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Article:

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<https://doi.org/10.3390/ijerph14040406>

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Table S1. Mean outlet density by deprivation and year with postcode deprivation fixed at baseline (2003) level.

Outlet Type by Deprivation		Mean Outlet Density (IQR)				Change from	Mean % Change
Quintile		2003	2007	2010	2013	2003–2013 (IQR)	from 2003–2013
On-trade	Q1 (most deprived)	40.2 (10–44)	38.9 (9–42)	36.6 (9–37)	34.6 (7–34)	-5.6 (-9--1)	-14.0%
	Q2	31.9 (7–31)	31.7 (7–30)	30.4 (6–28)	29.5 (6–26)	-2.4 (-5-0)	-7.6%
	Q3	18.8 (3–20)	18.8 (3–19)	18.3 (3–18)	17.8 (2–17)	-1 (-3-0)	-5.4%
	Q4	11.5 (2–13)	11.4 (2–13)	11 (2–12)	10.7 (2–11)	-0.8 (-2-0)	-7.2%
	Q5 (least deprived)	9.3 (3–11)	9.3 (3–11)	9 (3–11)	8.8 (2–10)	-0.5 (-1-0)	-5.4%
Off-trade	Q1 (most deprived)	12.7 (6–18)	14.3 (7–19)	15.4 (7–21)	17.1 (8–23)	4.4 (1–6)	34.8%
	Q2	9.4 (3–13)	10.9 (4–15)	11.8 (5–16)	13 (5–17)	3.6 (1–5)	37.9%
	Q3	5.8 (1–8)	6.7 (1–9)	7.2 (1–10)	7.9 (1–11)	2.1 (0–3)	36.3%
	Q4	3.8 (0–5)	4.5 (0–7)	4.8 (0–7)	5.2 (0–8)	1.4 (0–2)	36.6%
	Q5 (least deprived)	3.4 (1–5)	4 (1–6)	4.3 (1–6)	4.6 (1–7)	1.2 (0–2)	35.1%

Table S2. Hierarchical growth model results: effects of deprivation on logged outlet density.

Model Covariate and Level		Model Estimates (Standard Errors)					Other off-Trade
		Pubs, Bars & Nightclubs	Restaurants	Other on-Trade	Supermarkets	Convenience Stores	
Baseline (2003) logged outlet density (intercept)		1.225 (0.215) <i>p</i> < 0.0001	-2.213 (0.503) <i>p</i> < 0.0001	0.824 (0.236) <i>p</i> < 0.0001	-3.135 (0.182) <i>p</i> < 0.0001	-1.584 (0.266) <i>p</i> < 0.0001	-0.354 (0.34) <i>p</i> = 0.298
Effect on intercept	IMD Q1 (most deprived)	ref.	ref.	ref.	ref.	ref.	ref.
	IMD Q2	-0.201 (0.003)	-0.239 (0.006)	-0.284 (0.004)	-0.256 (0.005)	-0.288 (0.006)	-0.27 (0.004)
	IMD Q3	-0.381 (0.003)	-0.469 (0.007)	-0.575 (0.005)	-0.496 (0.005)	-0.514 (0.006)	-0.494 (0.005)
	IMD Q4	-0.472 (0.003)	-0.692 (0.007)	-0.764 (0.005)	-0.654 (0.006)	-0.699 (0.006)	-0.651 (0.005)
	IMD Q5 (least deprived)	-0.509 (0.004) <i>p</i> < 0.0001	-0.789 (0.008) <i>p</i> < 0.0001	-0.78 (0.005) <i>p</i> < 0.0001	-0.758 (0.006) <i>p</i> < 0.0001	-0.83 (0.007) <i>p</i> < 0.0001	-0.681 (0.006) <i>p</i> < 0.0001
Slope (change in logged outlet density per year from baseline (2003))		-0.037 (0) <i>p</i> < 0.0001	0.018 (0.001) <i>p</i> < 0.0001	-0.05 (0) <i>p</i> < 0.0001	0.069 (0) <i>p</i> < 0.0001	0.145 (0) <i>p</i> < 0.0001	0.032 (0) <i>p</i> < 0.0001
Effect on slope	IMD Q1 (most deprived)	ref.	ref.	ref.	ref.	ref.	ref.
	IMD Q2	0.012 (0)	0 (0.001)	0.007 (0)	-0.006 (0.001)	-0.013 (0.001)	-0.001 (0)
	IMD Q3	0.021 (0)	-0.004 (0.001)	0.014 (0)	-0.016 (0.001)	-0.036 (0.001)	-0.006 (0)
	IMD Q4	0.026 (0)	0.009 (0.001)	0.021 (0)	-0.02 (0.001)	-0.036 (0.001)	-0.008 (0)
	IMD Q5 (least deprived)	0.027 (0) <i>p</i> < 0.0001	0.021 (0.001) <i>p</i> < 0.0001	0.016 (0) <i>p</i> < 0.0001	-0.021 (0.001) <i>p</i> < 0.0001	-0.01 (0.001) <i>p</i> < 0.0001	-0.014 (0) <i>p</i> < 0.0001
Region	Variance (intercept)	0.42	2.28	0.50	0.30	0.64	1.04
Postcode	Variance (intercept)	6.81	14.33	9.47	11.97	11.81	11.68
	Variance (slope)	0.01	0.04	0.02	0.02	0.03	0.02
	Covariance(intercept, slope)	-0.02	-0.18	-0.08	-0.03	-0.24	-0.14
	Variance (residual)	0.24	1.32	0.55	0.85	0.99	0.55