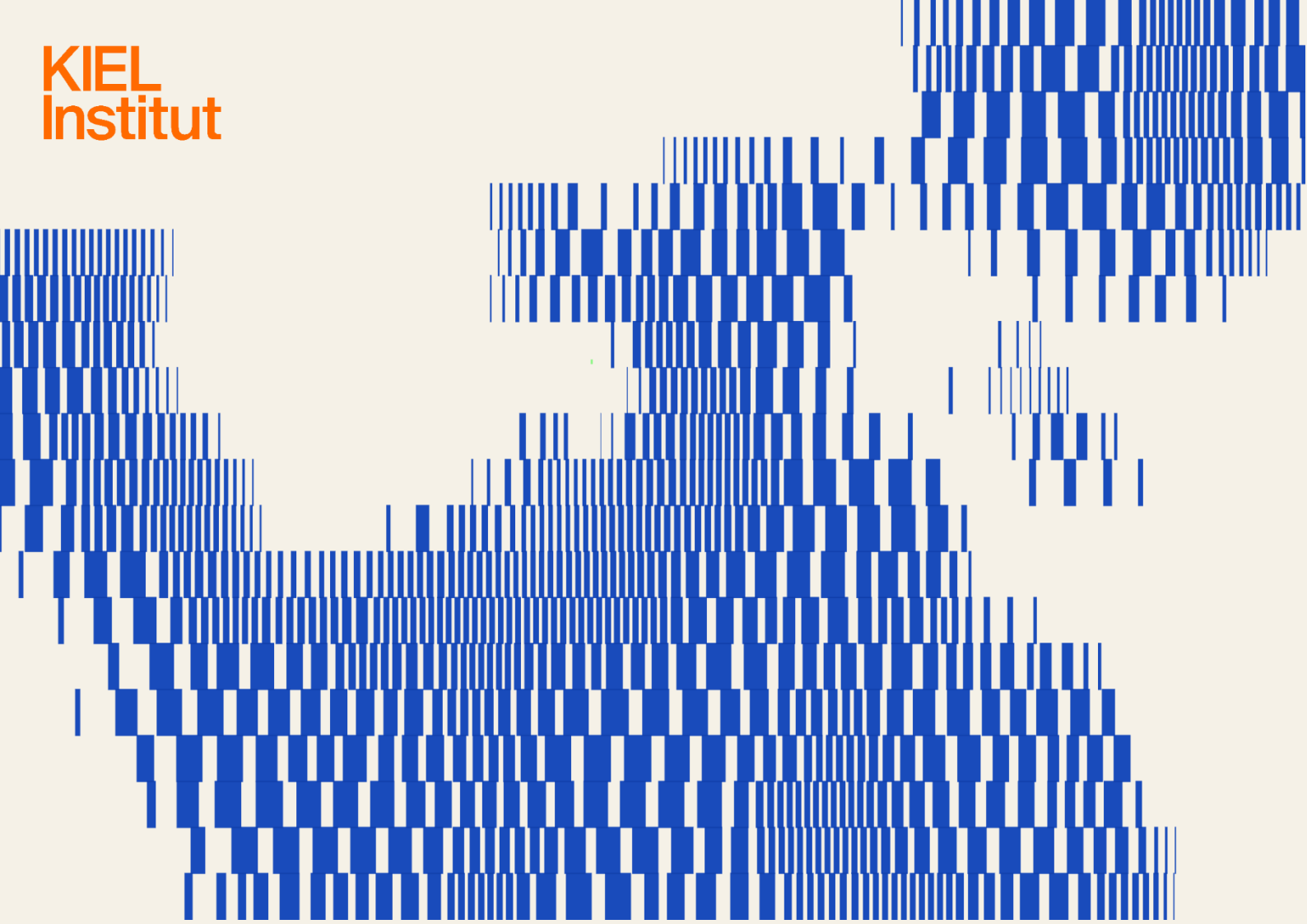




Gabriel Felbermayr, Julian Hinz,
Sebastian Krantz, Hendrik Mahlkow,
Joschka Wanner

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Tariffs Hit Differently: The Regional Impact of US tariffs across Europe and the Role of the Single Market

Abstract

Gabriel Felbermayr, Julian Hinz, Sebastian Krantz,
Hendrik Mahlkow, Joschka Wanner

How do adverse global trade shocks affect sub-national outcomes, and what insurance does regional integration provide? We study the EU Single Market using a large-scale quantitative trade model with regional labour mobility, calibrated to a new NUTS2- based Regionalized Inter-Country Input-Output (REICIO) database. Comparing four baselines, from a fully fragmented Europe to deep integration, we evaluate the 2025 US tariffs. Full integration of EU goods and labour markets reduces the average regional loss in real value added per capita by about 25% and more than halves its dispersion. Further deepening barely improves the mean but compresses the distribution of regional impacts even further.

Keywords: Global Trade Wars, MRIO, ICIO, European Regions, NUTS2, Global Value Chains, Sectoral Mobility Frictions, Trade Integration.

JELs: F15, F16, F17, R15

Authors

Gabriel Felbermayr

Vienna University of Economics and
Business and Austrian Institute for
Economic Research (WIFO)
gabriel.felbermayr@wifo.ac.at
www.wifo.ac.at/

Julian Hinz

Bielefeld University and Kiel Institut
julian.hinz@kielinstitut.de
www.kielinstitut.de

Sebastian Krantz

Kiel Institut
Sebastian.krantz@kielinstitut.de
www.kielinstitut.de

Hendrik Mahlkow

WIFO & Kiel Institut
Hendrik.mahlkow@kielinstitut.de
www.kielinstitut.de

Joschka Wanner

Julius-Maximilians-Universität
Würzburg, Kiel Institut and CESifo
Joschka.wanner@kielinstitut.de
www.kielinstitut.de

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1 Introduction

Events materializing in foreign countries can have major repercussions on local outcomes through global production networks. This has long been a central tenet of trade theory and empirics. Recently, however, advances in modeling and data have made it possible to conduct quantitative analyses at disaggregated regional levels. Work by Dix-Carneiro et al. (2023) or Caliendo et al. (2019) serve as excellent examples. The general insight is that foreign shocks can have highly heterogeneous effects on local labor markets, value-added, or welfare. The rise of geoeconomics in general and the use of unilateral tariffs by the US in particular spur further interest. Moreover, the recent developments provoke the question of how countries can insure themselves against such shocks.

In this paper, we use highly granular data for the European Union to understand how the regional integration of goods, services, and labor markets helps regional economies weather sudden reversals in foreign market access. We ask how the regional economic consequences of US tariffs are shaped by the existence of the EU Single Market, and how a further deepening of EU integration provides insulation. Recent high-level reports by Mario Draghi or Enrico Letta suggest positive effects, but provide no quantitative evidence.¹ Our exercise strives to close this gap.

We view the new US tariffs from the perspective of the economy of the EU which is hit by a wave of new taxes by its most important overall trade partner. In 2024, exports of goods and services to the US amounted to more than 800 bn Euro (4.4% of GDP), imports to more than 700 bn Euro. The EU, being a relatively open entity, is also affected by changes in third-country trade when the latter are hit by high US tariffs. It is therefore likely that the effects of new tariffs averaging more than 15% on real income and value-added are substantial. Given the diversity of regional specialization patterns in the EU, it is also reasonable to expect heterogeneity of outcomes at the regional level, so that the shock may have significant effects on regional inequality. Examining similar hypotheses, Rodriguez-Clare et al. (2025) propose an analysis of new US tariffs on the US. While they take the villain’s perspective, we turn to a major victim of US policy, the EU.

For our analysis, we develop a global value chain (GVC) trade model — drawing inspiration from Baqaee and Farhi (2024) — that leverages detailed multi-regional input–output (MRIO) data for Europe at the NUTS2 level alongside global MRIO data from the OECD’s ICIO database (covering many countries and 10 sectors). Our approach is extended by incorporating regional mobility following Caliendo and Parro (2022), thereby allowing workers to relocate in response to trade shocks. We use the model to study how the disruption of GVCs affects regional outcomes within EU Member States and across Europe. Our experiments are built on the actual trade war scenario in which the world economy is

¹Mario Draghi (2024) “The future of European competitiveness – A competitiveness strategy for Europe” and Enrico Letta (2024) “Much more than a market – Speed, Security, Solidarity”.

hit by US tariffs in 2025, but we evaluate the effects under alternative baselines that differ in the degree of EU integration.

Our contribution is threefold. First, on the data side, we construct a new Regionalized Inter-Country Input–Output (REICIO) table that replaces EU (plus UK, Norway, Switzerland) countries in the OECD ICIO by their constituent NUTS2 regions. This provides a consistent global MRIO with 335 spatial units that can be used more broadly in quantitative regional trade applications. Second, on the modeling side, we embed these regional blocks in a global GVC model with labor mobility and realistic tariff-revenue pooling inside the EU, allowing us to analyze within-country and cross-border adjustment to trade shocks in a single unified framework. Third, on the substantive side, we quantify the insurance role of European integration against the 2025 US tariffs by comparing four baselines that range from a fully fragmented Europe to a deeply integrated Single Market.

The headline findings are simple. Relative to a fragmented Europe in which each country sets its own trade policy and labor is immobile across borders, the actually observed degree of integration in goods and labor markets reduces the average decline in regional real value added per capita by around 25% and more than halves the cross-regional dispersion of losses. In other words, the current Single Market already provides substantial insurance against external tariff shocks. Further deepening internal integration by reducing remaining non-tariff barriers does not materially improve the EU-wide average outcome, but compresses the distribution of regional impacts even further: highly exposed regions are cushioned, while well-insured regions benefit little. Taken together, these results suggest that the main effect of deeper integration in our setting is not a less strong economic hit during a trade war, but lower cross-regional divergence in the impact.

Our work is related to several strands of literature. First, after severe disruptions of global value chains (GVCs) in the aftermath of the Covid-19 pandemic, a fast-growing literature has studied whether integration into global markets adds or subtracts to economic volatility. Theoretical and empirical work on risk and resilience in GVCs mostly cautions against the notion that shorter or domestically re-shored chains are necessarily safer. A careful synthesis provided by Baldwin and Freeman (2022) highlights how shocks propagate through multiple margins (demand surges, input bottlenecks, policy risk) and emphasizes diversification over autarky, while Miroudot (2020) distinguishes robustness from resilience and argues that location *per se* is a poor proxy for security of supply. COVID-era analyses (e.g., Gereffi et al., 2022) further show that resilience is multi-scalar—shaped by firms, chain governance, and states—rather than a simple domestic/global binary. We speak directly to this debate: our quantification treats trade-war-style increases in trade costs as the *risk* dimension, and evaluates an *opportunity/insurance* channel via the EU Single Market—showing how deep internal integration reallocates activity and dampens regional losses when shocks hit.

At the same time, the GVC literature has long asked for analysis at finer levels of regional resolution. Gereffi (2018) argues that regional heterogeneity is crucial to properly understand the governance and upgrading of GVCs. MacKinnon (2012) focuses on multinational firms and regional production networks. The use of sectorally rich accounts (e.g., Sturgeon et al., 2008; Smith et al., 2014) reveals how chain governance and specialization map into sharply varied regional outcomes. Theory on sequential production and upgrading shows how *lower* trade costs foster latecomer participation (e.g., Zi, 2020); our counterfactuals flip the lens to *higher* costs and trace how the same mechanisms generate heterogeneous regional losses across Europe. Methodologically, we align with the “GVC analysis: a primer” tradition (Fernandez-Stark and Gereffi, 2019)—linking chain structure to measurable outcomes—while implementing it in a global general-equilibrium setting at NUTS-2 resolution. This gives us sub-national incidence with economy-wide consistency, trading off some sectoral granularity emphasized in Sturgeon et al. (2008); Smith et al. (2014) for comprehensive GE coverage.

Related to this strand of work, the last years have seen the emergence of quantitative models that study the regional effects of trade shocks on regional outcomes. Caliendo et al. (2019) provide a leading example that studies the surge of imports from China on local labor markets in the US, attempting to complement empirical work on the ‘China shock’ (Autor et al., 2013) with a general equilibrium model. For this purpose, regional labor market frictions are important. Similarly, seminal work by Dix-Carneiro and Kovak (2017) and Dix-Carneiro et al. (2023) studies trade shocks in regional models.

Second, the unilateral use of import tariffs by the US administrations under President Trump (2017-2020) and after his reelection in 2024 has triggered work on modeling the effects of new trade barriers in quantitative trade models of the type surveyed in Costinot and Rodríguez-Clare (2014). The survey of Caliendo and Parro (2022) gives an excellent overview. Related work has studied more generic disintegration scenarios. For example, Felbermayr et al. (2023) study different scenarios of a trade decoupling of the ‘West’ from the ‘East’; Eppinger et al. (2023) analyze a decoupling of global value chains.

Third, there is a substantial quantitative literature on the welfare effects of EU integration. We draw on this literature as our interest lies in understanding intra-regional trade integration in shaping global trade policy shocks. In particular, we relate to Felbermayr et al. (2022), who use a Caliendo and Parro (2015)-type trade model to estimate and quantify the effects of different integration steps in Europe. Head and Mayer (2021) provide a similar analysis, albeit at a more aggregate level, and they offer an outstanding discussion of related literature. Fontagne and Yotov (2024), similar to us, ask how the negative effects of a decoupling of the EU economy from important external trade partners can be compensated by deeper internal integration. Using a quantitative model without regional details, they find that relatively low efforts can offset what they call the costs of

strategic autonomy.

The paper that our work is most closely related to is the one by Rodriguez-Clare et al. (2025), who study the effects of the US tariffs of 2025 in a quantitative framework that embeds US states into a global trade model. Their work highlights the role of costly geographical labor mobility, downward wage rigidity, and the endogenous emergence of involuntary unemployment. Moreover, they assume that tariff shocks are short-lived. This implies reduced geographical mobility and cumulative welfare losses from tariffs (even if they may be optimal if they were to remain permanently in place). While we study the case of a ‘victim’ region of the US trade war of 2025, they focus on the ‘villain’s perspective’, focusing on the crucial role of tariff revenue. They take the degree of goods and factor market integration in the US as given, while our interest lies in varying trade and mobility costs between member states of the EU. In analyzing the effects of the current US tariffs, our paper also relates to Ignatenko et al. (2025), who take a more aggregate view.

Aside from our model contribution, this paper also introduces the REICIO (“Regionalized Inter-Country Input-Output”) table. This extension to the OECD’s ICIO tables replaces countries within the European Union + Norway, Switzerland and the United Kingdom with their constituting NUTS2 regions. The granularity allows us to study the distributional impact of trade shocks across space.

We believe that our work can inspire further interesting research, for example, on how different regional impacts of actual or potential tariff shocks influence the political stance of regions or member states towards trade agreements or retaliation in the face of illegitimate foreign tariff hikes. It can also be used to calibrate place-based policies that aim to compensate regional real income losses that may arise if the EU liberalizes trade or retaliates in a trade war. Finally, Krebs and Pflüger (2023) has shown that further regional disaggregation within a quantitative trade model is feasible. Their paper moves to the NUTS-3 Level in Germany; our approach can easily be applied to such more granular data at the EU level. Constructing a data set following Krebs and Pflüger (2023) would therefore be worthwhile.

The remainder of this paper is structured as follows. We first give a high-level overview of the employed model that extends existing work by Baqaee and Farhi (2024) by factor mobility frictions in Section 2. In Section 3, we describe the calibration of the model using newly constructed MRIO tables mixing country-level and regional-level information. Section 4 introduces the baseline scenarios and the tariff experiment. The quantification exercise and the corresponding results are presented in Section 5. We conclude in Section 6.

2 A multi-country multi-sector trade model with regions

Our quantitative model builds on the framework introduced by Baqaee and Farhi (2024), which is a multi-country, multi-industry trade model featuring trade in both intermediate and final products. It depicts inter-sectoral, international, and — with our disaggregated baseline data — inter-regional value chains. We extend the model by incorporating labor mobility within countries between regions along the lines of Caliendo and Parro (2022).² International trade is motivated in Baqaee and Farhi (2024) via love of variety production and utility functions following Armington (1969), while Caliendo and Parro (2022) model trade as resulting from Ricardian comparative advantage as in Eaton and Kortum (2002). Our representation follows the former, but note that for a given parametrization, the two ways of modeling international trade are equivalent for all our outcomes of interest (cf. Arkolakis et al., 2012).

2.1 Preferences and final demand

Consumers in N regions, indexed by o and d , have nested CES preferences over regionally differentiated varieties of products in J sectors, indexed by j and k :

$$U_d = \left[\sum_{o=1}^N (\mu^j)^{\frac{1-\sigma}{\sigma}} \left(U_d^j \right)^{\frac{\sigma-1}{\sigma}} \right]^{\frac{\sigma}{\sigma-1}} \quad \text{with}$$

$$U_d^j = \left[\sum_{o=1}^N (\nu_o^j)^{\frac{1-\theta^j}{\theta^j}} \left(q_{od}^{j,C} \right)^{\frac{\theta^j-1}{\theta^j}} \right]^{\frac{\theta^j}{\theta^j-1}},$$

where μ^j and ν_o^j are preference shifters, q_{od}^j is the amount of region o 's variety of sector j consumed in region d , and σ and θ^j are the elasticities of substitution across sectors and across nationally differentiated varieties within sectors, respectively.

Sectoral expenditure shares in final demand are then determined by the relative sectoral to aggregate consumer price indices as follows:

$$\alpha_d^j = \left(\frac{\mu^j P_d^{j,C}}{P_d^C} \right)^{1-\sigma} \quad \text{with} \quad (1)$$

$$P_d^C = \left[\sum_{j=1}^J \left(\mu^j P_d^{j,C} \right)^{1-\sigma} \right]^{\frac{1}{1-\sigma}}, \quad (2)$$

where the C superscript denotes consumer prices. Bilateral expenditure shares within sectors and sectoral price indices are determined in Section 2.3 below.

²Note that we use the word “region” here lightly, in the sense that where the data will only feature one region per country, region is synonymous with country.

2.2 Production and intermediate demand

Each region produces a differentiated variety in each sector with a three-tier nested CES production function, combining (i) value-added F and intermediates M in the uppermost nest, (ii) labor L and local structures S into the value-added component and sectoral bundles into the intermediate component, and (iii) nationally differentiated varieties into the sectoral intermediate bundles:

$$Q_o^j = A_o^j \left[(v_o^{F,j})^{\frac{1-\rho}{\rho}} (F_o^j)^{\frac{\rho-1}{\rho}} + (v_o^{M,j})^{\frac{1-\rho}{\rho}} (M_o^j)^{\frac{\rho-1}{\rho}} \right]^{\frac{\rho}{\rho-1}} \quad \text{with} \quad (3)$$

$$F_o^j = \left[(v_o^{L,j})^{\frac{1-\kappa}{\kappa}} (L_o^j)^{\frac{\kappa-1}{\kappa}} + (v_o^{S,j})^{\frac{1-\kappa}{\kappa}} (S_o^j)^{\frac{\kappa-1}{\kappa}} \right]^{\frac{\kappa}{\kappa-1}}, \quad (4)$$

$$M_o^j = \left[\sum_{k=1}^J (v_o^j)^{\frac{1-\eta}{\eta}} (M_o^{k,j})^{\frac{\eta-1}{\eta}} \right]^{\frac{\eta}{\eta-1}}, \text{ and} \quad (5)$$

$$M_o^{k,j} = \left[\sum_{d=1}^N (\omega_d^j)^{\frac{1-\theta^j}{\theta^j}} (q_{do}^{j,M})^{\frac{\theta^j-1}{\theta^j}} \right]^{\frac{\theta^j}{\theta^j-1}}, \quad (6)$$

where A denotes TFP, v and ω denote input-specific productivity shifters and ρ , κ , and η are elasticities of substitution across inputs (factors vs. intermediates), across factors (labor vs. structures), and across intermediates, respectively. This nested production structure captures value chains across both sectors and regions and the varying extents of substitutability across these layers.

Cost-minimizing input costs are then given by

$$c_o^j = \left[(v_o^{F,j} P_o^{F,j})^{1-\rho} + (v_o^{M,j} P_o^{M,j})^{1-\rho} \right]^{\frac{1}{1-\rho}}, \quad (7)$$

where the prices of the factor and intermediate bundles are given by

$$P_o^{F,j} = \left[(v_o^{L,j} w_o)^{1-\kappa} + (v_o^{S,j} r_o)^{1-\kappa} \right]^{\frac{1}{1-\kappa}} \quad \text{and} \quad (8)$$

$$P_o^{M,j} = \left[\sum_{k=1}^J (v_o^{k,j} P_o^{k,j})^{1-\eta} \right]^{\frac{1}{1-\eta}} \quad (9)$$

and sectoral price indices, as well as wages w and rental prices for local structures r , are characterized in Sections 2.3 and 2.4, respectively, below.

Input cost shares are

$$\beta_o^{F,j} = \left(\frac{v_o^{F,j} P_o^{F,j}}{c_o^j} \right)^{1-\rho} \quad \text{and} \quad \beta_o^{M,j} = \left(\frac{v_o^{M,j} P_o^{M,j}}{c_o^j} \right)^{1-\rho}, \quad (10)$$

$$\gamma_d^{L,j} = \left(\frac{v_o^{L,j} w_d}{P_d^{F,j}} \right)^{1-\kappa} \quad \text{and} \quad \gamma_d^{S,j} = \left(\frac{v_o^{S,j} r_d}{P_d^{F,j}} \right)^{1-\kappa}, \quad (11)$$

$$\gamma_d^{k,j} = \left(\frac{v_o^{k,j} P_d^{k,j}}{P_d^{M,j}} \right)^{1-\eta}, \quad (12)$$

and bilateral input shares within sectors are determined in the next subsection.

2.3 International trade, sectoral output, and aggregate income

Producers and consumers both can source their goods from regions all over the world and have an incentive to do so as their production and utility functions feature a love of variety. Buying products from any other than the home region is subject to iceberg trade costs t and potentially import tariffs τ (with ad-valorem rate $\tilde{\tau} = 1 - \tau$). The trade cost components are summarized in $\phi = t\tau$. As in Baqaee and Farhi (2024) who in this respect follow Antràs and Chor (2018)'s extension of the global input-output trade framework by Caliendo and Parro (2015), all trade cost components may differ across users — i.e. between consumers and producers from different sectors.

The CES structure then implies the following bilateral trade shares for final consumption and intermediate inputs for different sectors, respectively:

$$\pi_{od}^{j,k} = \left(\frac{c_o^j \phi_{od}^{j,k} / A_o^j}{P_d^{j,k}} \right)^{\epsilon^j} \quad \text{and} \quad \pi_{od}^{j,C} = \left(\frac{c_o^j \phi_{od}^{j,C} / A_o^j}{P_d^{j,C}} \right)^{\epsilon^j}, \quad (13)$$

where $\epsilon^j = 1 - \theta^j$ denotes the trade elasticity and sectoral price indices are given by:

$$P_d^{j,k} = \left(\sum_{o=1}^N \left[\frac{\omega_o^j \phi_{od}^{j,k} c_o^j}{A_o^j} \right]^{\epsilon^j} \right)^{1/\epsilon^j} \quad \text{and} \quad P_d^{j,C} = \left(\sum_{o=1}^N \left[\frac{\nu_o^j \phi_{od}^{j,C} c_o^j}{A_o^j} \right]^{\epsilon^j} \right)^{1/\epsilon^j}. \quad (14)$$

Trade shares take the familiar gravity form established by Eaton and Kortum (2002) and capture how geography, technology, and trade policy jointly shape global trade patterns.

A region's total sectoral output equals final and intermediate demand for its products from

all regions:³

$$Y_o^j = \sum_{d=1}^N \frac{\pi_{od}^{j,C}}{\tau_{od}^{j,C}} \alpha_d^j I_d + \sum_{k=1}^J \sum_{d=1}^N \frac{\pi_{od}^{j,k}}{\tau_{od}^{j,k}} \beta_d^{M,k} \gamma_d^{j,k} Y_d^k, \quad (15)$$

where I_d denotes region d 's total income, which combines labor income, a share ι_d of global rental income, as well as tariff revenues T :

$$I_d = w_d L_d + \iota_d \sum_{o=1}^N r_o S_o + T_d. \quad (16)$$

For the two types of primary factor income, we hence follow Caliendo and Parro (2022) and treat them differently. Labor income stays in the respective region, while income from local structures is collected in a global portfolio that is owned by consumers in all regions with different shares, according to which the income is then distributed.

For tariff revenues, we distinguish regions according to the level of disaggregation. Regions that coincide with countries (in our quantification all countries outside the EU) collect tariff revenues and keep it for themselves. The EU, on the other hand, collects the total tariff revenue of imports associated with imports to any EU region and then distributes it according to fixed shares ζ_d (with $\sum_d \zeta_d = 1$):

$$T_d = \sum_{o=1}^N \sum_{j=1}^J \frac{\tilde{\tau}_{od}^{j,C} \pi_{od}^{j,C} \alpha_d^j I_d}{\tau_{od}^{j,C}} + \sum_{k=1}^J \frac{\tilde{\tau}_{od}^{j,k} \pi_{od}^{j,k} \beta_d^{M,k} \gamma_d^{j,k} Y_d^k}{\tau_{od}^{j,k}} \quad \text{if } d \notin EU,$$

$$T_d = \zeta_d \sum_{d' \in EU} \sum_{o=1}^N \sum_{j=1}^J \frac{\tilde{\tau}_{od'}^{j,C} \pi_{od'}^{j,C} \alpha_{d'}^j I_{d'}}{\tau_{od'}^{j,C}} + \sum_{k=1}^J \frac{\tilde{\tau}_{od'}^{j,k} \pi_{od'}^{j,k} \beta_{d'}^{M,k} \gamma_{d'}^{j,k} Y_{d'}^k}{\tau_{od'}^{j,k}} \quad \text{if } d \in EU.$$

2.4 Factor market clearing and equilibrium

To close the model, we need to consider the factor markets. For local structures, we take the standard assumption of fixed immobile endowments and market clearing, implying:

$$r_o S_o = \sum_{j=1}^J \beta_o^{F,j} \gamma_o^{S,j} Y_o^j. \quad (17)$$

For labor, we follow Caliendo and Parro (2022) and distinguish two cases, namely labor being immobile and labor being fully mobile across regions within the same country ($i(o)$ denoting o 's country). The latter leads two real wage equalization across regions within a

³Analogously, a region's total sectoral expenditure combines its final demand with the intermediate product demand required for the production to satisfy the demand for all of its products in all destination markets:

$$X_d^j = \sum_{k=1}^J \beta_d^{M,k} \gamma_d^{j,k} \left(\sum_{o=1}^N \frac{\pi_{do}^k}{\tau_{do}^k \zeta_{do}^k} X_o^k \right) + \alpha_d^j I_d.$$

country. These two assumptions on labor mobility pin down the regional labor force either ex- or endogenously:

$$L_o = \bar{L}_o \quad \text{if labor is immobile,} \quad (18)$$

$$L_o = \frac{\sum_j \beta_o^{F,j} \gamma_o^{L,j} Y_o^j / P_o^C}{\sum_{d \in i(o)} \sum_j \beta_d^{F,j} \gamma_d^{L,j} Y_d^j / P_d^C} L_{i(o)} \quad \text{if labor is mobile within countries,} \quad (19)$$

where $L_{i(o)} \equiv \sum_{d \in i(o)} L_d$ denotes the total labor force in country $i(o)$. Labor markets are assumed to clear, pinning down the regional wages as:

$$w_o = \frac{\sum_{j=1}^J \beta_o^{F,j} \gamma_o^{L,j} Y_o^j}{L_o}. \quad (20)$$

With this final condition, we can now formalize the equilibrium in our multi-region trade model.

Definition 1 For given endowments with local structures S , technology, preference, and distributional parameters A , μ , σ , ν , θ , v , ρ , κ , η , and ω , trade costs t , and tariffs τ , an equilibrium is a set of labor allocations L , wages w , rental prices r , and intermediate, consumer, and aggregate prices P that satisfy conditions (1)–(20).

2.5 Equilibrium in changes

We follow Dekle et al. (2007, 2008) and re-write the equilibrium conditions in relative changes, where $\hat{x} \equiv x/x'$ denotes the ratio of the counterfactual value x' to the baseline value x . This has the advantage that technology and preference shifters, as well as the level of iceberg trade costs do not have to be estimated or calibrated.

Definition 2 Let $\{L, w, r, P\}$ be a baseline equilibrium for trade costs t and tariffs τ and $\{L', w', r', P'\}$ be a counterfactual equilibrium for trade costs t' and tariffs τ' . Then, $\{\hat{L}, \hat{w}, \hat{r}, \hat{P}\}$ satisfy the following equilibrium conditions (21)–(36):

Input costs

$$\hat{c}_d^j = \left(\beta_d^{F,j} \left(\hat{P}_d^{F,j} \right)^{1-\rho} + \beta_d^{M,j} \left(\hat{P}_d^{M,j} \right)^{1-\rho} \right)^{\frac{1}{1-\rho}} \quad (21)$$

Input shares

$$\beta_d^{F,j'} = \beta_d^{F,j} \left(\frac{\hat{P}_d^{F,j}}{\hat{c}_d^j} \right)^{1-\rho} \quad \text{and} \quad \beta_d^{M,j'} = \beta_d^{M,j} \left(\frac{\hat{P}_d^{M,j}}{\hat{c}_d^j} \right)^{1-\rho} \quad (22)$$

Factor price index

$$\hat{P}_d^{F,j} = \left(\gamma_d^{L,j} (\hat{w}_d)^{1-\kappa} + \gamma_d^{S,j} (\hat{r}_d)^{1-\kappa} \right)^{\frac{1}{1-\kappa}} \quad (23)$$

Factor shares

$$\gamma_d^{L,j'} = \gamma_d^{L,j} \left(\frac{\hat{w}_d}{\hat{P}_d^{F,j}} \right)^{1-\kappa} \quad \text{and} \quad \gamma_d^{S,j'} = \gamma_d^{S,j} \left(\frac{\hat{r}_d}{\hat{P}_d^{F,j}} \right)^{1-\kappa} \quad (24)$$

Intermediate price index

$$\hat{P}_d^{M,j} = \left(\sum_{k=1}^J \gamma_d^{k,j} (\hat{P}_d^{k,j})^{1-\eta} \right)^{\frac{1}{1-\eta}} \quad (25)$$

Intermediate shares

$$\gamma_d^{k,j'} = \gamma_d^{k,j} \left(\frac{\hat{P}_d^{k,j}}{\hat{P}_d^{M,j}} \right)^{1-\eta} \quad (26)$$

Prices

$$\hat{P}_d^{j,k} = \left(\sum_{o=1}^N \pi_{od}^{j,k} [\hat{\phi}_{od}^{j,k} \hat{c}_o^j]^{-\theta^j} \right)^{-1/\theta^j} \quad \text{and} \quad \hat{P}_d^{j,C} = \left(\sum_{o=1}^N \pi_{od}^{j,C} [\hat{\phi}_{od}^{j,C} \hat{c}_o^j]^{-\theta^j} \right)^{-1/\theta^j} \quad (27)$$

Trade shares

$$\pi_{od}^{j,k'} = \pi_{od}^{j,k} \left(\frac{\hat{c}_o^j \hat{\phi}_{od}^{j,k}}{\hat{P}_d^{j,k}} \right)^{-\theta^j} \quad \text{and} \quad \pi_{od}^{j,C'} = \pi_{od}^{j,C} \left(\frac{\hat{c}_o^j \hat{\phi}_{od}^{j,C}}{\hat{P}_d^{j,C}} \right)^{-\theta^j} \quad (28)$$

Output

$$Y_o^{j'} = \sum_{d=1}^N \frac{\pi_{od}^{j,C'}}{\tau_{od}^{j,C'} \zeta_{od}^{j,C'}} \alpha_d^{j'} I_d' + \sum_{k=1}^J \sum_{d=1}^N \frac{\pi_{od}^{j,k'}}{\tau_{od}^{j,k'} \zeta_{od}^{j,k'}} \beta_d^{M,k'} \gamma_d^{j,k'} Y_d^{k'} \quad (29)$$

Consumer price index

$$\hat{P}_d^C = \left(\sum_{k=1}^J \alpha_d^k (\hat{P}_d^{k,C})^{1-\sigma} \right)^{\frac{1}{1-\sigma}} \quad (30)$$

Consumption shares

$$\alpha_d^{j'} = \alpha_d^j \left(\frac{\hat{P}_d^{j,C}}{\hat{P}_d^C} \right)^{1-\sigma} \quad (31)$$

Income

$$I'_d = \hat{w}_d \hat{L}_d w_d L_d + \iota_d \sum_o \hat{r}_o r_o S_o + T'_d \quad (32)$$

Tariff revenue

$$T'_d = \sum_{o=1}^N \sum_{j=1}^J \frac{\tilde{\tau}_{od}^{j,C'} \pi_{od}^{j,C'} \alpha_d^{j'} I'_d}{\tau_{od}^{j,C'}} + \sum_{k=1}^J \frac{\tilde{\tau}_{od}^{j,k'} \pi_{od}^{j,k'} \beta_d^{M,k'} \gamma_d^{j,k'} Y_d^{k'}}{\tau_{od}^{j,k'}} \quad \text{if } d \notin EU \quad (33a)$$

$$T'_d = \zeta_d \sum_{d' \in EU} \sum_{o=1}^N \sum_{j=1}^J \frac{\tilde{\tau}_{od'}^{j,C'} \pi_{od'}^{j,C'} \alpha_{d'}^{j'} I'_{d'}}{\tau_{od'}^{j,C'}} + \sum_{k=1}^J \frac{\tilde{\tau}_{od'}^{j,k'} \pi_{od'}^{j,k'} \beta_{d'}^{M,k'} \gamma_{d'}^{j,k'} Y_{d'}^{k'}}{\tau_{od'}^{j,k'}} \quad \text{if } d \in EU \quad (33b)$$

Labor force

$$\hat{L}_o = 1 \quad \text{if labor is immobile} \quad (34a)$$

$$\hat{L}_o = \frac{\sum_j \lambda_o^j \hat{\beta}_o^{F,j} \hat{\gamma}_o^{L,j} \hat{Y}_o^j / \hat{P}_o^C}{\sum_{d \in i(o)} \frac{L_d}{L_{i(o)}} \sum_j \lambda_d^j \hat{\beta}_d^{F,j} \hat{\gamma}_d^{L,j} \hat{Y}_d^j / \hat{P}_d^C} \quad \text{if labor is mobile across (some) regions} \quad (34b)$$

where $\lambda_o^j \equiv (\beta_o^{F,j} \gamma_o^{L,j} Y_o^j) / (w_o L_o)$ is the baseline share of sector j in region o 's total labor income.

Wage

$$\hat{w}_o = \frac{1}{\hat{L}_o w_o L_o} \sum_{j=1}^J (\beta_o^{F,j'} \gamma_o^{L,j'} Y_o^{j'}) \quad (35)$$

Rental price

$$\hat{r}_o = \frac{1}{r_o S_o} \sum_{j=1}^J (\beta_o^{F,j'} \gamma_o^{S,j'} Y_o^{j'}) \quad (36)$$

Note that compared to standard quantitative trade models we allow for labor to move between regions in countries or groups of countries (here the EU). Specifically, this means that in contrast to a world with immobile labor, where regional labor supply is fixed, with cross-regional mobility workers reallocate to equalize real wages, so the regional labor mass moves in proportion to its share of real labor income in the country total. Additionally, allowing for regions within (EU) countries, we treat tariffs realistically: For non-EU countries, tariff revenue accrues to the importing country. Within the EU, tariff revenue is pooled and redistributed according to fixed shares ζ_d .

3 Data and Parametrization

We now turn to the data requirements for the quantification exercise. One key contribution of this paper is the construction of the Regionalized Inter-Country Input-Output Tables (REICIO), embedding IO structures at the European NUTS 2 level into the OECD’s ICIO table. We now outline its construction before documenting additional data sources needed for the calibration of the model.

3.1 Constructing the Regionalized Inter-Country Input–Output Tables

This subsection provides an intuitive overview of how we build the Regionalized Inter-Country Input–Output (REICIO) database that embeds European NUTS2 regions into the OECD’s ICIO framework (OECD, 2025). A full technical description with balancing logic and algorithmic details is provided in Appendix A. Figure 1 summarizes the workflow, which proceeds in five stages: (1) preparation of national ICIO blocks, (2) regionalization of national input–output structures, (3) reconstruction of interregional trade patterns, (4) balancing into a coherent multi-regional system, and (5) integration back into the global ICIO with distance-adjusted linkages to non-EU partners.

The goal is to replace each EU (plus UK, Norway, Switzerland) country in the global ICIO with its constituent NUTS2 regions while preserving the original country totals when re-aggregated. The resulting table has 10 sectors and 335 spatial units: 288 NUTS2 regions and 47 (non-regionalized) countries. This hybrid structure allows us to follow trade and production linkages from individual European regions through global value chains and to quantify how foreign shocks (such as U.S. tariff hikes) propagate unevenly across space.

Step 1: Preparing National ICIO Blocks. We begin from the OECD ICIO OECD (2025) and collapse its 45 original industries to 10 broad NACE sections to match the availability of regional value added and investment statistics. For each country we then separate intermediate exports from final exports and similarly distinguish intermediate from final imports. This decomposition avoids conflating the role of a sector as a supplier inside value chains with its direct sales to foreign final users.

Step 2: Regionalizing National Tables (SRIO). Within countries that have multiple NUTS2 regions, analogous to and building on Huang and Koutroumpis (2023), we disaggregate national production and absorption across regions using (i) regional shares of gross value added and components of final demand from Eurostat’s regional accounts, and (ii) a simple specialization (location quotient) measure that scales national technical input coefficients downward in sectors where a region is under-represented. This preserves national production technologies where a region is strongly active, while preventing unrealistically large intermediate flows in sectors that are tiny locally. Where regional detail is

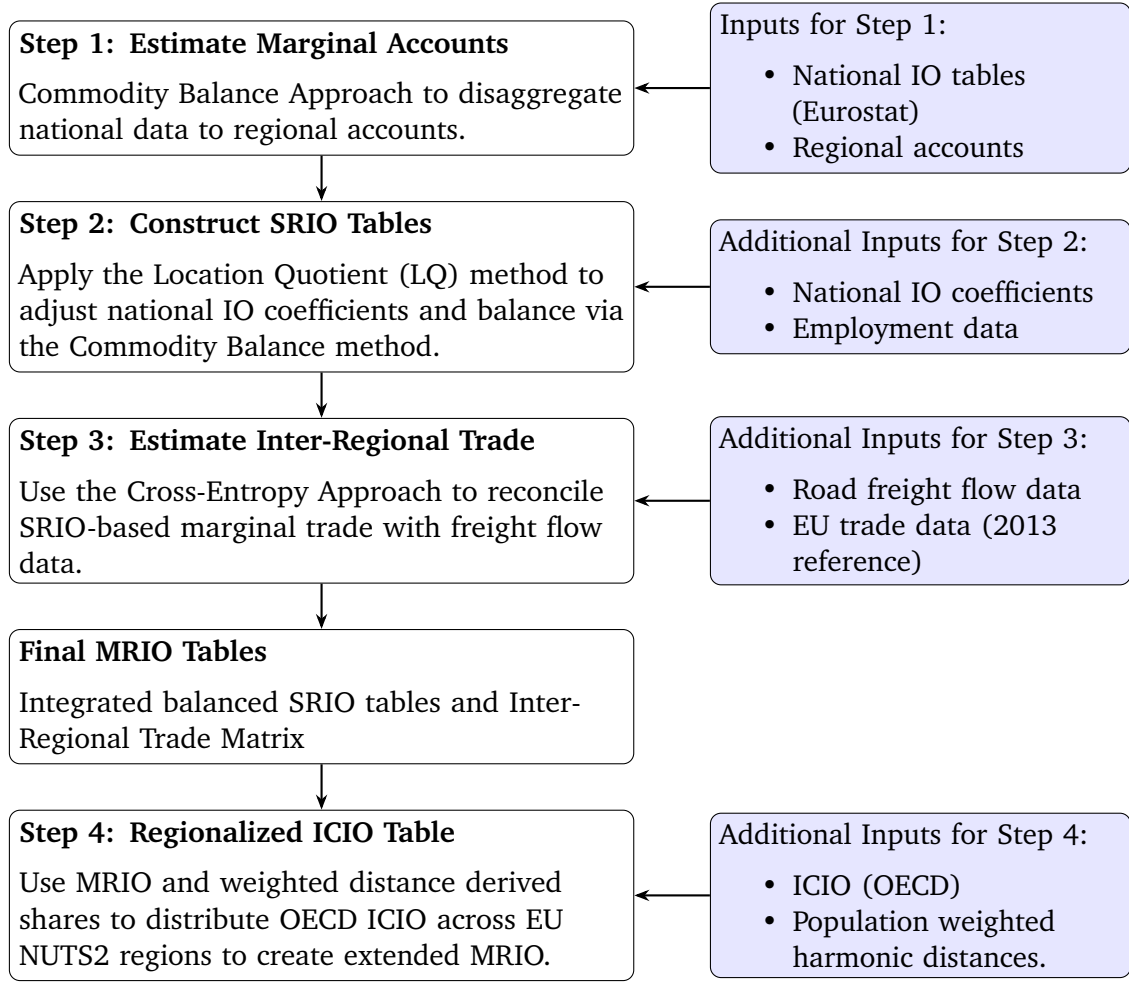


Figure 1: Workflow for Constructing Regionalized Inter-Country Input-Output (REICIO) Tables with Corresponding Data Inputs.

missing (e.g. parts of Switzerland or smaller public/non-market aggregates), we impute using structurally similar neighboring countries' sectoral profiles. Countries with only one region simply retain their national block unchanged.

Exports at the regional level are inferred residually (output minus intermediate use minus final demand) and then split into intermediate vs. final components using each sector's national export composition. This produces a set of stand-alone "single-region IO" (SRIO) tables with consistent regional totals for intermediate exports, final exports, and imports.

Step 3: Reconstructing Interregional Trade Patterns. Direct data on bilateral intermediate flows between all NUTS2 regions are not fully available. To inject spatial structure, we use the 2017 JRC freight and interregional trade matrix, disaggregated by origin sector, destination sector, and region pair (A et al., 2023). After standardizing region codes (e.g. aggregating London subregions, harmonizing Norwegian and Croatian splits, and distributing Swiss flows using value-added shares), we convert these observed shipments

into a set of proportional “patterns” that describe how a region’s sectoral exports are distributed across other regions, and conversely how a destination sources its imports across origins. Applying these proportions to the country-level ICIO flows yields a multi-regional intermediate flow matrix, and an analogous one for final demand categories. At this stage, national totals match by construction, but generally disagrees with the regional export and import totals implied by Step 2.

Step 4: Balancing (European MRIO). We then reconcile the spatial pattern with the regional totals via a blockwise iterative proportional fitting (IPF) procedure. Conceptually, for every ordered region pair we gently rescale the 10×10 sectoral block until (a) each region’s outward intermediate sales across all partners match its SRIO export totals, and (b) each region’s inward intermediate purchases match its SRIO import totals, while staying as close as possible to the spatial pattern extracted from the freight data. Intra-regional (within-country, within-region) use is held fixed at the SRIO diagonal. Final demand for locally absorbed goods is likewise overwritten with regional information, while interregional final demand flows retain their structure. The result is a balanced European multi-regional IO system that is simultaneously consistent with (i) regionally observed (or inferred) production and demand aggregates and (ii) empirically grounded spatial trade patterns.

Step 5: Global Embedding and Distance Adjustment. Finally, we insert the European regional block back into the global ICIO. For trade between two non-European countries we keep the original ICIO entries. For trade between a non-EU country and a European country that has now been disaggregated, we allocate the country’s aggregate flow across its regions using two ingredients: (a) each region’s share in the relevant export or import total (derived from the balanced European MRIO) and (b) a population-weighted bilateral distance between the region and the foreign country. This implements a parsimonious gravity-style correction that shifts more of a country’s extra-EU trade toward its geographically closer regions. We iterate light proportional adjustments so that, after reconstructing countries from their regions, the original ICIO is recovered (up to small numerical tolerances) for both intermediate flows and final demand.

Comparison to Existing European MRIOs Our procedure differs from purely survey-based or multilateral balancing approaches (e.g. FIGARO, WIOD sub-national extensions) by (i) explicitly separating intermediate from final exports before regionalization (reducing bias in export origin attribution for specialized regions), (ii) leveraging a sector-pair specific prior from observed interregional shipments (JRC freight matrix) rather than uniform proportional allocation, (iii) incorporating a distance-adjusted distribution of global (non-EU) linkages ensuring gravity-consistent spatial heterogeneity.

However, some obvious limitations remain: (a) The absence of explicit cross-border commuting or factor income adjustments, likely particularly relevant for smaller regions; (b) identical intermediate/final export composition across regions within a country; (c) reliance on a single benchmark year for spatial patterns; and (d) partial imputation in public/non-market sectors for Switzerland and small regions. Incorporating enterprise microdata, multi-period freight matrices, and region-specific export customs records would allow relaxing these assumptions. Extending the methodology to NUTS3 is feasible (cf. Krebs and Pflüger (2023) for Germany), but would exacerbate some of the limitations.

The resulting REICIO tables form the quantitative backbone for our counterfactual simulations. The procedure above results in a MRIO with 10 sector and 335 regions, composed of 288 NUTS 2 regions and 47 countries. They provide (i) the full regional input structure needed to trace tariff-induced cost shocks through global and regional value chains, and (ii) region- and sector-specific final demand exposure necessary for decomposing the regional economic impact and mobility responses discussed below.

3.2 Additional data requirements

Aside from the calibration for various economic fundamentals provided by REICIO, our analysis relies on standard sources for the remaining necessary variables and parameters. Up-to-date data on labor shares in European NUTS2 regions is taken from Minniti et al. (2025). As is now customary in the related trade literature, trade elasticities are sourced from Fontagné et al. (2022). For the elasticities of substitution between sectors in consumption (σ), between value added and intermediates (θ), between primary factors (γ), and between intermediates from different sectors (η), we follow Baqaee and Farhi (2024) and Atalay (2017) and set $(\sigma, \theta, \gamma, \eta) = (0.9, 0.5, 1, 0.2)$.

4 Counterfactual exercises

Having constructed the model and gathered the necessary data for its calibration, we now turn to the quantification exercise. Specifically, using the detailed data on regional specializations and linkages, we can evaluate the heterogeneous response of regions towards a trade shock — here the tariffs introduced by the US administration in 2025. Instead of evaluating different tariff scenarios, we analyze the impact of the actually imposed tariff regime (as of November 2025) but vary the baseline calibrations. We ask (and try to answer) whether the current state of EU integration has helped mitigating the impact. Aside from production responses and trade diversion our model setup allows us to evaluate the impact of free movement of labor within the EU — one tenet of EU integration. We can also simulate a world in which EU integration has progressed further, as outlined by the so-called Draghi Report.

Hence, we first simulate several counterfactual baseline scenarios that we then shock with the same tariff regime. Specifically, we construct four baselines:

1. **Integrated EU** — the calibration which most closely resembles the current state of the world, in which 27 European nations form the European Union with close trade integration internally, a joint external trade policy (and hence tariffs), as well as free labor mobility.
2. **Integrated Single Countries** — a counterfactual initial equilibrium that shares the trade policy features of the “Integrated EU” scenario, but does not have freedom of movement across national boundaries (but still allowing for mobility across regions within countries).
3. **Fragmented Single Countries** — a counterfactual initial equilibrium that abstracts entirely from European integration, i.e., without freedom of movement, no common currency, and no “single market”, leaving trade policy up to each European country (with each enforcing current EU trade policy separately, and *most-favored nation* tariff rates towards each other).⁴
4. **Deep Integration EU** — the polar opposite counterfactual initial equilibrium that builds on the “Integrated EU” scenario and deepens internal markets by assuming 15% lower non-tariff barriers following Felbermayr et al. (2022).

Each of the counterfactual baselines is subjected to the exact same tariff shock: the actual schedule of US import tariffs in place in November 2025, applied to all trading partners (see Table 2 in Appendix B).

Comparing outcomes across these four baselines for one and the same tariff scenario allows us to decompose the insurance role of European integration along several margins. First, contrasting the “Integrated EU” and “Integrated Single Countries” baselines isolates the contribution of cross-border labor mobility for cushioning regional losses, holding the trade policy environment fixed. Second, comparing “Integrated Single Countries” to “Fragmented Single Countries” quantifies the additional protection afforded by a common external tariff, the elimination of internal tariffs, and lower intra-EU trade costs, keeping labor mobility restricted to within-country moves. Third, the gap between the “Integrated EU” and “Fragmented Single Countries” baselines summarizes the overall value of existing EU integration — in both goods and factor markets — for mitigating the regional incidence of global trade wars. Finally, juxtaposing the “Integrated EU” and “Deep Integration EU” baselines informs how much additional insurance further reductions in internal non-tariff barriers could provide, i.e. the marginal payoff from pushing the Single Market closer to the vision articulated in recent policy reports. Together, these comparisons yield a structured decomposition of how much of the observed heterogeneity in regional outcomes

⁴Estimates to “rewind” the European integration are taken from Felbermayr et al. (2022).

is due to (i) geography and specialization alone, (ii) current levels of EU integration, and (iii) hypothetical further deepening of internal markets.

5 Results

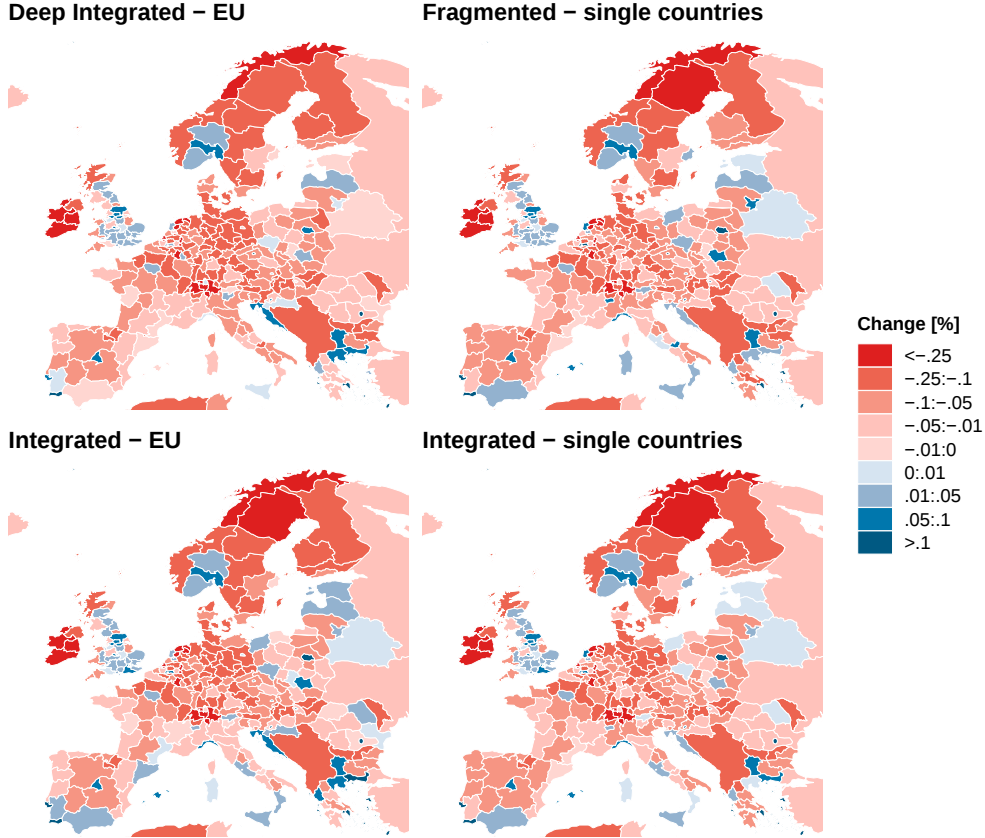


Figure 2: Real value added change due to US tariffs across European regions under the four baseline scenarios.

Figure 2 plots the regional changes in real value added across Europe under the four baseline scenarios. Despite the conceptual differences between these baselines, the spatial pattern of losses is remarkably stable: most regions experience moderate declines, with only a handful of areas — most prominently parts of Ireland, Northern Europe, and selected industrial clusters — exhibiting more pronounced contractions. The broad similarity across scenarios reflects that the external shock is identical and the underlying production structure of each region is unchanged. Fragmentation or deeper integration shifts the magnitude of losses somewhat, but it does not reconfigure which regions are fundamentally exposed. The map therefore highlights that, in terms of production responses alone, the EU-wide pattern of vulnerability to US tariffs is largely predetermined by existing specialization patterns and participation in global value chains.

Production responses, however, are only part of the adjustment margin. Because our model

incorporates labor mobility — either within countries or, in the fully integrated scenarios, across all EU regions — the distribution of real value added cannot be interpreted without considering how workers relocate in response to the shock. Labor mobility introduces an additional channel of amplification or insulation: regions facing value-added declines may adjust by shedding labor, while others absorb inflows that partly offset production losses. The scope of these reallocations depends directly on the integration baseline. Fragmented scenarios confine mobility to national borders, limiting the ability of workers to move toward less affected areas, whereas the integrated baselines allow for movement across the entire EU. Understanding the spatial pattern of labor flows is therefore essential for interpreting the ultimate distribution of regional welfare changes.

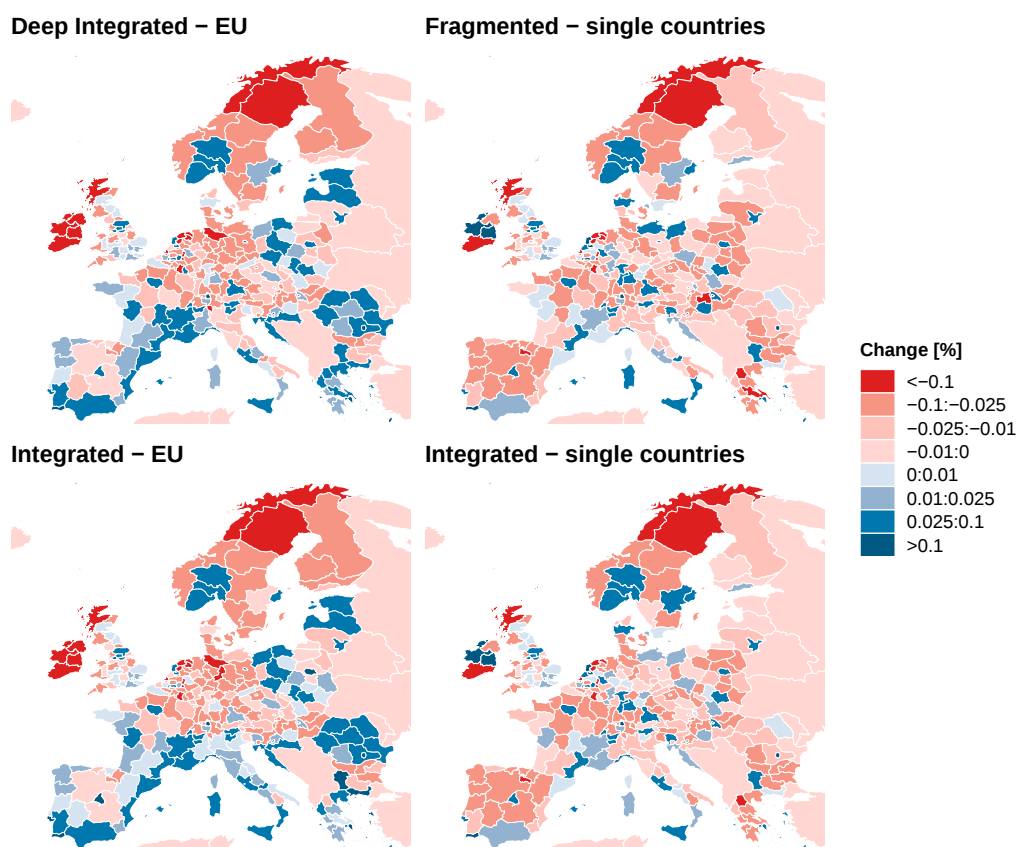


Figure 3: Change in regional labor supply due to US tariffs across Europe.

Figure 3 shows the corresponding changes in regional labor supply, and here the differences across baselines are substantial. In the *Fragmented Single Countries* scenario, where mobility is restricted to national borders, the adjustment remains largely country-internal: strongly affected regions (in terms of change in value added), e.g. in Ireland or Germany, shed workers, but these workers can only move to other regions within the same country, producing sharp domestic contrasts and very uneven patterns of outflows and inflows. The *Integrated Single Countries* baseline exhibits similar within-country reshuffling, with somewhat smoother responses in larger Member States, but still no cross-border movement.

By contrast, once EU-wide mobility is allowed, the spatial structure of adjustment changes markedly. In the *Integrated EU* and especially the *Deep Integration EU* scenarios, regions with value-added losses in the periphery (notably Ireland, parts of Sweden and Germany) shed labor that is absorbed by better-performing regions across borders, including Poland Southern France, Italy, and Spain. The overall pattern becomes much more diffuse, and the magnitude of local contractions is smaller because labor flows are spread across the entire Union. These differences mirror the earlier results on dispersion: deeper integration does not alter which regions are negatively hit by the tariff shock, but it systematically changes how much they are hurt by enabling labor to relocate toward opportunity, compressing regional imbalances through wider adjustment margins.

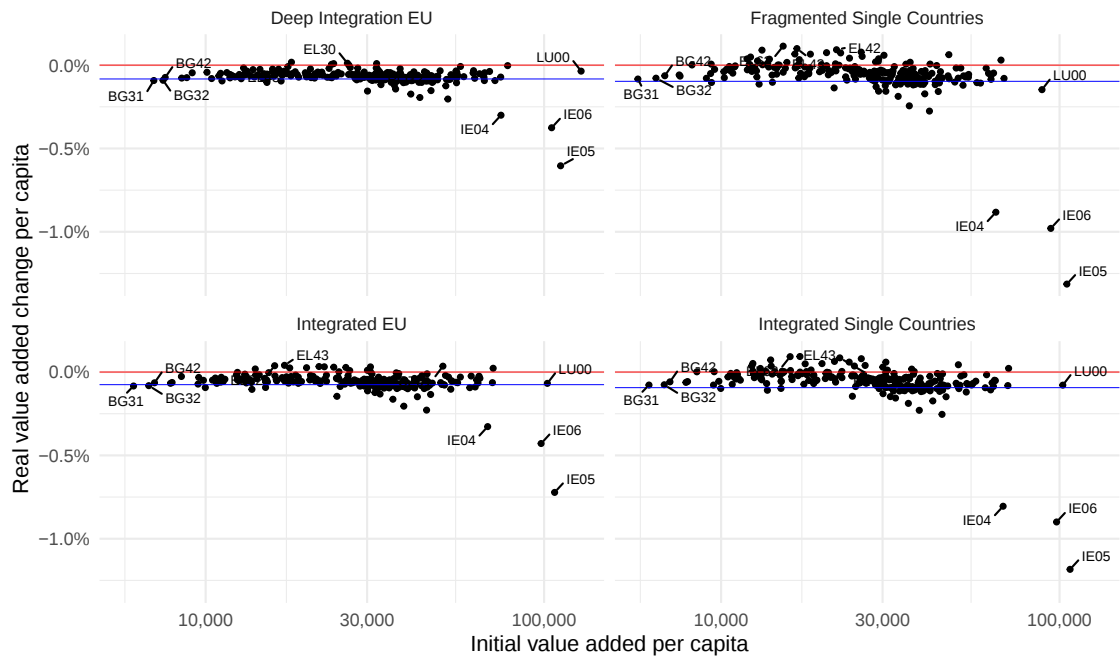


Figure 4: Change in real value added per capita and initial levels of value added per capita.

Figure 4 maps the regional distribution of real value added per capita changes in response to the 2025 US tariffs against the initial level of value added per capita under the four baseline scenarios. Two patterns stand out. First, the level of European integration substantially affects both the average impact and the dispersion of regional outcomes. In the *Fragmented Single Countries* baseline, regions face the largest losses on average (weighted mean around -0.10%) and exhibit the widest distribution (standard deviation approximately 0.21 percentage points). Introducing within-country labor mobility but maintaining national borders — the *Integrated Single Countries* baseline — reduces both the mean loss and the dispersion, but only modestly. In contrast, full integration of EU goods and labor markets (*Integrated EU*) lowers the average decline markedly to about -0.076% — or 25% lower — and cuts the cross-regional variation by more than half relative

to fragmentation. This reflects that the current degree of EU integration already provides sizeable insurance against asymmetric tariff shocks originating outside Europe.

Second, further deepening of EU internal integration (*Deep Integration EU*) shows a striking asymmetry: it does not reduce the *average* tariff-induced loss below that observed in the *Integrated EU* baseline, but it reduces the *dispersion* even further, to the lowest level among all scenarios (standard deviation around 0.08 percentage points). The fact that deeper integration does not move the mean while compressing the distribution indicates that its primary effect is to attenuate regional heterogeneity rather than to improve the EU-wide aggregate outcome. In other words, deeper internal integration operates as a *risk-reduction* mechanism: it shields highly exposed or structurally vulnerable regions, thereby narrowing the cross-sectional range of outcomes without improving the average. Once the EU is already highly integrated, additional reductions in internal frictions mostly improve risk-sharing and reduce concentration of exposure rather than generating EU-wide efficiency gains in the face of an external shock.

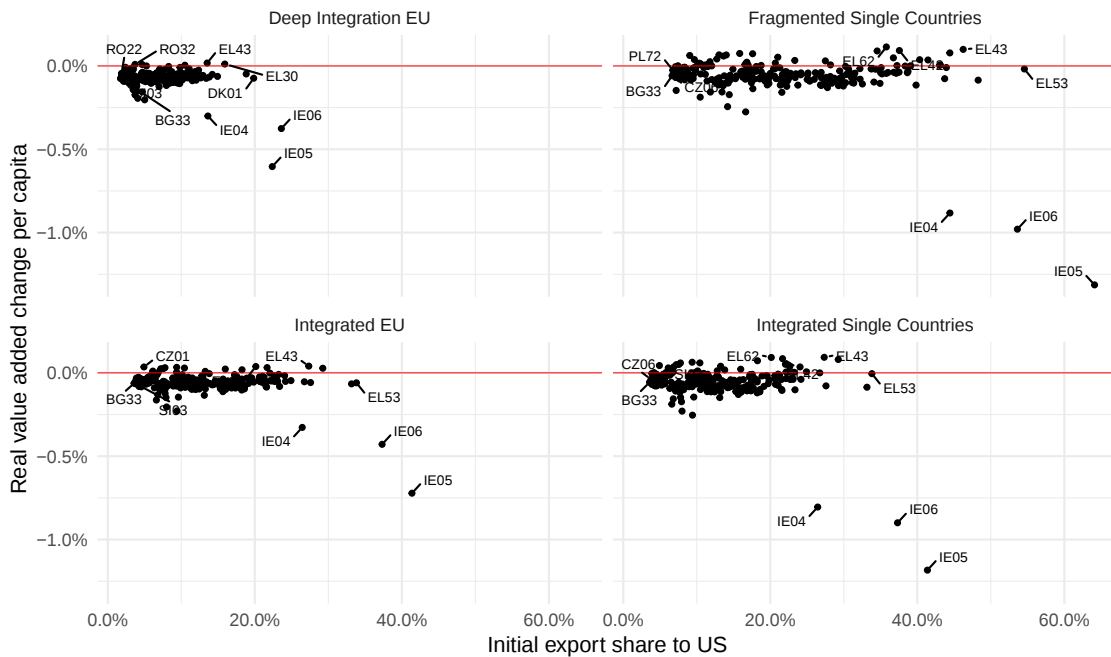


Figure 5: Real value added changes and initial export exposure to the United States.

Figure 5 compares a region's real value added changes to its initial export exposure to the United States across the four baseline scenarios. The striking feature of all four panels is the absence of a strong systematic relationship between export intensity and the magnitude of the tariff shock once the Irish outliers (IE04–IE06) are disregarded. For most regions, the impact varies only weakly with initial US exposure. What differs sharply across scenarios is instead the *distribution of exposure itself*. In the fragmented and lightly integrated baselines, regions exhibit a wide range of export shares to the United States, with some exceeding

30–40%, leaving them structurally vulnerable to US-specific shocks. As market integration deepens, both through lower intra-EU frictions and internal labor mobility, these exposure levels compress dramatically: in the *Integrated EU* and especially the *Deep Integration EU* baselines, nearly all regions cluster at very low exposure levels, typically below 10%. This mechanical reduction in extra-EU dependence explains why the dispersion of real value added losses shrinks with integration. Deeper EU integration does not change the (lack of a) direct exposure–impact relationship, but it sharply reduces the underlying heterogeneity in exposure, thereby limiting how far any single region can fall.

6 Conclusion

This paper has combined a multi-country, multi-sector quantitative trade model with regional labor mobility and a new NUTS2-based Regionalized Inter-Country Input–Output database (REICIO) to study how the 2025 US tariffs affect European regions and how much insurance the EU Single Market provides. We compared the incidence of the newly imposed tariffs across four alternative EU integration baselines, ranging from a fully fragmented Europe with nationally segmented goods and labor markets to a deeply integrated Single Market with substantially lower internal trade costs.

Three main findings emerge. First, the geography of vulnerability to US tariffs is remarkably stable across baselines. The same groups of regions — most notably parts of Ireland, Northern Europe and specific industrial clusters — tend to lose in all scenarios. This reflects that the structure of production and participation in global value chains largely predetermine which regions are exposed once the pattern of US protection is fixed. Regional integration does not reshuffle where Europe is specialized, but it does change how shocks are absorbed.

Second, the depth of EU integration matters quantitatively for both the average level and dispersion of losses. In the absence of EU integration, fragmented single countries experience the largest declines in real value added per capita and the widest spread of regional outcomes. Moving from this benchmark to a world with the current degree of integration in both goods and labor markets — our *Integrated EU* baseline — reduces the average regional loss by around 25% and cuts the cross-regional variation by more than half. This is the central result of the paper: existing EU integration already acts as a sizeable insurance mechanism against extra-European tariff shocks, even though the shock itself is entirely external and the pattern of specialization is held fixed. Further reductions in internal non-tariff barriers, captured by the *Deep Integration EU* baseline, do not lower the average loss relative to the current Single Market, but they visibly narrow the cross-sectional distribution of regional impacts. Deeper integration primarily reduces downside risk for highly exposed or structurally vulnerable regions, rather than raising the

EU-wide mean.

Third, labor mobility is central to these patterns. With immobile workers, regional shocks would be absorbed almost entirely through local prices and quantities, leading to sharp and persistent divergences. Allowing mobility within countries already enables some reallocation from heavily affected to less affected regions, modestly mitigating losses. However, it is cross-border EU mobility — in combination with low internal trade costs — that meaningfully spreads the adjustment burden. In our integrated baselines, workers move from regions hit hardest by US tariffs, such as parts of Ireland or Northern Europe, toward better-performing regions elsewhere in the Union. This helps explain why deeper integration compresses the distribution of outcomes even when the average EU loss barely changes: the Single Market enlarges the set of internal margins of adjustment once a shock occurs.

Our analysis also clarifies the mechanism behind the insurance role of the Single Market vis-à-vis the United States. Once the Irish outliers are set aside, changes in regional real value added are only weakly correlated with initial export shares to the US. What matters is not so much the direct bilateral exposure of any given region, but the way in which internal integration allows Europe to reorganize production and absorb the shock collectively. Deeper integration mechanically lowers extra-EU export shares for most regions and provides a large internal market into which activity and workers can be reallocated. In this sense, the Single Market insures Europe not by decoupling it from global trade, but by improving its capacity to adjust when foreign conditions deteriorate.

These findings have several policy implications. First, debates on “strategic autonomy” and the risks of over-dependence on particular trading partners should not be framed purely in terms of bilateral trade shares or tariff exposure. A more fragmented Europe with the same aggregate openness would suffer larger and more uneven losses. Second, measures that weaken the Single Market — such as new internal barriers, restrictions on labor mobility, or uncoordinated national responses to external shocks — would reduce this insurance capacity and amplify regional divergence in the face of future trade conflicts. Third, further deepening of the Single Market, even if it delivers limited gains in average income in normal times, can still be valuable as a form of macro-insurance against large external shocks.

The REICIO database developed for this paper opens several avenues for future research. It can be used to study other trade or climate policies with rich regional incidence, to calibrate place-based adjustment assistance, or to analyze how prospective enlargements of the EU would reshape the geography of exposure and insurance. Combining REICIO with political outcomes could help explain variation in regional support for trade agreements, retaliatory measures or further integration. Extending the framework to allow for frictional labor market adjustments, imperfect pass-through, or explicitly dynamic adjustment would

also be natural next steps. Overall, our results suggest that the Single Market is not only an engine of efficiency and long-run growth, but also a critical risk-sharing device for Europe in a world of rising protectionism: in the face of large external shocks such as the 2025 US tariffs, a deeply integrated EU does not prevent losses altogether, but it makes them smaller on average and, crucially, more evenly spread across regions.

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A Technical Details on Construction of REICIO

Below, let i, j denote NUTS2 regions (or a single aggregate region if a country is uni-regional), c, d countries, and $s, p \in \mathcal{S}$ sectors ($|\mathcal{S}| = 10$). Write $Z_{is,jp}$ for intermediate deliveries from region-sector (i, s) to (j, p) , $F_{is,f}$ for final demand component $f \in \mathcal{F}$ ($\mathcal{F} = \text{HFCE, NPISH, GGFC, GFCE, INVNT}$), X_{is} gross output, VA_{is} value added, and TLS_{is} net indirect taxes (taxes minus subsidies). Country-level ICIO objects use superscripts C and regionalized objects superscripts R . The goal is a block matrix combining (a) the intra-EU regional IO sub-system and (b) country-level rest-of-world blocks, such that aggregation over regions within each EU Member State recovers the original ICIO tables (up to numerical tolerances).

Step 0: Sectoral aggregation of OECD ICIO The OECD’s ICIO tables provide 45 sectors. We aggregate to 10 NACE sections $\{A, B-E, F, \dots, R-U\}$ using a deterministic concordance. Let M be a 45×10 binary mapping matrix (with proportional allocation only if the ICIO sector spans multiple NACE sections). Aggregation of the global intermediate block $Z^{C,45}$ and final demand $F^{C,45}$ proceeds by:

$$Z^{C,10} = M^\top Z^{C,45} M, \quad F^{C,10} = M^\top F^{C,45}.$$

All downstream regionalization operates at this 10-sector resolution, matching the availability of regional gross value added (GVA) and capital formation data.

Step 1: National decomposition of ICIO (Intermediate vs. Final Exports) For each ICIO country c , we extract a country-specific National IO Table (NIOT). We (i) separate intermediate exports (IEX) from final exports (FEX) rather than using a single export column, and (ii) construct intermediate (IIM) and final imports consistently. From the country block Z_c^C and final demand vectors we compute:

$$\begin{aligned} \text{FEX}_{c,s} &= \sum_{c' \neq c} \sum_{f \in \mathcal{F}} F_{cs',f}^{c'}, \\ \text{IEX}_{c,s} &= \sum_{c' \neq c} \sum_{p \in \mathcal{S}} Z_{cs',c'p}. \end{aligned}$$

and analogously for imports. Negative or near-zero residuals generated by subtraction are truncated at 10^{-7} to maintain numerical stability in later balancing (code guards against underflows). The output of Step 1 is a list of NIOTs with explicit columns for IEX and FEX and rows for IIM, VA, taxes/subsidies (TLS), and total output.

Step 2: Regionalization via Value Added Shares and Location Quotients Within multi-region countries (those with more than one NUTS2 region), national NIOT sectoral

totals are disaggregated using two complementary ingredients:

1. Regional shares of value added and final demand: Eurostat regional accounts provide GVA (RGVA) and gross fixed capital formation (RGFCF) at NUTS2 for each sector. After harmonization (e.g. UK post-Brexit coverage and treating CH, NO substitutions where necessary), we compute GVA shares

$$\omega_{i,s}^{\text{VA}} = \frac{\text{RGVA}_{i,s}}{\sum_{i' \in c} \text{RGVA}_{i',s}},$$

and analogously for GFCF and household consumption proxies (HFCE, NPISH, GGFC) when region specific data exist. Missing sectoral entries (e.g. Swiss public sector disaggregation) are imputed by borrowing average within-country relative sector profiles from structurally similar neighboring countries.

2. Location Quotient: To adjust intermediate input structures we compute a sector–region specialization

$$\text{SLQ}_{i,s} = \frac{(\text{VA}_{i,s} / \sum_p \text{VA}_{i,p})}{(\sum_i \text{VA}_{i,s} / \sum_{i,p} \text{VA}_{i,p})},$$

truncated at 1 (standard supply-driven adaptation). For $\text{SLQ}_{i,s} < 1$ the regional intermediate input coefficients are proportionally shrunk relative to national coefficients, reflecting limited local production capacity in under-specialized sectors.

Let $a_{s,p}$ denote national intermediate input coefficients. The unbalanced regional intermediate use matrix for region i is constructed as:

$$\tilde{Z}_{i,s,p} = a_{s,p} \cdot [X_{i,p} - \text{TLS}_{i,p} - \text{VA}_{i,p}] \cdot \text{SLQ}_{i,s},$$

where $X_{i,p}$ is initialized by scaling national gross output with the corresponding ω^{VA} shares (an initial proportionality that is later internally rebalanced). Final demand components for region i and sector s are $F_{i,s,f} = \omega_{i,s}^f \cdot F_{c,s,f}^C$. Inventories (INVNT) and taxes/subsidies are distributed with GVA shares.

Regional intermediate and final exports for a multi-region country are split using the national ratio of intermediate to total exports:

$$\theta_s = \frac{\text{IEX}_{c,s}}{\text{IEX}_{c,s} + \text{FEX}_{c,s}}, \quad \text{IEX}_{i,s} = \theta_s \cdot \text{EX}_{i,s}, \quad \text{FEX}_{i,s} = (1 - \theta_s) \cdot \text{EX}_{i,s},$$

where $\text{EX}_{i,s}$ is the regional residual $X_{i,s} - \sum_p \tilde{Z}_{i,p,s} - \sum_f F_{i,s,f}$. Small negative $\text{EX}_{i,s}$ due to rounding trigger an automatic local upward adjustment of $X_{i,s}$ (minimal balancing rule). For uni-regional countries (e.g. LU) the NIOT block is carried forward unchanged. The output is a collection of regional single-region IO tables (SRIO) with region-specific

(IEX, FEX, IIM, FIM).

Step 3: Interregional trade matrix Direct NUTS2 bilateral flows do not exist for all sectors. We exploit the JRC interregional trade and transport dataset for 2017 to obtain a rich origin–destination–sector matrix $T_{is,jp}^{\text{JRC}}$. Data cleaning includes: harmonizing NUTS2 codes (e.g. UKI3 $\rightarrow$ UKI1 aggregation), recoding Norwegian and Croatian splits, Swiss regionalization using GVA, and ensuring the 10-sector classification.

For each pair of (origin sector s , destination sector p) we convert the 2017 matrix into a set of weight patterns:

$$\pi_{is \rightarrow jp}^{\text{ex}} = \frac{T_{is,jp}^{\text{JRC}}}{\sum_{j' \neq i} T_{is,j'p}^{\text{JRC}}}, \quad \pi_{is \leftarrow jp}^{\text{im}} = \frac{T_{jp,is}^{\text{JRC}}}{\sum_{j' \neq i} T_{j'p,is}^{\text{JRC}}},$$

aggregated to country–country blocks to match the ICIO structure. These patterns are then combined with the country-level ICIO intermediate blocks for each year t to produce a multi-regional matrix Z_t^R by distributing each national cross-border intermediate flow proportionally across region pairs using π shares. An analogous procedure is applied to final demand (household, government, capital formation) using RHOMOLO SAM regional final demand shares where available, thus refining within-country allocation across the $f \in \mathcal{F}$ columns. The resulting table respects (i) country totals from ICIO, (ii) observed 2017 spatial patterns up to proportional scaling, but (iii) generally violates region-level SRIO export/import totals.

Step 4: Balancing via Iterative Proportional Fitting To reconcile the Z_t^R with (a) region-specific intermediate export vectors $\text{IEX}_{i,\cdot}$ and import vectors $\text{IIM}_{i,\cdot}$ from the SRIO and (b) known intra-regional (diagonal country blocks) intermediate use $Z^{R,\text{intra}}$, we apply a blockwise iterative proportional fitting procedure. For each ordered region pair (i, j) , $i \neq j$, and sector pair (s, p) we construct a seed matrix $S_{is,jp}$ and enforce row targets equal to the SRIO-consistent intermediate exports of (i, s) allocated across p using the prior’s relative pattern; likewise column targets match (j, p) ’s intermediate imports.

Formally, for block (i, j) we solve:

$$\min_{Z_{is,jp} \geq 0} D_{\text{KL}}(Z_{is,jp} \parallel S_{is,jp}) \quad \text{s.t.} \quad \sum_p Z_{is,jp} = \tilde{E}_{is \rightarrow j}, \quad \sum_s Z_{is,jp} = \tilde{M}_{jp \leftarrow i},$$

where $\tilde{E}$ and $\tilde{M}$ are the SRIO-implied bilateral export/import targets (constructed by scaling with prior relative shares), and D_{KL} is the Kullback–Leibler divergence. Intra-regional (same region) blocks are fixed to the SRIO diagonal submatrix $Z_{is,ip}^{R,\text{intra}}$. This yields a balanced European MRIO Z_t^R with exact region-level intermediate trade totals and preserved national aggregates.

Final demand at the regional level F_t^R is then partially replaced (diagonal country blocks) by the SRIIO final demand columns to maintain internally consistent production–absorption identities; off-diagonal interregional final demand flows keep prior proportions. Taxes/subsidies, value added, and total output rows are appended computed from SRIIO (with limited imputation for residual missing TOTAL entries using column sums identities).

Step 5: Embedding Regions into the Global System (REICIO) Let $\mathcal{E}$ denote the set of EU + (EFTA/UK) countries we regionalize. We replace each country $c \in \mathcal{E}$ in the aggregated ICIO with its NUTS2 region set $\mathcal{R}_c$. For any two regionalized regions $i \in \mathcal{R}_c$, $j \in \mathcal{R}_d$ we directly plug in $Z_{is,jp}^R$ and $F_{is,f}^R$. For flows entirely between non-EU countries we retain the original ICIO entries. The off-diagonal interface between regional blocks and non-EU countries requires allocating a country-level flow $Z_{cs,kp}^C$ (where $k \notin \mathcal{E}$) across regions $i \in \mathcal{R}_c$:

$$Z_{is,kp}^{REI} = Z_{cs,kp}^C \cdot \frac{\alpha_{is}^{\text{out}}/d_{i,k}}{\sum_{i' \in \mathcal{R}_c} \alpha_{i's}^{\text{out}}/d_{i',k}},$$

with $\alpha_{is}^{\text{out}} = \sum_{j,p} Z_{is,jp}^R$ the (balanced) regional intermediate output share to all destinations, and $d_{i,k}$ a population-weighted harmonic mean bilateral distance between NUTS2 region i and country k (Hinz, 2017). The exponent corresponds to a distance elasticity of -1 , consistent with the consensus range in gravity meta studies (Head and Mayer, 2014). Analogously, imports are distributed using $\alpha_{ip}^{\text{in}} = \sum_{j,s} Z_{js,ip}^R$. Final demand linkages (regional exports to / imports from third countries) are treated symmetrically with distance matrices matched to appropriate final demand origin region set.⁵

Within the EU block, the European regional shares are first normalized before scaling by the original ICIO entries. After the insertion of regional blocks, we iteratively (a) aggregate back to the ICIO country–sector level, (b) compute elementwise scaling factors to enforce exact recoverability of the original ICIO matrices, and (c) adjust regional final demand to restore accounting identities:

$$\text{Residual}_{is} = X_{is} + \text{VA}_{is} - \sum_{p,j} Z_{is,jp}^{REI} - \sum_f F_{is,f}^{REI}.$$

⁵Note that when a third country is geographically far from every region within c (e.g. Japan), relative distances are nearly equal and the allocation collapses to pure share weighting by α .

B Additional Tables

Table 1: Initial share of (a) Industry value added in total value added and (b) Industry exports in total Industry output.

Code	Name	Value added [%]	Total exports [%]	US exports [%]	EU exports [%]
AT11	Burgenland	19.0	65.2	4.1	40.5
AT12	Niederösterreich	24.2	30.2	2.1	17.1
AT13	Wien	8.8	32.0	3.9	12.8
AT21	Kärnten	27.4	44.3	3.0	26.4
AT22	Steiermark	28.4	40.3	2.7	24.3
AT31	Oberösterreich	33.1	39.2	2.8	23.8
AT32	Salzburg	19.0	50.0	4.2	29.0
AT33	Tirol	21.0	42.8	3.2	23.8
AT34	Vorarlberg	31.8	50.4	3.3	24.9
BE10	Région de Bruxelles-Capitale	5.4	47.2	6.5	23.6
BE21	Prov. Antwerpen	24.4	28.8	2.6	15.7
BE22	Prov. Limburg (BE)	19.3	46.6	3.1	29.6
BE23	Prov. Oost-Vlaanderen	20.0	32.8	2.6	19.8
BE24	Prov. Vlaams-Brabant	9.9	36.5	4.7	18.2
BE25	Prov. West-Vlaanderen	21.2	35.1	2.5	21.2
BE31	Prov. Brabant Wallon	33.8	53.1	3.6	31.1
BE32	Prov. Hainaut	16.2	56.3	4.1	33.0
BE33	Prov. Liège	19.7	50.8	3.2	27.1
BE34	Prov. Luxembourg (BE)	14.9	68.2	4.3	42.7
BE35	Prov. Namur	10.3	62.9	7.6	36.4
BG31	Severozapaden	32.2	62.6	1.5	34.2
BG32	Severen tsentralen	31.2	64.0	1.5	32.6
BG33	Severoiztochen	22.3	58.1	1.4	29.1
BG34	Yugoiztochen	34.8	48.2	1.1	23.9
BG41	Yugozapaden	14.3	33.7	1.4	16.5
BG42	Yuzhen tsentralen	34.0	43.2	1.1	20.9
CH01	Région lémanique	17.1	43.4	8.5	16.1
CH02	Espace Mittelland	27.5	40.5	7.3	15.4
CH03	Nordwestschweiz	29.4	40.1	6.5	15.6
CH04	Zürich	13.3	50.4	10.6	18.2
CH05	Ostschweiz	26.2	37.5	5.9	14.7
CH06	Zentralschweiz	20.7	36.9	5.8	14.5
CH07	Ticino	11.7	35.0	6.6	13.1
CY00	Cyprus	8.4	14.4	0.6	5.0
CZ01	Praha	9.8	45.1	1.7	26.8
CZ02	Střední Čechy	43.2	46.1	1.4	31.6
CZ03	Jihozápad	36.4	46.1	1.4	31.5
CZ04	Severozápad	36.9	47.4	1.5	33.1
CZ05	Severovýchod	39.9	42.9	1.3	29.0
CZ06	Jihovýchod	30.0	36.5	1.1	24.5
CZ07	Střední Morava	39.3	44.4	1.3	30.7
CZ08	Moravskoslezsko	38.3	46.6	1.4	32.2

Code	Name	Value added [%]	Total exports [%]	US exports [%]	EU exports [%]
DE11	Stuttgart	37.4	12.7	1.3	3.3
DE12	Karlsruhe	28.5	27.4	2.8	10.5
DE13	Freiburg	32.8	41.9	4.3	17.7
DE14	Tübingen	36.6	37.9	3.6	15.0
DE21	Oberbayern	25.1	27.4	3.1	9.4
DE22	Niederbayern	33.4	49.5	4.3	23.1
DE23	Oberpfalz	33.3	46.9	4.1	20.4
DE24	Oberfranken	30.0	41.9	3.8	19.1
DE25	Mittelfranken	28.6	37.0	3.6	16.0
DE26	Unterfranken	36.3	43.3	4.1	19.7
DE27	Schwaben	32.4	38.9	3.8	17.6
DE30	Berlin	10.0	30.0	3.6	11.3
DE40	Brandenburg	20.2	37.2	3.8	15.6
DE50	Bremen	22.9	49.9	5.3	23.6
DE60	Hamburg	14.4	33.5	4.2	13.5
DE71	Darmstadt	17.1	34.1	4.2	10.7
DE72	Gießen	28.8	48.3	4.3	22.5
DE73	Kassel	26.2	49.4	4.4	23.6
DE80	Mecklenburg-Vorpommern	16.5	45.6	4.6	20.8
DE91	Braunschweig	41.9	37.8	3.7	15.1
DE92	Hannover	22.5	35.8	3.6	15.5
DE93	Lüneburg	19.9	52.0	5.2	24.0
DE94	Weser-Ems	25.9	33.4	3.3	15.0
DEA1	Düsseldorf	21.1	19.5	2.4	6.5
DEA2	Köln	19.4	34.1	4.3	12.0
DEA3	Münster	23.7	22.5	2.4	9.3
DEA4	Detmold	30.5	36.6	3.6	16.3
DEA5	Arnsberg	29.1	19.9	2.1	7.6
DEB1	Koblenz	25.2	39.8	3.9	17.6
DEB2	Trier	27.4	56.1	4.7	27.6
DEB3	Rheinhessen-Pfalz	30.6	43.7	4.3	19.2
DEC0	Saarland	27.7	42.8	3.6	19.7
DED2	Dresden	24.9	43.5	3.9	20.0
DED4	Chemnitz	28.4	43.4	3.8	19.9
DED5	Leipzig	18.4	46.3	4.9	21.5
DEE0	Sachsen-Anhalt	26.1	42.6	3.9	19.7
DEF0	Schleswig-Holstein	20.2	41.0	4.6	17.9
DEG0	Thüringen	27.3	36.7	3.4	16.3
DK01	Hovedstaden	16.1	39.9	10.2	12.3
DK02	Sjælland	20.5	55.1	7.0	21.2
DK03	Syddanmark	21.2	30.5	5.3	12.3
DK04	Midtjylland	19.2	23.8	4.0	9.3
DK05	Nordjylland	20.0	49.6	6.5	21.0
EE00	Eesti	20.7	45.0	3.5	25.2
EL30	Attiki	10.4	13.6	0.9	4.8
EL41	Voreio Aigaio	8.0	44.4	3.5	17.7
EL42	Notio Aigaio	6.4	20.2	1.3	7.9

Code	Name	Value added [%]	Total exports [%]	US exports [%]	EU exports [%]
EL43	Kriti	9.7	16.5	1.4	6.0
EL51	Anatoliki Makedonia, Thraki	17.7	9.0	0.7	3.5
EL52	Kentriki Makedonia	15.3	16.4	1.2	5.8
EL53	Dytiki Makedonia	40.2	47.9	3.4	16.7
EL54	Ipeiros	11.4	24.2	2.8	10.4
EL61	Thessalia	15.1	39.3	3.1	15.2
EL62	Ionia Nisia	4.1	42.7	3.4	16.8
EL63	Dytiki Ellada	12.9	45.8	4.6	17.8
EL64	Stereá Ellada	37.7	32.6	2.2	11.3
EL65	Peloponnisos	24.6	43.6	2.9	17.0
ES11	Galicia	18.3	29.4	1.9	16.1
ES12	Principado de Asturias	20.3	29.9	2.0	16.8
ES13	Cantabria	21.4	52.8	3.3	28.9
ES21	País Vasco	24.4	29.5	2.0	14.8
ES22	Comunidad Foral de Navarra	30.2	52.0	3.3	27.6
ES23	La Rioja	25.9	55.3	3.4	29.7
ES24	Aragón	22.1	43.5	2.6	23.0
ES30	Comunidad de Madrid	10.5	22.8	1.8	8.6
ES41	Castilla y León	20.4	40.4	2.5	20.1
ES42	Castilla-La Mancha	19.9	43.6	2.5	24.2
ES43	Extremadura	13.5	51.7	3.0	28.9
ES51	Cataluña	19.3	9.2	0.6	4.2
ES52	Comunitat Valenciana	19.2	19.3	1.2	9.9
ES53	Illes Balears	5.7	47.9	4.0	22.5
ES61	Andalucía	11.7	17.4	1.2	8.6
ES62	Región de Murcia	18.5	38.5	2.2	20.1
ES63	Ciudad de Ceuta	5.1	30.1	1.5	19.2
ES64	Ciudad de Melilla	3.8	25.2	1.1	17.6
ES70	Canarias	6.3	31.3	2.3	17.3
FI19	Länsi-Suomi	25.2	21.7	1.6	9.3
FI1B	Helsinki-Uusimaa	16.1	33.9	3.0	14.1
FI1C	Etelä-Suomi	24.8	37.5	2.6	17.6
FI1D	Pohjois- ja Itä-Suomi	21.4	37.9	2.7	16.7
FI20	Åland	30.0	17.4	1.6	8.8
FR10	Ile-de-France	8.9	17.7	2.2	4.9
FRB0	Centre — Val de Loire	19.1	35.2	3.0	16.0
FRC1	Bourgogne	15.9	33.5	2.7	14.5
FRC2	Franche-Comté	22.2	42.2	3.4	18.2
FRD1	Basse-Normandie	17.4	37.8	3.1	17.9
FRD2	Haute-Normandie	22.6	42.2	3.7	19.5
FRE1	Nord-Pas de Calais	15.5	28.3	2.6	10.4
FRE2	Picardie	18.4	40.4	3.2	18.8
FRF1	Alsace	20.9	36.2	2.9	16.0
FRF2	Champagne-Ardenne	19.3	36.0	2.6	16.7
FRF3	Lorraine	18.3	35.2	2.9	16.1
FRG0	Pays de la Loire	18.5	21.0	1.9	8.1
FRH0	Bretagne	15.9	29.9	2.7	14.0

Code	Name	Value added [%]	Total exports [%]	US exports [%]	EU exports [%]
FRI1	Aquitaine	13.6	27.7	2.3	11.9
FRI2	Limousin	14.3	48.1	3.6	22.0
FRI3	Poitou-Charentes	15.9	27.1	2.3	12.0
FRJ1	Languedoc-Roussillon	8.9	18.7	1.8	7.4
FRJ2	Midi-Pyrénées	18.2	40.9	3.3	21.8
FRK1	Auvergne	18.9	26.9	2.2	12.0
FRK2	Rhône-Alpes	18.5	16.9	1.6	6.5
FRL0	Provence-Alpes-Côte d'Azur	11.4	28.3	2.4	13.2
FRM0	Corse	7.0	22.8	1.9	10.8
HR02	Panonska Hrvatska	25.1	22.1	0.8	12.2
HR03	Jadranska Hrvatska	15.8	9.6	0.6	5.1
HR05	Grad Zagreb	14.6	16.2	1.0	9.1
HR06	Sjeverna Hrvatska	36.2	32.6	1.2	17.4
HU11	Budapest	12.0	55.7	4.1	32.7
HU12	Pest	24.6	40.1	1.8	25.6
HU21	Közép-Dunántúl	42.8	51.6	2.3	34.1
HU22	Nyugat-Dunántúl	41.0	51.5	2.3	33.9
HU23	Dél-Dunántúl	24.9	56.7	2.2	35.7
HU31	Észak-Magyarország	39.3	54.6	2.4	35.6
HU32	Észak-Alföld	26.4	48.3	1.9	31.9
HU33	Dél-Alföld	25.2	50.0	1.9	33.5
IE04	Northern and Western	11.9	43.8	18.1	10.1
IE05	Southern	64.8	65.8	15.3	19.0
IE06	Eastern and Midland	18.1	77.5	28.4	14.5
ITC1	Piemonte	24.7	31.3	4.0	12.4
ITC2	Valle d'Aosta/Vallée d'Aoste	14.3	45.0	5.1	18.7
ITC3	Liguria	15.9	62.2	6.2	29.9
ITC4	Lombardia	23.0	22.6	3.0	7.2
ITF1	Abruzzo	21.4	43.9	4.3	19.6
ITF2	Molise	15.9	67.1	6.1	31.6
ITF3	Campania	13.3	36.6	4.7	13.8
ITF4	Puglia	13.5	42.5	5.0	17.0
ITF5	Basilicata	26.4	44.5	3.9	20.2
ITF6	Calabria	7.6	32.0	4.0	11.9
ITG1	Sicilia	8.7	24.2	3.6	8.0
ITG2	Sardegna	9.8	53.2	6.7	21.9
ITH1	Provincia Autonoma di Bolzano/Bozen	17.4	25.1	3.2	10.5
ITH2	Provincia Autonoma di Trento	18.7	31.4	3.5	14.7
ITH3	Veneto	28.1	13.8	1.6	4.7
ITH4	Friuli-Venezia Giulia	25.2	34.9	3.6	15.4
ITH5	Emilia-Romagna	28.1	13.1	1.5	5.1
ITI1	Toscana	21.3	18.5	2.2	7.7
ITI2	Umbria	21.3	33.7	3.3	14.7
ITI3	Marche	27.0	28.7	3.1	12.5
ITI4	Lazio	10.4	17.5	2.4	6.1
LT01	Sostinės regionas	16.2	34.5	2.1	17.8
LT02	Vidurio ir vakarų Lietuvos regionas	27.7	37.9	2.0	20.2

Code	Name	Value added [%]	Total exports [%]	US exports [%]	EU exports [%]
LU00	Luxembourg	7.6	50.4	2.0	32.0
IV00	Latvija	16.0	30.7	1.6	15.8
MT00	Malta	10.3	25.8	1.2	10.9
NL11	Groningen	30.1	58.3	3.0	36.6
NL12	Friesland (NL)	19.9	60.3	3.2	36.3
NL13	Drenthe	19.9	60.1	3.1	37.3
NL21	Overijssel	20.6	50.2	2.7	29.8
NL22	Gelderland	19.0	30.4	1.8	16.9
NL23	Flevoland	13.4	65.3	3.6	36.2
NL31	Utrecht	8.1	44.7	3.2	22.2
NL32	Noord-Holland	8.5	37.4	2.6	19.6
NL33	Zuid-Holland	12.8	38.1	2.6	19.7
NL34	Zeeland	24.0	60.8	3.1	39.6
NL41	Noord-Brabant	22.4	28.9	1.6	15.5
NL42	Limburg (NL)	24.2	52.1	2.9	32.8
NO02	Innlandet	0.0	11.3	1.6	5.1
NO06	Trøndelag	38.2	52.5	5.0	13.6
NO07	Nord-Norge	0.0	44.5	18.6	19.6
NO08	Oslo og Viken	0.0	16.0	2.1	7.2
NO09	Agder og Sør-Østlandet	0.0	22.9	2.7	13.6
NO0A	Vestlandet	54.1	41.1	3.5	22.0
NO0B	Jan Mayen and Svalbard	0.0	12.0	1.9	6.3
PL21	Małopolskie	21.2	36.8	1.6	22.9
PL22	Śląskie	33.0	12.9	0.5	7.7
PL41	Wielkopolskie	28.7	21.1	0.9	12.7
PL42	Zachodniopomorskie	21.6	50.4	2.2	33.6
PL43	Lubuskie	32.6	52.1	1.8	34.6
PL51	Dolnośląskie	30.8	20.9	0.9	12.8
PL52	Opolskie	31.3	50.7	1.7	34.4
PL61	Kujawsko-pomorskie	28.2	36.4	1.3	23.3
PL62	Warmińsko-mazurskie	25.7	46.0	1.5	29.2
PL63	Pomorskie	25.5	36.7	1.4	22.9
PL71	Łódzkie	28.9	35.4	1.3	22.7
PL72	Świętokrzyskie	27.1	44.8	1.4	26.7
PL81	Lubelskie	21.3	57.3	2.0	38.4
PL82	Podkarpackie	30.9	44.4	1.5	27.2
PL84	Podlaskie	22.6	59.4	1.9	39.0
PL91	Warszawski stołeczny	11.9	23.3	1.2	11.6
PL92	Mazowiecki regionalny	35.0	26.9	0.9	17.0
PT11	Norte	26.6	28.7	2.1	15.5
PT15	Algarve	5.3	26.4	2.0	15.0
PT16	Centro (PT)	26.0	34.0	2.4	19.3
PT17	Área Metropolitana de Lisboa	9.7	30.0	2.5	14.5
PT18	Alentejo	20.8	15.1	1.2	7.9
PT20	Região Autónoma dos Açores	7.6	45.6	4.2	27.3
PT30	Região Autónoma da Madeira	6.6	10.4	0.9	5.7
RO11	Nord-Vest	26.0	26.6	0.9	15.7

Code	Name	Value added [%]	Total exports [%]	US exports [%]	EU exports [%]
RO12	Centru	32.6	20.6	0.7	12.9
RO21	Nord-Est	19.3	33.5	1.1	19.5
RO22	Sud-Est	27.2	16.3	0.5	9.2
RO31	Sud-Muntenia	33.2	14.8	0.5	9.4
RO32	Bucureşti-Ilfov	14.9	16.8	0.6	8.1
RO41	Sud-Vest Oltenia	29.9	34.7	1.0	21.0
RO42	Vest	30.5	24.1	0.8	15.0
SE11	Stockholm	10.1	31.6	4.0	8.9
SE12	Östra Mellansverige	21.4	22.1	2.0	10.0
SE21	Småland med öarna	26.0	45.7	3.5	21.6
SE22	Sydsverige	15.8	37.5	3.4	19.1
SE23	Västsverige	22.0	29.4	2.8	13.2
SE31	Norra Mellansverige	25.4	42.2	3.5	20.8
SE32	Mellersta Norrland	19.6	55.6	5.4	28.8
SE33	Övre Norrland	30.6	59.2	4.5	27.5
SI03	Vzhodna Slovenija	35.6	54.5	1.8	35.1
SI04	Zahodna Slovenija	21.5	52.1	2.3	32.7
SK01	Bratislavský kraj	18.6	56.3	6.1	30.0
SK02	Západné Slovensko	36.9	32.0	2.5	18.8
SK03	Stredné Slovensko	27.3	48.5	3.2	30.0
SK04	Východné Slovensko	27.0	55.9	3.6	35.3
UKC1	Tees Valley and Durham	24.1	35.1	5.2	14.9
UKC2	Northumberland and Tyne and Wear	12.5	19.8	3.6	7.9
UKD1	Cumbria	17.3	16.7	3.5	6.4
UKD3	Greater Manchester	14.1	9.8	1.8	3.7
UKD4	Lancashire	16.2	22.3	3.7	9.3
UKD6	Cheshire	17.1	17.3	2.7	4.7
UKD7	Merseyside	14.6	14.2	2.3	5.1
UKE1	East Yorkshire, Northern Lincolnshire	16.9	41.5	6.0	18.7
UKE2	North Yorkshire	7.4	20.3	4.4	7.3
UKE3	South Yorkshire	12.6	16.6	2.9	6.7
UKE4	West Yorkshire	21.3	13.7	2.3	5.1
UKF1	Derbyshire and Nottinghamshire	14.3	16.4	2.8	6.6
UKF2	Leicestershire, Rutland	13.6	13.5	2.4	5.4
UKF3	Lincolnshire	24.9	34.1	5.0	15.1
UKG1	Herefordshire, Worcestershire	15.3	11.4	2.0	4.5
UKG2	Shropshire and Staffordshire	17.7	20.4	3.3	8.7
UKG3	West Midlands	19.0	15.1	2.6	5.6
UKH1	East Anglia	17.8	13.2	2.3	5.2
UKH2	Bedfordshire and Hertfordshire	13.1	11.9	2.1	4.5
UKH3	Essex	15.0	15.4	2.5	6.3
UKI1	Inner London	3.0	19.6	4.0	7.3
UKI2	Outer London	8.8	20.0	3.8	7.7
UKJ1	Berkshire Oxfordshire	17.7	12.3	2.1	4.7
UKJ2	Surrey, East and West Sussex	11.8	13.3	2.4	5.0
UKJ3	Hampshire and Isle of Wight	13.2	13.4	2.3	5.3
UKJ4	Kent	17.5	16.0	2.6	6.7

Code	Name	Value added [%]	Total exports [%]	US exports [%]	EU exports [%]
UKK1	Gloucestershire, Bristol/Bath area	17.4	15.1	2.6	5.9
UKK2	Dorset and Somerset	15.1	26.1	4.1	11.6
UKK3	Cornwall and Isles of Scilly	12.6	15.4	3.5	5.9
UKK4	Devon	19.1	27.9	4.3	12.0
UKL1	West Wales and The Valleys	20.5	29.3	4.5	12.1
UKL2	East Wales	19.6	25.6	4.0	10.8
UKM2	Eastern Scotland	16.6	16.1	2.3	8.0
UKM3	South Western Scotland	16.5	20.7	3.0	10.2
UKM5	North Eastern Scotland	10.7	59.8	10.3	26.3
UKM6	Highlands and Islands	23.7	33.4	5.6	14.5
UKN0	Northern Ireland	24.4	33.0	5.3	14.4

Table 2: US tariffs as of November 2025.

Code	Name	Tariff change (ad valorem)
BRA	Brazil	50
IND	India	50
LAO	Laos	40
MMR	Myanmar (Burma)	40
CHE	Switzerland	39
CAN	Canada	35
ZAF	South Africa	30
BRN	Brunei	25
KAZ	Kazakhstan	25
TUN	Tunisia	25
BGD	Bangladesh	20
TWN	Taiwan	20
KHM	Cambodia	19
MYS	Malaysia	19
PAK	Pakistan	19
THA	Thailand	19
CMR	Cameroon	15
CRI	Costa Rica	15
CIV	Côte d'Ivoire	15
ISL	Iceland	15
ISR	Israel	15
JOR	Jordan	15
NZL	New Zealand	15
NGA	Nigeria	15
NOR	Norway	15
TUR	Turkey	15
VNM	Vietnam	20
IDN	Indonesia	19
PHL	Philippines	19
AUT	Austria	15

Code	Name	Tariff change (ad valorem)
BEL	Belgium	15
BGR	Bulgaria	15
HRV	Croatia	15
CYP	Cyprus	15
CZE	Czechia	15
DNK	Denmark	15
EST	Estonia	15
FIN	Finland	15
FRA	France	15
DEU	Germany	15
GRC	Greece	15
HUN	Hungary	15
IRL	Ireland	15
ITA	Italy	15
JPN	Japan	15
LVA	Latvia	15
LTU	Lithuania	15
LUX	Luxembourg	15
MLT	Malta	15
NLD	Netherlands	15
POL	Poland	15
PRT	Portugal	15
ROU	Romania	15
SVK	Slovakia	15
SVN	Slovenia	15
KOR	South Korea	15
ESP	Spain	15
SWE	Sweden	15
GBR	United Kingdom	10
CHN	China	30
MEX	Mexico	25
SGP	Singapore	10
COL	Colombia	10
AUS	Australia	10
CHL	Chile	10
SAU	Saudi Arabia	10
PER	Peru	10
ARG	Argentina	10
RUS	Russia	10
EGY	Egypt	10
MAR	Morocco	10
UKR	Ukraine	10
SEN	Senegal	10
BLR	Belarus	10
HKG	Hong Kong SAR China	30
ROW	Rest of the World	13

Table 3: Change in value added and value added per capita (real) in percent.

Code	Name	VA (real)				VA per capita (real)			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
AT11	Burgenland	-0.19	-0.16	-0.16	-0.16	-0.11	-0.09	-0.09	-0.09
AT12	Niederösterreich	-0.08	-0.06	-0.07	-0.07	-0.07	-0.06	-0.06	-0.06
AT13	Wien	0.03	0.07	0.05	0.06	-0.03	-0.02	-0.02	-0.02
AT21	Kärnten	-0.12	-0.11	-0.11	-0.11	-0.08	-0.08	-0.07	-0.08
AT22	Steiermark	-0.09	-0.09	-0.09	-0.09	-0.07	-0.07	-0.07	-0.07
AT31	Oberösterreich	-0.14	-0.12	-0.13	-0.13	-0.09	-0.08	-0.08	-0.08
AT32	Salzburg	-0.11	-0.08	-0.08	-0.08	-0.08	-0.06	-0.06	-0.07
AT33	Tirol	-0.08	-0.08	-0.08	-0.08	-0.07	-0.06	-0.06	-0.07
AT34	Vorarlberg	-0.10	-0.13	-0.12	-0.11	-0.08	-0.08	-0.07	-0.08
BE10	Région de Bruxelles-Capitale	0.13	0.21	0.18	0.19	-0.00	0.03	0.02	0.02
BE21	Prov. Antwerpen	-0.13	-0.12	-0.13	-0.13	-0.09	-0.08	-0.08	-0.08
BE22	Prov. Limburg (BE)	-0.02	-0.02	-0.02	-0.02	-0.05	-0.04	-0.04	-0.04
BE23	Prov. Oost-Vlaanderen	-0.04	-0.05	-0.04	-0.04	-0.06	-0.05	-0.05	-0.05
BE24	Prov. Vlaams-Brabant	0.03	0.11	0.08	0.08	-0.03	-0.00	-0.01	-0.01
BE25	Prov. West-Vlaanderen	-0.08	-0.07	-0.08	-0.08	-0.07	-0.06	-0.06	-0.06
BE31	Prov. Brabant Wallon	-0.15	-0.20	-0.17	-0.17	-0.09	-0.11	-0.09	-0.09
BE32	Prov. Hainaut	-0.14	-0.17	-0.16	-0.15	-0.09	-0.09	-0.09	-0.09
BE33	Prov. Liège	-0.12	-0.14	-0.13	-0.13	-0.08	-0.08	-0.08	-0.08
BE34	Prov. Luxembourg (BE)	-0.35	-0.31	-0.35	-0.34	-0.16	-0.14	-0.15	-0.15
BE35	Prov. Namur	-0.14	-0.10	-0.10	-0.09	-0.09	-0.07	-0.07	-0.07
BG31	Severozapaden	-0.14	-0.15	-0.14	-0.14	-0.09	-0.08	-0.08	-0.08
BG32	Severen tsentralen	-0.14	-0.14	-0.14	-0.14	-0.09	-0.08	-0.08	-0.08
BG33	Severoiztochen	-0.09	-0.08	-0.08	-0.08	-0.08	-0.06	-0.06	-0.06
BG34	Yugoiztochen	-0.10	-0.10	-0.09	-0.10	-0.08	-0.07	-0.07	-0.06
BG41	Yugozapaden	0.06	0.10	0.10	0.09	-0.02	0.00	-0.00	0.00
BG42	Yuzhen tsentralen	-0.09	-0.10	-0.08	-0.09	-0.07	-0.06	-0.06	-0.06
CH01	Région lémanique	-0.23	-0.22	-0.23	-0.23	-0.27	-0.26	-0.27	-0.27
CH02	Espace Mittelland	-0.44	-0.42	-0.43	-0.43	-0.34	-0.32	-0.33	-0.33
CH03	Nordwestschweiz	-0.43	-0.40	-0.41	-0.41	-0.34	-0.32	-0.33	-0.33
CH04	Zürich	0.01	-0.01	-0.01	-0.01	-0.19	-0.19	-0.19	-0.19
CH05	Ostschweiz	-0.38	-0.34	-0.36	-0.36	-0.32	-0.30	-0.31	-0.31
CH06	Zentralschweiz	-0.28	-0.24	-0.26	-0.26	-0.29	-0.27	-0.28	-0.28
CH07	Ticino	-0.46	-0.40	-0.41	-0.41	-0.35	-0.32	-0.33	-0.33
CY00	Cyprus	-0.04	-0.08	-0.07	-0.07	-0.06	-0.08	-0.06	-0.07
CZ01	Praha	0.10	0.25	0.21	0.20	-0.01	0.06	0.04	0.04
CZ02	Střední Čechy	-0.09	-0.10	-0.09	-0.10	-0.08	-0.06	-0.07	-0.06
CZ03	Jihozápad	-0.07	-0.06	-0.06	-0.07	-0.07	-0.05	-0.06	-0.05
CZ04	Severozápad	-0.06	-0.06	-0.05	-0.06	-0.06	-0.04	-0.05	-0.05
CZ05	Severovýchod	-0.07	-0.08	-0.07	-0.08	-0.07	-0.05	-0.06	-0.05
CZ06	Jihovýchod	-0.04	-0.05	-0.03	-0.04	-0.06	-0.04	-0.05	-0.04
CZ07	Střední Morava	-0.09	-0.10	-0.09	-0.09	-0.07	-0.06	-0.07	-0.06
CZ08	Moravskoslezsko	-0.08	-0.08	-0.07	-0.07	-0.07	-0.05	-0.06	-0.05
DE11	Stuttgart	-0.04	-0.01	-0.05	-0.03	-0.06	-0.06	-0.05	-0.07
DE12	Karlsruhe	-0.06	-0.04	-0.06	-0.04	-0.06	-0.07	-0.06	-0.07
DE13	Freiburg	-0.13	-0.14	-0.14	-0.12	-0.09	-0.10	-0.08	-0.10

Code	Name	VA (real)				VA per capita (real)			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
DE14	Tübingen	-0.17	-0.15	-0.17	-0.15	-0.10	-0.11	-0.09	-0.11
DE21	Oberbayern	-0.02	-0.01	-0.03	-0.02	-0.05	-0.06	-0.05	-0.06
DE22	Niederbayern	-0.16	-0.18	-0.18	-0.16	-0.10	-0.12	-0.10	-0.11
DE23	Oberpfalz	-0.19	-0.19	-0.20	-0.18	-0.10	-0.12	-0.10	-0.12
DE24	Oberfranken	-0.08	-0.08	-0.09	-0.06	-0.07	-0.08	-0.06	-0.08
DE25	Mittelfranken	-0.10	-0.08	-0.10	-0.08	-0.08	-0.08	-0.07	-0.09
DE26	Unterfranken	-0.17	-0.17	-0.18	-0.16	-0.10	-0.11	-0.10	-0.11
DE27	Schwaben	-0.16	-0.14	-0.16	-0.14	-0.10	-0.10	-0.09	-0.10
DE30	Berlin	-0.01	0.03	0.00	0.02	-0.05	-0.05	-0.04	-0.05
DE40	Brandenburg	-0.11	-0.09	-0.12	-0.10	-0.08	-0.09	-0.07	-0.09
DE50	Bremen	-0.13	-0.07	-0.09	-0.07	-0.09	-0.08	-0.07	-0.08
DE60	Hamburg	-0.09	-0.07	-0.08	-0.07	-0.07	-0.08	-0.06	-0.08
DE71	Darmstadt	-0.06	-0.04	-0.06	-0.05	-0.06	-0.07	-0.06	-0.07
DE72	Gießen	-0.12	-0.10	-0.11	-0.09	-0.08	-0.09	-0.07	-0.09
DE73	Kassel	-0.12	-0.10	-0.11	-0.08	-0.08	-0.09	-0.07	-0.09
DE80	Mecklenburg-Vorpommern	-0.12	-0.05	-0.09	-0.07	-0.08	-0.07	-0.06	-0.08
DE91	Braunschweig	-0.19	-0.19	-0.21	-0.19	-0.11	-0.12	-0.10	-0.12
DE92	Hannover	-0.13	-0.10	-0.13	-0.11	-0.09	-0.09	-0.08	-0.10
DE93	Lüneburg	-0.23	-0.22	-0.24	-0.22	-0.12	-0.13	-0.11	-0.13
DE94	Weser-Ems	-0.17	-0.13	-0.17	-0.15	-0.10	-0.10	-0.09	-0.11
DEA1	Düsseldorf	-0.05	-0.03	-0.05	-0.03	-0.06	-0.07	-0.05	-0.07
DEA2	Köln	-0.13	-0.12	-0.14	-0.12	-0.09	-0.10	-0.08	-0.10
DEA3	Münster	-0.09	-0.05	-0.09	-0.07	-0.07	-0.08	-0.07	-0.08
DEA4	Detmold	-0.13	-0.09	-0.11	-0.09	-0.09	-0.09	-0.07	-0.09
DEA5	Arnsberg	-0.09	-0.06	-0.09	-0.08	-0.07	-0.08	-0.07	-0.08
DEB1	Koblenz	-0.08	-0.07	-0.08	-0.06	-0.07	-0.08	-0.06	-0.08
DEB2	Trier	-0.13	-0.20	-0.19	-0.17	-0.09	-0.12	-0.10	-0.11
DEB3	Rheinhessen-Pfalz	-0.14	-0.12	-0.13	-0.11	-0.09	-0.10	-0.08	-0.10
DEC0	Saarland	-0.07	-0.06	-0.07	-0.05	-0.07	-0.08	-0.06	-0.08
DED2	Dresden	-0.12	-0.10	-0.12	-0.10	-0.08	-0.09	-0.07	-0.09
DED4	Chemnitz	-0.13	-0.12	-0.14	-0.12	-0.09	-0.10	-0.08	-0.10
DED5	Leipzig	-0.15	-0.13	-0.14	-0.12	-0.09	-0.10	-0.08	-0.10
DEE0	Sachsen-Anhalt	-0.13	-0.12	-0.14	-0.12	-0.09	-0.10	-0.08	-0.10
DEF0	Schleswig-Holstein	-0.18	-0.16	-0.19	-0.17	-0.10	-0.11	-0.10	-0.11
DEG0	Thüringen	-0.12	-0.09	-0.12	-0.10	-0.08	-0.09	-0.08	-0.09
DK01	Hovedstaden	-0.09	-0.06	-0.09	-0.07	-0.07	-0.09	-0.07	-0.09
DK02	Sjælland	-0.12	-0.17	-0.17	-0.15	-0.08	-0.12	-0.09	-0.11
DK03	Syddanmark	-0.14	-0.13	-0.15	-0.13	-0.09	-0.10	-0.09	-0.11
DK04	Midtjylland	-0.06	-0.04	-0.07	-0.04	-0.06	-0.08	-0.06	-0.08
DK05	Nordjylland	-0.08	-0.16	-0.14	-0.12	-0.07	-0.11	-0.08	-0.10
EE00	Eesti	-0.00	0.00	0.03	0.00	-0.05	0.00	-0.03	0.00
EL30	Attiki	0.14	0.13	0.17	0.13	0.01	0.08	0.03	0.08
EL41	Voreio Aigaio	0.05	0.16	0.14	0.11	-0.02	0.09	0.02	0.07
EL42	Notio Aigaio	0.12	0.17	0.18	0.15	0.00	0.09	0.03	0.09
EL43	Kriti	0.16	0.19	0.20	0.17	0.02	0.10	0.04	0.09
EL51	Anatoliki Makedonia, Thraki	0.08	0.05	0.10	0.06	-0.02	0.05	-0.00	0.05
EL52	Kentriki Makedonia	0.05	0.01	0.06	0.01	-0.03	0.04	-0.02	0.04

Code	Name	VA (real)				VA per capita (real)			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
EL53	Dytiki Makedonia	-0.02	-0.15	-0.07	-0.11	-0.05	-0.02	-0.06	-0.00
EL54	Ipeiros	0.03	0.02	0.06	0.01	-0.03	0.04	-0.02	0.04
EL61	Thessalia	-0.04	-0.09	-0.04	-0.09	-0.06	0.00	-0.05	0.00
EL62	Ionia Nisia	0.10	0.24	0.22	0.18	-0.01	0.11	0.04	0.09
EL63	Dytiki Ellada	-0.04	-0.08	-0.03	-0.08	-0.06	0.00	-0.05	0.01
EL64	Stereá Ellada	-0.02	-0.13	-0.05	-0.10	-0.05	-0.01	-0.05	-0.00
EL65	Peloponnisos	-0.03	-0.09	-0.04	-0.08	-0.05	0.00	-0.05	0.00
ES11	Galicia	-0.05	-0.06	-0.04	-0.06	-0.06	-0.03	-0.05	-0.03
ES12	Principado de Asturias	-0.04	-0.05	-0.02	-0.04	-0.06	-0.02	-0.04	-0.02
ES13	Cantabria	-0.09	-0.09	-0.07	-0.09	-0.07	-0.04	-0.06	-0.04
ES21	País Vasco	-0.07	-0.07	-0.05	-0.07	-0.07	-0.03	-0.05	-0.03
ES22	Comunidad Foral de Navarra	-0.12	-0.13	-0.12	-0.14	-0.09	-0.05	-0.08	-0.05
ES23	La Rioja	-0.15	-0.18	-0.16	-0.18	-0.09	-0.07	-0.09	-0.07
ES24	Aragón	-0.05	-0.07	-0.04	-0.06	-0.06	-0.03	-0.05	-0.03
ES30	Comunidad de Madrid	0.07	0.08	0.10	0.08	-0.02	0.02	-0.00	0.02
ES41	Castilla y León	-0.08	-0.09	-0.06	-0.08	-0.07	-0.04	-0.06	-0.03
ES42	Castilla-La Mancha	-0.07	-0.08	-0.06	-0.08	-0.07	-0.03	-0.06	-0.03
ES43	Extremadura	-0.09	-0.07	-0.05	-0.07	-0.07	-0.03	-0.05	-0.03
ES51	Cataluña	-0.01	-0.01	0.02	-0.00	-0.05	-0.01	-0.03	-0.01
ES52	Comunitat Valenciana	-0.03	-0.03	-0.01	-0.03	-0.05	-0.02	-0.04	-0.02
ES53	Illes Balears	-0.00	0.09	0.07	0.05	-0.04	0.02	-0.01	0.01
ES61	Andalucía	-0.01	0.01	0.03	0.01	-0.05	-0.00	-0.03	-0.00
ES62	Región de Murcia	-0.03	-0.04	-0.02	-0.04	-0.05	-0.02	-0.04	-0.02
ES63	Ciudad de Ceuta	0.08	0.24	0.20	0.19	-0.02	0.07	0.03	0.05
ES64	Ciudad de Melilla	0.07	0.24	0.20	0.18	-0.02	0.07	0.02	0.05
ES70	Canarias	-0.00	0.04	0.05	0.03	-0.04	0.01	-0.02	0.00
FI19	Länsi-Suomi	-0.12	-0.09	-0.12	-0.10	-0.08	-0.08	-0.08	-0.09
FI1B	Helsinki-Uusimaa	-0.08	-0.05	-0.08	-0.06	-0.07	-0.07	-0.06	-0.08
FI1C	Etelä-Suomi	-0.10	-0.09	-0.11	-0.09	-0.08	-0.08	-0.07	-0.09
FI1D	Pohjois- ja Itä-Suomi	-0.12	-0.10	-0.13	-0.11	-0.08	-0.09	-0.08	-0.09
FI20	Åland	-0.15	-0.17	-0.17	-0.15	-0.09	-0.11	-0.09	-0.11
FR10	Ile-de-France	0.04	0.03	0.04	0.03	-0.03	-0.02	-0.02	-0.02
FRB0	Centre — Val de Loire	-0.09	-0.08	-0.09	-0.09	-0.07	-0.05	-0.06	-0.06
FRC1	Bourgogne	-0.07	-0.06	-0.05	-0.06	-0.07	-0.05	-0.05	-0.05
FRC2	Franche-Comté	-0.15	-0.15	-0.15	-0.15	-0.09	-0.08	-0.08	-0.08
FRD1	Basse-Normandie	-0.09	-0.09	-0.09	-0.09	-0.07	-0.05	-0.06	-0.06
FRD2	Haute-Normandie	-0.13	-0.13	-0.13	-0.14	-0.09	-0.07	-0.08	-0.07
FRE1	Nord-Pas de Calais	-0.06	-0.04	-0.04	-0.05	-0.06	-0.04	-0.05	-0.04
FRE2	Picardie	-0.11	-0.12	-0.11	-0.12	-0.08	-0.06	-0.07	-0.06
FRF1	Alsace	-0.10	-0.10	-0.10	-0.11	-0.08	-0.06	-0.07	-0.06
FRF2	Champagne-Ardenne	-0.14	-0.15	-0.15	-0.16	-0.09	-0.07	-0.08	-0.08
FRF3	Lorraine	-0.09	-0.07	-0.07	-0.08	-0.07	-0.05	-0.06	-0.05
FRG0	Pays de la Loire	-0.06	-0.04	-0.03	-0.04	-0.06	-0.04	-0.05	-0.04
FRH0	Bretagne	-0.05	-0.05	-0.05	-0.06	-0.06	-0.04	-0.05	-0.04
FRI1	Aquitaine	-0.05	-0.05	-0.04	-0.05	-0.06	-0.04	-0.05	-0.04
FRI2	Limousin	-0.09	-0.09	-0.08	-0.09	-0.07	-0.05	-0.06	-0.05
FRI3	Poitou-Charentes	-0.01	-0.03	-0.01	-0.02	-0.05	-0.03	-0.04	-0.03

Code	Name	VA (real)				VA per capita (real)			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
FRJ1	Languedoc-Roussillon	-0.01	-0.00	0.01	-0.00	-0.05	-0.03	-0.03	-0.03
FRJ2	Midi-Pyrénées	-0.05	-0.06	-0.05	-0.06	-0.06	-0.04	-0.05	-0.05
FRK1	Auvergne	-0.02	-0.03	-0.02	-0.03	-0.05	-0.04	-0.04	-0.03
FRK2	Rhône-Alpes	-0.03	-0.01	-0.01	-0.01	-0.05	-0.03	-0.04	-0.03
FRL0	Provence-Alpes-Côte d'Azur	-0.03	-0.03	-0.02	-0.02	-0.05	-0.04	-0.04	-0.03
FRM0	Corse	-0.06	-0.03	-0.03	-0.04	-0.06	-0.04	-0.05	-0.04
HR02	Panonska Hrvatska	0.00	-0.01	0.01	-0.02	-0.04	0.01	-0.03	0.00
HR03	Jadranska Hrvatska	0.05	0.04	0.07	0.04	-0.03	0.03	-0.01	0.02
HR05	Grad Zagreb	0.09	0.09	0.11	0.08	-0.01	0.04	0.00	0.04
HR06	Sjeverna Hrvatska	-0.04	-0.06	-0.04	-0.07	-0.06	-0.01	-0.05	-0.01
HU11	Budapest	-0.00	0.19	0.12	0.13	-0.04	0.02	0.00	-0.00
HU12	Pest	-0.04	-0.02	-0.02	-0.02	-0.06	-0.05	-0.04	-0.05
HU21	Közép-Dunántúl	-0.18	-0.22	-0.20	-0.20	-0.10	-0.11	-0.10	-0.11
HU22	Nyugat-Dunántúl	-0.15	-0.18	-0.17	-0.16	-0.10	-0.10	-0.09	-0.10
HU23	Dél-Dunántúl	-0.06	-0.02	-0.04	-0.03	-0.06	-0.05	-0.05	-0.06
HU31	Észak-Magyarország	-0.16	-0.19	-0.17	-0.17	-0.10	-0.10	-0.09	-0.10
HU32	Észak-Alföld	-0.11	-0.11	-0.11	-0.10	-0.08	-0.08	-0.07	-0.08
HU33	Dél-Alföld	-0.10	-0.10	-0.10	-0.09	-0.08	-0.08	-0.07	-0.07
IE04	Northern and Western	-0.78	-0.54	-0.88	-0.49	-0.30	-0.88	-0.33	-0.81
IE05	Southern	-1.38	-1.69	-1.69	-1.51	-0.60	-1.31	-0.72	-1.18
IE06	Eastern and Midland	-0.91	-0.85	-1.08	-0.79	-0.38	-0.98	-0.43	-0.90
ITC1	Piemonte	-0.04	-0.06	-0.05	-0.06	-0.06	-0.04	-0.05	-0.04
ITC2	Valle d'Aosta/Vallée d'Aoste	-0.07	0.07	0.04	0.03	-0.07	0.01	-0.02	-0.01
ITC3	Liguria	0.00	0.07	0.07	0.06	-0.04	0.01	-0.01	0.00
ITC4	Lombardia	-0.07	-0.05	-0.05	-0.06	-0.07	-0.04	-0.05	-0.04
ITF1	Abruzzo	-0.04	-0.05	-0.03	-0.04	-0.06	-0.04	-0.04	-0.03
ITF2	Molise	-0.12	0.06	-0.01	-0.01	-0.08	-0.00	-0.04	-0.02
ITF3	Campania	-0.05	-0.03	-0.02	-0.03	-0.06	-0.03	-0.04	-0.03
ITF4	Puglia	-0.09	-0.07	-0.05	-0.06	-0.07	-0.04	-0.05	-0.04
ITF5	Basilicata	-0.08	-0.09	-0.08	-0.09	-0.07	-0.05	-0.06	-0.05
ITF6	Calabria	-0.03	0.01	0.02	0.01	-0.05	-0.02	-0.03	-0.02
ITG1	Sicilia	0.00	0.03	0.04	0.03	-0.04	-0.01	-0.02	-0.01
ITG2	Sardegna	-0.04	0.01	0.01	0.00	-0.06	-0.02	-0.03	-0.02
ITH1	Provincia Autonoma di Bolzano/Bozen	-0.00	0.01	0.01	0.01	-0.04	-0.02	-0.03	-0.02
ITH2	Provincia Autonoma di Trento	0.01	-0.03	-0.01	-0.02	-0.04	-0.03	-0.04	-0.03
ITH3	Veneto	-0.09	-0.06	-0.05	-0.06	-0.07	-0.04	-0.05	-0.04
ITH4	Friuli-Venezia Giulia	-0.06	-0.08	-0.06	-0.07	-0.06	-0.05	-0.06	-0.04
ITH5	Emilia-Romagna	-0.08	-0.05	-0.04	-0.05	-0.07	-0.04	-0.05	-0.04
ITI1	Toscana	-0.07	-0.05	-0.03	-0.04	-0.07	-0.04	-0.05	-0.03
ITI2	Umbria	-0.09	-0.06	-0.05	-0.07	-0.07	-0.04	-0.05	-0.04
ITI3	Marche	-0.08	-0.07	-0.05	-0.06	-0.07	-0.04	-0.05	-0.04
ITI4	Lazio	-0.01	0.00	0.03	0.02	-0.05	-0.02	-0.03	-0.01
LT01	Sostinės regionas	0.01	0.06	0.05	0.04	-0.04	-0.01	-0.02	-0.01
LT02	Vidurio ir vakarų Lietuvos regionas	-0.07	-0.08	-0.07	-0.08	-0.07	-0.05	-0.06	-0.05
LU00	Luxembourg	0.02	-0.15	-0.10	-0.08	-0.04	-0.15	-0.07	-0.08
LV00	Latvija	0.02	0.02	0.04	0.01	-0.04	0.02	-0.02	0.01
MT00	Malta	0.01	-0.08	-0.05	-0.05	-0.04	-0.08	-0.05	-0.05

Code	Name	VA (real)				VA per capita (real)			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
NL11	Groningen	-0.47	-0.61	-0.57	-0.55	-0.20	-0.28	-0.23	-0.25
NL12	Friesland (NL)	-0.31	-0.26	-0.29	-0.27	-0.14	-0.16	-0.13	-0.16
NL13	Drenthe	-0.24	-0.26	-0.27	-0.24	-0.12	-0.16	-0.12	-0.15
NL21	Overijssel	-0.18	-0.15	-0.18	-0.15	-0.10	-0.12	-0.09	-0.12
NL22	Gelderland	-0.13	-0.09	-0.12	-0.10	-0.09	-0.10	-0.08	-0.10
NL23	Flevoland	-0.39	-0.35	-0.38	-0.36	-0.17	-0.19	-0.16	-0.19
NL31	Utrecht	-0.01	0.05	0.02	0.05	-0.05	-0.06	-0.03	-0.05
NL32	Noord-Holland	0.02	0.06	0.03	0.06	-0.04	-0.05	-0.02	-0.05
NL33	Zuid-Holland	-0.08	-0.04	-0.07	-0.04	-0.07	-0.08	-0.06	-0.08
NL34	Zeeland	-0.46	-0.53	-0.51	-0.49	-0.19	-0.24	-0.20	-0.23
NL41	Noord-Brabant	-0.12	-0.09	-0.12	-0.09	-0.08	-0.10	-0.07	-0.10
NL42	Limburg (NL)	-0.33	-0.31	-0.34	-0.32	-0.15	-0.17	-0.15	-0.17
NO02	Innlandet	0.03	0.04	0.03	0.03	-0.04	-0.04	-0.04	-0.04
NO06	Trøndelag	-0.16	-0.16	-0.16	-0.16	-0.10	-0.10	-0.10	-0.10
NO07	Nord-Norge	-0.44	-0.44	-0.44	-0.44	-0.20	-0.20	-0.20	-0.20
NO08	Oslo og Viken	0.06	0.07	0.07	0.07	-0.03	-0.03	-0.03	-0.03
NO09	Agder og Sør-Østlandet	0.03	0.03	0.03	0.03	-0.04	-0.04	-0.04	-0.04
NO0A	Vestlandet	-0.20	-0.19	-0.20	-0.20	-0.12	-0.11	-0.11	-0.11
NO0B	Jan Mayen and Svalbard	0.25	0.27	0.22	0.22	0.03	0.04	0.03	0.03
PL21	Małopolskie	0.01	0.06	0.05	0.04	-0.04	0.01	-0.02	0.00
PL22	Śląskie	-0.01	-0.01	0.01	-0.01	-0.04	-0.01	-0.03	-0.01
PL41	Wielkopolskie	-0.02	-0.03	-0.01	-0.03	-0.05	-0.02	-0.04	-0.02
PL42	Zachodniopomorskie	-0.03	0.03	0.02	0.01	-0.05	0.00	-0.03	-0.01
PL43	Lubuskie	-0.10	-0.09	-0.09	-0.10	-0.08	-0.04	-0.07	-0.05
PL51	Dolnośląskie	0.01	0.01	0.02	0.01	-0.04	-0.00	-0.03	-0.01
PL52	Opolskie	-0.06	-0.05	-0.05	-0.06	-0.06	-0.03	-0.05	-0.03
PL61	Kujawsko-pomorskie	-0.06	-0.06	-0.05	-0.06	-0.06	-0.03	-0.05	-0.03
PL62	Warmińsko-mazurskie	-0.07	-0.07	-0.06	-0.08	-0.07	-0.03	-0.06	-0.04
PL63	Pomorskie	-0.01	-0.02	-0.01	-0.02	-0.05	-0.01	-0.04	-0.02
PL71	Łódzkie	-0.03	-0.03	-0.03	-0.04	-0.05	-0.02	-0.05	-0.03
PL72	Świętokrzyskie	-0.07	-0.05	-0.04	-0.06	-0.07	-0.03	-0.05	-0.03
PL81	Lubelskie	-0.08	-0.05	-0.04	-0.05	-0.07	-0.03	-0.05	-0.03
PL82	Podkarpackie	-0.06	-0.06	-0.04	-0.06	-0.06	-0.03	-0.05	-0.03
PL84	Podlaskie	-0.11	-0.09	-0.07	-0.09	-0.08	-0.04	-0.06	-0.04
PL91	Warszawski stołeczny	0.08	0.14	0.14	0.12	-0.02	0.04	0.01	0.03
PL92	Mazowiecki regionalny	-0.08	-0.08	-0.07	-0.08	-0.07	-0.03	-0.06	-0.04
PT11	Norte	-0.04	-0.06	-0.03	-0.06	-0.06	-0.01	-0.05	-0.02
PT15	Algarve	0.12	0.18	0.18	0.16	-0.00	0.07	0.03	0.06
PT16	Centro (PT)	-0.05	-0.08	-0.05	-0.07	-0.06	-0.02	-0.05	-0.02
PT17	Área Metropolitana de Lisboa	0.08	0.13	0.14	0.11	-0.02	0.05	0.01	0.04
PT18	Alentejo	0.00	-0.02	0.01	-0.01	-0.04	0.00	-0.03	-0.00
PT20	Região Autónoma dos Açores	-0.03	0.07	0.05	0.03	-0.05	0.03	-0.02	0.01
PT30	Região Autónoma da Madeira	0.15	0.19	0.20	0.18	0.01	0.07	0.03	0.06
RO11	Nord-Vest	-0.01	-0.02	-0.00	-0.02	-0.05	-0.01	-0.04	-0.01
RO12	Centru	-0.03	-0.04	-0.02	-0.04	-0.05	-0.01	-0.04	-0.01
RO21	Nord-Est	-0.01	0.00	0.02	0.00	-0.05	0.00	-0.03	0.00
RO22	Sud-Est	-0.01	-0.01	0.01	-0.01	-0.04	-0.00	-0.03	-0.00

Code	Name	VA (real)				VA per capita (real)			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
RO31	Sud-Muntenia	-0.02	-0.02	-0.00	-0.02	-0.05	-0.01	-0.04	-0.01
RO32	București-Ilfov	0.15	0.17	0.19	0.17	0.01	0.06	0.03	0.06
RO41	Sud-Vest Oltenia	-0.04	-0.04	-0.03	-0.05	-0.06	-0.02	-0.05	-0.02
RO42	Vest	-0.02	-0.03	-0.01	-0.04	-0.05	-0.01	-0.04	-0.01
SE11	Stockholm	-0.01	0.02	-0.00	0.01	-0.05	-0.05	-0.04	-0.05
SE12	Östra Mellansverige	-0.04	-0.05	-0.06	-0.04	-0.06	-0.07	-0.06	-0.07
SE21	Småland med öarna	-0.15	-0.14	-0.16	-0.14	-0.09	-0.10	-0.09	-0.10
SE22	Sydsverige	-0.09	-0.07	-0.09	-0.08	-0.07	-0.08	-0.07	-0.08
SE23	Västsverige	-0.10	-0.09	-0.11	-0.09	-0.08	-0.08	-0.07	-0.09
SE31	Norra Mellansverige	-0.18	-0.18	-0.19	-0.18	-0.10	-0.11	-0.10	-0.11
SE32	Mellersta Norrland	-0.18	-0.19	-0.20	-0.18	-0.10	-0.12	-0.10	-0.11
SE33	Övre Norrland	-0.24	-0.32	-0.30	-0.28	-0.12	-0.16	-0.13	-0.15
SI03	Vzhodna Slovenija	-0.10	-0.09	-0.09	-0.09	-0.08	-0.07	-0.07	-0.07
SI04	Zahodna Slovenija	-0.07	-0.02	-0.02	-0.02	-0.07	-0.05	-0.04	-0.05
SK01	Bratislavský kraj	-0.15	-0.04	-0.07	-0.06	-0.09	-0.06	-0.06	-0.07
SK02	Západné Slovensko	-0.09	-0.09	-0.09	-0.08	-0.07	-0.08	-0.07	-0.07
SK03	Stredné Slovensko	-0.05	-0.04	-0.04	-0.04	-0.06	-0.06	-0.05	-0.06
SK04	Východné Slovensko	-0.09	-0.08	-0.08	-0.07	-0.07	-0.07	-0.06	-0.07
UKC1	Tees Valley and Durham	-0.08	-0.09	-0.08	-0.08	-0.02	-0.01	-0.01	-0.01
UKC2	Northumberland and Tyne and Wear	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.03
UKD1	Cumbria	-0.01	0.04	0.02	0.02	0.01	0.03	0.02	0.02
UKD3	Greater Manchester	0.09	0.10	0.10	0.10	0.04	0.05	0.04	0.05
UKD4	Lancashire	-0.02	-0.02	-0.02	-0.02	0.00	0.01	0.01	0.01
UKD6	Cheshire	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
UKD7	Merseyside	-0.02	0.01	-0.00	-0.00	0.00	0.02	0.01	0.01
UKE1	East Yorkshire, Northern Lincolnshire	-0.01	-0.01	-0.01	-0.01	0.01	0.01	0.01	0.01
UKE2	North Yorkshire	0.06	0.08	0.07	0.07	0.03	0.04	0.04	0.04
UKE3	South Yorkshire	0.06	0.07	0.06	0.06	0.03	0.04	0.04	0.04
UKE4	West Yorkshire	0.06	0.07	0.07	0.07	0.03	0.04	0.04	0.04
UKF1	Derbyshire and Nottinghamshire	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
UKF2	Leicestershire, Rutland	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02
UKF3	Lincolnshire	-0.08	-0.08	-0.08	-0.08	-0.02	-0.01	-0.01	-0.01
UKG1	Herefordshire, Worcestershire	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
UKG2	Shropshire and Staffordshire	-0.02	-0.02	-0.02	-0.02	0.00	0.01	0.01	0.01
UKG3	West Midlands	0.05	0.06	0.05	0.06	0.03	0.03	0.03	0.03
UKH1	East Anglia	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03
UKH2	Bedfordshire and Hertfordshire	0.04	0.04	0.04	0.04	0.02	0.03	0.03	0.03
UKH3	Essex	0.04	0.04	0.04	0.04	0.02	0.03	0.03	0.03
UKI1	Inner London	0.14	0.16	0.16	0.16	0.06	0.07	0.07	0.07
UKI2	Outer London	0.04	0.06	0.06	0.06	0.03	0.04	0.03	0.04
UKJ1	Berkshire Oxfordshire	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
UKJ2	Surrey, East and West Sussex	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.03
UKJ3	Hampshire and Isle of Wight	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.02
UKJ4	Kent	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.02
UKK1	Gloucestershire, Bristol/Bath area	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.03
UKK2	Dorset and Somerset	-0.00	0.01	0.00	0.00	0.01	0.02	0.02	0.02
UKK3	Cornwall and Isles of Scilly	-0.07	-0.06	-0.06	-0.06	-0.01	-0.00	-0.01	-0.00

Code	Name	VA (real)				VA per capita (real)			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
UKK4	Devon	-0.09	-0.09	-0.09	-0.09	-0.02	-0.01	-0.01	-0.01
UKL1	West Wales and The Valleys	-0.09	-0.09	-0.09	-0.09	-0.02	-0.01	-0.02	-0.02
UKL2	East Wales	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
UKM2	Eastern Scotland	0.02	0.03	0.03	0.03	0.02	0.03	0.02	0.03
UKM3	South Western Scotland	-0.03	-0.02	-0.02	-0.02	-0.00	0.01	0.01	0.01
UKM5	North Eastern Scotland	-0.07	-0.06	-0.07	-0.06	-0.01	-0.00	-0.01	-0.01
UKM6	Highlands and Islands	-0.17	-0.17	-0.17	-0.17	-0.04	-0.04	-0.04	-0.04
UKN0	Northern Ireland	-0.16	-0.10	-0.13	-0.12	-0.04	-0.02	-0.03	-0.02

~~Notes: Each column refers to one scenario: Deep is deep integration with labor movement within EU, Frag. is~~
the fragmented scenario with labor movement only within each country, *Int. EU* is the current EU integration
with labor movement within EU, and *Int. Sgl* is the current EU integration with labor movement only within
each country.

Table 4: Change in total exports and exports to the US in percent.

Code	Name	Total exports				US exports			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
AT11	Burgenland	-1.17	-1.15	-1.19	-1.19	-2.57	4.09	1.31	1.31
AT12	Niederösterreich	-1.29	-1.79	-1.53	-1.53	-1.63	-1.29	-1.42	-1.42
AT13	Wien	-1.37	-1.34	-1.37	-1.37	-4.07	2.04	-0.35	-0.35
AT21	Kärnten	-0.82	-0.73	-0.80	-0.80	4.13	4.42	4.25	4.25
AT22	Steiermark	-1.15	-1.58	-1.34	-1.34	-1.50	-1.38	-1.47	-1.47
AT31	Oberösterreich	-1.33	-1.97	-1.63	-1.63	-5.80	-5.67	-5.77	-5.77
AT32	Salzburg	-1.16	-1.13	-1.17	-1.17	-2.54	2.74	0.67	0.68
AT33	Tirol	-0.88	-0.82	-0.86	-0.86	4.76	7.37	6.46	6.46
AT34	Vorarlberg	-0.78	-0.75	-0.78	-0.77	4.00	4.59	4.29	4.29
BE10	Région de Bruxelles-Capitale	-1.04	-0.41	-0.73	-0.72	4.72	10.54	8.58	8.58
BE21	Prov. Antwerpen	-1.64	-2.60	-2.10	-2.09	-4.29	-4.27	-4.22	-4.22
BE22	Prov. Limburg (BE)	-0.51	-0.22	-0.38	-0.37	16.14	15.04	15.54	15.54
BE23	Prov. Oost-Vlaanderen	-0.86	-0.89	-0.86	-0.85	10.99	10.50	10.76	10.76
BE24	Prov. Vlaams-Brabant	-1.47	-1.20	-1.36	-1.35	1.07	6.18	4.50	4.51
BE25	Prov. West-Vlaanderen	-0.98	-1.17	-1.05	-1.04	9.03	8.41	8.73	8.73
BE31	Prov. Brabant Wallon	-0.85	-0.92	-0.88	-0.87	10.57	7.80	8.76	8.76
BE32	Prov. Hainaut	-0.89	-1.10	-0.99	-0.98	10.02	10.11	10.13	10.12
BE33	Prov. Liège	-0.92	-1.14	-1.02	-1.02	8.08	7.55	7.76	7.76
BE34	Prov. Luxembourg (BE)	-1.17	-1.31	-1.27	-1.26	8.61	11.87	10.47	10.48
BE35	Prov. Namur	-1.25	-1.10	-1.17	-1.17	3.55	7.94	6.39	6.39
BG31	Severozapaden	-0.92	-1.03	-1.01	-1.02	10.71	8.05	8.72	8.72
BG32	Severen tsentralen	-0.95	-0.98	-1.02	-1.02	3.66	3.82	3.59	3.59
BG33	Severoiztochen	-0.94	-0.93	-0.97	-0.97	5.51	7.08	6.41	6.40
BG34	Yugoiztochen	-0.98	-1.06	-1.09	-1.09	3.33	3.38	3.21	3.21
BG41	Yugozapaden	-1.03	-0.77	-0.94	-0.95	3.18	8.25	6.41	6.41
BG42	Yuzhen tsentralen	-1.03	-1.19	-1.17	-1.18	6.51	5.45	5.66	5.66
CH01	Région lémanique	-3.05	-3.13	-3.12	-3.12	-23.47	-24.69	-24.24	-24.24
CH02	Espace Mittelland	-3.84	-3.73	-3.78	-3.78	-30.91	-31.74	-31.45	-31.45
CH03	Nordwestschweiz	-4.03	-3.85	-3.93	-3.93	-36.08	-36.86	-36.59	-36.59
CH04	Zürich	-2.48	-2.69	-2.63	-2.63	-13.49	-14.96	-14.40	-14.40

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Table 4: Change in total exports and exports to the US in percent (continued).

Code	Name	Total exports				US exports			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
CH05	Ostschweiz	-3.38	-3.30	-3.34	-3.33	-34.19	-34.91	-34.66	-34.66
CH06	Zentralschweiz	-2.60	-2.73	-2.71	-2.70	-24.62	-25.62	-25.27	-25.28
CH07	Ticino	-5.27	-5.13	-5.27	-5.26	-36.32	-37.30	-36.98	-36.98
CY00	Cyprus	-0.55	-0.69	-0.64	-0.64	22.63	21.40	21.77	21.78
CZ01	Praha	-1.17	-0.72	-0.98	-0.98	-4.37	5.23	1.32	1.32
CZ02	Střední Čechy	-1.05	-0.96	-0.99	-1.00	-1.23	-1.10	-1.20	-1.20
CZ03	Jihozápad	-0.84	-0.57	-0.68	-0.68	2.36	2.83	2.64	2.63
CZ04	Severozápad	-0.86	-0.57	-0.72	-0.72	4.98	5.67	5.37	5.36
CZ05	Severovýchod	-0.98	-0.86	-0.92	-0.92	0.60	0.83	0.68	0.68
CZ06	Jihovýchod	-1.10	-1.06	-1.09	-1.09	-2.24	-1.12	-1.61	-1.62
CZ07	Střední Morava	-0.98	-0.75	-0.88	-0.89	3.83	3.60	3.60	3.60
CZ08	Moravskoslezsko	-0.91	-0.72	-0.83	-0.83	0.77	1.14	0.92	0.92
DE11	Stuttgart	-0.86	-1.16	-0.99	-0.99	6.12	5.52	5.75	5.76
DE12	Karlsruhe	-1.04	-1.46	-1.22	-1.21	-2.08	-2.06	-2.07	-2.06
DE13	Freiburg	-0.89	-1.05	-0.95	-0.94	3.36	2.71	2.88	2.89
DE14	Tübingen	-1.02	-1.24	-1.14	-1.13	1.10	0.43	0.57	0.58
DE21	Oberbayern	-0.88	-1.03	-0.92	-0.90	5.39	5.18	5.27	5.28
DE22	Niederbayern	-0.76	-0.80	-0.80	-0.79	2.02	1.48	1.56	1.57
DE23	Oberpfalz	-0.93	-1.05	-1.03	-1.02	1.53	0.85	0.97	0.98
DE24	Oberfranken	-0.62	-0.50	-0.58	-0.57	4.21	3.92	3.93	3.94
DE25	Mittelfranken	-1.09	-1.31	-1.24	-1.23	-2.58	-2.39	-2.57	-2.56
DE26	Unterfranken	-1.06	-1.31	-1.18	-1.17	-0.61	-0.61	-0.68	-0.67
DE27	Schwaben	-1.06	-1.36	-1.22	-1.20	-2.01	-2.26	-2.26	-2.25
DE30	Berlin	-1.41	-1.44	-1.41	-1.40	1.56	5.07	3.86	3.87
DE40	Brandenburg	-1.30	-1.58	-1.43	-1.42	-1.69	-0.32	-0.79	-0.78
DE50	Bremen	-0.85	-0.73	-0.83	-0.82	3.57	6.27	5.24	5.24
DE60	Hamburg	-1.60	-1.69	-1.66	-1.65	-0.27	3.58	2.24	2.25
DE71	Darmstadt	-1.29	-1.34	-1.30	-1.30	0.22	2.53	1.73	1.74
DE72	Gießen	-0.63	-0.48	-0.69	-0.68	2.44	2.50	2.24	2.24
DE73	Kassel	-0.70	-0.59	-0.79	-0.79	2.17	2.36	2.05	2.06
DE80	Mecklenburg-Vorpommern	-1.36	-1.51	-1.47	-1.45	1.14	3.27	2.54	2.55
DE91	Braunschweig	-1.09	-1.40	-1.26	-1.25	-1.03	-2.06	-1.81	-1.80
DE92	Hannover	-1.44	-1.87	-1.63	-1.62	-2.52	-1.63	-1.92	-1.91
DE93	Lüneburg	-1.42	-1.77	-1.59	-1.58	-3.48	-1.27	-2.12	-2.11
DE94	Weser-Ems	-1.41	-2.09	-1.72	-1.70	-2.33	-3.00	-2.76	-2.75
DEA1	Düsseldorf	-1.02	-0.99	-0.99	-0.98	4.33	6.02	5.45	5.46
DEA2	Köln	-1.83	-2.52	-2.18	-2.17	-6.87	-5.62	-6.09	-6.08
DEA3	Münster	-1.15	-1.66	-1.32	-1.31	-0.79	-0.58	-0.57	-0.57
DEA4	Detmold	-0.98	-1.20	-1.12	-1.11	-2.42	-2.31	-2.47	-2.46
DEA5	Arnsberg	-1.45	-2.30	-1.78	-1.77	-3.96	-4.46	-4.19	-4.18
DEB1	Koblenz	-0.69	-0.62	-0.73	-0.72	2.75	3.34	3.00	3.00
DEB2	Trier	-0.49	-0.63	-0.62	-0.61	4.29	4.38	4.23	4.24
DEB3	Rheinhessen-Pfalz	-1.04	-1.27	-1.18	-1.17	-4.11	-3.95	-4.11	-4.10
DEC0	Saarland	-0.64	-0.52	-0.66	-0.66	1.46	1.69	1.39	1.39

(continued on next page)

Table 4: Change in total exports and exports to the US in percent (continued).

Code	Name	Total exports				US exports			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
DED2	Dresden	-0.84	-0.86	-0.87	-0.85	3.07	3.24	3.11	3.12
DED4	Chemnitz	-0.88	-0.99	-0.93	-0.92	0.10	-0.26	-0.20	-0.20
DED5	Leipzig	-1.41	-1.50	-1.49	-1.49	-1.33	2.43	0.97	0.98
DEE0	Sachsen-Anhalt	-0.82	-0.99	-0.89	-0.88	0.61	-0.03	0.13	0.14
DEF0	Schleswig-Holstein	-1.68	-2.38	-2.02	-2.01	-6.34	-5.27	-5.66	-5.65
DEG0	Thüringen	-0.94	-1.19	-1.03	-1.02	-0.49	-0.99	-0.85	-0.84
DK01	Hovedstaden	-1.32	-1.39	-1.36	-1.35	-3.82	-1.68	-2.47	-2.46
DK02	Sjælland	-0.43	-0.36	-0.36	-0.35	14.10	9.97	11.45	11.46
DK03	Syddanmark	-0.95	-1.26	-1.08	-1.07	0.28	0.03	0.14	0.15
DK04	Midtjylland	-0.38	-0.25	-0.28	-0.26	10.79	9.31	9.84	9.85
DK05	Nordjylland	-0.15	0.06	-0.00	0.01	19.39	14.43	16.34	16.35
EE00	Eesti	-0.83	-0.53	-0.72	-0.74	3.41	6.02	5.01	4.99
EL30	Attiki	0.07	0.72	0.36	0.34	19.98	19.49	19.57	19.54
EL41	Voreio Aigaio	-0.95	-0.89	-0.93	-0.95	14.07	15.79	15.34	15.31
EL42	Notio Aigaio	-0.67	-0.44	-0.56	-0.58	19.75	19.82	19.86	19.83
EL43	Kriti	-0.31	0.17	-0.05	-0.08	21.36	20.36	20.72	20.69
EL51	Anatoliki Makedonia, Thraki	-0.45	-0.24	-0.39	-0.42	22.71	21.34	21.73	21.69
EL52	Kentriki Makedonia	-0.21	0.37	0.02	-0.01	22.12	20.62	21.09	21.05
EL53	Dytiki Makedonia	0.78	1.00	0.94	0.91	20.88	16.63	18.12	18.09
EL54	Ipeiros	-0.62	-0.48	-0.58	-0.61	16.04	15.03	15.35	15.31
EL61	Thessalia	-0.57	-0.54	-0.61	-0.64	15.10	13.27	13.80	13.77
EL62	Ionia Nisia	-0.96	-0.68	-0.80	-0.83	14.13	16.94	16.24	16.20
EL63	Dytiki Ellada	-0.62	-0.57	-0.66	-0.68	11.46	10.37	10.66	10.63
EL64	Stereá Ellada	-0.14	0.07	-0.03	-0.06	17.23	15.04	15.74	15.71
EL65	Peloponnisos	-0.51	-0.43	-0.49	-0.51	15.00	13.18	13.75	13.72
ES11	Galicia	-0.65	-0.75	-0.83	-0.83	7.88	7.38	7.41	7.40
ES12	Principado de Asturias	-0.44	-0.26	-0.48	-0.48	10.93	10.94	10.80	10.79
ES13	Cantabria	-0.73	-0.54	-0.72	-0.73	4.38	5.28	4.83	4.82
ES21	País Vasco	-0.80	-1.00	-1.01	-1.02	4.49	4.33	4.26	4.25
ES22	Comunidad Foral de Navarra	-0.76	-0.76	-0.78	-0.79	-0.45	-0.20	-0.38	-0.39
ES23	La Rioja	-1.21	-1.50	-1.40	-1.41	2.73	2.79	2.69	2.68
ES24	Aragón	-0.86	-0.94	-0.98	-0.99	3.85	3.99	3.82	3.81
ES30	Comunidad de Madrid	-0.85	-0.72	-0.86	-0.88	7.20	9.34	8.59	8.57
ES41	Castilla y León	-0.91	-1.16	-1.18	-1.19	2.05	1.93	1.81	1.79
ES42	Castilla-La Mancha	-0.69	-0.72	-0.80	-0.81	4.24	4.27	4.12	4.11
ES43	Extremadura	-1.00	-0.98	-1.08	-1.09	2.85	5.76	4.64	4.63
ES51	Cataluña	-0.55	-0.57	-0.68	-0.69	12.54	12.04	12.10	12.09
ES52	Comunitat Valenciana	-0.66	-0.79	-0.83	-0.84	11.08	10.51	10.60	10.58
ES53	Illes Balears	-1.12	-0.90	-1.03	-1.04	4.83	11.17	8.98	8.97
ES61	Andalucía	-0.87	-0.86	-0.94	-0.95	10.60	11.13	10.90	10.89
ES62	Región de Murcia	-0.93	-0.96	-1.01	-1.02	7.44	7.96	7.73	7.72
ES63	Ciudad de Ceuta	-1.39	-1.12	-1.26	-1.27	8.06	14.43	12.42	12.40
ES64	Ciudad de Melilla	-1.50	-1.15	-1.33	-1.35	9.90	15.78	14.02	13.99
ES70	Canarias	-0.98	-0.69	-0.89	-0.90	8.93	13.27	11.83	11.81

(continued on next page)

Table 4: Change in total exports and exports to the US in percent (continued).

Code	Name	Total exports				US exports			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
FI19	Länsi-Suomi	-1.60	-2.49	-2.03	-2.01	-6.15	-6.99	-6.65	-6.64
FI1B	Helsinki-Uusimaa	-1.32	-1.65	-1.46	-1.44	-1.30	1.02	0.27	0.28
FI1C	Etelä-Suomi	-1.09	-1.58	-1.29	-1.28	1.03	0.81	0.95	0.95
FI1D	Pohjois- ja Itä-Suomi	-1.15	-1.78	-1.44	-1.42	-0.01	-0.90	-0.54	-0.53
FI20	Åland	-1.91	-2.41	-2.17	-2.15	-6.12	-1.44	-3.31	-3.30
FR10	Ile-de-France	-0.95	-1.10	-1.07	-1.07	8.02	9.74	9.19	9.18
FRB0	Centre — Val de Loire	-1.04	-1.48	-1.26	-1.26	1.79	1.34	1.51	1.51
FRC1	Bourgogne	-0.82	-1.05	-1.02	-1.03	6.45	6.32	6.30	6.29
FRC2	Franche-Comté	-0.96	-1.27	-1.15	-1.15	6.47	5.09	5.49	5.48
FRD1	Basse-Normandie	-0.83	-0.98	-0.88	-0.89	7.95	7.39	7.59	7.59
FRD2	Haute-Normandie	-1.00	-1.23	-1.11	-1.12	2.94	2.78	2.81	2.80
FRE1	Nord-Pas de Calais	-0.99	-1.39	-1.23	-1.23	5.79	5.27	5.42	5.41
FRE2	Picardie	-0.83	-0.90	-0.89	-0.88	5.80	5.87	5.83	5.81
FRF1	Alsace	-0.92	-1.00	-1.00	-1.01	5.40	5.87	5.67	5.66
FRF2	Champagne-Ardenne	-0.84	-0.96	-0.90	-0.90	8.03	7.41	7.63	7.63
FRF3	Lorraine	-0.98	-1.35	-1.19	-1.19	8.20	7.33	7.61	7.60
FRG0	Pays de la Loire	-0.94	-1.49	-1.31	-1.31	4.00	3.31	3.47	3.47
FRH0	Bretagne	-0.81	-1.20	-1.03	-1.03	4.95	4.43	4.60	4.60
FRI1	Aquitaine	-1.04	-1.49	-1.40	-1.40	3.65	3.59	3.54	3.53
FRI2	Limousin	-0.55	-0.72	-0.67	-0.66	12.60	11.32	11.69	11.68
FRI3	Poitou-Charentes	-0.42	-0.55	-0.56	-0.56	9.19	8.91	8.93	8.93
FRJ1	Languedoc-Roussillon	-0.85	-0.87	-0.90	-0.90	10.52	12.55	11.94	11.94
FRJ2	Midi-Pyrénées	-0.91	-1.15	-1.05	-1.04	3.32	3.12	3.15	3.14
FRK1	Auvergne	-0.55	-0.56	-0.56	-0.56	12.89	11.95	12.24	12.23
FRK2	Rhône-Alpes	-1.69	-2.61	-2.25	-2.25	0.41	-0.02	0.09	0.09
FRL0	Provence-Alpes-Côte d’Azur	-1.09	-1.45	-1.32	-1.32	2.41	4.10	3.53	3.52
FRM0	Corse	-1.24	-1.34	-1.31	-1.32	8.39	14.39	12.40	12.39
HR02	Panonska Hrvatska	-0.65	-0.64	-0.63	-0.64	15.93	14.07	14.68	14.66
HR03	Jadranska Hrvatska	-0.71	-0.41	-0.56	-0.58	17.66	18.06	18.02	18.00
HR05	Grad Zagreb	-0.71	-0.34	-0.53	-0.55	17.89	18.91	18.65	18.62
HR06	Sjeverna Hrvatska	-0.87	-0.98	-0.92	-0.94	7.30	6.28	6.57	6.55
HU11	Budapest	-1.60	-1.48	-1.63	-1.62	-8.44	1.25	-3.07	-3.06
HU12	Pest	-0.93	-0.86	-0.92	-0.91	6.73	10.09	8.86	8.86
HU21	Közép-Dunántúl	-1.06	-1.38	-1.24	-1.24	3.73	2.17	2.59	2.59
HU22	Nyugat-Dunántúl	-0.95	-1.05	-1.02	-1.02	7.76	6.42	6.77	6.77
HU23	Dél-Dunántúl	-1.11	-1.08	-1.13	-1.12	5.74	6.55	6.15	6.16
HU31	Észak-Magyarország	-1.01	-1.22	-1.13	-1.12	5.98	4.25	4.72	4.73
HU32	Észak-Alföld	-1.11	-1.36	-1.27	-1.26	6.46	5.05	5.41	5.41
HU33	Dél-Alföld	-0.99	-1.06	-1.06	-1.05	3.47	3.75	3.55	3.55
IE04	Northern and Western	-2.83	-2.50	-2.85	-2.63	-2.61	2.20	-0.02	0.19
IE05	Southern	-1.48	-2.04	-1.85	-1.76	3.75	-1.03	0.47	0.57
IE06	Eastern and Midland	-2.50	-3.02	-2.91	-2.72	-9.78	-7.92	-8.80	-8.65
ITC1	Piemonte	-0.66	-0.97	-0.93	-0.93	0.55	0.69	0.49	0.48
ITC2	Valle d’Aosta/Vallée d’Aoste	-1.65	-1.54	-1.66	-1.67	-1.29	4.91	2.69	2.69

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Table 4: Change in total exports and exports to the US in percent (continued).

Code	Name	Total exports				US exports			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
ITC3	Liguria	-0.72	-0.36	-0.69	-0.69	8.04	10.05	9.17	9.17
ITC4	Lombardia	-0.92	-1.26	-1.28	-1.28	1.07	1.18	0.96	0.95
ITF1	Abruzzo	-0.56	-0.42	-0.78	-0.78	4.39	4.67	4.22	4.22
ITF2	Molise	-1.15	-1.17	-1.24	-1.24	4.56	7.43	6.37	6.37
ITF3	Campania	-1.02	-1.18	-1.31	-1.32	-0.81	1.24	0.31	0.31
ITF4	Puglia	-1.28	-1.63	-1.66	-1.67	-4.87	-2.79	-3.75	-3.76
ITF5	Basilicata	-0.69	-0.42	-0.64	-0.64	4.98	5.17	4.97	4.97
ITF6	Calabria	-1.24	-1.27	-1.37	-1.37	0.24	4.22	2.75	2.74
ITG1	Sicilia	-0.97	-0.96	-1.12	-1.12	2.33	5.24	4.12	4.12
ITG2	Sardegna	-1.36	-1.33	-1.43	-1.43	-2.55	2.48	0.53	0.52
ITH1	Provincia Autonoma di Bolzano/Bozen	-1.28	-1.67	-1.54	-1.55	-0.73	0.82	0.25	0.24
ITH2	Provincia Autonoma di Trento	-0.84	-1.08	-1.04	-1.04	0.60	2.20	1.57	1.56
ITH3	Veneto	-1.61	-2.66	-2.48	-2.49	-4.99	-5.62	-5.69	-5.70
ITH4	Friuli-Venezia Giulia	-0.79	-1.08	-1.10	-1.11	-0.30	-0.22	-0.49	-0.50
ITH5	Emilia-Romagna	-1.28	-2.28	-2.13	-2.14	-4.13	-4.78	-4.87	-4.88
ITI1	Toscana	-0.65	-1.07	-1.26	-1.26	1.65	1.39	1.07	1.07
ITI2	Umbria	-0.62	-0.72	-1.06	-1.06	-0.58	-0.58	-1.03	-1.03
ITI3	Marche	-0.64	-0.81	-1.12	-1.12	-0.75	-0.80	-1.24	-1.24
ITI4	Lazio	-0.73	-0.85	-1.01	-1.01	1.93	3.57	2.79	2.79
LT01	Sostinės regionas	-1.00	-0.84	-0.93	-0.94	0.26	5.39	3.43	3.43
LT02	Vidurio ir vakarų Lietuvos regionas	-0.92	-1.04	-1.00	-1.00	-1.16	-1.27	-1.29	-1.29
LU00	Luxembourg	-0.06	-0.22	-0.10	-0.09	20.39	18.94	19.54	19.54
LV00	Latvija	-0.83	-0.72	-0.76	-0.78	5.92	7.49	6.94	6.92
MT00	Malta	-0.15	-0.34	-0.26	-0.26	23.47	22.05	22.53	22.53
NL11	Groningen	-1.13	-1.52	-1.33	-1.31	16.29	10.77	12.85	12.87
NL12	Friesland (NL)	-1.07	-1.08	-1.12	-1.10	9.46	8.28	8.64	8.64
NL13	Drenthe	-0.74	-0.65	-0.72	-0.70	14.74	12.96	13.59	13.60
NL21	Overijssel	-0.93	-0.94	-0.98	-0.97	9.94	9.41	9.58	9.59
NL22	Gelderland	-1.03	-1.16	-1.13	-1.11	9.74	8.82	9.14	9.14
NL23	Flevoland	-1.52	-1.75	-1.65	-1.63	2.12	5.60	4.33	4.34
NL31	Utrecht	-1.16	-0.99	-1.10	-1.08	6.03	10.43	8.89	8.89
NL32	Noord-Holland	-1.05	-0.78	-0.93	-0.90	8.89	12.39	11.29	11.28
NL33	Zuid-Holland	-1.34	-1.52	-1.47	-1.44	2.93	4.99	4.30	4.31
NL34	Zeeland	-1.14	-1.40	-1.30	-1.29	10.20	7.83	8.63	8.64
NL41	Noord-Brabant	-1.08	-1.31	-1.22	-1.20	7.05	6.59	6.75	6.75
NL42	Limburg (NL)	-1.30	-1.57	-1.47	-1.45	7.83	7.37	7.56	7.57
NO02	Innlandet	1.22	1.24	1.22	1.23	21.66	20.85	21.13	21.13
NO06	Trøndelag	-0.93	-0.97	-0.96	-0.96	-6.40	-7.09	-6.87	-6.88
NO07	Nord-Norge	-3.06	-3.08	-3.11	-3.10	-6.55	-6.96	-6.85	-6.85
NO08	Oslo og Viken	-0.18	-0.25	-0.24	-0.24	19.29	18.35	18.69	18.69
NO09	Agder og Sør-Østlandet	0.42	0.39	0.38	0.38	19.80	18.85	19.19	19.19
NO0A	Vestlandet	-1.47	-1.37	-1.41	-1.41	-8.39	-9.12	-8.89	-8.89
NO0B	Jan Mayen and Svalbard	0.75	0.62	0.66	0.66	19.59	18.81	19.08	19.08
PL21	Małopolskie	-1.04	-0.91	-0.99	-0.99	2.45	6.19	4.92	4.91

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Table 4: Change in total exports and exports to the US in percent (continued).

Code	Name	Total exports				US exports			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
PL22	Śląskie	-0.84	-0.86	-0.87	-0.87	9.46	8.51	8.83	8.82
PL41	Wielkopolskie	-1.03	-1.27	-1.13	-1.14	1.26	1.10	1.17	1.16
PL42	Zachodniopomorskie	-1.03	-0.81	-0.94	-0.94	0.36	5.95	3.94	3.93
PL43	Lubuskie	-0.83	-0.67	-0.71	-0.71	4.77	5.22	5.09	5.08
PL51	Dolnośląskie	-0.71	-0.43	-0.56	-0.57	12.87	12.50	12.67	12.66
PL52	Opolskie	-0.75	-0.52	-0.62	-0.62	11.23	11.06	11.15	11.13
PL61	Kujawsko-pomorskie	-0.73	-0.62	-0.63	-0.63	5.93	5.42	5.64	5.63
PL62	Warmińsko-mazurskie	-0.81	-0.65	-0.72	-0.72	6.37	6.22	6.24	6.23
PL63	Pomorskie	-0.78	-0.67	-0.69	-0.69	6.69	7.18	7.08	7.07
PL71	Łódzkie	-0.70	-0.62	-0.55	-0.55	7.34	6.87	7.16	7.15
PL72	Świętokrzyskie	-0.79	-0.61	-0.70	-0.70	6.39	6.78	6.64	6.63
PL81	Lubelskie	-1.03	-0.95	-1.00	-1.01	-2.35	2.29	0.49	0.48
PL82	Podkarpackie	-0.75	-0.55	-0.64	-0.65	6.63	6.16	6.34	6.33
PL84	Podlaskie	-1.11	-1.01	-1.10	-1.11	-3.95	0.21	-1.49	-1.50
PL91	Warszawski stołeczny	-1.12	-0.96	-1.05	-1.06	-1.52	3.01	1.37	1.36
PL92	Mazowiecki regionalny	-1.15	-1.46	-1.32	-1.33	2.33	0.64	1.12	1.11
PT11	Norte	-1.08	-1.47	-1.31	-1.32	3.51	3.53	3.50	3.48
PT15	Algarve	-0.42	-0.04	-0.23	-0.24	17.33	19.35	18.81	18.79
PT16	Centro (PT)	-0.89	-1.17	-1.04	-1.06	4.82	4.78	4.79	4.77
PT17	Área Metropolitana de Lisboa	-0.97	-0.43	-0.71	-0.73	4.60	10.26	8.30	8.28
PT18	Alentejo	-0.43	-0.30	-0.39	-0.41	15.11	14.36	14.64	14.62
PT20	Região Autónoma dos Açores	-1.00	-0.71	-0.91	-0.93	4.32	12.34	9.32	9.30
PT30	Região Autónoma da Madeira	-0.34	0.05	-0.16	-0.18	20.57	21.50	21.34	21.31
RO11	Nord-Vest	-0.75	-0.86	-0.88	-0.90	7.53	7.30	7.27	7.26
RO12	Centru	-0.91	-1.29	-1.20	-1.21	3.35	2.56	2.70	2.69
RO21	Nord-Est	-0.98	-1.02	-1.08	-1.09	2.27	4.44	3.59	3.58
RO22	Sud-Est	-0.70	-0.83	-0.84	-0.84	8.43	7.63	7.76	7.75
RO31	Sud-Muntenia	-0.90	-1.09	-1.09	-1.10	9.83	8.34	8.69	8.68
RO32	București-Ilfov	-0.69	-0.13	-0.50	-0.51	15.06	17.11	16.35	16.33
RO41	Sud-Vest Oltenia	-0.80	-0.85	-0.85	-0.86	8.89	7.98	8.17	8.16
RO42	Vest	-0.72	-0.73	-0.77	-0.78	7.38	7.04	7.07	7.06
SE11	Stockholm	-1.43	-1.60	-1.51	-1.50	-1.70	0.97	0.06	0.07
SE12	Östra Mellansverige	-0.60	-0.70	-0.61	-0.59	10.65	9.77	10.12	10.13
SE21	Småland med öarna	-0.91	-1.09	-0.99	-0.98	1.77	1.52	1.60	1.61
SE22	Sydsverige	-1.16	-1.42	-1.27	-1.26	1.66	3.07	2.62	2.63
SE23	Västsverige	-1.28	-1.82	-1.52	-1.51	0.00	-0.14	-0.04	-0.04
SE31	Norra Mellansverige	-1.09	-1.49	-1.28	-1.27	0.18	-0.15	-0.05	-0.04
SE32	Mellersta Norrland	-0.77	-0.72	-0.76	-0.76	3.73	3.61	3.56	3.56
SE33	Övre Norrland	-0.84	-1.05	-0.93	-0.92	7.66	5.28	6.05	6.06
SI03	Vzhodna Slovenija	-0.86	-0.80	-0.89	-0.89	2.95	1.60	1.87	1.88
SI04	Zahodna Slovenija	-1.13	-1.04	-1.16	-1.16	-8.24	-4.34	-6.10	-6.10
SK01	Bratislavský kraj	-1.70	-2.02	-1.92	-1.92	-12.34	-8.53	-10.52	-10.52
SK02	Západné Slovensko	-1.01	-1.01	-1.06	-1.06	-5.91	-4.90	-5.45	-5.45
SK03	Stredné Slovensko	-0.98	-0.80	-0.94	-0.94	-3.14	-0.81	-1.84	-1.84

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Table 4: Change in total exports and exports to the US in percent (continued).

Code	Name	Total exports				US exports			
		Deep	Frag.	Int. EU	Int. Sgl	Deep	Frag.	Int. EU	Int. Sgl
SK04	Východné Slovensko	-1.11	-1.05	-1.13	-1.13	-7.77	-4.74	-6.08	-6.08
UKC1	Tees Valley and Durham	-0.58	-0.77	-0.77	-0.77	15.25	14.37	14.62	14.62
UKC2	Northumberland and Tyne and Wear	0.08	-0.01	-0.02	-0.02	20.95	20.01	20.29	20.29
UKD1	Cumbria	-0.15	-0.14	-0.18	-0.17	18.36	17.51	17.76	17.76
UKD3	Greater Manchester	1.35	1.40	1.32	1.34	21.51	20.56	20.85	20.85
UKD4	Lancashire	-0.14	-0.28	-0.29	-0.28	19.40	18.46	18.74	18.73
UKD6	Cheshire	0.72	0.64	0.62	0.62	20.12	19.19	19.48	19.47
UKD7	Merseyside	0.61	0.64	0.56	0.57	20.65	19.91	20.12	20.11
UKE1	East Yorkshire, Northern Lincolnshire	-0.24	-0.34	-0.36	-0.35	17.65	16.73	17.01	17.00
UKE2	North Yorkshire	0.03	-0.01	-0.04	-0.03	20.23	19.30	19.60	19.59
UKE3	South Yorkshire	0.61	0.57	0.52	0.52	20.96	20.01	20.28	20.27
UKE4	West Yorkshire	1.17	1.15	1.09	1.10	19.46	18.51	18.81	18.80
UKF1	Derbyshire and Nottinghamshire	0.14	0.02	0.00	0.01	20.35	19.41	19.68	19.68
UKF2	Leicestershire, Rutland	0.13	0.07	0.03	0.04	19.90	18.97	19.25	19.24
UKF3	Lincolnshire	-0.28	-0.43	-0.43	-0.42	17.35	16.52	16.77	16.76
UKG1	Herefordshire, Worcestershire	0.33	0.25	0.23	0.23	21.21	20.27	20.56	20.55
UKG2	Shropshire and Staffordshire	-0.18	-0.35	-0.35	-0.35	17.58	16.67	16.93	16.93
UKG3	West Midlands	0.58	0.54	0.49	0.50	18.80	17.89	18.16	18.16
UKH1	East Anglia	0.47	0.39	0.37	0.38	20.18	19.30	19.57	19.56
UKH2	Bedfordshire and Hertfordshire	0.45	0.40	0.37	0.38	21.91	20.98	21.26	21.26
UKH3	Essex	0.45	0.38	0.36	0.36	21.64	20.75	21.02	21.02
UKI1	Inner London	0.55	0.59	0.53	0.54	20.53	19.64	19.91	19.91
UKI2	Outer London	-0.32	-0.29	-0.34	-0.33	17.16	16.30	16.56	16.56
UKJ1	Berkshire Oxfordshire	-0.01	-0.06	-0.12	-0.11	19.52	18.59	18.87	18.86
UKJ2	Surrey, East and West Sussex	0.10	0.00	-0.02	-0.01	19.59	18.72	18.98	18.97
UKJ3	Hampshire and Isle of Wight	0.30	0.25	0.20	0.21	20.48	19.54	19.82	19.81
UKJ4	Kent	0.35	0.25	0.23	0.24	20.36	19.45	19.72	19.71
UKK1	Gloucestershire, Bristol/Bath area	0.32	0.17	0.17	0.17	18.95	18.06	18.32	18.32
UKK2	Dorset and Somerset	-0.03	-0.08	-0.11	-0.11	19.87	18.99	19.26	19.26
UKK3	Cornwall and Isles of Scilly	-0.42	-0.49	-0.50	-0.50	20.59	19.70	19.97	19.97
UKK4	Devon	-0.68	-0.80	-0.81	-0.81	18.19	17.31	17.57	17.56
UKL1	West Wales and The Valleys	-1.06	-1.23	-1.23	-1.23	15.13	14.26	14.51	14.50
UKL2	East Wales	0.34	0.22	0.21	0.22	19.05	18.15	18.43	18.42
UKM2	Eastern Scotland	0.24	0.40	0.31	0.32	20.94	19.97	20.27	20.26
UKM3	South Western Scotland	-0.38	-0.35	-0.38	-0.38	19.37	18.35	18.63	18.63
UKM5	North Eastern Scotland	-0.78	-0.85	-0.87	-0.84	15.49	14.62	14.91	14.89
UKM6	Highlands and Islands	-0.53	-0.60	-0.62	-0.61	16.97	16.18	16.42	16.41
UKN0	Northern Ireland	0.01	0.12	0.02	0.05	18.86	18.38	18.50	18.52

Notes: Each column refers to one scenario: *Deep* is deep integration with labor movement within EU, *Frag.* is the fragmented scenario with labor movement only within each country, *Int. EU* is the current EU integration with labor movement within EU, and *Int. Sgl* is the current EU integration with labor movement only within each country.