Research into the Impact of Audit on Compliance

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Outcomes Reporting for Government

Over the last 6 years, there has been a general move of New Zealand government departments to outcome reporting rather than reporting on outputs or 'widgets.' This applies to Inland Revenue; in addition to managing audit through the traditional measures of audit performance, IRD is required to report on and hence measure the outcome of audit.

Audit Outcome Challenges

Measuring the outcome of audit is not straightforward. If it were, we and other tax administrations would be doing so in a routine way already. In developing the evaluation of the impact of audit on compliance, we were forced to consider some fundamental questions:

1) What is the desired outcome of audit?
2) How can the outcome be measured?
3) How do you control for external influences such as a change in economic conditions, major media event, etc?

Issue 1: What is the desired outcome of audit?

We decided that the desired goal of audit is to have compliant taxpayers, both those who have been audited and those in the broader community. Audit should result in improved compliance for the noncompliant and in maintained compliance of those who are already compliant. This contrasts to the output-based approach of measuring the number of audits performed, number of hours spent, and the value of discrepancies found.

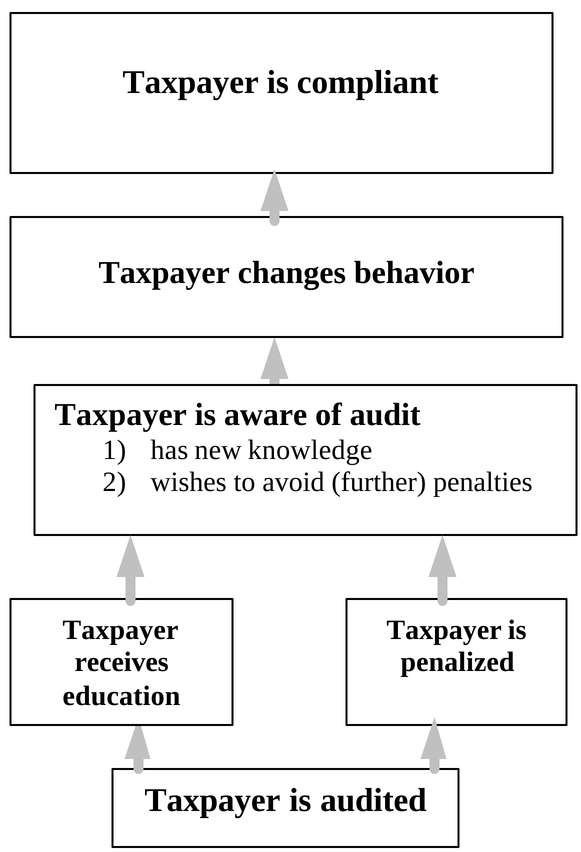
Issue 2: How can the outcome be measured?

Having identified the desired outcome of audit in compliant taxpayers, both immediate and in the longer term, we set about identifying what measures of compliance we can use and whether compliance changes are due to audit activity.

We approached the question through the evaluation technique of developing an intervention logic diagram, linked to the compliance triangle, which we use to assist thinking about customer compliance.

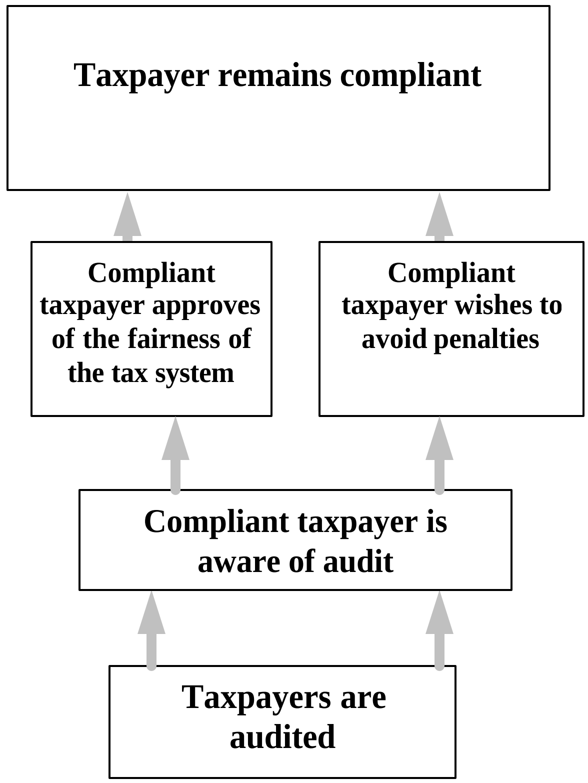
Key elements of the logic are: the taxpayer is aware of the audit, gains knowledge and a desire to avoid penalties, and changes behavior to become more compliant.

Figure 1: ***Audit Intervention logic for a noncompliant taxpayer***



A similar logic applies for a taxpayer who is compliant but is influenced by the audit activity undertaken by IRD. This compliant taxpayer may or may not have had direct experience of audit.

Figure 2: ***Audit Intervention logic for a compliant taxpayer***



A multistranded approach to evaluating the impact of audit on compliance was developed working closely with the audit strategy team who are shaping the direction of audit within New Zealand's Inland Revenue. At last year's conference, the paper *Translating the Compliance Model into Practical Reality* by Tony Morris and Michele Lonsdale included a description of the Audit Strategy[1]

To support the evaluation of the impact of audit on compliance, three major research activities were developed:

1) Investigation of customers' perspectives of the effect of audit on them and their tax practices. This involved qualitative interviews with a small number of auditees and quantitative customer research on the service aspects of audit.

2) Developing and putting in the field a compliance review task, in which a selection of taxpayers who had been audited are reviewed to see whether they have improved in the areas identified by the previous audit as needing improvement.
3) Compliance tracking using indicators formed from administrative data. This third process is the topic of this presentation.

Each of these methods seeks information on changes made as a consequence of audit. The measures differ, as do the time periods the changes relate to. Customer surveys, which provide the customer perspective, are the most immediate, collecting information 2 to 12 months after the close of an audit. The compliance review takes place 15 to 22 months after an audit, whereas the compliance tracking which uses administrative data considers more extended time periods of up to 4 years after an audit.

Indicators of compliance

The end outcome 'Taxpayer is (more) compliant' leads us to consider what compliance is and how changes will be signalled by administrative data. A compliant taxpayer:

1) Provides the necessary correct and complete information to make an accurate assessment of his or her tax position
2) Files this information on time as required, and
3) Pays any tax due by the required time.

Many taxpayers meet most of their obligations most of the time. A small proportion seldom or never meet their obligations, wilfully or inadvertently. Indicators of improved compliance include:

- Reduced late payment penalties
- Improved on-time filing
- Increased tax paid--income tax or GST
- Increased sales and incomes as declared on GST[2] returns.

One problem with these indicators, particularly for income tax, is that it takes time for impacts to show. In New Zealand, the income tax cycle is annual with the majority of returns due 3 months after the end of the accounting period and payment of outstanding terminal tax due 11 months after the end of the accounting period. For tax papers audited in the early part of a tax year, it may be 2 years before they are required to file an income tax return for that period.

A taxpayer must be aware of the audit to change his or her behavior due to an audit. Consequently, we restricted our analysis to 'significant contact' audits. To qualify as a significant contact audit, there was contact between the taxpayer and auditor or a discrepancy was found. As a result, many of those who had experienced technical, 'back room,' desk-based audit activities were excluded from the analysis.

The resulting group of audited taxpayers was still large--12,000.

Issue 3: Attributing cause through use of a control group

Improved compliance may be achieved through implementing new processes or installing computer systems, getting additional help, or simply being more mindful of the requirements. These changes may be unconnected to audit activity or may have been prompted by audit. Improvements may also be due to improved economic circumstances or the removal of difficult requirements.

When we look only at results for audited taxpayers, we cannot say if changes are due to audit or to other changes. A control group was created to examine what was happening to the compliance indicators of taxpayers who had not been audited but who were subject to the same influences. This increases the likelihood that any differences between the groups are due to audit rather than other factors.

The match process

Comparing the audited taxpayers to all other unaudited taxpayers is not suitable as auditees are not chosen at random and differ markedly from the unaudited population. They are chosen according to a risk profile, sometimes individual, sometimes on an industry basis. Hence, due both to the disparity between the audited taxpayers and other taxpayers and to the logistics of working with the large unaudited group, each audited taxpayer was matched to a single similar unaudited taxpayer. The Data Warehouse, which contains administrative data for every taxpayer for a number of years, made the matching and subsequent analysis possible. A range of fields were used to match on. The match fields were:

- Entity type--company, individual, partnership, or trust
- Entity class--e.g., self-employed individual, close company, loss at tributing qualifying company
- NZSIC--New Zealand Standard Industrial Classification, initially at the 5-digit level

- District office--the region of New Zealand the business is located.
- Number of employees
- Use of a tax agent, and
- The first digit of the IRD[3] number, used as a surrogate for the length of time the taxpayer had been registered in the tax system.

The results from the match process were varied as you might expect. For some auditees, thousands of full matches were found; for others, no full matches were found at all. The unaudited taxpayer with the closest IRD number to that of the audited taxpayer was selected when there were multiple matches. When no full match on all criteria was found, the matching criteria were loosened; the number of employees was transformed into groups, the NZSIC was matched at the 4-digit-level and the IRD number was removed from the match criteria. Eventually, a match was found for each audited taxpayer, with the exception of one group, albeit with up to four passes of the data.

The group of taxpayers who were not matched had a relatively rare structure (an entity type of trust) and had been subjected to a high level of audit activity to address particular revenue risks. Consequently, no similar unaudited taxpayers were available to match with this group; hence, they were excluded from the analysis.

Enhancements to matching process

Size indicator--Number of employees as a measure of size is a rather blunt instrument. New Zealand is a country of small businesses, with a large proportion of sole traders or businesses with one or two workers. There is wide variation in turnover and tax paid for entities with the same number of employees. Inland Revenue is investigating other size measures--mainly based on activity level--which may provide a better level of similarity when matching two taxpayers.

Region--The Inland Revenue district office was used as one of the match variables, as we believe that taxpayers' attitudes and behaviors differ from area to area. We want to investigate further how useful this field is. We have concerns that, by matching on both district offices (there are 26) and industry codes, a linkage is made between, for example, the only two chemists in the area which in combination with the audit selection criteria results in the control and audit groups not being comparable. This issue will be explored in any future analysis done by broadening the geographic region.

Results

The results are very much a work in progress. They are the first set of indicators formed in this way. A number of possible improvements have been suggested which will be incorporated in the next set of analysis which will also bring in data for later years. In the following section, I give a flavour of the findings.

There is no one accepted indicator of noncompliance. In this project, we focused on the nonpayment of assessed tax and the level of tax assessed as indicators of noncompliance. A range of compliance indicators were created from administrative data for the two groups, the control group and the audited taxpayers. For audited taxpayers, the indicators were calculated for 2 years pre- and postaudit. For the control group, indicators were calculated for 2 years pre- and post-2001, when the audits were performed on the audited group:

a) The ratio of late payment penalties to the opportunities for payment
b) The change in income tax assessed
c) The change in sales and income recorded on GST returns

Late Payment Penalties

If a taxpayer is late paying assessed tax or never pays it, late payment penalties are applied. The proportion of late penalties were grouped into four groups to aid analysis

Compliant	no LPP
Mainly compliant	ratio of LPP to number of returns <. 3
Less compliant	ratio of LPP to number of returns between .3 and .7
Mainly noncompliant	ratio of LPP to number of returns >.7

For the audited group, as shown in Figure 3, there is an increase in the proportion of taxpayers who are compliant, i.e., pay on time.

There is movement both up and down the triangle, but the net effect is towards greater compliance. When the same analysis is done for the control group, the picture is somewhat different.

The proportion of the control group who are compliant (do not incur late payment penalties) is as expected higher than for those audited. See Figure 4. There is less change in proportions for the control group than for the audited group. Preaudit, the proportion of audited taxpayers who did not have any late payment penalties is 56 percent. Postaudit, the proportion is 63 percent. For the control group, the change is less and in the other direction, 73 percent to 70 percent. Based on this analysis, we conclude that audits do

Figure 3

Preaudit **Postaudit**

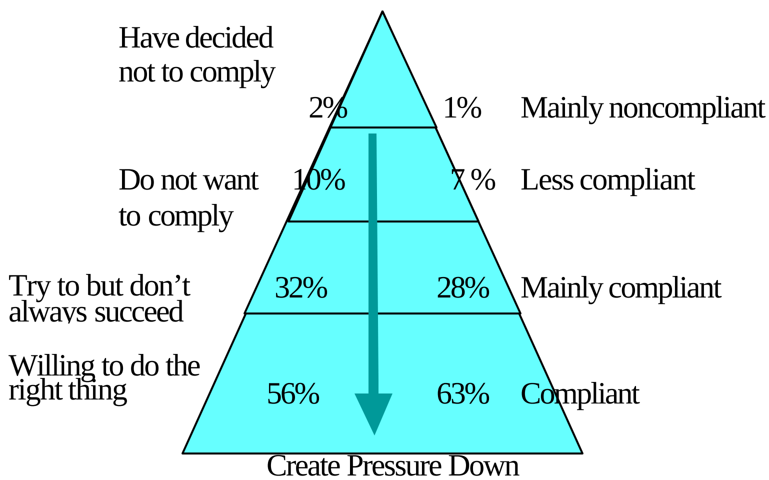
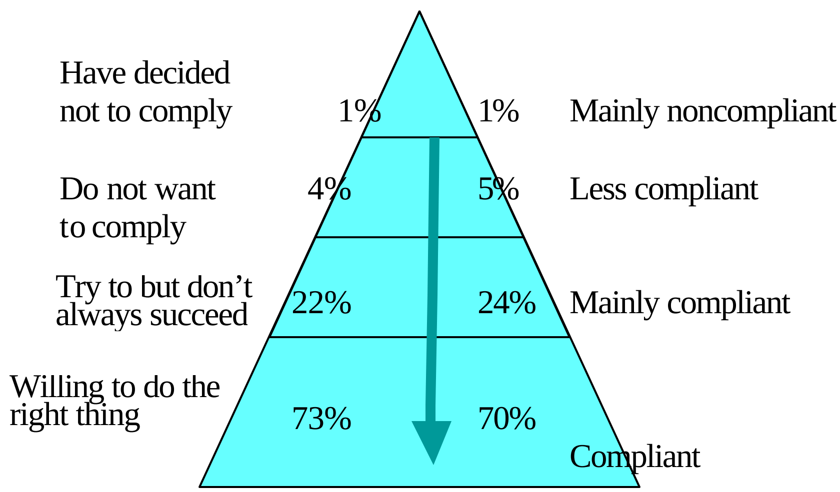


Figure 4 **Control Group**

Pre 2001 **Post 2001**



encourage the auditees to pay on time, although room for improvement still exists.

Other analysis shows that taxpayers tend to perform in line with past behavior. Those who were compliant either remain compliant or if they move, move to the mainly compliant category. Similarly, those who are mainly noncompliant remain noncompliant or move to the less noncompliant.

Tax Assessed

Some would say that paying on time is a minor part of compliance, that what really matters is how much tax is assessed and how close that is to the actual amount which should have been assessed. Unfortunately, we do not have a means of estimating the undeclared tax—apart from performing an audit.

However, for those audited, if there has been underdeclaration of tax in the past, the tax assessed should rise to a greater extent than for the control group.

Analysis of change in income tax assessed showed a variety of movements depending on the explanatory variables used. We have concluded that further analysis is required, including taking into account changes in tax rates for companies which occurred in 2000.

Similarly, results for the sales and income on GST returns did not show consistent patterns. Further exploration is planned.

Conclusions

Use of a control group shows promise as a method for establishing the extent of changes in audited taxpayer behaviors. The proportion of late payment penalties applied suggests that audit does improve compliance. Examination of tax assessed did not suggest that tax assessed rose to a greater extent for auditees than for the control group. Further exploration and analysis of the data with improvements to the methodology are planned for further years.

Endnotes

1 *Translating the Compliance Model into Practical Reality*, Tony Morris and Michele Lonsdale, New Zealand Inland Revenue. February 2005.

2 Goods and Services Tax—charged at 12.5 percent of the value of goods.

3 Every New Zealand taxpayer is issued a unique 8-digit number which is used to administer all his or her activities within the tax system.