Department for
International Trade

Analysis

Analytical working paper – Aggregate valuation estimates for market access barriers

1. Purpose

This report contains analysis illustrating the potential value of export opportunities associated with the removal of a selection of market access barriers. Barriers refer to any legal, regulatory, or administrative restriction imposed by another government or regulator that can impede a business exporting or investing overseas. This analysis draws upon the methodological approaches developed in DIT to produce indicative estimates of the value associated with a barrier to inform decision making such as which barriers should be prioritised for government action. These methodological approaches were set out in more detail in the publication: Market Access barrier statistics: Financial year 2020 to 2021.

This analytical working paper sets out:

- An aggregate valuation estimate for a selection of unresolved market access barriers
- Aggregate valuation estimate for a selection of market access barriers resolved in the latest financial year 2021/2022.
- Individual valuation summary for a selection of resolved and unresolved barriers

1.2 Context

DIT is alerted to the presence of potential market access barriers in a number of ways, including through Other Government Departments, by UK officials working in our overseas network and directly by UK businesses using the 'report a trade barrier' service.

DIT records these barriers on a system internal to government called Digital Market Access Service (DMAS). DMAS is an operational system used to ensure all relevant details relating to an identified barrier are recorded consistently and accessible to those involved in addressing them across government[1].

DIT has released information on trade barriers through the Check International Trade Barriers service. This provides more details to raise awareness for UK businesses on a selection of the barriers DIT has worked to resolve or is working to resolve.

Published statistics on the number of barriers reported and resolved only provide some of the picture of market access issues and activity. This analytical working paper sets out additional analysis developed by DIT to build understanding of the potential impact market access activity could have, and to inform decision making.

[1] DMAS is also accessible by officials in the Devolved Administration to report, update, and track market access barriers.

2. Potential economic value

2.1 Context

DIT analysts produce indicative valuation estimates for a range of barriers. This is an important consideration in determining whether government should take action, alongside other factors such as the viability of reducing or removing the barrier, and alignment with wider government objectives.

Valuation estimates presented are not intended as definitive predictions of the expected benefits to UK exports, nor an analysis of the wider impacts on the UK economy. Rather they provide an indication of the potential size of the opportunity associated with addressing a specific market access barrier. They are expressed as the potential export benefit over a five year period following resolution of the barrier.

Given the inherent uncertainty involved in these analyses, the estimates can reflect wide ranges, typically these have been expressed as broad orders of magnitude. For each barrier an order of magnitude estimate, a low, mid and high point covering the full range is calculated. To produce a total figure for the value associated with a selection of barriers, the low, mid and high points for each barrier are summed to produce aggregate estimates presented as a range.

The actual economic impact from addressing specific barriers will be affected by factors such as:

- the precise characteristics of the barrier
- the nature and extent of resolution
- the dynamics of the import market
- the behaviour of UK exporters and producers, as well as those from other countries
- the timescale under consideration

There are two broad approaches DIT uses to understand the economic importance of specific market access barriers. These complementary approaches are:

- using publicly available economic metrics and statistics to contextualise the affected market and existing scale of UK exports
- developing bespoke indicative valuation estimates using a variety of data, evidence and analytical tools to provide an indication of the order of magnitude of potential opportunity in terms of value of additional UK exports or return on investment

Alternative approaches such as macro-economic modelling or estimates provided by businesses provide important evidence, but do not provide sufficiently comprehensive, granular nor timely analysis to be used exclusively. Where possible these are used to corroborate DIT analysis.

The key methodological approaches used to produce indicative valuation estimates were set out previously in November 2021. The varied nature of market access barriers means there is not one straightforward way to try and estimate their value. This is compounded by data and evidence limitations at such a granular level of detail (which in many cases would need to be at product/service-line level for example).

The evidence base on the measurement of non-tariff measures and market access barriers, how they arise, and their impacts are important areas for further evidence development. Key questions of interest are set out in the DIT areas of research interest. In addition, DIT is undertaking a review of the methodological approaches used to produce indicative valuation estimates presented in this working paper. Methodological developments, as well as any revisions necessary will be set out in future analytical publications on market access barriers. DIT would welcome further engagement and views from those with expertise and interests in this area.

3 – Aggregate valuation estimates.

A selection of unresolved barriers where government action is being taken is included in the subsequent analysis (3.1 and 3.2). A full breakdown of the selected sample of barriers is not possible due to commercial sensitivities, and the likelihood that publicising specific UK asks will impede our negotiations with host Governments.

3.1 Aggregate value of opportunity for selection of unresolved barriers.

An aggregation of the indicative valuation estimates for a selection of 123 unresolved barriers where government action is being taken indicate the potential value of opportunity for UK exports associated with these could be between £9.7 billion to £33.5 billion, with a midpoint estimate of £21.6 billion.

3.2 Aggregate value of opportunity for selection of unresolved barriers expected for resolution in FY 2022/23.

An aggregation of the indicative valuation estimates for a selection of 36 unresolved barriers where government action is being taken, and where it is anticipated that they may be resolved in the FY 2022/2023, indicates the potential value of opportunity for UK exports associated with these could be between £1.5 billion to £5.9 billion, with a midpoint estimate of £3.7 billion.

3.3 Aggregate value for a selection of barriers resolved in FY 2021/2022

An aggregation of the indicative valuation estimates for a selection of 45 resolved barriers, indicates the potential value of opportunity for UK exports associated with these could be between £1.6 billion to £8.2 billion, with a midpoint estimate of £4.9 billion.

4. Valuation case studies

A summary of the barrier and valuation approach has been included for a selection of cases included in the calculation of aggregate valuation estimates presented in section 3. Further methodological details for the main valuation approaches used can be found in the [Market Access barrier statistics: Financial year 2021/2022] release.

Table 1: Summary of the key methodological approaches

Methodology	Overview	Suitability
Ad-Valorem Equivalents non-tariff measures (NTMs)	Tariff equivalents of non-tariff measures and elasticities are identified and applied to observed trade flows to determine the change in exports after barrier removal.	This methodology is most suited to barriers where non-tariff measures are imposing additional costs that affect the export of goods. For example, the impact of labelling requirements on food exports.
OECD Services in Trade Restrictiveness Index	The use of online tools produced by the OECD to simulate changes in policy measures that typically impose restrictions on trade in services. Changes in the restrictiveness index are used to estimate a consequential change in trade flows. Additionally, the heterogeneity index method is used as a basis to estimate the change in trade flows from converging regulatory environments between the UK and a partner country.	This methodology can be used to estimate the effect of either removing barriers relating to the export of services or making two service-related regulatory environments more complementary. For example, allowing UK lawyers to practice in a partner country
International Trade Centre (ITC) Export Potential Tool	The use of an online tool utilising gravity modelling to estimate the potential trade of a specific good between two countries. Unrealised trade is given by the potential trade suggested by the model less any existing trade.	This methodology is particularly useful when estimating the effect of removing export bans on goods.
OECD Foreign Direct Investment: Regulatory Restrictiveness Index (FDI RRI)	Using the OECD FDI RRI in combination with coefficients sourced from academic literature estimates how the removal of regulatory restrictiveness can affect UK investment positions and therefore earnings.	Barriers relating to the export of foreign direct investment related services specifically. For example, allowing UK investors to invest without minimum capital requirements

Methodology	Overview	Suitability
Trade Facilitation Index (TFI)	The OECD TFI scores the restrictiveness of customs and border procedures affecting the movement of goods. Changes to these procedures are simulated to identify effects on the index score. The change in TFI score is then applied to trade flows in combination with coefficients to estimate the resulting changes in trade.	Barrier related to restrictive trade facilitation measures. For example, improvements to the efficiency and simplicity of customs procedures

4.1 Tax on alcoholic spirits drinks in Peru affecting UK exporters/investors.

Barrier Summary

The Peruvian Government has implemented an exemption mechanism for excise tax on pisco - a domestically produced alcoholic spirits drink in Peru. This has a detrimental impact on other alcoholic spirits drinks, including Scotch Whisky.

Method

The AVE methodology has been used to estimate the impact of removing this barrier as it effects the export of UK goods, through an assumed increase in price due to the imposed tax burden.

Trade flow data relating to the following product codes (HS6) 220890, 220870, 220820, 220300, 220840, 220860, 220850, 220830 were obtained from ITC Trademap.

The AVE methodology is based on estimates of elasticities[2] for the affected products and the ad-valorem cost[3] of discriminatory taxation on UK exports to Peru. When applied to existing UK exports of the affected products, it estimates the increase in export value (over a 5-year period), that could result from resolution of this barrier. The analytical outputs have been compared with an industry body valuation, which estimates a value of a similar magnitude.

Valuation assessment and summary

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the tens of millions (£10m - £99m) category over a 5-year period.

Key assumptions, uncertainties, and mitigation

This methodology is considered appropriate for estimating the value of resolving discriminatory taxation barriers. Comparisons with the current value of exports and import market size, however, suggest that

[2] Ghodsi, M., J. Grübler and R. Stehrer (2016), 'Import Demand Elasticities Revisited', wiiw Working Paper, No. 132, November.
[3] The ad valorem equivalent (AVE) of non-tariff measures (NTMs) is the uniform tariff that will result in the same trade impacts on the import of a product due to the presence of the NTMs. In other words, the AVEs represent the additional costs that the presence of NTMs has on imports.' 'NTM AVEs', World Bank

factors such as consumer preferences and demand may restrict an increase in trade flows of this scale. Precise elasticity estimates are not available for the specific commodities considered in this analysis; therefore it is not possible to account for the exact relationship between the price of the good and demand.

4.2 UK not permitted to export lamb meat to China.

Barrier summary

There is currently no market access permitted for UK lamb to be exported to China. In July 2019, the UK Government applied to the General Administration of Customs China for lamb market access, and this application is currently being reviewed.

Method

The ITC Export Potential Tool (EPI) was used to produce this valuation, since this is akin to an effective ban on UK exports of affected products.

This barrier identifies lamb as an affected product. This product code (0204) was therefore selected on the ITC export potential tool where the value of untapped export potential was observed. The value was multiplied by 5 to get a 5-year figure before being converted to Pound Sterling using Bank of England spot rates.

Additionally, an estimate from an industry body was considered along with the valuation analysis estimate.

Valuation assessment and summary

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the £tens of millions (£10m-£99m) category over a 5-year period.

Key assumptions, uncertainties and mitigation

There is some difference between the industry estimate and the EPI estimate; however broadly they fall into the same range. The primary assumption using the EPI is that if all barriers were to be removed, actual trade would increase to the expected potential trade figure.

The average import price is assumed to change across markets by the same proportion for all products.

A significant limitation of this approach is that it is unlikely that the unrealised trade is entirely due to the presence of barrier. The export potential figure reflects a frictionless scenario, whereas removing a barrier may leave residual frictions. It is therefore important to note that estimates produced using this approach are upper bound estimates.

4.3 Ban on UK beef exports in South Korea.

Barrier summary

Since 2001, South Korea has banned imports of beef and beef products from the UK and certain EU members due to Bovine Spongiform Encephalopathy (BSE). The UK is undertaking an 8-step 'import risk analysis procedure' to request approval to export.

Method

The ITC Export Potential Tool is a publicly available tool that, for a given good, compares actual exports to an expected potential level of exports to give an unrealised level of exports.

The level of potential exports is calculated using a gravity-type calculation which considers supply, demand, and an easiness to trade index.

The underlying data used in the ITC Export Potential Tool is drawn from International Trade Centre (ITC) data and consists of direct and mirror reports of weighted average exports.

The barrier identifies beef and beef products as the affected exports. Relevant product codes were therefore selected on the ITC Export Potential Tool and the value of untapped export potential was observed. The value was multiplied by 5 to get a 5-year figure before being converted to GBP using Bank of England spot rates.

This analysis was considered alongside an estimate of their assessment of the potential impact from an affected UK business in order to provide a valuation estimate.

Valuation assessment and summary

The potential value of the additional exports gained from resolving this barrier is estimated to be in the low hundreds of millions (£100m-£400m) category over a 5-year period.

Key assumptions, uncertainties and mitigations

The primary assumption using this approach is that if all barriers were to be removed, actual trade would increase to the expected potential trade figure.

Whilst this methodology is appropriate for estimating the value of removing a ban, it is unlikely that all the unrealised potential can be attributed to this barrier alone. Therefore, the estimate produced by the EPI tool was considered an upper bound.

The model only implicitly takes account of cultural, linguistic, geopolitical and other intangible variables through the easiness to trade metric.

Further explanation of the approach and possible limitations is covered in the ITC export potential methodology paper (PDF download).

4.4 Professional qualification requirements affecting service exports from the UK to the United States.

Barrier Summary
This affects exporters of services to the United States, including the legal, engineering, architectural, and accountancy professions. Certain professions in the United States require licensing, often through state level bodies. Requirements may vary by state and profession.

This barrier impacts individuals and UK companies operating in these sectors looking to establish business or provide additional expertise on an ad-hoc basis in the United States.

Method

This methodology uses the OECD's STRI tool, to simulate changes in measures that typically impose restrictions on trade in services. Simulated changes in the restrictiveness index are applied to current trade flows to estimate consequential changes.

The estimate is produced using ONS Services Export Data[4].

Valuation assessment and summary

The potential value of the export opportunity associated with from resolving this barrier is estimated to be in the high hundreds of millions (£700m-£999m) category over a 5-year period.

Key assumptions, uncertainties and mitigations

The services trade data used for this is analysis is classified by EBOPS[5], which is not aggregated such that trade data for affected sectors can be isolated. Sectors 10.2.1 and 10.3.1 have been used, however they also encompass a range of other services that are not reportedly affected by this barrier, such as scientific services. This will have an impact on the accuracy of this valuation.

4.5 Requirement for cosmetics products exported to China to be tested on animals

Barrier summary

China stipulates that cosmetics and beauty products exported to China must be tested on animals to be sold in-market. Animal testing is an ethical red line for many of the UK's cosmetics producers and is a banned practice in the EU.

Domestic manufacturers of cosmetics, whether Chinese or overseas, do not need to test their products on animals. The Chinese government's rationale for this, is that inspectors can easily access domestic manufacturing plants and evaluate standards, however, cannot do the same for products manufactured outside of China. However, many UK cosmetics businesses do not want to establish manufacturing centres in China.

China has indicated that it will move away from animal testing products, possibly to accept international data on tests of individual ingredients. The timing for this, which would remove this barrier for UK exporters, is unclear. The UK government continues to raise this issue with Chinese government counterparts.

Method

[4] The sectors selected were 10.2.1 and 10.3.1. Data sourced from ONS UK trade in services: service type by partner country, non-seasonally adjusted, 2019.

[5] 2010 Extended Balance of Payments Services Classification

This valuation has been produced using a combination of business intelligence, EPI methodology (assuming a full ban) and the AVE method (assuming the barrier only acts as a non-prohibitive NTM). This reflects that the barrier affects firms in different ways.

The EPI method considers the full extent of export potential for the UK as an exporter of cosmetics products to China. Whereas the AVE method considers the additional cost that technical NTMs could be imposing on current UK exports of these products to China.

This provided a range of potential impacts; from the barrier acting as an effective ban on most UK exporters; to the barrier acting as an additional cost to current UK exporters. Since it was not clear exactly how different UK exporters were affected, the midpoint of these two methods was used as a guide and considered alongside estimates from businesses.

Trade flow data relating to the product codes (HS6) 330499, 340130, 330300, 330410, 330590, 330510, 330491, 330420, 330790, 330610, 330690, 340111, 340119, 340120, 330730, 330720, 330530, 330620, 330430, 330710, 330520 was obtained from ITC Trademap (with a 2019-2021 average calculated).

Valuation assessment and summary

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the hundreds of millions (£100m-£999m) category over a 5-year period.

Key assumptions, uncertainties and mitigations

Uncertainty over the overriding impact of this barrier with regards to whether more firms are being affected in a prohibitive way or just as an additional cost. To deal with this both possibilities are considered and the mid point between the two is considered.

The EPI considers frictions besides the barrier in question.

The AVE estimates used to approximate the cost of this barrier to current exports, are not necessarily specific to the affected products, importer or specific measures in place.

4.6 UK vehicle exports to Morocco subject to duties due to lack of ability to authenticate certificates of origin.

Barrier summary

Moroccan vehicle importers were being asked to pay duties on UK vehicle exports due to lack of ability to authenticate certificates of origin.

Method

For this barrier, we received an estimate from an affected business as to how much the issue had cost them. To affirm this estimate we estimated the difference in price between preferential rates and MFN rates; and used this as an input in our AVE method to calculate the cost of this barrier. Given the implied impact and the levels of exports, we affirmed that the business' estimate of impact was reliable.

Trade flow data relating to the product codes (HS6) '870324; '870333 was obtained from ITC Trademap with a 2019-2021 average calculated.

Valuation

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the £low millions (£1m-£4m) category over a 5-year period.

Key assumptions, uncertainties and mitigations

The full extent of this barrier on UK exporters is not entirely known and this valuation has focused on a specific exporter who has reported the impact on their business. Therefore, the full impact of the barrier may be different to the initial estimate presented here.

4.7 Acceptability of UK hallmarked jewellery

Barrier summary

The Austrian hallmark office questioned the acceptability of UK jewellery marked with UK Hallmarks and the Hallmark Convention marking (CCM) being imported into Austria without being re-marked with Austrian hallmarks.

Method

The AVE methodology has been used to estimate the impact of removing this barrier, it utilises estimates of elasticities and the ad-valorem equivalent cost of labelling requirements inconsistent with UK standards. When applied to existing UK exports of the affected products, it estimates the increase in export value (over a 5-year period), that could result from resolution of this barrier.

Trade flow data relating to the following product codes (HS4) 7113, 7114, 7115 was obtained from ITC Trademap with a 2019-2021 average calculated.

Valuation

The potential value of the additional exports gained from resolving this barrier is estimated to be in the low hundreds of thousands (£100k-£400k) category over a 5-year period.

4.8 Export Health Certification (EHC) requirements for UK pet food/supplement exports to India.

Barrier summary

In September 2021, India changed its protocol for importing dog and cat food products by issuing a new Export Health Certificate which led to complications with exporters' paperwork.

Method

This valuation is based on intelligence from an affected business. To corroborate this estimate, analysts compared the estimate with historic reported exports of the affected products and deemed that the business estimate may be plausible.

Valuation assessment

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the £low millions (£1m-£4m) category over a 5-year period.

4.9 Mongolia requires premises to be visited prior to issuing of EHC for export of poultry.

Barrier summary

A UK company looking to export poultry to Mongolia had a EHC issues on the condition that a premises visit be conducted when the COVID-19 situation allowed. After discussion with the Mongolian Government, it was established that UK companies could export poultry products to Mongolia without the need of a physical risk assessment of exporting premises.

Method

This valuation is primarily based on business intelligence from an affected business which reported the value of a contract that could be realised if this barrier was resolved. To corroborate this estimate, analysts compared the reported value of the contract against Mongolian imports of the affected products and deemed that the business estimate may be plausible.

We also considered the ITC Export potential indicator's outputs for the UK as an exporter of these products to Mongolia. This gave a lower, but broadly similar output of fully unrealised export potential.

Valuation Assessment

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the £mid millions (£4m-£7m) category over a 5-year period.

Key assumptions, uncertainties and mitigations

As the UK does not currently export to Mongolia, it is not clear how successful the affected business will be. It is also not clear what a reasonable expectation of the UK's market share of Mongolian market would be. Therefore, the corroboration of the business estimate is generous.

The EPI did not fully corroborate the Business' contract's value, however we considered that this is a modelled output as compared with the business' actual contract. The Export Potential Indicator includes sources of friction besides the barrier in question.

4.10 Difficulties navigating sanitary and phytosanitary (SPS) checks at Spanish border control posts[6]

Barrier summary

[6] The headline and description of 4.10, originally published in 2021, has been changed to describe the situation more accurately. The original said that UK companies reported inconsistent interpretation of customs requirements by the Spanish customs authorities. However, the text should have said that businesses found it difficult to navigate sanitary and phytosanitary (SPS) checks. SPS checks are a standard requirement for any imports into Spain from a non-EU country. The change in barrier description has resulted in a slight change in the inputs used in the valuation. Due to this change, the valuation of this barrier has increased from £low tens of millions (£10 - £40 million) to £high tens of millions (£70 - £99 million) over five years.

In early 2021, some UK food and drink companies reported that they were finding it difficult to navigate SPS checks when entering the Spanish market.

Method

The AVE methodology has been used to estimate the impact of removing this barrier, it utilises estimates of elasticities and the ad-valorem equivalent cost of SPS measures. When applied to existing UK exports of the affected products, it estimates the increase in export value (over a 5-year period), that could result from resolution of this barrier.

Valuation

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the high tens of millions (£70-£99 million) category over a 5-year period.

Key assumptions, uncertainties and mitigations

This issue primarily affects processed foods. Beyond that and due to the broad, non-specific scope of this barrier, it is difficult to specify exactly which goods are affected. This analysis has therefore been conducted on the range of products reportedly affected, however it is important to note that this may not represent the entire scope of this barrier.

4.11 Regulatory framework needed for offshore wind in Brazil

Barrier summary

Brazil does not currently have sufficient regulations in place for the offshore wind market, that enable overseas companies to invest in and develop the market.

Method

Due to the complexity of the offshore wind market, and lack of data, this valuation estimate uses a bespoke methodology to assess the potential impact of removing the barrier. Various data sources[7] have been used to quantify the scale of UK trade and investment in the Brazilian offshore wind market. Government and industry estimations of the future size of Brazil's offshore wind market have also been considered and the data extrapolated to account for this.

Valuation

The potential value of the export opportunity associated with resolving this barrier is estimated to be in the tens of millions (£10m-£99m) category over a 5-year period.

Key assumptions, uncertainties and mitigations

This methodology relies heavily on a number of assumptions and uncertainties and therefore a broad valuation range has been given, to reflect that this valuation provides a potential scale, but not a specific estimation. For example, the methodology assumes that UK content (exports and investment) in

[7] Data sources used include: Trade data sourced from ITC TradeMap, 2017-19. FDI data sourced from fDi Markets, up to 2020. ONS, Low carbon and renewable energy economy estimates, 2016-18.

Brazilian offshore wind projects remains at a constant level. Removal of this barrier may however increase international competition and alter the currently assumed market share of UK exports and investment. The methodology also assumes that the Brazilian offshore wind market grows in line with current plans for increased offshore wind capacity. Over the coming years however, this growth may accelerate or decelerate.