

Applying Behavioural Science in Tax Administration

A Summary of Lesson Learned

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PART III – LESSONS LEARNED

Our Experience

- ❑ Application of psychological insights (using letters) to economics
- ❑ Endorsement Internationally and in Ireland
- ❑ In general, many nudges; little measurement. Our approach has been empirically focused (observation leads, theory follows)
- ❑ Empirical demonstrations are persuasive. Where our trials have shown a positive behavioural change, they have been scaled nationwide
- ❑ While RCTs are scientific, they are also highly specific and not always feasible
- ❑ Our experience is that endorsement and logistics are often harder than experimental design
- ❑ Understanding what does not work important as understanding what does (file drawer problem). One of our most striking results is that our evidence on social norms conflicts with similar trials from the UK (but not from the US)

Current Research

- ❑ Our current research paper summarises lessons from 20 RCTs conducted by Revenue over the past 6 years
- ❑ Revenue was the first Government Department in Ireland to implement RCTs to test the application of BE. We have now built up a comprehensive picture of taxpayer behaviour in Ireland
- ❑ Audit (and other interventions) are effective but expensive and time consuming. Could targeted treatments be more efficient in improving compliance (filing, reporting and paying)

Which Insights Drive Behaviour?



Deterrence
(5)

+8.0%



Personalisation
(2)

+4.0%



Simplification
(8)

+3.3%



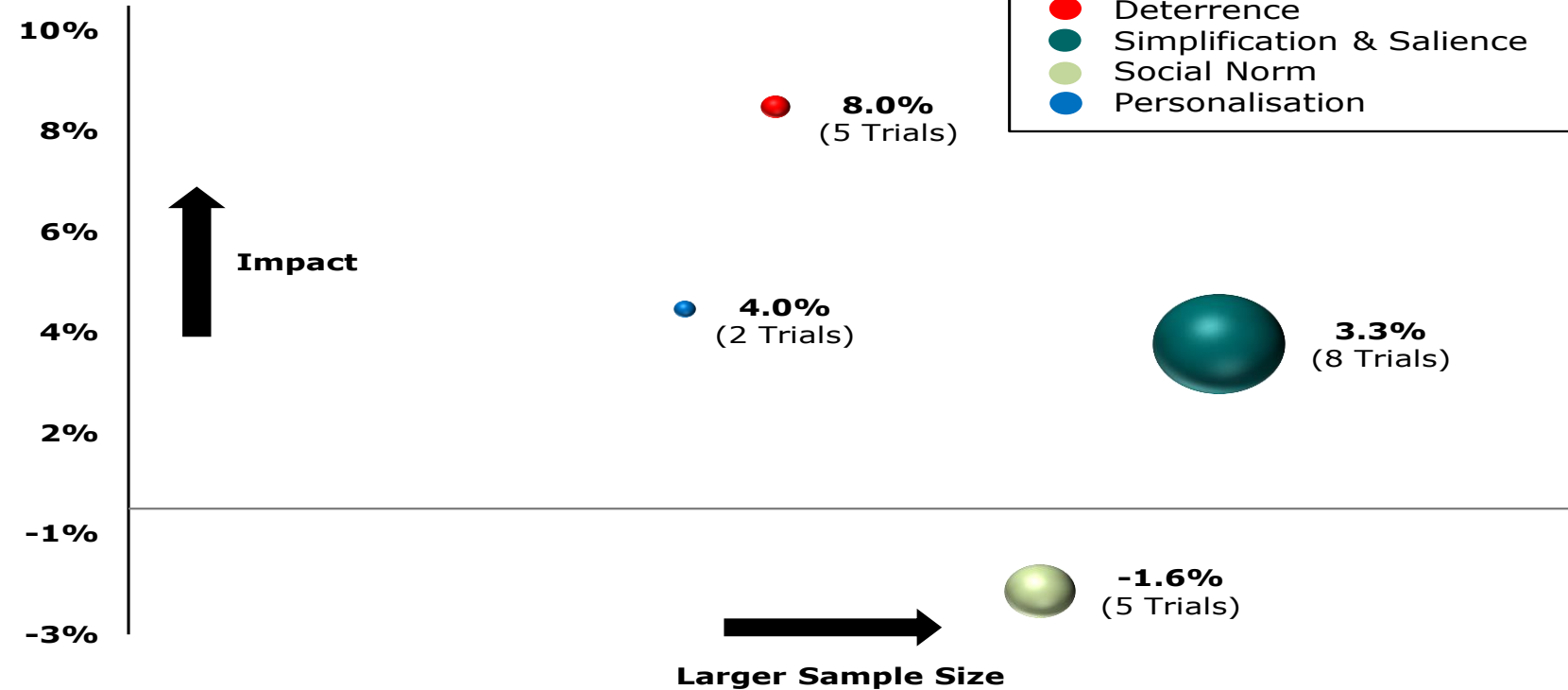
Social Norms
(5)

-1.6%

1. **Deterrence:** Strategies dissuade taxpayers from noncompliant behaviour
2. **Simplification & Salience:** Simple presentation and drawing attention to details
3. **Personalisation:** Personalised correspondence may improve behaviours
4. **Social Norms:** The behaviour of others can influence an individuals choice

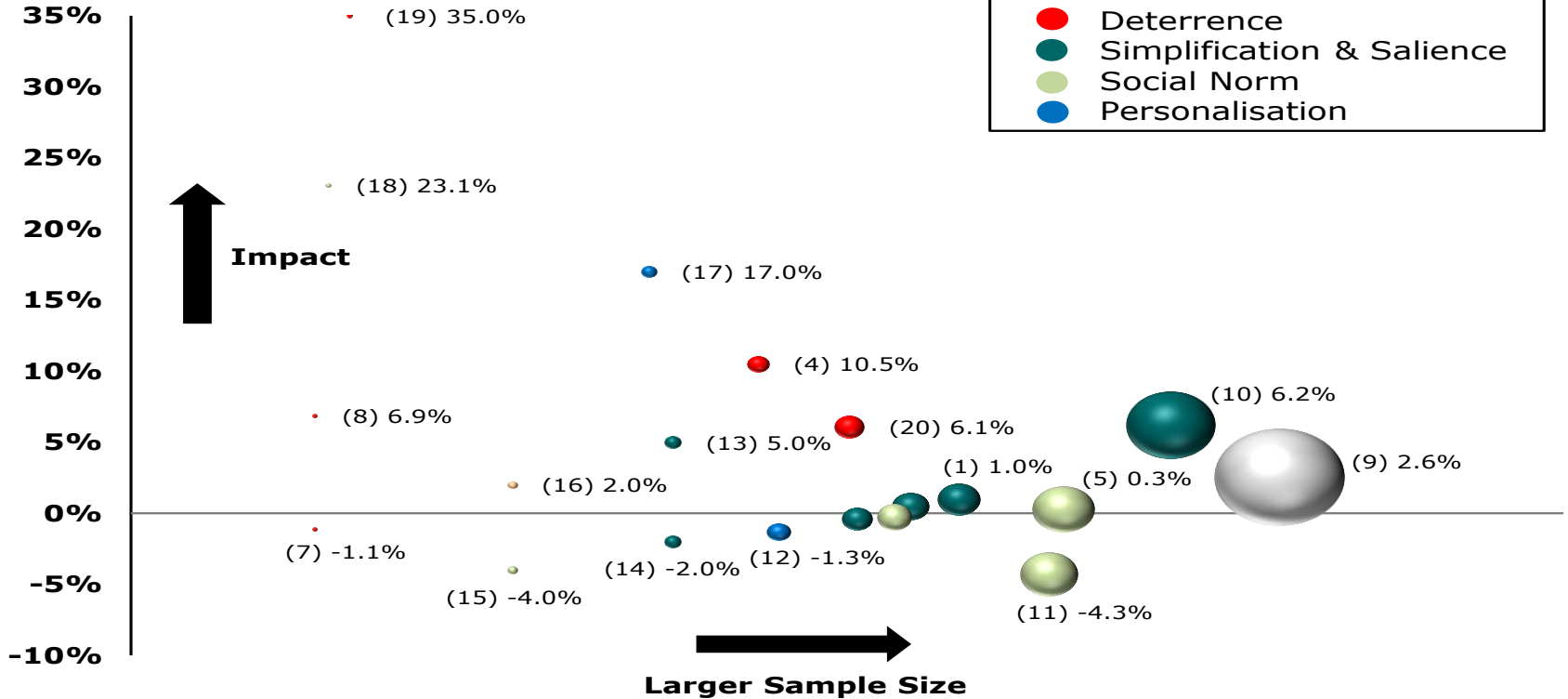
Summary Findings, by Trial

% Behavioural Change (Mean)



Summary Findings, by Trial

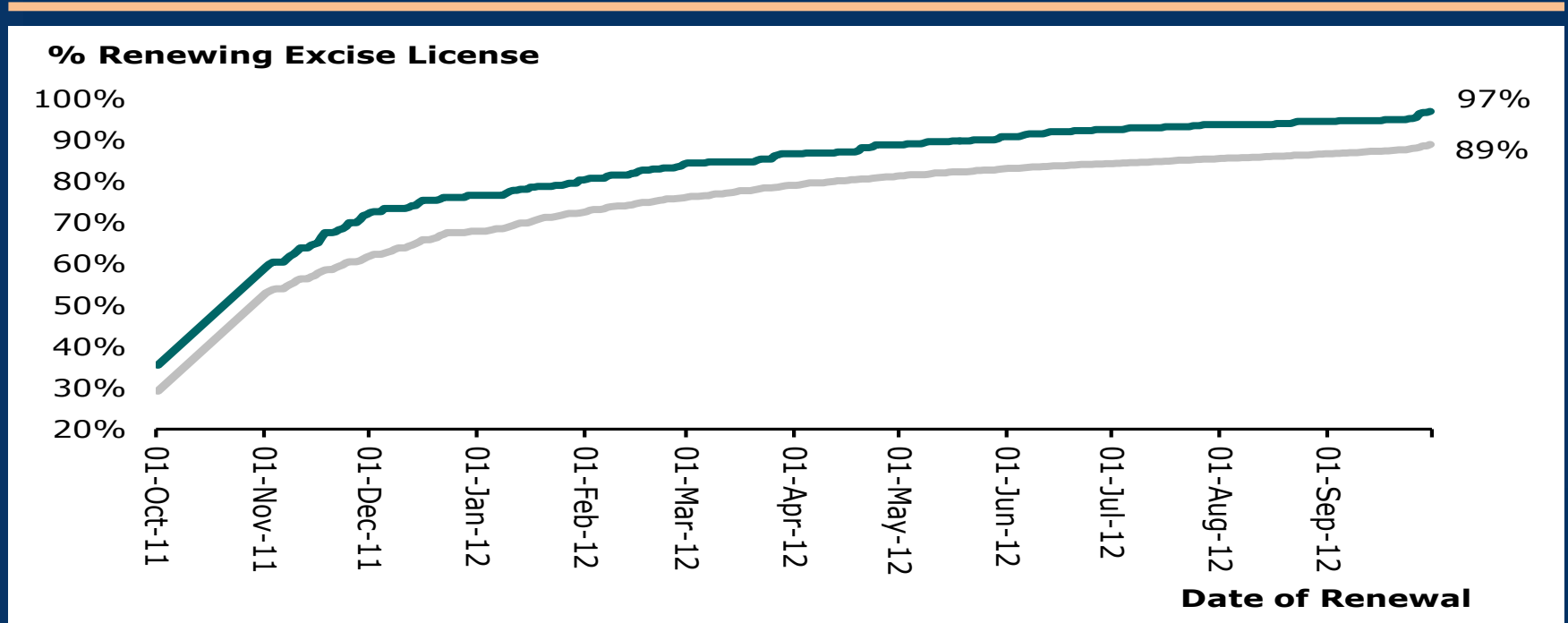
% Behavioural Change (Mean)



Deterrence (Pub Licenses)

- ❑ Deterrence should positively influence taxpayers (Slemrod, 2007) but empirical evidence seems mixed. Wenzel (2004) finds that when norms in favour of compliance are strong, deterrence effects are small, but they become more important when norms are weak
- ❑ All Publican's required to hold excise licence issued by Revenue. Renewal letters to all publicans issue in September
- ❑ **Treatment group (400):** Randomly assigned to receive revised letter with deterrence ('unlicensed trading is an offense') and social norm ('majority license holders renew on time')
- ❑ **Control group (7,800):** Remainder received standard renewal letter
- ❑ **Target:** Improve renewal rates (and timing)

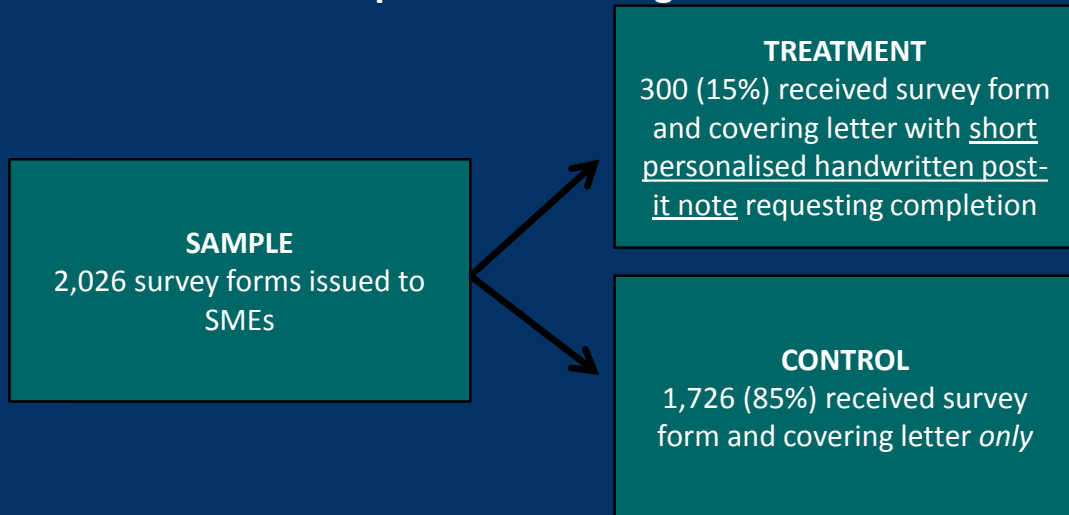
Deterrence (Pub Licenses)



- ❑ On Time Renewal Rates (1st October): Control 29.4%, Treatment 35.5%
- ❑ At end of licensing year, renewal rates are 97% and 89% respectively
- ❑ While 6% may seem small, it derives from modest changes to a letter

Personalisation (Post-it)

Experimental Design



Illustrative Example

Dear Joe Bloggs,

Please take a few minutes to complete this for us.

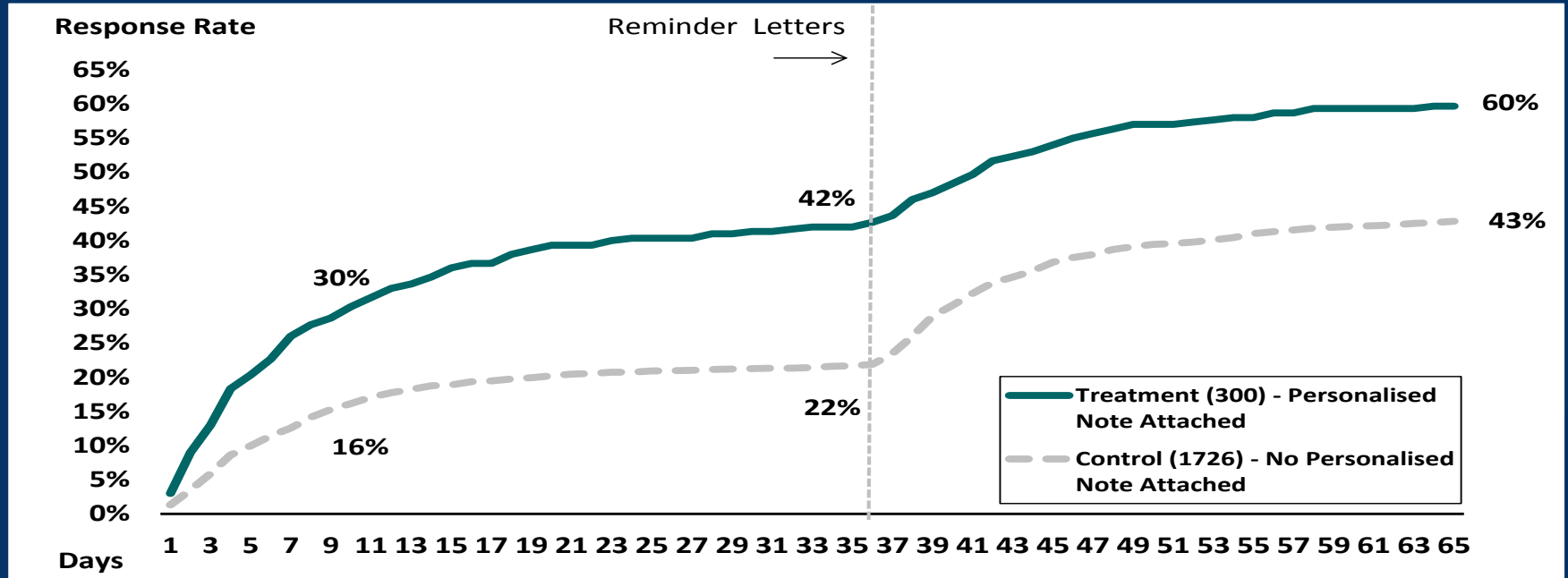
Thank you.

Beán Kennedy
Tax Official

- ❑ Literature suggests seemingly insignificant post-it leads to much higher responses
- ❑ Five specific personal features included in each note

Personalisation (Post-it)

Response Rates, by Day



□ Treatment (300): Response rate is 60% over the period

Personalisation (Post-it)

Econometric Modelling, by SME taxpayer

Table 1: OLS, Logit and Probit Estimates of the Effect of Post-it Notes on Survey Responses

	All Responses				Responses within Four Weeks		
	OLS (1)	OLS (2)	Logit (1)	Probit (1)	Logit (2)	Probit (2)	OLS (3)
Received Post-it	0.147*** (-0.0309)	0.139*** (-0.0314)	0.139*** (-0.0312)	0.139*** (-0.0312)	0.175*** (-0.0298)	0.176*** (-0.0298)	0.176*** (-0.0298)
Controls	No	Yes	Yes	Yes	Yes	Yes	Yes
Selected Covariate Estimates							
Larger Size		0.003 (-0.0278)	0.003 (-0.0276)	0.003 (-0.0275)	-0.011 (-0.0233)	-0.011 (-0.0232)	-0.011 (-0.0232)
Manufacturing		0.118* (-0.0594)	0.118* (-0.0592)	0.119* (-0.0593)	0.096 (-0.0522)	0.095 (-0.0524)	0.095 (-0.0524)
Dublin		-0.072* (-0.032)	-0.072* (-0.0319)	-0.073* (-0.0319)	-0.04 (-0.0272)	-0.041 (-0.027)	-0.041 (-0.027)
Sole Trader		0.028 (-0.0243)	0.028 (-0.0241)	0.028 (-0.0241)	0.005 (-0.0201)	0.004 (-0.0201)	0.004 (-0.0201)
Sample size	2,013	2,013	2,013	2,013	2,005	2,013	2,005

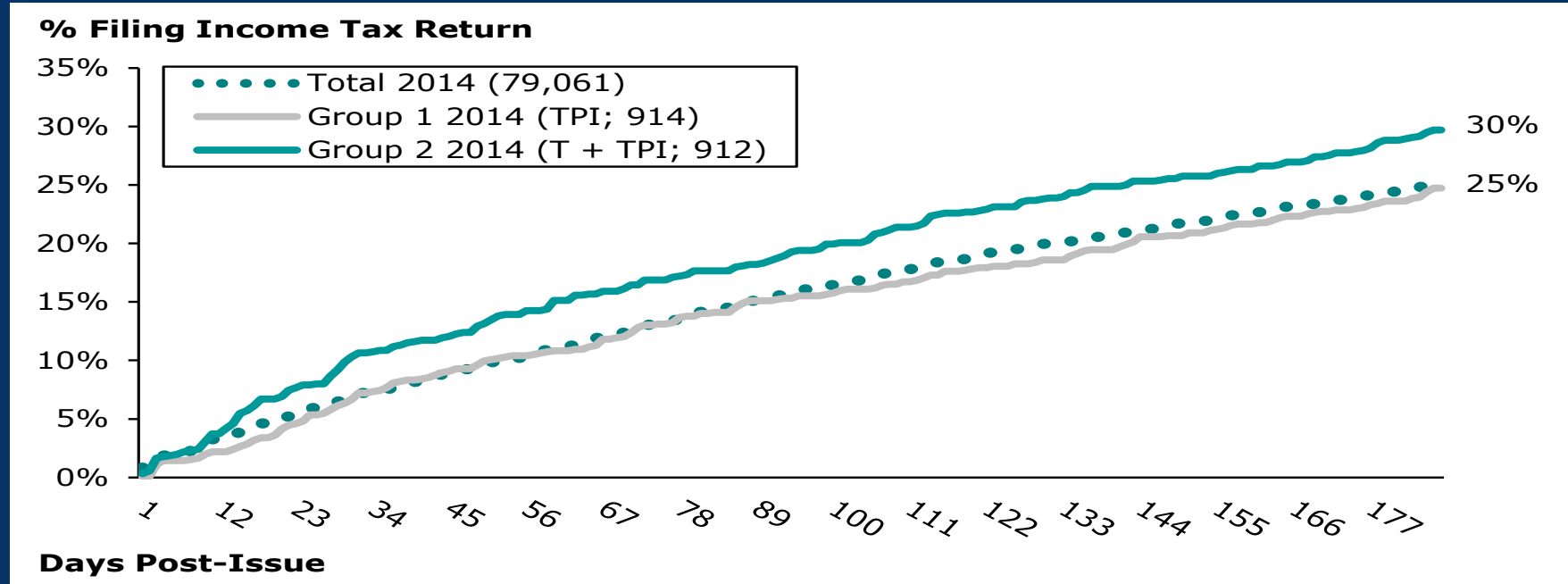
- Simple OLS (1) regression shows receiving post-it increases response rate by 14.7 percentage points on average
- When controls are included, estimate is revised to 13.9
- Econometric modelling confirms responses received more quickly

Simplification (Non-Filers)

- ❑ Self-assessed Income Tax compliance rate is ~90% annually in Ireland
 - ❑ In 2014, conducted Non-Filers Project to evaluate impact of tailoring letters on the proportions of non-filing Income Tax payers who file a tax return
 - ❑ Previously, policy was to issue automated reminder letter to all non-filers
1. **Control Group (79,000):** Issued bulk letter in March 2014
 2. **Treatment 1 (914):** Random assignment to receive TPI
 3. **Treatment 2 (912):** Random assignment to shorter letter & TPI

Simplification (Non-Filers)

% Filing (Form 11), 185 days post letter issue

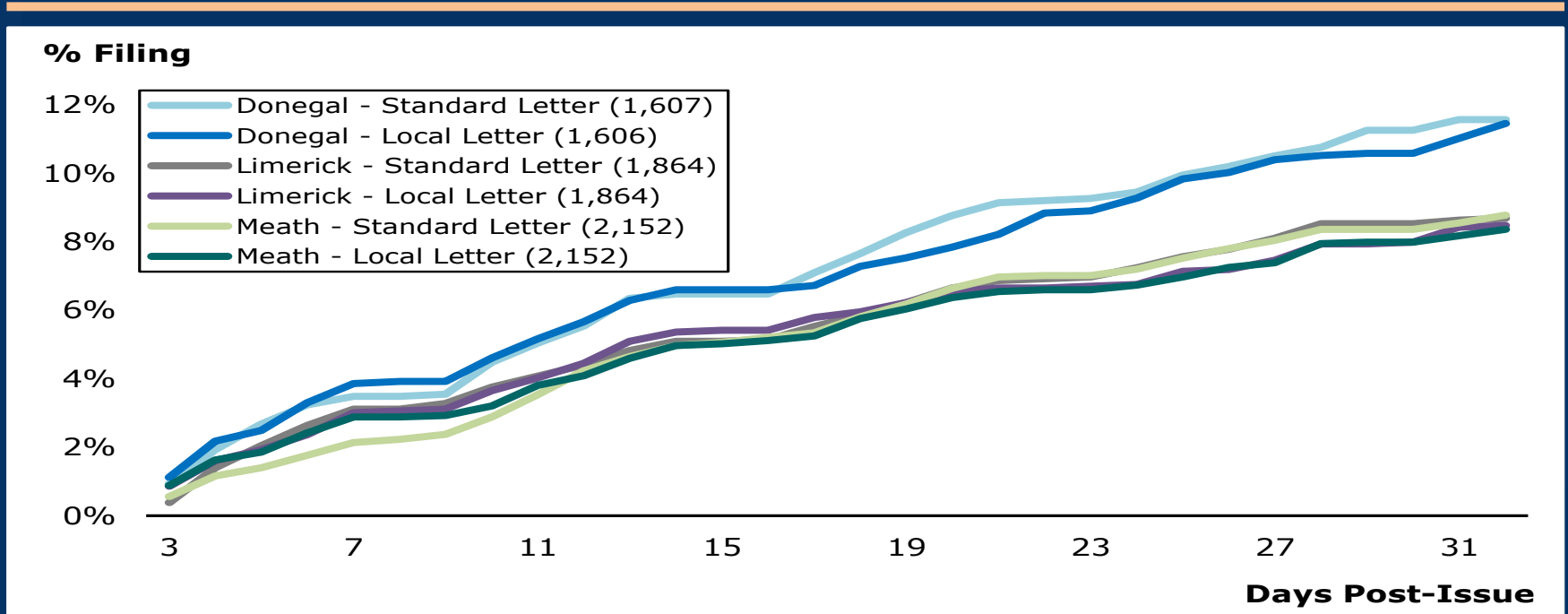


□ **Treatment 2 (912):** For those assigned shortened letter with TPI, now significant increase in filing of 5 percentage points...

Social Norms (Non-Filers)

- ❑ Internationally evidence that the behaviour of others strongly influences an individual's choices. From tax perspective, perception that majority are compliant may make people less willing to evade taxes themselves
- ❑ Jan 2016, Revenue tested the impact of a localised social norm
- ❑ Non-filers in 3 counties (Donegal, Meath and Limerick) randomly assigned to receive standard or localised letter ('9 in 10 filed in your local area')
- ❑ In total, 11,246 letters issued, 50% of which were localised

Social Norms (Non-Filers)



- ❑ **Limerick Treatment (1,864):** Again, no observable difference with social norm
- ❑ **Summary:** Social norms combined with geographic specificity do not significantly impact on filing compliance for any of the counties tested

Lessons Learned

- ❑ Our research shows wording, design and tone matters for influencing compliance. Even seemingly insignificant changes to correspondence can significantly changes behaviour
- ❑ Lessons learned primarily from letters but they can, and should, be considered in any communication (including electronic channels)
- ❑ Conducting RCTs not just about careful experimental design. Challenges of logistics and organisational endorsement often more challenging
- ❑ While RCTs are scientific, they are also highly specific and not always feasible
- ❑ Empirical demonstrations are persuasive. Where our trials have shown a positive behavioural change, they have been scaled nationwide
- ❑ Understanding what does not work important as understanding what does (file drawer problem). One of our most striking results is that we find no evidence that social norms impact behaviour (different from similar trials in UK but similar to some in US)