HOW DO TAX PENALTIES AFFECT COMPLIANCE?
EVIDENCE FROM AN EXPERIMENT ON NEW ZEALAND TAXPAYERS

Norman Gemmell
Chair in Public Finance, Victoria University of Wellington
SPECIAL THANKS TO:
(in alphabetical order)

Larissa Bachelor
Ann De Biak
Susan Secker
Melissa Siegel
Keith Taylor
Alison Wright

... and many others in the ‘experiment team’
Outline

1. Penalties and compliance - what do we know?
2. Research questions & models
3. The GST penalty regime
4. The experiment
   - Design: who was involved and how?
   - Summary data
   - Results
5. Compliance conclusions
Do tax penalties encourage compliance?

Slemrod (JEP, 2007, p.38):

“There has been no compelling empirical evidence addressing how noncompliance is affected by the penalty for detected evasion, as distinct from the probability that a given act of noncompliance will be subject to punishment.”

Academic debate on probability of detection has focussed on:

• a ‘crime & punishment’ model? i.e. threat of, and penalties for, detection reduce non-compliance?

• are ‘social norms and stigmas’ also/more important in non-compliance decisions?

• Is ‘3rd party reporting’ the key? (is this ‘surveillance’ in the crime & punishment model?)
Penalties and compliance - what do we know?

**Lubell and Scholz (2001)**

Using experimental evidence - finds introduction of penalties leads to less cooperation (compliance?) among participants:

“Institutions that punish non-cooperation enhance cooperation by initial defectors, but reduce cooperation by initial cooperators”

**Hallsworth et al (2014)**

HMRC (UK) use various letter ‘scripts’ to taxpayer samples to appeal to ‘social norms’. Finds affects tax compliance positively, but how important relative to penalty regime?

**Kleven et al (2014)**

Allowing for 3rd-party reporting gives adequate explanation without social norms (e.g. Denmark):

“... prior audits and threat-of-audit letters have significant effects on self-reported income, but no effect on third-party reported income. All these empirical results can be explained by extending the standard model of (rational) tax evasion to allow for the key distinction between self-reported and third-party reported income.”
3. Research Questions & models
2. Research Questions

**General question:**
Do taxpayer responses to penalties & interest on unpaid tax conform to a ‘crime & punishment’ model: “bigger penalties = better behaviour”?

**Specific questions:**
- "How important is the tax penalty regime for taxpayer compliance?"
  - does the existence of penalties matter?
  - does the size of penalties make a difference?
  - do penalty threats affect actual payments or just intentions?

**Experiment questions:**
1. Does penalty information make a difference to decision to enter instalment arrangement?
2. Who agrees to enter instalments, to ‘pay up’, or to delays further?
3. How do actual repayment outcomes align with initial responses?
To address these research questions...

What we need is a model...

an economic
To address these research questions ...

An economic model needs to explain ...

Taxpayers

- Pay on time
- Don’t Pay

Tax debt

- Add penalties
- Pay now
- Further delay
- Agree instalments

Tax paid

- Tax paid + penalties
- Tax paid + (lower) penalties

Choices & Decisions

An economic model of payment choices
Economic influences on decisions ... to repay/not-repay GST debt

A simple economic model:
- Individuals choose option that minimises NPV of tax liability
- Affected by:
  - IR Penalty and interest regimes
  - Taxpayer characteristics:
    - size of tax liability/debt
    - taxpayer’s knowledge of penalty regime
    - least-cost alternative source of borrowing
    - perceived probability of full repayment
- Experiment ‘treatment group’:
  - New contact by IR
  - New/reinforced penalty information

[Social norms]
## Economic influences on decisions ... to repay/not-repay GST debt

<table>
<thead>
<tr>
<th>Penalty regime</th>
<th>Penalty information</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Interest rate on IR debt</td>
<td>• Prior penalty info sent to taxpayer</td>
</tr>
<tr>
<td>• Fixed penalty</td>
<td>• Phone v letter contact</td>
</tr>
<tr>
<td>• Incremental penalty</td>
<td>• ‘Penalty group’ in experiment</td>
</tr>
<tr>
<td>• Instalment arrangement details</td>
<td></td>
</tr>
</tbody>
</table>

### Taxpayer characteristics

- Alternative cost of borrowing
- Perceived probability of full payment
  - Income levels
  - GST & non-GST debt levels
  - Past experience of IR debt
  - Past defaulting behaviour
  - Individuals v firms
  - firm size - access to credit proxy
  - Bankruptcy risk

### Social norms/environment

- Connections to debtor and non-debtor taxpayers
- Avoidance/procrastination cultures
3. The GST Penalty Regime

**Penalty Regime**

- Late *filing* and late *payment* penalties
- Apply, at various rates, to all tax debt (PAYE, GST, FBT etc)
- Plus use-of-money interest (UOMI), currently 8.4% per year

**GST Late Payment Penalties:**

1. Initial one-off ‘fixed’ penalty of 5% (after 7 days)
2. ‘Incremental’ penalty: 1% per month

**Instalment arrangement (IA):**

- Stops incremental’ penalty (interest charges remain)
- Can be proposed by taxpayer, or selected for offer by IR

⇒ 2015 Annual effective penalty rate: 27.6% (vs 13.8% in IA)

*Effective penalty = (1 + fixed + incremental)(1 + interest rate)*

**marginal penalty rate:** 22.6% (vs 8.8% in IA)
4. The GST Debt Experiment
Specific hypotheses to be tested

Test the high-level hypothesis that:

“The cessation of incremental penalties while under instalment arrangement encourages non-compliant customers to undertake an instalment arrangement.” (IR Evaluation Plan, 2014)

Three Specific hypotheses tested with the experiment:

1. Is IR-initiated contact sufficient to persuade debtors to enter an instalment arrangement?
2. Does being told (qualitatively) that “penalties will be turned off” provide additional inducement to enter instalments?
3. Does being told the magnitude of the penalty rate make a difference to debtors' willingness to enter instalments?
The GST debtors

• **Taxpayers**: ~ 4,400 with GST debts for ‘60-90 days’

• **Experiment**: randomly selected 3 groups (A, B, C) each of 333 taxpayers for telephone contact in August 2014 using 3 alternative ‘scripts’

• **Script**: different penalty information/reminder given before offer of instalment arrangement with future penalties turned off.

• **Outside experiment**: 3,400 ‘business as usual’ (BAU) group act as ‘comparator group’ mixture of contacts: IR-initiated, debtor-initiated & none

• **A, B, C groups**: exclude some debtors, e.g. if debt over $1 million
IR initiate phone call. First seek payment in full. If no success, then:

A: “Would you like to enter into an instalment arrangement”.
   No mention of penalties

B: “Did you know that you are being charged penalties on your debt to IR? If you enter into an instalment arrangement, we’ll stop your penalties.”

C: “Did you know that you are being charged penalties on your debt to IR? If you enter into an instalment arrangement, we’ll stop penalties of 1% per month.”
<table>
<thead>
<tr>
<th>Experiment categories:</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enter Instalments</strong></td>
<td><em>Verbal agreement on terms of instalment agreement</em></td>
</tr>
<tr>
<td><strong>Pay now</strong></td>
<td><em>Agrees to pay (a few pay immediately via credit card)</em></td>
</tr>
<tr>
<td><strong>No positive response</strong></td>
<td><em>No form of agreement with debtor</em></td>
</tr>
<tr>
<td><strong>On-going Negotiation</strong></td>
<td><em>More info requested or letters sent</em></td>
</tr>
<tr>
<td><strong>Miscellaneous</strong></td>
<td><em>Unreachable or unclassifiable response (e.g. debtor initiated penalty discussion)</em></td>
</tr>
<tr>
<td><strong>No response</strong></td>
<td><em>Failed to make any contact with debtor</em></td>
</tr>
<tr>
<td><strong>Not in debt</strong></td>
<td><em>No longer in debt by start of experiment (n = 632)</em></td>
</tr>
<tr>
<td><strong>Control group</strong></td>
<td><em>IR select for no contact (n = 30)</em></td>
</tr>
</tbody>
</table>
Experiment: Summary Data

Total GST debt
The Responses

- Pay now: 36%
- Instalments: 27%
- No positive action: 14%
- Ongoing communication: 15%
- Miscellaneous: 8%
Experiment Results

**Does contact &/or offer of penalty cessation make a difference to payment choices?**

![Bar chart showing probability of selecting choice (logit model)]

Red bar = statistically significant difference from BAU
Experiment Results

Does contact &/or offer of penalty cessation make a difference to payment choices?

Red bar = statistically significant difference from BAU
Does contact &/or offer of penalty cessation make a difference to payment choices?

Red bar = statistically significant difference from BAU
Experiment Results

Does contact &/or offer of penalty cessation make a difference to payment choices?

Probability of selecting choice (logit model)
What else influences payment choices?

### Impact on debt payment choice: Instalments (Relative risk ratios)

<table>
<thead>
<tr>
<th></th>
<th>Instalments</th>
<th>Pay now</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group B</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Group C</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GST Debt ($ Grp)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>ALL Debts (No.; Grp)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Prev. GST Debt (No.; Grp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Debt write-offs (No.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax returns outstanding (No.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prev. Default on Instalment ($)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>IR contact persistance (No.)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Size: Employees (0,1)</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

### Experiment group
- Larger debts
- Bad behaviour
- Known defaulters
- Persistence pays off!
- Size/firms
But – what about ‘final’ outcomes?

- Does the taxpayer follow through on their experiment response option?
- We have data for “end action” as at 15\textsuperscript{th} March 2015 – approx. 6-7 months after campaign

**Questions:**

How many who agreed to instalments or ‘pay now’, delivered on their promises?

Does this differ by penalty group (BAU, A, B, C)?

...Does IR phone contact &/or penalty information ‘scare’ taxpayers into temporary false commitments?
When is an ‘Agreement’ not an agreement?!

Of those who agreed to instalments in Aug. 2014, what % actually in instalments in March 2015?

![Percentage in Instalments (March 2015):](chart)
When is an ‘Agreement’ not an agreement?!

Of those who agreed to ‘pay now’ in Aug. 2014, what % in instalments in March 2015?
When is an ‘Agreement’ not an agreement?!
‘Final’ Outcomes
(Approx. 7 months later)
‘Final’ Outcomes
(Approx. 7 months later)
4. Conclusions

1. Useful additional compliance information from experiments

2. Phone contact encourages taxpayers to make decisions – including encouraging ‘pay now’ and instalment choices

3. Specific magnitude of incremental penalty (and its cessation) has additional instalment choice effect.

Bad news

4. Worryingly, past instalment defaulters seem more likely to agree to instalments

5. Less clear that GST payers follow-through on initial commitments

Good news

6. More IR attempts to contact eventually bring ‘closure’!
HOW DO TAX PENALTIES AFFECT COMPLIANCE?
EVIDENCE FROM AN EXPERIMENT ON NEW ZEALAND TAXPAYERS

Thank You

Go on, give him another 50 volts
Make him pay his taxes