.0	23.2	25.2	27.1	26.2	25.3	24.4	23.6	22.8
Net Present Value	3.5	7.0	10.3	13.3	16.1	18.6	21.0	23.2	25.2	27.1	26.2	25.3	24.4	23.6	22.8

Table E: Total NPV of the agreement, in the Central, High and Low Scenarios

Total NPV In the Central Scenario	
	Total NPV (£M) 15 Years
Discounted costs	£0.3
Discounted benefits	£288
Net present value	£288

Low and High Scenarios		
	Low Scenario	**High scenario**
	Total NPV (£M)	**Total NPV (£M)**
Discounted costs	£0	£0.3
Discounted benefits	£230	£345
Net present value	£230	£345

Other Economic impacts not included in the Net Present Value Calculation

6.35 The impacts outlined below are already captured in the analysis above in the form of the total GDP impact. They are provided here to explain the mechanisms whereby GDP impacts occur and provide further evidence of why allowing Ecuador to accede to the agreement is beneficial to the UK population.

Impact on Consumers

Tariff Benefits to Consumers

6.36 Tariff reductions will reduce prices for UK consumers of Ecuadorian products. Where consumers are purchasing goods directly from Ecuadorian firms, the direct benefits to consumers will be equal to the tariff reductions. Where businesses are trading between the UK and Ecuador, the extent to which consumers benefit from tariff reductions will depend upon how much of the price decrease is passed on to consumers, rather than retained as profit.

Indirect Total Welfare Benefits to Consumers

6.37 As part of the benefits outlined above to GDP, the estimated welfare gain to the EU population is \$260m (approximately £175m) in 2035 (in 2011 prices).[34] Using the same method as outlined for estimating the UK share of EU benefits for GDP, this equal to benefits of around £13m-£19m per annum for UK consumers (2017 prices). This figure is not directly comparable to the estimated GDP impact outlined in the economic analysis above. To remain consistent with the GDP analysis, the impact assessment has not attempted to use this figure to derive specific costs/benefits to UK consumers, as opposed to UK businesses.

Additional Indirect Benefits to consumers and workers

6.38 The effects of the agreement on prices and wages are also estimated by the European commission. For the EU, and by extension the UK, the estimated impact on import prices and real wages is negligible, given the size difference between the EU/UK economies and Ecuador, and the low volume of trade.

Impact on the UK Exchequer

6.39 In addition to the benefits outlined above, associated with greater trade values with Ecuador, UK firms currently trading with Ecuador will not be required to pay tariffs that have been liberalised under the agreement. There will be an ongoing cost of forgone revenue to

[34] Welfare is an economic indicator that compares the change in consumer utility, valued at base year prices.

the EU and the UK from lower tariffs on imports from Ecuador, particularly as Ecuador has lost its privileges under GSP and begin being charged tariffs at MFN rates. In the baseline, the UK (and EU) exchequer would be collecting tariff revenue resulting from the charging of higher tariff rates. These are estimated to be equal to €248m (approximately £200m) annually to the EU.[35] If we assume that the UK's share of this revenue, estimated as equivalent to the UK's share of EU trade with Ecuador, this would equate to around £17m per annum.

6.40 These costs to the UK Exchequer are transfers, equal to the benefits felt by UK consumers and businesses from tariff liberalisation.

[35] The EU Commission has not published formal analysis for how it has estimated the reduction will equal €106m. But this is the formal figure used in public statements. We have no reason to doubt the credibility of the statements made. For the purposes of this IA, we have assumed that €248 million is equivalent to 2014 prices. This is likely to overstate the costs to the UK Exchequer.

Option 2 (do not ratify the agreement):

6.41 As mentioned above, if the UK Government chose not to ratify the agreement it would notify the European Commission of this decision. Ecuador's provisional accession would then be terminated and trade barriers that have been provisionally removed would be reintroduced. Ecuador's trading arrangement with the EU would revert to WTO, Most Favoured Nation (MFN) rules. As explained in Annex A, this represents a greater change than returning to the status quo, as Ecuador has subsequently lost its access to GSP+ privileges after the World Bank updated its economic status to Middle-Income.

6.42 Under this option, after Ecuador's accession has been prevented, the costs and benefits that would accrue to the UK would be the same as under the baseline of this IA (Ecuador does not accede to the EU-Andean FTA and trades with the EU on most favoured nation terms). This would broadly similar, but not directly equal to foregoing the benefits and costs outlined under option 1.

6.43 Some of the estimated 100 to 1,500 UK businesses that trade with Ecuador will now utilising the preferential terms of the agreement. If the UK government chose not to ratify the agreement, these UK businesses would face losses of these preferences. It is difficult to estimate the size of these losses. We do not have data to show the number of firms that utilise the trade deal, the data available will show us the value of goods trade under EU-Andean tariff preferences (Eurostat, 2018) but not trade due to Non-Tariff Measures (NTMs).

6.44 Likewise, UK businesses would need to adjust to the process and mechanisms through which trade occurs under MFN rules. Firms trading with Ecuador before the provisional application of Ecuador's accession may not be familiar with the process and mechanism through which trade is conducted on MFN terms. We therefore expect the re-adjustment cost to business to be similar in magnitude to those for firms adjusting to the agreement. UK businesses will face higher tariffs and higher regulatory barriers to trade in goods and services.

6.45 In addition to this, not ratifying Ecuador's accession could also have a negative impact on achieving continuity with Ecuador after the UK leaves the EU. It would likely adversely affect improving bilateral diplomatic relations with Ecuador.

7 Impact Tests (including Small and Micro Business Impact Test or SAMBA)

Statutory Equalities Duties Impact Test

7.1 The impact of this agreement on protected groups should be positive, as consumers and businesses overall should benefit from this agreement.

Small and Micro Business Impact Test (SAMBA)

7.2 Small and medium firms are not exempt from this agreement or any of the specific chapters within the agreement. SMEs are less likely than larger firms to have the capacity and capabilities to deal with and understand the different standards and regulatory barriers in the Ecuadorian market. Because of this Agreement, firms will benefit from removing some of the trade barriers in Ecuador that prevent these firms from exporting. In addition, firms that use imports from Ecuador are likely to benefit, as the cost of existing imports are likely to reduce. Some uncompetitive firms may be adversely affected from competition from Ecuadorian firms, however the net impact on SMEs is expected to be positive.

7.3 Currently, around 94% of UK businesses that imported and/or exported had less than 50 employees. In context, 98% of UK businesses have less than 50 employees. However, given the geographical distance between the UK and Ecuador, we assume that a large proportion of these smaller firms will probably be trading with the EU rather than Andean countries. By comparison, experimental HMG statistics suggest around 50% of firms trading with Mexico had fewer than 50 employees.[36]

Competition Impact Test

7.4 Competition is a core part of the FTA. The chapter on competition recognises the importance of free and undistorted competition to trade relations, and ensures that competition laws in the EU and Andean Countries will be applied so as to prevent the benefits of trade liberalisation being eliminated by anti-competitive business conduct or transactions.

7.5 Competition in the EU and the Andean countries are likely to increase as a result of this agreement as the FTA will remove barriers that currently prevent firms from each side accessing the other's market, hence the total number of firms will increase. This will result in

[36] HMRC: UK trade in goods by business characteristics 2016: Interdepartmental Business Register overseas trade statistics country data tables.

numerous benefits, which include increased innovation, greater efficiency, lower price and more choices for consumers and businesses within the respective economies. However as already mentioned in the analysis section, not all firms or sectors will benefit from this agreement. Even in sectors where the UK is competitive, weaker firms may suffer from stronger competition from the Andean countries; but the overall impact will be beneficial.

Human Rights Impact Test

7.6 The agreement includes some clauses related to both human rights and weapons of mass destruction. These aspects can be invoked by either party as grounds for their unilateral and immediate suspension of trade preferences. In addition, as outlined earlier, trade agreements are important for economic growth and prosperity, which should help improve human rights in the Andean countries.

Annex A: Explanation of the Dynamic Computable General Equilibrium Model

1. There are various well-established methods to estimate the impact of trade agreements namely:

    - Econometric gravity modelling – This type of modelling is based on the assumption that bilateral trade flows are determined by the economic size of the countries in question and their geographic distance. Expansions of gravity modelling have included other components of 'distance' including trade costs and other country characteristics such as culture and language. This method has been applied since the late 1960's and is predicated on historical data.

    - Partial equilibrium modelling – this tool of analysis estimates the isolated impact of a change in policy in one sector, e.g. automotive, agriculture, financial. In the context of trade agreements, it looks at the impacts of changes in trade costs on a sector's production, exports, and imports. While it can observe the impacts for a a much more granular sectoral aggregation that CGE models, it does not capture positive or negative spillover effects on complementary sectors or the wider economy.

    - General equilibrium modelling – this model links all sectors and agents of an economy together and therefore captures any positive or negative spillover effects from a trade agreement. For example, if tariffs are reduced for a particular good, its use as a final and intermediate good may increase due to lower prices. This has expansionary effects for other sectors that rely on the good for their own production and further knock-on effects for the incomes of workers, firms, and government.

2. The following text is taken from the European Commission's Analysis to explain the methodology that was used to estimate the overall impact of allowing Ecuador to accede into the EU-Andean FTA:

3. *The economic analysis is based on a dynamic computable general equilibrium (CGE) model of the world economy. This type of model is widely used to simulate the effects of events such as changes in trade policy, on a range of macroeconomic variables including income, prices, production, trade and wages. Standard CGE trade analyses reflect the difference*

between the economic outcome of a specific policy change scenario (e.g. signing of a Trade Agreement) and a baseline that simulates the scenario of there being no changes in trade policy during a specific time period.

4. *In order to assess the difference in economic outcome of a situation where Ecuador accedes to the Trade Agreement, and a situation where it does not accede and thus faces MFN tariffs, i.e. the opportunity cost of not acceding to the Trade Agreement, the study considers two alternative scenarios. These scenarios are built against a baseline that assumes no changes in trade policy (i.e. Ecuador keeps its GSP+ preferences). The two scenarios are then compared.*

5. *An alternative approach would have been to create the Trade Agreement scenario from a baseline scenario under which Ecuador is subject to MFN tariffs instead of GSP+ tariffs. This would, however, have implied an irrational production strategy in the baseline scenario, due to the underlying effect of having a substantial amount of trade subject to MFN tariffs. This is because, under high tariffs (in this case, MFN tariffs), the sectors subject to these tariffs would become less important for the country, and vice versa. If Trade Agreement tariffs were applied to a baseline scenario of having MFN tariffs, the change in the model would be being measured relative to the already existing 'MFN reality'. In the model, therefore, the resulting Trade Agreement scenario would reflect a different change in production, trade and other macroeconomic variables than was the case in reality, where the change was from a baseline reflecting GSP+ tariffs.*

6. *The CGE model used for the analysis is a dynamic version of the Global Trade Analysis Project (GTAP) model (Ianchovichina and McDougall, 2000). The database used was GTAP version 9 (base year 2011), a fully-documented, publicly available global database that represents the world economy and contains complete information (from 2011) on bilateral trade and on the links created by transport and protectionist measures, for 140 regions and all 57 GTAP commodities. The model produces projections for up to 2035. The initial tariffs are contained in the standard GTAP database and are therefore available in the model.*

Annex B: Method description: estimated one-off costs associated with EU-Andean FTA text familiarisation costs

The steps below set out the method applied to estimate the one-off familiarisation costs to businesses.

1	UK businesses would be at liberty to choose how much guidance they read as they adjust to the new rules that are governed by the trading relationship covered in the agreement. In practice, this may be replaced by conversations with representatives of the Department for International Trade or wider advice. Likewise, the UK Government has taken steps to provide accessible online tools and advice to exporters and importing customers, including through the .gov and HMRC websites. However, in order to illustrate the additional burden placed on businesses of that allowing Ecuador to accede to the agreement, we assume that the total familiarisation costs are similar, but likely lower, than those estimated for a one-off familiarisation with the EU-Canada Comprehensive Economic and Trade Agreement (CETA), which was provisionally applied in September 2017. This is outlined in the Impact Assessment that accompanied ratification of the CETA agreement, wherein, DIT assumed a business will read documents which collectively total 259 pages and 58,726 words. By comparison, the EU-Andean FTA is substantially longer than the guidance that accompanies the CETA agreement. However, we have assumed that businesses are unlikely to read the entire agreement, only the small portions that relate to the goods and services that they trade with the Andean countries. We have no evidence to suggest the estimates below are not reasonable assumptions.
3	We assume the following ranges of time it may take a firm to become familiar with the new arrangements for trading with Ecuador: a) High scenario: It will take 4.9 hours to familiarise with the agreement. b) Central scenario: It will take 4.3 hours to familiarise with the agreement. c) Low scenario: It will take 3.8 hours to familiarise with the agreement.
4	Average weekly earnings is £472 from the year ending September 2017 and the average number of hours worked per week is 37.5 over the same period. From this we estimate the average hourly pay is £13 per hour. We assume that the average weekly pay for an employee reading the documents is equal to this wage.
5	We uplift this by 20.2% to account for other non-wage labour costs such as national insurance, pensions and other costs that vary with hours worked, revising the cost per business to £15.60 (£13 + £2.60).
6	The cost for one business is estimated at: a) High scenario: £77 (£15.60 x 4.9 reading hours) b) Central scenario: £67 (£15.60 x 4.3 reading hours) c) Low scenario: £59 (£15.60 x 3.8 reading hours)

7	Businesses may also seek advice from a specialist agent on interpreting the text and implications for their trade. Survey evidence shows that 60% of businesses seek advice from an agent to complete tax affairs. Using this as a proxy for the number of firms which would seek advice on trading with Ecuador. The same survey provides an average cost of using an agent of £265.
8	Estimates outlined in paragraph 6.8 suggests that somewhere between 100 and 1,500 UK businesses currently export to, or import from, Ecuador. From this we assume: • The upper bound of UK firms trading with Ecuador is probably around 1,500. • 60% of these firms seek advice from specialist agents = £238,500 (1,500 x £265 x 0.6) • This figure represents an estimate that applies in the High and Central scenario of our analysis. To represent a lower bound in the expected costs, we assume that only 100 firms receive specialist advice.
	We assume that 100% of firms use the preferences and therefore incur some familiarisation costs: a) High scenario: £353,000 [(1,500 x £77 cost per firm) + £238,500] b) Central scenario: £339,000 [(1,500 x £67 cost per firm) + £238,500 c) Low scenario: £32,000 [(100 x £59 cost per firm) + £26,500]
Sources : Labour market statistics summary data tables (ONS) 2017. Table 15. Average Weekly Earnings (nominal) – Regular Pay (Great Britain, seasonally adjusted). Understanding tax administration for businesses, HM Revenue and Customs Research Report 375, July 2015 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/443746/HMRC_Report_375_Tax_Administration.pdf https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/october2017/relateddata	

Annex C: Factors affecting GDP

As presented in the main body of the impact assessment, we estimate Ecuador's accession to the EU-Andean FTA could result in a £37 million per year increase in UK net GDP. GDP is the summation of aggregate consumption, investment, government expenditure, and net trade (exports – imports).

Although not explicitly stated in the results, the impact of this trade agreement will positively affect several of the components of GDP and not just imports and exports. One of the advantages of the CGE model used is that it captures the links between markets throughout the economy.

An FTA can allow for UK businesses to import intermediate goods at a lower cost and be passed onto consumers in the form of lower prices, inducing increased consumption. Cheaper intermediate products could also increase UK businesses profitability, extra profits can then be used for either increased domestic investment or higher wages and tax receipts, hence providing a potential boost to government expenditure and consumption.

An example includes Copenhagen Economics assessment of EU-Japan Economic Partnership Agreement (2009). Gains in EU imports from Japan are estimated to range from €35.3 billion to €53.8 billion, whereas gains in EU export to Japan are estimated to range from €27.8 billion to €43.3 billion. However, the overall impact on EU GDP is positive and equal to an increase of between 0.10% to 0.14%."