Appendix 1

Table: Experimental studies of norms in public administration

Study	Substantive Area	Outcome	Treatment details	Mode of delivery	Sample size and characteristics	Sample characteristics	Effect size And duration	Sub-groups
1. Cabinet Office (2013)	Health; prompted choice	Organ donor registrations	Control + 7 arms. T1: info on large no of people joined the register; T2: descriptive norm + picture (group of people); T3: descriptive norm + logo7	Online at end of online vehicle tax renewal or driving licence registration	1,085,322 (135,000 in each arm)	Car owners in the UK	T1: 2.3%>2.9%=0.6% T2: 2.3>2.2%=0.1% T3: 2.3>2.9%=0.6% No dynamic effects reported Cohen's d =0.04	None reported
2. Sanders et al (2014) Stoptober	Health	Registrations for UK-wide stop smoking campaign	24 arms with nudge + message: "Last Stoptober over 160,000 people stopped smoking for 28 days"	Website	345,469	Visitors to the stoptober.com (anti-smoking campaign) website.	5.9% No dynamic effects reported Cohen's d = 0.16	None reported
3. Hallsworth et al (2015) Missed hospital appointments (DNAs)	Health	Hospital outpatient appointments: 1) Did Not Attend (DNA) rates 2) rates of attendance and cancellation	Four treatment groups. T1: social norm: "We are expecting you at [hospital] on [date] at [time]. 9 out of 10 people attend."	SMS reminders	10, 137 (5 sites)	UK London Adults with outpatient appointments in cardiology, rheumatology, ophthalmology, neurology, or gastroenterology	Social norms – no significant effect on DNA, but increase cancellations: 1.8% No dynamic effects reported Cohen's d = 0.037 (not significant)	Subgroup analysis done by specialty (five total specialties). No effect for social norm
4. Coleman (1996)	Taxation	Reported income, and amount of taxes	T1: 20,00: social norm treatment "93 per cent of taxpayers"+ four other treatment groups + control.	Letters	47,000 (20,000 for T1)	Taxpayers in Minnesota	T1: Reported income increase by $850, $48 more tax paid	No subgroup effects

5. Cabinet Office (2012)	Taxation	Payment	'9 out of 10 people in Britain pay their tax on time' T1: National, T2: In your postcode T3: In your town	Letters	140,000	UK tax payers on self-assessment	T1: 72.5%, T2: 79.0%, T3: 83.0% No dynamic effects Cohen's d T2= 0.147; Cohen's d T3=0.238	None reported
6. BIT (2012)	Taxation	Tax paid	Control + 2 treatment groups (one social norm). T1: Norm +honesty: "97% of doctors have filed all their tax returns for the last four years"	Letters	3,000	Doctors owing tax in 2011	No impact of T1 No dynamic effects reported Cohen's d = -0.006 (not significant)	None reported
7. Del Carpio (2013)	Taxation	Property tax payments	T1: average rate of compliance, T2: the average level of municipal enforcement, or T3: both.	Letters	22,318	Randomly chosen residents in two municipalities in the Lima province, Peru	T1: 20%; T2: no effect; T3: no effect	Greater impact on those who had already paid
8. Hallsworth et al (2014) study 1	Taxation	Payment in £	3 norm-based messages and two public goods.T1: "9 out of 10 people pay their tax on time" (basic norm; T2: country norm; T3: minority norm.	Letters	101,471	UK tax payers on self-assessment who have not settled their accounts by due date	T1: Norm 1.3% (Cohen's d = 0.05); T2: 2.1% Cohen's d = 0.75) T3: 4.9% above the control (Cohen's d = 0.18) No Dynamic effects reported	No impact for age, gender, and size of debt variables (Some evidence of size of debt reduced social norm effect)
9. Hallworth et al (2014) study 2	Taxation	Payment in £	T1:"The great majority of people in the UK pay their tax on time".T2: "..local area"; T3: "..Most people"; T4: "The great majority of people in your local area";T5: "Nine out of ten people."	Letters	119,527 (8,538 per group)	UK tax payers on self-assessment who have not settled their accounts by due date	T1: increase of 1.4%; T2: 2.2%; T3: 3.0%, T4: 4.2% The local and debt descriptive norm together have a 5.0% effect	None reported
10. Besley et al (2014)	Taxation	Local tax evasion per council	Natural experiment using areas of high non-payment	Indirectly estimated	From 1980-2009 in the 342 councils	English and Welsh council areas	3.5%	None reported

11. Blume and John (2014)	Taxation	Payment on local tax	T1: simplification; T2: social norm "nine of ten people"; T3: simplification+social norm	Letters	7,951	Households in three wards in Lambeth, London UK	No impact of social norm	High income groups more likely to respond to social norm
12. Kettle et al (2015)	Taxation	Tax declarations & payments	T1: Control, no letter; T2: Original Tax Authority letter, T3: Simplified, call-to-action, persuasive deterrent message; T4: T3 + social norm message; T5: T3 + deliberate choice message; T6: T3 + national pride message	Letters	43, 389	Guatemala taxpayers (individuals and firms) who had failed to declare annual income tax	T2: Declaration 3.6%, Payment no effect T3: Declaration 4.3%, Payment no effect T4: Declaration 4.8%, Payment 1.7% T5: Declaration 5.5%, Payment 1.5% T6: Declaration 3.8%, Payment 1.1%	Central and Western regions more likely to respond to social norm; Businesses are more likely to respond to social norm.
13.Croson and Shang (2008)	Charitable giving	Donations	Phone. Between subjects: "We had another member like you and they contributed at x". T1: less; T2: same: T3 above contribution	On air/Phone, Letters	225 and 2,883	Donors to a public radio, US	T1: -$22.4, T2+$5.45; T3:+$12.08	None reported
14. Sanders & Smith (2014)	Charitable giving	Donation in a legacy	Three treatment groups (plain ask as baseline) Norm: "many of our customers like to leave money to charity in their will"	Telephone: asked by a will writer	3,000 (1,000 in each group)	People making a will with Co-Operative Legal Services	10.8%>15.4% (Cohen's d=0.22)	None reported
15. Sanders (2017)	Charitable giving	Contributions	Half recipients of e-mails were told that "7.5% of your colleagues have already donated".	E-mail	5,733	Employees of a bank	No significant effects	Lowest and highest ranked increased giving

16. Cialdini et al (1990) Study 1	Environment, littering	Whether respondent littered handbill on windscreen	Handbill dropped or walked by amid other litter or no litter (descriptive norm)	Administered face-to-face	139	Car owners in US	41% vs. 11% in littered versus non-littered environment, Strong effect for salience	None reported
17. Cialdini et al (1990) Study 2	Environment, littering	0,1,2,4,8 or 16 handbills littered	Handbill given to respondent	Administered face to face	358	Visitors to a SW US amusement facility	No significant differences, except for first and second pieces (10 to 20 per cent)	Greater impact for men
18. Cialdini et al (1990) Study 3	Environment, littering	Littering with fliers	A public service flier in mailboxes	Flier	484	College Dorm students	T1: 26.7% vs. 10.7 T2: 3.6 (one litter) % vs. 10.7%	None reported
19. Cialdini et al (1990) Study 4	Environment, littering	Whether respondent littered handbill on windscreen	T1: Littered; litter swept up; T2: high norm litter dropped near pile	Face to face in parking lot	127	Visitors to a university-affiliated hospital	T1: 33% vs. 45% T2: 29% vs. 18% for injunctive norm	None reported
20. Cialdini et al (1990) Study 5	Environment, littering	Littering of the handbill	5 messages conveying norms of littering	Face to face in parking lot	133 females, 126 males	Patrons of A municipal Public library branch	Antilittering norm 10% and the control message 25%	None reported
21. Keizer et al (2008) Study 1	Environment, littering	Littering in alley	T1: Clean walls; T2: graffiti on walls; injunctive and descriptive norms	On walls	154	Cyclists using an alley in Groningen with flyer	T1: 33% vs. T2: 69%	None reported
22. Keizer et al (2008) Study 2	Environment, use of public space	Stepping though gap in fence	T1: bicycles not attached to fence: T2 attached	On a fence near a carpark	44+49=93	Users of a local carpark with illegal entrance	T1: 27% vs. T2: 82%	None reported
23. Keizer et al (2008) Study 3	Environment, littering	Littering a flyer	T1: no shopping carts left: T2: shopping carts	Shopping carts	60+60=120	A private Garage lot near a supermarket	T1: 30% vs. 58%	None reported

24. Keizer et al (2008) Study 4	Environment, littering	Littering a flyer	T1: no fireworks; T2: fireworks let off	Flyer on bikes	50+46=96	A bicycle shed	T1: 52% vs. 80%	None reported
25. Keizer et al (2008) Study 5&6	Environment, theft	Picking up a % Euro note	T1: no graffiti; T2: graffiti; T3: T3: litter only	On area near letterbox	71+60+72	A mailbox with a hanging note and passers by	T1: 13%; T2: 27%; T3: 25%	None reported
26. Schultz et al (1999)	Environment, recycling	Frequency of kerbside recycling	Five groups + Control. T3:plea plus neighbourhood feedback	Door hangers	605	Households in La Verne, California, US	T3:0.49 vs. 0.58%	Top 1/3 of recyclers decreased
27. Nomura et al (2011)	Environment, recycling	Frequency of food waste recycling	Both descriptive and injunctive norms. Streets in treatment received positive and negative feedback, measured at two periods	Postcard	318 (9082 households)	Streets in Oldham, UK	2.8% Sustained in time (2.9% in period 2)	Treatment more effective for households on smaller streets
28. de Groot et al (2013)	Environment, recycling	Numbers of free bags used	T1: injunctive social norms, T2: personal norms, and T3 combined injunctive and personal norms salient	Signs placed in the supermarket	200	Customers in a Bournemouth supermarket who did not have a plastic bag at the till	T1: mean 2.04 v. control 3.02 T2: 2.44 T3: 1.86	None reported
29. Fellner et al (2013)	Licencing	TV licence de-registered, contract updates	T3: social information: "..94% –a vast majority of all households – have registered their broadcasting receivers", T4: Soc info + threat	Letters	50,498	TV licence evaders in Austria	T3: No impact on registration, but impact on contracts=023; T4: on overall response, of 1.5%	T3: impact greater with municipalities with high evasion rate

30. Schultz et al (2007)	Energy consumption	Household energy (consumption diary)	T1 Descriptive norm only + T2 descriptive plus injunctive information + consumption: above + consumption below baseline	Door hangers	290 households	Households in San Marcos, CA,	T1: above average= mean 20.25 vs. 21.47 kWh; below av=11.27 vs. 10.38; T2: above average=as T1; below av: no effect (removes boomerang) Long term: sustained results	None reported
31. Nolan et al (2007)	Energy	Electricity usage (Average Daily Kilowatt Hours (kWh))	T1: information only; T2 descriptive norm: "99% of people in your community reported turning off unnecessary lights". 3 other groups	Letters	371	Households in the middle-class neighbourhoods of San Marcos, California	T1: 14.42 v T2: 12.97, long term 17.36 vs 16.10	None reported
32. Ayers et al (2009)	Energy	Electricity and gas usage	T1: received energy reports	Letters	85,000 (35,000 in T1)	Customers in Sacramento ,US	T1: 2.5% reduction (depends on time period)	Higher effects in high consuming households
33. Costa and Kahn (2010)	Energy	Electricity consumption	T1: Feedback on consumption: households received either a monthly or quarterly report.	Letters	35,000	Randomly selected households in California	T1: 0.021%	2.4% reduction for liberals, 1.7 for conservatives
34. Allcott (2011)	Energy	Electricity consumption	T1: energy report with comparison + injunctive norm	Letters	600,000	States across US	T1: 2.7 percentage points Increase over time	High energy users reduced 6.3%
35. Dolan and Metcalfe (2013) study 1	Energy	Gas consumption	T1. Plain energy statement: T2: Plain energy statement + Norms; T3: Plain energy statement + Norms + Info Varied according to high or low with smiley face	Letters	569	Households in newly refurbished homes owned by Camden Council.	7% for norms only (over six months) No differences above and below the norm	More wealthy households are less responsive to the norms; no effect for age; males less

36. Dolan and Metcalfe (2013) study 2	Energy	Electricity consumption	4 groups, each with 2 treatment groups: T1: online social norm; T2: offline social norm; T3: 'High-end user' + social norm; T4: £100 reward + social norm; T5: £10 reward + social norm	Letters + online	Subgroups: 676 + 608 + 539 +319	Utility customers in the UK	T1: no effect; T2: 5.73%; T3: no effect; T4; no effect; T4% T5: no effect> social norm removes effect of low incentives	None reported
37. Ferraro et al (2013).	Environment	Water consumption	T2 an appeal to pro-social preferences (weak norm), T3: a group that received technical advice and an appeal to pro-social preferences augmented with a social comparison	Letters	106,872 households. T2: 11,695; T3:	Water company customers in Cobb County, Georgia, US	T2: 2.25% reduction; T3: 5.6%; Treatment effects diminish over three months T3:5.6>3.6	Stronger effects on high-using group + decay
38. Gerber and Rodgers (2009)	Voter turnout	Likelihood of Voting	T1: High norm: In the last federal election the vast majority of eligible citizens voted. T2: Low norm: Voter turnout in California has been declining for decades.	Telephone	3,700	Newly registered voters, in New Jersey 2005 California 2006	5% difference between high and low social norm	Boost in turnout for low frequency voters
39. Matland and Murray (2014)	Voting	Voter turnout	2 x 3 x 2 design: descriptive norms T2: low turnout; T3: high turnout	Letters	13x400	Voters in Wisconsin and Lubbock County, Texas. During 2010 governor elections	Wisconsin: T2: no effect; T3: 3.3% difference Lubbock: T2: 1.8%; T3: 1.8% n/s	Greater for regular voters
40. Castro & Scartascini (2013)	Taxation	Total tax liabilities paid in full	Control (no message) + 3 arms T1: Deterrence, T2: Reciprocity, T3: Peer-effects	Tax bill message	22,5,000	Taxpayers of the CVP in Junin excluding those who pay their dues annually	T1: 4.7% T2: no effect; T3: no effect for whose who had not complied before and negative for those who had.	None reported

41. Castro & Scartascini (2015)	Taxation	Total tax liabilities paid in full	Control (no message) + 3 arms T1: Deterrence , T2: Reciprocity, T3: Peer-effects	Tax bill message and image	23,176	Junin residents	T1: 5 pp T2: no effect T3: no effect	None reported
42. Hallsworth et al (2017) ***Experiment 1***	Taxation	Payment rates	Control (letter with standard information) + 5 arms T1: basic norm , T2: country norm , T3: minority norm, T4: gain-framed public services , T5: loss-framed public services	Letters	101,471	Taxpayers who had not made the correct payment	Jointly, increase payments by 2.2pp. T3 statistically significant at 70 days.	None reported
43.Hallsworth et al (2017) ***Experiment 2***	Taxation	Payment rates	Control (letter with standard information) + 13 arms T1: general descriptive country norm, T2: Local descriptive norm, T3: Debt descriptive norm, T4: Local and debt describe norm, T5: Minority status T6: Minority descriptive norm, T7: moral duty, T8:general, injunctive norm, T9: fraction, injunctive norm, T10: percentage injunctive norm, T11: Injunctive and descriptive norm, T12: additional information, T13: interest	Letters	11,9527	Taxpayers who had not made the correct payment	Jointly, increase payments by 2.9pp. Effect is largest for those without a recent debt (had not receive a reminder letter in the past). The majority of the messages remain statistically significant at 70 days.	
44. Silva and John (2017)	Tuition fees payment rates	Payment by 14 days	Control (reminder email) + 1 arm T1: Descriptive norm	Reminder email	4298	late paying students	No effect	None

45.Perez-Truglia & Cruces (2015)	Political campaign contributions	Individual campaign contributions	Control (no letter) + 2 arm T1: List letter (amount given from the 9 contributors nearest to the recipient's location), T2: 'placebo' letter	Letters	92,000	contributors	For each $100 increase in the average amount contributed to the recipient's own party there is a statistically significant increase in the recipient's own contributions of about $2.95	
46. Reese et al (2014)	Pro-environmental behaviour	Average number of towels used per person per day	Control (message on the importance of environmental protection) + 2 arms T1:general descriptive norm, T2: local descriptive norm	Message printed on signs placed in room	131	hotel guests	No effect	
47.Bohner & Schluter (2014)	Pro-environmental behaviour	% towel reuse rates	Control (message on the importance of environmental protection) + 2 arms T1: general descriptive norms, T2: local descriptive norms	Sticker attached to the bathroom mirror	724	guests	T1 no effect T2: 5.9% reduction	
48. Shultz et al (2015)	Electricity consumption	Electricity consumption	Control (informational video) + 3 arms T1: Feedback only, T2: Cost+feedback, T3: Norms+feedback	Real-time household electricity consumption feedback	431	households	T1: no effect T2: no effect T3: 7% reduction 3-month follow up	
49. Shultz et al (2016)	Water conservation	1 week of water usage	Control (information only) + two arms T1: Descriptive norms, T2: Descriptive + injunctive norms	Letters or online website	301	Households	T1: 26% reduction T2: 16% reduction Effect moderated by baseline water consumption and personal norms	

50.Hallsworth et al (2016)	Antibiotics prescription	Rate of antibiotic items dispensed per 1000 population	Control (no communication) + 1 arm T1: Local norm feedback intervention	Letter from chief medical officer	1581	GP practices whose prescribing rate for antibiotics was in the top 20% for their National Health Service (NHS)	T1: 126·98 Control group: 131·25 An estimated 73 406 fewer antibiotic items dispensed	
51.Meeker et al (2016)	Antibiotics prescription	Antibiotic prescribing rate	Control + 3 arms T1: Suggested alternatives, T2: Accountable justification, T3: Local norm feedback intervention	Email	47 , 248 clinicials	primary care practices in Boston,	T3: Difference in differences, −5.2% [95% CI, −6.9% to −1.6%]; P < .001	

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Appendix 2: Behavioural Insights Team unpublished studies

In the first unpublished trial, BIT (2012) collaborated with HMRC, the General Medical Council (GMC) and the General Dental Council (GDC) to encourage doctors and dentists to pay their overdue taxes. Three thousand letters were sent out all at once in 2011, following the design of a randomized control trial. Each letter recipient was randomly allocated to each of four conditions. This trial had three treatment arms plus a control group, each corresponding to a different letter variation informed by behavioural insights:

1. Traditional: Using style and phrases employed in communications from Medics Tax Health Plan.
2. Simplified: Simplified language, key messages/required actions, with emphasis on risk of fraud detection, previous failure to come forward is 'oversight' but now is active choice.
3. Simplified with social norms/perception norms: As simplified, beginning with the social message that "97% of doctors have filed all their tax returns for last four years" and statement about trust of profession (Ipsos MORI survey: "9 out of 10 people surveyed said that they trust their doctor to tell the truth").

The control group received a generic letter that had been sent previously. The results found that simplification had a strong effect on compliance, but that the inclusion of an injunctive social norm had no marginal effect.

In the second unpublished trial, Sanders conducted an experiment in a large investment bank in which participants (investment bankers) were asked to donate a day's salary (mean = £500) to charity over the course of a Thursday. The subsequent Tuesday, participants were emailed and told that they had one last chance to make a donation if they wished to, which would be matched by the bank and exempt of tax (so that every pound donated would be worth up to £2.81, depending on the tax liability of the donor). Half of all e-mail recipients were also randomly chosen to be told that "7.5% of your colleagues have already donated". This provides a negative social norm, where the 'normal' behavior is not to donate. The experiment finds that there is no significant effect of social norms overall, but that on average the lowest ranked employee (Analysts) and the highest ranked employees (Director and Managing Directors) increased their giving in response to the norm, hence violating the established norm, while participants in the middle of the firm's hierarchy were less likely to donate, although we note that these effects are only statistically significant at conventional levels for directors.