

A decorative graphic on the left side of the slide consists of a grid of squares in shades of red, grey, and dark blue, arranged in a stepped pattern that descends from the top left towards the bottom right.

Take-up of Free School Meals: Price Effects and Peer Effects

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Free School Meals (FSMs) in the UK

Current situation:

- c.1.4 million children entitled to receive a free lunch each schoolday.
 - Entitled if parent receives a qualifying benefit:
 - Out-of-work (Income Support/Income Based Jobseekers Allowance/Working Tax Credit run-on).
 - In-work but low income (Child Tax Credit but not Working Tax Credit and gross income ≤£16,190).
 - Income-related Employment Support Allowance.
 - Guarantee element of State Pension Credit
 - Support for Asylum seekers.
- Parents of entitled children must *register* them with the local authority.
 - 200,000 entitled children not registered to receive them (Iniesta-Martinez and Evans, 2012).
 - On average, 215,000 registered children do not take up (i.e. actually eat) their Free School Meal (Department for Education, 2012)

Why does non-participation matter?

- Economic value £400 per child per year.
 - = Average market value, charged to non-entitled pupils, for same items.
 - ≈ Opportunity and financial cost of parent providing a packed lunch

- Social safety net against malnutrition, which harms learning
 - Hinders physical and cognitive development.
 - Negative spillovers through disruptive behaviour.
 - (Belot and James, 2001; Lambert et al, 2004; Sorhaindo and Feinstein, 2006)

- Unlocks other benefits.
 - 'Pupil premium': £900 per year paid to schools per FSM-registered child.
 - Schools to decide how best to target this money to close attainment gap by socio-economic status.



Universal Entitlement:

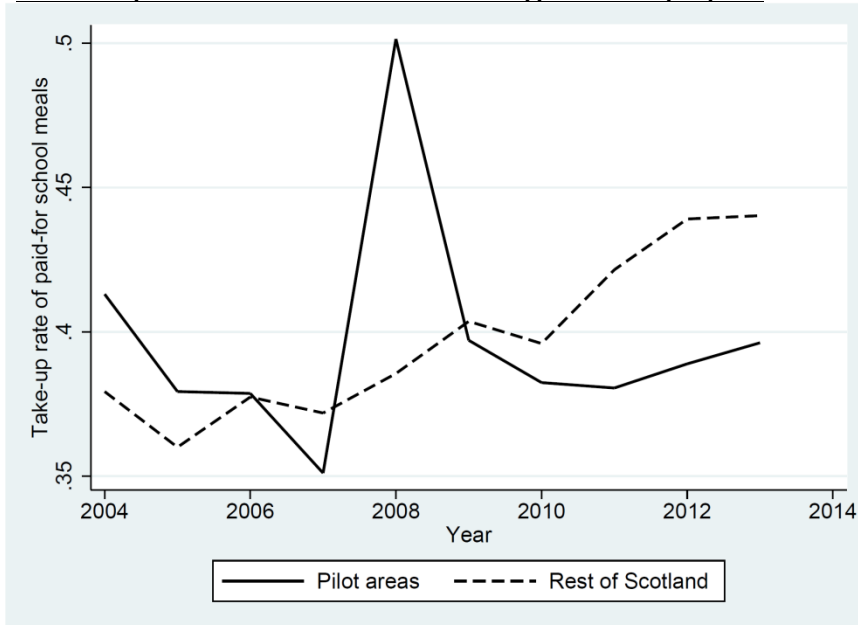
- From September 2014, Free School Meals will be made available to all children in the first three years (Reception-Year 2, aged 4-7) at state-funded primary schools in England.
 - Scotland from January 2015
- Cost c. £600m per year
 - 1.37m extra free meals per day.
- Capital fund of £150m to spend on expanding/refurbishing school kitchens.

Today's seminar:

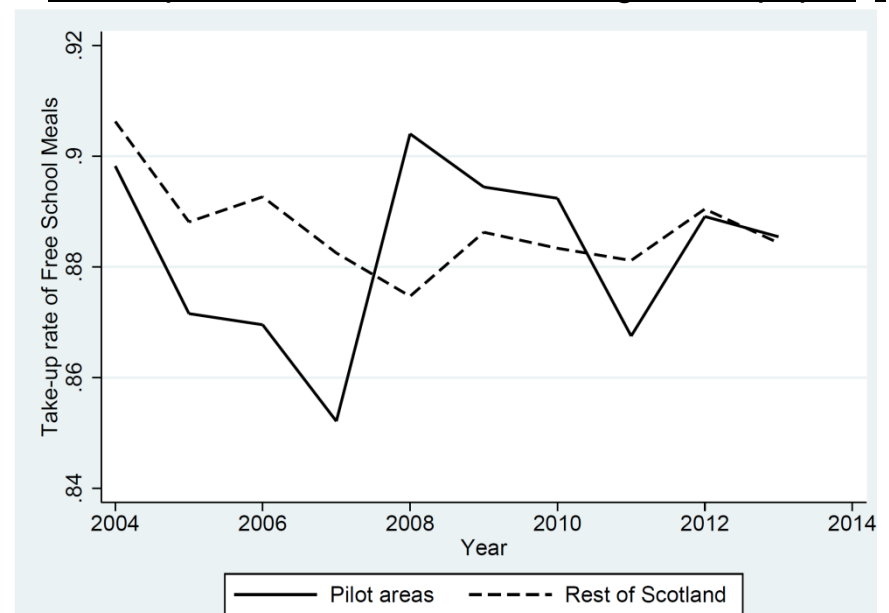
- Evidence from Scotland, which ran its own pilot for universal entitlement in 2007-2008.
- Show that increasing take-up by *newly eligible* pupils will increase take-up by FSM-registered pupils.
 - “Peer effects in consumption”.
- Implications in light of the planned introduction of universal FSMs in England:
 - Likely effects on take-up by both registered and non-registered.
 - Examine critique that policy will primarily benefit the well-off.

Pilot scheme: 'Universal entitlement'

- October 2007 - June 2008.
- Five LEA areas in Scotland with high levels of FSM-registration.
- School meals made free for *all* pupils in first three years of school.
- Direct effect: Price reduced to zero for all unregistered pupils.
- Take-up of school meals: Unregistered pupils



Take-up of Free School Meals: Registered pupils



- But scheme persuaded relatively more packed-lunch takers among the *already registered* group to change their lunch arrangements.
 - 34% against 23%



Spurious explanation (i): Falling registration

- If FSM-entitlement is universal – no personal incentive to register.
- Could rise in take-up *rate* be driven by fall in denominator?
 - **For Scotland pilot, timing of key announcements, and temporary nature of reform meant could argue this is not the case.**

Pupil premium issue:

- If children then not registered, school loses pupil premium money.
- PP payments for academic year based on previous January.
 - So ok for first year
- Beyond this, will require one of:
 - Compulsory registration for *anyone* to take a school meal
 - Collect necessary information to ascertain FSM status - looks most likely.
 - Automaticity: Incorporate alert into Universal Credit IT system.
 - Benefits all other school years as well.

Spurious explanation (ii): Overt stigma

From being observable as FSM-registered

	Not Registered for FSMs		Registered for FSMs	
Anonymised payment	0.001 (0.006)		-0.002 (0.003)	
	Not anonymised	Anonymised	Not anonymised	Anonymised
Universal FSM entitlement	0.107*** (0.026)	0.144*** (0.021)	0.035** (0.011)	0.033* (0.013)

- Within schools, anonymised payment does not lead to increased take-up.
- Universal entitlement [effective anonymisation] did not raise take-up by any more in schools without anonymised payment.

So either:

- Being observable as FSM-registered does not deter take-up.
- Current anonymisation practices don't remove this stigma.
- Either way: Can't explain jump in registered take-up as down to effective anonymisation



Proposition: FSM-registered take-up rose
because FSM-unregistered take-up rose.

Mechanisms:

■ **Separation:**

- For practical reasons many schools separate those taking school meals (free and paid for) from packed lunches at mealtimes.
 - May be forced to sit apart from classmates/friends in order to take up entitlement.
 - 44% of primary schools (*Evidence base for School Food Plan, 2013.*)

■ **Information:**

- Peer-group take-up sends signal that school meals are a desirable good (overcome parents' and children's perceptions).
 - Persuade to try for first time
 - Or to try again – update perceptions.

Identification strategy (i):

- Fixed-effect instrumental variables framework
 - Effect of “peer-group take-up” on “FSM-registered take-up”
- Exploit policy induced variation in cost of school meals to *unregistered* pupils:
 - Demand for school meals by unregistered pupils should:
 - Be higher under **universal entitlement**
 - Be higher, the lower the **price charged**
 - These instruments should have **no direct effect** on FSM-registered group, **for whom the meals are always free.**

Identification strategy (ii):

Possible downfalls:

- Positive information effect of universal entitlement scheme.
 - Condition on registration for, rather than entitlement to, FSMs.
 - Parent has made active choice to register child, so knows child is eligible.

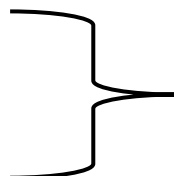
- Price sends a positive signal about quality of food.
 - Assumption can be tested.
 - Show “direct effect” of price is small, negative and insignificant.

Data

- Dataset created from publicly available, school or local-area level, administrative data files. Scottish Gov'/Scottish Index of Multiple Deprivation (SIMD) web
- Estimation sample: Every state primary school in Scotland, 2004-2010.
- School Meal Census:

Number of children:

- Enrolled
- Present
- Taking a school meal



By FSM-registration status

On a 'representative' survey day in February each year

Indicator for anonymised payment system.

Not separated by year-group or school class

- Prices “for a standard school meal”:
 - By LEA, by year.
- Index of Multiple Deprivation:
 - Ranking of 'datazone' (≈LSOA area) in which school is situated.

First stage: Peer-group take-up

Take-up *across all seven years of primary school* rose by 10.2 percentage points, when made available to *first three years only*

10p rise in price *applying to all seven years of primary school* reduces take-up by c.1.3 percentage points.

	All schools	Price in 2 nd stage	Non-pilot only
Universal FSM	0.102*** (0.018)	0.102*** (0.018)	x
Price	-0.133*** (0.034)	-0.133*** (0.034)	-0.123*** (0.038)
Test statistics / p-values:	-----	-----	-----
Weak identification (F)	33.024 (0.000)	29.256 (0.000)	10.184 (0.004)
Overidentification (J)	1.529 (0.216)	x	x
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Schools	1033	1033	834

Also: Total school intake, peer-group registration rate and their interaction, SIMD percentile, school and year fixed effects.

Second stage: FSM-registered take-up

Percentage point effect of a 1 percentage point rise in peer-group take-up.

Effect of price is small, negative and insignificant

	All schools		Non-pilot only
	Price excl.	Price incl.	
Peer-group take-up	0.382*** (0.143)	0.329** (0.149)	0.400** (0.198)
Price	x	-0.030 (0.022)	x
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Schools	1033	1033	834

Also: Total school intake, peer-group registration rate and their interaction, SIMD percentile, school and year fixed effects.

But remember: Initial rise in peer-group take-up caused by instruments only affecting the **unregistered** pupils.

So for policy effects of a given intervention, need to know the relative number of pupils from this group.

The social multiplier

Overall percentage point rise in FSM-registered take-up resulting from initial 10 percentage point rise in take-up by those **not registered** for FSMs.

Social multiplier* under:	Proportion of peers FSM-registered ($\rho_{[-i]jt}^f$)			
	40%	20%	10%	5%
Universal entitlement to youngest three year-groups:	2.27	2.82	3.06	3.18
Price reduction to all seven year-groups:	2.86	3.48	3.75	3.88

Two strategies will achieve same rise in FSM-registered participation *across the whole school*:

- Universal entitlement to the youngest three year-groups:

OR

- Reduce price charged to all unregistered pupils by £1.10 *
- Both will:
 - -> Raise registered take-up by 3.3 - 4.6 percentage points.
 - Equivalently: **Reduce non-participation by 28-40%.**

If still believe in 'stigma' story: Social multiplier is biggest in schools where would expect stigma to be biggest problem.

* 70% from average price in estimation sample: £1.55. 2014 budget based on £2.30.

Bounds (i)

- Likely that peer-effects are strongest within school classes or year-groups.
- So estimated effect of universal entitlement is a *lower bound* on the effect for year-groups affected by reform.
- Obtain upper bound by assuming
 - (i) No cross-year-group peer effects.
 - (ii) Universal entitlement has no effect on take-up outside targeted year-group
- -> *Then*: Raises registered take-up in affected year by 7.7 – 10.7 percentage points.
 - Equivalently: Reduces non-participation by 67-93%.



Bounds (ii)

- In the original 9-month pilot:
 - Pupils had first half-term of school year before entitlement started.
 - Pupils in P2 and P3 already had 1 or 2 years under means-testing.
- When scheme is made permanent:
 - Longer exposure in total
 - Starts from beginning of school year.
 - Eventually, everyone will have had this entitlement from start of “regular” school years.
- Permanent universal entitlement will make school lunch participation a social norm before other habits are formed.
 - Easier than changing established routine.

Conclusions / implications (i)

- No evidence that ‘stigma’ [conventional definition] is responsible for non-participation in Free School Meals.
- Raising take-up by currently ineligible pupils raises take-up among FSM-registered pupils:
 - Signals that school meals are a desirable good.
 - “Actions speak louder than words”.
 - In schools that separate packed-lunch/school meals, increases chance that FSM-eater can eat with friends.
 - Schools should stagger lunchtimes if need be, to ensure all pupils from same class can eat together at same time.

Conclusions / implications (ii)

- Universal scheme criticised as poorly targeted, with high opportunity cost.
 - Majority of direct beneficiaries come from higher soc'-econ' backgrounds.
 - *Economist*, 21-9-2013, “£600m bung to the better off”.
 - Trade-off: c.14%/200,000 of newly eligible will be on WTC
 - Scheme will raise work incentives for low-income parents.
- Evidence presented here:
 - Scheme *will* raise take-up by children from current FSM-households.
 - Typical school (15% FSM): 37-85% drop in non-participation in affected year-groups
 - Current non-participants likely to include those from most deprived households.
 - Peer effects may influence behaviour of those “hard to reach” by other means.
 - Consistent with purpose of FSM policy as safety-net .
- Whether the policy is worthwhile: Depends on own welfare function.



Thank you

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