

## Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1. Median GDP per capita, score of the Smokefree component of the Tobacco Control Scale, unemployment, education, and births by mothers at high risk in NUTS-2 regions of 23 European Union countries, 2004 to 2014.**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Median % of people 25-64 with higher education</b>	22.0 (15.4-26.7)	22.3 (15.4-27.4)	22.9 (16.4-28.1)	23.4 (16.8-29.1)	24.3 (17.6-29.6)	25.4 (18.-30.4)	26.0 (19.2-31.5)	26.5 (19.3-32.2)	27.3 (20.6-33.2)	27.8 (21.6-34.8)	27.5 (21.7-35.1)
<b>Median unemployment (%)</b>	8.0 (5.3-11.0)	7.9 (5.4-10.6)	7.3 (5.4-10.0)	6.5 (4.8-8.9)	6.4 (4.6-8.4)	7.9 (6.0-10.4)	8.5 (6.3-11.6)	8.5 (6.0-12.3)	8.6 (6.4-12.2)	8.9 (6.6-12.8)	8.4 (6.0-11.9)
<b>Median % of all births by mothers aged &lt;18 or ≥40 years</b>	4.0 (3.2-4.9)	4.2 (3.3-5.2)	4.4 (3.2-5.3)	4.5 (3.4-5.3)	4.7 (3.4-5.5)	4.7 (3.5-5.6)	4.8 (3.6-5.5)	4.8 (3.6-5.7)	4.8 (3.8-5.8)	4.6 (3.8-6.2)	4.7 (3.9-6.4)
<b>Median GDP per capita (€) adjusted for inflation</b>	28422 (18156-33595)	28393 (18589-34075)	29482 (18942-35183)	29822 (19484-35830)	28330 (19022-33884)	25982 (18179-31546)	26309 (17723-33158)	25964 (16505-33298)	26116 (16045-32894)	25866 (15481-32365)	26400 (15700-33000)
<b>Median score of the Smokefree component of the Tobacco Control Scale</b>	6 (2-8)	6 (2-8)	6 (2-12)	12 (6-15)	13 (11-17)	13 (11-17)	13 (11-17)	13 (11-17)	13 (11-17)	13 (11-17)	13 (11-18)

**eTable 2. Infant mortality rate (per 1,000 live births) in 23 European Union countries, 2004 to 2014.**

Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Belgium	3.9	3.7	4.0	3.9	3.8	3.5	3.6	3.4	3.8	3.5	3.4
Bulgaria	11.6	10.4	9.7	9.2	8.6	9.0	9.4	8.5	7.8	7.3	7.6
Czech Republic	3.7	3.4	3.3	3.1	2.8	2.9	2.7	2.7	2.6	2.5	2.4
Denmark	4.4	4.4	3.5	4.0	4.0	3.1	3.4	3.5	3.4	3.5	4.0
Estonia	6.4	5.4	4.4	5.0	5.0	3.6	3.3	2.5	3.6	2.1	2.7
Finland	3.3	3.0	2.8	2.7	2.6	2.6	2.3	2.4	2.4	1.8	2.2
France	4.0	3.8	3.8	3.8	3.8	3.9	3.6	3.5	3.5	3.5	3.5
Germany	4.1	3.9	3.8	3.9	3.5	3.5	3.4	3.6	3.3	3.3	3.2
Greece	4.1	3.8	3.7	3.5	2.7	3.1	3.8	3.4	2.9	3.7	3.8
Hungary	6.6	6.2	5.7	5.9	5.6	5.1	5.3	4.9	4.9	5.0	4.5
Ireland	4.6	3.8	3.9	3.2	3.4	3.3	3.6	3.5	3.5	3.5	3.3
Italy	3.4	3.3	3.2	3.1	3.1	3.2	3.0	2.9	2.9	2.9	2.8
Latvia	9.3	7.7	7.4	8.5	6.6	7.6	5.6	6.6	6.3	4.4	3.8
Lithuania	8.1	7.1	7.2	6.3	5.5	5.6	5.0	4.8	3.9	3.7	3.9
Netherlands	4.4	4.9	4.4	4.1	3.8	3.8	3.8	3.6	3.7	3.8	3.6
Poland	6.8	6.4	6.0	6.0	5.6	5.6	5.0	4.7	4.6	4.6	4.2
Portugal	3.8	3.5	3.3	3.4	3.3	3.6	2.5	3.1	3.4	2.9	2.9
Romania	16.8	15.0	13.9	12.0	11.0	10.1	9.8	9.4	9.0	9.2	8.4
Slovakia	6.8	7.2	6.6	6.1	5.9	5.7	5.7	4.9	5.8	5.5	5.8
Slovenia	3.7	4.1	3.4	2.8	2.4	2.4	2.5	2.9	1.6	2.9	1.8
Spain	3.9	3.7	3.5	3.4	3.3	3.2	3.2	3.1	3.1	2.7	2.8
Sweden	3.1	2.4	2.8	2.5	2.5	2.5	2.5	2.1	2.6	2.7	2.2
United Kingdom	5	5.1	4.9	4.7	4.6	4.5	4.2	4.2	4	3.9	3.9

**eTable 3. Minimum cigarette prices per pack in 23 European Union countries, 2004 to 2014.**

Country	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014
Belgium	3.8	3.6	n/a	3.8	4.1	4.0	4.2	4.0	4.9	4.8
Bulgaria	0.4	1.2	1.0	1.0	1.1	1.1	1.3	1.2	2.1	2.1
Czech Republic	1.1	1.3	1.0	2.1	2.1	2.4	2.6	2.5	2.3	2.4
Denmark	3.7	3.8	3.1	3.6	3.4	3.8	4.2	4.1	4.9	5.0
Estonia	1.2	1.3	1.3	1.0	1.9	1.9	2.0	2.1	2.3	2.6
Finland	3.8	3.7	3.7	3.6	3.6	4.1	4.0	4.1	4.4	4.8
France	5.3	5.0	5.0	5.2	5.2	5.0	5.6	5.5	6.5	6.5
Germany	1.7	1.7	3.8	4.1	3.7	4.2	4.1	4.0	4.2	4.3
Greece	1.2	1.7	1.9	1.9	2.0	2.0	2.4	2.2	3.0	3.3
Hungary	2.1	1.7	1.9	1.9	1.8	2.0	1.6	1.9	2.7	2.6
Ireland	6.3	6.4	6.2	6.3	7.3	8.1	8.0	7.8	8.1	8.3
Italy	3.0	3.3	3.8	3.8	3.9	3.9	4.0	4.1	4.0	4.0
Latvia	0.8	0.6	0.5	0.7	1.4	1.9	2.0	2.1	2.3	2.5
Lithuania	1.0	1.0	0.8	0.9	1.1	1.5	1.9	1.9	2.1	2.2
Netherlands	2.9	3.4	3.6	3.5	3.8	3.4	4.1	3.4	4.4	5.5
Poland	0.9	1.2	1.1	1.5	1.1	2.0	1.7	2.1	2.0	2.3
Portugal	2.3	2.5	2.9	2.8	3.2	3.3	3.2	3.5	3.3	3.6
Romania	0.4	1.1	1.5	1.6	1.6	2.4	2.2	2.5	2.6	2.6
Slovakia	1.1	n/a	1.8	1.9	1.9	2.0	2.4	2.3	2.6	2.7
Slovenia	n/a	1.5	2.1	2.0	2.0	2.3	2.5	2.6	3.1	3.2
Spain	2.2	1.7	2.5	2.2	2.2	2.4	2.6	3.5	4.2	4.0
Sweden	3.7	3.8	4.3	3.8	3.7	4.1	4.3	5.0	4.9	5.2
United Kingdom	6.1	7.2	7.8	5.6	5.3	5.3	5.8	5.6	7.9	7.9

Prices shown in Euros and adjusted for inflation  
n/a: not available

**eTable 4. Median cigarette prices per pack in 23 European Union countries, 2004 to 2014.**

Country	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014
Belgium	4.4	4.3	n/a	4.7	4.8	4.8	5.2	4.7	5.0	5.2
Bulgaria	0.9	1.6	1.5	1.3	1.4	1.4	2.0	2.3	2.3	2.4
Czech Republic	1.9	2.0	2.1	2.5	2.6	2.8	3.0	2.8	2.8	2.8
Denmark	4.7	4.8	4.7	4.5	4.8	5.3	5.1	5.2	5.7	5.5
Estonia	1.6	1.9	1.6	1.5	2.2	2.5	2.5	2.6	3.0	3.1
Finland	4.4	4.2	4.4	4.4	4.5	5.1	4.8	4.6	4.8	5.2
France	5.5	5.3	5.2	5.7	5.3	5.4	5.6	5.7	6.5	6.5
Germany	4.2	5.0	5.1	5.0	4.9	5.2	5.0	5.1	5.2	5.3
Greece	2.7	2.7	3.2	3.2	3.2	2.8	3.7	3.9	3.5	3.7
Hungary	2.7	2.6	2.6	2.5	2.4	2.7	2.3	2.3	3.3	3.3
Ireland	7.1	6.9	7.3	7.4	8.3	8.8	8.8	9.2	9.4	10.0
Italy	3.7	4.0	3.8	4.0	4.2	4.1	4.1	4.6	4.3	4.6
Latvia	1.3	1.2	1.2	2.1	2.0	2.3	2.3	2.6	2.7	2.9
Lithuania	1.5	1.5	1.1	1.4	1.5	2.4	2.4	2.3	2.4	2.5
Netherlands	4.4	4.6	4.5	4.4	4.6	5.1	5.0	4.6	5.9	5.9
Poland	1.4	1.8	1.8	2.1	2.0	2.4	2.4	2.6	2.8	3.1
Portugal	2.5	2.9	3.1	3.2	3.6	3.7	3.7	3.8	4.0	4.1
Romania	1.2	1.5	1.9	1.9	2.0	2.7	2.8	3.0	3.0	3.2
Slovakia	1.6	n/a	2.2	2.5	2.6	3.0	2.7	2.8	2.9	3.1
Slovenia	n/a	2.3	2.5	2.4	2.4	2.6	2.7	2.9	3.2	3.4
Spain	2.7	2.4	2.7	2.7	2.7	3.2	3.9	3.9	4.4	4.5
Sweden	4.9	4.9	5.3	5.1	4.5	5.2	5.7	6.0	6.7	6.5
United Kingdom	8.1	8.6	9.1	7.9	6.8	7.9	8.0	8.4	9.3	9.7

Prices shown in Euros and adjusted for inflation  
n/a: not available

**eTable 5. Price differential between median and minimum cigarette prices (% of median price) in 23 European Union countries, 2004 to 2014.**

Country	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014
Belgium	13.5	17.1	n/a	18.9	13.7	15.4	18.3	15.9	3.3	7.7
Bulgaria	54.2	26.1	35.6	26.1	23.1	23.1	35.9	50.0	8.7	12.8
Czech Republic	41.8	34.7	50.0	15.8	21.9	13.8	13.0	11.8	20.2	14.1
Denmark	22.0	21.0	34.1	21.0	28.8	27.0	18.9	21.1	13.1	9.8
Estonia	24.1	33.5	18.4	31.7	16.7	23.5	21.9	19.6	23.3	16.1
Finland	12.1	10.2	14.9	20.0	20.2	18.2	16.6	9.3	9.3	7.9
France	5.0	6.4	4.3	9.4	2.0	7.6	0.1	3.6	0.5	0.5
Germany	58.4	66.3	26.5	17.9	25.2	20.0	18.2	21.9	18.4	19.0
Greece	53.7	34.8	39.3	40.0	38.3	25.9	35.1	42.5	14.3	10.8
Hungary	19.8	35.7	29.0	25.5	25.5	26.2	30.7	15.6	18.1	21.8
Ireland	10.5	7.0	14.6	15.0	11.9	8.3	9.4	14.8	13.8	16.8
Italy	16.7	17.6	0.0	5.6	5.3	5.3	2.6	11.1	7.0	13.0
Latvia	36.5	51.7	55.4	68.9	29.2	20.1	14.0	18.0	15.8	14.0
Lithuania	34.3	33.3	29.7	36.3	25.2	37.1	20.6	17.5	12.9	11.6
Netherlands	33.3	25.0	21.1	21.1	18.1	32.3	17.4	26.4	26.1	7.2
Poland	34.0	32.7	35.6	30.5	43.7	14.5	29.3	18.5	31.1	25.4
Portugal	7.1	11.8	8.0	13.3	10.6	11.4	12.5	9.2	17.5	12.2
Romania	65.5	25.9	19.6	15.4	20.0	10.1	19.6	13.9	13.1	17.1
Slovakia	30.2	n/a	19.2	25.0	26.3	34.2	10.9	15.4	11.8	11.6
Slovenia	n/a	32.6	14.1	15.9	15.9	10.4	7.7	10.7	3.1	5.9
Spain	18.6	28.4	8.3	20.0	18.0	26.7	33.9	9.1	5.6	12.7
Sweden	23.4	22.0	18.2	24.7	17.6	21.7	24.0	16.3	26.9	19.6
United Kingdom	25.0	16.1	14.3	29.2	22.2	32.7	27.7	33.7	15.4	18.6

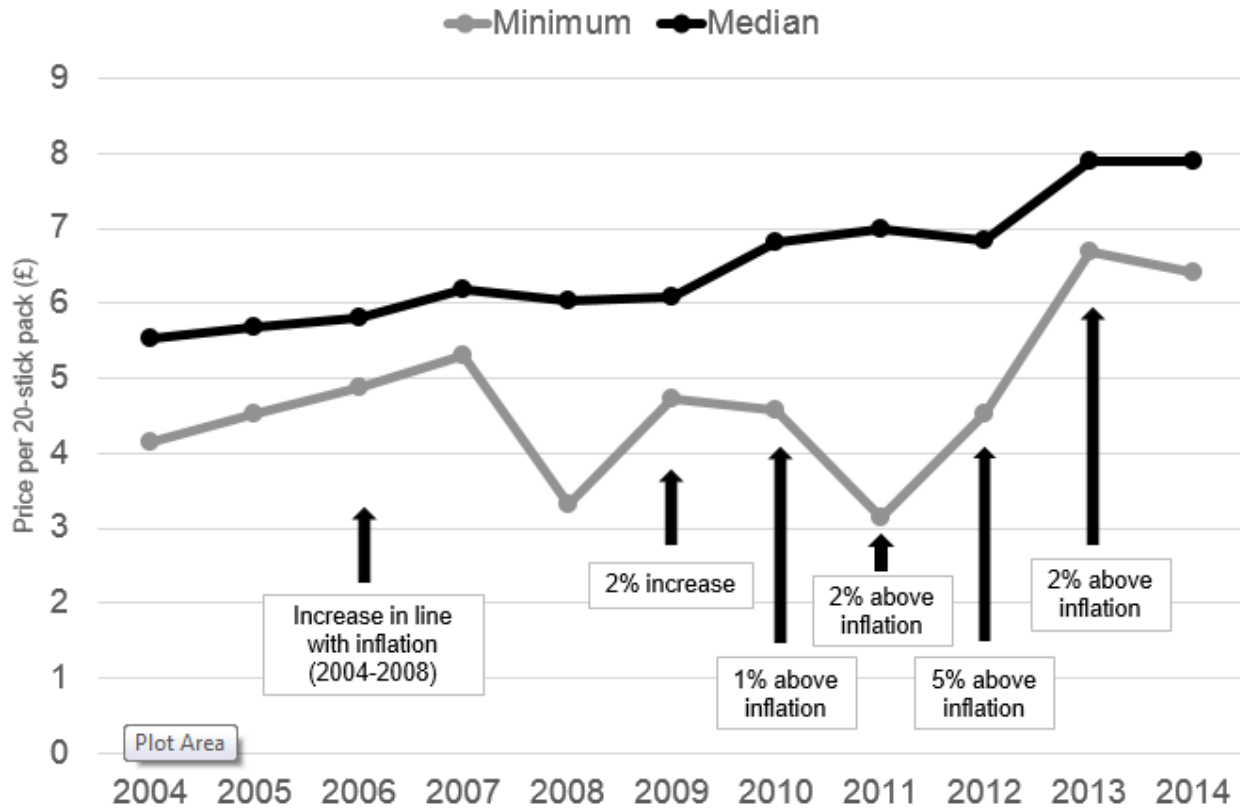
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**eTable 6. Sensitivity analysis: association of infant mortality (infant deaths per 1,000 live births) with median cigarette price and price differential between median and minimum cigarette price, in 23 European Union countries (950 region-years).**

	$\beta$	95% CI
Median cigarette price (per pack)		
Within year	<b>-0.41</b>	<b>-0.72 to -0.10</b>
One year lagged	-0.06	-0.37 to 0.24
Price differential between median and minimum cigarette price (per 10% increase)		
Within year	0.01	-0.06 to 0.09
One year lagged	<b>0.16</b>	<b>0.05 to 0.26</b>
GDP per capita (per €1,000)	0.06	0.00 to 0.11
Comprehensive Smoke-free component of the legislation (Tobacco Control Scale (per point increase smoke-free score $\geq 18$ ))	0.23	-0.11 to 0.58
Unemployment (per 10%)	-0.01	-0.25 to 0.22
Education (per % of people 25-64 with higher education)	-0.02	-0.08 to 0.04
Births by mothers at higher risk (% of all births by mothers aged <18 or $\geq 40$ years)	<b>0.30</b>	<b>0.13 to 0.47</b>
Time (per calendar year)		
Linear term	<b>-0.38</b>	<b>-0.55 to -0.21</b>
Quadratic term	<b>0.02</b>	<b>0.01 to 0.03</b>

Only data from years for which original (i.e. non-interpolated) TCS scores were available were used: 2005, 2007, 2010 and 2013.

eFigure 1. Tax increases, minimum and median cigarette prices in the United Kingdom, 2004-2014.



Prices are adjusted for inflation.



eFigure 2. Potential causal pathways between tobacco prices and infant mortality.

