

Effects of removing the VAT de minimis on e-commerce imports

Technical annex
11 October 2017

Calculation of the impact of removing the de Minimis

The report estimates the impact of removing the de minimis. This is done by looking at the potential maximum VAT revenue and the additional processing costs for customs authorities, delivery operators and e-sellers. Our main report calculates the impact both under the current VAT collection approach (pre-OSS) and also under alternative scenarios where the OSS simplification measures are assumed to be in place (post-OSS).

In part one of the report and this technical annex, we use the assumptions set forward in the impact assessment study by Deloitte to the greatest extent possible in order to disentangle the specific impact of the EC proposal to remove the VAT de minimis.

In part two of the report and of this annex, we perform a sensitivity test on the results by testing how widely the results vary as a function of a set of key assumptions introduced by Deloitte.

In part three of this annex we assess the effect of the same sensitivity test, now applied to the cost impact on the delivery industry due to the overall EC policy proposal (EC proposed Option 5). This is thus the combined effect of jointly removing the VAT de minimis, while also introducing OSS and applying the other proposed policies.

1 Impact of the VAT de minimis removal, based on the assumptions in the analyses provided to the Commission

1.1 Impact of removing VAT de minimis under the current system (pre-OSS)

With the VAT processing system in place today, there are large VAT processing costs for delivery operators, customs administrations and businesses selling online. Our

analysis show that, compared to the situation today, removing the de minimis would lead to costs that outweighs the potential maximum VAT revenue, resulting in additional costs of € 2,681 m. compared to a maximum potential VAT revenue of € 594 m.

Our analysis compares additional processing costs with the potential maximum VAT revenue. On the revenue side, our presentation of the results is conservative, since we do not incorporate changes in the compliance rate. Note that non-compliance is expected to increase if the de minimis is removed, as expected by Deloitte (2016), Lot 2, as the incentive to undervalue increases. In fact, it is argued in the EC impact assessment that removing the de minimis and the distance selling threshold will decrease VAT revenues due to more non-compliance. In other words, the increase in non-compliance outweighs the broadening of the tax base.

The above results focus on calculating the impact of removing the de minimis threshold as a standalone policy decision (not part of a bundle). Currently, low value items with a value below € 10-22 coming into the EU are not subject to VAT. Once the de minimis is removed, the items will be VAT-liable and will therefore potentially bring additional VAT revenue, but it will also require additional processing costs of collecting the VAT compared to the lower cost of just clearing the item without collection. Table 1 shows the calculation of the direct economic impact under the current approach (pre-OSS), as described above.

Table 1 Additional processing costs, due to removing the VAT de minimis, under the current system (pre-OSS)

	Label	Formula	Figure	Source:
Number of small value items (i.e. currently de minimis), (items, m.)¹	A		144	Deloitte (2016), Lot 2, page 31
Delivery Operators				
Average variable cost for delivery operators when items are VAT-liable, today. (€)	B		8.96	EY (2015), Annex L page 103
Average variable cost for delivery operators when items are VAT-exempt, today. (€)	C		2.10	Deloitte, lot 2 , page 263
Average added variable cost for delivery operators due to the new VAT liability (de minimis removal), (€)	D	B-C	6.86	CE calculation
Delivery industry: Added processing cost due to the new VAT liability (de minimis removal), (€, m.)	E	A*D	989	CE calculation
Customs Authorities				
Average variable cost for customs when items are VAT-liable, today. (€) ²	F		9.34	EY (2015) Annex K, page 101-102
Average variable cost for customs when items are VAT-exempt, today. (€)	G		0	CE assumption
Average added variable cost for customs due to the new VAT liability (de minimis removal), (€)	H	F-G	9.34	CE calculation
Customs: Added processing cost due to the new VAT liability (de minimis removal), (€, m.)	I	A*H	1,345	CE calculation
E-sellers				
Hours spent on processing sales tax, per additional item. (hours)	J		0.15	Sidley Austin (2016), page 13
EU average hourly wage. (€)	K		32.1	Deloitte, lot 2, page 258
Non-EU wage relative to EU wage (accounting for productivity differences). (%) ³	L		50%	CE assumption
Non-EU average hourly wage. (€)	M	K*L	16.1	CE calculation
Average variable cost for e-sellers when items are VAT-liable, today. (€)	N	J*M	2.41	CE calculation
Average variable cost for e-sellers when items are VAT-exempt, today. (€)	O		0	CE assumption
Average added variable cost for e-sellers due to the new VAT liability (de minimis removal), (€)	P	N-O	2.41	CE calculation
E-sellers: Added processing cost due to the new VAT liability (de minimis removal), (€, m.)	Q	A*P	347	CE calculation
Total additional processing cost due to removing VAT de minimis (€, m.)	R	E+I+Q	2,681	CE calculation
VAT revenue				
Average value of additional items. (€)	S		20.6 ⁴	Deloitte (2016), Lot 2, page 31
Average VAT rate. (%) ⁵	T		20%	Deloitte (2016), Lot 2, page 31
Potential max additional VAT revenue due to removing VAT de minimis. (€, m.)	U	A*S*T	594	CE calculation

¹ The impact assessment study for the Commission estimates that 144 million low-value items will become VAT-liable with the removal of the de minimis – based on EY (2015) Assessment of the application and impact of the VAT exemption for importation of small consignments, p. 39. The estimate is constructed by taking a 2013 estimate and assuming a growth rate of 12 per cent for two years to bring it to a 2015 estimate. The impact assessment by Deloitte then keeps this constant for the evaluation of policy implementation. While e-commerce is expected to continue to grow (incl. the number of low value items), the EY study does not provide a volume estimate for 2021 in order to evaluate a policy proposed to be implemented in 2021. Besides, it should also be noted

1.2 Impact of removing VAT de minimis (post-OSS), based on the assumptions relied upon in the impact assessment provided to the Commission

The EC proposal includes simplification measures that are aimed at reducing the processing cost of collecting VAT. It should be recognised that these simplifying measures can change the cost benefit metric. However, the result from the impact assessment study suggests that removing the de minimis will likely put a disproportionately large burden on both delivery operators and customs authorities, even if simplifying measures are fully implemented. Our analysis shows that, compared to the situation where simplifying measures are implemented to begin with, removing the de minimis would lead to costs that outweigh the potential maximum tax revenue.

We have calculated the impact, under the assumption that the OSS have already been implemented. In other words, we here assume that the simplifying measures are implemented first, with all cost reductions realised, and the de minimis is removed taking these cost reductions as a given. This provides us with the correct baseline scenario against which to evaluate the removal of the de minimis (post-OSS) and thus identify the impact of the specific de minimis proposal.

The most important assumptions made in the Deloitte study, supporting the impact assessment of the Commission proposal are listed below:

- Deloitte assumes that the average value of items below current de minimis is €20.60. This is a high average value for items that can only range in value between €0-22.
- Deloitte assumes that 75 percent of small consignments will be registered in the new OSS system. This is a high share for a voluntary scheme where no sanctions are imposed on e-sellers opting out.
- Deloitte assumes that the delivery operators' processing cost per item for items outside the OSS system will decline by 30 percent due to the other simplifying measures. The evidence for this decrease is unclear.
- Deloitte assumes that delivery operators' processing costs will be €1.64 for consignment registered in the OSS system. This is a drop of 82 percent compared to collecting VAT today – especially noting that Deloitte estimates current (pre-OSS) processing

that the implementation of these policies may affect the flow of low value items – including international trade patterns, a factor not quantified by Deloitte or EY.

² We use the simple average of the processing costs for customs authorities in the sample in EY (2015).

³ This cost reduction is implemented in order to arrive at a conservative estimate. Please note that e.g. Holloway and Rae (2012) find that business compliance costs in the APEC-6 economies varies between EUR 1.04 and 10.64 (2012 prices), implying that our final estimate of EUR 2.41 per item is in low end of this range.

⁴ There are inconsistencies in the Deloitte study regarding this key parameter (Average value of additional items, i.e. of the items that become VAT-liable due to the removal of de minimis). In order to be conservative, we use the highest reported value therein. The inconsistencies are shown in greater detail below.

⁵ There are some inconsistencies in Deloitte, lot2 regarding the average VAT rate. Throughout the report an average VAT of 20% is referenced, however, on page 265 a VAT rate of 22% is assumed. There is no documentation explaining this disparity.

cost for items below de minimis of €2.10. Thus Deloitte assumes that post-OSS processing costs for VAT-liable items are lower than current (pre-OSS) processing costs for VAT-exempt items.⁶

Additional processing cost for delivery operators, due to the removal of the VAT de minimis

We have noted that the evidence base supporting the above Deloitte assumption is unclear. Still, in this part of our analysis we apply all the Deloitte assumptions listed above.⁷

The impact assessment estimates that items that are VAT-liable will have a processing cost of €1.64, if they go through the new OSS system. If the de minimis is still in place, the low value items will still be exempt from VAT and thus not require VAT collection. We assume that the processing cost of clearing a VAT-exempt item post-OSS will be the same as the processing cost for an item that is VAT-liable (€1.64). In other words, we assume that on items registered via the OSS channel, removing de minimis does not add costs. Thus, this is a conservative assumption in the sense that this provides an upper limit for costs in the new baseline scenario (and thus a lower overall cost impact). This assumption is based on the fact that in a pre-paid system, such as the OSS, there may not be any payment specific tasks for delivery operators.

For those items that e-sellers opt not to register in the OSS, the processing cost is assumed to be the same as costs for VAT-exempt (de minimis) items in the current (pre-OSS) setup, thus € 2.10. Note that this is also a conservative assumption.

Thus, we estimate the following processing costs falling upon delivery operators for low value items (i.e. not VAT-liable) in a situation when OSS have been implemented:

- € 1.64 for items in the OSS system and;
- € 2.10 for items outside the OSS system.

Once the de minimis is removed, all items will be subject to VAT. The processing cost for low value items if the de minimis is removed is estimated by Deloitte to be:⁸

- € 1.64 for items in the OSS system and;
- € 6.30 for items outside the OSS system.

As a result, we calculate an added processing cost for delivery operators of € 150 m., due to removing the de minimis post-OSS, see table 2.

⁶ See Deloitte (2016) Lot 2.

⁷ In a following part of our analysis, we will perform a sensitivity test, varying those parameters.

⁸ See Deloitte (2016), Lot 2, page 270

Table 2 Additional processing cost for delivery operators

	Label	Formula	Figure			Source:
Number of small value items, i.e. goods subject to de minimis (items, m.)	A		144			Deloitte (2016), Lot 2, page 31
			In OSS	Not in OSS	Total	
Take-up of OSS. (%)	B		75%	25%	100%	Deloitte (2016), Lot 2, page 270
Average variable cost for delivery operators when items are VAT-liable, in new baseline scenario, (€)	C		1.64	6.30		Deloitte (2016), lot 2. page 270
Average variable cost for delivery operators when items are VAT-exempt, in new baseline scenario, (€)	D		1.64	2.10		CE assumption
Average added variable cost for delivery operators due to the new VAT liability (de minimis removal), (€)	E	C-D	0	4.20		CE calculation
Added processing cost for delivery operators due to the new VAT liability (de minimis removal), (€, m.)	F	A*B*E	0	150	150	CE calculation

Note: Intermediate calculations and totals reflect rounding.

Source: Copenhagen Economics

Additional processing cost for customs authorities, due to the removal of the VAT de minimis

The impact assessment delivers no estimate of the processing cost per item for customs authorities when the OSS is fully implemented. Hence, for the purpose of this calculation we apply the same relative cost reductions that Deloitte estimated for delivery operators. Thus, we estimate the following the processing costs accrued by customs authorities for items above the de minimis (i.e. VAT-liable) in a situation when OSS is fully implemented:⁹

- € 1.71 for items in the OSS system and;
- € 6.56 for items outside the OSS system.

For items below the de minimis we apply the same approach as in the pre-OSS situation, thus assign no processing costs for customs authorities.

As a result, we calculate an added processing cost for customs authorities of € 419 m., due to removing the de minimis post-OSS, see table below.

⁹ Deloitte's estimates imply a post-OSS cost reduction of 82% for items in the OSS and of 30% for items outside OSS, compared to the processing cost for delivery operators in the current (pre-OSS) VAT collection approach.

Table 3 Additional processing costs for customs authorities

	Label	Formula	Figure			Source:
Number of small value items, i.e. goods subject to de minimis (items, m.)	A		144			Deloitte (2016), Lot 2, page 31
			In OSS	Not in OSS	Total	
Take-up of OSS. (%)	B		75%	25%	100%	Deloitte (2016), Lot 2, page 270
Average variable cost for customs when items are VAT-liable, in new baseline scenario. (€)	C		1.71	6.56		CE assumption
Average variable cost for customs when items are VAT-exempt, in new baseline scenario. (€)	D		0	0		CE assumption
Average added variable cost for customs due to the new VAT liability (de minimis removal), (€)	E	C-D	1.71	6.56		CE calculation
Added processing cost for customs due to the new VAT liability (de minimis removal), (€, m.)	F	A*B*E	185	235	419	CE calculation

Note: Intermediate calculations and totals reflect rounding.

Source: Copenhagen Economics

Additional processing cost for e-sellers, due to the removal of the VAT de minimis

We apply the same approach when estimating the post-OSS processing cost for e-sellers. Thus we base this on:

- our estimate of pre-OSS processing costs for e-sellers (€2.41, see calculation in Table 1);
- the same relative cost reductions that Deloitte estimated for delivery operators (i.e. relative effect on items registered in the OSS vs. items not registered); and
- the Deloitte estimate of the average cost reduction for e-sellers of 55%.¹⁰

Thus, we estimate the following processing costs falling upon e-sellers for items above the de minimis (i.e. VAT-liable) in a situation when the OSS is fully implemented:

- € 0.77 for items in the OSS system and;
- € 2.04 for items outside the OSS system.

For items below the de minimis we assume that there are no costs associated with VAT. In total this adds up € 156 m. in added processing costs for E-sellers.

¹⁰ See Deloitte (2016) lot 2, page 11, which estimates the average cost reduction for e-sellers as 55%, without distinguishing before reductions applicable for items registered in the OSS vs those not registered. We have decomposed this average into a figure applicable to items registered in the OSS (a cost reduction of 68%) and a figure applicable to items not in the OSS (a cost reduction of 15%), which is a split consistent with an aggregated value of 55% for the entire set of items.

Table 4 Additional processing costs for e-sellers

	Label	Formula	Figure			Source:
Number of small value items, i.e. goods subject to de minimis (items, m.)	A		144			Deloitte (2016), Lot 2, page 31
			In OSS	Not in OSS	Total	
Take-up of OSS. (%)	B		75%	25%	100%	Deloitte (2016), Lot 2, page 270
Average variable cost for e-sellers when items are VAT-liable, in new baseline scenario. (€)	C		0.77	2.04		CE calculation
Average variable cost for e-sellers when items are VAT-exempt, in new baseline scenario. (€)	D		0	0		CE assumption
Average added variable cost for e-sellers due to the new VAT liability (de minimis removal). (€)	E	C-D	0.77	2.04		CE calculation
Added processing cost for e-sellers due to the new VAT liability (de minimis removal), (€, m.)	F	A*B*E	83	73	156	CE calculation

Note: Intermediate calculations and totals reflect rounding.

Source: Copenhagen Economics

The results reported in table 2, 3 and 4 gives a total added cost of € 726 m., as reported in table 1 of the report.

2 Impact of the VAT de minimis removal, based on sensitivity test of key parameters

To shine a light on this key dependency between the cost-benefit result and the cost assumptions made, we have conducted a sensitivity test – an analysis missing in the evidence base that the Commission relied upon.

The most important assumptions made in the Deloitte study, supporting the impact assessment of the Commission proposal are listed below:

- Deloitte assumes that the average value of items below current de minimis is €20.60. This is a high average value for items that can only range in value between €0-22.
- Deloitte assumes that 75 percent of small items will be registered in the new OSS system. This is a high share for a voluntary scheme where no sanctions are imposed on e-sellers opting out.
- Deloitte assumes that the delivery operators' processing cost per item for items not registered in the OSS system will decline by 30 percent. The evidence for this decrease is unclear.
- Deloitte assumes that delivery operators' processing costs will be €1.64 for items registered in the OSS system. This is a drop of 82 percent compared to collecting VAT today – especially noting that Deloitte estimates current (pre-OSS) processing cost for

items below de minimis of €2.10. Thus Deloitte assumes that post-OSS processing costs for VAT-liable items are lower than current (pre-OSS) processing costs for VAT-exempt items.¹¹

In our analysis on post-OSS running costs, we test how the results on the impact of removing de minimis vary as a function of the above key parameters. Thus we test what happens if the assumptions introduced by Deloitte (e.g. on cost reductions linked to the introduction of the OSS) do not hold.

Test on the effects of a different average value of small value items

First of all, we test how results would differ in a scenario where the average value of small value items (those that can range between € 0-22) would be the mid-point of this interval, i.e. € 11 – instead of the parameter applied by Deloitte, €20.60 which is at the far higher end of the interval of the distribution of items. This is done for two reasons:

- First of all, it is unclear how the average value of small value items is estimated in the impact assessment¹². The impact assessment reference to EY and CBRA studies¹³, however, it is unclear how these references support the value used to estimate the average value of small value items.
- Secondly, there are inconsistencies regarding this crucial parameter in the impact assessment, with implied average values ranging from € 16.8-20.6.¹⁴

Insofar as Deloitte has overestimated the average value of small value items, this leads to an upward bias on the estimated potential maximum VAT revenue (forgone VAT). With an average value of € 11, and average VAT rate of 20% and 144 m. small value items, the potential max VAT revenue is only € 317 m. We apply this estimate in our sensitivity test. Our approach is conservative, since non-compliance (as identified by Deloitte) would further reduce VAT tax intake.

Conservative assumptions about cost reductions

On the cost side, we test three scenarios:

- In the **first test** we begin to explore the implications of the assumptions made in the IA study by the Commission. We here assume that the items that goes outside of OSS are subject to the same procedure as today and therefore accrue the same

¹¹ See Deloitte (2016) Lot 2.

¹² See Deloitte (2016), Lot 2, page 31

¹³ Hintsä J., Mohanty S., Tsikolenko V., Ivens B., Leischnig A., Kähäri P., Hameri AP., and Cadot (2014), The import VAT and duty de-minimis in the European Union - Where should they be and what will be the impact? And Ernst & Young (2015) Assessment of the application and impact of the VAT exemption for importation of small consignments, p. 41.

¹⁴ When the average value of small value consignments are referenced in the text it is consistently € 20. However, from the tables, e.g. table 9 and 131 in Deloitte (2016), lot 2, the implied average value is € 20.6. Furthermore, in table 132 the implied average value is € 16.8, as implied by that text referring to a 30% transportation cost.

processing cost (this implies no cost reduction for items outside the OSS). We further assume that the processing costs for the items going through the OSS will be reduced significantly but only by 50 per cent.

- In the **second test** we instead relax the assumption of the voluntary take-up of the OSS, i.e. how many items that will go through the OSS as opposed to outside. We assume a 50/50 split such that half of the items are processed via the OSS.
- The **third test** combines the conservative assumptions of the two scenarios above, i.e. more conservative cost reductions and a take-up of the OSS of 50%.

The processing costs for delivery operators, customs authorities and E-sellers are calculated following the same methodology described in table 2-4.

1. The impact of conservative assumptions about cost reductions

The additional processing costs for delivery operators, customs authorities and e-sellers will go up significantly if the cost reductions are less pronounced than estimated in the EC impact assessment. Our results suggest that the total additional processing cost of removing the de minimis when the OSS is fully implemented is € 1,559 m. given conservative assumptions about cost reductions, see table 5.¹⁸ This can be compared to the total additional processing costs of € 726 m. found using the assumption in the impact assessment. The additional processing costs are shared between delivery operators, customs authorities and e-sellers with € 504 m., € 839 m. and € 216 m., respectively.

Table 5 Processing costs with conservative assumptions about cost reductions

	Conservative assumptions, cost reductions		
	In OSS	Not in OSS	Total
<i>Key parameters:</i>			
Take-up of OSS, (%)	75%	25%	
Reduction in cost, delivery operators and customs, (%)	-50%	-0%	
Reduction in cost, e-sellers, (%)	-50%	-0%	
<i>Results:</i>			
Processing cost delivery operators, (€ m.)	258	245	504
Processing cost customs, (€ m.)	506	334	839
Processing cost e-seller, (€ m.)	130	86	216

¹⁸ Note for the purpose of this calculation we have made conservative assumptions about the new baseline scenario with the OSS implemented but the de minimis still in place. Specifically, we assume that the cost of processing items below the de minimis is the same as today, this generally suggests that our estimate is conservative, as other simplifying measures might cut costs for items below the de minimis.

Total additional processing cost, (€ m.)	1,559
Potential max VAT revenue (€, m.)	317

Note: The underlined parameters are those on which we apply the sensitivity test here. We assume that the items that are not registered via OSS are subject to a similar procedure as de minimis items currently (pre-OSS) and thus accrue the same processing cost (this implies no cost reduction for items outside the OSS). We further assume that the processing costs for the items going through the OSS will be reduced significantly, but only by 50 per cent. Intermediate calculations and totals reflect rounding.

Source: Copenhagen Economics

2. The impact of conservative assumption about the take-up of the OSS

The additional processing costs for delivery operators, customs authorities and e-sellers will also go up significantly if the take-up of the voluntary OSS is lower than assumed in the impact assessment.¹⁹ Our results show that the total additional processing cost of removing the de minimis when the OSS is fully implemented is € 1,101 m. given conservative assumptions about the take-up of the OSS, see table 6. The additional processing costs are shared between delivery operators, customs authorities and e-sellers with € 303 m., € 596 m. and € 203 m., respectively.

Table 6 Processing costs with conservative assumptions about take-up

	Conservative assumptions, take-up of OSS		
	In OSS	Not in OSS	Total
<i>Key parameters:</i>			
<u>Take-up of OSS, (%)</u>	50%		50%
Reduction in cost, delivery operators and customs, (%)	-82%		-30%
Reduction in cost, e-sellers, (%)	-68%		-15%
<i>Results:</i>			
Processing cost delivery operators, (EUR m.)	0		303
Processing cost customs, (EUR m.)	123		596
Processing cost e-seller, (EUR m.)	56		203
Total additional processing cost, (EUR m.)			1,101
Potential max VAT revenue (EUR, m.)			317

Note: The underlined parameters are those on which we apply the sensitivity test here. We assume a 50/50 split such that half of the items are processed via the OSS. Intermediate calculations and totals reflect rounding.

Source: Copenhagen Economics

3. The impact of overall conservative assumptions on the cost side

¹⁹ Note for the purpose of this calculation, we assume the same cost reductions as assumed in the impact assessment.

The additional processing costs would more than double if cost reductions are less significant and the take-up of the OSS is only 50%, see table 7. Our results show that the total additional processing cost of removing the de minimis when the OSS is fully implemented is € 1,935 m. given overall conservative assumptions. The additional processing costs are shared between delivery operators, customs authorities and e-sellers with € 666 m., € 1,009 m. and € 260 m., respectively.

Table 7 Processing costs with overall conservative assumptions

	Conservative assumptions overall		
	In OSS	Not in OSS	Total
<i>Key parameters:</i>			
<u>Take-up of OSS, (%)</u>	50%	50%	
<u>Reduction in cost, delivery operators and customs, (%)</u>	-50%	-0%	
<u>Reduction in cost, e-sellers, (%)</u>	-50%	-0%	
<i>Results:</i>			
Processing cost delivery operators, (EUR m.)	172	494	666
Processing cost customs, (EUR m.)	336	672	1,009
Processing cost e-seller, (EUR m.)	87	173	260
Total additional processing cost, (EUR m.)			1,935
Potential max VAT revenue (EUR, m.)			317

Note: The underlined parameters are those on which we apply the sensitivity test here. We assume more conservative cost reductions (equivalent to the first scenario, table 5) and a take up of the OSS of 50%. Intermediate calculations and totals reflect rounding.

Source: Copenhagen Economics

3 Sensitivity tests on total processing costs for delivery operators

It is argued in the impact assessment that: “Under Options 4, 5 and 6 Postal operators and couriers are likely to experience higher processing costs because of a higher volume of parcels to pass through Customs. Conversely, the simplified procedures available both via and outside the SEM are expected to counter-balance such increase. As a result, it is estimated that portal operators and couriers will benefit from a reduction processing costs of about 24%.”²⁰ This implies that total processing costs for delivery operators are expected to fall from € 689 m. today to € 523m in the future (post-OSS), based on Deloitte estimates; these estimates amount to a reduction of €166m, i.e. 24%.

²⁰ See Deloitte (2016), lot 2, p. 11.

However, these estimates are based on Deloitte's assumptions of key cost-side parameters, which were discussed and sensitivity-tested in the previous chapter.

Thus we have applied once more the same sensitivity test, this time assessing the impact of those key parameters on the outcome under Option 5, thus on the combined effect of removing the de minimis and also introducing OSS and further simplification measures.

The sensitivity test is ultimately a test of how robust is the Deloitte estimate that the combined effect of Option 5 for the delivery industry will be that higher processing costs (because of a higher volume of parcels to pass through Customs) are counter-balanced by the simplification measures – or whether instead this may not be the case.

As in the previous chapter, we have applied the following sensitivity tests to the parameters assumed by Deloitte:

- Processing costs decrease due to OSS though not as sharply as assumed by Deloitte;
- E-sellers' choice to take-up OSS is substantial (50%) though lower than assumed by Deloitte (75%)

The finding of our sensitivity test is that, for the delivery industry, Option 5 (combined effect of removing de minimis while introducing simplifications) would not be a reduction in processing costs but instead a potentially major increase in costs.

As shown in Table 8 (which replicates and sensitivity tests key results in Deloitte)²¹, costs for delivery operators could increase from € 689 m. today to € 1,259 m., under Option 5. The sensitivity tests finds that:

- instead of the Deloitte-estimated cost saving of €166m, i.e. -24%...
- ...option 5 could increase processing costs by €570m, i.e. +83%.

This is a sensitivity test and much uncertainty surrounds these key parameters. We find it notable that the outcome of the sensitivity test brings the cost outcome from being a moderate cost saving to a firmly negative cost increase: in other words the overall cost impact of option 5 for the delivery industry is very sensitive to those key parameters. If parameters assumed by Deloitte were not to hold, results would swing in a major way.

²¹ See Deloitte (2016), lot 2, table 3, p. 12.

Table 8 Expected impact on delivery operators, sensitivity test – for all items below €150

Label	Formula	Status quo, de minimis still in place	Post-OSS and removal of the de minimis, IA assumptions				Post-OSS and removal of the de minimis, conservative assumptions			
			Low value items (below € 22)		Mid value items (€ 22-150)		Low value items (below € 22)		Mid value items (€ 22-150)	
			In OSS	Not in OSS	In OSS	Not in OSS	In OSS	Not in OSS	In OSS	Not in OSS
Take-up of OSS (%)	A	n/a	75%	25%	75%	25%	50%	50%	50%	50%
Number of items (m.)	B	187	108	36	33	11	72	72	22	22
Number of items per group (m.)			144		43		144		43	
Reduction in cost (%)	C	n/a	-82%	-30%	-82%	-30%	50%	-0%	50%	-0%
Processing cost per item (€)	D	n/a	1.64	6.30	1.64	6.30	4.48	8.96	4.48	8.96
Processing cost, (€ m.)	E	B * D	177	225	53	68	323	645	97	194
Processing cost per group (€ m.)			402		121		968		291	
Total processing cost, (€ m.)	H	sum E	689²²		523²³		1,259			

Note: Intermediate calculations and totals reflect rounding. Deloitte uses, for this exercise, all small value items, i.e. up to a value of €150.

Source: Copenhagen Economics based on Deloitte (2016) Lot 2, table 3, p. 12.

Finally, we note that the Deloitte statement quoted at the start of this chapter (the counter-balancing question) ignores the possibility of introducing the OSS and not removing the de minimis. In other words, it takes for granted that the simplification cannot be obtained without the additional cost burden of the removal of de minimis. In other words, the impact assessment fails to compare option 4-6 with the more directly relevant alternative of introducing the OSS without removing the de minimis.

Moreover, the Deloitte analysis in reduction in processing costs is not focused on low value items (below the de minimis) but also include items with values between €22-150. This implies that additional processing costs for low value items that are VAT-liable under option 4-6 are bundled in with the cost savings on the items with values between €22-150. Thus the alleged counter-balancing effect does not arise just from the items in questions (those below €22) but also counts in the cost savings from simplification on items over €22 (items for which the de minimis question is not relevant).

²² See on Deloitte (2016) Lot 2, table 3, column 2, p. 12.

²³ We have broken up the calculation of the total processing cost but arrive at the same result as Deloitte (2016) Lot 2, table 3, column 3, p. 12.

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Copenhagen Economics is one of the leading economics firms in Europe. Founded in 2000, the firm currently employs more than 75 staff operating from our offices in Brussels, Copenhagen and Stockholm. Our economists provide advice and analyses in the fields of competition, regulation, international trade and impact assessment.

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