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POLICY BRIEFING
UZBEKISTAN

The impact of Uzbekistan's WTO accession on chemical imports: product-level assessment

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Executive Summary

- » The chemical industry is among large UZB importers accounting for about 9% of the total goods imports in 2022 and strongly growing
- » UZB tariff protection for the chemical industry is low, with a simple average MFN duty of 2.6%
- » The WTO accession will change duties for imports from current MFN partners and WTO member states having no preferential agreements with UZB
- » The partial equilibrium modelling showed a limited short-term impact of the WTO accession on chemical imports, resulting in imports growth of up to USD 50 m or +2.6% compared to the baseline
- » These results are comparable with assessments produced by the computable general equilibrium model (see GET Policy Study [PS/02/2022](#))
- » The highest increase in imports is estimated for the manufacture of glues, particularly glues for retail sales
- » Joining the WTO will result in trade reorientation of chemical imports from the EAEU, in particular Russia, towards the EU, Turkey and China

Structure

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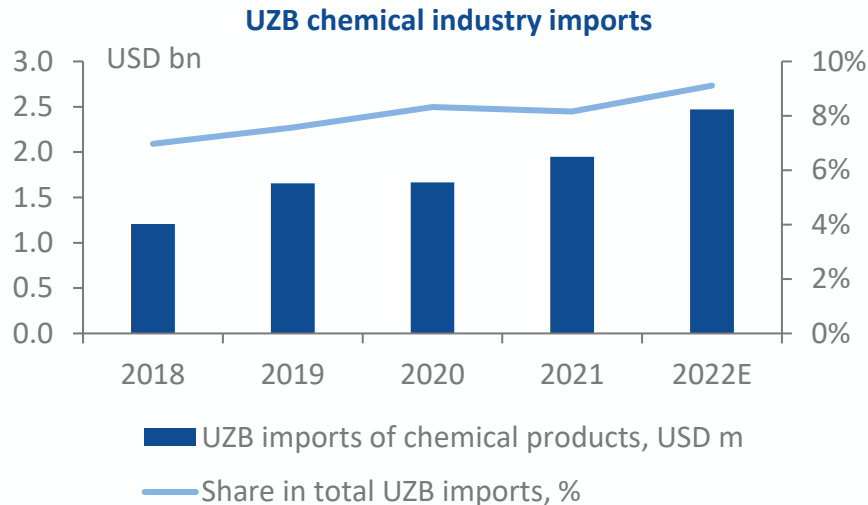
1. Introduction

- » Uzbekistan is in the process of negotiating accession to the World Trade Organisation (WTO), entailing the wide-ranging reduction in tariff barriers
- » This will have an impact on the development of individual economic sectors: while some will face more competition, others will gain through easier access to input factors
- » In this regard, one of the sectors in the government's focus is the chemical industry
- » Our Computable General Equilibrium (CGE) analysis of the WTO accession showed increased competition in the sector and an increase of chemical imports by up to 2% in the long term (see GET Policy Study [PS/02/2022](#))
- » However, due to data limitations, our CGE model does not allow detailing the impact within the sector

Aim of this policy briefing

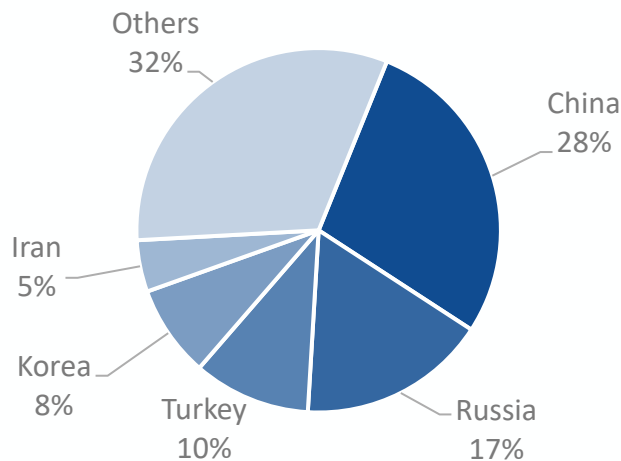
- » The detailed estimation of the effects of WTO accession on chemical products imports under different tariff liberalisation using a partial equilibrium model
- » The obtained results can be helpful in the negotiation process and the preparation of policy measures to buffer potential shocks

2. UZB chemical imports



Source: WITS for 2018-2021, UN Comtrade for 10 months 2022; *estimates using data for 10 months and assuming November and December imports is equal to monthly average for previous 10 months

Geography of UZB chemical industry imports, 2022



Source: UN Comtrade for 10 months 2022; *estimates using data for 10 months and assuming November and December imports is equal to monthly average for previous 10 months

UZB chemical imports, 2022 (est.*)

- » Value: USD 2.5 bn
- » Share in UZB total imports: 9%
- » Growth, 2022/2021: +27%
(total imports: +14%)
- » Average growth per year, 2022/2018: +20% (total imports: +12%)
- » Key partners: CHN (28%), EAEU (22%)
- **Strong growth in recent years, above the economy's average**
- **Mostly used by other sectors in their production**

UZB chemical imports by sub-sectors

NACE Rev.2	Manufacture ...	UZB imports, 2022*, USD m	Share in total, %	Growth, 2022/2021
2016	of plastics in primary forms	841	34%	37%
2014	of other organic basic chemicals	242	10%	50%
2030	of paints, varnishes and similar coatings	167	7%	36%
2060	of man-made fibres	136	6%	32%
2053	of essential oils	124	5%	29%
2042	of perfumes and toilet preparations	124	5%	-1%
2013	of other inorganic basic chemicals	103	4%	55%
2041	of soap and detergents, cleaning and polishing preparations	96	4%	12%
2015	of fertilisers and nitrogen compounds	96	4%	231%
	of other subsectors of NACE 20	543	22%	-1%
	Total	2,471	100%	27%

Source: WITS for 2021, UN Comtrade for 10 months 2022; *estimates using data for 10 months and assuming November and December imports is equal to monthly average for previous 10 months

- Products of manufacture of plastics in primary forms, other organic basic chemicals, and paints & vanishes constitute more than half of total imports
- Mostly chemical imports used by other sectors in their production: intermediate products 89% of imports vs 11% consumer goods

3. UZB import tariff regimes for chemicals

Regime	Free Trade Area	Bilateral MFN	Non-preferential
Import duty	Duty-free rate*	Most Favoured Nation (MFN)** rate	Full rate = 2 x MFN rate
Countries covered	Russia, Kazakhstan, Belarus, Kyrgyzstan, Azerbaijan, Ukraine, Georgia, Moldova, Tajikistan, Turkmenistan	27 EU member states, Afghanistan, Bangladesh, Brazil, Switzerland, China, Egypt, United Kingdom, Indonesia, India, Israel, Jordan, Japan, Korea, Malaysia, Pakistan, Saudi Arabia, Singapore, Turkey, United States, Vietnam	All other countries
Share of UZB chemical imports subject to tariff regime (2022 est.)***	24%	68%	8%

* Duty-free trade applies to only selected products in the case of FTA with Turkmenistan; ** Import duties used by WTO members towards other members; *** UN Comtrade for ten months 2022; annual estimates using data for ten months and assuming November and December imports are equal to the monthly average for the previous ten months

➤ Most chemical imports occur under MFN tariff regime (see also Annex 2)

UZB import duty on chemical imports

NACE Rev.2	Manufacture...	MFN import duty, simple average, %, 2021	Applied import duty, trade-weighted, %, 2021
2011	of industrial gases	0.0	0.0
2012	of dyes and pigments	2.9	4.4
2013	of other inorganic basic chemicals	0.3	1.2
2014	of other organic basic chemicals	0.8	0.2
2015	of fertilisers and nitrogen compounds	6.0	2.3
2016	of plastics in primary forms	1.4	1.7
2017	of synthetic rubber in primary forms	0.0	0.0
2020	of pesticides	0.0	0.0
2030	of paints, varnishes	10.0	6.8
2041	of soap and detergents	14.4	7.1
2042	of perfumes and toilet preparations	26.3	13.0
2051	of explosives	18.3	1.8
2052	of glues	8.3	8.5
2053	of essential oils	0.0	0.0
2059	of other chemical products n.e.c.	2.6	1.9
2060	of man-made fibres	0.0	0.0
Total		2.6	2.8

Source: WITS, MFN import duties at HS 6-digit are used for estimating simple average, the structure of trade is not taken into account; import in 2021 by country and trade regime is used for weighting of import duties;

- UZB tariff protection on average is low, with a 2.6% average MFN duty
- However, strong protection for some goods in particular consumer goods, e.g. for perfumes and toilet preparations (26% MFN and 13% applied import duty)

UZB import tariff regime under WTO

- » WTO membership means the MFN (or better) duty to be used among WTO member states, while duties levied on non-members are not regulated
- » Thus, WTO membership will have a different impact on UZB trade regimes:
 - (1) FTA: no change in import duty (24% of imports)
 - (2) Bilateral MFN: changes in UZB MFN import duties based on the country's schedule of concessions (under negotiations) (68% of imports)
 - (3) Non-preferential trade (8% of imports):
 - With WTO members: switch from the full rate to the new MFN rate based on the country's schedule of concessions (under negotiations)
 - With non-WTO members: UZB is free to decide the regime
- **Import duties are expected to change for imports from current bilateral MFN partners (2) and WTO member states with no preferential agreements (3)**

4. Methodology to estimate product level trade impact

- » **Aim:** impact assessment of tariff liberalisation on imports of individual products and sub-sectors
- » **Tool:** partial equilibrium model SMART (Single Market Partial Equilibrium Simulation Tool) of the World Bank's WITS (World Integrated Trade Solution)
- » **Key idea:** import duty reduction on good g from county c results in the direct effect of increasing imports from county c (*trade creation*) and the indirect change in imports from all partners due to the substitution effect provoked by the change in relative prices (*trade diversion*). See Annex 3 for model terms and formulas

$$\text{Total trade effect} = \text{Trade creation} + \text{Trade diversion}$$

- » **Data and assumptions:**
 - UZB imports at HS 6 digits: WITS, base year 2021
 - UZB import duty at HS 6 digits: WITS, omissions are filled in using applied rate by partners reported by the ITC Trade Map
 - Import demand elasticity by product: WITS; for omitted values, elasticity is set equal to -1
 - Elasticity of substitution: -1.5 (default value in SMART)

5. Impact assessment: scenarios

Assumption:

- UZB sets new MFN import duties for WTO member states, except for states, with which UZB has free trade agreements

	Uniform small change in MFN duties (S1: Small)	Uniform change; MFN duties halved (S2: MFN halved)	Uniform change; close to full liberalisation (S3: Liberal)
Change for FTA countries	none	none	none
Change for partners with bilateral MFN	20% ↓ MFN	50% ↓ MFN	80% ↓ MFN
Change for WTO members having no preferential agreements	60% ↓ full rate	75% ↓ full rate	90% ↓ full rate
Change for non-WTO members having no preferential agreements	none	none	none

Impact assessment: applied vs new import duties

NACE Rev.2	Manufacture...	Applied import duty, %	Import duty under S1: Small	Import duty under S2: MFN halved	Import duty under S3: Liberal
2011	of industrial gases	0.0	0.0	0.0	0.0
2012	of dyes and pigments	4.4	3.5	2.2	0.9
2013	of other inorganic basic chemicals	1.2	1.1	1.0	0.9
2014	of other organic basic chemicals	0.2	0.1	0.1	0.0
2015	of fertilisers and nitrogen compounds	2.3	1.7	1.1	0.5
2016	of plastics in primary forms	1.7	1.5	1.1	0.8
2017	of synthetic rubber in primary forms	0.0	0.0	0.0	0.0
2020	of pesticides	0.0	0.0	0.0	0.0
2030	of paints, varnishes	6.8	5.4	3.4	1.4
2041	of soap and detergents	7.1	6.1	4.6	3.0
2042	of perfumes and toilet preparations	13.0	10.1	6.4	2.7
2051	of explosives	1.8	1.5	0.9	0.4
2052	of glues	8.5	7.0	4.8	2.6
2053	of essential oils	0.0	0.0	0.0	0.0
2059	of other chemical products n.e.c.	1.9	1.5	1.0	0.4
2060	of man-made fibres	0.0	0.0	0.0	0.0
Total		2.8	2.3	1.6	0.8

Source: own estimates, base year 2021; import duties are reported as trade-weighted using 2021 imports

Impact assessment: change in total imports

	Uniform small change in MFN duties (S1: Small)	Uniform change; MFN duties halved (S2: MFN halved)	Uniform change; close to full liberalisation (S3: Liberal)
Nominal change, USD m	+13.8	+32.0	+50.0
Relative change, %	+0.7%	+1.6%	+2.6%
Share of GDP, %	0.02%	0.05%	0.07%

Source: own estimates, base year 2021

- » The short-term impact of WTO-induced tariff liberalisation on UZB imports of chemical products is small, with up to USD 50 m increase in value and +2.6% growth compared to the baseline imports
- » Reason: UZB applies already low import duty on chemical products
- **Limited increase in chemical products imports due to the WTO accession**
- **Aggregate results are very similar to estimates reported by the CGE model (see GET Policy Study [PS/02/2022](#))**

Impact assessment: change by sub-sectors

NACE Rev.2	Manufacture ...	Nominal increase, USD m			Relative increase, %		
		S1: Small	S2: MFN halved	S3: Liberal	S1: Small	S2: MFN halved	S3: Liberal
2052	of glues	2.3	5.7	9.2	10.1%	25.2%	40.3%
2042	of perfumes and toilet preparations	2.2	5.1	8.0	1.8%	4.1%	6.4%
2016	of plastics in primary forms	1.8	4.4	7.0	0.3%	0.7%	1.1%
2030	of paints, varnishes and similar coatings, printing ink and mastics	1.8	4.4	7.0	1.5%	3.6%	5.7%
2059	of other chemical products n.e.c.	1.7	4.0	6.2	0.5%	1.1%	1.7%
2015	of fertilisers and nitrogen compounds	2.1	3.7	5.2	7.3%	12.7%	18.1%
2041	of soap and detergents, cleaning and polishing preparations	0.9	2.2	3.6	1.1%	2.6%	4.2%
2012	of dyes and pigments	0.8	2.0	3.2	1.1%	2.6%	4.2%
2014	of other organic basic chemicals	0.1	0.2	0.3	0.0%	0.1%	0.2%
2051	of explosives	0.0	0.1	0.2	0.2%	0.5%	0.8%
2013	of other inorganic basic chemicals	0.0	0.1	0.1	0.1%	0.1%	0.2%

Source: own estimates, base year 2021; only sectors with non-zero impact are reported; sorted by nominal change in Scenario 3 "Liberal"

- Manufacture of glues features the highest nominal (up to +USD 9 m) and relative (up to +40%) increase in imports, mainly thanks to glues for the retail
- Also, significant impact on fertilisers (up to +18%), mostly due to higher imports of mixtures of calcium nitrate and ammonium nitrate
- Impact on other sectors rather small even in case of a strong liberalisation

Impact assessment: change by partners

Description	Nominal increase, USD m			Relative increase, %		
	S1: Small	S2: MFN halved	S3: Liberal	S1: Small	S2: MFN halved	S3: Liberal
Top change by net trade creation						
European Union	5.8	14.3	22.9	1.5%	3.7%	5.8%
<i>incl. Germany</i>	1.5	3.8	6.1	2.8%	7.0%	11.1%
Turkey	4.9	12.1	19.3	2.1%	5.3%	8.4%
China	3.8	9.5	15.1	0.9%	2.1%	3.4%
Korea	1.6	4.1	6.5	1.1%	2.8%	4.5%
India	0.6	1.5	2.4	1.7%	4.2%	6.6%
Top change by net trade diversion						
Eurasian Economic Union	-5.9	-13.7	-21.2	-1.3%	-3.1%	-4.7%
<i>incl. Russia</i>	-5.3	-12.1	-18.8	-1.3%	-3.1%	-4.8%
Iran	-0.5	-1.2	-1.8	-0.5%	-1.2%	-1.9%
Turkmenistan	-0.2	-0.5	-0.8	-0.7%	-1.7%	-2.6%

Source: own estimates, base year 2021; only sectors with non-zero impact are reported; sorted by nominal change in Scenario 3 "Liberal"

- The highest nominal increase in chemical products imports is expected from the EU, up to USD 23 m, out of which about a quarter comes from Germany
- Trade diversion from the EAEU is close to trade creation with the EU

6. Conclusions

- » Chemicals are an essential part of UZB imports accounting for USD 2.5 bn or about 9% of the total imports
- » Most imports come from countries having bilateral MFN agreements with UZB
- » The WTO accession will change import duties applied on imports from MFN partners and from other WTO members, with which UZB has no preferential arrangements
- » Modelling of tariff liberalisation using the partial equilibrium model showed:
 - The WTO accession will have a limited impact on chemical imports, with imports growth of up to USD 50 m or 2.6% compared to the baseline
 - The highest increase in imports is estimated for the manufacture of glues
 - The WTO accession will result in trade reorientation from the EAEU, in particular Russia, towards the EU, Turkey and China
- » Thus, the WTO accession will not result in an influx of chemical imports at levels threatening domestic production; however, the sector will face intense domestic competition for resources

About the German Economic Team

Financed by the Federal Ministry for Economic Affairs and Climate Action, the German Economic Team (GET) advises the governments of Ukraine, Belarus*, Moldova, Kosovo, Armenia, Georgia and Uzbekistan on economic policy matters. Berlin Economics has been commissioned with the implementation of the consultancy.

**Advisory activities in Belarus are currently suspended.*

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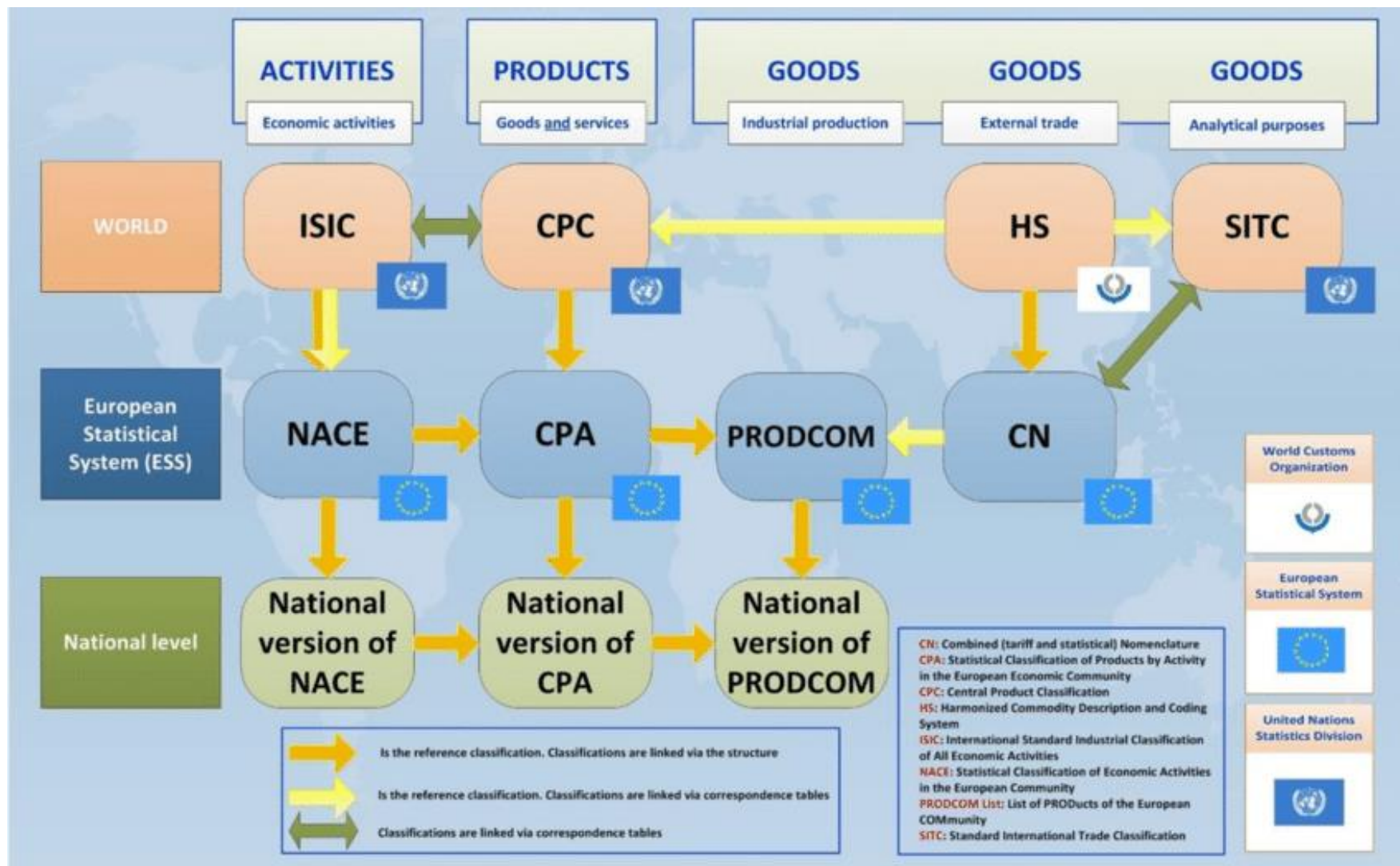
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Annex 1.1: Classifications and aggregations used

- » To ensure correct coverage of the chemical industry when analysing its external trade, we used several classifications (see Annex 1.2 for a detailed review of their links):
 - **NACE**, the EU statistical classification of economic activities, directly linked with the **ISIC**, the international standard industrial classification of all economic activities maintained by the United Nations
 - **CN**, the EU's classification of products in external trade, the first six digits of which comprise codes of the Harmonised System (**HS**), the commodity nomenclature for external trade maintained by the World Customs Organisation
 - **PRODCOM**, the EU-wide harmonised classification of products produced by the industrial sector that uses the first four digits of NACE and is directly matchable with the external trade commodity classification CN, thereby establishing an explicit link between economic activity and external trade classification codes for industrial sectors
- » We conducted the partial equilibrium analysis at HS 6-digit level, the most disaggregated product-level data that is publicly available
- » To improve the comprehensiveness of the results, we used the chemical industry sub-sectors (NACE 4-digit codes) in the PB
- » The detailed product-level results are available in Annex 4 for the top 15 products at HS 4-digits and HS 6-digits. Full tables are available in Excel

Annex 1.2: Integrated System of Classifications



Source: European business statistics user's manual for PRODCOM, 2021 Edition; <https://ec.europa.eu/eurostat/documents/3859598/14358654/KS-GQ-21-024-EN-N.pdf/f6533c1c-d95a-4e65-6c43-9aad5f72187d?t=1645786507249>

Annex 2: UZB chemical imports by tariff regime

NACE Rev.2	Manufacture...	UZB imports, 2022*, USD m	FTA share	MFN share	Full rate share
2016	of plastics in primary forms	841	18%	68%	15%
2059	of other chemical products n.e.c.	312	17%	79%	4%
2014	of other organic basic chemicals	242	28%	65%	7%
2030	of paints, varnishes	167	34%	64%	2%
2060	of man-made fibres	136	7%	92%	1%
2053	of essential oils	124	3%	97%	0%
2042	of perfumes and toilet preparations	124	41%	58%	1%
2013	of other inorganic basic chemicals	103	32%	55%	13%
2041	of soap and detergents	96	42%	44%	14%
2015	of fertilisers and nitrogen compounds	96	91%	8%	1%
2012	of dyes and pigments	94	5%	94%	1%
2020	of pesticides	66	11%	87%	2%
2052	of glues	31	15%	80%	5%
2017	of synthetic rubber in primary forms	25	48%	42%	10%
2051	of explosives	14	93%	7%	0%
2011	of industrial gases	2	89%	4%	7%
Total		2,471	24%	68%	8%

Source: WITS for 2021, UN Comtrade for ten months 2022; *estimates using data for ten months and assuming November and December imports are equal to the monthly average for the previous ten months

Annex 3: Partial equilibrium model terms and formulas

- » **Trade creation (TC)** is the direct increase in imports $m_{g,c}$ following a reduction on the tariff $t_{g,c}$ imposed on good g from country c .

$$TC_{g,c} = m_{g,c} \varepsilon_{g,c} \Delta t_{g,c} ,$$

where for each g and c , $\Delta t_{g,c} = (t_{wto} - t_{applied}) / (1 + t_{applied})$ and $\varepsilon_{g,c}$ is the elasticity of import demand, $\varepsilon_{g,c} < 0$

- » **Trade diversion (TD)** is the indirect change in imports after a reduction on the tariff caused by the change in relative prices of goods supplied by different trade partners.

$$TD_{g,c} = m_{g,\neq c} m_{g,c} \Delta t_{g,c} \sigma_{g,c,\neq c} / (m_{g,\neq c} + m_{g,c} + m_{g,c} \Delta t_{g,c} \sigma_{g,c,\neq c}) ,$$

where $\sigma_{g,c,\neq c}$ is the elasticity of substitution between imports from country c affected by tariff change and imports from countries $\neq c$ not affected by tariff change. Export supply is assumed to be perfectly elastic.

$\sum_c TD_{g,c} = 0$, i.e. total increase in imports from countries affected by tariff change is equal to total reduction in imports from countries not affected by the change in tariff.

Annex 4.1: Top 15 affected products at HS 4-digit

HS	Description	Nominal increase, USD m			Relative increase, %		
		S1: Small	S2: MFN halved	S3: Liberal	S1: Small	S2: MFN halved	S3: Liberal
3506	Prepared glues for retail	2.3	5.7	9.1	11%	27%	44%
3904	Polymers of halogenated olefins in primary forms	1.0	2.6	4.1	1%	3%	5%
3102	Nitrogenous fertilisers	1.8	3.0	4.1	56%	91%	126%
3214	Glaziers' putty, resin cements etc.	1.0	2.4	3.9	5%	11%	18%
3401	Soap for retail	0.8	1.9	3.0	3%	7%	12%
3204	Synthetic organic colouring matter	0.6	1.5	2.4	1%	3%	5%
3403	Lubricating preparations	0.6	1.3	2.1	3%	6%	9%
3305	Hair preparations; for use on the hair	0.6	1.3	2.0	1%	3%	4%
3902	Polymers of other olefins, in primary forms	0.5	1.2	1.9	1%	1%	2%
3306	Oral or dental hygiene preparations in individual retail packages	0.5	1.1	1.8	3%	7%	11%
3208	Paints, varnishes dissolved in a non-aqueous medium	0.4	1.1	1.7	1%	3%	5%
3402	Organic surface-active agents (not soap)	0.4	1.1	1.7	1%	2%	3%
3304	Beauty, make-up and skin care preparations	0.3	0.8	1.3	2%	4%	7%
3809	Finishing agents used in the textile, paper, leather or like industries	0.3	0.8	1.3	1%	3%	4%
3824	Prepared binders for foundry molds or cores	0.3	0.7	1.2	0%	1%	1%

Source: own estimates, base year 2021; only sectors with non-zero impact are reported; sorted by nominal change in Scenario 3 "Liberal"

Annex 4.2: Top 15 affected products at HS 6-digit

HS	Description	Nominal increase, USD m			Relative increase, %		
		S1: Small	S2: MFN halved	S3: Liberal	S1: Small	S2: MFN halved	S3: Liberal
350691	Adhesives based on polymers or on rubber	2.1	5.2	8.3	18.4%	46.0%	73.7%
310260	Double salts and mixtures of calcium nitrate and ammonium nitrate	1.8	2.9	4.0	94.9%	153.6%	212.2%
390410	Polyvinyl chloride, in primary forms, not mixed with any other substances	1.0	2.4	3.8	1.7%	4.1%	6.6%
321410	Glaziers' putty, grafting putty, resin cements	0.7	1.6	2.6	4.2%	10.3%	16.4%
320416	Synthetic organic reactive dyes	0.4	1.1	1.7	1.6%	3.9%	6.3%
330610	Dentifrices	0.4	1.1	1.7	2.8%	7.0%	11.1%
390210	Polypropylene, in primary forms	0.4	1.0	1.6	0.6%	1.3%	2.1%
340319	Lubricant preparations	0.4	1.0	1.6	3.0%	6.9%	10.8%
330510	Shampoos	0.5	1.0	1.5	1.8%	3.6%	5.5%
340119	Soap, excluding for toilet use	0.4	0.9	1.4	7.3%	18.3%	29.3%
340111	Soap for toilet use	0.4	0.9	1.3	4.0%	8.6%	13.1%
320890	Paints and varnishes dissolved in a non-aqueous medium	0.3	0.8	1.3	2.1%	5.1%	8.1%
321490	Non-refractory surfacing preparations	0.3	0.8	1.2	5.9%	14.2%	22.5%
380991	Finishing agents	0.3	0.7	1.2	1.1%	2.8%	4.5%
382490	Chemical products n.e.s.	0.3	0.7	1.2	0.4%	1.0%	1.6%

Source: own estimates using WITS data on UZB imports and import duties, base year 2021; only sectors with non-zero impact are reported; sorted by nominal change in Scenario 3 "Liberal"