EVALUATING TRADE POLICY - THE PRACTICE OF THE EUROPEAN COMMISSION

This paper provides an overview of the European Commission’s evaluation of EU trade policy. It discusses the importance of transparent policy evaluation for improving the functioning of trade policy, informing EU co-legislators and the general public to ensure accountability. It discusses specificities of evaluations in the field of trade policy, the evaluation cycle, and the types of impacts studied. The methodology used in evaluations is outlined and discussed. Overall, the paper provides insights into how the European Commission uses evaluation tools to inform EU trade policy decision making.

Keywords: trade policy, evaluation.

Evaluación de la política comercial - La práctica de la Comisión Europea

Este documento ofrece una visión general de la evaluación de la política comercial de la UE por parte de la Comisión Europea. Analiza la importancia de una evaluación transparente de las políticas para mejorar el funcionamiento de la política comercial, informar a los colegisladores de la UE y al público en general para garantizar la rendición de cuentas. Analiza las especificidades de las evaluaciones en el ámbito de la política comercial, el ciclo de evaluación y los tipos de impacto estudiados. Se esboza y discute la metodología utilizada en las evaluaciones. En general, el documento ofrece una visión de cómo la Comisión Europea utiliza las herramientas de evaluación para informar la toma de decisiones de la política comercial de la UE.

Keywords: política comercial, evaluación.

JEL: F13, M48.
1. Introduction

The European Commission is committed to evidence-based policy making. As part of this commitment, European Commission services use a variety of evaluation tools to ensure that policy decisions are supported by research, analysis and an understanding of their likely impacts. The Better Regulation Framework, which was introduced in 2015, is a mechanism put in place within the European Commission to support the development of its policy initiatives and the assessment of their impact both ex-ante and ex-post. The European Commission is increasingly integrating evaluation into the policy cycle to continuously improve the quality of European Union (EU) decision making.

When developing the EU trade policy, the European Commission makes use of the Better Regulation Framework to feed into the cycle of negotiation of trade agreements as well as the preparation of EU regulations in the field of trade. The trade department of the European Commission, the Directorate-General for Trade (DG Trade), has a specific evaluation policy tailored to the specific needs of EU trade policy that is embedded into the Better Regulation Framework but also goes beyond. In principle, EU Trade Policy is an EU-only policy and administrated by the European Commission representing the common EU interest. The European Commission therefore has a particular interested in a transparent evaluation of this policy, both for reasons of improving the impact of EU policies as well as for informing the EU co-legislators, the European Council (EU Member States governments representatives) and the European Parliament (directly elected by the EU citizens). It also serves to inform the general public about the impacts of trade policy and thereby allows to hold the EU accountable for its policies.

In fact, EU trade policy is one of the EU policies most evaluated, both in terms of detail as well as in terms of analysis throughout the policy-making cycle.

This paper presents DG Trade’s evaluation policy. It first discusses the rationale for putting in place such a policy (section 2). It then discusses some specificities of evaluations in the field of trade policy (section 3) and details the evaluation cycle in DG Trade (section 4). Finally, it outlines the types of impacts studied (section 5) and the methodology used (section 6).

2. Why is the European Commission conducting evaluations

In the early 1990s, there was significant public concern about the impact of trade liberalisation on social and environmental issues. There was considerable pressure on the European Commission to respond to these concerns and to engage in a structured dialogue with civil society. The pressure increased following the conclusion of the Uruguay Round and culminated at the Seattle World Trade Organization (WTO) Ministerial Conference of 1999. It is against this background that the European Commission conducted a study on the impact of trade on sustainability issues of the then new multilateral negotiating round: the first Sustainability Impact Assessment (SIA) was born.

During the following twenty years, DG Trade has modernised its evaluation policy to adapt to the evolving context. It has notably introduced analysis in new areas such as human rights and gender issues. However, the most significant contextual change since the first SIA in 1999 has been the development of European Commission-wide ex-ante and ex-post evaluation tools from 2003 onwards, further reinforced by the adoption of the Better Regulation Agenda in 2015 (European Commission, 2015a).

Evaluation is usually conceived as having three sets of objectives. It is a key contributor to the European Commission’s accountability, providing assessments of its effects both before and after implementation. This is an outward looking aspect of evaluation: oriented towards the European Parliament, the Council, EU Member States and the public at large.

It also creates a regulatory culture which shapes policy as analyses of impacts. An organisation with a culture of
Evaluation is one where all actors are committed to using evidence and evaluation findings to inform decisions, where risks and trade-offs are systematically identified, and where genuine mitigation measures are proposed and implemented. The EU evaluation policy can contribute to this by fostering a better mapping of trade-offs and choices, as well as a more systematic definition of objectives and possible policies to reach them.

Evaluation also contributes to organisational learning as it increases the European Commission's capacity to create, retain and share knowledge within the Commission services of what did work and what did not work in past endeavours. This is the inward-looking aspect of evaluation.

At its core, policy evaluation is nothing more than comparing the overall impact (the potential or actual result) of a public policy with its stated goals (the desired impact of a public policy) via its diverse effects on the economy, the environment, and social factors.

Evaluation is an evidence-based assessment: it takes a critical look at policy interventions by analysing their objectives and whether these policy options can meet those objectives (ex-ante) or have met them (ex-post). It aims at providing policy-makers with reliable information and evidence, enabling them to take better decisions.

As illustrated in Figure 1, evaluation contrasts with both monitoring and audit by having a broader focus, from the start of a project to its final impacts: evaluation looks at all causal steps from the policy instruments put in place to the overall final impacts.

3. Specificities of trade policy evaluations

In a world affected by increasing distrust among members of the public towards legitimate sources of information, the importance of establishing a sound basis of facts, as well as the explanation and justification of public policy is high. Trade policy is no exception: the current public debate around the EU’s trade policy is marred with misinformation and sometimes faulty reasoning. The problem is exacerbated by the fact that trade is one of the most difficult policy areas to evaluate.

![FIGURE 1](source: Own elaboration.)
Several characteristics set trade policy apart from other EU policies:

- **Trade policy affects many segments of society and arguably all sustainability dimensions.** Given the complexities of trade policy, leaving the evaluation of the likely impact of policy measures to an informal and unstructured process cannot do justice to the diversity and complexity of the mechanisms in play in the economic, environmental, social and human rights areas. Evaluations need to provide global assessments of the type and size of impacts.

- **Given the size of the EU economy and its vast internal market, macroeconomic impacts of the EU external trade policy are small relative to other drivers of economic activity,** such as fiscal policy, monetary policy, the business cycle, the regulation of the internal market, or developments in the innovation cycle. Furthermore, the scale and distribution of the impacts of a trade policy initiative (whether favourable or adverse) depends to some extent on the existence and effectiveness of accompanying measures taken by the competent authorities, often EU Member States’ national governments. In addition, its positive impacts, often in form of more and cheaper choices for consumers are dispersed, while its potential negative impacts such as competitive pressures for sectors are concentrated.

- **Trade policy is multidimensional in its objectives and is at the intersection of economic and foreign policy.** While the core aim of the EU trade policy is to open economic opportunities to EU economic operators and to ensure a level playing field in areas such as public procurement and intellectual property rights, the political relevance of non-economic objectives is increasing. Geopolitical tensions have again put trade policy in the limelight, both with regards to the weaponization of trade policy as well as with regards to ensuring access to critical supply chains. In addition, sustainable development dimensions are gaining prominence, with climate change in the forefront of public concern. Evaluations ensure that all these dimensions are considered when designing and assessing trade policy initiatives.

- **Trade policy often takes place via negotiations/bargaining with third country governments.** Evaluations in such contexts are politically sensitive, in particular when they aim at levelling the playing field among trade partners. Evaluations should not undermine the EU’s capacity to negotiate with its partners or to react to unfair trade practices.

- **Successive negotiations of trade agreements share many similarities,** which facilitates learning from one trade agreement to the next. This matters for the questions raised, both externally (how successful were previous exercises at achieving their stated objectives?) and internally (what lessons can be drawn from our past successes and failures?). Evaluations ensure that the lessons of previous negotiations are considered when a new negotiation is launched.

4. **The European Commission’s evaluation cycle for trade policy**

European Commission services are using a wide array of evaluation and assessment tools throughout the policy-making cycle. The role of these tools is to provide trade negotiators and policymakers (both at the EU level and the Member State level) with evidence-based assessments of the economic, social, human rights and environmental impacts that are likely to arise from a specific trade policy initiative at different stages of the trade policy initiatives.

The systematic use of impact assessments and ex-post evaluations is a key element of the European Commission’s evaluation cycle for trade policy. European Commission services are using a wide array of evaluation and assessment tools throughout the policy-making cycle. The role of these tools is to provide trade negotiators and policymakers (both at the EU level and the Member State level) with evidence-based assessments of the economic, social, human rights and environmental impacts that are likely to arise from a specific trade policy initiative at different stages of the trade policy initiatives.
Commission’s commitment to better policy making. In April 2015, the European Commission adopted the Better Regulation Agenda with the aim of enhancing transparency and scrutiny in EU decision making. Better Regulation sets the guiding principles, objectives, tools and procedures which underpin impact assessments and ex-post evaluation of EU policies (and not only regulation as the name could suggest).3 To help the European Commission implementing the better regulation principles, a new Regulatory Scrutiny Board (RSB) was set up, superseding the former Impact Assessment Board, to check and provide advice not only on impact assessments but also on major evaluations and fitness checks, also and in particular in the area of trade policy.4

Figure 2 provides an overview of the timeline of the evaluations conducted by DG Trade throughout the policy making/negotiation cycle. Every significant initiative in the field of trade policy is subject to an impact assessment (IA). During the negotiation of major trade agreements, sustainability impact assessments (SIAs) are carried out. After the conclusion of negotiations, the economic impact of what has been achieved is analysed —economic assessments of the negotiated outcome (EANOs)— and, finally, ex-post evaluations of provisions and policies are undertaken after they have been implemented for enough time.

It is important to note that, in principle, the Commission will not submit a proposal to start negotiating a trade agreement or an important policy initiative without having conducted an IA. Usually the IA is accompanying the draft negotiation directives when submitted to the Council of the European Union and ultimately made public. The evaluation of the EU trade policy therefore generally starts before the actual policy is conducted.

The European Commission follows an integrated approach by combining an assessment of economic, social, human rights and environmental impacts of trade policy initiatives at all stages of policy making and under a single framework with an open and wide consultation process during the evaluation cycle. Impact analysis and evaluations contribute to assessing and demonstrating the impact of the EU’s trade initiatives (including at the individual Member States level) and increase the transparency


4 See https://ec.europa.eu/info/law/law-making-process/regulatory-scrutiny-board_en
of trade policy by providing publicly available analysis; two aspects that are at the forefront of public attention.

**Impact Assessments (IAs)**

IAs are European Commission-wide analytical tools prepared for European Commission initiatives that are likely to have significant and clearly identifiable economic, environmental or social impacts. IAs are prepared in accordance with the Better Regulation Guidelines and Tools. In trade matters, IAs will usually be prepared for:

- All major trade negotiations for which the European Commission will adopt a recommendation for a negotiating directive.
- All major regulations proposed for adoption by the Council and European Parliament.

IAs are about gathering and analysing evidence to support decision-making. They accompany the European Commission’s College decision to request an authorisation to launch negotiations from the Council and are attached to the draft negotiating directives. They aim to provide answers to questions such as: “Is a trade negotiation the best course of action for our trade relations with partner X, Y, Z?”; “Which issues should be covered in the negotiation?”

In line with a European Commission-wide standardised process, an IA verifies the existence of a problem, identifies its underlying causes, assesses whether EU action is needed and analyses the advantages and disadvantages of available options and their impacts. 5

On this basis, the IA identifies the best course of action and accompanies the negotiation directives proposal when it is sent to the other EU institutions, especially the European Parliament and the Council.

One recent example is the Impact Assessment prepared to back the Commission’s proposal for an Anti-Coercion Instrument (2022). 6

**Sustainability Impact Assessments (SIAs)**

SIAs are DG TRADE specific assessments carried out simultaneously with major trade negotiations. DG TRADE is the only Directorate-General carrying out such assessments. They complement IAs by allowing a more in-depth analysis of the potential economic, social, human rights and environmental impacts of the agreement under negotiation. SIAs promote transparency by relying on a wide-ranging and continuous provision of information to, and consultation of, stakeholders including critical ones, early on in the process and during the negotiations. They are a channel through which stakeholders can inform negotiators of their views on the likely impact of the trade agreement under negotiation and have an opportunity to influence negotiations. SIAs also help to steer the trade negotiations by supporting them with evidence during the negotiations, in particular on sustainability issues.

SIAs deepen our understanding of sustainable development impacts. Building on impact assessments, they allow for a more in-depth analysis of the potential economic, social and environmental impacts of trade agreements, including on consumers, human rights, developing countries, small- and medium-sized enterprises (SMEs), and specific economic sectors. Detailed case studies and sectoral analyses provide in-depth assessments of the potential impact on areas of specific interest.

While IAs are produced by the European Commission services, SIAs are run by independent external consultants. Contractors conclude their analyses with recommendations for measures to minimise potential risks and maximise opportunities for sustainable development that may be created by the trade negotiations. Building on the study that supported the Impact Assessment, the SIA consists of specific chapters examining specific areas in greater depth. SIA chapters cover topics where the agreement is most likely to have an impact on sustainability issues, or where the agreement opens opportunities for achieving non-trade policy objectives.

The most recent finalised SIA was prepared in support of Angola’s accession to the Economic Partnership

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5 For examples of trade related IAs, see [https://policy.trade.ec.europa.eu/analysis-and-assessment/impact-assessments_en](https://policy.trade.ec.europa.eu/analysis-and-assessment/impact-assessments_en)

Agreement between the European Union and South African Development Community (2023).7

Economic Assessment of negotiated outcome

In the Communication Trade Growth and World Affairs in 2010,8 the European Commission committed itself to assessing the impact of major trade agreements: “Once negotiations are concluded and before signature, we will prepare for the Parliament and Council an analysis of consequences of the proposed deal for the EU.” 9 Five years later, in the Communication Trade for All,10 the European Commission reiterated that it “…also analyses the economic impact of agreements after their conclusion…” These EANOs constitute the third step in DG Trade’s assessment cycle of trade policy initiatives. EANOs examine the results of the negotiations in detail and assesses the impact of the agreement in economic terms.11

IAs and SIAs provide for comprehensive analyses of the potential and likely economic, social, environmental and human rights impacts of the agreements subject to analysis. Therefore, at the stage when negotiations have been concluded and EANOs are conducted, only the now foreseeable economic impact is examined as knowledge now exists about what exactly has been achieved in terms of trade cost reductions and other trade facilitating measures. This should be seen in comparison to IAs and SIAs which assesses the economic impact of the agreement under different scenarios, often in terms of varying levels of ambition in terms of the degree of liberalisation.

Further analyses of social, environmental and human rights impact normally do not form part of the EANOs, as they were already analysed in depth in preceding IAs and SIAs. Nevertheless, should new elements pertaining to these issues have resulted from the negotiations, the EANO will review these as well.

Ex-post evaluations

Ex-post evaluations are European Commission-wide tools that use the available evidence to assess whether a specific policy intervention was justified and if it worked (or is working) as expected in achieving its objectives and if it was efficient in doing so. Ex-post evaluations also look for unintended effects (i.e., those which were not anticipated at the time of the IA or SIA) and look for evidence of causality. Such ex-post evaluations help further develop the trade policy vis-à-vis the partner with which the trade agreement was concluded. They can additionally be useful in designing other trade agreements with other counterparts. Ex-post evaluations are undertaken after the trade agreement or trade measure has entered into force, commitments have been phased in and sufficient time has passed to gather a robust body of data and evidence. Ex-post evaluations are prepared by DG Trade in accordance with the related Better Regulation Guidelines and Tools. The ex-post evaluation policy in DG Trade can include thematic ex-post evaluations on specific elements of EU trade policy or that are part of several agreements, as well as ex-post Evaluations of major trade agreements with particular economic or political relevance.

An example of an ex-post evaluation is the one that was conducted on six Euro-Med trade agreements. It was finalised in 2021.12

5. Which topics are covered?

IAs, SIAs and ex-post evaluations look more broadly at how the trade and trade-related provisions of trade policy instruments could affect or have affected economic, social, human rights and environmental issues in the EU, partner

7 https://circabc.europa.eu/rest/download/074f1594-7d48-45e4-96ad-8b1586c69a9
8 European Commission (2010).
9 Ibid, p. 15.
11 See e.g., European Commission (2018).
countries and sometimes globally (while EANOs focus on the economic impact of the agreement). These evaluation tools also examine possible impacts in specific relevant countries, especially least developed countries, and, in the case of SIAs, propose measures (trade or non-trade related) to maximise the benefits of the agreement and prevent or minimise potential negative impacts. Evaluations thus look at a wide range of impacts, both in the EU and in third countries. In addition, there is a particular focus on small and medium enterprises, developing countries, least developed countries, the EU’s outermost regions as well as neighbouring countries and gender issues.

Assessments and evaluations can cover any type of impact resulting from a trade policy initiative. Impacts are typically grouped into four different dimensions:

a) **Economic impacts**: These include impacts on GDP, trade flows, foreign direct investment (FDI), wages, consumer prices, fiscal revenue; sectors most affected; effects on competitiveness, small- and medium-sized enterprises (SMEs), least developed countries (LDCs) and the informal economy.

b) **Social impacts**: These include impacts on employment (including sectoral job creation/losses), promotion of the International Labour Organization (ILO) Decent Work Agenda and core labour standards, equality, gender, consumer welfare, public health, education, etc.

c) **Human rights impacts**: This covers whether the initiative could enhance/impair the enjoyment of certain human rights (particularly by vulnerable groups) or strengthen/weaken the ability of the signatory parties to fulfil their Human Rights obligations.

d) **Environmental impacts**: These centre around effects on greenhouse gas emissions and biodiversity. Does the initiative contribute to greening the economy, to resource efficiency objectives and sustainable consumption/production?

6. Methodology

To assess the impact of Free Trade Agreements (FTAs), both quantitative and qualitative approaches are used in the form of economic modelling of the impacts on the one hand and qualitative analysis, surveys, stakeholder consultations and civil society interactions on the other.\(^{13}\)

**Economic modelling**

In terms of economic modelling, depending on the nature of the agreement to be analysed and at what point in time the analysis takes place, the most common tools are computable general equilibrium (CGE) models, partial equilibrium (PE) models, as well as econometric tools. Each of these three approaches are briefly discussed below.

*Computable general equilibrium models*\(^{14}\)

Most studies undertaken to assess the economy-wide impact of trade agreements *ex-ante* are carried out using CGE models, which are state of the art tools for overall assessments of trade agreements at region, country and broad sector level. These models are computer-based simulations, which calculate the future state of the global economy (including any country or region specifically analysed) as a consequence of a specified set of (trade) policy changes. The main advantage of CGE models is that they analyse the effects of trade policy considering the main links between the domestic and international production of goods and services, including sectoral input-output relations.

These types of model help answer ‘what if...’ questions by simulating the price, income and substitution effects of different policy changes and comparing them to a so called baseline (*i.e.*, what would happen without a policy change). The formulation of a correct baseline is important, since it is the counterfactual against which the economic outcome of the initiative is assessed. Hence,

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\(^{13}\) Moisé and Rubinová (2021) provide a critical review of the topics covered in trade evaluations and the methodologies used.

\(^{14}\) Parts of this section draws on Nilsson (2018).
these models allow economists to simulate how sectors and actors adjust to the changes of costs, prices and/or incentives that a trade policy change would cause. This allows for an assessment of the direct and indirect effects of changes to trade policy.

Figure 3 describes the potential impact of a free trade agreement (FTA). An *ex-ante* analysis of the impact of an FTA is projected to assess the effects once the agreement is fully implemented. In Figure 3, this would be at time $t$. The impact is defined as the difference between the thick line (GDP growth) and the baseline without the FTA as measured by the thin line in the figure. Moreover, *ex-post* analyses have shown that after FTA negotiations have started, but before agreements are applied, it is sometimes possible to detect anticipation effects of an FTA (see e.g., Lakatos and Nilsson, 2017).

For example, assume that policymakers decide to lower import tariffs on products of wood via an FTA. A CGE model would then demonstrate that opening the wood sector to competition would have a positive impact on downstream industries that use wood products as an input (they will substitute imported wood products for domestic wood products due to lower import prices). Moreover, the inter-linkages in the model would identify the effect on upstream industries. More wood will be used overall in the country and, therefore, there will be more demand for complementary goods and services such as business services like...
logistics and transport. CGE models are thus important tools for assessing direct and indirect effects of specific trade policy decisions.

One of the most common data sources that feed into CGE models for trade policy making is the Global Trade Analysis Project (GTAP). The latest version of the data base —GTAP 10— includes 120 countries and 20 aggregate regions. For each country/region, the data base reports production, intermediate and final uses, international trade and transport margins and taxes/subsidies, see Aguiar et al. (2019).

In order to provide harmonised data for 140 countries and regions, the number of sectors is limited to 65, out of which, roughly one third each is made up of agricultural products. Other sectors include services sectors and merchandise products and raw materials. To compare, one should recall that at the 6-digit level of the Harmonised System, there are about 5,000 products.15

CGE models have been subject to general critique, but also in the way they sometimes are employed. Critics claim some analysis exaggerates welfare gains from trade liberalization, by omitting important mechanisms. For example, when trade costs are reduced the mechanics of the model ensure that the output of the more competitive sectors of an economy increases (relative to the baseline) while the opposite holds true for the less competitive sectors. For this to happen labour has to move from contracting to expanding sectors, where wages increase. This process is assumed to be friction free (see Boeters and Savard, 2013). This assumption may be more appropriate within sectors, but it is less so between sectors. Moreover, the fiscal implications that this adjustment entails in the presence of labour market frictions (re-training, temporary wage replacement payments, etc.) are not accounted for in the macroeconomic welfare analysis.

On the other hand, some arguments have been put forward suggesting that the impact of trade liberalization as assessed using CGE models may be underestimated. Several arguments along this line carry importance. Firstly, the CGE models that are used in trade liberalization simulations do not account for increased productivity effects associated with greater incentives to innovate from enhanced competitive pressure and knowledge transfers through trade (see Hall, 2011). Secondly, the impact of liberalization of foreign investment (an increasingly important component of modern trade agreements) is unaccounted for in most models, including its likely impact on sectoral and economy-wide productivity. This is an important drawback as foreign direct investment (FDI) is a significant part of modern economic integration and the presence of FDI has been shown to be in itself a catalyst for knowledge and technology advancements in recipient countries, which eventually lead to relevant productivity gains.16

Thirdly, CGE models do not capture the impact of reduced uncertainty FTAs bring about. For example, a country’s applied tariffs are in many cases lower than its bound tariffs. Removing this ‘water in the tariff levels’ has positive impacts in terms of removing economic uncertainty, since applied tariffs rather than bound tariffs are cut in the simulations and hence models do not account for this.17 The same holds for the services area for which, in most cases, FTAs bind currently applied levels of protection rather than generating real new market access.

Another shortcoming (as in all trade models) relates to the need to deal with cases where initial levels of trade are low. This could e.g., be the case if current trade barriers are prohibitive. This problem may render trade models inappropriate especially for the analysis of trade agreements with some developing countries and least developed countries which may have their bulk of trade concentrated in a few sectors and only with a limited number of trading partners (see Kehoe


16 For example, Smarzynska Javorcik (2004) finds positive productivity spill-overs from FDI.

17 See e.g., Lakatos and Nilsson (2017) for goods and Lamprecht and Miroudot (2018) for services.
et al., 2017). In these cases, CGE models underestimate the impact of trade liberalization since they tend to multiply existing trade with a specific estimated impact coefficient and if there is no (or little) trade initially, there will be no (or little) trade also after trade liberalisation.

Nevertheless, given their ability to capture input-output relations and a large variety of policy decision-making relevant variables, CGE models remain the best available tool for economy-wide and in particular for ex-ante assessments of the impact of FTAs and trade policy.

Partial equilibrium models

FTAs are negotiated at tariff line level, which may mean products at the 8-digit, 10-digit or 12-digit level and thus 10,000 or more products depending on the negotiating parties. Trade liberalisation at the product level must subsequently be aggregated to GTAP sector level before the policy change can be simulated in a CGE model. CGE models are thus not well-suited for specific analyses of trade liberalisation of detailed product- or industry level. It is therefore common to turn to PE models. Even though PE models lack linkages between sectors, countries and regions and thus cannot provide an assessment of the economy-wide impact of trade policy changes, PE models may sometimes be preferred to CGE models for trade policy analyses since they can assess the impact at detailed product level. But contrary to CGE models mentioned above, PE models do not capture impacts on substitute goods and services.

PE models are partial in nature, with the underlying meaning that they assess the impact of trade liberalisation product by product without considering the effects on intermediate inputs used to produce the goods in question and with the resulting income effects. That is, using the example of wood products from above, if imports of products of wood face lower tariffs, a PE model is likely to find that an increase in the value of imported wooden products and a decrease in the domestic production of such products (if production data is available). However, the producers of wood as raw material are not part of the analysis, and neither are any logistics services in the form of e.g., truck services that transport the wood.

A significant advantage of PE modelling however is that these models require little data. Trade flows are needed, but in addition to that, in principle, one only needs data on trade barriers (duties) and on how much more of wood products consumers would purchase given e.g., a 10% decrease in duties (import demand elasticity) and how easily they would substitute away from similar products of another material (elasticity of substitution).

Econometrics

Econometrics uses economic tools, mathematics, and statistical inference to quantify policy changes. For example, how much has trade changed following the introduction of an FTA? A common econometric tool is the linear regression model, which provides a formal approach to estimating how a change in one economic variable —among the explanatory or control variables—affects the variable being explained, while accounting for the impact of all the explanatory variables in the model and holding everything else equal. This latter precision is important as a regression estimates the marginal impact of an explanatory variable. In the case of trade, one might try to assess the impact on trade of a one percentage point decrease in duties, while holding all other determinants of trade constant.

The explanatory variables in the model are specified based on theory and practice, but it is not possible to account for everything that affects the dependent variable, e.g., because of data availability. Therefore, an error term—which is assumed to have certain properties—is added to the model. An econometric software is then used to run the regression and produce the results, which have to be looked upon with care. Does the outcome make sense? Do the explanatory variables perform as expected and in line with theory, etc.? If yes, the results of the empirical model may help policy makers in defining potential choices to be taken by quantifying effects.
One of the most successful and popular empirical trade models is the so called “gravity model”, which states that the value of trade between two countries is proportional to their economic mass and a measure of their relative trade frictions. It got its name from the analogy to Newton’s law of gravity where the force of attraction between two bodies is proportional to the product of their masses and inversely proportional to their distance squared. The gravity model’s popularity stems from its ability to explain a large share of the variation in bilateral trade flows.

In its most basic version, trade \( X_{ij} \) between importing country \( i \) exporting country \( j \) is explained by the two countries’ gross domestic products \( Y_i \) and \( Y_j \) and the geographical distance between them as follows, after a logarithmic transformation:

\[
\ln(X_{ij}) = \beta_1 \ln(Y_i) + \beta_2 \ln(Y_j) + \beta_3 (\text{dist}_{ij}) + \ln(\epsilon_{ij})
\]

where \( \epsilon_{ij} \) is normally assumed to be a log-normally distributed error term.

The gravity model has been used widely among empirical trade economists over the past 50 years. Its’ theoretical underpinnings have been greatly expanded and improved, in particular over the past two decades and with it how the model should be estimated, depending on the underlying characteristics of the issues analysed.

Another common approach used in econometrics is the difference in differences (diff-in-diff) technique, which examines the effect of applying a policy change, e.g., an FTA, on trade compared to a control group i.e., trade unaffected by the policy change.

**Other tools used**

Economic modelling is often the preferred quantification tool of evaluations, but a wide range of other methods are used to provide the full picture across all sustainability dimensions.

Typically, quantitative estimates of economic impacts will provide the foundation which will support the other analyses: when it is known which economic sectors are most likely to be impacted, it is possible to analyse where social, environmental and human rights impacts are likely to happen. In order to reinforce the reliability of the results, it is often important to use: i) a variety of different sources of data, ii) appropriate tools and methods beyond economics, and particularly both quantitative and qualitative methods at the same time, if possible and iii) different evaluators (not relying on one expert).

The methodology to be used for human rights and biodiversity impacts have been formalised in two separate documents: Guidelines on the analysis of human rights impacts in impact assessments for trade-related policy initiatives (European Commission, 2015c) and Methodology for assessing the impacts of trade agreements on biodiversity and ecosystems (European Commission, 2021). This is part of ongoing efforts to improve the quality of analyses in all sustainability dimensions and to ensure a high degree of comparability between studies.

7. Conclusions

EU trade policy is one of the EU policies most evaluated, in terms of detail and rigour, but also in terms of accompanying analysis throughout the policy cycle. With regards to transparency and accessibility of the analytical results, the EU is at the forefront of evidence based policy-making by providing publicly available analysis at all stages of the conducting of its major trade policy initiatives.

EU trade policy and trade agreements are evaluated before (Impact Assessments), during (Sustainability Impact Assessments) and after their conclusion (Economic Assessment of Negotiated Outcome) as well as after implementation (ex post Evaluations). This resource intensive but meticulous approach allows a constant review of whether the proposed, conducted and implemented trade policy initiatives effectively and efficiently serve EU policy goals.

European Commission services are using a wide array of evaluation and assessment tools (computable general
equilibrium models, partial equilibrium models, econometrics, and other quantitative and qualitative analysis) throughout the policy-making cycle. The role of these tools is to provide trade negotiators and policymakers, as well as the public, with evidence-based assessments of the economic, social, human rights and environmental impacts that are likely to arise from a specific trade policy initiative.

Bibliographic references


