

## Appendix 1. Other bootstrap intervals of average number of clients

In Table 1, alternative bootstrap estimates are presented for the time sex workers are visible for clients. These alternative bootstraps are systematically shown for the other calculations, in the ensuing annexes. The abbreviations refer to the basic estimations using the estimated standard errors (Estim), and bootstraps based on the following methods: the normal approximation (Norm), percentile method (Perc), bias-corrected (BC), bias-corrected and accelerated (BCa) and bootstrap-t or studentized (Btstrp-t) bootstraps. In the main text, we always showed the basic calculations and the bootstrap-t (Davison and Hinkley 2006).

**Table 1: Estimates of clients per work hour and per hour visible at the window**

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Average number of clients per work hour (<math>E(T)</math>)</b>	0.6861	0.0456	0.0455	(0.5960	0.7762)	(Estim)
				(0.5973	0.7757)	(Norm)
				(0.5988	0.7778)	(Perc)
				(0.6009	0.7804)	(BC)
				(0.6034	0.7826)	(BCa)
				(0.5971	0.7785)	(Btstrp-t)
<b>Average number of clients per hour visible for clients (<math>E(S)</math>)</b>	0.9607	0.0893	0.0897	(0.7929	1.1472)	(Estim)
				(0.7834	1.1350)	(Norm)
				(0.7979	1.1507)	(Perc)
				(0.8016	1.1564)	(BC)
				(0.8061	1.1612)	(BCa)
				(0.7862	1.1418)	(Btstrp-t)

Sample size :  $n = 136$

Source: Observations of transactions in Antwerp and Brussels

## Appendix 2. Detailed results of sex workers visible for clients (VR)

Table 2 shows the detailed results of working time for sex workers, broken down per red light district.

The red light district of Brussels was treated as though it consisted of two neighbourhoods. The fieldwork indeed showed that the sex workers, clientele and average occupation rates between the windows in the Rue d'Aerschot (Schaerbeek) and the premises in Saint-Josse-ten-Noode differ significantly, although they are adjacent to one another. In order to give space to the differences, we decided to treat them as separate RLD's, denoted as 'Brussels 1' (Rue d'Aerschot) and 'Brussels 2' (Saint-Josse-ten-Noode).

Table 2: Estimates of the occupancy rate that sex workers are visible at the window

	<i>n</i>	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Antwerp</b>	2 440	38.89%	0.987%	0.991%	36.96%	40.83%	(Estim)
					36.95%	40.84%	(Norm)
					36.97%	40.82%	(Perc)
					36.93%	40.78%	(BC)
					36.93%	40.78%	(BCa)
					36.98%	40.83%	(Btstrp-t)
<b>Brussels 1</b>	1 040	42.21%	1.532%	1.539%	39.21%	45.21%	(Estim)
					39.21%	45.25%	(Norm)
					39.13%	45.19%	(Perc)
					39.13%	45.10%	(BC)
					39.13%	45.10%	(BCa)
					39.24%	45.31%	(Btstrp-t)
<b>Brussels 2</b>	832	24.40%	1.489%	1.492%	21.48%	27.32%	(Estim)
					21.46%	27.31%	(Norm)
					21.51%	27.40%	(Perc)
					21.39%	27.28%	(BC)
					21.39%	27.28%	(BCa)
					21.45%	27.35%	(Btstrp-t)
<b>Ghent</b>	537	43.02%	2.137%	2.156%	38.83%	47.20%	(Estim)
					38.76%	47.21%	(Norm)
					38.73%	47.11%	(Perc)
					38.55%	46.93%	(BC)
					38.55%	46.93%	(BCa)
					38.94%	47.33%	(Btstrp-t)
<b>Ostend</b>	280	50.00%	2.988%	3.027%	44.14%	55.86%	(Estim)
					44.04%	55.91%	(Norm)
					44.29%	56.07%	(Perc)
					43.93%	55.71%	(BC)
					43.93%	55.71%	(BCa)
					43.91%	55.73%	(Btstrp-t)
<b>Liège</b>	45	32.33%	7.563%	7.519%	17.51%	47.16%	(Estim)
					17.66%	47.13%	(Norm)
					17.41%	47.26%	(Perc)
					17.41%	44.77%	(BC)
					17.41%	47.77%	(BCa)
					18.04%	49.02%	(Btstrp-t)
<b>Seraing</b>	520	23.46%	1.998%	2.003%	19.55%	27.38%	(Estim)
					19.51%	27.36%	(Norm)
					19.59%	27.55%	(Perc)
					19.37%	27.34%	(BC)
					19.59%	27.34%	(BCa)
					19.49%	27.47%	(Btstrp-t)

### Appendix 3. Technical background and results of transactions in window prostitution

This annex presents the calculation of the estimates for the total number of clients in the different window prostitution districts, and shows how the sum and the standard error are calculated.

An estimator  $\widehat{N}_{WI,k}$  for the expected total number of clients in red light district  $k$  can be written as

$$\widehat{N}_{WI,k} = (7272 + 1488 f_k) c_k \widehat{VR}_k \widehat{\mu}_S$$

where  $c_k$  is the capacity in district  $k$ ,  $\widehat{VR}_k$  is an estimator for the proportion of time that sex workers are visible for clients,  $\widehat{\mu}_S$  is an estimator for the expected number of services per hour that a sex worker is visible for clients and  $f_k = 1$  for Ostend and  $f_k = 0.5106$  for all other districts (allowing for the correction for the decreased supply during the summer months, except for the touristic resort of Ostend).

The standard error  $SE(\widehat{N}_{WI,k})$  of  $\widehat{N}_{WI,k}$  is given by

$$SE(\widehat{N}_{WI,k}) = (7272 + 1488 f_k) c_k \sqrt{SE(\widehat{VR}_k)^2 SE(\widehat{\mu}_S)^2 + \widehat{VR}_k^2 SE(\widehat{\mu}_S)^2 + SE(\widehat{VR}_k)^2 \widehat{\mu}_S^2}.$$

To calculate an estimate  $\widehat{N}_{RLD}$  for the expected total number of clients in all the red light districts together, we just take the sum of all the 7 districts

$$\widehat{N}_{RLD} = \sum_{k=1}^7 \widehat{N}_{WI,k}$$

The variance of  $\widehat{N}_{RLD}$  is the sum of all the variances  $Var(\widehat{N}_{WI,k})$  and all the mutual covariances, which can be estimated by

$$\begin{aligned} Cov(\widehat{N}_{WI,j}, \widehat{N}_{WI,k}) &= Cov((7272 + 1488 f_j) c_j \widehat{VR}_j \widehat{\mu}_S, (7272 + 1488 f_k) c_k \widehat{VR}_k \widehat{\mu}_S) \\ &= (7272 + 1488 f_j) (7272 + 1488 f_k) c_j c_k Cov(\widehat{VR}_j \widehat{\mu}_S, \widehat{VR}_k \widehat{\mu}_S) \\ &\approx (7272 + 1488 f_j) (7272 + 1488 f_k) c_j c_k \widehat{VR}_j \widehat{VR}_k Var(\widehat{\mu}_S). \end{aligned}$$

This is based on the fact that  $Cov(XZ, YZ) = E(X) E(Y) Var(Z)$  for independent variables  $X$ ,  $Y$ , and  $Z$ .

The estimate of all red light districts does not contain the rare scattered window prostitution premises outside of red light districts, most of them are located along arterial roads outside of cities. These have to be added with a methodology analogue to the one developed for the other segments.

We calculate the relative size of these scattered supply compared to the red light district. How this is done is explained in detail in next section; for now it suffices to indicate that this relative size and a standard error are calculated. We will denote this estimate by  $\widehat{odds}_{Oth}$ . This notation makes sense since it is similar to odds: it is the probability of a transaction in a window outside RLD's over the probability of a transaction in a window in the RLD.

Now the expected total number of transactions in windows outside the red light districts ( $E(N_{Oth})$ ) and the expected total number of transactions in window prostitution in a year ( $E(N_{WI})$ ) can be estimated (by  $\widehat{N}_{Oth}$  and  $\widehat{N}_{WI}$ ), as well as their standard errors.

For the number in transactions in scattered window premises we find

$$\widehat{N}_{Oth} = \widehat{odds}_{Oth} \widehat{N}_{RLD}$$

$$SE(\widehat{N}_{Oth}) = \sqrt{SE(\widehat{odds}_{Oth})^2 SE(\widehat{N}_{RLD})^2 + \widehat{odds}_{Oth}^2 SE(\widehat{N}_{RLD})^2 + SE(\widehat{odds}_{Oth})^2 \widehat{N}_{RLD}^2}$$

And finally for the total number of transactions in window prostitution

$$\widehat{N}_{WI} = \widehat{N}_{RLD} + \widehat{N}_{Oth} = \widehat{N}_{RLD} + \widehat{odds}_{Oth} \widehat{N}_{RLD} = (1 + \widehat{odds}_{Oth}) \widehat{N}_{RLD}$$

$$SE(\widehat{N}_{WI}) = \sqrt{SE(\widehat{odds}_{Oth})^2 SE(\widehat{N}_{RLD})^2 + (1 + \widehat{odds}_{Oth})^2 SE(\widehat{N}_{RLD})^2 + SE(\widehat{odds}_{Oth})^2 \widehat{N}_{RLD}^2}$$

In

Table 3 we present the estimates for the total number of clients in each red light district, and the total for all red light districts and for the segment of window prostitution, as well as their estimated and bootstrap standard errors and their estimated and bootstrap confidence intervals.

Table 3: Total number of transactions in window prostitution

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Antwerp</b>	915 370	88 264	88 303	(742 377	1 088 364)	(Estim)
				(740 889	1 087 030)	(Norm)
				(754 106	1 103 903)	(Perc)
				(758 305	1 108 312)	(BC)
				(745 134	1 094 256)	(Btstrp-t)
<b>Brussels 1</b>	423 443	42 293	42 210	(340 550	506 336)	(Estim)
				(340 237	506 698)	(Norm)
				(345 914	512 718)	(Perc)
				(347 813	515 407)	(BC)
				(342 385	509 951)	(Btstrp-t)
<b>Brussels 2</b>	195 806	21 808	21 948	(153 063	238 549)	(Estim)
				(152 340	238 372)	(Norm)
				(156 602	242 456)	(Perc)
				(157 932	244 348)	(BC)
				(153 580	239 476)	(Btstrp-t)
<b>Ghent</b>	361 814	38 182	38 371	(286 979	436 648)	(Estim)
				(285 788	436 201)	(Norm)
				(292 838	444 473)	(Perc)
				(295 817	447 010)	(BC)
				(287 246	438 127)	(Btstrp-t)
<b>Ostend</b>	147 281	16 301	16 553	(115 331	179 231)	(Estim)
				(114 518	179 406)	(Norm)
				(117 874	182 421)	(Perc)
				(118 418	183 294)	(BC)
				(115 526	180 000)	(Btstrp-t)
<b>Liège</b>	22 456	5 673	5 647	(11 337	33 575)	(Estim)
				(11 394	33 530)	(Norm)
				(12 183	34 232)	(Perc)
				(12 521	34 924)	(BC)
				(11 758	34 350)	(Btstrp-t)
<b>Seraing</b>	188 285	23 788	24 092	(141 661	234 909)	(Estim)
				(140 513	234 951)	(Norm)
				(145 543	239 914)	(Perc)
				(146 793	241 871)	(BC)
				(141 610	236 325)	(Btstrp-t)
<b>ALL RLD</b>	2 254 456	213 475	214 153	(1 836 052	2 672 860)	(Estim)
				(1 830 701	2 670 166)	(Norm)
				(1 866 056	2 714 295)	(Perc)
				(1 876 667	2 734 484)	(BC)
				(1 832 705	2 685 886)	(Btstrp-t)

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b><i>“Other” Districts</i></b>	36 038	3 936	3 885	(28 343 (28 360 (29 001 (29 153 (28 486	43 733) 43 590) 44 357) 44 619) 43 879)	(Estim) (Norm) (Perc) (BC) (Btstrp-t)
<b><i>Total window prostitution</i></b>	2 290 494	216 897	217 592	(1 865 385 (1 859 935 (1 895 514 (1 906 514 (1 861 878	2 715 604) 2 712 882) 2 756 550) 2 776 244) 2 727 544)	(Estim) (Norm) (Perc) (BC) (Btstrp-t)



## Appendix 4. Relative size of segments compared to window prostitution

Table 4: Relative size of each segment compared to windows

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Street prostitution</b>	2.95%	0.169%	0.163%	(2.61%	3.28%)	(Estim)
				(2.63%	3.26%)	(Norm)
				(2.64%	3.28%)	(Perc)
				(2.64%	3.29%)	(BC)
				(2.62%	3.26%)	(Btstrp-t)
<b>Clubs and private houses</b>	38.03%	0.502%	0.522%	(37.04%	39.01%)	(Estim)
				(37.00%	39.05%)	(Norm)
				(37.03%	39.07%)	(Perc)
				(37.02%	39.07%)	(BC)
				(37.00%	39.04%)	(Btstrp-t)
<b>Massage parlours</b>	53.24%	0.626%	0.646%	(52.01%	54.47%)	(Estim)
				(51.98%	54.51%)	(Norm)
				(51.99%	54.54%)	(Perc)
				(51.99%	54.54%)	(BC)
				(51.96%	54.50%)	(Btstrp-t)
<b>Escort and private</b>	140.38%	1.273%	1.271%	(137.89%	142.88%)	(Estim)
				(137.89%	142.87%)	(Norm)
				(137.94%	142.93%)	(Perc)
				(137.97%	142.96%)	(BC)
				(137.86%	142.85%)	(Btstrp-t)

## Appendix 5. Technical background and detailed results of the number of transactions

To estimate the number of transactions in the other segments than window prostitution (street prostitution, clubs and private houses, massage parlours and escort and private), the relative size of each segment is estimated through a comparison to window prostitution, and a multiplication of this relative size with the estimated number of transactions in window prostitution.

$$\widehat{N}_{ST} = \left( \frac{2\widehat{P}_{ST}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI}$$

$$\widehat{N}_{CB} = \left( \frac{\widehat{P}_{CB}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI}$$

$$\widehat{N}_{MA} = \left( \frac{\widehat{P}_{MA}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI}$$

$$\widehat{N}_{ES} = \left( \frac{\widehat{P}_{ES}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI}$$

As argued in the article, the relative size of street prostitution was doubled, because there were strong indications that this segment was underestimated.

The variances can be estimated by

$$Var(\widehat{N}_{ST}) = Var(2\widehat{P}_{ST}/\widehat{P}_{WI}) Var(\widehat{N}_{WI}) + (2\widehat{P}_{ST}/\widehat{P}_{WI})^2 Var(\widehat{N}_{WI}) + Var(2\widehat{P}_{ST}/\widehat{P}_{WI}) \widehat{N}_{WI}^2$$

and equivalently for all the other segments.

The total number of transactions in all female sex workers segments together, is then estimated by the sum

$$\begin{aligned} \widehat{N}_{FSW} &= \widehat{N}_{WI} + \widehat{N}_{ST} + \widehat{N}_{CB} + \widehat{N}_{MA} + \widehat{N}_{ES} \\ &= \widehat{N}_{WI} + \left( \frac{2\widehat{P}_{ST}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI} + \left( \frac{\widehat{P}_{CB}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI} + \left( \frac{\widehat{P}_{MA}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI} + \left( \frac{\widehat{P}_{ES}}{\widehat{P}_{WI}} \right) \widehat{N}_{WI} \\ &= \widehat{N}_{WI} \left( \frac{\widehat{P}_{WI} + 2\widehat{P}_{ST} + \widehat{P}_{CB} + \widehat{P}_{MA} + \widehat{P}_{ES}}{\widehat{P}_{WI}} \right) \\ &= \widehat{N}_{WI} \left( \frac{1 + \widehat{P}_{ST}}{\widehat{P}_{WI}} \right) \end{aligned}$$

Since  $\widehat{P}_{WI} + \widehat{P}_{ST} + \widehat{P}_{CB} + \widehat{P}_{MA} + \widehat{P}_{ES} = 1$

The variance can be estimated by

$$Var(\widehat{N}_{FSW}) = Var(\widehat{N}_{WI}) Var\left(\frac{1 + \widehat{P}_{ST}}{\widehat{P}_{WI}}\right) + \widehat{N}_{WI}^2 Var\left(\frac{1 + \widehat{P}_{ST}}{\widehat{P}_{WI}}\right) + Var(\widehat{N}_{WI}) \left(\frac{1 + \widehat{P}_{ST}}{\widehat{P}_{WI}}\right)^2$$

with

$$Var\left(\frac{1 + \widehat{P}_{ST}}{\widehat{P}_{WI}}\right) = \left(\frac{1 + \widehat{P}_{ST}}{\widehat{P}_{WI}}\right)^2 \left[ \frac{Var(\widehat{P}_{ST})}{(1 + \widehat{P}_{ST})^2} - 2 \frac{Cov(\widehat{P}_{ST}, \widehat{P}_{WI})}{(1 + \widehat{P}_{ST}) \widehat{P}_{WI}} + \frac{Var(\widehat{P}_{WI})}{\widehat{P}_{WI}^2} \right]$$

As explained in the article, we assume that the number of transactions for male sex workers (MSW) is 5% of the number of transactions for FSW. So this means that the number of transactions for MSW ( $N_{MSW}$ ) and the total number of transactions ( $N_{ALL}$ ) can easily be written in function of  $N_{FSW}$ . So we can write for the estimators and their standard errors

$$\widehat{N}_{MSW} = 0.05 \widehat{N}_{FSW}$$

$$\widehat{N}_{ALL} = 1.05 \widehat{N}_{FSW}$$

$$SE(\widehat{N}_{MSW}) = 0.05 SE(\widehat{N}_{FSW})$$

$$SE(\widehat{N}_{ALL}) = 1.05 SE(\widehat{N}_{FSW})$$

This allows us to calculate the number of transactions for each segment and the totals, presented in Table 5.

Table 5: Total number of transactions (all segments)

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Window prostitution</b>	2 290 494	216 897	217 592	(1 865 385	2 715 604)	(Estim)
				(1 859 935	2 712 882)	(Norm)
				(1 895 514	2 756 550)	(Perc)
				(1 906 514	2 776 244)	(BC)
				(1 861 878	2 727 544)	(Btstrp-t)
<b>Street prostitution</b>	67 458	7 483	7 373	(52 792	82 124)	(Estim)
				(52 893	81 793)	(Norm)
				(53 970	83 238)	(Perc)
				(54 389	83 880)	(BC)
				(53 130	82 510)	(Btstrp-t)
<b>Clubs and private houses</b>	871 046	83 288	83 615	(707 805	1 034 287)	(Estim)
				(705 548	1 033 312)	(Norm)
				(719 780	1 050 012)	(Perc)
				(721 792	1 053 704)	(BC)
				(708 045	1 039 242)	(Btstrp-t)
<b>Massage parlours</b>	1 219 475	116 371	116 781	(991 391	1 447 559)	(Estim)
				(988 496	1 446 269)	(Norm)
				(1 006 793	1 472 082)	(Perc)
				(1 010 613	1 477 636)	(BC)
				(989 453	1 455 625)	(Btstrp-t)
<b>Escort and private</b>	3 215 448	305 889	306 456	(2 615 916	3 814 980)	(Estim)
				(2 609 109	3 810 395)	(Norm)
				(2 660 537	3 875 487)	(Perc)
				(2 668 067	3 887 199)	(BC)
				(2 613 718	3 838 239)	(Btstrp-t)
<b>All FSW</b>	7 663 921	727 107	728 986	(6 238 817	9 089 026)	(Estim)
				(6 221 531	9 079 101)	(Norm)
				(6 345 108	9 244 513)	(Perc)
				(6 371 041	9 285 278)	(BC)
				(6 224 040	9 132 088)	(Btstrp-t)
<b>MSW</b>	383 196	36 355	36 449	(311 941	454 451)	(Estim)
				(311 077	453 955)	(Norm)
				(317 255	462 226)	(Perc)
				(318 552	464 264)	(BC)
				(311 202	456 604)	(Btstrp-t)
<b>TOTAL</b>	8 047 118	763 463	765 435	(6 550 758	9 543 477)	(Estim)
				(6 532 607	9 533 056)	(Norm)
				(6 662 363	9 706 738)	(Perc)
				(6 689 593	9 749 542)	(BC)
				(6 535 242	9 588 692)	(Btstrp-t)

## Appendix 6. Average prices per transaction: detailed results

Table 6: Average price per transaction, breakdown in red light districts

	<i>n</i>	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Antwerp</b>	2 446	€ 68.25	€ 1.016	€ 1.018	(€ 66.25 (€ 66.25 (€ 66.35 (€ 66.42 (€ 66.52 (€ 66.33	€ 70.24) € 70.25) € 70.31) € 70.44) € 70.59) € 70.33)	(Estim) (Norm) (Perc) (BC) (BCa) (Btstrp-t)
<b>Brussels 1</b>	342	€ 61.79	€ 1.583	€ 1.575	(€ 58.67 (€ 58.69 (€ 58.81 (€ 58.83 (€ 58.97 (€ 58.79	€ 64.90) € 64.86) € 64.95) € 64.99) € 65.14) € 64.98)	(Estim) (Norm) (Perc) (BC) (BCa) (Btstrp-t)
<b>Brussels 2</b>	129	€ 41.78	€ 1.720	€ 1.729	(€ 38.38 (€ 38.36 (€ 38.57 (€ 38.57 (€ 38.80 (€ 38.47	€ 45.19) € 45.14) € 45.43) € 45.43) € 45.74) € 45.41)	(Estim) (Norm) (Perc) (BC) (BCa) (Btstrp-t)
<b>Ghent</b>	561	€ 63.02	€ 1.739	€ 1.753	(€ 59.61 (€ 59.58 (€ 59.85 (€ 59.94 (€ 60.19 (€ 59.73	€ 66.44) € 66.45) € 66.76) € 67.93) € 67.33) € 66.76)	(Estim) (Norm) (Perc) (BC) (BCa) (Stud)
<b>Ostend</b>	36	€ 81.39	€ 13.376	€ 13.309	(€ 54.23 (€ 55.15 (€ 61.11 (€ 62.50 (€ 64.72 (€ 57.32	€ 108.54) € 107.32) € 111.67) € 115.28) € 129.17) € 117.54)	(Estim) (Norm) (Perc) (BC) (BCa) (Btstrp-t)
<b>Liège/ Seraing</b>	37	€ 60.89	€ 7.600	€ 7.507	(€ 45.48 (€ 46.11 (€ 47.51 (€ 47.70 (€ 48.65 (€ 46.78	€ 76.31) € 75.54) € 76.46) € 76.84) € 78.67) € 77.65)	(Estim) (Norm) (Perc) (BC) (BCa) (Btstrp-t)
<b>Other</b>	45	€ 121.44	€ 12.863	€ 12.742	(€ 95.52 (€ 96.36 (€ 99.22 (€ 100.00 (€ 102.33 (€ 97.88	€ 147.37) € 146.31) € 148.89) € 150.23) € 155.61) € 151.84)	(Estim) (Norm) (Perc) (BC) (BCa) (Btstrp-t)

Table 7: Average price per transaction in heterosexual prostitution segments

	<i>n</i>	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Window prostitution</b>	3 596	€ 66.59	€ 0.803	€ 0.803	(€ 65.01	€ 68.16)	(Estim)
					(€ 65.01	€ 68.16)	(Norm)
					(€ 65.06	€ 68.22)	(Perc)
					(€ 65.09	€ 68.25)	(BC)
					(€ 65.14	€ 68.33)	(BCa)
					(€ 65.06	€ 68.22)	(Btstrp-t)
<b>Street prostitution</b>	42	€ 80.90	€ 8.974	€ 8.909	(€ 62.78	€ 99.03)	(Estim)
					(€ 63.43	€ 98.36)	(Norm)
					(€ 65.74	€ 100.50)	(Perc)
					(€ 66.69	€ 102.47)	(BC)
					(€ 68.10	€ 107.20)	(BCa)
					(€ 64.39	€ 104.29)	(Btstrp-t)
<b>Clubs and private houses</b>	1 399	€ 103.98	€ 1.257	€ 1.234	(€ 101.51	€ 106.45)	(Estim)
					(€ 101.58	€ 106.41)	(Norm)
					(€ 101.58	€ 106.44)	(Perc)
					(€ 101.65	€ 106.50)	(BC)
					(€ 101.68	€ 106.55)	(BCa)
					(€ 101.60	€ 106.45)	(Btstrp-t)
<b>Massage parlours</b>	1 797	€ 97.90	€ 0.968	€ 0.959	(€ 96.00	€ 99.80)	(Estim)
					(€ 96.02	€ 99.78)	(Norm)
					(€ 96.00	€ 99.81)	(Perc)
					(€ 96.01	€ 99.81)	(BC)
					(€ 96.07	€ 99.86)	(BCa)
					(€ 96.06	€ 99.87)	(Btstrp-t)
<b>Escort and private</b>	3 793	€ 148.12	€ 1.529	€ 1.540	(€ 145.12	€ 151.12)	(Estim)
					(€ 145.08	€ 151.12)	(Norm)
					(€ 145.16	€ 151.27)	(Perc)
					(€ 145.16	€ 151.26)	(BC)
					(€ 145.24	€ 151.38)	(BCa)
					(€ 145.15	€ 151.23)	(Btstrp-t)

Table 8: Average price per advertisement and per transaction for female and male sex workers

	<i>n</i>	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Advertisements</b>							
<b><i>FSW</i></b>	201	€ 145.74	€ 3.114	€ 3.106	(€ 139.60	€ 151.88)	(Estim)
					(€ 139.63	€ 151.80)	(Norm)
					(€ 139.60	€ 151.79)	(Perc)
					(€ 139.50	€ 151.69)	(BC)
					(€ 139.55	€ 151.77)	(BCa)
					(€ 139.73	€ 151.95)	(Btstrp-t)
<b><i>MSW</i></b>	213	€ 107.11	€ 3.860	€ 3.910	(€ 99.50	€ 114.72)	(Estim)
					(€ 99.45	€ 114.77)	(Norm)
					(€ 99.93	€ 115.24)	(Perc)
					(€ 100.10	€ 115.42)	(BC)
					(€ 100.54	€ 116.35)	(BCa)
					(€ 99.83	€ 115.42)	(Btstrp-t)
<b>Transactions</b>							
<b><i>FSW</i></b>	10 627	€ 105.96	€ 0.733	€ 0.654	(€ 104.52	€ 107.40)	(Estim)
					(€ 104.67	€ 107.24)	(Norm)
					(€ 104.69	€ 107.27)	(Perc)
					(€ 104.69	€ 107.27)	(BC)
					(€ 104.71	€ 107.29)	(BCa)
					(€ 104.70	€ 107.28)	(Btstrp-t)
<b><i>MSW</i></b>		€ 77.88	€ 3.307	€ 3.331	(€ 71.39	€ 84.36)	(Estim)
					(€ 71.32	€ 84.38)	(Norm)
					(€ 72.73	€ 84.86)	(Perc)
					(€ 71.86	€ 84.98)	(BC)
					(€ 71.51	€ 84.75)	(Btstrp-t)

## Appendix 7. Technical background and detailed results of yearly turnover

In this annex we show how we combine the estimates for transactions per year with the average price, in order to calculate yearly turnover. We calculate the combined estimate for window prostitution districts separately (additionally for scattered windows), then for all segments with female and trans sex workers, and finally for all the segments together, also taking into account the MSW prostitution.

For every window prostitution district  $k$  we estimate the yearly turnover ( $TO_{WI,k}$ ) by

$$\widehat{TO_{WI,k}} = \widehat{N_{WI,k}} \bar{X}_{WI,k}$$

where  $\bar{X}_{WI,k}$  is the mean price for transactions in window prostitution district  $k$ , measured by means of a sample from hookers.nl (see annex 6). Variance is estimated by

$$Var(\widehat{TO_{WI,k}}) = Var(\widehat{N_{WI,k}}) Var(\bar{X}_{WI,k}) + Var(\widehat{N_{WI,k}}) \bar{X}_{WI,k}^2 + \widehat{N_{WI,k}}^2 Var(\bar{X}_{WI,k})$$

The mutual covariances are

$$Cov(\widehat{TO_{WI,j}}, \widehat{TO_{WI,k}}) = Cov(\widehat{N_{WI,j}} \bar{X}_{WI,j}, \widehat{N_{WI,k}} \bar{X}_{WI,k}) \approx Cov(\widehat{N_{WI,j}}, \widehat{N_{WI,k}}) \bar{X}_{WI,j} \bar{X}_{WI,k}$$

Now we can calculate the total yearly turnover for all 7 window prostitution districts (Antwerp, Brussels 1, Brussels 2, Ghent, Ostend, Liège (both in the city centre and in Seraing), “Other”) together

$$\widehat{TO_{RLD}} = \sum_{k=1}^7 \widehat{TO_k}$$

The variance of this sum is the sum of all the variances and covariances.



Table 9 shows the estimates for the yearly turnover for each window prostitution district separately, and for all districts together, as well as their estimated and bootstrap standard errors and their estimated and bootstrap confidence intervals.

Table 9: Estimates of yearly turnover per window prostitution district

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Antwerp</b>	€ 62 469 729	€ 6 095 559	€ 6 099 916	(€ 50 522 653	€ 74 416 804)	(Estim)
				(€ 50 422 011	€ 74 333 242)	(Norm)
				(€ 51 465 110	€ 75 480 668)	(Perc)
				(€ 51 711 116	€ 75 849 202)	(BC)
				(€ 50 616 926	€ 74 684 267)	(Btstrp-t)
<b>Brussels 1</b>	€ 26 163 096	€ 2 698 606	€ 2 693 548	(€ 20 873 925	€ 31 452 267)	(Estim)
				(€ 20 848 691	€ 31 407 205)	(Norm)
				(€ 21 233 045	€ 31 882 160)	(Perc)
				(€ 21 342 686	€ 32 139 867)	(BC)
				(€ 20 944 828	€ 31 626 000)	(Btstrp-t)
<b>Brussels 2</b>	€ 8 181 365	€ 972 163	€ 981 815	(€ 6 275 960	€ 10 086 770)	(Estim)
				(€ 6 230 750	€ 10 079 395)	(Norm)
				(€ 6 436 598	€ 10 320 708)	(Perc)
				(€ 6 485 796	€ 10 372 953)	(BC)
				(€ 6 273 850	€ 10 155 437)	(Btstrp-t)
<b>Ghent</b>	€ 22 801 994	€ 2 488 039	€ 2 508 200	(€ 17 925 527	€ 27 678 461)	(Estim)
				(€ 17 831 924	€ 27 663 888)	(Norm)
				(€ 18 287 858	€ 28 145 867)	(Perc)
				(€ 18 436 935	€ 28 318 013)	(BC)
				(€ 17 957 458	€ 27 856 538)	(Btstrp-t)
<b>Ostend</b>	€ 11 987 047	€ 2 385 106	€ 2 384 433	(€ 7 312 326	€ 16 661 769)	(Estim)
				(€ 7 266 188	€ 16 612 992)	(Norm)
				(€ 8 225 141	€ 17 458 687)	(Perc)
				(€ 8 531 083	€ 18 232 334)	(BC)
				(€ 7 650 729	€ 17 416 668)	(Btstrp-t)
<b>Liège / Seraing</b>	€ 12 832 436	€ 2 256 715	€ 2 252 382	(€ 8 409 357	€ 17 255 515)	(Estim)
				(€ 8 371 241	€ 17 200 416)	(Norm)
				(€ 8 976 579	€ 18 858 495)	(Perc)
				(€ 9 156 360	€ 17 102 574)	(BC)
				(€ 8 528 318	€ 17 543 050)	(Btstrp-t)
<b>Total RLD</b>	€ 144 435 667	€ 13 977 057	€ 14 011 116	(€ 117 041 139	€ 171 830 195)	(Estim)
				(€ 116 672 688	€ 171 595 254)	(Norm)
				(€ 118 812 446	€ 174 281 380)	(Perc)
				(€ 119 520 513	€ 175 030 703)	(BC)
				(€ 117 225 108	€ 172 884 941)	(Btstrp-t)
<b>Rural areas</b>	€ 4 376 642	€ 666 909	€ 663 102	(€ 3 069 524	€ 5 683 760)	(Estim)
				(€ 3 064 944	€ 5 664 257)	(Norm)
				(€ 3 242 546	€ 5 819 543)	(Perc)
				(€ 3 280 517	€ 5 903 270)	(BC)
				(€ 3 145 774	€ 5 769 155)	(Btstrp-t)
<b>All Window Prostitution</b>	€ 148 812 308	€ 14 392 133	€ 14 433 082	(€ 120 604 246	€ 177 020 370)	(Estim)
				(€ 120 210 251	€ 176 786 893)	(Norm)
				(€ 122 412 609	€ 179 547 486)	(Perc)
				(€ 123 108 251	€ 180 429 536)	(BC)
				(€ 120 799 190	€ 178 120 941)	(Btstrp-t)

Secondly, we calculate yearly turnover for the other FSW segments and the total for all FSW segments together. For instance, for street prostitution, the estimated yearly turnover and its variance can be written as

$$\widehat{TO}_{ST} = \widehat{N}_{ST} \bar{X}_{ST}$$

$$Var(\widehat{TO}_{ST}) = Var(\widehat{N}_{ST}) Var(\bar{X}_{ST}) + Var(\widehat{N}_{ST}) \bar{X}_{ST}^2 + \widehat{N}_{ST}^2 Var(\bar{X}_{ST}),$$

and similarly for all other segments.

To calculate the total yearly turnover for all FSW prostitution, we just take the sum of all segments

$$\widehat{TO}_{FSW} = \widehat{TO}_{WI} + \widehat{TO}_{ST} + \widehat{TO}_{CB} + \widehat{TO}_{MA} + \widehat{TO}_{ES}$$

For all segments, the yearly turnover is based on the estimated number of transactions in this segment, multiplied by the average price per transaction in this segment. Since the number of transactions in the other (than windows) segments is based on the number of transactions in the windows segment, the terms in the latter formula are not independent, so the variance of  $\widehat{TO}_{FSW}$  can be calculated as

$$Var(\widehat{TO}_{FSW}) = Var(\widehat{TO}_{WI}) + Var(\widehat{TO}_{ST}) + Var(\widehat{TO}_{CB}) + Var(\widehat{TO}_{MA}) + Var(\widehat{TO}_{ES}) + \text{all covariances}$$

The covariances can be estimated as

$$Cov(\widehat{TO}_{WI}, \widehat{TO}_{CB}) \approx Cov(\widehat{N}_{WI} \bar{X}_{WI}, \widehat{N}_{CB} \bar{X}_{CB}) \approx Cov(\widehat{N}_{WI}, \widehat{N}_{CB}) \bar{X}_{WI} \bar{X}_{CB}$$

$$Cov(\widehat{TO}_{CB}, \widehat{TO}_{MA}) = Cov(\widehat{N}_{CB} \bar{X}_{CB}, \widehat{N}_{MA} \bar{X}_{MA}) \approx Cov(\widehat{N}_{CB}, \widehat{N}_{MA}) \bar{X}_{CB} \bar{X}_{MA}$$

and analogously for all other covariances.

This means that we have to calculate  $Cov(\widehat{N}_{WI}, \widehat{N}_{CB})$  and  $Cov(\widehat{N}_{CB}, \widehat{N}_{MA})$  (among others)

$$Cov(\widehat{N}_{WI}, \widehat{N}_{CB}) = Cov\left(\widehat{N}_{WI}, \left(\frac{\widehat{P}_{CB}}{\widehat{P}_{WI}}\right) \widehat{N}_{WI}\right) \approx Var(\widehat{N}_{WI}) \left(\frac{\widehat{P}_{CB}}{\widehat{P}_{WI}}\right)$$

$$Cov(\widehat{N}_{CB}, \widehat{N}_{MA}) = Cov\left(\left(\frac{\widehat{P}_{CB}}{\widehat{P}_{WI}}\right) \widehat{N}_{WI}, \left(\frac{\widehat{P}_{MA}}{\widehat{P}_{WI}}\right) \widehat{N}_{WI}\right)$$

It can be easily seen that for random variables  $X, Y, A$ , where  $X$  and  $Y$  are independent from  $A$

$$Cov(XA, YA) = Cov(X, Y) E(A^2) + E(X) E(Y) Var(A)$$

Applied to the previous equation (and using that  $E(A^2) = Var(A) + (E(A))^2$ ) gives

$$Cov(\widehat{N}_{CB}, \widehat{N}_{MA}) \approx Cov\left(\frac{\widehat{P}_{CB}}{\widehat{P}_{WI}}, \frac{\widehat{P}_{MA}}{\widehat{P}_{WI}}\right) (Var(\widehat{N}_{WI}) + \widehat{N}_{WI}^2) + \left(\frac{\widehat{P}_{CB}}{\widehat{P}_{WI}}\right) \left(\frac{\widehat{P}_{MA}}{\widehat{P}_{WI}}\right) Var(\widehat{N}_{WI})$$

By using a Taylor expansion about the mean for the fraction  $\frac{\widehat{P}_{CB}}{\widehat{P}_{WI}}$  (and  $\frac{\widehat{P}_{MA}}{\widehat{P}_{WI}}$ ), we can approximate the covariance of  $\widehat{P}_{CB}/\widehat{P}_{WI}$  with  $\widehat{P}_{MA}/\widehat{P}_{WI}$  by

$$Cov\left(\frac{\widehat{P}_{CB}}{\widehat{P}_{WI}}, \frac{\widehat{P}_{MA}}{\widehat{P}_{WI}}\right) \approx \frac{\widehat{P}_{CB} \widehat{P}_{MA}}{\widehat{P}_{WI}^2} \left( \frac{Cov(\widehat{P}_{CB}, \widehat{P}_{MA})}{\widehat{P}_{CB} \widehat{P}_{MA}} - \frac{Cov(\widehat{P}_{CB}, \widehat{P}_{WI})}{\widehat{P}_{CB} \widehat{P}_{WI}} - \frac{Cov(\widehat{P}_{MA}, \widehat{P}_{WI})}{\widehat{P}_{MA} \widehat{P}_{WI}} + \frac{Var(\widehat{P}_{WI})}{\widehat{P}_{WI}^2} \right)$$

Now we have all the elements to calculate the estimates and the standard errors for all the FSW segments separately and their sum.

Finally, we can make the increment for MSW prostitution.

We assumed that the total number of transactions serviced by MSW equalled 5% of those serviced by female sex workers. Again, the yearly turnover in MSW prostitution can be estimated by multiplying the estimated number of transactions in this segment with an estimation of the average price per transaction

$$T\widehat{O}_{MSW} = \widehat{N}_{MSW} \widehat{\mu}_{MSW} = 0.05 \widehat{N}_{FSW} \widehat{\mu}_{MSW}$$

and its variance

$$Var(T\widehat{O}_{MSW}) \approx 0.05^2 \left( Var(\widehat{N}_{FSW}) Var(\widehat{\mu}_{MSW}) + Var(\widehat{N}_{FSW}) \widehat{\mu}_{MSW}^2 + \widehat{N}_{FSW}^2 Var(\widehat{\mu}_{MSW}) \right)$$

Consequently, the total yearly turnover is the sum of the turnover in FSW and MSW prostitution

$$\begin{aligned} \widehat{T\mathcal{O}} &= T\widehat{O}_{FSW} + T\widehat{O}_{MSW} = \widehat{N}_{FSW} \bar{X}_{FSW} + \widehat{N}_{MSW} \widehat{\mu}_{MSW} \\ &= \widehat{N}_{FSW} \bar{X}_{FSW} + 0.05 \widehat{N}_{FSW} \frac{\bar{X}_{B4u}}{\bar{X}_{G4u}} \bar{X}_{FSW} \\ &= \widehat{N}_{FSW} \bar{X}_{FSW} \left( 1 + 0.05 \frac{\bar{X}_{B4u}}{\bar{X}_{G4u}} \right) \\ &= T\widehat{O}_{FSW} \left( 1 + 0.05 \frac{\bar{X}_{B4u}}{\bar{X}_{G4u}} \right) \end{aligned}$$

and thus is its variance

$$\begin{aligned} Var(\widehat{T\mathcal{O}}) &\approx 0.05^2 Var(T\widehat{O}_{FSW}) Var\left(\frac{\bar{X}_{B4u}}{\bar{X}_{G4u}}\right) + Var(T\widehat{O}_{FSW}) \left( 1 + 0.05 \frac{\bar{X}_{B4u}}{\bar{X}_{G4u}} \right)^2 \\ &\quad + 0.05^2 T\widehat{O}_{FSW}^2 Var\left(\frac{\bar{X}_{B4u}}{\bar{X}_{G4u}}\right) \end{aligned}$$

Table 10 presents the estimates for the yearly turnover for each segment separately and for all segments together, as well as their estimated and bootstrap standard errors and their estimated and bootstrap confidence intervals.

Table 10: Estimates of yearly turnover per window prostitution district

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Window prostitution</b>	€ 148 812 308	€ 14 392 133	€ 14 433 082	(€ 120 604 246	€ 177 020 370)	(Estim)
				(€ 120 210 251	€ 176 786 893)	(Norm)
				(€ 122 412 609	€ 179 547 486)	(Perc)
				(€ 123 108 251	€ 180 429 536)	(BC)
				(€ 120 799 190	€ 178 120 941)	(Btstrp-t)
<b>Street prostitution</b>	€ 5 457 653	€ 858 756	€ 853 447	(€ 3 774 523	€ 7 140 784)	(Estim)
				(€ 3 774 290	€ 7 119 740)	(Norm)
				(€ 4 004 254	€ 7 363 171)	(Perc)
				(€ 4 092 194	€ 7 541 538)	(BC)
				(€ 3 860 572	€ 7 295 304)	(Btstrp-t)
<b>Clubs and Private Houses</b>	€ 90 571 976	€ 8 729 923	€ 8 749 417	(€ 73 461 641	€ 107 682 311)	(Estim)
				(€ 73 269 347	€ 107 566 432)	(Norm)
				(€ 74 723 345	€ 109 411 140)	(Perc)
				(€ 75 089 997	€ 109 905 554)	(BC)
				(€ 73 456 463	€ 108 170 617)	(Btstrp-t)
<b>Massage parlours</b>	€ 119 387 110	€ 11 454 417	€ 11 495 607	(€ 96 936 865	€ 141 837 354)	(Estim)
				(€ 96 647 991	€ 141 709 943)	(Norm)
				(€ 98 488 483	€ 144 144 112)	(Perc)
				(€ 98 967 439	€ 144 738 833)	(BC)
				(€ 96 728 349	€ 142 659 253)	(Btstrp-t)
<b>Escort and private</b>	€ 476 262 727	€ 45 575 960	€ 45 723 655	(€ 386 935 488	€ 565 589 966)	(Estim)
				(€ 385 735 792	€ 564 969 226)	(Norm)
				(€ 392 433 955	€ 574 006 740)	(Perc)
				(€ 395 226 703	€ 577 252 602)	(BC)
				(€ 386 734 834	€ 569 162 407)	(Btstrp-t)
<b>ALL FSW</b>	€ 840 491 775	€ 80 311 355	€ 80 277 920	(€ 693 084 411	€ 997 899 138)	(Estim)
				(€ 681 553 120	€ 996 236 786)	(Norm)
				(€ 694 210 110	€ 1 013 736 854)	(Perc)
				(€ 697 449 799	€ 1 018 682 816)	(BC)
				(€ 682 752 827	€ 1 003 283 085)	(Btstrp-t)
<b>MSW</b>	€ 29 841 994	€ 3 104 229	€ 3 130 527	(€ 23 757 816	€ 35 926 172)	(Estim)
				(€ 23 640 501	€ 35 911 941)	(Norm)
				(€ 24 175 936	€ 36 490 758)	(Perc)
				(€ 24 358 291	€ 36 647 659)	(BC)
				(€ 23 834 292	€ 36 143 453)	(Btstrp-t)
<b>TOTAL</b>	€ 870 333 769	€ 83 272 746	€ 83 141 285	(€ 707 122 185	€ 1 033 545 352)	(Estim)
				(€ 705 717 249	€ 1 031 625 098)	(Norm)
				(€ 718 489 245	€ 1 049 584 956)	(Perc)
				(€ 723 074 518	€ 1 055 883 353)	(BC)
				(€ 706 441 614	€ 1 038 505 184)	(Btstrp-t)

## Appendix 8. Technical background and detailed results of yearly turnover corrected for non-resident production

Table 11: Percentage central-European sex workers

	<i>n</i>	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Window prostitution</b>	3 578	52.93%	0.834%	0.841%	(51.30%	54.57%)	(Estim)
					(51.30%	54.60%)	(Norm)
					(51.29%	54.58%)	(Perc)
					(51.29%	54.58%)	(BC)
					(51.29%	54.58%)	(BCa)
					(51.28%	54.58%)	(Stud)
<b>Street prostitution</b>	40	37.50%	7.655%	7.707%	(22.50%	52.50%)	(Estim)
					(22.30%	52.51%)	(Norm)
					(22.50%	52.50%)	(Perc)
					(20.00%	50.00%)	(BC)
					(20.00%	50.00%)	(BCa)
					(22.73%	53.65%)	(Stud)
<b>Clubs and private houses</b>	1 364	22.29%	1.127%	1.134%	(20.08%	24.50%)	(Estim)
					(20.06%	24.50%)	(Norm)
					(20.09%	24.56%)	(Perc)
					(20.01%	24.49%)	(BC)
					(20.01%	24.49%)	(BCa)
					(20.05%	24.53%)	(Stud)
<b>Massage parlours</b>	1 772	12.81%	0.794%	0.797%	(11.25%	14.37%)	(Estim)
					(11.26%	14.38%)	(Norm)
					(11.23%	14.39%)	(Perc)
					(11.17%	14.33%)	(BC)
					(11.23%	14.33%)	(BCa)
					(11.27%	14.44%)	(Stud)
<b>Escort and private</b>	3 725	9.40%	0.478%	0.476%	(8.46%	10.33%)	(Estim)
					(8.47%	10.33%)	(Norm)
					(8.48%	10.34%)	(Perc)
					(8.46%	10.31%)	(BC)
					(8.46%	10.31%)	(BCa)
					(8.48%	10.33%)	(Stud)

We assume that one third of these central-European sex workers are non-residents, so that in each segment  $k$  a fraction  $\widehat{P}_{CE,k}/3$  of the yearly turnover is produced by non-residents. This means that the corrected yearly turnover ( $\widehat{TO}'_k$ ) in each segment  $k$  is

$$\widehat{TO}'_k = (1 - \widehat{P}_{CE,k}/3) \widehat{TO}_k$$

with variance

$$Var(\widehat{TO}'_k) = \frac{1}{9} Var(\widehat{P}_{CE,k}) Var(\widehat{TO}_k) + \frac{1}{9} Var(\widehat{P}_{CE,k}) \widehat{TO}_k^2 + \left(1 - \frac{\widehat{P}_{CE,k}}{3}\right)^2 Var(\widehat{TO}_k)$$

And for the estimated Import

$$\widehat{I}_k = \widehat{P}_{CE,k} \widehat{TO}_k / 3$$

with variance

$$Var(\widehat{I}_k) = \frac{1}{9} Var(\widehat{P}_{CE,k}) Var(\widehat{TO}_k) + \frac{1}{9} Var(\widehat{P}_{CE,k}) \widehat{TO}_k^2 + \frac{1}{9} \widehat{P}_{CE,k}^2 Var(\widehat{TO}_k)$$

To calculate the total import, we just take the sum of all segments

$$\widehat{I} = \widehat{I}_{WI} + \widehat{I}_{ST} + \widehat{I}_{CB} + \widehat{I}_{MA} + \widehat{I}_{ES}$$

The variance can be calculated as

$$Var(\widehat{I}) = Var(\widehat{I}_{WI}) + Var(\widehat{I}_{ST}) + Var(\widehat{I}_{CB}) + Var(\widehat{I}_{MA}) + Var(\widehat{I}_{ES}) + \text{all covariances}$$

$$Cov(\widehat{I}_j, \widehat{I}_k) = Cov\left(\frac{\widehat{P}_{CE,j}}{3} \widehat{TO}_j, \frac{\widehat{P}_{CE,k}}{3} \widehat{TO}_k\right) \approx \frac{1}{9} \widehat{P}_{CE,j} \widehat{P}_{CE,k} Cov(\widehat{TO}_j, \widehat{TO}_k)$$

To calculate the corrected total yearly turnover for all FSW prostitution, we just take the sum of all segments

$$\widehat{TO}'_{FSW} = \widehat{TO}'_{WI} + \widehat{TO}'_{ST} + \widehat{TO}'_{CB} + \widehat{TO}'_{MA} + \widehat{TO}'_{ES}$$

The variance can be calculated as

$$Var(\widehat{TO}'_{FSW}) = Var(\widehat{TO}'_{WI}) + Var(\widehat{TO}'_{ST}) + Var(\widehat{TO}'_{CB}) + Var(\widehat{TO}'_{MA}) + Var(\widehat{TO}'_{ES}) + \text{all covariances}$$

$$\begin{aligned} Cov(\widehat{TO}'_j, \widehat{TO}'_k) &= Cov\left(\left(1 - \frac{\widehat{P}_{CE,j}}{3}\right) \widehat{TO}_j, \left(1 - \frac{\widehat{P}_{CE,k}}{3}\right) \widehat{TO}_k\right) \\ &\approx \left(1 - \frac{\widehat{P}_{CE,j}}{3}\right) \left(1 - \frac{\widehat{P}_{CE,k}}{3}\right) Cov(\widehat{TO}_j, \widehat{TO}_k) \end{aligned}$$

Now the corrected yearly turnover can be calculated. Remark that we assume that there is no production of non-residents in MSW prostitution.

$$\widehat{TO}' = \widehat{TO}'_{FSW} + \widehat{TO}_{MSW}$$

$$Var(\widehat{TO}') = Var(\widehat{TO}'_{FSW}) + Var(\widehat{TO}_{MSW}) + 2 Cov(\widehat{TO}'_{FSW}, \widehat{TO}_{MSW})$$

$$Cov(TO'_{FSW}, TO'_{MSW}) = Cov(TO'_{WI}, TO'_{MSW}) + Cov(TO'_{ST}, TO'_{MSW}) + \dots$$

$$\begin{aligned} Cov(TO'_{WI}, TO'_{MSW}) &= Cov\left(\left(1 - \frac{P_{CE,WI}}{3}\right) TO_{WI}, 0.05 \widehat{N}_{FSW} \widehat{\mu}_{MSW}\right) \\ &\approx Cov\left(\left(1 - \frac{P_{CE,WI}}{3}\right) \widehat{N}_{WI} \bar{X}_{WI}, 0.05 \widehat{N}_{FSW} \widehat{\mu}_{MSW}\right) \\ &\approx 0.05 \widehat{\mu}_{MSW} \bar{X}_{WI} \left(1 - \frac{P_{CE,WI}}{3}\right) Cov(\widehat{N}_{WI}, \widehat{N}_{FSW}) \end{aligned}$$

$$\begin{aligned} Cov(\widehat{N}_{WI}, \widehat{N}_{FSW}) &= Cov(\widehat{N}_{WI}, \widehat{N}_{WI} + \widehat{N}_{ST} + \widehat{N}_{CB} + \widehat{N}_{MA} + \widehat{N}_{ES}) \\ &= Cov(\widehat{N}_{WI}, \widehat{N}_{WI}) + Cov(\widehat{N}_{WI}, \widehat{N}_{ST}) + Cov(\widehat{N}_{WI}, \widehat{N}_{CB}) + Cov(\widehat{N}_{WI}, \widehat{N}_{MA}) + Cov(\widehat{N}_{WI}, \widehat{N}_{ES}) \end{aligned}$$

Table 12 presents the estimates for the corrected yearly turnover for each segment separately and for all segments together, as well as their estimated and bootstrap standard errors and their estimated and bootstrap confidence intervals.



Table 12: Estimates of corrected yearly turnover per segment

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Window prostitution</b>	€ 122 554 575	€ 11 859 953	€ 11 900 784	(€ 99 309 494	€ 145 799 656)	(Estim)
				(€ 98 963 655	€ 145 613 872)	(Norm)
				(€ 100 977 997	€ 148 037 213)	(Perc)
				(€ 101 355 321	€ 148 549 097)	(BC)
				(€ 99 298 351	€ 146 541 117)	(Btstrp-t)
<b>Street prostitution</b>	€ 4 775 447	€ 764 520	€ 757 560	(€ 3 277 015	€ 6 273 879)	(Estim)
				(€ 3 283 375	€ 6 252 956)	(Norm)
				(€ 3 479 383	€ 6 442 001)	(Perc)
				(€ 3 570 809	€ 6 629 113)	(BC)
				(€ 3 364 238	€ 6 406 313)	(Btstrp-t)
<b>Clubs and Private Houses</b>	€ 83 843 266	€ 8 088 590	€ 8 105 564	(€ 67 989 921	€ 99 696 611)	(Estim)
				(€ 67 816 442	€ 99 589 670)	(Norm)
				(€ 69 177 655	€ 101 279 047)	(Perc)
				(€ 69 578 833	€ 101 780 134)	(BC)
				(€ 68 040 778	€ 100 140 946)	(Btstrp-t)
<b>Massage parlours</b>	€ 114 289 127	€ 10 969 892	€ 11 008 016	(€ 92 788 535	€ 135 789 720)	(Estim)
				(€ 92 511 125	€ 135 661 754)	(Norm)
				(€ 94 342 084	€ 138 009 963)	(Perc)
				(€ 94 734 015	€ 138 550 666)	(BC)
				(€ 92 648 654	€ 136 484 236)	(Btstrp-t)
<b>Escort and private</b>	€ 461 346 221	€ 44 155 107	€ 44 290 450	(€ 374 803 801	€ 547 888 720)	(Estim)
				(€ 373 647 936	€ 547 263 754)	(Norm)
				(€ 379 983 540	€ 556 120 963)	(Perc)
				(€ 382 773 666	€ 559 025 666)	(BC)
				(€ 374 593 076	€ 551 368 236)	(Btstrp-t)
<b>ALL FSW</b>	€ 786 808 636	€ 75 171 416	€ 75 160 495	(€ 639 475 368	€ 934 141 905)	(Estim)
				(€ 637 990 185	€ 932 613 911)	(Norm)
				(€ 649 445 616	€ 948 501 982)	(Perc)
				(€ 652 720 053	€ 954 074 988)	(BC)
				(€ 638 868 852	€ 939 452 128)	(Btstrp-t)
<b>MSW</b>	€ 29 841 994	€ 3 104 229	€ 3 130 527	(€ 23 757 816	€ 35 926 172)	(Estim)
				(€ 23 640 501	€ 35 911 941)	(Norm)
				(€ 24 175 936	€ 36 490 758)	(Perc)
				(€ 24 358 291	€ 36 647 659)	(BC)
				(€ 23 834 292	€ 36 143 453)	(Btstrp-t)
<b>TOTAL</b>	€ 816 650 630	€ 78 006 577	€ 78 024 641	(€ 663 760 550	€ 969 540 711)	(Estim)
				(€ 662 152 783	€ 968 003 755)	(Norm)
				(€ 673 960 588	€ 984 493 694)	(Perc)
				(€ 677 753 138	€ 989 935 798)	(BC)
				(€ 663 195 479	€ 974 712 252)	(Btstrp-t)

Table 13: Total production, imports, intermediate consumption and value added

	Estimate	Estimated SE	Bootstrap SE	95% Lower	95% Upper	
<b>Total turnover in Belgium</b>	€ 870 333 769	€ 83 272 746	€ 83 141 285	(€ 707 122 185)	€ 1 033 545 352)	(Estim)
				(€ 705 717 249)	€ 1 031 625 098)	(Norm)
				(€ 718 489 245)	€ 1 049 584 956)	(Perc)
				(€ 723 074 518)	€ 1 055 883 353)	(BC)
				(€ 706 441 614)	€ 1 038 505 184)	(Btstrp-t)
<b>Imports (non-residents)</b>	€ 53 683 138	€ 5 245 423	€ 5 235 023	(€ 43 402 299)	€ 63 963 978)	(Estim)
				(€ 43 332 449)	€ 63 853 360)	(Norm)
				(€ 44 221 859)	€ 64 815 850)	(Perc)
				(€ 44 494 384)	€ 65 142 773)	(BC)
				(€ 43 075 830)	€ 63 346 892)	(Btstrp-t)
<b>Domestic production</b>	€ 816 650 630	€ 78 006 577	€ 78 024 641	(€ 663 760 550)	€ 969 540 711)	(Estim)
				(€ 662 152 783)	€ 968 003 755)	(Norm)
				(€ 673 960 588)	€ 984 493 694)	(Perc)
				(€ 677 753 138)	€ 989 935 798)	(BC)
				(€ 663 195 479)	€ 974 712 252)	(Btstrp-t)
<b>Intermediate consumption</b>	€ 163 330 126	€ 15 601 315	€ 15 604 928	(€ 132 752 110)	€ 193 908 142)	(Estim)
				(€ 132 430 557)	€ 193 600 751)	(Norm)
				(€ 134 792 118)	€ 196 898 739)	(Perc)
				(€ 135 550 628)	€ 197 987 160)	(BC)
				(€ 132 639 096)	€ 194 942 450)	(Btstrp-t)
<b>Value added</b>	€ 653 320 504	€ 62 405 261	€ 62 419 713	(€ 531 008 440)	€ 775 632 569)	(Estim)
				(€ 529 722 226)	€ 774 403 004)	(Norm)
				(€ 539 168 470)	€ 787 594 955)	(Perc)
				(€ 542 202 511)	€ 791 948 639)	(BC)
				(€ 530 556 383)	€ 779 769 801)	(Btstrp-t)

## References

Davison, A.C., and D.V. Hinkley. *Bootstrap Methods and Their Application*, Cambridge University press, Cambridge, 2006.