

Trade Policy and the Global Economy

Scenario 1: Reducing Tariffs

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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.

Trade has been an engine of global growth and prosperity for centuries, creating jobs and increasing incomes along with widening consumer choice. Between 1960 and today, trade of goods and services has been growing at a faster pace than world output. The ratio of trade to GDP has increased by a factor of 2.5, rising from 24% to nearly 60% of GDP. Integration into the global economy, most spectacularly by China but also in many emerging and developing countries, has contributed to their economic growth and development. Advanced economies have benefitted from access both to vast new markets and to new inputs, products and services from around the world.

Global trade and output growth has been accompanied by strong structural shifts in economic activity within and across countries. Advances in technology and communication, a major force behind this structural change, have enabled production to be split across borders, making it easier for firms to integrate into global markets, as they only have to produce parts of a product rather than construct entire value chains. However, not all workers and businesses have shared in these opportunities. In less developed economies, for example, meeting the high standards necessary to participate effectively in global value chains has constrained the growth of some firms, while in advanced economies some traditional manufacturing activities offer fewer high paying jobs for the moderately skilled. For these and other reasons, the benefits of trade are increasingly being questioned in many countries.

Today 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. OECD work clearly shows that, overall, economies grow from opportunities afforded to them through international commerce, stimulating

competition and innovation, enhancing incomes, and creating jobs. OECD work also shows that these benefits are not distributed evenly, or immediately, across individuals, firms, sectors, and regions. The key policy conclusion is that an integrated policy approach, encompassing trade and a wide range of domestic policies, is essential to ensure that trade works better for more people.

This policy note is one element in a series of hypothetical scenarios designed to examine both long standing and recently emerged issues in the trade policy debate, drawing upon the OECD METRO Model.¹ This note describes an illustrative scenario that highlights the expected gains from trade liberalisation and the accompanying adjustment process. Results are presented in terms of estimated changes in economic output, trade (including at the sector level), incomes, and jobs. Finally, overall policy considerations are summarised.

Liberalising trade to G20 standards

Average tariff levels around the world are low. There are, however, certain sectors in which tariffs remain elevated. For example, tariffs in the agriculture and food sectors tend to be higher than for manufacturing goods, and for many countries exceed 30% (see table). In primary manufacturing, high tariffs continue to exist in textiles, as well as mineral products. Trade in motor vehicles, metal products, chemical products, electrical equipment, and recycling continues to face significant tariffs.

In many countries a gap persists between the WTO MFN (Most Favoured Nation) bound rates, which are negotiated maximum tariffs a country can levy on a non-discriminatory basis on imports from another WTO member, and those that are actually applied. In most cases applied rates are lower.

Average Ad Valorem tariffs (%)

	1996	2001	2005	2011	2015
All countries					
Agricultural - applied rates	12.9	14.2	11.8	10.7	8.7
Agricultural - WTO bound rates	56.3	57.9	51.9	56.3	52.3
Industrial - applied rates	9.4	9.4	7.5	6.7	5.5
Industrial WTO bound rates	30.2	29.0	26.3	29.3	26.2
G20 members					
Agricultural - applied rates	16.6	14.7	11.8	12.1	11.4
Agricultural - WTO bound rates	34.3	33.0	31.4	31.6	29.2
Industrial - applied rates	11.7	10.0	6.9	5.8	5.3
Industrial WTO bound rates	18.1	17.4	17.0	17.1	15.3

Source: WITS-TRAINS. Does not include AVEs for specific and mixed tariffs. Note: For some countries WTO bound rates are not available for all years.

The remaining distortions continue to impose costs on both producers and consumers. In addition, the current trade policy environment threatens a further retreat from liberalisation, potentially endangering workers in firms that rely on overseas markets or participation in global value chains. These measures can also raise the cost of living across the board.

The scenario modelled in this exercise assesses the impact of lowering existing tariff rates to the lowest level among G20 economies.² For most, with the exception of some food (around 1%) and textile sectors (around 2%), this rate is 0%. Gains from lowering these tariffs will depend not only on the initial rate of tariffs in individual economies, but also on relative opportunities for each sector to expand into new markets.

Reducing tariffs to the lowest level observed in G20 economies implies steeper reductions in some economies than in others – but every G20 economy would experience an increase in exports as well as imports

The first thing to note from the findings of this analysis is that trade can be expected to increase across the board (Figure 1).³ While the relative size of these increases differs by country - depending on the initial tariff level and the sectors to which these tariffs applied - it is clear that trade grows in all countries. The largest increases are expected for Korea, China, Brazil and India, all of whom have high tariffs in specific sectors. It is worth noting that while the simulated tariff reductions in these economies are larger than others, each would experience an increase in exports as well as imports and in some cases, the increase in exports is higher than the increase in imports (below the diagonal line). This illustrates the power of liberalising tariffs on inputs, reducing costs to downstream industries and thereby making them more competitive (also see Figure 4).

Looking at specific sector impacts (Figure 2), global trade would be expected to expand across every category.⁴ Those sectors with the highest instances of protection – namely meat, dairy and cereals – experience the largest increase in global trade. The figure also shows how new opportunities from trade can translate into increases in global production, but that the increases in production do not necessarily mirror increases in trade. For example, trade increases almost 24% for meat products but global production only goes up 0.8% (for a ratio of 0.03). This is because most of the inefficiencies stemming from the tariff can be corrected by sourcing from already available, more efficient, producers. This, in turn, frees resources that can then be used more productively for other activities. In some other sectors, such as textiles, individual tariffs may be lower, but they are applied in more countries. As a result, the ratio of the increase in global production to trade is higher than for meat, reflecting not just efficiency gains from changes in the pattern of production but direct increases in output from serving under-met demand. When high tariffs are applied on a few specific products in a few specific markets, these markets tend to have inefficiencies tied more to sub-optimal sourcing than to production, leading to greater relative increases in trade than output.

It is important to note that these increases in global production and trade illustrate the benefits of global action. This scenario decreased all tariffs to a common level (usually 0). While the relative amounts of liberalisation across the countries differ, the benefits overall outweigh the costs. Improved opportunities from both efficiency gains through tariff reduction and expanding production in undersupplied sectors lead to growing incomes and expanding economic growth. Indeed, the returns to households from this liberalisation, measured in terms of added income, are positive for every

economy or economic grouping examined in the study (Figure 3). Those economies experiencing the greatest efficiency gains through tariff reduction have the largest gains in household income (i.e. China and Korea) but the EU and US also experience large gains, despite the fact that they have some of the lowest initial tariff levels (thus small tariff reductions). Given that both are significant traders, the efficiencies gained through tariff reductions have a relatively large effect on income.

The virtuous cycle of more efficient trading opportunities and greater domestic output can be seen by examining the role that imported intermediates play in generating greater production growth. For example, Korea has relatively large tariffs on many agricultural inputs, driving up costs to downstream industries such as food production. Reducing tariffs in this area would lead not only to an increase in food production, but would also generate net growth across the entire Korean economy (Figure 4).

The decline of some sectors and the rise of other sectors in the same country is an important source of the gains that trade brings...but domestic policies, rather than trade policies, can most effectively support the needed structural adjustments

Figure 5 shows the sectors' changes for the individual economies and the EU. For the majority of economies, there are a larger number of gaining sectors than losing sectors. Many of the sectors experiencing the largest declines are those that were protected by the largest tariffs (usually in agriculture). These include Korean grains and oilseeds, Canadian dairy, UK meat, and Brazilian machinery and equipment. Sectors seeing significant gains include meat in Argentina, dairy in Australia/New Zealand, and electronics in Mexico.

The change that occurs in each sector for each country depends on several factors, including the size of the original tariff (thus the size of the corrected distortion), as illustrated in the case of Korean food and agriculture sectors. The ability to access alternative markets is also important. For example, improving market access for motor vehicles and transport equipment in other economies is expected to result in expanded production for Korean companies operating in these sectors. Similar re-positioning is observed for other economies that experience gains and losses in individual sectors.

Experience shows that these sectoral adjustments can enable new firms to start new activities that are competitive only when they can quickly and at low cost obtain high quality inputs from other markets. These new business opportunities will simply not exist if trade barriers remain high. To the extent these

new activities do arise, potential gains in this scenario are likely understated.

In principle, new growth sectors also provide new employment opportunities, including potentially for individuals in contracting sectors. But in practice, individuals do not shift easily or quickly from one sector to another for a variety of reasons (from a mismatch between skills needed and available, to the requirement for families to relocate to where the new employment opportunities are created). Domestic measures, such as active labour market policies and social protection schemes - rather than trade policies - can most effectively facilitate the needed structural adjustments, thereby enabling higher economy-wide growth and helping to ensure that no one is left behind.

Figure 6 shows the distribution of labour income changes across skill levels for each economy. Virtually all skill levels in all economies experience an increase in income. In Brazil unskilled workers would see income levels decline due to a decline in the machinery and equipment sector (Figure 5). The distribution of the increases in labour income across skill is fairly even for most economies, with the exception of low skilled workers in Turkey and Argentina. These workers gain relatively more than other categories of workers (due to the expansion of agriculture sectors) as do services workers in Indonesia and Brazil.

In line with the changes in sector output across the G20 economies, labour demand changes as well. Figure 7 shows the share of selected sectors in the employment reallocation. Because applied tariffs in agriculture are more than twice as high as applied rates in manufacturing across G20 economies, greater relative gains in agriculture employment are seen in those countries with a comparative advantage in agriculture – in particular South Africa, Australia/New Zealand and the United States.⁵

Less efficient producers who have higher tariffs see declines in employment in this sector – namely Turkey, Korea and Japan. However, Turkey and Korea, both relatively more efficient manufacturers, experience employment gains in these sectors.

It is important to keep in mind that tariffs are but one form of policy-induced inefficiencies. It is generally agreed that the largest source of distortions in international trade come from behind-the-border measures, generally termed non-tariff measures (NTMs). Thus, this scenario is a reflection of where the current tariff regime is most inefficient (namely agriculture and certain manufacturing sectors) and not where trade distortions exist more generally (NTMs).

Just as the employment gains are not the same across skill levels, they are not the same across gender. Based on ILO estimates of the share of women employed by sector, Figure 8 shows the change in labour demand for women by sector. For many economies, the agriculture sector accounts for the largest share of the change in female employment, especially in Turkey, Korea and Japan, which all show declines. This is very much in line with the change in domestic output of this sector as shown in Figures 5 and 7. Female employment in manufacturing provides the most growth opportunities for women in Turkey, Mexico and the United Kingdom. What the graph highlights is that opportunities for women across many economies tend to be concentrated in the lower skill sectors – underscoring yet again the importance of domestic policies to improve outcomes.

Policy Considerations

This exercise illustrates a well-established observation of economic studies – overall, trade liberalisation expands markets and increases income and employment opportunities. It also supports another well-established fact – not everyone gains automatically. The process of some industries growing while others recede is a necessary part of any healthy, dynamic economy, largely driven by advances in technology. A dynamic market underpins sustainable long-term growth by allowing the transition of resources from declining sectors and firms that are no longer competitive to those that are more productive, competitive and growing.

The scenario presented highlights the fact that when (G20) countries act together the gains are much larger than if countries act alone, and the associated adjustment costs are potentially much lower. Still, there will be adjustment costs and not all individuals, firms, or regions are equally prepared to make the transition from one activity or sector to another. Proactive domestic policies that are in place in advance and that can respond quickly to individual needs – from temporary income support and job search assistance to relocation services and skills upgrading – can help ensure that the expected benefits of trade are widespread.

The *OECD Employment Outlook 2018*⁶ notes that access to unemployment benefits for displaced workers can play a crucial role in the transition to new employment opportunities, but also that the availability of such schemes across OECD countries has declined. As a result, displaced workers are more vulnerable now to significant changes in living standards. In addition, this report highlights two differences between workers who lose their job for economic reasons and other jobseekers. There is greater scope for proactive measures to assist displaced workers, even beginning during the notice period before the layoff occurs; and, employers, in

collaboration with employee unions, are well-placed to foster mobility for workers they dismiss. These are important factors to inform future consideration of adjustment policies, whether caused by a trade shock, technological change, resource depletion, and so on.

The OECD report, *Financing SMEs and Entrepreneurs 2018*⁷, draws attention to the importance of SMEs and entrepreneurship in dynamic, growing economies and to the constraints they may face. For example, policies to support access to a wider range of finance instruments, including equity-based, rather than exclusive reliance on bank credit can help address the needs of innovative start-ups.

OECD's *Making Trade Work for All 2017*⁸ reviews a range of international and domestic policies, identifying areas where more can be done: to create a domestic policy environment that encourages opportunity, innovation and competition; to facilitate adjustment, ensuring no one is left behind; and, to make the international system work better, by filling gaps in the rule book and using the full range of international economic co-operation tools.

As OECD analysis has consistently shown, in today's integrated global economy, it is not one policy area that will provide the needed stimulus to enable long-term growth; rather, it is an integrated approach across policy areas. Trade liberalisation creates growth and opportunities, but an environment supportive of job seekers and entrepreneurs must accompany these reforms. A cohesive policy approach will enable countries to effectively support growing living standards for their citizens.

This initial scenario highlights the considerable gains from joint action on trade liberalisation, even if only addressing the generally low level of tariffs among G20 economies. A second scenario (forthcoming) will examine the impact of increasing tariffs across a range of sectors, providing a contrasting picture to that presented here. There are significant other restrictions on trade that also warrant attention. Inefficient customs and border procedures, for example, impose unnecessary costs on traders, as documented in OECD's *Trade Facilitation in the Global Economy 2018*.⁹ Even more importantly, perhaps, there are a range of non-tariff measures and regulations governing services sectors that can potentially restrict trade unnecessarily. In the coming months, the OECD will publish findings from scenarios on the impact of reducing these “behind the border” regulatory measures.

Endnotes

1 For more information on the OECD METRO model see <http://oe.cd/metro-model>

2 Due to data limitations, Saudi Arabia is not included in the analysis.

3 For some economies, such as Australia, New Zealand, China, Japan and the Russia Federation, import demand is rising faster than exports. The net effect on the trade balance depends on the initial difference between exports and imports. For a discussion of how trade policies may impact trade imbalances, see D. Flaig et al. (2018), "Miracle or Mirage: What role can trade policies play in tackling global trade imbalances?", OECD Economics Department Working Papers, No. 1473, OECD Publishing, Paris, <https://doi.org/10.1787/1a55f809-en>.

4 The results presented in this brief do not include outcomes for government services.

5 While employment in the EU agriculture and food sectors is also found to expand, it should be borne in mind that the simulation does not address changes in agriculture support policies. Hence, in this case some policy-induced incentives are left in place that favourably impact labour returns in agriculture relative to other sectors. See OECD 2018, Agricultural policy monitoring and evaluation 2018, <https://doi.org/10.1787/6e27effd-en>

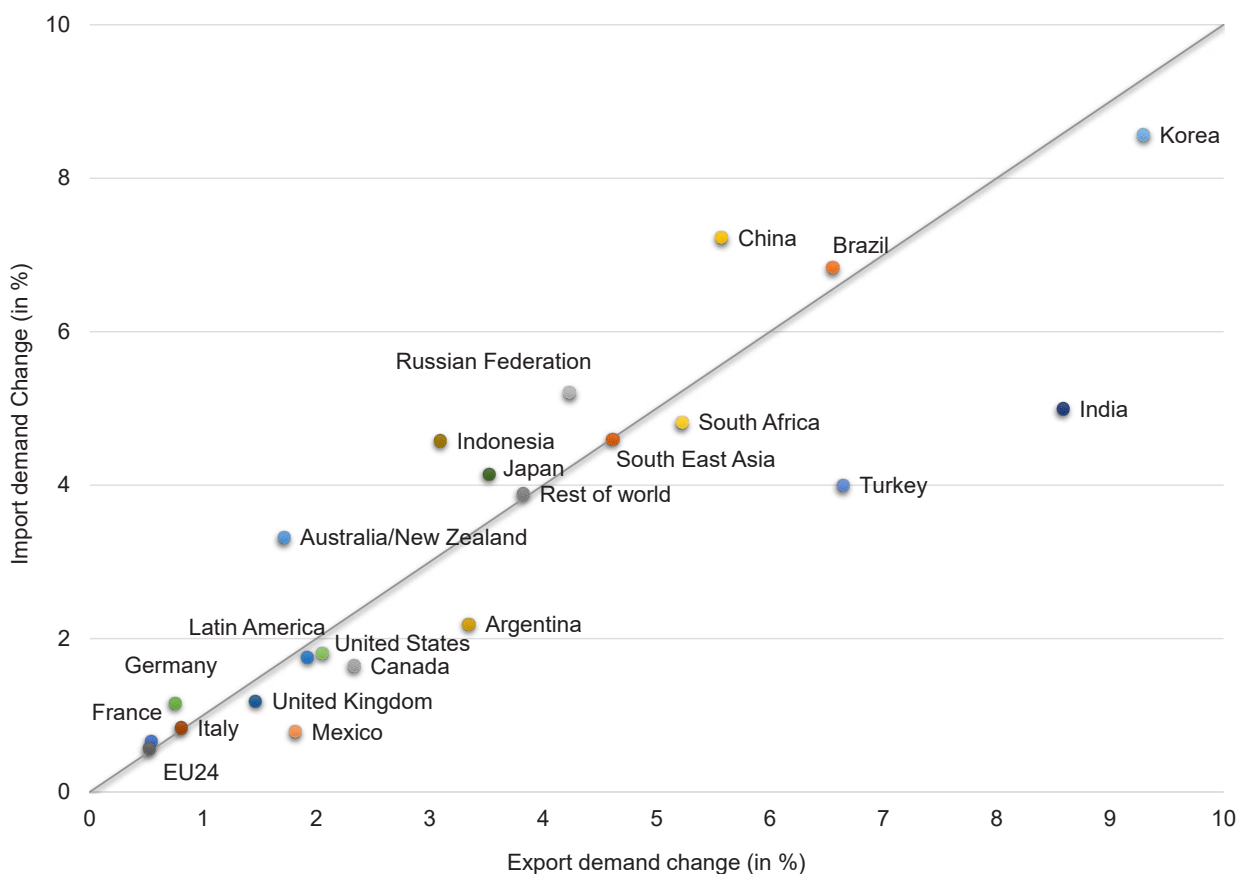
6 <https://doi.org/10.1787/19991266>

7 <https://doi.org/10.1787/23065265>

8 <https://doi.org/10.1787/6e27effd-en>

9 <https://doi.org/10.1787/9789264277571-en>

Figure 1. Estimated changes in trade flows, by country



Note: G20 members except Saudi Arabia

Figure 2. Estimated global changes in sector trade and output (percent change from base)

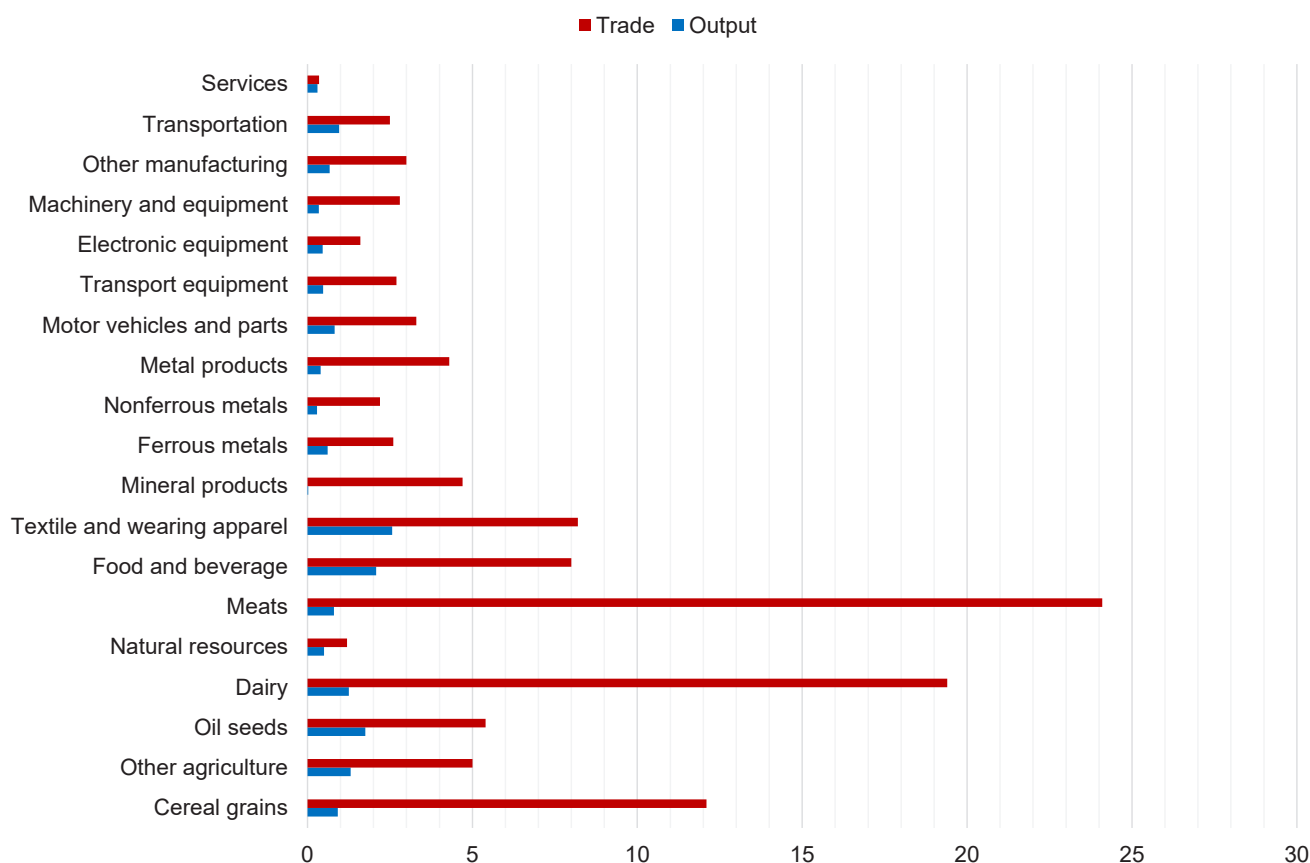
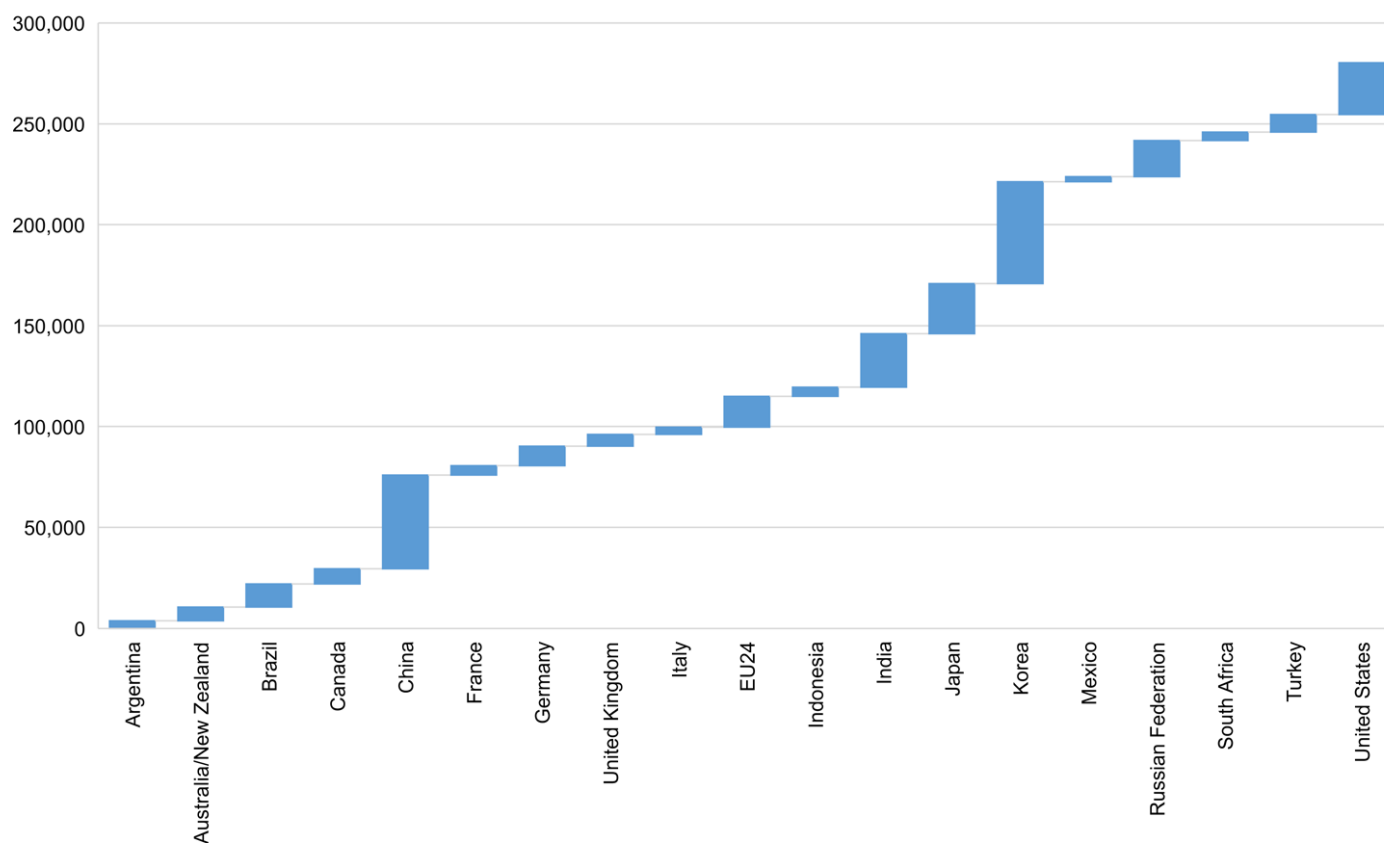


Figure 3. Estimated changes in national household income* (Million US\$)



*Measured as equivalent variation.

Figure 4. Estimated global changes in sector trade and output (percent change from base)

Efficiency gains through intermediate flows Korean Example

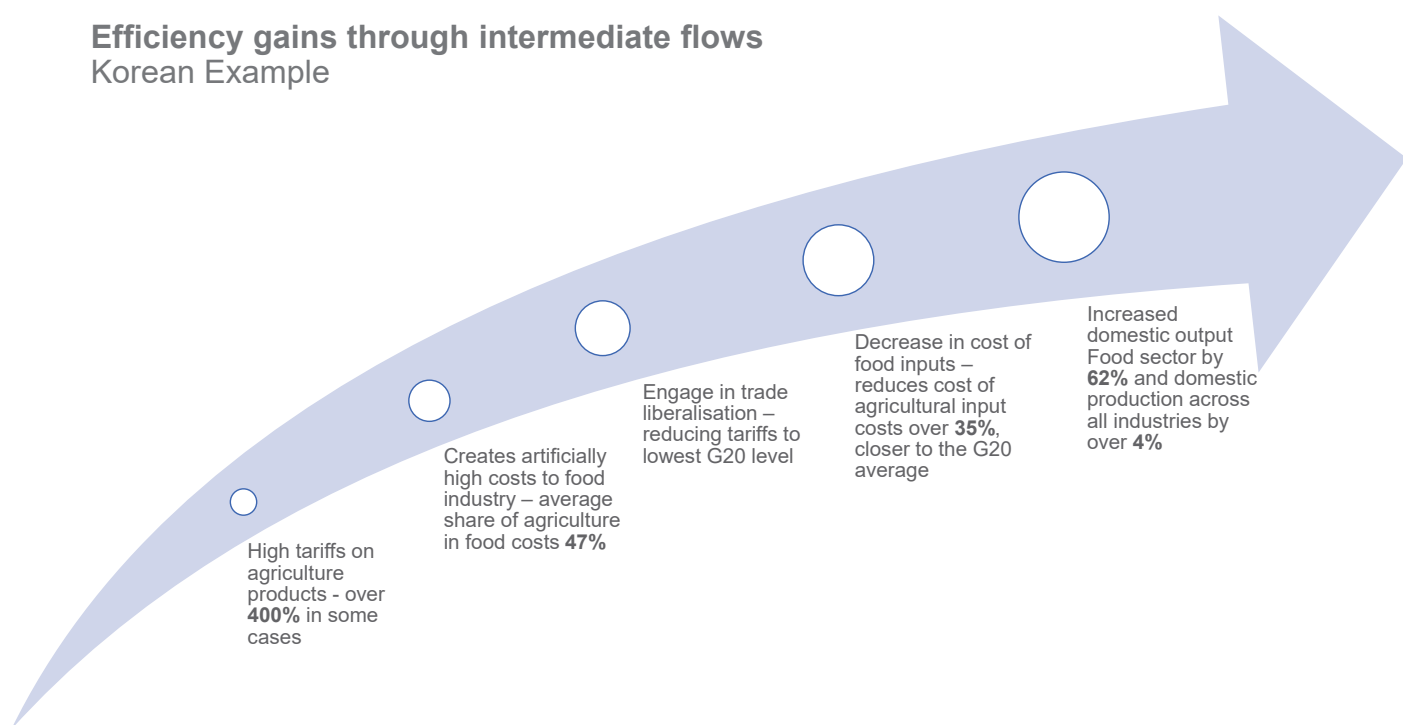


Figure 5. Sectors changes in output, per cent

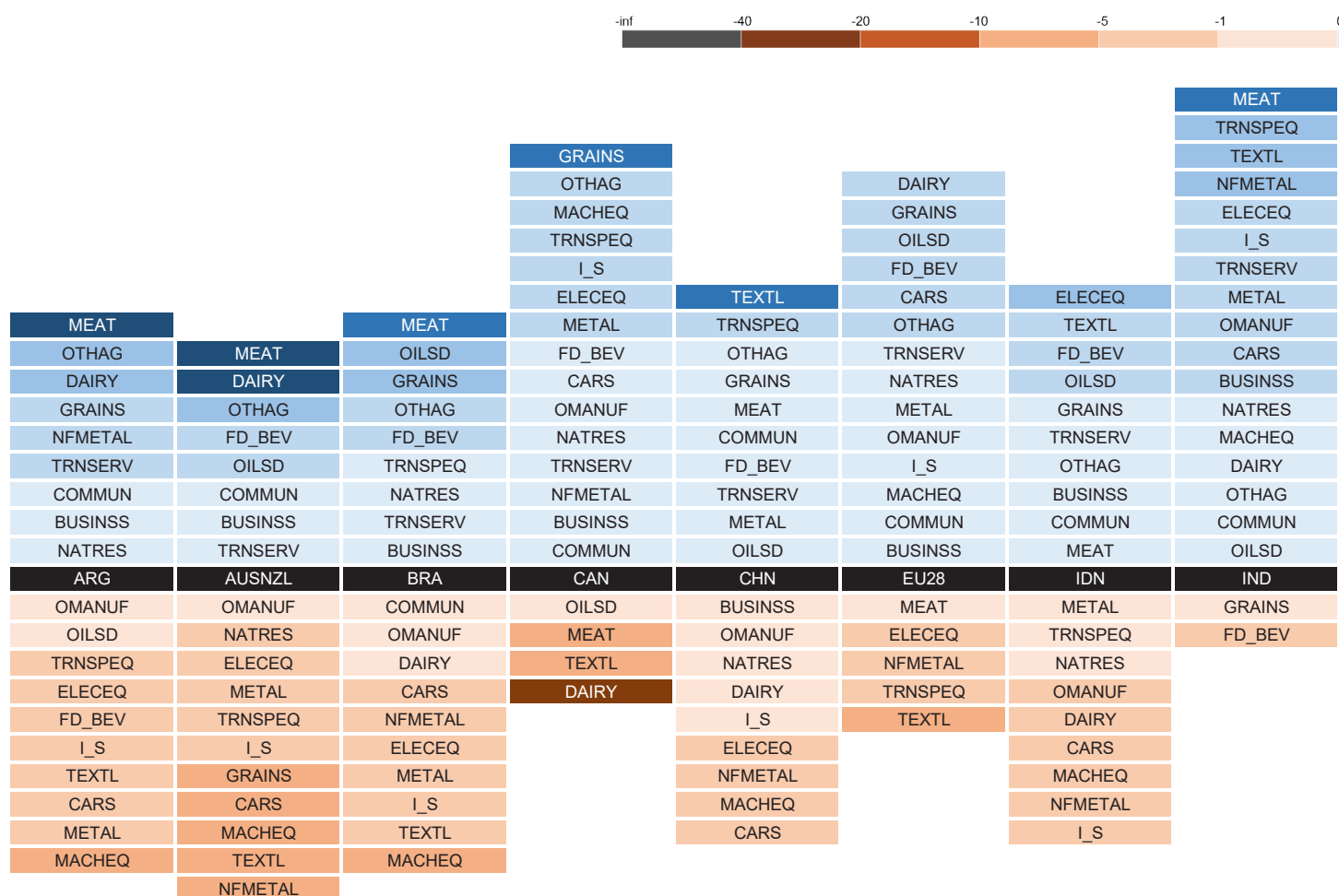
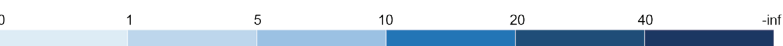
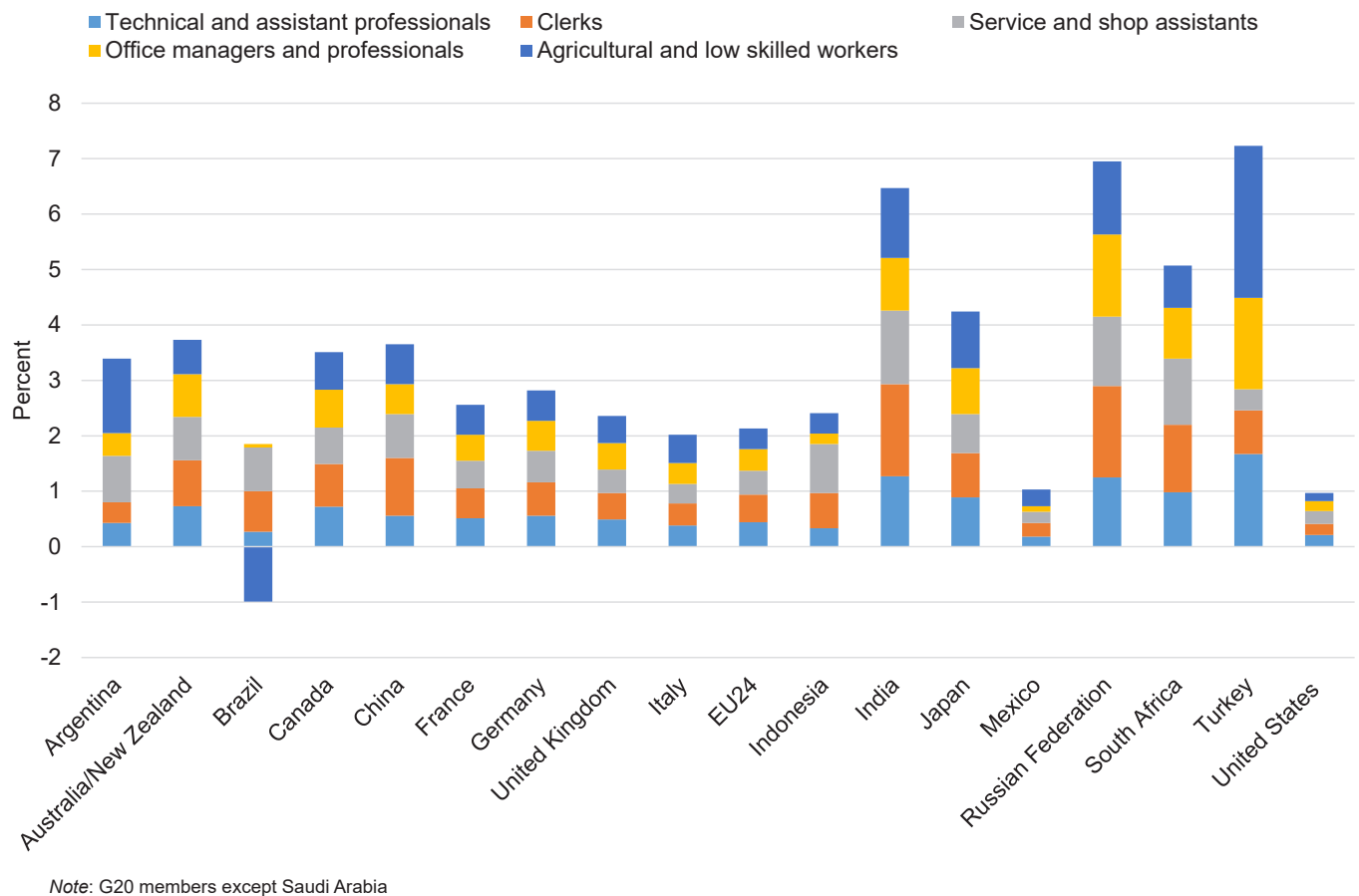
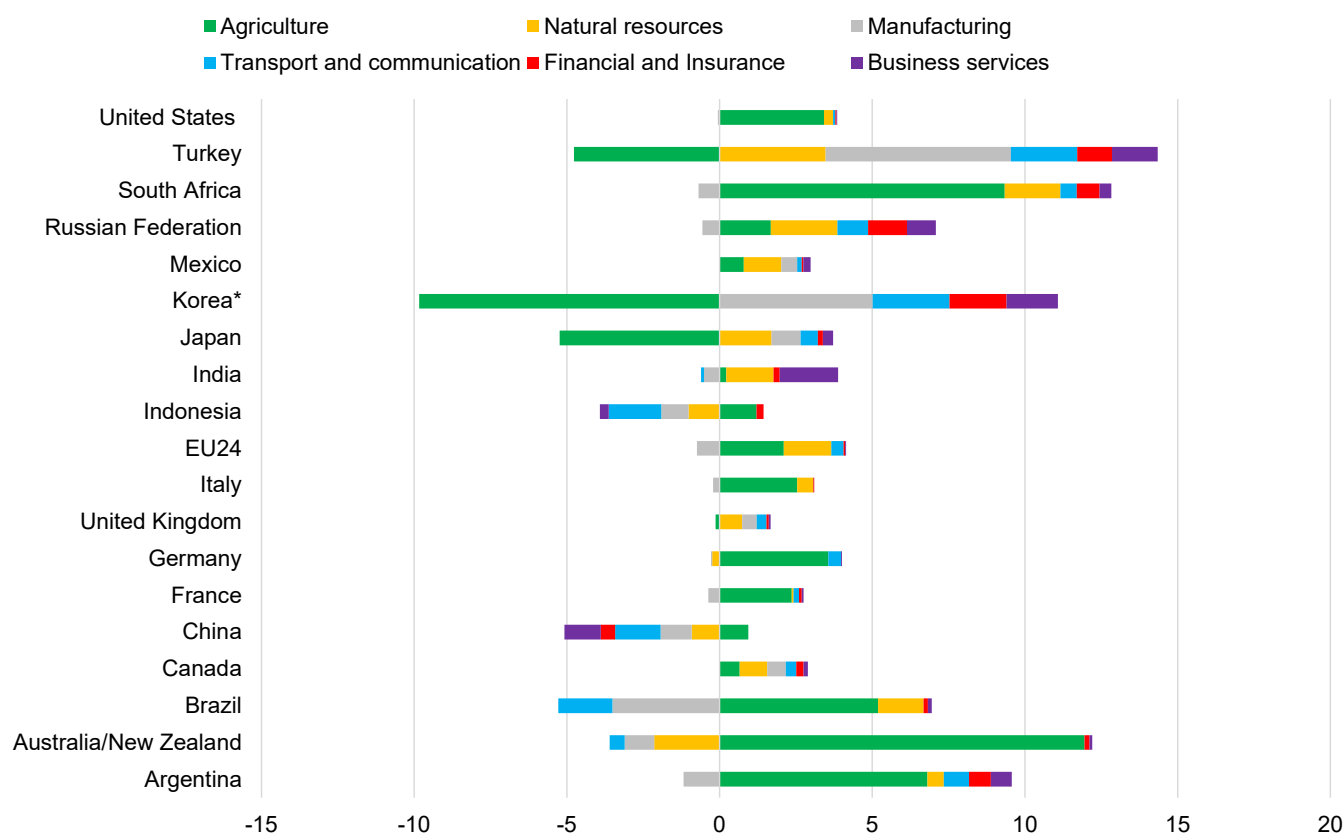


Figure 6. Income Changes across skill category



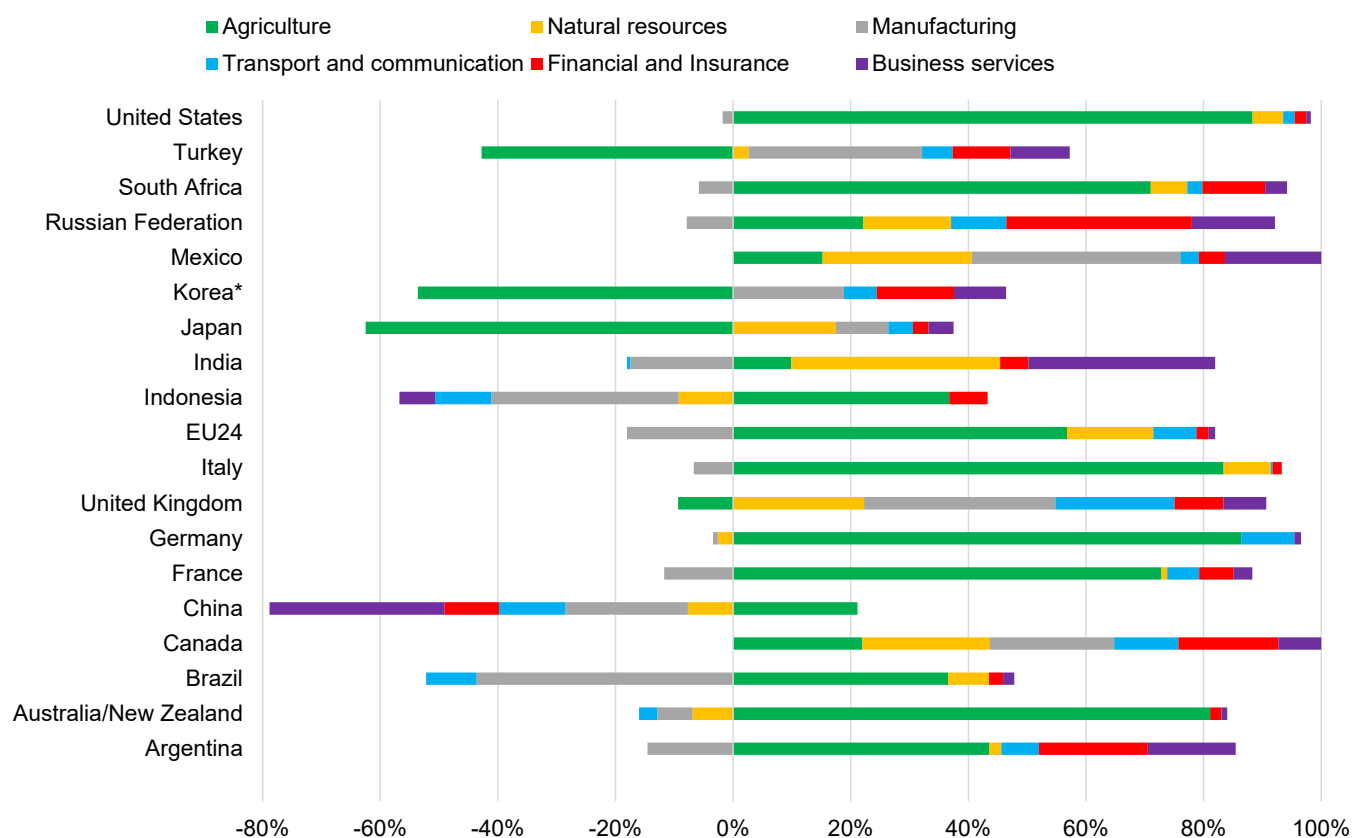
		OILSD				
	FD_BEV	MEAT		METAL	GRAINS	OILSD
	OTHAG	ELECEQ		MACHEQ	MEAT	GRAINS
	TRNSPEQ	MACHEQ		I_S	DAIRY	FD_BEV
CARS	CARS	GRAINS		FD_BEV	FD_BEV	ELECEQ
I_S	MEAT	I_S	GRAINS	OMANUF	OTHAG	I_S
TRNSPEQ	TEXTL	METAL	NFMETAL	NFMETAL	OILSD	NFMETAL
NATRES	DAIRY	NFMETAL	I_S	TEXTL	CARS	TRNSERV
NFMETAL	OMANUF	NATRES	CARS	NATRES	METAL	MACHEQ
METAL	I_S	OMANUF	MACHEQ	CARS	OMANUF	DAIRY
OMANUF	METAL	OTHAG	TRNSERV	OTHAG	I_S	NATRES
ELECEQ	NFMETAL	TRNSERV	NATRES	ELECEQ	TRNSERV	OMANUF
MACHEQ	TRNSERV	COMMUN	BUSINSS	TRNSPEQ	NATRES	METAL
TRNSERV	MACHEQ	BUSINSS	COMMUN	TRNSERV	NFMETAL	TRNSPEQ
BUSINSS	BUSINSS	TRNSPEQ	ELECEQ	OILSD	MACHEQ	BUSINSS
FD_BEV	COMMUN	CARS	OILSD	BUSINSS	COMMUN	COMMUN
COMMUN	ELECEQ	FD_BEV	TRNSPEQ	COMMUN	BUSINSS	OTHAG
JPN	KOR	MEX	RUS	TUR	USA	ZAF
TEXTL	NATRES	DAIRY	FD_BEV	DAIRY	ELECEQ	MEAT
OTHAG	OILSD	TEXTL	OMANUF	MEAT	TRNSPEQ	CARS
GRAINS	GRAINS		DAIRY	GRAINS	TEXTL	TEXTL
OILSD			OTHAG			
DAIRY			TEXTL			
MEAT			METAL			
			MEAT			

Figure 7. Percentage change in labour demand by sector (%)



Note: G20 members except Saudi Arabia

Figure 8. Sectoral composition of the change in female labour employment



Note: G20 members except Saudi Arabia

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The publication of this work has been authorised by Ken Ash, Director of the Trade and Agriculture Directorate. Any comments should be sent to tad.contact@oecd.org.

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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