Update to HMRC Working Paper Number 9: Econometric Analysis of Cigarette Consumption in the UK

1.   In line with best practice, HM Revenue & Customs regularly reviews the assumptions used in its models.

2.   In line with this policy HMRC has recently refreshed its long run cigarette elasticity. In doing so it has applied the methodology from 'Econometric Analysis of Cigarette Consumption in the UK, Czubek and Johal (2010)' to more recent data, covering the period ranging from Quarter 1 of 1991 to Quarter 3 of 2014.

3.   The table in Annex A shows the results from Czubek and Johal (2010), and the 2015 updated results for the preferred long run regression (Model 2a):

4.   As with Czubek and Johal (2010), the elasticity is assessed at the sample average.

5.   Using this methodology, we obtain an elasticity estimate of **-1.19**, with the edges of the 95% confidence interval being -1.07 and -1.30. This is significantly higher than the previous estimate, which stood at -1.05.

Annex A: Results

	Log quantity of cigarettes (2010)	Log quantity of cigarettes (2015)
Price of cigarettes	-0.058	-4.261
	(0.005)	(0.210)
Price of HRT	0.001	-1.227
	(0.000)	(0.465)
Household expenditure	0.000	-0.00008
	(0.000)	(0.00006)
Sterling-Euro exchange rate	0.142	-0.021
	(0.059)	(0.025)
Time trend	-0.004	-0.012
	(0.001)	(0.0005)
Smoking ban	-0.070	-0.060
	(0.013)	(0.013)
Quarter 1	0.009	0.003
	(0.011)	(0.007)
Quarter 2	0.022	-0.006
	(0.009)	(0.007)
Quarter 3	0.014	0.003
	(0.007)	(0.006)
Single market	0.049	-0.037
	(0.011)	(0.011)
Constant	6.644	12.49
	(0.115)	(0.128)
Observations	101	95