

Institute for
Fiscal Studies

The effect of changes to Local Housing Allowance on rent levels

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From joint work with Mike Brewer, James Browne, Carl Emmerson and Robert Joyce, for the Department for Work and Pensions, published at <http://www.ifs.org.uk/publications/6697> and <http://www.ifs.org.uk/publications/7277>



Introduction: motivation

- Targeted subsidies for housing are an important part of the redistributive programs of modern welfare states
 - UK spends £10 billion a year (0.5% of GDP) subsidising rents for low-income families in private accommodation through housing benefit
- A key question is who benefits (incidence of the subsidy)
 - Economic theory suggests answer depends on the relative elasticities of supply and demand for private rented housing
- Previous empirical literature suggests significant proportion of housing subsidies is incident on landlords
 - eg. Gibbons and Manning (2006) estimate that 60% to two-thirds of 1990s cut to UK HB was incident on landlords through lower rents

Introduction: key empirical issues

- Challenge is identifying a convincing counterfactual – what would rents have been in the absence of changes to housing subsidies?
- One approach is to exploit a reform and compare rents among those affected and a valid control group (at the same point in time)
 - Difficult when subsidy reforms affect non-random subset of claimants
 - And need to worry about general equilibrium effects on their rents (how big a problem this is depends on details of housing market)
- Alternative is to extrapolate pre-reform trend in rent levels to use a clearly unaffected control group
 - Stronger assumption about changes in rents
 - But no need to worry about general equilibrium effects

Introduction: our contribution

- We look at whether cuts to Local Housing Allowance (HB for private tenants) in 2011 and 2012 reduced rent levels
- All new claimants affected in April 2011
 - Estimate effects on rents by using pre-reform trend as counterfactual
- Existing claimants rolled onto new system over course of 2012, with month of rollover defined by claim start date
 - Estimate effects on rents using those not yet rolled over as controls
- Both strategies give similar estimates – about 90% of the reduction in HB incident on tenants rather than landlords
 - ie. rents fell by 10% of the size of the HB cut

Policy context: overview

- Private sector HB spending has grown particularly rapidly
 - From under £4bn in 2000-01 to over £9bn in 2010-11 in real terms (total spending up from £15bn to £23bn)
 - 70% of increase explained by rising claimant count
- Most private tenants now subject to LHA rules
 - Around 1 million recipients in 2010-11, with total spending of £6.4bn
 - Average award pre-reform about £120 per week
- Reforms evaluated (announced in June 2010) expected to reduce spending by £1.3bn in 2015-16
 - Part of overall cuts to benefit spending of nearly £17bn
 - “Purpose of reform is to influence rent levels and housing choices”

Policy context: pre-reform LHA awards

- Maximum (pre-means test) entitlement (LHA rate) varies by Broad Rental Market Area (BRMA) and family type
- Each BRMA had 'shared' rate, and 1,2,3,4 and 5-bedroom rates
 - rates set at median of rents for non-HB private properties
- Applicable room rate a function of family composition
 - shared rate applicable if in shared accommodation or single, childless and under 25
- If rent below LHA rate, could keep £15 per week of the excess
 - i.e. Weekly LHA = $\min(\text{applicable LHA rate}, \text{rent} + £15)$

Policy context: details of reforms

- Five cuts to LHA awards
 1. LHA rates based on the 30th percentile of rents in a (local area x bedrooms) cell not the median
 2. £15 excess removed
 3. 5-room rate abolished
 4. National caps on room rates: £250, £250, £290, £340, £400 p/w for shared, 1-4 rooms respectively
 5. Shared accommodation rate applies if single, childless and under 35 (previously 25)
- Removal of excess affected existing claimants nine months before other reforms (Apr 11 – Mar 12 rather than Jan – Dec 12)

Reforms to LHA weekly awards: examples

	Pre-reform LHA rate	Post-reform LHA rate
Couple with two children under 10 in Greater Glasgow	£126.92	£115.38
Couple with 2 children over 16 and 2 11-16s of opposite sex in Leeds	£335.00	£173.08
Lone parent with one child in Central London	£550.00	£290.00

Data: Single Housing Benefit Extract (SHBE)

- Administrative panel data on the universe of HB claims in GB
 - Central database of monthly scans of Local Authority systems
 - (Roughly) monthly observations from January 2010 to November 2013
 - Key variables include contractual rents, LHA amounts, BRM A, LHA bedroom entitlements, actual number of bedrooms, family type, age
- For new claimants, use first observation for all claims starting between April 2010 and November 2011
 - 50,000 -60,000 observations (ie. new claims) a month
- Analysis of existing claimants based on stock in January 2011
 - Use monthly observations from January 2010 to November 2013
 - 240,000 claimants, observed an average of 28 times (1 in 3 sample)

New claimants: demographic characteristics

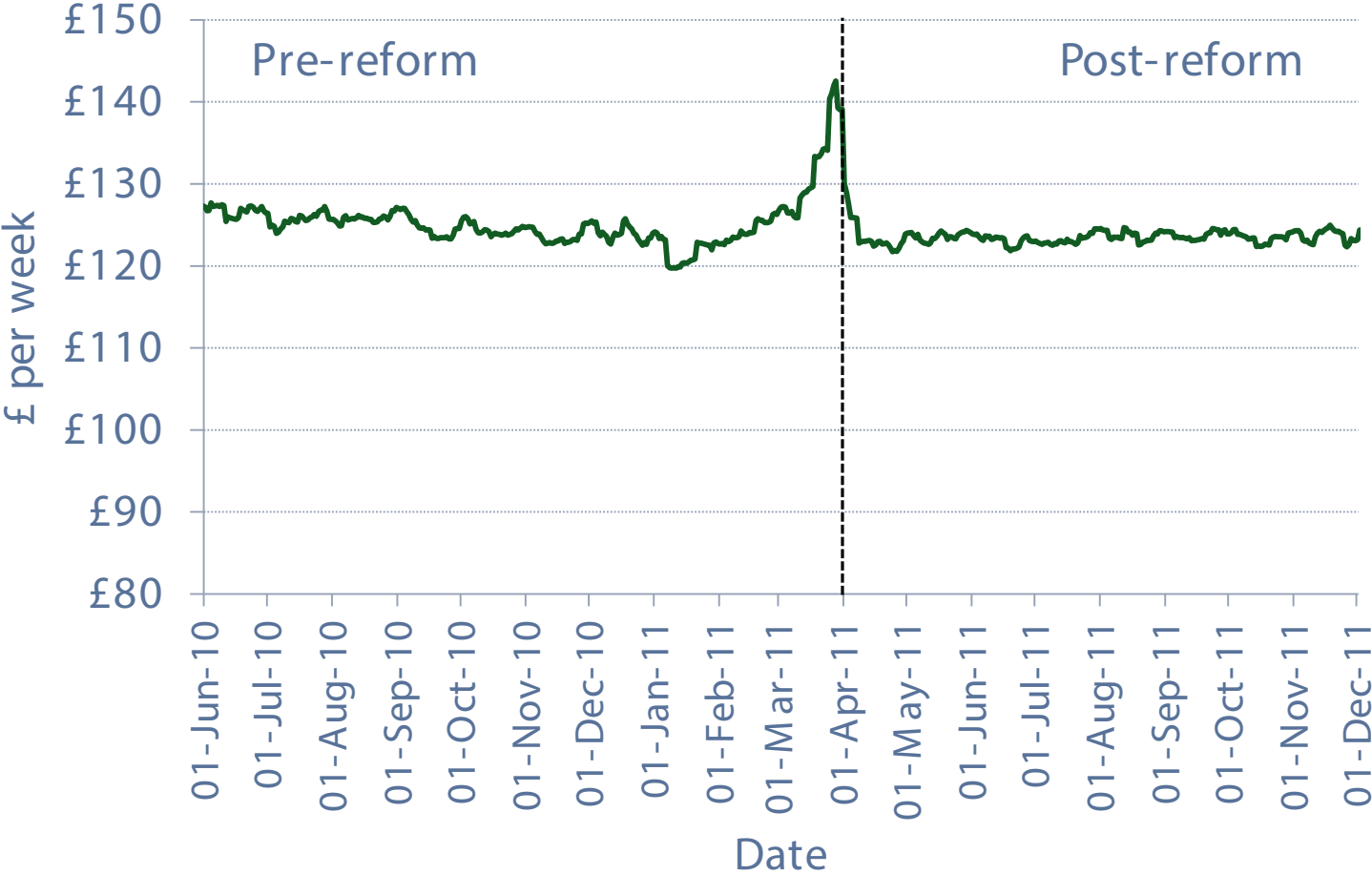
	June 2010 to November 2010 (% of claimants)	June 2011 to November 2011 (% of claimants)
Single man	35.7	34.5
Single woman	18.8	18.7
Couples without children	7.4	7.6
Single parents	24.3	24.7
Couples with children	13.7	14.7
Under 25	23.2	22.6
25-34	32.8	33.1
35-44	22.8	22.8
45-54	13.0	13.4
55-64	5.6	5.6
65 and above	2.6	2.7

Average LHA entitlement of new claimants (7-day moving average)



Average rent of new claimants

(7-day moving average)



New claimants: descriptives

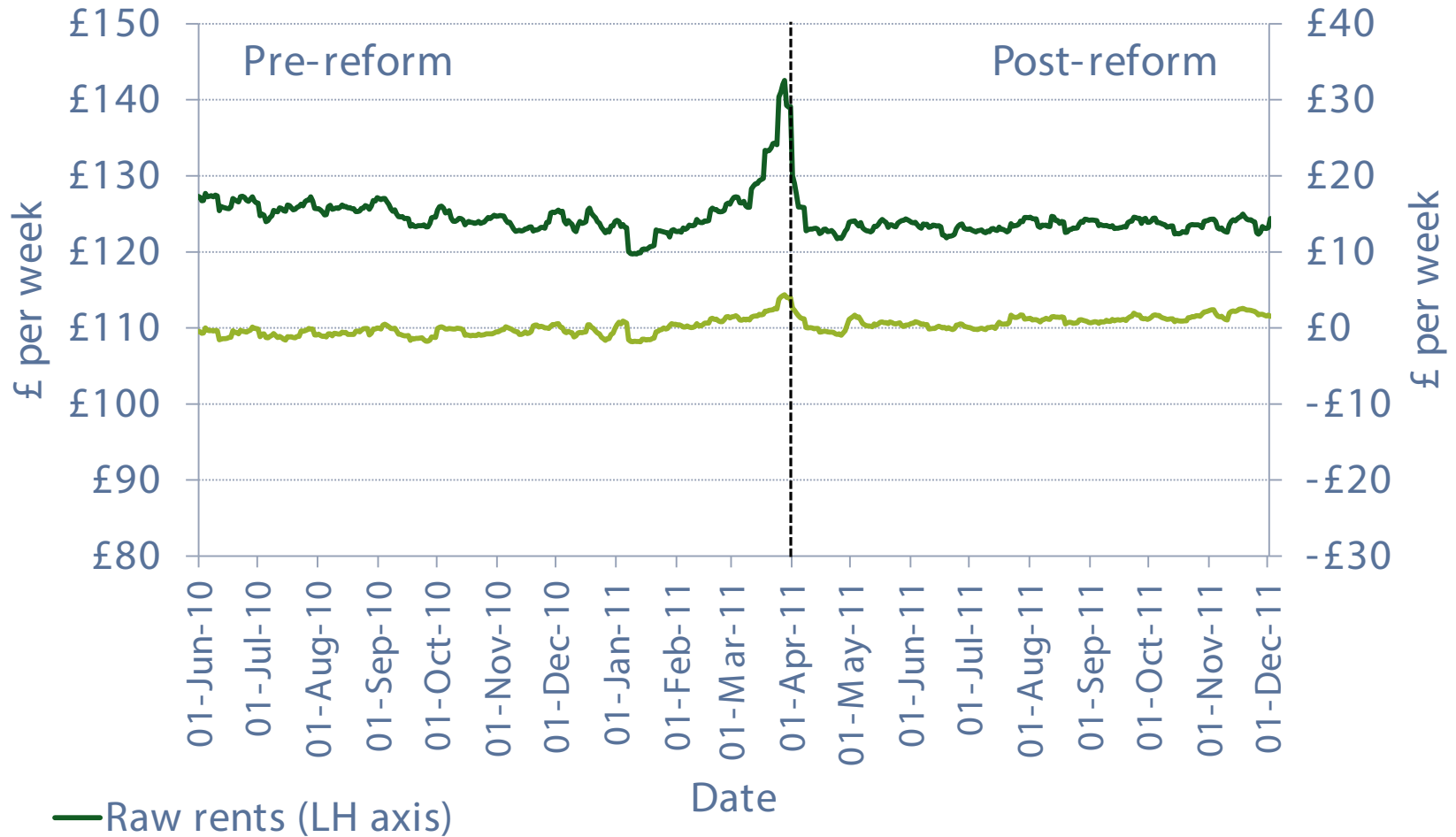
- HB entitlements broadly flat pre-reform – clearly settle at a lower level after April 2011
- But little difference in rent levels before and after reforms
 - Indicative of our formal regression results on incidence
- Large spike in both entitlements and rents just before April 2011
 - Consistent with financial incentives created by reform
 - New claims in late March not subject to cuts in full for 21 months while those in early April subject straight away
 - Those most affected (higher rents/entitlements) more likely to respond, by claiming earlier and/or ‘manufacturing’ a new claim

New claimants: methodology

- Can explain most of the spike with controls for property type, but not all of it

Average rent of new claimants

(7-day moving average)



— Raw rents (LH axis)

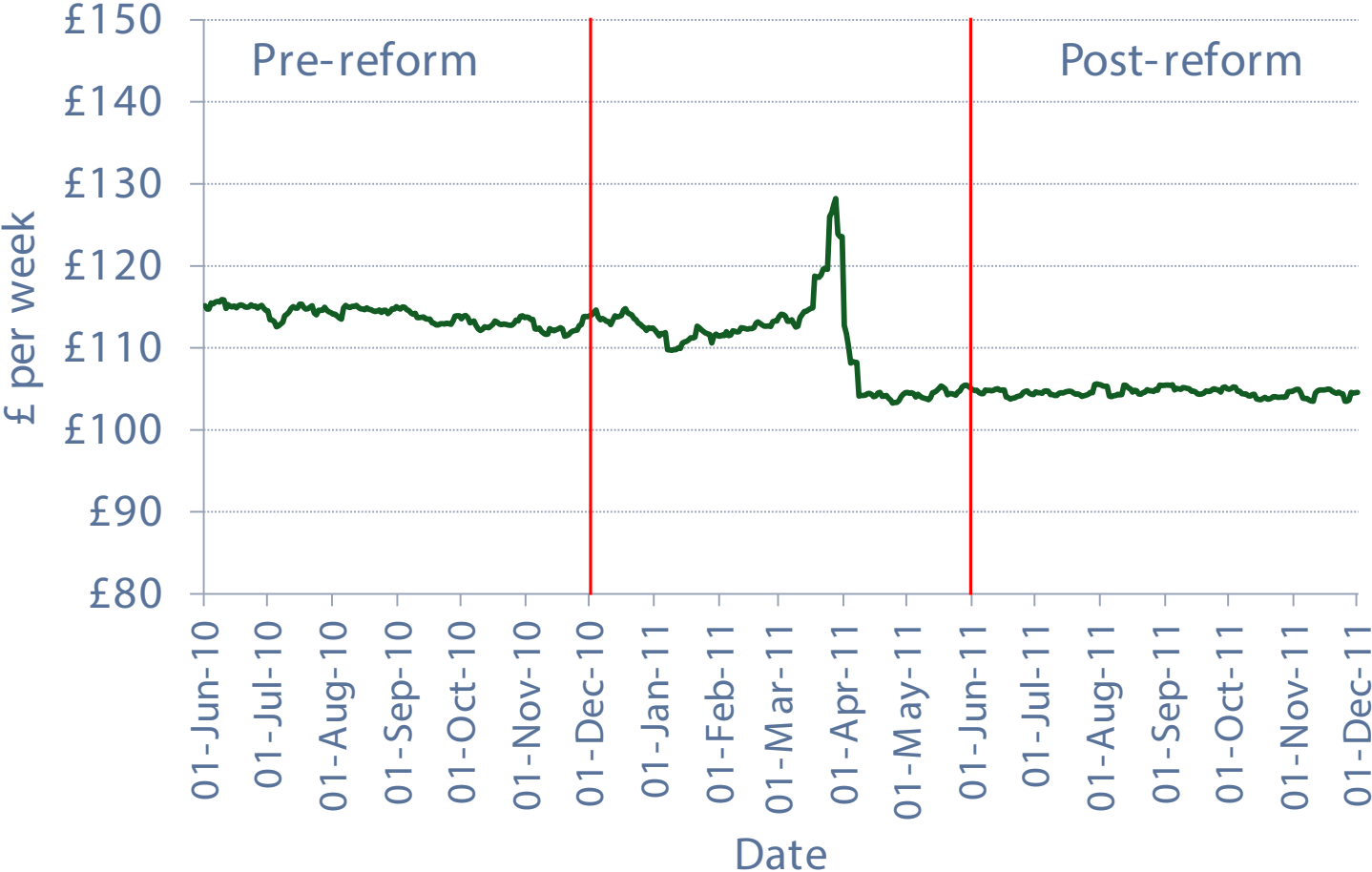
— Component not predicted by BRM A or number of bedrooms (RH axis)

New claimants: methodology

- Can explain most of the spike with controls for property type, but not all of it
 - So exclude window of data around time of reform (December 2010 to May 2011)

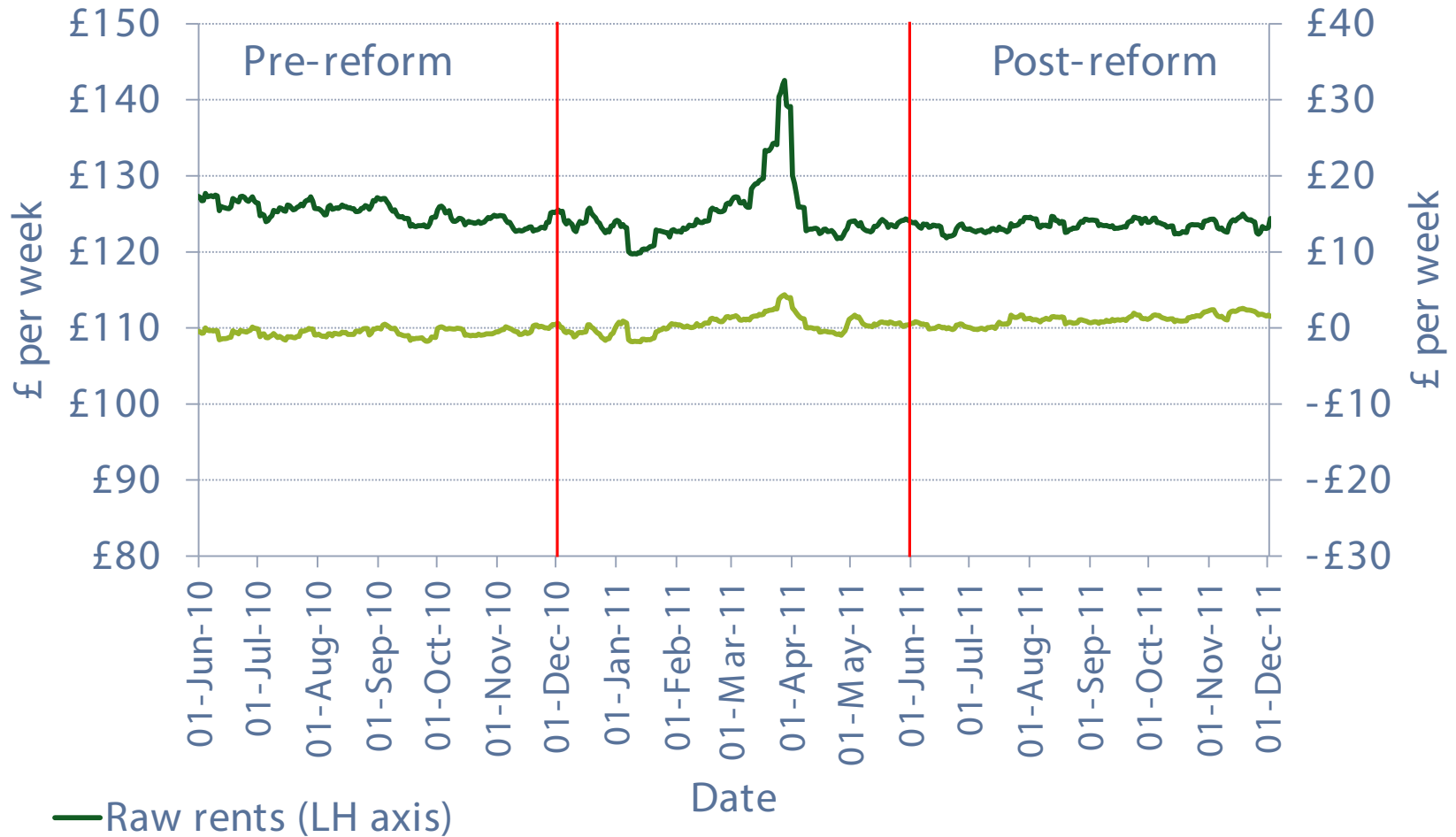
Average LHA entitlement of new claimants

(7-day moving average)



Average rent of new claimants

(7-day moving average)



New claimants: methodology

- Can explain most of the spike with controls for property type, but not all of it
 - So exclude window of data around time of reform (December 2010 to May 2011)
- Identification of effect comes from extrapolation of time trend from before that window (pre-December 2010 data)
 - provides counterfactual for post-reform observations
- Trade-off: exclude more data and be surer of getting rid of anticipation effects; but parametric time trends have to extrapolate more, and sample size is lost
 - We take very conservative approach because time trends look uncomplicated and sample very large

Estimating incidence: controlling for property type

- The reform could have reduced the rents of HB claimants for 2 reasons
 1. Rents fall *for a given type of property* as a result of lower demand
 2. Claimants respond to cut by moving to a lower quality property
- We want to measure the size of the *first* of these effects – the incidence of the reform on landlords through lower rents
 - Though we do also look separately at property type changes
- To do this, we control for property type (BRM A and number of bedrooms)
 - But since controls are limited likely bias (if any) is still to overstate incidence on landlords, and understate the incidence on tenants

Estimating incidence: regression specification

$$y_{iat} = f_a(t) + 1(t \geq \text{April 2011})\beta + x'_{iat}\alpha + \varepsilon_{iat}$$

- Regress rent (or housing benefit) entitlement on a time trend, post-reform dummy and a vector of control variables
 - Linear time trend allowed to vary by BRMA (and overall trend allowed to be different before and after the reform)
 - Controls include dummies for full set of BRMA x rooms interactions, family type and age
- Implemented using Ordinary Least Squares, with standard errors clustered at the BRMA level

Estimating incidence: impact on rents

(£ per week)

	Model				
	(1)	(2)	(3)	(4)	(5)
Post-reform coefficient	-1.57	0.12	1.62***	-0.21	-0.46
Standard error	(1.11)	(0.52)	(0.43)	(0.66)	(0.64)

Note: *** Statistically significant at 1% level, ** Statistically significant at 5% level, * Statistically significant at 10% level. Standard errors in brackets are robust to heteroscedasticity and clustering at the BRMA level.

1. Post-reform dummy variable only
2. Adds BRMA and local authority (area) controls
3. Adds controls for number of bedrooms and interaction with BRMA
4. Adds linear time trends for each BRMA
5. Adds joint controls for family type and age

Estimating incidence: results for new claimants

(£ per week)

Rent	Housing benefit	Rent net of HB
-0.46 (0.64)	-8.21*** (0.50)	7.76*** (0.49)

Note: *** Statistically significant at 1% level, ** Statistically significant at 5% level, * Statistically significant at 10% level. Standard errors in brackets are robust to heteroscedasticity and clustering at the BRMA level. Includes controls for BRMA, local authority, number of bedrooms in the property, linear time trends in each BRMA, and family type and age. N = 659,682

- Estimated 95% of the cut in HB incident on tenants
- Fall in rents not statistically significant

Existing claimants: overview

- We use as our sample the stock of LHA claimants in January 2011

Existing claimants: demographic characteristics

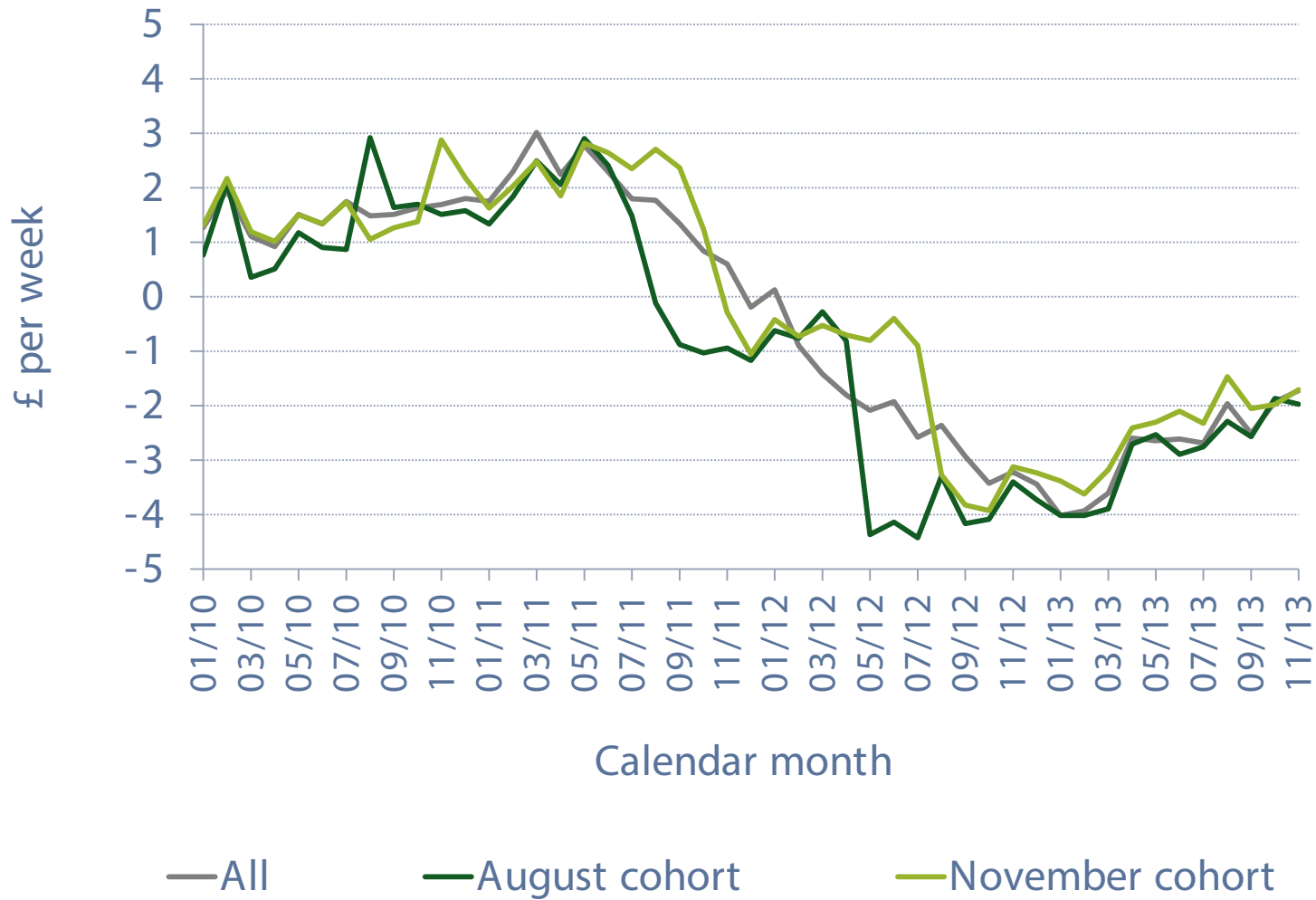
	January 2011 LHA claimants	
	(% of claimants)	Average weekly LHA entitlements
Single man	29.2	£98
Single woman	15.6	£103
Couples without children	6.3	£112
Single parents	32.4	£148
Couples with children	16.3	£158
Under 25	16.5	£107
25-34	31.8	£129
35-44	25.2	£139
45-59	18.9	£126
60 and above	7.6	£109

Existing claimants: overview

- We use as our sample the stock of LHA claimants in January 2011
 - Follow them from January 2010 until November 2013
- Similar claimants affected at different times according to their claim anniversary
 - Lose any excess on their first post-April 2011 anniversary
 - Affected by other reforms nine months later (January 2012 to December 2012)

Average LHA entitlement of existing claimants

(Residual from regression on BRMA and number of bedrooms)

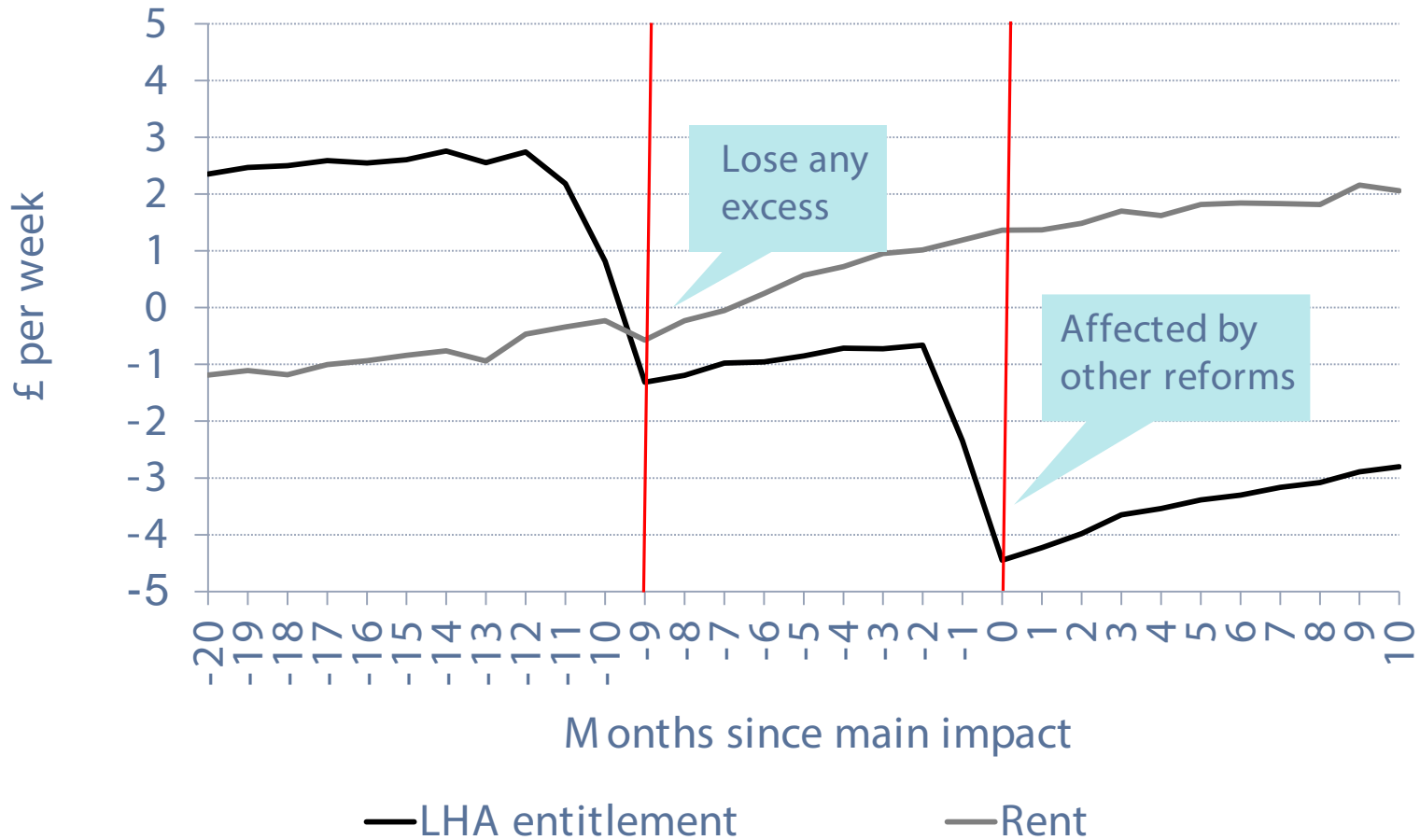


Existing claimants: descriptives

- Gradual decline in LHA entitlements between April 2011 and December 2012
 - Each (claim anniversary) cohort clearly affected at a different time

Average LHA entitlements and rents of existing claimants by months since impact

(Residual from regression on BRMA and number of bedrooms)



Existing claimants: descriptives

- Gradual decline in LHA entitlements between April 2011 and December 2012
 - Each (claim anniversary) cohort clearly affected at a different time
- No visible effect of reform on trend in rents
 - Again indicative of our formal regression results

Existing claimants: methodology

- Identification of effect of reforms comes from the fact that otherwise-identical individuals (with different claim anniversaries) face the old and new systems *at the same point in time*
 - We apply a difference-in-difference design
- Key assumption is that the *rents* of individuals in different cohorts are affected at different points in time
 - All part of the same rental market, so not true if housing market is perfectly competitive and frictionless, with a single rental spot price at all times
 - But typically rents only change once a year, and there is evidence of limited awareness of reforms before impact
 - We allow rents to be affected in the year before being rolled over to the new system (as long as changes relate to roll-over dates rather than calendar time)

Existing claimants: regression specification

$$y_{iact} = f_a(t) + \pi_c + z'_{ct}\beta + x'_{iact}\alpha + \varepsilon_{iact}$$

- Regress rent and housing benefit entitlement on:
 - BRMA-level linear time trends and national month dummies
 - Cohort fixed effects
 - Vector of dummies for “months since main impact” – interaction of cohort and time
 - Vector of control variables (similar to analysis of new claimants)
- Again implement using OLS, with standard errors clustered at the BRMA level

Estimating incidence: results for existing claimants

(£ per week)

	Housing benefit	Rent	Rent net of HB
Loss of excess	-4.98*** (0.42)	-0.81*** (0.27)	4.17*** (0.34)
Point of main impact	-8.31*** (0.42)	-0.73 (0.68)	7.58*** (0.85)
11 months after main impact	-6.84*** (0.92)	-0.79 (1.09)	6.06*** (0.83)

Note: *** Statistically significant at 1% level, ** Statistically significant at 5% level, * Statistically significant at 10% level. Standard errors in brackets are robust to heteroscedasticity and clustering at the BRMA level. Figures given in UK pounds per week. Includes controls for BRMA, local authority, number of bedrooms in the property, local area deprivation, 'cohort', calendar month, linear time trends in each BRMA, and family type and age. N = 6,607,687

- Estimated 90% of the cut in HB incident on tenants
 - Similar to results for new claimants

Estimating incidence: subgroups

- 3 subgroups of claimants affected by particular elements of the reform package:
 1. Those entitled to 5 bedrooms under old system (large families)
 2. Those affected by national LHA caps (all in central London)
 3. Those affected by the SAR change (25-34 singles without children not currently in shared accommodation)
- We define these groups based on January 2011 characteristics
 - Groups are exogenous (not determined by responses to the reform)
- For each group, consider changes in HB entitlement, “quality-adjusted” rent (our usual measure) and unadjusted rent
 - Difference is informative about moves to cheaper accommodation

Estimating incidence: results for subgroups

(£ per week, 11 months after main impact)

Group (% of claimants)		Housing benefit	Rent	Rent net of HB
Increased scope of SAR rate (6.9%)	Quality-adjusted	-13.05*** (1.36)	-4.80*** (1.31)	8.25*** (0.34)
	Unadjusted	-7.58*** (1.30)	-2.49* (1.43)	5.09*** (1.77)
Abolition of 5-room rate (0.8%)	Quality-adjusted	-29.21*** (8.49)	-11.69** (5.48)	17.52*** (5.44)
	Unadjusted	-31.60*** (9.99)	-19.04** (9.27)	12.56*** (5.36)
National caps on LHA rates (2.4%)	Quality-adjusted	-41.93*** (0.42)	-5.68 (10.19)	36.25*** (12.31)
	Unadjusted	-48.48*** (0.92)	-17.07 (14.20)	31.41*** (12.13)

Note: *** Statistically significant at 1% level, ** Statistically significant at 5% level, * Statistically significant at 10% level. Standard errors in brackets are robust to heteroscedasticity and clustering at the BRMA level. Figures given in UK pounds per week. "Adjusted" figures include controls for BRMA, local authority, number of bedrooms in the property, local area deprivation, 'cohort', calendar month, linear time trends in each BRMA, and family type and age." Unadjusted" figures do not include controls for contemporaneous BRMA, LA, number of bedrooms and local area deprivation, but do controls for BRMA in January 2011.

Estimating incidence: evidence of heterogeneity

- About a third of the cut those affected by extension of SAR rate (25-34 singles) incident on their landlords
- Estimated 40% of cut for those affected by abolition of 5-room rate incident on their landlords
 - Bigger fall in unadjusted rents suggests moves to cheaper properties
- Falls in quality-adjusted rents (and incidence on landlords) large and statistically significant in both cases
- But central estimate is only small fall in quality-adjusted rents for those affected by national caps on LHA rates (central London)
 - Although again some evidence of moves to cheaper properties

Estimating incidence: explaining heterogeneity

- Possible explanation is these groups adjust faster (to bigger losses)
 - But previous literature found contemporaneous changes in rents
- Alternative explanation is different elasticities of demand
 - All else equal more elastic demand means higher incidence on landlords
- Reasons to think demand of SAR and 5-room groups is more elastic
 - Single 25-34s might be relatively indifferent between self-contained and shared accommodation
 - Large families might be relatively indifferent over number of bedrooms (at the 4/5 margin)

Did claimants move in response?

- As well as the incidence of reforms, might care about their impact on the housing quality of claimants
 - Did they respond by moving to cheaper properties?

Impact on property choices: results for subgroups

	Outcome (<i>pre-reform level</i>)	Effect of reform
Increased scope of SAR rate	Probability of moving (ppts per month) (2.6)	1.4***
	Probability of living in shared accommodation (ppts per month) (N/A)	12.9***
Abolition of 5-room rate	Probability of moving (ppts per month) (2.1)	0.8
	Number of bedrooms (3.8)	-0.135
National caps on LHA rates	Probability of moving (ppts per month) (1.6)	1.1*
	Probability of moving out of capped area (ppts per month) (0.1)	0.4

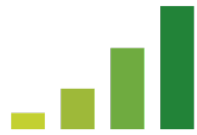
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Did claimants move in response?

- As well as the incidence of reforms, might care about their impact on the housing quality of claimants
 - Did they respond by moving to cheaper properties?
- Those affected by the SAR change more likely to move, and much more likely to live in shared accommodation
 - Some evidence those affected by 5-room rate moved to smaller properties (reduced number of bedrooms)
 - Some evidence those affected by national caps moved out of capped area (central London)

Conclusions

- We looked at whether the cuts to private sector HB in 2011 and 2012 led to a fall in rent levels
 - Was the cut incident on tenants or their landlords?
- Evidence from both new and existing claimants that nearly all of the incidence (around 90%) on tenants, at least initially
 - Little change in rent levels
- Incidence on landlords significantly higher for some subgroups
 - Those affected by extension of SAR rate and abolition of 5-room rate
- Results suggest incidence can vary substantially
 - Less straightforward than one might think given existing literature



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