

# Trade Policy and the Global Economy

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This brief presents the results of analysis using the OECD Trade Model (METRO). METRO is a state-of-the-art analytical tool that uses a globally integrated approach to estimate likely outcomes from illustrative policy-change scenarios. METRO is not a forecasting tool and thus results are relevant only in the context of the specified scenario and are not reflective of actual policy actions in any specific country or sector.

The term “non-tariff measures” (NTMs) covers a wide set of policies in terms of purpose, legal form and economic effect. They are perhaps better defined by what they are not, than by what they are: all policy measures other than tariffs and tariff-rate quotas that have a more or less direct effect on the price of traded products, the quantity of traded products, or both. Generally, NTMs stem from domestic regulations that aim to overcome or reduce the impacts of market imperfections, such as those related to negative externalities (e.g. pollution), information asymmetries (e.g. the condition of a used car), and risks for human, animal or plant health. NTMs also tend to increase production and trade costs and can influence, positively or negatively, the development of new technologies or production methods.

Because NTMs stem from regulation to correct market imperfections, they can have benefits as well as costs for trade. For example, sanitary regulations ensure that fresh produce does not contain harmful bacteria; compulsory labelling to address information asymmetries can increase the costs to businesses, but at the same time can provide a signal of quality or safety, strengthening consumer confidence in products, domestic and foreign. Given the positive role performed by many NTMs, it is not desirable for governments to eliminate them in the same manner as they would eliminate tariffs.

Nevertheless, there is scope to lower unnecessary costs associated with NTMs, while still respecting governments’ right to regulate in order to meet their public policy objectives. Indeed the issue with NTMs is not the regulatory objectives, which may even be shared across countries, but is more often the application of different standards or methods to achieve those objectives that can unnecessarily raise costs for businesses seeking to access more than one market. Higher costs than necessary can be

especially burdensome for micro, small and medium enterprises (MSMEs).

Recent OECD estimates of the ad valorem equivalents (AVEs)<sup>1</sup> of NTMs show that for most economies, the costs associated with NTMs are between two and 10 times the costs associated with tariffs. Thus, international trade in goods and services is strongly affected by NTMs. A growing body of evidence, including recent estimates by the OECD, suggests that reducing regulatory heterogeneity can reduce trade costs associated with NTMs.<sup>2</sup> The costs and benefits of reducing differences in some regulatory approaches have been identified in ongoing work by the OECD on Preferential Trade Agreements. This evidence shows a strong, positive impact on bilateral trade flows when countries cooperate to reduce unnecessary trade costs related to measures such as Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT).<sup>3</sup>

This policy note is the third in a series examining the impact of illustrative policy scenarios on global economic outcomes. This brief shows what can be expected if trading economies were to reduce unnecessary trade costs associated with NTMs, drawing upon analysis using the OECD METRO Model.<sup>4</sup> Results are presented for G20 economies in terms of estimated changes in economic output, trade (including at the sector level), and incomes. Finally, overall policy considerations are summarised.

### Reducing NTM costs across G20 economies

The OECD has estimated the trade costs of doing business across divergent NTM regimes for a large number of economies.<sup>5</sup> Figure 1 illustrates that the closer the regulatory structure between two economies, the lower the estimated level of trade

costs associated with NTMs (that is, moving closer to the bottom right hand corner of Figure 1).

The scenario presented in this brief assumes that governments are able to work together to minimise policy divergence, thereby reducing unnecessary bilateral trade costs that may stem from differences in regulatory approaches across G20 economies.<sup>6</sup> Given the harmonised regulatory regime existing within the European Union, NTMs among these countries are not reduced in this scenario, although they are reduced between EU members and third parties.<sup>7</sup> The level of actual NTM reduction varies by sector and country. Figure 2 shows the level of bilateral trade costs by sector, on average, across the G20 and the average size of cost reduction applied for that sector.

As would be expected, when NTM costs are reduced, both imports and exports increase for all G20 economies (Figure 3). Total imports among the G20 increase by 5.5% while exports expand by 5.6%. The reduction in trade costs allows for improved resource allocation, which is what drives the gains from trade. Indeed, these carry through the rest of the economy in the form of increased incomes as domestic consumers and businesses have access to cheaper imports at the same time as they experience improved access for their exports overseas.

Economies producing goods that encounter relatively high initial NTMs experience the largest gains in trade. For example, trade costs associated with NTMs are reduced in 13 of the 16 sectors examined for Argentina and Australia-New Zealand. This leads to substantial efficiency gains across these economies, creating relatively large increases in both production and trade. Canada and Turkey have relatively fewer sectors affected (6 out of 16), but the size of the declines in key sectors (cereal grains and motor vehicles for Canada and motor vehicles for Turkey) leads to large increases in trade for these countries as well. This same process occurs in Brazil and China. Brazil increases in imports in motor vehicles and machinery and its exports of cereal grains and meat. China increases its imports of dairy and exports of textiles and other manufacturing products. The members of the EU have relatively smaller gains because they continue to conduct the bulk of their trade amongst each other at existing levels of NTM-related trade costs.

The simulated reduction in NTM costs across the G20 economies does shift trade away from non-G20 economies. While export demand falls slightly for Latin America (0.6%), Southeast Asia and the rest of the world experience larger declines (1.7% and 1.1%, respectively). That is because these parts of the world compete more directly in sectors experiencing greater efficiency gains through the reduction of NTM costs, especially in intermediate trade. Similarly, as trade costs remain high in the non-G20

economies, exporting to them remains relatively more expensive, leading to declines in import demand. Imports decline by 1.7% in Latin America, 2.8% in Southeast Asia and 1.6% in the rest of the world. These changes translate into slightly smaller overall gains in global trade of 4% (versus over 5% among just G20 economies).

***Reducing trade costs associated with NTMs can affect domestic production in two ways: through improved efficiency and resource savings and through cost reductions leading more directly to price declines.***

Given that many of the costs associated with NTMs stem from redundancies in processes (e.g. retooling production runs for different market specifications), when eliminated, firms are able to service more markets with existing (or even less) resource use (e.g. the same machine tooling). The resources previously used in these sectors are reallocated to other economic activities where they can be used more productively. This raises output and incomes across the economy. At the same time, reducing actual costs associated with serving external markets (e.g. costs for additional testing procedures for customs clearance) leads more directly to price reductions. These price reductions tend to increase demand and increase resource use. The ultimate impact on production in any one sector will depend on the combination of these two effects.

Figure 4 illustrates these points in the growth in intermediate and final goods exports. While businesses benefit from greater final goods exports as a result of price reductions, they also experience increased access to, as well as demand for, production inputs. The growth in intermediate exports is an outcome of the efficiency gains experienced by producers.

Either way, being able to access more markets more efficiently, producers can offer goods at lower prices, thus raising domestic demand (Figure 4). These gains are reflected in all sectors with the exception of a very slight decline in demand for nonferrous metals. Nonferrous metals are used almost exclusively as an intermediate input and thus the efficiencies gains from trade lead to an overall decline in demand as current needs can be met with existing production levels. Over time, as sectors using nonferrous metals continue to expand, it is expected that demand for nonferrous metals would increase.

***The estimated efficiency gains from improved reallocation of trade are seen most clearly in income gains to labour.***

Figure 5 shows the distribution of the changes in labour income across selected occupations. While all job categories gain across G20 economies, in most of the economies services incomes increase more, relative to the average. Services, such as transport, business services and insurance, play a



**Table 1. Changes in National Household Income per Worker (US\$)**

	<b>Tariff Liberalisation</b>	<b>NTM Cost Reduction</b>
Argentina	193	477
Australia and New Zealand	436	1,171
Brazil	110	171
Canada	371	1,356
China	58	68
France	155	362
Germany	223	420
United Kingdom	173	413
Italy	145	301
European Union (24)	133	249
Indonesia	35	49
India	51	21
Japan	369	617
Republic of Korea	1,827	840
Mexico	45	173
Russian Federation	237	392
South Africa	189	227
Turkey	278	512
United States	157	740
Average across G20	185	450

large role in supporting trade flows.<sup>8</sup> Thus, when trade increases, so does the demand for these inputs and the workers they employ (such as clerical staff). There are specific standouts, directly related to corresponding sectoral gains in trade, such as agriculture workers in Turkey and Canada, professionals in Russia and agriculture workers in Mexico. Russia increases its exports of metals, which employs a relatively large share of professionals. Agriculture workers in Canada, Mexico and Turkey benefit from a sizable increase in the exports of their cereal grains (Canada) and other agricultural products (Mexico and Turkey). Low skill workers, while experiencing improved incomes overall, experience smaller relative increases than other labour categories.

While the majority of policy adjustments take place in agriculture and manufacturing areas, income gains are widely spread, including in the services sector. These translate into significant GDP gains (Figure 6). Efficiency gains can add as much as 2.8 percentage points to GDP levels in some countries. These gains are a direct result of the spillovers experienced in the domestic economy and illustrate the important links between policy areas. While the scenario presented here focuses on NTMs in goods markets, services jobs benefit, implying that a more coordinated effort in streamlining both goods

and services NTMs would generate total economic benefits that exceed the sum of the individual parts.

The increases in labour income that translate into substantial gains across the G20 economies in terms of both overall output and household income, can be further disaggregated into gains to workers. Compared with the outcome of the tariff reduction scenario<sup>9</sup>, household income gains per worker are more than double for many economies and 1.7 times larger over the entire G20 group of economies (Table 1). The gains to workers from improved trade through NTM cost reductions are not just bigger in total (averaging \$185/worker for tariffs versus \$450/worker on average for NTMs) but larger amounts occur for more countries. The distribution across economies largely reflects the relative size of the NTM cost cuts, and the sectors to which they are applied. For example, NTMs across the G20 were significant in the meat and dairy sectors, sectors in which Australia and New Zealand have a comparative advantage. Therefore, when the trade costs in these sectors are reduced, they experience relatively larger trade expansion, increasing labour demand significantly. Similarly, Canada experiences a large gain in its exports of motor vehicles, which push up labour demand, and income. Each of these three countries have a relatively small labour force,

leading to large increases in income per worker.

***Compared with the outcome of the tariff reduction scenario, household income gains per worker are more than double for many economies and 1.7 times larger over the entire G20.***

The longstanding concern over NTMs by businesses and policymakers is validated by the results presented in this brief. Reducing trade costs associated with NTMs is estimated to increase global trade by 5.5% among G20 members and 4% worldwide. It could also lead to greater increases in workers' incomes than tariff liberalisation alone.

The benefits of reducing unnecessary trade costs on a multilateral basis, for example by adopting internationally agreed standards, would accrue more widely. The broad-based nature of the gains subsequently reduces the potential for trade diversion, benefitting both businesses (in terms of lower compliance costs) and governments (in terms of lower enforcement costs).

***Developing market regulations in isolation is costly and can put domestic industries at a competitive disadvantage when attempting to access global markets***

What the results of this analysis highlights is that developing market regulations in isolation is costly and can put domestic industries at a competitive disadvantage when attempting to access global markets. The benefits of coordinated policy action can lead to improvements in domestic markets as well, given that the OECD has shown that reducing distortions between markets can lead to fewer distortions within markets, generating domestic gains beyond those tied to trade.<sup>10</sup> In addition, many policies leading to efficiency gains can be implemented unilaterally.

OECD work has also shown that simply increasing policy transparency can be enough to reduce trade costs.<sup>11</sup> Having regulatory requirements publicly available, clearly stated and consistently applied increases predictability and certainty for traders wishing to access a market. This is particularly important in today's interconnected world, characterized by the international fragmentation of production within global value chains.

## **Policy Considerations**

The nature of NTMs generally reflect domestic conditions and preferences, but may also reflect domestic rule-making processes that pay less, if any, attention to international market considerations. This can have significant unintended consequences as the available evidence shows that the most productive firms, offering the best prices and quality, are those with unimpeded access to world-class inputs and to larger overseas markets. This scenario highlights that reducing unnecessary trade

costs associated with NTMs can lead to significant economic gains to all countries involved. That is, by taking a more comprehensive approach to regulatory design it is possible to reduce some of the trade costs due to regulatory divergence without constraining government's right to regulate in pursuit of its domestic policy interests.

OECD analysis suggests, in line with best regulatory practices, that countries systemically include consideration of international market conditions when *developing new regulations*.<sup>12</sup> This includes incorporating the likely impacts on international markets in existing regulatory impact analysis systems and making use of cross-border mutual recognition frameworks and trade agreements.

There are also important potential benefits in examining the existing stock of NTMs to clarify their impact on the participation of domestic firms in international markets. Are existing regulations clear, transparent, and predictable? Are NTMs consistently applied both to domestic and foreign firms? Are existing NTMs based on the best available science or other technical information, proportionate to the goals being pursued, and consistent with internationally agreed standards?

Policy makers can also review existing regulations to identify and address any inconsistencies within domestic markets. In particular, regulatory cooperation across both goods and services markets is essential to reduce unnecessary trade costs and realize the subsequent economic and employment benefits.

From a multilateral perspective, the results of this analysis highlight the significant gains that come from international cooperation. By working together to improve regulatory processes between countries, in particular to ensure NTMs are transparent, non-discriminatory, and proportionate, unnecessary costs and conflicts can be avoided. Countries can more fully participate in cooperative initiatives such as the development of international standards, frameworks and guidelines, including those agreed at international institutions such as WTO, UN, OIE, ILO, and OECD.

Finally, it is important to recall that NTMs are elements of a much broader package of policies, and that only an integrated policy approach, both domestically and internationally, can make the whole system work better for more people. OECD analysis concludes that action is required in three broad areas: domestic policies that encourage opportunity, innovation and competition; measures that support the needed structural adjustments, including in lagging regions and MSMEs; and increased international cooperation, using the full range of international cooperation tools (from binding global disciplines to voluntary 'soft law') to update the global trade rule-book.<sup>13</sup>

## Endnotes

**1** Ad valorem equivalents are the cost of the NTM measured as if it were a tax expressed as percentage of the value of the good or service. They differ from tariff equivalent by capturing the cost, not the volume, of trade.

**2** Cadot, O., J. Gourdon and F. van Tongeren (2018), “Estimating Ad Valorem Equivalents of Non-Tariff Measures: Combining Price-Based and Quantity-Based Approaches”, *OECD Trade Policy Papers*, No. 215, OECD Publishing, Paris, <https://doi.org/10.1787/f3cd5bdc-en>.

**3** Disdier, Stone and Van Tongeren (2019), “Trade and economic effects of IRC - Further empirical evidence from SPS and TBT Provisions”, *OECD Trade Policy Papers*. Forthcoming.

**4** For more information on the OECD METRO model see [https://issuu.com/oecd.publishing/docs/metro-the\\_oecd\\_trade\\_model](https://issuu.com/oecd.publishing/docs/metro-the_oecd_trade_model)

**5** See endnote 2

**6** The scenario assumes that these differences across G20 countries are ‘actionable’, i.e. that countries are able to identify enough common ground to reduce the cost differential.

**7** The scenario takes place prior to the implementation of any specific Brexit plan, thus the UK is included as part of the European Union.

**8** OECD (2017), *Services Trade Policies and the Global Economy*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264275232-en>.

**9** <https://issuu.com/oecd.publishing/docs/oecd-trade-scenario-1-reducing-tari>

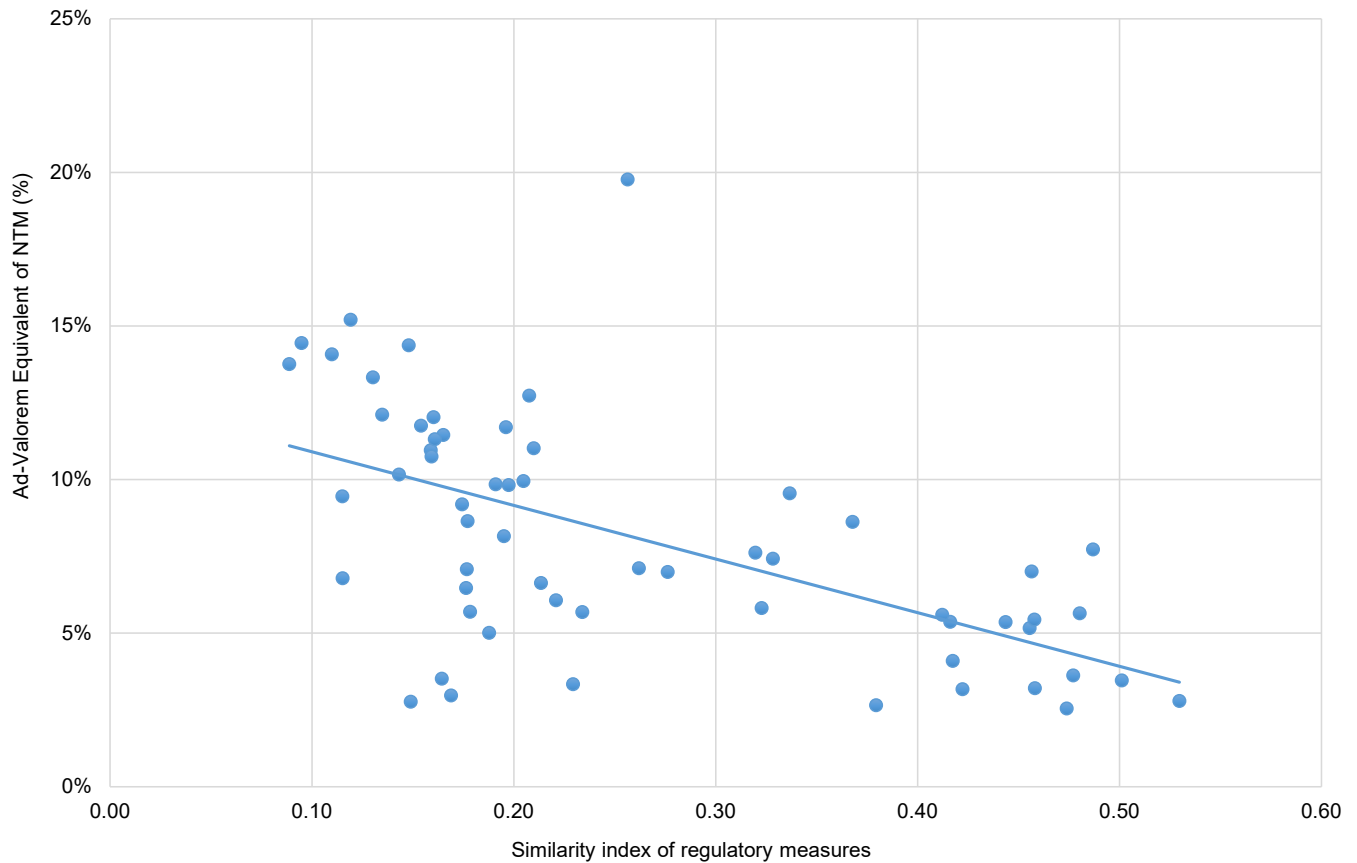
**10** OECD (2018), *Trade Facilitation and the Global Economy*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264277571-en>.

**11** von Lampe, M., K. Deconinck and V. Bastien (2016), “Trade-Related International Regulatory Co-operation: A Theoretical Framework”, *OECD Trade Policy Papers*, No. 195, OECD Publishing, Paris, <https://doi.org/10.1787/3fbf60b1-en>.

**12** OECD (2017), *International Regulatory Co-operation and Trade: Understanding the Trade Costs of Regulatory Divergence and the Remedies*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264275942-en>.

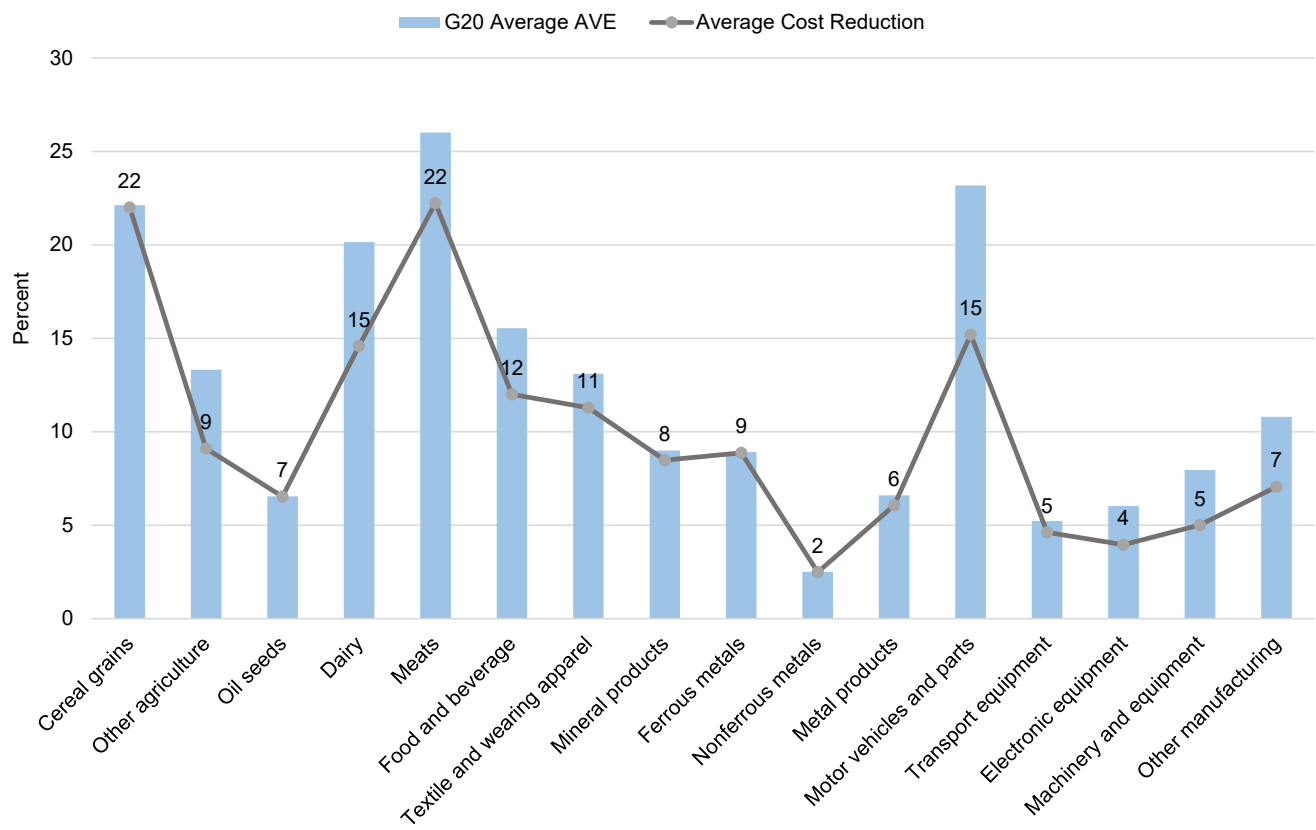
**13** OECD (2017), “Making trade work for all”, *OECD Trade Policy Papers*, No. 202, OECD Publishing, Paris, <https://doi.org/10.1787/6e27effd-en>.

**Figure 1. Cost of NTM versus Regulatory Similarity**

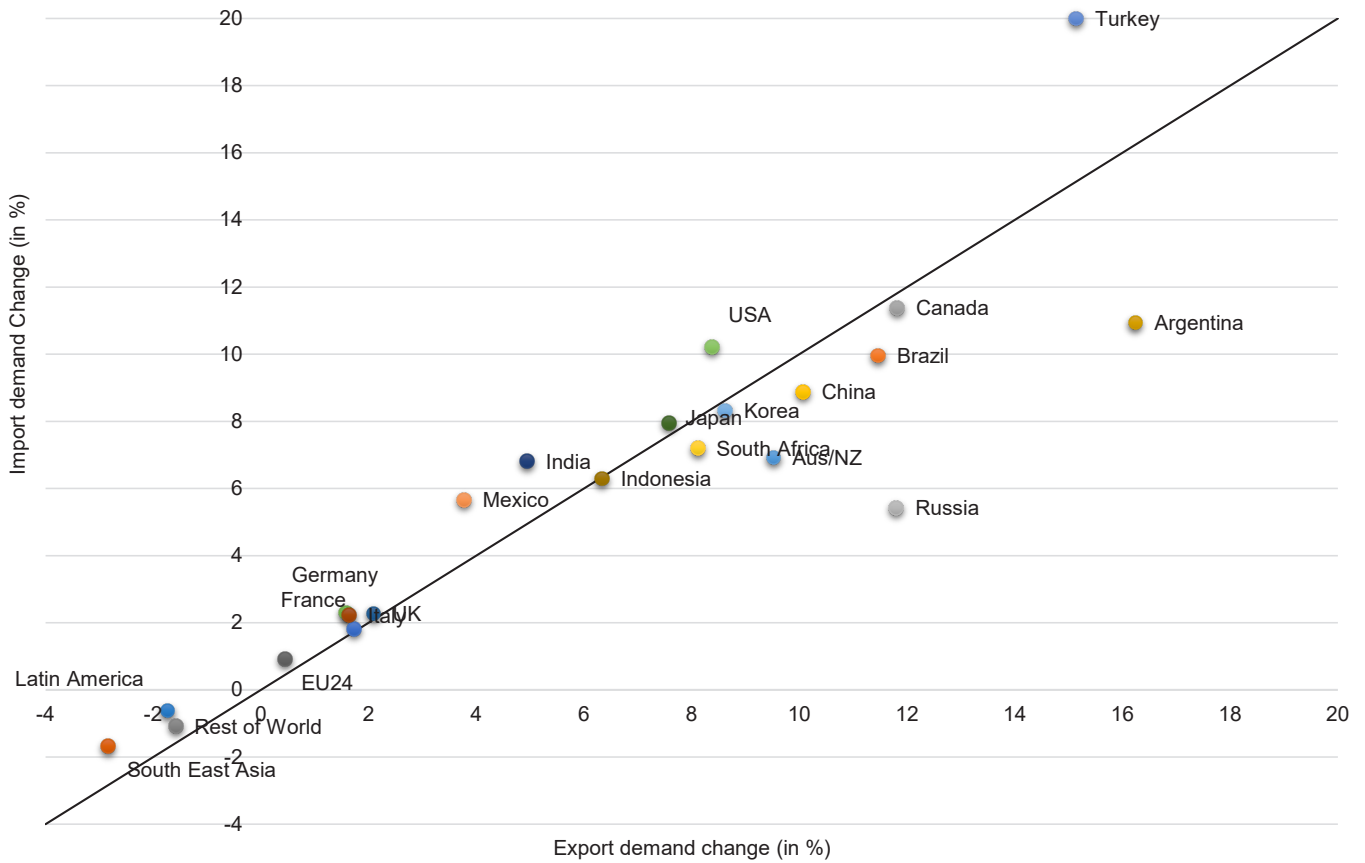


Notes: \*Reference to SPS and TBT measures only. Similarity Index is measured on a scale of 0 to 1, where 1 indicates perfect alignment.

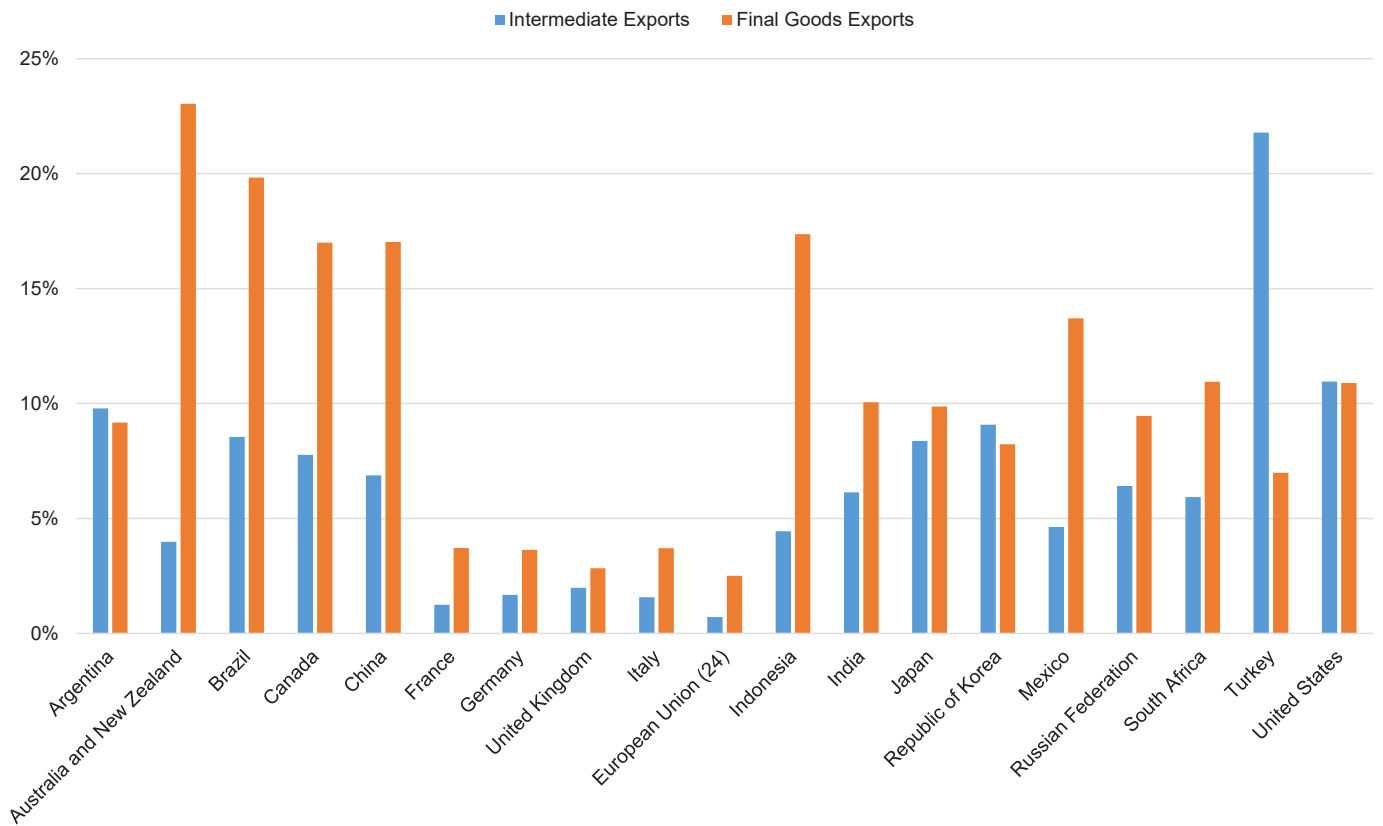
**Figure 2. Average size of NTM cost reductions, by sector**



**Figure 3. Changes in Trade Flows from NTM cost reductions, by country**

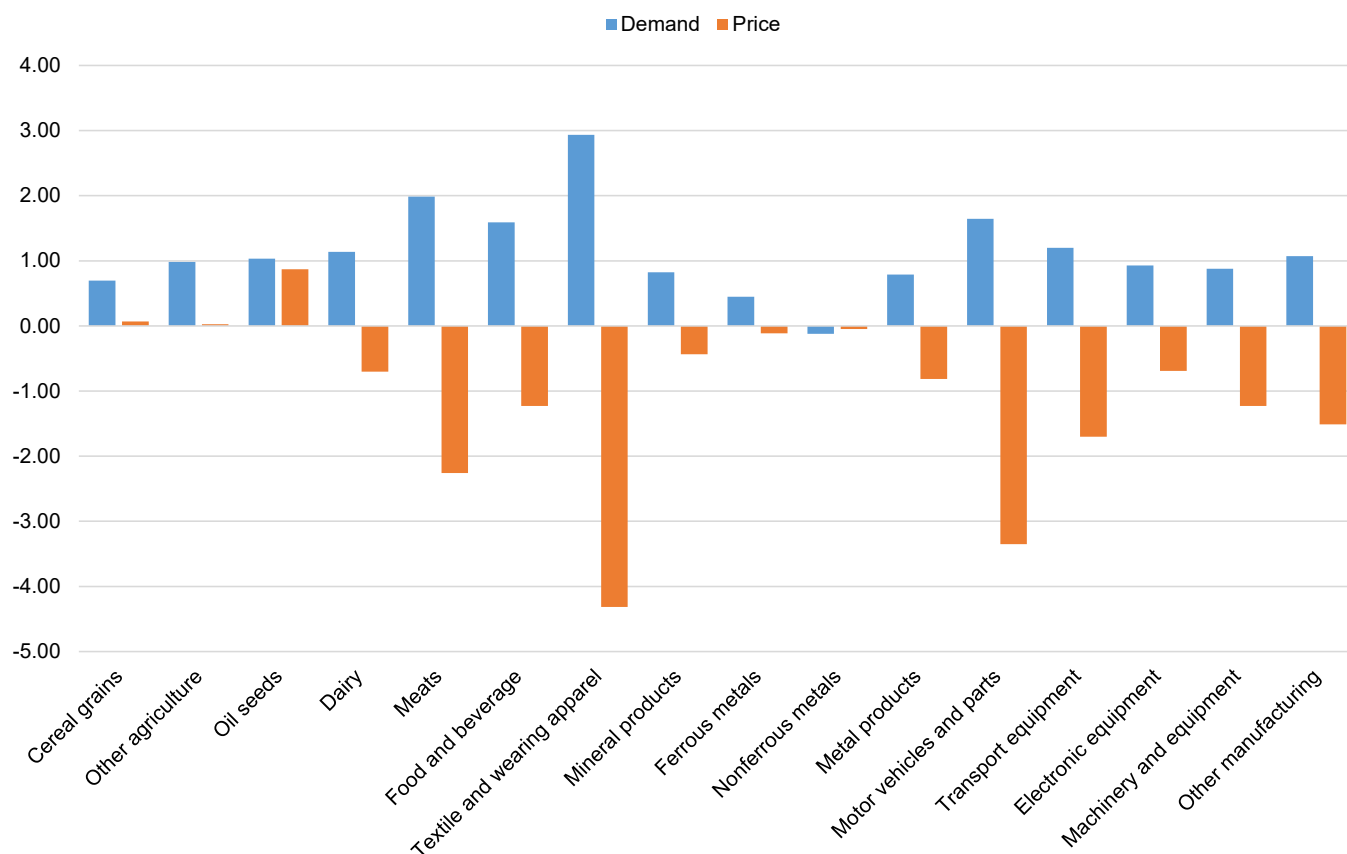


**Figure 4. Change in exports by use**





**Figure 5. Change in demand and price from NTM cost reductions across G20 countries, by sector**



**Figure 6. Estimated changes in labour income by job category (% change)**

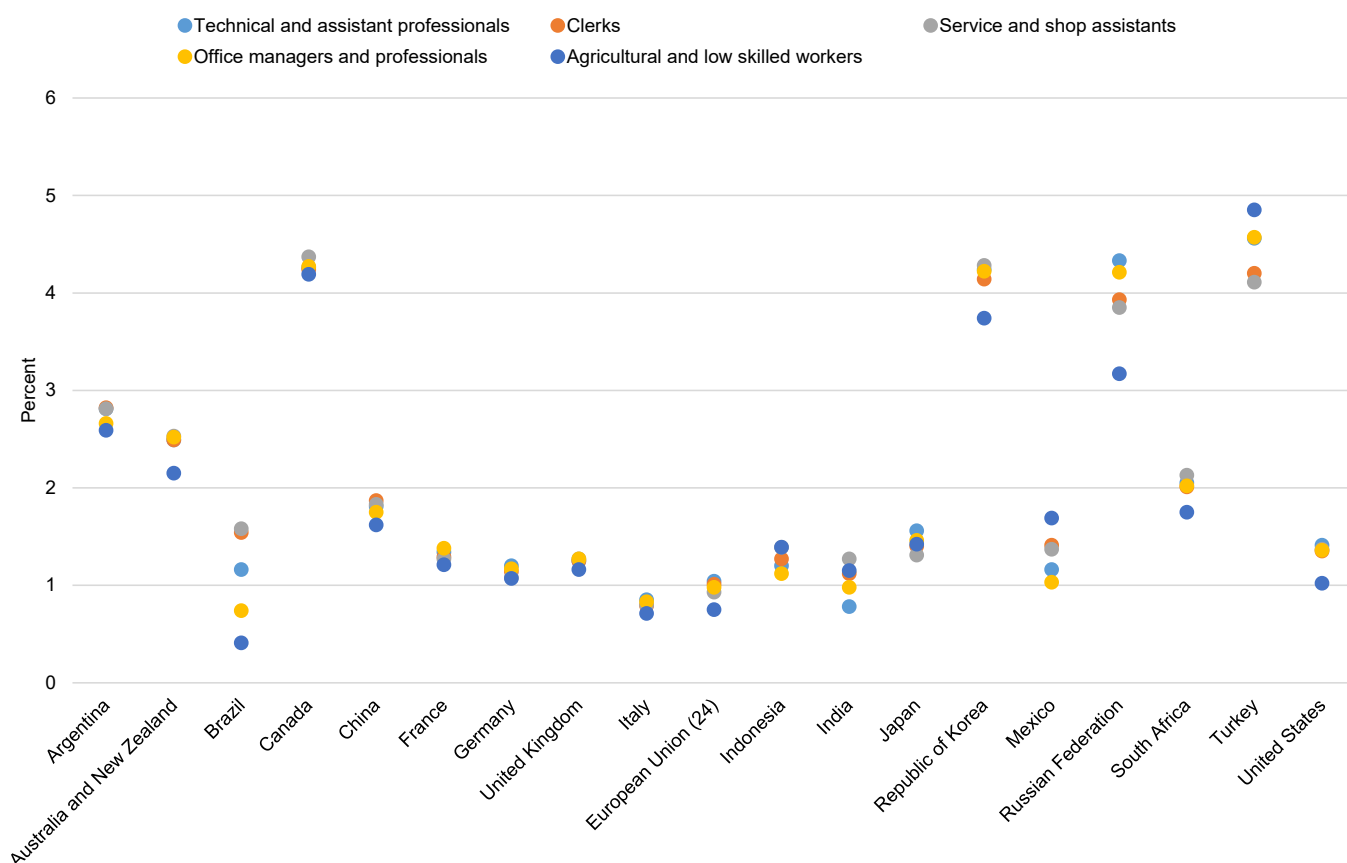
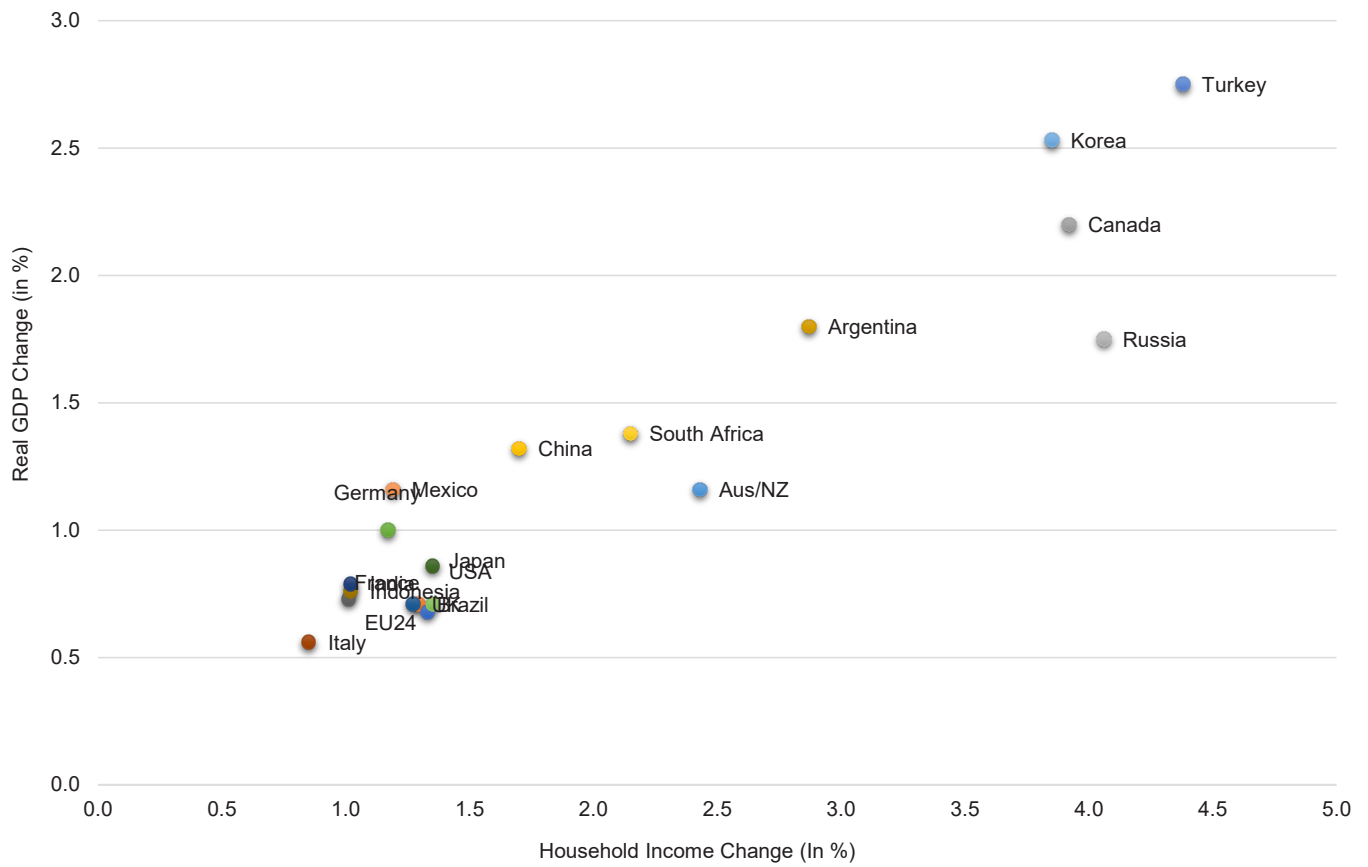


Figure 7. Household and GDP changes (%)



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In today's uncertain trade policy environment, it is arguably more important than ever to retain an objective, evidence-based approach when assessing alternative actions to open or to close markets for trade. The OECD is developing four 'illustrative' scenarios that are analysed in order to highlight the likely consequences of possible future developments in critical trade policy areas. The scenarios are designed to address both long standing and newly emerged issues in the trade community, and will be examined using the OECD METRO Model.

The overall aim of this examination of a wide range of plausible international market scenarios is to provide a robust base of evidence and policy insights that can inform government consideration of alternative trade policy measures, while avoiding engaging in the day-to-day rhetoric that often surrounds specific trade policy announcements by one or more governments.

For more information, visit  
[\*\*www.oecd.org/trade\*\*](http://www.oecd.org/trade)