

| | | | | |
|--|---|--|--|--|
| Title: Impact assessment of the EU-Singapore Free Trade Agreement (EUSFTA) on the UK IA No: DIT005 RPC Reference No: RPC-4237(1)-DIT Lead department or agency: Department for International Trade Other departments or agencies: | Impact Assessment (IA) | | | |
| | Date: 10/05/2018 | | | |
| | Stage: Final | | | |
| | Source of intervention: EU | | | |
| | Type of measure: Other | | | |
| | Contact for enquiries: enquiries@trade.gov.uk | | | |
| RPC Opinion: Green | | | | |

Summary: Intervention and Options

| 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 |
| £1,024m | N/A | N/A | No | Not a regulatory provision |

What is the problem under consideration? Why is government intervention necessary?
 Negotiations on an EU-Singapore FTA (EUSFTA) concluded in October 2014. The European Commission has now presented a final text to the Council of the European Union (Council) with proposed Council Decisions on signature and conclusion of the agreement. The Council will now decide whether to adopt the necessary Council Decision authorising signature of the EUSFTA, with a vote in October 2018. In the past, EU trade agreements have typically been agreed through Common Accord, requiring the agreement of all Member States. We anticipate this will be the case for the EUSFTA. Ahead of this, the Council Decisions and the position the UK will take is subject to UK Parliamentary scrutiny.

What are the policy objectives and the intended effects?
 The UK is a strong advocate of global free trade. Whilst we are an EU Member State, this includes UK support for the EU's extensive range of trade agreements such as the EUSFTA. The EUSFTA seeks to liberalise trade between the EU and Singapore by removing tariff and non-tariff barriers, with the overall aim of promoting economic growth and creating jobs. The agreement also seeks to promote sustainable development principles around environmental and social protection. The EUSFTA will enable UK firms to export and import at a lower cost and give more opportunity for UK businesses to expand subsidiaries in Singapore. In addition, it is the government's stated objective to seek continuity of EU trade agreements which are signed before we fully leave the EU, such as the EUSFTA.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
 The agreement has already been negotiated and there is no scope at this stage to change its contents. The Government's options are to support or not support signature of the agreement. The following options are assessed against a baseline in which the FTA is not implemented.
 The options are:
 1. **The UK votes in favour of a Council Decision on signature and conclusion of the EU-Singapore FTA.** The FTA is signed and enters into force in 2019. This is the Government's preferred option.
 2. **The UK does not support a Council Decision on signature and conclusion of the agreement.** If the Council choose to use qualified majority voting and a qualified majority of Member States favoured proceeding to signature, the EU-Singapore FTA would still come to force, as in option 1. However, should the Council continue to seek consensus before proceeding, the agreement would not be implemented, and the EU and Singapore would continue to trade on WTO, Most Favoured Nation (MFN) terms. The impact of this, whilst the implementation is delayed, is the same as the baseline in which the FTA is not implemented and therefore has not been assessed separately.

| | | | | | | |
|--|--|--|----------------|--------------|--------------------|--------------|
| Will the policy be reviewed? No. 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: 11/06/2018

Summary: Analysis & Evidence

Policy Option 1

Description: The UK votes in favour of signature of the EU-Singapore FTA. This is the government's preferred option and the one being taken forward. **FULL ECONOMIC ASSESSMENT**

| Price Base Year 2017 | PV Base Year 2017 | Time Period Years 15 | Net Benefit (Present Value (PV)) (£m) | | |
|----------------------|-------------------|----------------------|---------------------------------------|-------------|----------------------|
| | | | Low: - N/A | High: - N/A | Best Estimate: 1,024 |

| COSTS (£m) | Total Transition (Constant Price) | Average Annual (excl. Transition) (Constant Price) | Total Cost (Present Value) |
|---------------|-----------------------------------|--|----------------------------|
| Low | - | - | - |
| High | - | - | - |
| Best Estimate | 2.7 | - | 2.7 |

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

Where a business chooses to trade under EUSFTA preferences they will incur a one-off familiarisation cost associated with reading the free trade agreement text (estimated in the region of £2.8 million). UK businesses are not expected to incur costs if they do not utilise the preferences set out in the EU-Singapore FTA.

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

There will be lower domestic production in some sectors due to increased competition from imports. This is captured within the net GDP effects set out below.

| BENEFITS (£m) | Total Transition (Constant Price) | Average Annual (excl. Transition) (Constant Price) | Total Benefit (Present Value) |
|---------------|-----------------------------------|--|-------------------------------|
| Low | - | - | - |
| High | - | - | - |
| Best Estimate | - | 88 | £1,026 |

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

Figures presented here reflect the long run impacts per annum and should be treated as a magnitude of change and not a forecast.

The benefits above represent the monetised net increase in real Gross Domestic Product (GDP) in the UK of around £95 million each year in the long run. UK exports of goods to Singapore face few tariffs. Most of the gain to GDP is from the removal of regulatory non-tariff measures in services and goods that can impede trade.

The increase in GDP is associated with:

- A £296 million net increase in UK exports to Singapore.
- A £607 million net increase in UK imports from Singapore.

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

There will be an increase in consumer choice of goods and services.

There will also be efficiency savings from changes to regulation, for example, the mutual recognition of conformity assessment bodies.

Key assumptions/sensitivities/risks

Discount rate (%)

3.5%

- The analysis assumes that the UK continues to trade with the European Union on a frictionless basis after EU exit, and that it trades with Singapore on an equivalent preferential basis to the EUSFTA. 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.
- The analysis is based on the results of computable general equilibrium modelling, and as such is sensitive to the assumptions and methodologies employed within that. Such results should be treated as guidance on the plausible magnitude and direction of impacts, rather than a forecast.
- The European Commission's Economic Impact Assessment estimates EU aggregate impacts. This impact assessment uses the UK's share of total EU trade with Singapore to apportion part of these impacts to the UK.

BUSINESS ASSESSMENT (Option 1)

| Direct impact on business (Equivalent Annual) £m | | | Score for Business Impact Target (qualifying provisions only) £m: Not a regulatory provision |
|--|---------------------|----------|--|
| Total Costs: N/A | Total Benefits: N/A | Net: N/A | |

Evidence Base

The structure of this Impact Assessment is as follows:

- 1: Economic background
- 2: Strategic overview of EUSFTA
- 3: Problem under consideration
- 4: Rationale for intervention
- 5: Policy objective
- 6: Description of options considered
- 7: Monetised and non-monetised costs and benefits of each option
- 8: Small and Micro Business Assessment
- 9: Direct costs and benefits to business calculations
- 10: Sensitivities
- 11: Risks and assumptions

1 Economic background

- 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 we are members of the EU, we will continue to cooperate fully and constructively with our partners. Once we have left, we will work collaboratively with the EU to press our shared free trade agenda. We will then also have the opportunity to advance our 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 are 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
- 1.5 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
- 1.6 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, and almost one third of the value of manufactured exports of developed countries comes from service intermediate inputs.⁵ Digital technology is continuing to rapidly develop, facilitating economic growth and making more and more services tradable.⁶
- 1.7 Trade agreements at the multilateral, plurilateral and bilateral level help to facilitate international trade.

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 estimates based on UNCTAD trade data.

⁵ WTO working paper see https://www.wto.org/english/res_e/reser_e/ersd201503_e.pdf

⁶ <https://www.gov.uk/ukdigitalstrategy>.

The benefits of international trade

Global benefits

An open and rules-based international trading environment enables economic integration and security cooperation, 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 and accountability.

Growth, prosperity and jobs

- 1.8 Empirical studies generally suggest a positive relationship between trade openness and economic growth. The dramatic increase in China's growth 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, talent and technology across borders, and so become more competitive. Businesses that export into new markets can access more customers and help grow overall UK exports which contribute to growth in the UK economy.

Choice, value and quality for consumers

- 1.11 Free trade and imports improve living standards for consumers, through the variety and price of goods available.
- 1.12 Consumers and households benefit directly through lower tariffs on imported final consumption goods. They also benefit indirectly as firms become more productive. For example, during 1996 – 2006 import prices for textiles and clothing fell by 27% and 38% respectively in real terms, in large part because of the phasing out of restrictive quotas in developed countries. For the same period the import price of consumer electronics fell by around 50%,⁸ reflecting the impact of the Information Technology Agreement.
- 1.13 Free trade drives businesses to innovate and move up the value chain to compete with cheaper imports to set themselves apart which means that consumers benefit from better quality and ever improving products, at lower prices.

⁷ OECD (2003), Sources of Economic Growth in OECD Countries, <https://www.oecd.org/eo/growth/2505752.pdf>

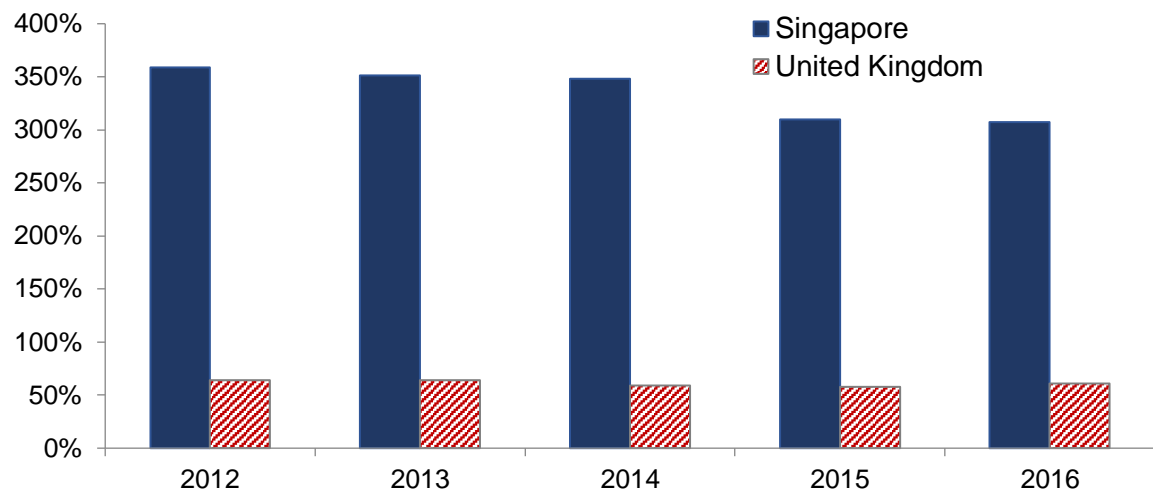
⁸ J. Francois, M. Manchin, and H. Norberg, 2007, "Passing on of the benefits of trade openness to consumers", European Commission, Directorate General for Trade, p.7.

Summary

- 1.14 Countries engage in trade because it is mutually beneficial and can benefit businesses, consumers and the wider economy. Businesses gain from greater revenue and profit which can lead to more investment, productivity and innovation. Consumers gain from greater choice in the variety and quality of goods and services, lower prices through increased competition, higher real wages and living standards. Trade allows countries to allocate their resources to activities in which they are more productive.
- 1.15 Domestic government policies may reduce trade flows between countries and the associated benefits. The most common policy measures are tariffs, subsidies and quantitative restrictions, but they also include complex regulations (for example, health and safety, packaging, labelling and product regulations) and customs procedures. These restrict free trade, which distorts the market price, lowering competition and reducing choice for consumers.
- 1.16 Given the benefits of free trade, liberalisation generally has a positive impact on GDP and citizens' welfare. However, changes in the pattern of trade do lead to some sectors expanding and some sectors declining in response to increased international competition.

Trade between the UK and Singapore

- 1.17 This section examines current trade flows between the UK and Singapore and the extent to which trade is restricted by tariffs and non-tariff measures (NTMs).
- 1.18 Singapore has GDP per capita equal to £34,000 and a population of only 5.6 million inhabitants. To achieve this level of development with a small internal market Singapore places a large emphasis on international trade as a source of economic growth. Graph 1, below, shows that the value of total trade in Singapore regularly exceeds three times the value of GDP. Total trade as a percentage of GDP has been growing for both the UK and Singapore since 2000, indicating that trade is becoming increasingly important to both nations.
- 1.19 Trade between the EU and Singapore was worth, on average, around £67.5bn a year between 2012-2016. Over this period, the EU has held a positive trade balance with Singapore. This was driven by a surplus in goods and services trade of £11bn and £4.5bn respectively.

Graph 1: Total trade as a percentage of GDP

Source: UN Comtrade for total trade data (<https://comtrade.un.org/>) and World Bank for GDP data (<https://data.worldbank.org/>)

1.20 Between 2012-2016, the UK was Singapore's third largest trading partner within the EU, following only Germany and the Netherlands in the value of total trade. The UK was the second largest exporter of services accounting for around 17% of the EU total and the third largest exporter of goods, again, accounting for around 17% of the total. Table 1 below shows the breakdown of trade between Singapore and its top ten EU trading partners.

Table 1: Singapore's top ten EU trading partners, average 2012-2016 (£, millions)

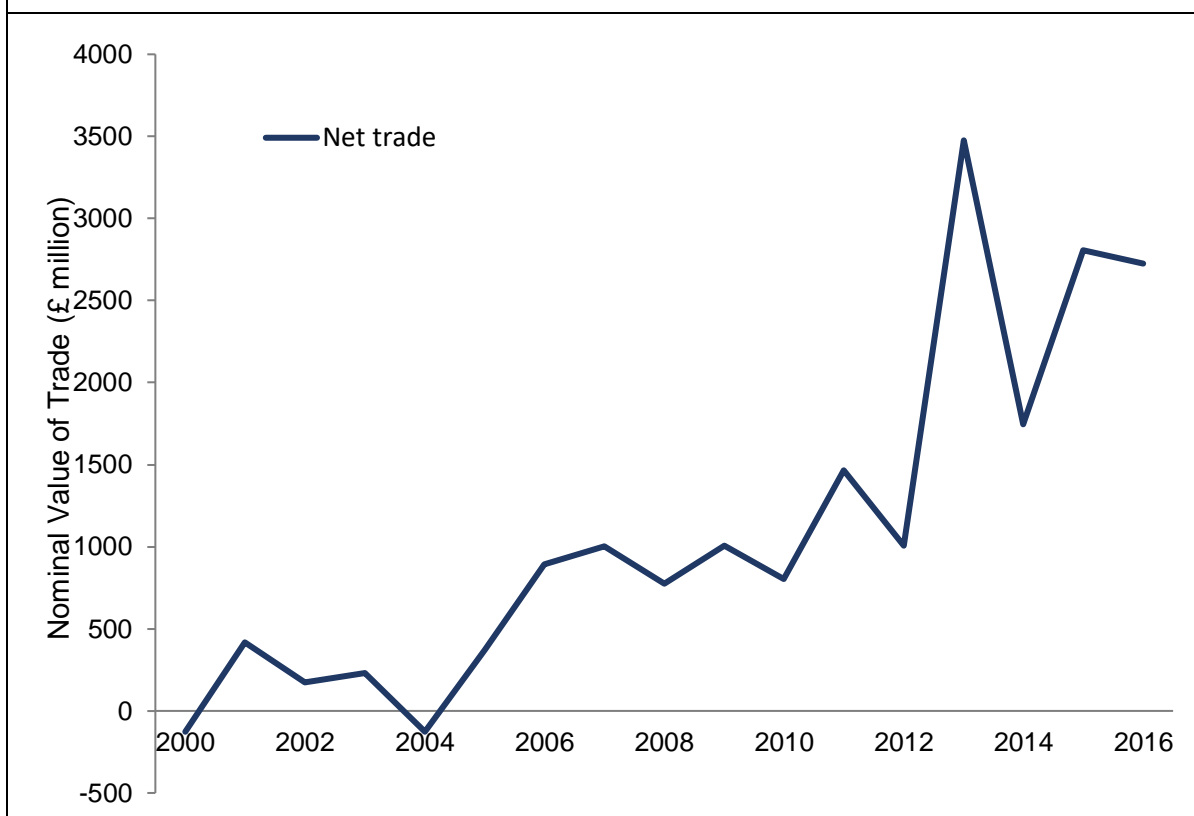
| | Total trade with Singapore | Share of EU28 total trade with Singapore | Exports to Singapore | Imports from Singapore |
|-----------------------|----------------------------|--|----------------------|------------------------|
| Germany | 12,575 | 18.6% | 7,537 | 5,037 |
| Netherlands | 12,276 | 18.2% | 7,582 | 4,694 |
| United Kingdom | 10,460 | 15.5% | 6,747 | 3,714 |
| France | 9,747 | 14.4% | 6,518 | 3,229 |
| Belgium | 5,804 | 8.6% | 1,672 | 4,131 |
| Denmark | 2,623 | 3.9% | 1,375 | 1,248 |
| Luxembourg | 2,488 | 3.7% | 528 | 1,960 |
| Italy | 2,355 | 3.5% | 1,854 | 502 |
| Ireland | 2,007 | 3.0% | 1,336 | 671 |
| Spain | 1,113 | 1.6% | 806 | 307 |
| Total | 67,466 | 100% | 39,918 | 27,548 |

Source: Eurostat Data: <http://ec.europa.eu/eurostat>

Note: Services data is on a balance of payments basis; goods data is on a physical movement basis.

1.21 In 2016, Singapore was the UK's 21st largest trading partner accounting for 1% of UK total world trade. The UK held a trade surplus of £2.7bn with Singapore. Total exports to Singapore were valued at £7.2bn and total imports from Singapore were valued at £4.5bn. As seen in Graph 2, the UK has held a trade surplus with Singapore in every year since 2004.

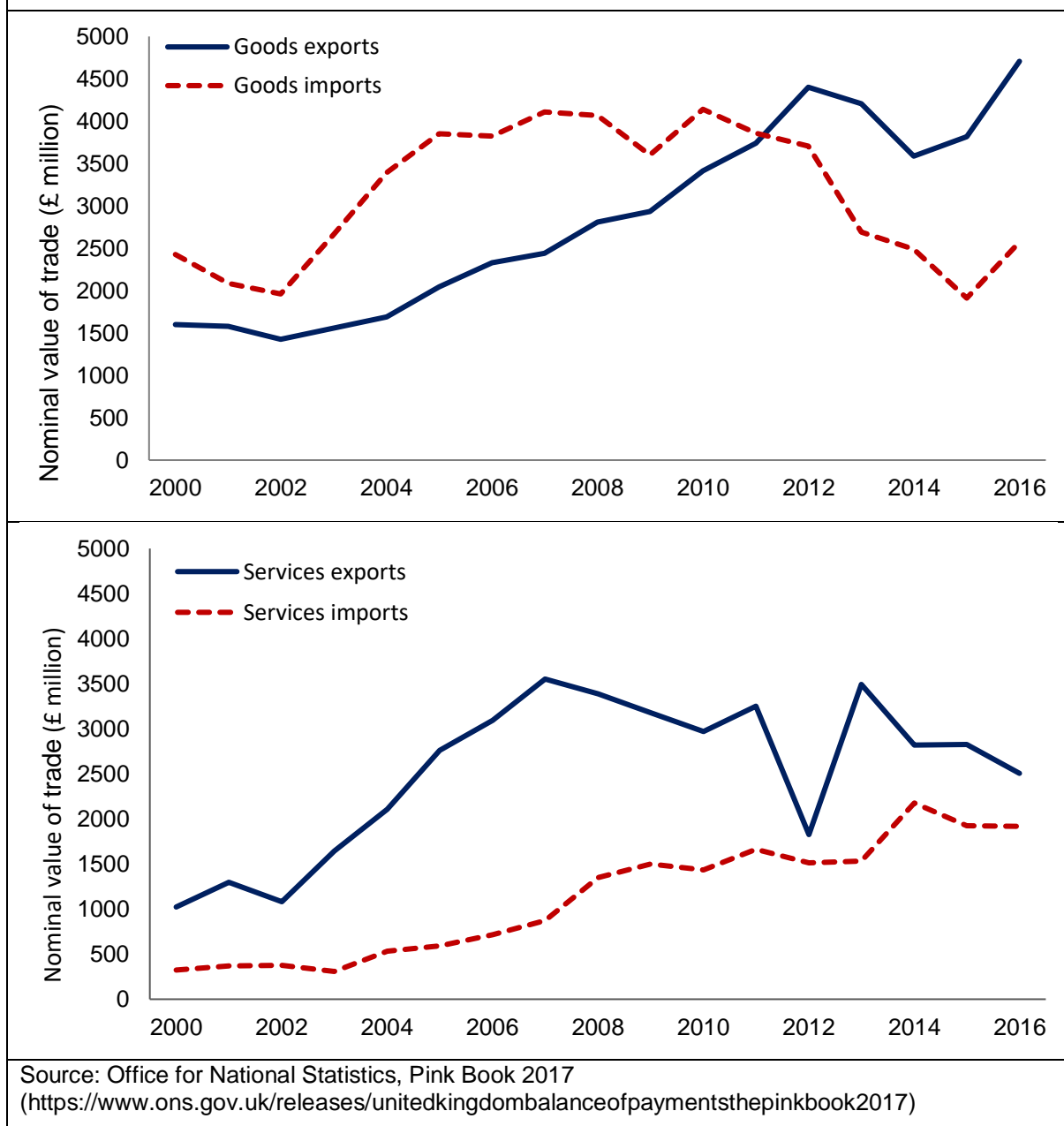
Graph 2: UK net trade with Singapore



Source: Office for National Statistics, Pink Book 2017
<https://www.ons.gov.uk/releases/unitedkingdombalanceofpaymentsthepinkbook2017>

1.22 Graph 3 highlights that this trade surplus was historically driven by a large surplus in services trade whilst goods trade was in a small deficit. However, since 2012 both goods and services have been in surplus together and the size of the goods surplus has overtaken the size of the services surplus.

Graph 3: UK trade in goods and services with Singapore.



1.23 The top 10 goods imported and exported between the UK and Singapore can be seen in Table 2. These accounted for 88% and 85% of the total goods imported from and exported by the UK to Singapore respectively. The top products exported to Singapore are 'machinery and mechanical appliances', 'electrical machinery', and 'beverages'. Of the nearly £2 billion worth of machinery and mechanical appliances exported to Singapore, around 70% was in the export of turbojets or parts that make turbojets and turbopropellers.

1.24 The data highlights that the UK exports and imports similar goods, reflecting a pattern of intra-industry trade. The table also highlights that the pattern of imports and exports has changed significantly from 2011-2013 to 2014-2016. It should be noted that the data presented has been aggregated at the two-digit harmonised standard; meaning the pattern of trade within each of these categories may be more diverse.

| Table 2: Top 10 UK goods exports and imports on average 2014 to 2016 | | | |
|--|---|--|---|
| Product Categories | 3-year average value (£, millions) | Proportion of total exports/imports to/from Singapore | Change from 2011 - 2013 average to 2014 - 2016 average |
| Top 10 goods exports to Singapore average 2014 to 2016 | | | |
| Machinery and mechanical appliances | £1,996 | 49% | 8% |
| Electrical machinery and equipment | £337 | 8% | 17% |
| Beverages, spirits and vinegar | £242 | 6% | -33% |
| Optical, photographic, cinema | £214 | 5% | -3% |
| Precious stones and metal | £182 | 4% | 20% |
| Vehicles other than railway | £158 | 4% | -22% |
| Aircraft and spacecraft | £98 | 2% | 1% |
| Organic chemicals | £89 | 2% | -30% |
| Miscellaneous chemical products | £78 | 2% | 75% |
| Articles of iron or steel | £75 | 2% | -7% |
| Top 10 goods imports from Singapore average 2014 to 2016 | | | |
| Machinery and mechanical appliances | £944 | 41% | -16% |
| Electrical machinery and equipment | £315 | 14% | 34% |
| Mineral fuels, mineral oils | £181 | 8% | -10% |
| Ships, boats and floating structures | £176 | 8% | 239% |
| Optical, photographic, cinema | £159 | 7% | 1% |
| Organic chemicals | £141 | 6% | -88% |
| Aircraft and spacecraft | £41 | 2% | -41% |
| Precious stones and metal | £29 | 1% | -22% |
| Furniture and furnishings | £24 | 1% | -28% |
| Vehicles other than railway | £21 | 1% | 11% |
| Source : https://www.uktradeinfo.com/Statistics/BuildYourOwnTables/Pages/Table.aspx | | | |
| Notes: Data presented is based on 2-digit HS codes. | | | |

1.25 Table 3, below, shows the breakdown of UK trade in services with Singapore on average from 2014-2016. Business services are the largest export service valued at £1,237 million, followed by financial services (£372 million) and travel services (£328 million). Business services are the largest service import valued at £1,299 million.

| Table 3: Trade in services by type of service on average 2014-2016 | | |
|---|---|--|
| Service sectors | 3-year average value (£, millions) | Proportion of total exports/imports to/from Singapore |
| Service exports to Singapore average 2014-2016 | | |
| Business Services | 1,237 | 46% |
| Financial | 372 | 14% |
| Travel | 328 | 12% |
| Transportation | 322 | 12% |
| Intellectual Property | 167 | 6% |
| Telecommunication and Information | 134 | 5% |
| Insurance & Pension | 51 | 2% |
| Construction | 19 | 1% |
| Personal, Cultural, and Recreational | 15 | 1% |
| Government | 14 | 1% |
| Total | 2,707 | 100% |
| Service imports from Singapore average 2014-2016 | | |
| Business Services | 1,299 | 64% |
| Financial | 279 | 14% |
| Travel | 155 | 8% |
| Transportation | 146 | 7% |
| Telecommunication and Information | 61 | 3% |
| Government | 28 | 1% |
| Personal, Cultural, and Recreational | 19 | 1% |
| Intellectual Property | 16 | 1% |
| Construction | 5 | 0% |
| Insurance & Pension | 0 | 0% |
| Total | 2,015 | 100% |
| Source: ONS Pink Book 2017 (https://www.ons.gov.uk/) | | |
| Note: two service categories 'manufacturing services' and 'maintenance and repair services' have disclosive data and have therefore been omitted. Their values are, however, included in the total calculation. | | |

1.26 We can examine which goods the UK and Singapore export relatively more in compared to world trade by estimating each country's revealed comparative advantage (RCA)⁹. The RCA estimates have been normalised to range between +1 and -1, where a positive RCA reflects a good which the UK exports relatively more compared to other countries, and a negative RCA identifies a good in which the UK exports relatively less than other countries.

1.27 Table 4, below, shows the RCA for the UK and Singapore. The analysis shows that the UK and Singapore are better at exporting different products in most categories relative to the rest of the world. The UK has a considerable advantage in the export of 'works of art and antiques', and in 'pearls, precious stones, and metals.' In only two sectors is there overlap in RCA between Singapore and the UK, these are: 'chemical products' (0.23 and 0.04 respectively) and 'instruments and clocks' (0.05 and 0.11 respectively).

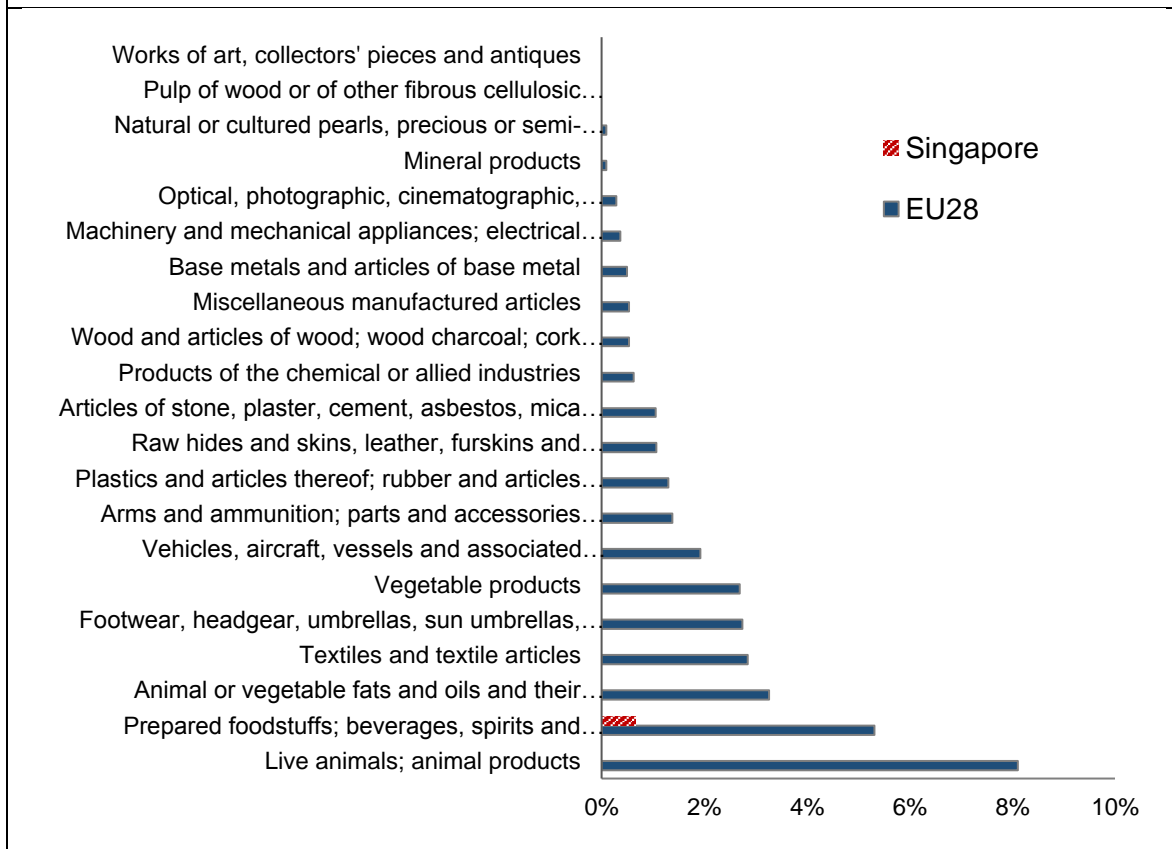
⁹ This is based on the Balassa Index (1965). It calculates the percentage of exports of a given sector in a given country and compares it to the equivalent measure of world trade. If a country has a greater share of its total trade in a given sector than the share of world exports in that sector, then it has a revealed comparative advantage in that sector.

| Product Category | UK RCA Normalised | Singapore RCA Normalised |
|---|--------------------------|---------------------------------|
| Works of art and antiques | 0.82 | -0.37 |
| Pearls, precious stones and metals; coin | 0.47 | -0.34 |
| Arms and ammunition | 0.32 | -0.99 |
| Products of the chemical and allied industries | 0.23 | 0.04 |
| Vehicles, aircraft and vessels | 0.15 | -0.53 |
| Prepared foodstuff; beverages, spirits, tobacco | 0.13 | -0.19 |
| Paper, paperboard and articles | 0.07 | -0.07 |
| Instruments, clocks, recorders and reproducers | 0.05 | 0.11 |
| Commodities not specified according to kind | -0.10 | 0.53 |
| Machinery and electrical equipment | -0.11 | 0.29 |
| Base metals and articles | -0.13 | -0.44 |
| Live animals and products | -0.16 | -0.82 |
| Mineral products | -0.16 | 0.05 |
| Resins, plastics and articles; rubber and articles | -0.17 | -0.03 |
| Articles of stone, plaster; ceramic prod.; glass | -0.24 | -0.77 |
| Textiles and articles | -0.26 | -0.77 |
| Miscellaneous manufactured articles | -0.26 | -0.70 |
| Footwear, headgear; feathers, flowers, fans | -0.30 | -0.72 |
| Hides, skins and articles; saddlery and travel goods | -0.32 | -0.46 |
| Animal and vegetable fats, oils and waxes | -0.53 | -0.69 |
| Vegetable products | -0.59 | -0.86 |
| Wood, cork and articles; basket ware | -0.73 | -0.92 |
| Source: https://comtrade.un.org/data | | |
| Notes: The calculations are based on a 5-year average of 2012, 2013, 2014, 2015 and 2016 data, with the trade flow data extracted from Comtrade for goods categories. | | |

1.28 Tariffs or excise duties can be levied by a government to increase the cost of importing from abroad to protect domestic industries and/or raise revenue. The impact of a tariff depends on the behaviour and responsiveness of domestic consumers and businesses to a change in tariff. Graph 4, below, presents the trade weighted MFN tariffs imposed by Singapore and the EU¹⁰.

¹⁰ Tariffs can be calculated as a simple average over a range of goods i.e. the average tariff across several tariff lines. However, countries import different quantities of goods under different tariff lines which the simple average does not account for. A weighted tariff adjusts the average tariff for the volume of trade under each tariff line.

Graph 4: Trade weighted tariffs between the EU28 and Singapore by sector

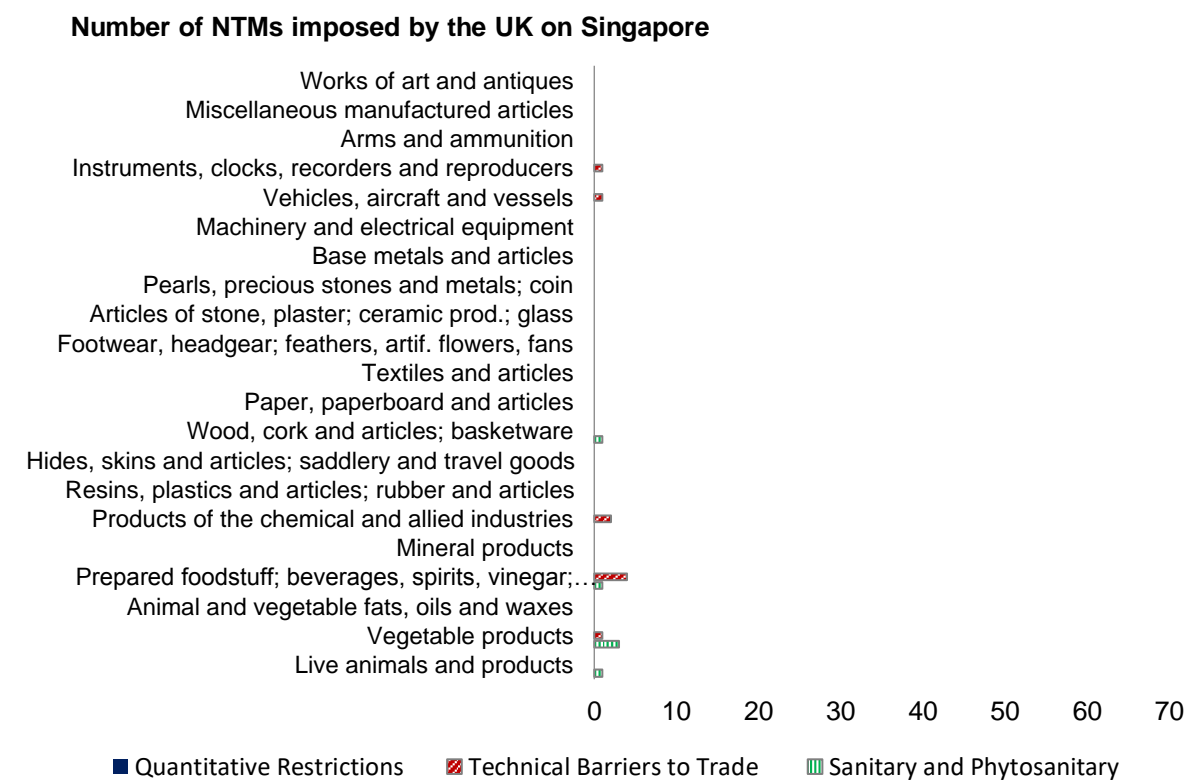
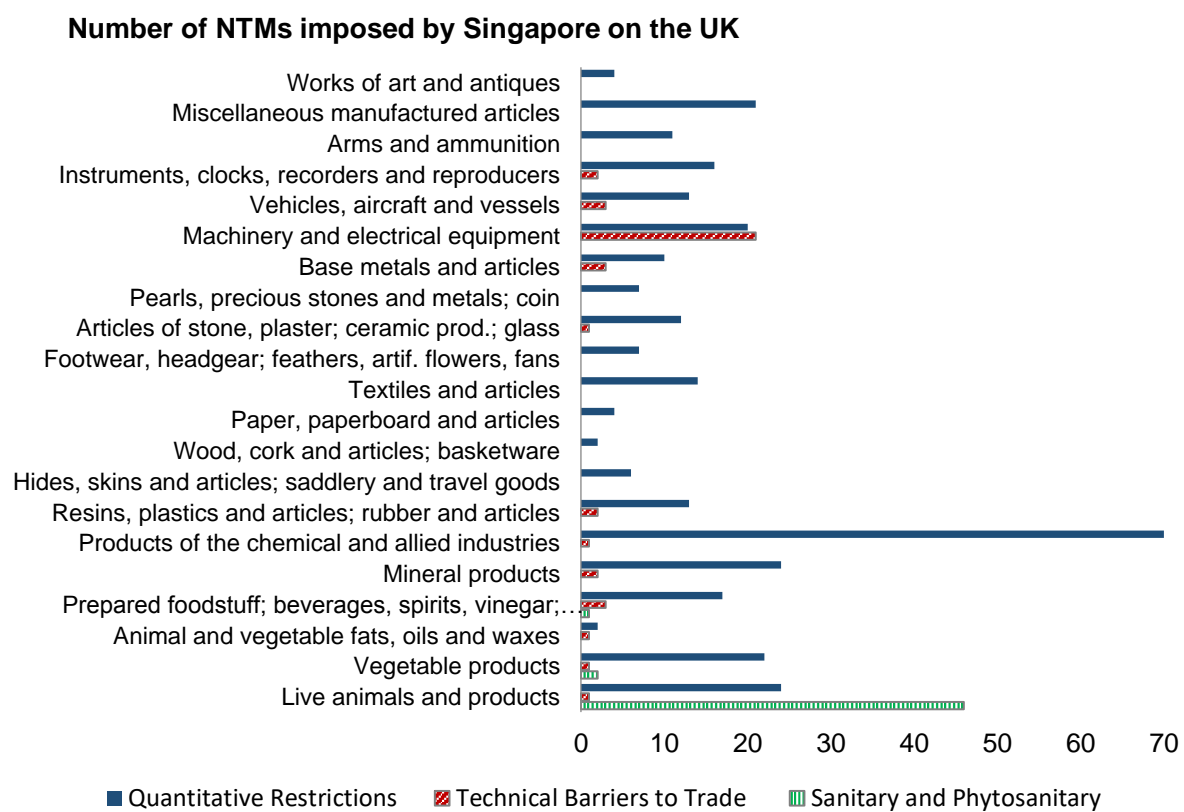


Source: International Trade Centre (ITC) market access maps. <http://www.macmap.org/CountryAnalysis/>.

1.29 Graph 4 shows that there is a large disparity in the tariffs imposed by Singapore and the EU. Out of the Harmonised Standards 9,558 different product categories Singapore only imposes tariffs on 6 of them, with all 6 levied on alcoholic beverages. This is reflected in the graph by the 0.65% weighted average tariff on 'prepared foodstuffs, beverages, spirits, vinegar, and tobacco.' Singapore's near complete liberalisation supports the fact that a heavy emphasis is placed on international trade as a continual source of economic growth. In comparison, the EU imposes tariffs on several sectors with the highest rates found on 'animal products' (8.11%) and 'prepared foodstuffs, beverages, spirits, vinegar, and tobacco' (5.31%).

1.30 Additionally, non-tariff measures such as regulatory and standards requirements, can restrict the trade of goods and services. Whilst Singapore has been shown to have a highly liberalised tariff schedule, Graph 5, below, indicates that relative to the EU Singapore imposes far more quantitative restrictions, technical barriers to trade, and sanitary and phytosanitary measures across a range of sectors. It should be noted that Graph 6 only shows the number of NTMs imposed and not the extent to which they restrict trade. Although Singapore imposes relatively more NTMs it is possible that they could have less impact than those imposed by the EU.

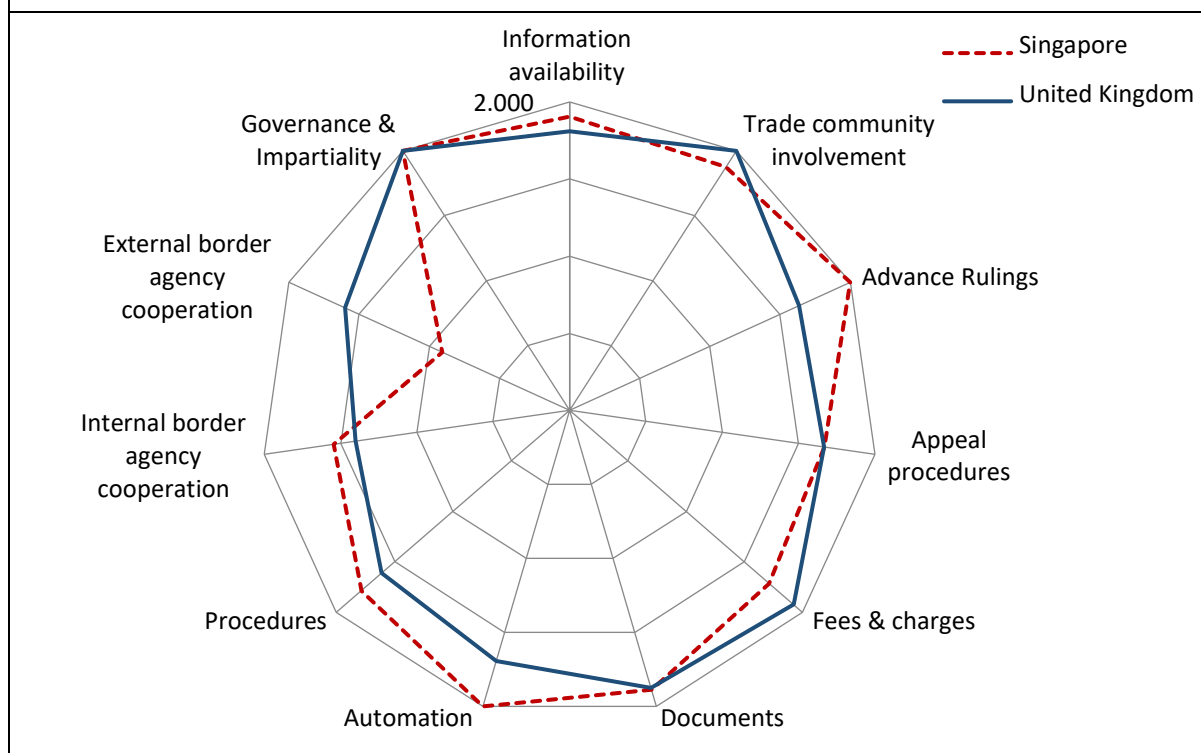
Graph 5: Number of NTMs imposed by Singapore and the EU as of 2016



Source: WTO integrated analysis and retrieval of notified non-tariff measures (<http://i-tip.wto.org/goods/default.aspx?language=en>)

1.31 Tariffs impede trade by raising the cost of importing foreign goods. However, other measures can also restrict the trade. Graph 6, below, shows the Trade Facilitation Index (TFI) estimated by the OECD for the UK and Singapore, which covers 11 indicators. Each indicator, such as automation of processes, is scored from 0 to 2, where 2 represents the best performance that can be achieved. The data shows that both the UK and Singapore have good systems in place to facilitate trade. The UK scores noticeably higher in 'external border agency cooperation', whilst Singapore scores noticeably higher in 'advanced rulings.'

Graph 6: OECD trade facilitation index



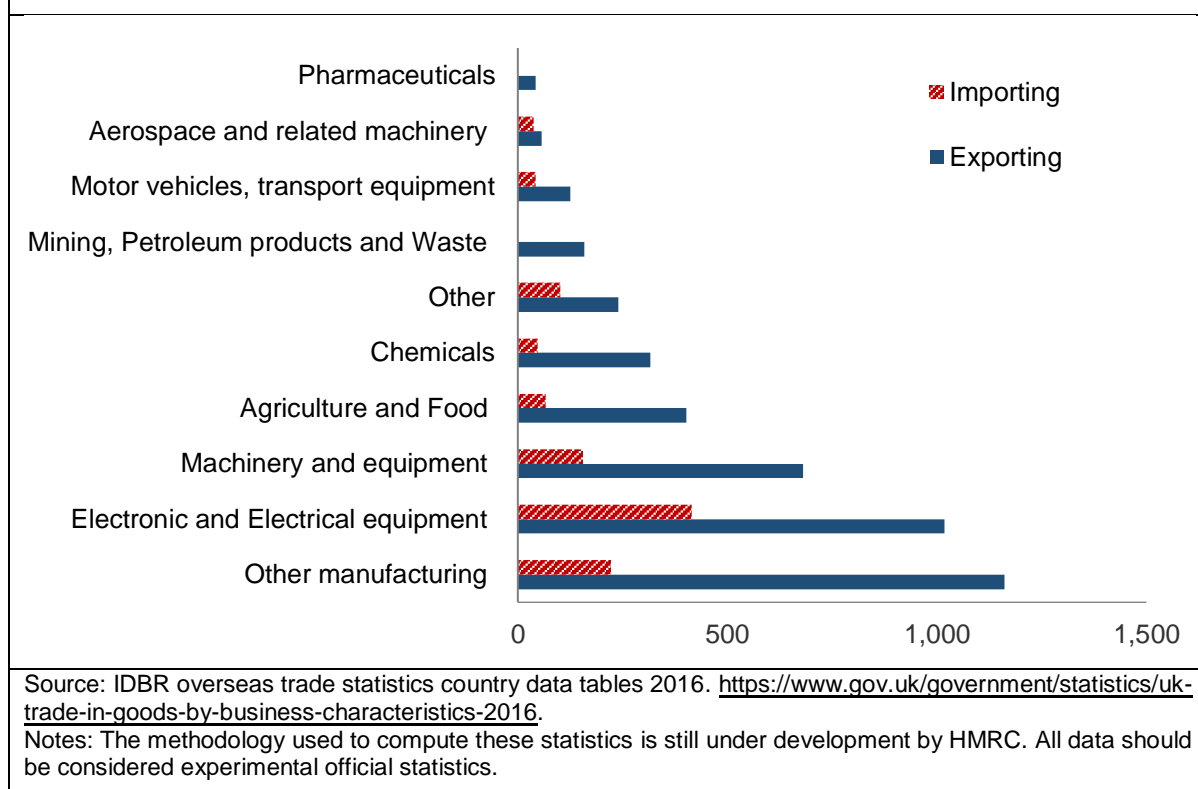
Source: OECD (<http://www.oecd.org/trade/facilitation/indicators.html>)

Notes:

- A-Information Availability** Publication of trade information, including on internet and enquiry points.
- B – Involvement of the Trade Community** The degree to which consultations are carried out with traders.
- C –Advance Rulings** Prior statements by the government to requesting traders concerning the classification, origin, valuation method, etc., applied to specific goods at the time of importation; the rules and process applied to such statements.
- D- Appeal Procedures** The ability to appeal administrative decisions by border agencies.
- E – Fees and Charges** Disciplines on the fees and charges imposed on imports and exports.
- F – Documents** Simplification of trade documents; harmonisation in accordance with international standards; acceptance of copies.
- G – Automation** Electronic exchange of data; automated border procedures; use of risk management.
- H – Procedures** Streamlining of border controls; single submission points for all required documentation (single windows); post-clearance audits; authorised economic operators.
- I – internal cooperation** Co-operation between various border agencies of the country; control delegation to customs authorities.
- J – External cooperation** Co-operation with neighbouring and third countries.
- K – Governance and Impartiality** Customs structures and functions; accountability; ethics policy

1.32 In 2016, there were 10,120 UK firms exporting to Singapore and 3,471 UK firms importing from Singapore. When looking at the breakdown of UK businesses by industry, the service sector has the highest number of firms trading with Singapore. In 2016, 5,919 UK firms exported services to Singapore and 2,306 UK firms imported services from Singapore. In terms of goods trade, 'other manufacturing' has the highest number of firms exporting to Singapore (1,161), whilst 'electronic and electrical equipment' has the highest number of firms importing from Singapore (415). Graph 7, below, highlights the breakdown of businesses trading with Singapore in each goods sector.

Graph 7: UK businesses exporting to and importing from Singapore in 2016



1.33 The stock of UK foreign direct investment (FDI) in Singapore was £10.7bn in 2016, 42.9% lower than in 2015. In 2016, Singapore accounted for 0.9% of total UK outward FDI stock. The stock of Singapore FDI in the UK was £18.2bn in 2016, 18.6% higher than in 2015. In 2016, Singapore accounted for 1.5% of total UK inward FDI stock¹¹.

¹¹ ONS foreign direct investment involving UK companies (<https://www.ons.gov.uk/>)

2 Strategic overview of the EUSFTA

Context & overview of the agreement

- 2.1 As an open and trade-driven economy, Singapore acts as a financial and logistics hub for the Asia-Pacific region. It has a stable government, strong rule of law and an effective regulatory system, and regularly comes at the top of the World Bank's 'Ease of Doing Business' rankings.¹² Singapore acts as an advocate of free trade. The EU entered into FTA negotiations with Singapore in March 2010, which concluded in October 2014.
- 2.2 The primary aim of the EU-Singapore FTA (EUSFTA) is to reduce barriers to trade and consolidate preferential trade access over the long-term, providing certainty to businesses and promoting economic growth, job creation and greater choice for consumers. Whilst Singapore offers an already liberal and open market to the UK and wider EU, the EUSFTA aims to address specific concerns of businesses across a range of areas, including tariffs on goods, services market access, government procurement, intellectual property rights protection and others. Amongst these priorities, the EUSFTA is also designed to promote trade and sustainable development principles via provisions on labour and environmental protections.
- 2.3 The EUSFTA as negotiated includes chapters and annexes covering:
- Objectives and general definitions
 - National treatment and market access for goods
 - Trade remedies
 - Technical barriers to trade
 - Sanitary and phytosanitary measures
 - Customs and trade facilitation
 - Non-tariff barriers to trade & investment in renewable energy generation
 - Services, establishment and e-commerce
 - Investment
 - Government procurement
 - Intellectual property
 - Competition and related matters
 - Sustainable development
 - Transparency
 - Dispute settlement
 - Mediation mechanism
 - Institutional, general and final provisions
 - Rules of origin protocol

¹² To include references

- 2.4 The agreement preserves the EU and Singapore's ability to achieve legitimate policy objectives, such as public health, safety, environment, public morals and the promotion and protection of cultural diversity. The EUSFTA will not change EU standards and regulations such as those related to food safety, product safety, consumer protection, health, environment, social or labour standards. Without exception, all imports from Singapore will have to continue to comply with EU product rules and regulations. However, the EUSFTA does provide the basis for mutual recognition of conformity assessment bodies and acceptance of their test assessments to reduce the costs of such compliance for certain sectors.
- 2.5 A secondary objective of the EUSFTA is to support the long-term goal of a regional FTA between the EU and the Association of South East Asian Nations (ASEAN). After negotiations on an EU-ASEAN FTA were paused in 2009, due mainly to differing levels of economic development across the region, the Council authorised the Commission to embark on bilateral FTA negotiations with those ASEAN countries ready and willing to strike ambitious and comprehensive agreements. The EUSFTA is the first of these bilateral FTAs. The EUSFTA, and the EU-Vietnam FTA that was subsequently negotiated (though not yet signed), are to act as benchmarks for further EU FTAs with other ASEAN countries. The EUSFTA therefore has a broader strategic significance in setting the scope and ambition for further EU FTAs in the region, including an overarching EU-ASEAN FTA. An EU-ASEAN FTA is not expected to enter into force ahead of the UK's exit from the EU. Other bilateral EU FTAs are at varying stages of development with countries across the region, including Indonesia, the Philippines, Thailand and Malaysia. Of these, only negotiations with Indonesia are actively being progressed at present, though this is at an early stage still.

3 Problem under consideration

- 3.1 Trade between the EU and Singapore is currently governed solely by WTO rules. Whilst Singapore is generally an open and pro-free trade market, there nevertheless remain barriers which, if liberalised, would help to boost trade flows. In turn, this could contribute positively to economic growth, job creation and greater choice for consumers.
- 3.2 With negotiations on the EUSFTA concluded, and with the agreement having been presented to Council, the UK and other EU Member States must vote on whether or not to authorise signature and conclusion of the agreement. If the Council votes in favour, work can progress towards ratification of the agreement by the EU and Singapore once the European Parliament also approves the agreement. If signature is opposed, the agreement will not be put forward to the European Parliament and the benefits of the EUSFTA will not be realised.

- 3.3 In May 2017 the Court of Justice of the European Union (CJEU) issued an Opinion on the balance of competence in the EUSFTA (as it was at the time). The CJEU concluded that only certain provisions within the investment chapter are of shared competence between the EU and its Member States, including mechanisms to resolve investor-state disputes. Following the CJEU Opinion, the Commission has separated out the investment chapter to allow the rest of the FTA to be presented as an EU-only competence agreement. This sees the investment chapter presented as a distinct mixed Investment Protection Agreement. As such, the investment chapter has not been included in the scope of this impact assessment on the main body of the EUSFTA.
- 3.4 The ‘architecture’ of the EUSFTA is important in terms of how the agreement and its provisions are concluded and implemented. Mixed-agreements of shared competence between the EU *and* its Member States require ratification by national parliaments in addition to EU and third-country ratification, whereas EU-only competence agreements enter fully into force following EU and third-country ratification with no need for national parliaments to also ratify. As such, separating the investment chapter from the rest of the agreement has enabled the main body of the EUSFTA to enter into force in a more streamlined manner. Given the time it typically takes for all Member States to ratify EU trade agreements (taking close to five years in the case of the EU-Korea FTA), we do not foresee the EU-Singapore Investment Protection Agreement applying to the UK prior to our pending exit from the EU¹³, including during the proposed implementation period agreed at March European Council (ending Jan 2021). If the agreement does come into force during the implementation period, it will apply to the UK during that period as the UK is to be treated as a Member State for the purposes of international agreements during that period.¹⁴¹⁵

4 Rationale for intervention

- 4.1 As a global champion of free trade, the UK government has long supported initiatives liberalise the trading landscape. On this basis the UK welcomes the EU’s ambitious and extensive FTA agenda and continues to support the full range of EU FTAs as a means of driving economic growth, creating jobs and promoting consumer choice. The EUSFTA can contribute positively to this overarching objective.

¹³ If the UK were to need to ratify the EU-Singapore Investment Protection Agreement at any point ahead of our exit from the EU, a separate impact assessment would be required and the UK parliament would need to vote in favour of the agreement before it could enter into force, pending approval also from all other Member State national parliaments.

¹⁴ Article 124(1) plus footnote, draft Withdrawal Agreement, March European Council 2018

¹⁵ If the UK were to need to ratify the EU-Singapore Investment Protection Agreement at any point ahead of our exit from the EU, a separate impact assessment would be required and the UK parliament would need to vote in favour of the agreement before it could enter into force, pending approval also from all other Member State national parliaments.

- 4.2 With respect to the UK's bilateral trade relationship with Singapore, it is in our interest to see the EUSFTA implemented. The range of tariff and non-tariff barriers that the agreement seeks to address should help to improve bilateral trade flows, provide certainty for British businesses and make it easier for our companies to operate in the Singaporean market.
- 4.3 The UK government seeks continuity in its existing trade and investment relations when we leave the EU, including continuity of existing EU FTAs such as the EUSFTA, to avoid disruption for businesses and consumers. UK support for the EUSFTA at the Council will, additionally, demonstrate the UK's commitment to this agreement and provide a clear endorsement that its provisions are positive for the UK. Were the UK to vote against signature of this agreement, this would likely be damaging for the UK's bilateral relations with Singapore and with the EU, which could make negotiations over future trading arrangements more challenging and would conflict with our support for the EU's trade agenda while we remain a Member State.

5 UK policy objectives

- 5.1 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.
- 5.2 As an advocate of free trade globally, the government supports the EU's ambitious trade agenda as a means of facilitating trade liberalisation and promoting economic growth, job creation and consumer choice. This includes the EU's extensive range of trade agreements, such as the EUSFTA.
- 5.3 The Government is committed to maintaining continuity of trade relations when we leave the EU. It is important that continuity is safeguarded so as not to leave British businesses at a disadvantage. The government supports swift progress towards the implementation of the EUSFTA to further this aim, to ensure that continuity of trade relations with Singapore can be achieved.
- 5.4 Overall, the Government supports the EUSFTA and advocates swift implementation of the agreement.

6 Description of options considered

- 6.1 The options are either to support or not to support the signature of the agreement which would lead to formal implementation of the EUSFTA. The economic assessment is carried out against the baseline where the EUSFTA has not been implemented.

Option 1: UK supports signature and conclusion of the EUSFTA

- 6.2 This is the government's preferred option as the EUSFTA should increase export opportunities for UK businesses, create greater competition and thus lower prices and boost economic growth, facilitate innovation, and bring benefits to consumers. The agreement sets out provisions on sustainable development, intellectual property, sanitary and phytosanitary standards and public procurement reflecting and building upon WTO law, which are intended to generate welfare gains and improve the business environment both in the EU and Singapore. In the broader context, the EUSFTA contributes positively to the UK's commitment to global free trade and the EU's extensive and ambitious trade agenda.
- 6.3 The analysis for this option assumes that the UK will continue trading with Singapore on equivalent terms after EU exit. This reflects the Government's stated policy commitment to securing continuity of the effect of existing EU free trade agreements and other EU preferential arrangements with third countries. 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.
- 6.4 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.

Option 2: UK does not support signature and conclusion of EUSFTA

- 6.5 We expect that the process of Common Accord will be used to secure Council approval for signature of the EUSFTA. Whilst not mandated by the EU Treaties, Common Accord requires all Member States to vote in favour in order for signature to be authorised. Should the UK or any other Member State vote against or abstain, signature of the EUSFTA would be blocked. If the Council choose to use qualified majority voting (as established under the EU Treaties) and the UK were to vote against or abstain, signature of the EUSFTA could still be approved should a qualified majority of Member States vote in favour of doing so. In either eventuality, if signature of the EUSFTA is blocked the EU and Singapore would continue to trade on WTO, Most Favoured Nation (MFN) terms. 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 Singapore and with the EU, which could make negotiations over future trading arrangements more challenging.

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

- 7.1 This section will look in depth at the costs and benefits of each policy option under consideration, focussing on the impacts to UK businesses, consumers, and the wider economy.
- 7.2 Most of the results reported in this section are derived from Computable General Equilibrium (CGE) modelling. This type of modelling is appropriate when there is a significant change in trade policy and an assessment of the impacts on the whole economy is needed. The model considers linkages between domestic markets within each economy and provides impacts at a sectoral and aggregate level. It also considers the knock-on consequences to trade flows of third parties, reflecting trade creation and trade diversion effects, as well as the allocation of resources within an economy.
- 7.3 CGE analysis can provide a useful indication of the potential magnitude of economic impacts resulting from policy changes. CGE results should not, however, be treated as a forecast or prediction of the future. Annex A lays out further details on CGE modelling.

Economic appraisal the EU-Singapore Free Trade Agreement on the UK

- 7.4 The main source of evidence used to assess the monetised impacts is the European Commission's 'Economic Impact of the EU-Singapore Free Trade Agreement' (2013) study¹⁶. We consider this to be the best available source to examine the impacts of EUSFTA.
- 7.5 There are some limitations in using the European Commission's study, such as:
- The analysis conducted by the European Commission estimates impacts to the EU in 2025 compared to the structure of the economy in 2007 without the EUSFTA being in place. However, the baseline year of the study is 2007. The total value of trade between the EU and Singapore has grown by around £29 billion (63%) from 2007 to 2016. Over the same period, the value of the UK's total trade with Singapore has remained roughly the same, meaning the UK's share of EU total trade with Singapore has reduced from 26% to 14%¹⁷. Were the model to use 2017 as its baseline it would be likely that the monetised values reported for the entirety of the EU would be larger than those currently reported by the European Commission's study. However, given that the UK's total trade with Singapore has remained roughly the same we expect the monetised values estimated for the UK to be comparable between 2007 and 2017.

¹⁶ http://trade.ec.europa.eu/doclib/docs/2013/september/tradoc_151724.pdf

¹⁷ Eurostat Data. <http://ec.europa.eu/eurostat>

- The EU's modelling does not disaggregate the costs and benefits for individual countries from the overall impact. The report does not estimate the impact on the UK or any other Member State individually.

7.6 It is uncertain how much of the estimated benefit may be attributable to the UK given the complex patterns of global trade. To present the expected magnitude of these benefits, this IA has assumed that the UK's portion of the total benefits will be equivalent to the UK's proportion of EU total trade with Singapore.

Key assumptions

7.7 A few key assumptions in the Commission's analysis should be noted:

- Due to data limitations, reductions in goods NTMs are not modelled. In practise, the provisions within EUSFTA will reduce goods NTMs bilaterally between the EU and Singapore. As a result, the modelling estimates presented will be an underestimate of the real economic gains of the EUSFTA.
- In terms of services regulatory barriers, the European Commission assumes that businesses will benefit from greater certainty because of EUSFTA. This is due to provisions within EUSFTA that bind the current levels of service regulatory barriers. Greater predictability of EU-Singapore trade policy will in turn positively affect bilateral trade.
- The European Commission use a study by Decreux and Fontange (2011)¹⁸ who, when modelling the impact of the Doha Development Agenda (DDA), estimate the binding of service sector protection equates to a 3% tariff equivalent reduction in costs. The European Commission consider this to be a conservative assumption in the context of EUSFTA, as it only reflects the binding of service sector protection and excludes reductions in services barriers that will result in greater market access. Again, this means the results presented will be an underestimate of the real economic gains and should be considered a 'lower-bound' estimate.
- The methodology to calculate this 3% reduction is not stated. In the absence of any precise information on current service barriers in Singapore the European Commission have deemed this 3% reduction used to model the DDA to be applicable in the context of the EUSFTA. The 3% does fall within the range estimated in DIT's assessment of the EU-Japan Economic Partnership Agreement (0.9% to 19.2% across service sectors) and within the EU-Canada Comprehensive and Economic Trade Agreement (0.1% to 5.7% across service sectors). We have spoken to the authors of the study who stated that the 3% figure was based upon expert judgement.

¹⁸ Economic Impact of the Potential Outcome of the DDA (2011). Available at: <http://trade.ec.europa.eu/doclib/html/148337.htm>

- Given this, the European Commission model a scenario which assumes the bilateral removal of all tariffs¹⁹ and a symmetric 3% reduction in service sector costs across the EU and Singapore.

7.8 Additionally, we make some further assumptions to apportion the results of the European Commission's study:

- A key assumption is that the EU and UK continue to trade under the status quo and that the UK and Singapore trade on preferential terms for the duration of the assessment period after the UK has exited the EU. This is the Government's intended policy.
- The expected gains in UK GDP and bilateral imports have been estimated by applying the UK's share of EU28 total trade with Singapore in 2007 (21.3%)²⁰.
- The sectoral bilateral export impacts that are estimated by the European Commission are apportioned based on the UK's share of total trade with Singapore in each sector relative to the EU28. The impact in each sector is then summed to give the overall increase in bilateral exports.
- Where prices are in non-2017 values, these have been adjusted in line with an average of spot prices between Sterling and Euro and then inflated where appropriate.

Baseline: the EUSFTA is not in force across the EU28 and Singapore

7.9 The baseline is one where the EUSFTA is not in force across the EU28 and Singapore. Under the baseline scenario the EU28 trades with Singapore under the Most Favoured Nation commitments agreed at the WTO and not under the preferences contained in the EUSFTA. See Annex B for information on how the Comprehensive and Progressive Trans Pacific Partnership (CPTPP) could affect this baseline.

¹⁹ In line with the agreed implementation schedule: Singapore eliminates all tariffs lines at entry into force. EU eliminates 75% of tariffs at entry into force, 85% after 3 years and 99.99% after 5 years.

²⁰ The baseline used in the European Commission's GCE analysis is 2007 and based on the GTAP database. We have therefore used the UK's proportion of EU total trade with Singapore in 2007 for consistency. This share was derived from the GTAP database. Due to the difference in database it differs from the share calculated using Eurostat in section 7.5

Assessment of option 1: UK supports signature and formal implementation of the EUSFTA

Overall benefits to the UK Economy

- 7.10 Benefits to the UK from the agreement will come from reducing existing trade barriers that restrict free and efficient trade. This will increase export opportunities for UK businesses, create greater competition and thus lower prices, increase innovation, investment in R&D and bring a greater variety of goods and services for consumers.
- 7.11 The commission describe their analysis as showing absolute GDP gains from the impact of EUSFTA in 2025 compared to not having the trade agreement in 2025. This corresponds to a gain of €550 million (£450 million in 2017 prices).
- 7.12 ‘Absolute’ reflects that GDP has been measured in volume terms as opposed to a measurement in relative terms (i.e. in percentage change). This is consistent with the normal presentation of results from CGE modelling. From a dynamic point of view, it is found that most of the gains (87%) from the liberalisation materialise in the first five years: 68% in the first year and the rest within the next four years. It is then assumed these gains continue to be realised every year following. This is reflected in the total NPV calculation shown in Section 9. This methodology follows the same approach as used in the CETA and Japan-EU EPA Impact Assessments recently produced by DIT.
- 7.13 The EU’s modelling does not 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. It is uncertain how much of the estimated benefit may be attributable to the UK, given the complex patterns of global trade. 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 total trade with Singapore (21.3%) in 2007.
- 7.14 Compared to a baseline in which the EUSFTA is not in force, we therefore estimate **the beneficial impact of the EUSFTA on UK GDP to be around £95 million**. The net impact of EUSFTA on UK GDP is accounted for in the total Net Present Value (NPV) of the agreement presented in Section 9.
- 7.15 From a dynamic point of view, it is found that in the case of the EU most of the gains (87%) from the liberalisation materialise in the first five years: 68% in the first year and the rest within the next four years. In the case of Singapore, the gains are more gradual as 23% of the gains occur in the first year and 51% in the first five years. This is because the EU liberalises more slowly.

7.16 The benefits identified under this policy option are expected to outweigh the costs relating to one-off familiarisation costs, on-going compliance costs, foregone benefits to government revenue, and the additional administration needed to trade under EUSFTA preferences. **The government's preferred option is to ratify EUSFTA in order to continue the UK's access to gain these benefits.**

7.17 The section below assesses the direct and in-direct impact of EUSFTA on UK businesses, UK consumers, the UK Exchequer and wider impacts. We define direct impacts as those that instantly effect businesses, in the absence of any behavioural change. For example, the removal of Singaporean regulations allows UK business to export more to Singapore automatically at a lower cost. In comparison, indirect impacts are those that require a behavioural response from businesses. For example, UK firms may increase domestic production to increase its exports to Singapore.

The net impacts of EUSFTA to UK businesses

a) Direct benefits to UK businesses from a reduction in tariffs and regulatory barriers to trade

(i) Monetised impacts

7.18 UK businesses will benefit from reduced tariffs and non-tariff barriers on both exports to and imports from Singapore. As a result, UK goods and services will be more price competitive in Singapore, and UK producers will be able to import a greater choice of intermediate goods and services at a lower cost.

7.19 UK businesses currently trading with Singapore will benefit from reduced tariffs. We estimate that UK businesses could save up to £34 million a year from the elimination of tariffs. Although, it should be noted that some of this gain may be passed onto consumer in the form of lower prices. Tariff cuts will increase the competitiveness of UK firms by enabling them to offer Singaporean consumers better value for money.

7.20 UK businesses currently trading with Singapore will also benefit directly from a decline in regulatory barriers in Singapore's services market. These gains are monetised and included implicitly within the CGE modelling and overall gains in UK GDP. The model assumes a 3% reduction in service sector costs across the EU and Singapore.

(ii) Non-monetised impacts

7.21 The 3% service sector reduction included in the European Commission's model only reflects the binding of service sector protection and excludes reductions in services and goods barriers that will result in greater market access. The following section outlines the additional market access that firms will receive upon the EUSFTA's entry into force that is not captured within the CGE model:

7.22 **Goods NTMs** - Several NTMs will be reduced or removed concerning electronics, pharmaceuticals and motor vehicles & parts. 45 categories of household electrical appliances and accessories will no longer need to obtain third party certification of safety standards before they are given the 'SAFETY Mark' and sold in Singapore.²¹ With regards to regulatory convergence for motor vehicles and parts, Singapore will refrain from introducing any new domestic technical regulations diverging from UN ECE Regulations or Global Technical Regulations and will mutually recognise conformity assessments attributed to these standards for vehicles or parts without the need for further testing or marking requirements²². For pharmaceuticals, Singapore has committed to use international standards, practices and guidelines for pharmaceutical products or medical devices, including those developed by the WHO, the OECD, the ICH, the PIC/S and the GHTF as a basis for their technical regulations²³.

7.23 **Financial services** - UK financial companies already have a strong presence in Singapore's market, however there are currently stringent licensing requirements on the retail banking sector. The Monetary Authority of Singapore restricts the number of bank licences with qualifying full bank (QFB) privileges, which includes deposit taking and the provision of cheque services and lending. Under EUSFTA, UK banks which already have QFB will be able to set up an additional 25 branches on top of the 25 they are currently allowed²⁴. If Singapore allows a QFB from Australia, China, India or Malaysia to operate more than 50 customer service locations, it will extend the same privilege to UK QFBs²⁵. Additionally, If Singapore offers additional QFB licences to banking institutions from Australia, China, India or Malaysia, EU banks, including UK banks, will similarly be eligible for such additional licences²⁶. Singapore is also opening its market to allow UK software providers to offer solutions relating to the provision and transfer of financial information, as well as for financial data processing²⁷. Further opportunities are available to UK businesses providing cyber security, authentication and biometrics products, especially as financial institutions and fintech companies need to protect sensitive data and comply with data security and privacy law.

²¹ As set out in 'Annex 4 – Electronics' of the EUSFTA

²² As set out in 'Annex 2-B – Motor vehicles and parts thereof' of the EUSFTA

²³ As set out in 'Annex 2-C – Pharmaceutical products and medical devices' of the EUSFTA

²⁴ As detailed in 'Section B – Banking and other financial services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

- 7.24 **Insurance services** - Singapore does not currently impose any restrictions on UK insurance firms establishing a presence in Singapore to provide non-life insurance products. However, under EUSFTA they can now provide such products through online portals²⁸. Furthermore, commercial presence in Singapore will no longer be required for authorised or licenced UK insurers to provide maritime, aviation, and transit insurance²⁹.
- 7.25 **Legal services** - Given that Singapore has a common law system based on English law, the UK legal sector has a competitive advantage and English law specialists are in high demand. Under the terms of the agreement Singapore will relax certain requirements in relation to UK law firms in a Joint Law Venture, and UK lawyers will be able to participate in international commercial arbitration proceedings in Singapore³⁰.
- 7.26 **Healthcare services** - The UK is a leader in the medical technology and medical biotechnology sectors and has particular expertise in harnessing data and technology to improve patient care. Under EUSFTA UK health firms will now be able to set up facilities in Singapore that provide residential care for the elderly, as well as palliative and specialised care³¹.
- 7.27 **Education services** - The UK enjoys a natural advantage in Singapore's education sector as English is the primary language of instruction. Singapore has not committed to opening the market for pre-school education services, but under EUSFTA UK firms will be able to explore opportunities for commercial partnerships with Singaporean pre-school operators³². Additionally, Singapore has opened up its market for post-secondary vocational and technical education services³³. This means UK institutions specialising in technical and vocational education can offer skills upgrading programmes, as well as professional training and executive education services.

²⁵ As detailed in 'Section B – Banking and other financial services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

²⁶ As detailed in 'Section B – Banking and other financial services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

²⁷ As detailed in 'Section B – Banking and other financial services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

²⁸ As detailed in 'Section A – Insurance and insurance-related services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

²⁹ As detailed in 'Section A – Insurance and insurance-related services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

³⁰ As detailed in 'Section 1A – Sector specific commitments/limitations' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

³¹ As set out in 'Section 8 – Health related and social services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

³² As set out in 'Section 5 – Education services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

³³ As set out in 'Section 5 – Education services' of Appendix 8-B-1 Singapore Schedule of Specific Commitments of the EUSFTA

- 7.28 **Government procurement opportunities** - Prior to EUSFTA, UK business had access to 40% of Singapore's government procurement contracts worth around £10.3 billion per year. Under EUSFTA, UK firms can now bid on an additional 33 entities, including in certain utilities sectors, such as the National Environment Agency and the Public Utilities Board. In total, UK businesses will be able to bid for public contracts for 81 entities, nearly twice the regular WTO GPA coverage.
- 7.29 **Creation of a geographical indicator register** – At present, Singapore has no domestic geographical indicators (GIs) and does not protect them. The EUSFTA establishes a register for GIs as well as an administrative process to identify and verify GIs from the EU. GI products will be registered for a period of 10 years, renewable for further 10-year periods. This will give increased brand recognition for several the GIs which appear on the EU register, such as 'Scottish wild salmon', 'Newmarket sausage', 'Dorset blue cheese', and 'Gloucestershire cider'.
- 7.30 **Protection of intellectual property rights** – Singapore already affords a high degree of intellectual property (IP) protection. Under EUSFTA this protection will be increased further. Copyright protection has been increased to 70 years, and there will now be 5-year protection of test data to obtain marketing approval for pharmaceutical products; 10 years for agricultural chemicals. The agreement also lays out the creation of an exclusive right for sound recording producers to receive royalties when (a) there is a broadcast of the sound recording; or (b) a performance of the sound recording is made to the public. Additionally, there will be strengthened border enforcement against IP infringements, whereby IP holders can request Singapore customs to prohibit exports of goods that infringe IP rules.

(b) Indirect benefits to UK businesses from a reduction in trade barriers

(i) Monetised impacts

- 7.31 The European Commission's CGE model reflects a preferential agreement in which all tariffs in the UK and Singapore are removed and service regulations are reduced symmetrically by 3%. UK businesses would benefit from the reduction in tariffs and regulatory barriers making it cheaper to export to Singapore. Businesses would also benefit from cheaper imports from Singapore.

7.32 The removal of barriers would make UK businesses more competitive in the Singaporean market. The overall impact of EUSFTA is expected to be positive for UK businesses. However, the impact will differ by sector and between firms within each sector. Due to increased competition from Singaporean firms it is possible that some less efficient UK firms may have to exit the market.

7.33 Overall, bilateral exports to Singapore are estimated to increase by around £296 million in the long run. Table 5, below, presents more detailed information about the potential gains in bilateral exports to UK businesses. The top 5 sectors account for 98% of the gains, with by far the largest increase seen in commercial services (£244 million). Commercial services incorporate several service sectors which the UK is globally competitive in. This includes: finance, insurance, business, real estate, and construction. There is likely to be a large degree of variation between firms within each sector that benefit the most³⁴.

| Sector | Percentage increase in EU28 bilateral exports to Singapore | UK share of EU total trade with Singapore by sector* | Monetised increase in UK exports to Singapore (£, millions in 2017 prices) |
|--------------------------------|---|---|---|
| Commercial services | 7.72% | 27% | £244 |
| Middle high-tech manufacturing | 1.71% | 26% | £16 |
| Chemicals | 1.89% | 32% | £15 |
| Tobacco and beverages | 5.56% | 30% | £7 |
| Machinery | 1.05% | 15% | £7 |

* Trade shares have been derived from the GTAP database version 8 that contain 2007 data. This has been applied as the European Commission's analysis is based on GTAP database version 8. The UK's share of EU28 total trade with Singapore, by sector, has been applied to estimate the UK's pro rata share of net bilateral exports.

³⁴ It should be noted that the results here represent a high-level of sectoral aggregation. The GTAP database contains 57 sectors which have been aggregated to 14 sectors for the purposes of readability

7.34 EUSFTA is expected to increase bilateral imports from Singapore by £607 million in the long run. The European Commission do not, however, give a detailed breakdown of how this increase will occur on a sectoral basis (as they do for bilateral exports). To derive this result, the overall figure the European Commission report for the EU28 increase in bilateral imports (€3.5 billion in 2007 prices) is divided by the UK share of total EU trade with Singapore (21.3%) and inflated to 2017 prices. This method therefore assumes a uniform increase in imports across all sectors and does not reflect the UK's share in each sector as was the case in calculating bilateral exports. Even with this increase the UK would remain in a trade surplus with Singapore. See Annex C for further details on the factors affecting GDP.

(ii) Non-monetised impacts

7.35 Trade liberalisation will increase UK business productivity by increasing competition. UK businesses can specialise in the production of goods and services that they are relatively better at producing, allowing them to expand production, benefit from economies of scale and produce goods at a lower average cost. In addition, UK businesses will have the incentive to reduce costs and increase efficiency in the face of greater international competition.

7.36 There are several channels through which competition raises productivity, but most importantly competition forces firms to innovate, coming up with new products and processes which can lead to step-changes in efficiency.

c) Direct costs to UK businesses

(i) Monetised impacts

7.37 Trading under EUSFTA preferences is voluntary. UK business have the option to choose whether to trade with Singapore under EUSFTA trading preference (i.e. under lower tariffs) or the baseline MFN tariffs. Therefore, there is no net cost to businesses for those who do not wish to trade under EUSFTA preferences.

7.38 We attempt to monetise the direct cost to businesses where possible for both one-off and on-going costs. It is difficult to estimate business costs due to availability of data and there are considerable uncertainties around the cost estimates provided. For this reason, we provide ranges where possible and a description of the costs and activities involved to demonstrate the impact on businesses. Our best estimate of business impact costs has then been included in the Total NPV calculations. There are some limitations to the data used in this section, these include:

- Data on the preference utilisation of trade deals is not readily accessible. This means that existing evidence on preference utilisation is limited.

- HMRC empirical data on the administration costs incurred by businesses to trade are commercially sensitive and not available for this analysis.

7.39 There will be one-off costs to firms, enforcers, and customs and government officials from reading and understanding the text of this agreement. It is not possible to monetise the precise impact of this one-off cost however we provide an illustration of the potential impacts on UK businesses that trade with Singapore. In 2016, 10,120 VAT registered businesses exported to Singapore and 3,471 VAT registered businesses imported from Singapore. Based on this, the upper bound of businesses trading with Singapore is 13,591 in 2016. This figure could be an overestimate as it double counts firms who both export to Singapore as well as import from Singapore. However, it does not consider the number of new businesses that may trade with Singapore as a result of EUSFTA which may lead to an underestimate.

7.40 Based on this number of firms, the aggregate cost to businesses currently trading with Singapore could range from £2.7 to £2.8 million. The method for this estimate is shown in Annex D.

(ii) Non-monetised impacts

7.41 To trade under the EUSFTA preferences business are required to produce a certificate to confirm the origin of the export content meets the rules of origin requirements set out in the agreement. Businesses can submit rules of origin forms to HMRC to process free of charge however this could take several days to complete. 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 £46.80.³⁵

7.42 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.

7.43 Firms could face other one-off costs such as IT set-up costs and custom declarations.

³⁵ <https://www.londonchamber.co.uk/LCCI/media/media/Export%20Docs/Prices/Export-Document-Price-List.pdf>

d) Indirect Costs to UK businesses

(i) Monetised impacts

7.44 There are no monetised indirect impacts to UK businesses

(ii) Non-monetised impacts

7.45 UK business will be exposed to greater international competition with greater trade liberalisation. This may cause a decline in production for domestic businesses that are less competitive. However, due to data limitations it is not possible to indicate which sectors may incur a decline in activity.

Impact on Consumer welfare

7.46 The European Commission do not provide specific monetary values for the impact on consumption or consumer welfare, however the impact will be reflected in the overall GDP estimates and therefore within the Total Net Present Value calculation.

a) Direct benefits to UK consumers

7.47 UK consumers will be able to imports products at a lower cost due to the tariff reduction on final goods. This can be viewed as an increase in consumer purchasing power.

b) Indirect benefits to UK consumers

7.48 Consumption and consumer welfare will likely increase because of EUSFTA due to several reasons:

- As a result of the EUSFTA, UK consumers will have a wider variety of choice in the goods and services they can consume, as Singaporean goods will become less costly and easier to purchase. Prices may fall, and quality may increase.
- UK businesses will be able to import intermediate goods and services at a lower price due to EUSFTA preferences. This allows the income of consumers to go further if firms pass lower import prices on to consumers in the form of lower goods prices.

- As UK firms face greater competition from Singaporean firms' aggregate productivity may increase causing a subsequent increase in real wages.

b) Indirect benefits to UK consumers

7.49 Consumption and consumer welfare will likely increase because of EUSFTA due to several reasons:

- As a result of the EUSFTA, UK consumers will have a wider variety of choice in the goods and services they can consume, as Singaporean goods will become less costly and easier to purchase. Prices may fall, and quality may increase.
- UK businesses will be able to import intermediate goods and services at a lower price due to EUSFTA preferences. This allows the income of consumers to go further if firms pass lower import prices on to consumers in the form of lower goods prices.
- As UK firms face greater competition from Singaporean firms' aggregate productivity may increase causing a subsequent increase in real wages.

c) Direct cost to UK consumers

7.50 There are no direct costs on UK consumers.

d) Indirect costs to UK consumers

7.51 It is possible that in some sectors the exit of UK firms from domestic markets might reduce consumer choice. As the firms that are left expand they will be able to better exploit economies of scale which may ultimately increase consumer prices.

Impact of EUSFTA on the UK Exchequer

a) Direct benefits to the UK Exchequer

7.52 There are no direct benefits to the UK Exchequer.

b) Indirect benefits to the UK Exchequer

7.53 A loss in government revenue from reduced tariffs is in part a transfer to UK businesses who benefit from lower trade costs under the EUSFTA preferences, and to consumers who will benefit from lower prices on final goods. The EUSFTA is expected to increase domestic economic activity in specific sectors of the economy, which in turn will increase revenue for the UK Exchequer.

c) Direct costs to the UK Exchequer

7.54 The EUSFTA is expected to increase domestic economic activity which will in turn increase revenue. This will be offset to some extent by forgone revenue to the EU and the UK from lower or eliminated tariffs on imports from Singapore. To present the maximum loss of revenue of the EUSFTA we assume that all tariffs are removed on entry into force³⁶. As a result of the reduction in tariffs on imports of Singaporean goods the UK exchequer could lose around £34 million a year in revenue from Singaporean imports. Table 6 illustrates this in more detail below. It should be noted that that this is partly a transfer to UK consumers who may benefit from lower prices.

d) Indirect costs to the UK Exchequer

7.55 There are no indirect costs to the UK Exchequer.

³⁶In reality Singapore eliminates all tariffs at entry into force whilst the EU eliminates 75% of tariffs at entry into force, 85% after 3 years and 99.99% after 5 years.

| Table 6: Estimated foregone revenue in the UK from the reduction in tariffs | |
|--|--|
| Sector Name | Estimated annual revenue (£, thousands) |
| Chemicals | £7,400 |
| Minerals and metals | £6,000 |
| Transport equipment | £5,400 |
| Animal products | £3,800 |
| Non-electrical machinery | £2,700 |
| Leather, footwear, etc | £2,600 |
| Other agricultural products | £2,200 |
| Clothing | £1,200 |
| Beverages and tobacco | £600 |
| Fruits, vegetables, plants | £500 |
| Electrical machinery | £500 |
| Textiles | £400 |
| Fish and fish products | £300 |
| Sugars and confectionary | £200 |
| Manufactures, not elsewhere specified | £100 |
| Oilseeds, fats & oils | £70 |
| Wood, pulp, paper & furniture, raw materials | £40 |
| Coffee and tea | £10 |
| Cereals and preparations | £5 |
| Total of all sectors | £34,100 |
| Source: Agriculture AVEs are sourced from the MacMaps, non-Agri AVEs are sourced from WITs World Bank and trade flow data is sourced from HMRC trade database. | |
| Notes: AVEs do not include the various reductions that importers can get, e.g. inward processing exemption, outward processing exemption. | |

Impact of EUSFTA on Singapore's Economy

7.56 The Commission estimate the impacts of EUSFTA on Singapore's economy. The results suggest that Singapore's GDP will grow by £2.2 billion. The estimated GDP gain to Singapore's economy therefore far outweighs the corresponding gain to the EU economy. As a result, Singapore stands to gain far more from EUSFTA than the EU does. These estimations are, however, in line with expectations – Singapore gains significant preferential access to the entire EU market with a combined GDP of £13 trillion and population of 511 million, whilst the EU only gains access to the relatively small Singaporean economy in which tariffs on most goods are already fully liberalised.

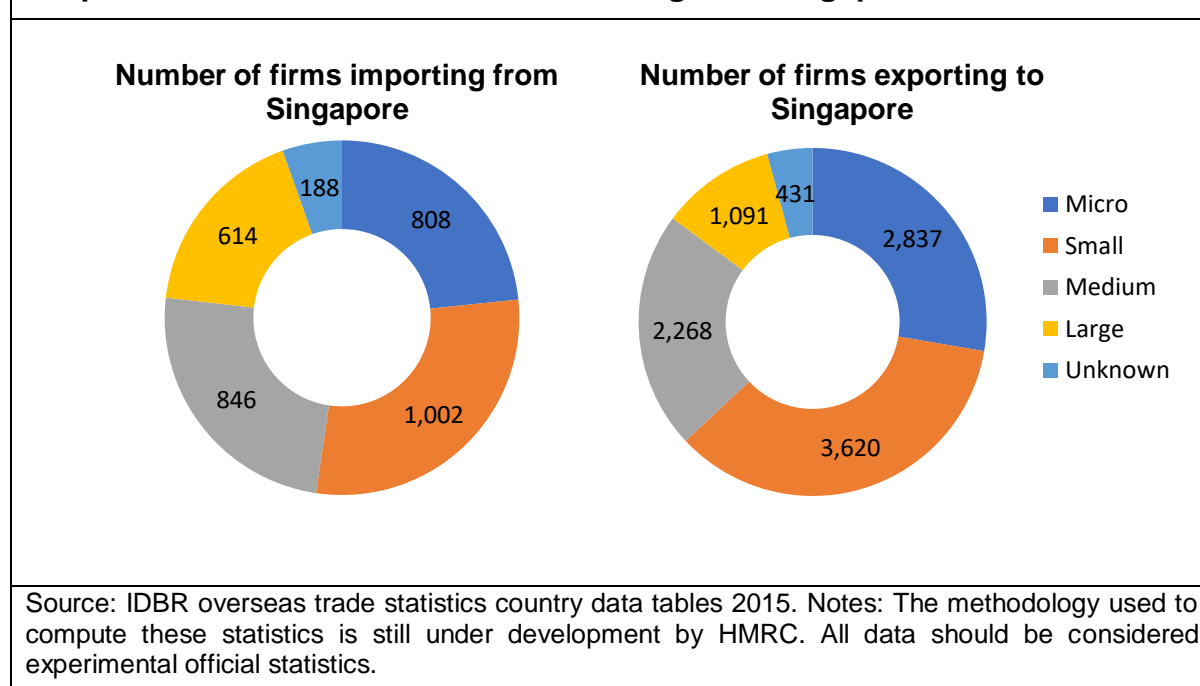
Assessment of policy option 2: UK does not support signature and conclusion of the EUSFTA

- 7.57 Under this option the Government opposes the Commission's proposed decisions on signature and conclusion of the EUSFTA. If the Council choose to use qualified majority voting and a qualified majority of Member States favoured proceeding to signature, the EUSFTA would still come to force, as in option 1. However, should the Council continue to seek consensus before proceeding, the agreement would not be implemented, and the EU and Singapore would continue to trade on WTO Most Favoured Nation (MFN) terms. Under this option, the UK would not accrue any additional costs and benefits and is therefore the same as under the baseline of this IA.
- 7.58 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 Singapore and with the EU, which could make negotiations over future trading arrangements more challenging.
- 7.59 If the UK does not support signature and conclusion of the EUSFTA then the benefits identified in Option 1 will be lost. This is assuming that the EU28 continues to trade with Singapore with the current applied MFN tariff schedule that is in place as of today. Without a trade agreement, though, it is possible that Singapore could raise its tariffs to their bound MFN levels. Annex E sets out the potential impacts if Singapore raised its tariffs to bound levels.

8 Small and micro business assessment

- 8.1 This section provides a qualitative assessment of the impacts of EUSFTA on Small and Micro Businesses. It is assessed whether the impact on the operations and performance of small businesses are likely to be disproportionate compared to larger businesses.
- 8.2 In 2015, there were 1,810 small and micro firms importing from Singapore, and 6,457 small and micro firms exporting to Singapore. This reflects 52% and 63% of the total number of firms importing/exporting to/from Singapore respectively. However, small and micro firms only represent 14% of both import and export value. Comparatively, while large firms make up 18% of importing and 11% of exporting firms, they account for 75% and 73% of import and export value respectively.

Graph 8: The size of UK businesses trading with Singapore in 2015



Rules of Origin

- 8.3 Small and micro firms in the UK will be able to choose to export goods and services under EUSFTA preferences. These firms will have the incentive to export to Singapore if the reduction in tariffs outweighs the cost of complying with rules of origin. If this cost is too high for small businesses, they can opt out and trade under the baseline MFN tariffs and as a result will not incur an additional cost above the baseline. However, because Singapore only imposes tariffs on six product lines we expect the number of firms this will affect to be negligible.

- 8.4 Small and micro firms in the UK will be able to choose to export goods and services under EUSFTA preferences. These firms, along with larger firms, will have the incentive to export to Singapore if the reduction in tariffs outweighs the cost of complying with rules of origin. If this cost is too high for small businesses, they can opt out and trade under the baseline MFN tariffs and as a result will not incur an additional cost above the baseline. However, because Singapore only imposes tariffs on six product lines we expect the number of firms this will affect to be negligible.
- 8.5 Cost will affect small business disproportionately to larger businesses as these firms will face relatively higher fixed costs compared to larger firms. Furthermore, small firms may not have the capacity and capabilities to deal with understanding the process and regulations around complying with Rules of Origin requirements compared to larger firms.

Tariff reductions

- 8.6 Small and micro firms in industries that are liberalised may expand production and experience an increase in revenue as their products become cheaper for Singaporean importers. These are likely to be firms in the beer brewing industry where tariffs on exports have been reduced or in industries where NTMs have been reduced such as pharmaceuticals and electronics. Similarly, small UK firms will be able to import products from Singapore at a lower cost. This could lead to small businesses becoming more productive and competitive in the UK.
- 8.7 Some less competitive small businesses in the UK may be adversely affected by greater competition from Singapore. However, the net impact on small businesses is expected to be positive.

Mutual recognition agreements

- 8.8 The burdens of understanding and addressing technical barriers to trade such as different conformity standards and regulatory requirements in Singapore can be disproportionately large for small businesses. EUSFTA provides a basis for the mutual recognition of certain standards, which could reduce the costs to business of conformity assessments such as product testing. This may be of particular benefit to small business exporters. In addition, small businesses in the UK might benefit if they can import products at a lower cost as a result of reduced product assessment costs in Singapore.

9 Total Net Present Value impacts on the UK population under Option 1

- 9.1 Our estimate of EUSFTA's net impact on UK GDP is £95 million relative to a baseline where the agreement is not implemented. Not all these gains are expected to accrue in the first year that EUSFTA is implemented. The European Commission (2013) expects around 68% of the net impact on UK GDP to be achieved in the first year of the implementation, followed by 87% after 5 years and the full gains after 8 years. Furthermore, we do not expect all firms to incur the one-off familiarisation costs in the first year of EUSFTA's implementation. We assume that 60% of the total one-off familiarisation cost to businesses (£2.70 million) occurs in the first year that EUSFTA is implemented, followed by 25% in year two and 15% in year three.
- 9.2 As shown in Table 7, below, in total the benefits to the UK are estimated to equal £1,026 million over a 15-year period. Costs are estimated at around £2.70 million over the same period. Subsequently, it is estimated that the net impact, in present value terms of option 1 is around £1,024 million over 15 years.

Table 7: The estimated total Net Present Value (NPV) of EUSFTA across 15 years

| Total Impacts on the UK (£m) | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | Y11 | Y12 | Y13 | Y14 | Y15 | Total |
|---|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Costs (2017 Real Prices) | | | | | | | | | | | | | | | | |
| Time path | 60% | 25% | 15% | | | | | | | | | | | | | |
| One-off familiarisation costs | 1.65 | 0.69 | 0.41 | | | | | | | | | | | | | 2.75 |
| Benefits (2017 Real Prices) | | | | | | | | | | | | | | | | |
| Time path | 68% | 73% | 78% | 82% | 87% | 92% | 97% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | |
| Increase in UK GDP | 65 | 69 | 74 | 78 | 83 | 88 | 92 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 1,313 |
| Total NPV Costs | 1.65 | 0.66 | 0.38 | | | | | | | | | | | | | 2.69 |
| Total NPV Benefits | 65 | 67 | 69 | 71 | 72 | 74 | 75 | 75 | 72 | 70 | 68 | 65 | 63 | 61 | 59 | 1,026 |
| Total Business NPV | 63 | 66 | 69 | 71 | 72 | 74 | 75 | 75 | 72 | 70 | 68 | 65 | 63 | 61 | 59 | 1,024 |
| <p>Note: The time path set out for the benefits aligns with the expected GDP gains as estimated by the European Commission (2013). The benefits are estimated to be £95 million in 2017 prices in the long run. This is discounted to calculate present value gains which is estimated at £59 million in appraisal year 15.</p> | | | | | | | | | | | | | | | | |

10 Sensitivities

10.1 This section explores the degree to which our understanding of the net benefits can change when considering the construction of a CGE model.

CGE modelling

10.2 CGE models are used widely to estimate the impact of trade policy changes. However, there are several limitations of these models. The results depend on the underlying assumptions and parameters that are used in the model, which to some extent are subjective and difficult to estimate – for example estimating elasticities in certain markets and regions. The results will also depend on the data used in the model and the assumption that future outcomes depend on past behaviour, which is not always the case. For example, if bilateral trade flows between two countries are non-existent or negligible, trade cost reductions facilitated by a trade agreement will not stimulate much impact in a CGE model.

10.3 However, CGE models can sometimes underestimate the full benefits of policy changes, as it is difficult and often requires further assumptions to model a comprehensive set of dynamic changes. For instance, this trade agreement is likely to result in increased competition between firms, which could result in higher levels of innovation. However, the positive impact of increasing innovation is not included explicitly within the model.

10.4 With regards to a change in trade policy there are two specific parameters built into CGE models that when altered have a substantial effect on the results: Firstly, the elasticity that describes how tariff changes impact trade flows. Secondly, the degree to which non-tariff measures (NTMs) are reduced.

10.5 Due to data limitations, the European Commission were unable to model what impact a reduction in NTMs would have. Instead, they assume a symmetric 3% reduction in service regulatory barriers. This only reflects a cost-saving from the reduced uncertainty for businesses achieved by binding applied levels of services sector protection. For this reason, the results presented in this impact assessment are an underestimate of the real economic gains EUSFTA will bring.

11 Risks and assumptions

- 11.1 The section below sets out the key modelling assumptions regarding the baseline, employment, model calibration, and sector aggregation.
- 11.2 **Baseline assumptions:** The baseline scenario in the European Commission study assumes no changes in trade policy - tariffs and NTMs remain as they are at present. The baseline contains projections of different macroeconomic variables such as GDP, population, skilled and unskilled labour. The baseline year for the study is 2007 which is the default year of the GTAP 8.1 database. This is a commonly used database and was seen at the time to have the most update internally consistent data on production, consumption and international trade by country and sector.
- 11.3 **Full employment:** The Commission's study assumes that all workers in the economy will still be employed after the EUSFTA comes into force. A policy change in the model causes a reallocation of workers across the different sectors of the economy with the most productive sectors gaining workers from the least productive sectors. This assumption is widely adopted in studies which use a CGE model. In practice, the EUSFTA, along with any new FTA, may cause an expansion or contraction of total employment across the economy's at least in the short term.
- 11.4 **Model calibration:** The model simulations are based on a multi-sector, multi-region dynamic model. This includes: international capital mobility, endogenous capital accumulation, and adaptive expectations theory of investment. Capital is assumed to be perfectly mobile across all sectors, whilst investors are assumed to respond to expected rates of return as opposed to actual rates of return when making investment decisions.
- 11.5 **Sector aggregation:** CGE models require an aggregation of sub sectors into larger groupings. This can obscure specific sector impacts as tariff changes for sub sectors will be aggregated to a higher level. The GTAP database contains 57 sectors which were aggregated into 14 main sectors for the purposes of the European Commission's study. The database also contains 134 different countries/regions. For the purposes of modelling, the European Commission bundle these into: EU27, Singapore, USA, Australia, New Zealand, Japan, Korea, rest of ASEAN, and the rest of the world.

Annex A: Explanation of CGE modelling

There are various well established robust methods to estimate the impact of trade agreements namely:

- Econometric gravity modelling – This type of modelling predicts bilateral trade flows based on 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 much more granular sectoral aggregation than 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.

Annex B: The impact of future free trade agreements on the baseline

The European Commission’s study was concluded in 2013. As a result, The Comprehensive and Progressive Trans Pacific Partnership (CPTPP) is not included in the baseline.

CPTPP is a free trade agreement involving 11 countries, including Japan, Canada, Australia, New Zealand, Singapore, Brunei, Malaysia, Vietnam, Chile, Mexico and Peru. It was signed in March 2018 but has not yet entered into force. The US was a prospective member of the TPP, the precursor to CPTPP, but withdrew from the agreement in January 2017. CPTPP will provide Singapore access to countries with an estimated combined economic worth of \$11.7 trillion in 2020³⁷.

Modelling that captures the impact of the EU-Singapore free trade agreement on the UK specifically, taking into account the final CPTPP, is not available. CPTPP will bring the harmonisation of certain standards and reductions in NTMs that will affect the flow of both goods and services between CPTPP members and could lead to diversionary effects. We do, however, expect the negative impact of CPTPP to be small in the short term, for the following reasons:

³⁷ IMF World Economic Outlook 2017, nominal GDP <https://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017>

The Most Favoured Nation (MFN) tariffs that Singapore imposes are already zero in all but 6 cases. Out of the Harmonised Standards 9,558 different product categories Singapore only imposes tariffs on 6 of them, with all 6 levied on alcoholic beverages. These 6 lines will be eliminated when the EU-Singapore FTA comes into force. Given this, CPTPP will only marginally erode the relative degree of tariff preference accorded to the UK.

Goods: Singapore has a mixture of bilateral and regional FTAs with seven of the ten other CPTPP members. As a result, 96% of Singapore’s total goods trade with other CPTPP members already takes place under the coverage of an FTA even before CPTPP enters into force. The scope for goods trade diversion away from the UK due to CPTPP is thus limited. With that said, the three countries which Singapore does not currently hold an FTA with are: Mexico, Canada, and Chile. Table 8 shows that the UK does not compete with Chile in the types of goods Singapore imports. There is some competition with Mexico and Canada. However, for the four goods where Singapore’s imports from Canada and Mexico compete the most with the UK, they account for only 1.2% of Singapore’s total imports from the world.

Table 8: Singapore’s top 5 goods imports from UK, Canada, Mexico, and Chile on average 2014-2016 (\$)

| UK | | Canada | | Mexico | | Chile | |
|-------------------------------------|---------------|-------------------------------------|-------------|-------------------------------------|-------------|----------------------------|------------|
| Machinery and mechanical appliances | 1,899,100,183 | Machinery and mechanical appliances | 417,640,861 | Mineral fuels | 964,251,340 | Copper | 21,476,322 |
| Beverages and spirits | 538,920,269 | Electrical machinery | 147,783,881 | Electrical machinery | 454,525,138 | Fish and crustaceans | 18,997,375 |
| Electrical machinery | 492,120,241 | Aircrafts and spacecrafts | 93,072,061 | Precision instruments | 410,610,102 | Meat and fish preparations | 13,902,393 |
| Precision instruments | 373,987,061 | Precision instruments | 82,071,927 | Machinery and mechanical appliances | 203,259,132 | Pulp of wood | 12,432,381 |
| Organic chemicals | 288,881,980 | Organic chemicals | 64,148,679 | Pharmaceutical products | 35,767,772 | Inorganic chemicals | 9,902,494 |

Source: UN Comtrade <https://comtrade.un.org/data/>
Note: ■ = overlap in sectors

Services: CPTPP takes a broad approach to cross-border trade and investment in services, with services covered unless specifically excluded or listed in a country’s schedule of non-conforming measures (i.e. a negative list approach). Measures include enhanced obligations to secure current and future levels of liberalisation in the services sector³⁸. However, Canada is the only high-income country in CPTPP that Singapore does not currently have an FTA with. The UK’s position as a service

³⁸ Economic impact of Canada’s participation in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. <http://international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/cptpp-ptpgp/impact-repercussions.aspx?lang=eng>

provider to Singapore is unlikely to be weakened because of the increased liberalisation between Singapore and Canada. On average, between 2013-2015³⁹, Canada accounted for only 0.4% of Singapore's total service imports, whereas the UK accounted for 2.8%. Additionally, as Table 9 shows, the UK has a very strong competitive advantage in insurance and financial services (0.52 and 0.45 respectively) which suggests even with greater liberalisation Singapore would be unlikely to substitute UK providers for Canadian providers of these services.

| Table 9: UK and Canada services Revealed Comparative Advantage | | | |
|--|---|---------------|-------------------|
| Service sector | Singapore imports from world* (billions, \$) | UK RCA | Canada RCA |
| Other business services | 45.9 | 0.14 | 0.22 |
| Transport | 44.5 | -0.24 | -0.09 |
| Travel | 23.6 | -0.31 | -0.09 |
| Intellectual property | 20.6 | -0.09 | -0.08 |
| Telecommunications and information services | 8.0 | -0.12 | -0.01 |
| Insurance and pension services | 4.8 | 0.52 | -0.15 |
| Financial services | 4.2 | 0.45 | 0.03 |
| Maintenance and repair services | 0.7 | -0.32 | 0.12 |
| Construction | 0.6 | -0.39 | -0.51 |
| Personal, cultural, and recreational services | 0.5 | 0.15 | 0.45 |
| Government goods and services | 0.2 | -0.11 | 0.03 |
| Source: ITC Trade Map. https://www.trademap.org/Index.aspx | | | |
| *Notes: Imports are on average from 2013-2015 | | | |

³⁹ This is the most recent available data.

Annex C: Factors affecting GDP

GDP is the summation of aggregate consumption, investment, government expenditure, and net trade (exports – imports). As presented in the main body of the impact assessment, we estimate the EUSFTA could result in a £296 million increase in UK exports to Singapore, a £607 million increase in UK imports from Singapore, and a £95 million increase in UK net GDP. The European Commission's analysis similarly finds the EUSFTA will increase EU GDP by €550 million driven in part by a 3.6% (€1.4 billion) increase in exports to Singapore and a 10.4% (€3.5 billion) increase in imports from Singapore.

Although not explicitly stated in the Commission's results, the impact of a trade agreement also affects other components of GDP. One of the advantages of the CGE model used is that it captures links between markets throughout the economy so that the wider effects can be captured, rather than a narrow focus on imports and exports. This is why the impact to GDP is positive even though the trade balance has declined.

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.

Other examples include Copenhagen Economics assessment of EU-Japan Economic Partnership Agreement (2009). Gains in EU imports are estimated at €35.3 to €53.8 billion, whereas export gains are only €27.8 to €43.3 billion. However, the overall impact on EU GDP is positive equal to increase of between 0.10% to 0.14%.

Annex D: Method description: estimated one-off costs associated with EUSFTA text familiarisation costs

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

| | |
|---|---|
| 1 | <p>We assume that 40% of UK businesses that trade with Singapore will read the full agreement, this includes:</p> <ul style="list-style-type: none"> 16 chapters, 22 annexes, and 9 appendixes of the EU-Singapore Free Trade Agreement text¹, authentic as of April 2018. <p>We assume a business will read the document stated above which collectively total 94,134 words.</p> |
| 2 | Evidence shows the average reading time is 228 words per minute with a range of 30 words either side. ² |
| 3 | <p>Based on the information above, we estimate the following ranges of time it may take a firm to become familiar with the EUSFTA text:</p> <ol style="list-style-type: none"> High scenario: assuming an employee reads 198 words per minute, it will take 7.9 hours to read the document above. Central scenario: assuming an employee reads 228 words per minute, it will take 6.9 hours read the collective documents above. Low scenario: assuming an employee reads 258 words per minute, it will take 6.0 hours to read the collective documents. |
| 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. ³ |
| 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 £15.63 (£13 + £2.62). ⁴ |
| 6 | <p>The cost for one business to read the EUSFTA text and guidance is estimated at:</p> <ol style="list-style-type: none"> High scenario: £103.01 (£15.63 x 7.9 reading hours) Central scenario: £89.45 (£15.63 x 6.9 reading hours) Low scenario: £79.05 (£15.63 x 6.0 reading hours) |
| 7 | <p>Published data shows 10,120 UK businesses exporting to Singapore and 3,471 importing from Singapore in 2016.⁶ The total number of firms trading with Singapore is therefore 13,591.</p> <p>The 40% of firms (5,436) which choose to read the full agreement incur some familiarisation costs:</p> <ol style="list-style-type: none"> High scenario: £673,115 [(5,436 x £103.01 cost per firm) Central scenario: £584,547 [(5,436 x £89.45 cost per firm) Low scenario: £516,577 [(5,436 x £479.05 cost per firm) |
| 8 | <p>Alternatively, businesses may seek advice from a specialist agent on interpreting the text and implications for their trade.</p> <p>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 EUSFTA. The same survey provides an average cost of using an agent of £265.⁵</p> |

| | |
|---|---|
| 9 | <p>Published data shows 10,120 UK businesses exporting to Singapore and 3,471 importing from Singapore in 2016.⁶ The total number of firms trading with Singapore is therefore 13,591.</p> <p>The 60% of firms (8,155) that choose to seek advice from an agent will incur the following costs:</p> <ul style="list-style-type: none"> • £2,160,969 (8155 firms x £265 cost per firm) |
| 10 | <p>We assume that 100% of firms use the EUSFTA preferences and therefore incur some familiarisation costs:</p> <p>d) High scenario: £2.83 million (£673,116 + £2,160,969)</p> <p>e) Central scenario: £2.75 million (£584,547+ £2,160,969)</p> <p>f) Low scenario: £2.68 million (£516,577 + £2,160,969)</p> |
| <p>Sources :</p> <p>¹ http://trade.ec.europa.eu/doclib/press/index.cfm?id=961</p> <p>² http://iovs.arvojournals.org/article.aspx?articleid=2166061#90715174</p> <p>³ Labour market statistics summary data tables (ONS) 2017. Table 15. Average Weekly Earnings (nominal) – Regular Pay (Great Britain, seasonally adjusted).</p> <p>⁴ 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/HMR_C_Report_375_Tax_Administration.pdf https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/october2017/relateddata</p> <p>⁵ As cited in the Green Book, HSE uses 30% as an adjustment for non-wage labour cost. This is based on the labour force survey 1992. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf</p> <p>⁶ IDBR overseas trade statistics country data tables 2016. https://www.gov.uk/government/statistics/uk-trade-in-goods-by-business-characteristics-2016.</p> | |

Annex E: Potential impacts on the UK if Singapore raised its tariffs to bound levels

11.6 When WTO members negotiate tariff levels with each other during trade rounds they make agreements about bound tariff rates rather than actually applied rates. The bound tariff is the maximum MFN tariff level for a given commodity line. Bound tariffs are usually not the rate that a WTO member applies in practice, but members do have the flexibility to increase their tariffs so long as they don't raise them above their bound levels. Table 10 highlights that in nearly all sectors the bound tariffs Singapore could theoretically impose are higher than the current applied levels⁴⁰.

⁴⁰ For tariffs lines that are unbound i.e. which are not included in the WTO concession data, it is assumed that the bound rate is equal to the trade weighted average of the bound rate of the HS2 chapter the considered product belongs to. For tariff lines that are bound at very high rates (such as beer and tobacco products) the bound rate is assumed to be twice as high as the currently applied MFN tariff rate.

| Table 10: Difference between applied and bound MFN tariffs in Singapore | | |
|---|-------------------------------------|-----------------------------------|
| Sector | Applied tariffs in Singapore | Bound tariffs in Singapore |
| Agriculture and minerals | 0.0% | 10.00% |
| Tobacco and beverages | 2.02% | 3.46% |
| Primary energy products | 0.0% | 10.00% |
| Low-tech manufacturing | 0.0% | 7.34% |
| Textiles | 0.0% | 10.00% |
| Energy | 0.0% | 0.00% |
| Chemicals | 0.0% | 4.45% |
| Middle low-tech manufacturing | 0.0% | 6.35% |
| Middle high-tech manufacturing | 0.0% | 9.11% |
| Electronics | 0.0% | 1.10% |
| Machinery | 0.0% | 5.40% |
| Source: http://trade.ec.europa.eu/doclib/docs/2012/july/tradoc_149809.pdf | | |

- 11.7 The European Commission model what the impact would be of Singapore raising their tariffs from the applied levels to the bound levels seen in Table 7. This can be considered an ‘insurance scenario’ - creating an FTA between the EU and Singapore will protect EU economies from a potential increase in protectionism in the future.
- 11.8 By comparing the results of this scenario to the results of a full-fledged FTA scenario outlined in Option 1 it is possible to reveal the potential cost to the UK economy of not voting in favour of signature.
- 11.9 Compared to a baseline in which the EUSFTA is not in force, should Singapore raise their tariff levels to those bound at the WTO we estimate the negative impact on UK GDP to be around -£61 million. The negative impact on UK bilateral exports is estimated to be -£627 million.
- 11.10 Table 11 below presents more detailed information about the potential losses in bilateral exports to UK businesses. The top 5 sectors account for 92% of the losses, with the largest loss seem in ‘middle high-tech manufacturing (-£222 million).

| Sector | Percentage decrease in EU28 bilateral exports to Singapore | UK share of EU total trade with Singapore by sector* | Monetised decrease in UK exports to Singapore (£, millions in 2017 prices) |
|--------------------------------|---|---|---|
| Middle high-tech manufacturing | -37.8% | 26% | -£222 |
| Machinery | -32.6% | 15% | -£140 |
| Chemicals | -22.9% | 32% | -£133 |
| Low-tech manufacturing | -34.5% | 17% | -£59 |
| Middle low-tech manufacturing | -34.0% | 13% | -£25 |

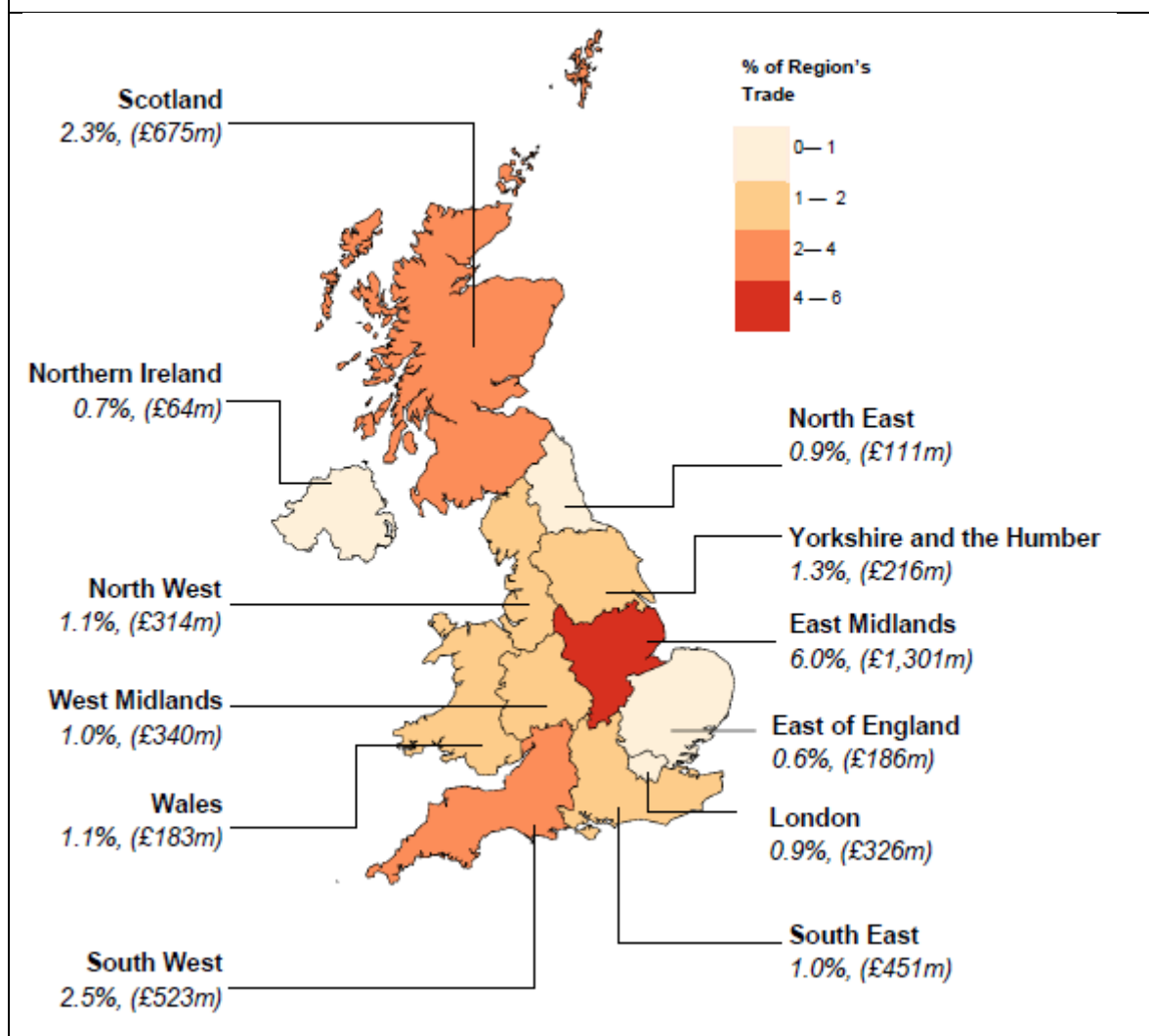
* Trade shares have been derived from the GTAP database version 8 that contain 2007 data. This has been applied as the European Commission’s analysis is based on GTAP database version 8. The UK’s share of EU28 total trade with Singapore, by sector, has been applied to estimate the UK’s pro rata share of net bilateral exports.

Annex F: Distribution impacts

Section 7 set out an assessment of how EUSFTA could increase UK exports to Singapore by around £296 million in the long run and increase UK imports from Singapore by around £690 million in the long run. Whilst the distribution of these impacts will depend on business responses to EUSFTA opportunities, these might be expected to reflect, at least initially the regional variation of UK exports to, and imports from, Singapore.

Graph 9 shows that the highest values of exports to Singapore in 2017 were from the East Midlands (£1,301 million) and Scotland (£675 million). However, the part of the UK with the highest concentration of goods exported to Singapore relative to its exports to the rest of the world was the South West (2.5%) in 2017. In comparison, Graph 10 shows that the part of the UK that imported the most from Singapore was Scotland (£1,119 million). Imports from Singapore were also the most concentrated in Scotland accounting for 4.6% of all its imports.

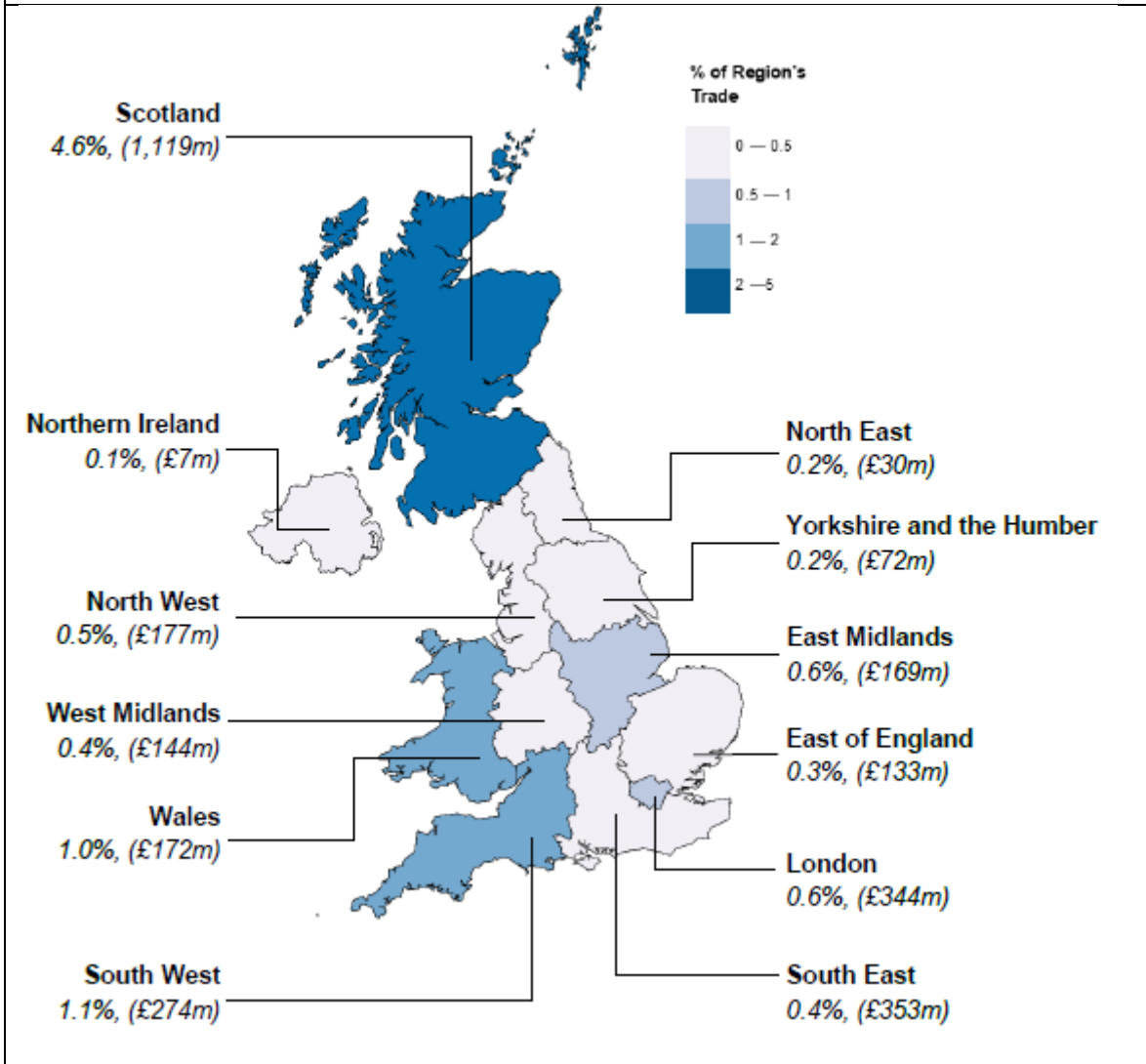
Graph 9: UK exports of goods to Singapore by area in 2017



Source: [HMRC, Regional Trade Statistics](#)

Note: The percentage shares represent the value of trade each area exports in goods to Singapore compared to the value of trade each area exports to the world.

Graph 10: UK imports of goods from Singapore by area in 2017



Source: [HMRC, Regional Trade Statistics](#)

Note: The percentage shares represent the value of trade each area imported in goods from Singapore compared to the value of trade each area imported from the world.

