

## The Impact of Public Tax-Return Disclosure

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**Abstract.** We investigate the effect of public disclosure of information from corporate tax returns filed in Australia on consumers, investors, and the corporations themselves that were subject to disclosure. We find some evidence that, for firms subject to disclosure, consumer sentiment declines for relatively small private companies, and that investor reaction is negative for both Australian public firms and non-Australian public firms with Australian operations. Regarding firm behavior, we find evidence that some firms took action to avoid disclosure, adjusting their reported income in order to fall below the disclosure threshold. Other firms, that did not avoid disclosure appear to have reported paying more in tax in the year of the disclosure. This implies firms anticipate that disclosure will be costly, consistent with many of our findings surrounding consumer and investor perceptions.

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## **1. Introduction**

The tax affairs of large corporations have recently come under intense scrutiny. One symptom of this scrutiny has been increasing disclosure requirements, both to the public and to taxing authorities. In a recent E&Y survey, approximately 80 percent of tax directors globally report experiencing increased disclosure requirements in the past two years, and virtually none of them expect these requirements to diminish in the future (Ernst & Young, 2011). In this paper, we examine the effects of public disclosure of tax-return information using a recent newsworthy case wherein the Australian Taxation Office (ATO) disclosed certain items reported by large public and private companies on their Australian company tax returns – namely, taxable income before deductions (called total income), taxable income, and tax payable for the tax year ended June 30, 2014. We examine the response of consumers and investors, as well as responses by the corporations themselves that were subject to disclosure.

In many countries, required public financial statement information about taxes does not provide much insight into the information revealed on business tax returns, including about the bottom-line tax liability. Moreover, consolidated financial information often masks the underlying tax status of individual members of the corporate group, reducing the transparency of tax planning at the firm level. For private companies, there is often very little public disclosure at all. Proponents argue that such disclosure increases the transparency of the tax system, may constrain aggressive tax planning and evasion by shaming companies to pay their “fair share,” and might provide incremental information about the profitability of the companies that is valuable to investors. Opponents argue that such disclosure will not deliver greater understanding to stakeholders but will instead create compliance burdens, divulge sensitive information to competitors, and generate confusion. These arguments against disclosure are

generally stronger in the private company setting, where there is limited information already in the public domain. To this point, policy discussions regarding changes in tax disclosure for large firms have proceeded in a near-absence of evidence about the actual impacts of such tax-return disclosure requirements.<sup>1</sup> This paper seeks to fill that void by examining in detail the consequences of a recent tax-return disclosure policy.

In 2013, the Australian legislature began debating making public certain pieces of what was once private information. Amid growing concerns that companies, especially foreign-owned firms operating in Australia (called non-resident companies in the Australian legislation), were implementing aggressive tax strategies that allowed them to escape taxation (in some cases, entirely), the legislature passed the *Tax Laws Amendment (2013 Measures No. 2) Bill 2013*. Specifically, the legislation was motivated by “the Government’s broader efforts to maintain the integrity of Australia’s tax base and crack down on profit shifting” with respect to multinational corporations (Bradbury, 2013). The legislation mandated disclosure of Australian total income, taxable income, and tax payable for large corporate taxpayers in Australia. The law eventually mandated disclosure for both foreign-owned private firms and Australian public firms with total income reported on the Australian company tax return over 100 million AUD, with disclosure occurring on December 17, 2015. After some legislative twists and turns (discussed in detail later), the same requirements went into effect for Australian-owned private firms with total income over 200 million AUD, with disclosure occurring on March 22, 2016.

We use this Australian setting to examine several potential economic and behavioral effects of public disclosure of company tax information, including changes in the perceptions of consumers, and the behavior of investors and the firms subject to disclosure. We start by

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<sup>1</sup> Some attention has been paid to small firms (Bø et al., 2015; Hasegawa et al., 2013) and individuals (Hasegawa et al., 2013). We discuss these papers later in the manuscript.

verifying that this event was newsworthy, and that the Australian public paid attention. We find that the media covered this disclosure event, and that in the period surrounding the event, information searching for some of the disclosed firms increased, especially among smaller firms. There was also attention paid to the disclosure event on social media platforms such as Twitter.

First, we formally investigate how Australian consumers responded to this news. One potential impact of tax-return disclosure is changes in consumer sentiment toward the firm. We use two sources of consumer sentiment data generated from surveys. Our first source is data obtained from YouGov, an international pollster that regularly asks questions about perceptions of brands worldwide. Because of its international focus, brands covered by YouGov tend to be brands owned by large global companies. We use these data to search for changes in brand perception following the disclosure on December 17, 2015. We find no evidence of changes in brand perception, reputation of the brand, or general “buzz” about the brand, in our sample of firms after the disclosure event. This non-result holds after conducting a variety of robustness tests. One possibility is that the disclosure event does not substantially alter the transparency of these firms’ financial affairs given that many of them are public, and have very large, established brands.

To obtain our second source of consumer sentiment data, we designed and administered a survey of Australian consumers surrounding the March 22, 2016 release of tax data for Australian-owned private firms.<sup>2</sup> We measure consumer sentiment using responses to questions about individual views towards these businesses along five dimensions (i) overall impression, (ii) business practices, (iii) firm ethics, (iv) tax practices, and (v) negative news. We find consistent evidence of a decline in consumer sentiment after the disclosure event for firms subject to disclosure, providing empirical support for the notion that tax-return disclosure, and negative tax

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<sup>2</sup> We embarked on this research project too late to administer a survey around the December 17, 2015 disclosure.

publicity in general, can generate (at least short-term) consumer backlash, especially among smaller firms. Given our prior finding that the media covered this event, we also examine the role of media attention in terms of generating a differential consumer response to the disclosure. We find that greater media attention results in a lower perceived level of ethics by consumers, but that this differential response is not conditional on whether or not the firm paid tax in Australia.

Our second set of tests explore investor reaction towards public firms subject to disclosure by examining market returns around the disclosure event itself, and around a relevant legislative date leading up to the disclosure. On December 17, 2015, the ATO made available on its website the total income, taxable income, and tax payable for 1,534 Australian companies, 210 of which are Australian public firms for which we have all available data. We find that among our sample of firms, compared to non-disclosed firms of similar size, disclosed firms had market returns that were 0.003 percentage points smaller in the event window surrounding disclosure, suggesting that the market did anticipate a reduction in firm value as a result of the disclosure. We also examine market returns surrounding April 3, 2013 when the Australian legislature initially considered the disclosure law. We find similar results – returns are lower surrounding this legislative event date for firms (expected to be) subject to disclosure relative to other firms, suggesting that the market anticipated negative consequences of the disclosure. Finally, additional tests confirm similar results in a sample of 320 non-Australian public firms, with material Australian subsidiaries subject to disclosure.

While our previous tests consider the responses of consumers and investors, it is reasonable to assume that, anticipating these responses, firms themselves would respond to disclosure requirements in a variety of ways. Our final set of tests examines the effects of

disclosure on corporate behavior. First, we examine whether firms sought to avoid disclosure, and its associated costs. Using aggregated data prepared for us by the ATO, we examine the distribution around the applicable disclosure threshold of total income (taxable income before deductions) reported on the Australian company's tax return for both private and public companies. We find evidence of an increase in the frequency of reported total income just below the disclosure threshold, which indicates that some firms adjusted their reported income in order to fall below the threshold. This pattern is stronger among private companies, and is concentrated among taxpaying firms in both public and private companies, suggesting that firms are perhaps more concerned about divulging sensitive information to competitors about income, rather than tax payments, pertaining to Australia.

Collectively, our evidence points to several interesting effects of company tax return disclosure on companies as well as their stakeholders. First, consumers appear to respond, at least in the short term, by holding a more negative view towards relatively smaller companies that are subject to disclosure. In some cases, these negative views appear to be a consequence of media coverage, but interestingly, not conditional on the firm's actual tax payments disclosed. Investor response appears to be negative surrounding the disclosure event, suggesting capital markets anticipate that disclosure will be costly. Finally, we find evidence that some firms preempt disclosure by manipulating reported total income on the tax return around the disclosure threshold. This implies firms anticipate that, all in all, disclosure will be costly, consistent with many of our findings surrounding consumer and investor perceptions. Whether these disclosures have any effect on firms' tax planning has yet to be explored.

These results should be of interest to managers, academics, and policymakers. Surveys of tax directors have found that one large fear of a tax director is garnering negative media

attention as a result of tax planning (Graham et al., 2014). Our results confirm the negative reputational consequences of negative tax events being made known to the public. However, our findings add nuance to the prevailing wisdom—we fail to find that disclosure affects well established, public firms. Rather, our strongest results show in private firms. Next, our evidence contributes to the literature on tax disclosure (Bø et al., 2015; Hasegawa et al., 2013; Lenter et al., 2003), and the reputational effects of taxes (Austin and Wilson, 2015; De Simone et al., 2016; Dyreng et al., 2016; Gallemore et al., 2014; Graham et al., 2014; Hanlon and Slemrod, 2009). Finally, policymakers designing or considering disclosure systems should find our evidence useful. The costs we document should be taken into account in the decision to adopt disclosure. Further, if a system of disclosure is adopted, care should be taken so that firms are not so easily able to escape disclosure.

## **2. Background on Tax Disclosure**

### **2.1 Mandatory Tax Disclosure**

There are various types of mandatory tax disclosures, with private tax disclosures the most common (Hoopes, Robinson and Slemrod, 2016). Aside from the general tax return that supports the calculation of taxable income, private tax disclosure takes many forms, from the disclosing of aggressive tax planning strategies (i.e., Schedule UTP in the United States, Form RC312 in Canada, etc.), to disclosing specific differences between book accounting and tax accounting (Schedule M-3 in the U.S.), to requiring the reporting of various items on a jurisdiction-by-jurisdiction basis (as in the OECD’s country-by-country reporting mandate, now adopted in several countries). The evidence on the effectiveness in terms of deterring aggressive tax behavior of these private disclosures is mixed, with many recent mandates being too new to have allowed a full analysis. Whether these disclosure mandates actually increase tax compliance

or otherwise change corporate behavior is yet to be fully seen, and certainly will depend on the details of the specific disclosure mandate. However, in situations in which firms can avoid disclosure, there is compelling evidence that many have done so (Blouin et al., 2010; Hasegawa et al., 2013; Towery, 2015).

While much less common, some countries are also adopting systems of public disclosure of tax-related information. For example, the Extractive Industries Transparency Initiative (EITI) is a worldwide push for expanded disclosure by extractors, including some tax-related information, with more than two-dozen countries being compliant with EITI requirements for disclosure.<sup>3</sup> While these types of disclosures are meant to curb corruption and engender transparency, they may also have an effect on the tax behavior of firms, potentially even facilitating tax collection. For example, Nigeria claims that EITI disclosures helped it recover over \$2 billion in taxes (Balleny, 2013).

While EITI-related disclosures contain tax information, their main purpose was not to increase tax compliance. However, there have been examples of public tax-related disclosure with just such a purpose. Bø et al. (2015) explore the effect of public tax disclosure of individual taxpayers in Norway, which has a long history of disclosing tax filings. Beginning in 2001 anyone with access to the Internet could obtain individual information on other Norwegians' taxable income and income tax liability. Bø et al. (2015) exploit this change in the degree of exposure to identify the effects of public disclosure on individuals' income reporting.

Identification of the deterrence effects of public disclosure is facilitated by the fact that, prior to

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<sup>3</sup> For example, Canada recently passed legislation, the Extractive Sector Transparency Measures Act, that requires public disclosure of taxes paid by oil, gas, and mining firms that are listed on a stock exchange in Canada or does business in Canada. In a similar spirit, the European Union recently enacted similar disclosure requirements for logging and extractive industries, embodied in the EU Accounting Directive rules. These disclosures require the country-by-country reporting of many different types of payments made to governments, including taxes, dividends, royalties, and payments for infrastructure improvement. The U.S. actually implemented similar disclosure requirements under the Dodd-Frank Act (Krauss, 2012), but, these requirements were eliminated before implementation (Cockfield and MacArthur, 2015).



the shift to the Internet in 2001, in some jurisdictions something close to the Internet type of public disclosure existed because tax information was distributed widely through paper catalogues that were locally produced and disseminated. Bø et al. (2015) observe income changes that are consistent with public disclosure deterring tax evasion: an approximately three percent higher average increase in reported income is found among business owners living in areas where the switch to Internet disclosure represented a relatively large change in access.

Another example of public disclosure of tax information is the case of Japan, which, in 2005, eliminated mandatory public tax disclosure of both corporate and individual taxpayers. Hasegawa et al. (2013) take advantage of the abolition and the fact that disclosure applied only to taxable incomes above 40,000,000 JPY (about 400,000 USD). They find strong evidence based on bunching of observations right below the disclosure threshold that, on average, some individuals and businesses actively avoided disclosure. However, the authors do not find evidence that disclosure increased reported business taxable income generally.

## **2.2 The Australian Tax Disclosure Policy**

On April 3, 2013, the Australian government announced that, following public consultation, they intended to legislate a regime of public disclosure of company tax return information. The draft legislation was introduced on May 29, 2013 and on June 29, 2013, the *Tax Laws Amendment (2013 Measures No. 2) Bill 2013* (TLAA 2013) was enacted by an Australian Labor Party government, and applied to tax years ending after July 1, 2013. Under TLAA 2013, all companies filing a company tax return in Australia with total income of 100 million AUD (about 75 million USD) or more in a year would be subject to the disclosure regime, with the ATO releasing its first annual *Corporate Tax Transparency Report* beginning in December

2015.<sup>4</sup> The legislation applied to all companies whether public or private, and whether Australian-owned or foreign-owned.

There were heated arguments on whether such disclosure was warranted. Some felt that firms should disclose the amount of tax they pay and that, absent inappropriate behavior, they should have nothing to fear. Indeed, some commenters noted that “If you’re not doing anything dishonest then you should have no fear of public disclosure (Lanis et al., 2015).” However, others pointed out the costs of disclosure. Some referenced the anticipated media coverage surrounding what is, ultimately, a complex issue, and feared it would turn into “name and shame reporting” that would become costly for firms as they “seek to mitigate the reputational damage of ill-informed reporting (Chartered Accountants Australia and New Zealand, 2015).” Some also feared that the disclosure mandate would make Australia a less favorable business environment, inhibiting future investment. One of the more interesting arguments was that the disclosure of firms paying little in taxes may undermine confidence in the tax system, with individual taxpayers wondering why they paid taxes, while large corporations did not (Chartered Accountants Australia and New Zealand, 2015).

In addition to the more general debate about public disclosure of tax return information, private companies argued resolutely against being subject to disclosure at all. They argued that as a result of accessing public capital markets public firms had chosen a certain level of publicity, such that the ATO disclosure would be relatively costless. Among private firms filing a company tax return in Australia, Australian-owned private firms argued further that, because their immediate owners were Australian individuals as opposed to corporations like their foreign-owned counterparts, the costs of disclosure were even greater. The reason they offered was that, in addition to the commercial sensitivity of business information, the ATO disclosure would

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<sup>4</sup> See <https://www.data.gov.au/dataset/corporate-transparency>.

expose the privacy and personal security of the individual owners, and engender public misunderstanding of total taxes remitted by the individual owners on their individual tax return. Indeed, some argued that the owners of private firms could even face personal abduction once criminals learned of their wealth from the tax reports (Hurst, 2015); others treated such fears (and all other arguments against disclosure) with disdain (Knapp, 2015).<sup>5</sup>

In response to the above arguments, on June 4, 2015 the Treasury released for public consultation a draft amendment to the legislation that would exempt from disclosure all Australian-owned private companies (the amendment did not apply to foreign-owned private companies).<sup>6</sup> Although there was significant disagreement about the exemption within the government, it was enacted on November 12, 2015. Reflecting the disagreement, the exemption was amended on December 3, 2015 to increase the disclosure threshold to 200 million AUD (about 150 million USD) rather than offer a complete exemption. Due to the late nature of the final decision on the amendment, the Commissioner did not include any Australian-owned private companies in the first report released on December 17, 2015, which included information only on 1,534 Australian public and foreign-owned private companies. The March 22, 2016 release included information about 321 Australian-owned private companies.

### **3. Did Anyone Notice?**

We begin our analysis by providing descriptive data exploring whether the Australian public seems to have paid attention to this public disclosure event generally. We examine the number of news articles related to the tax disclosure, as well as Wikipedia page view data for a

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<sup>5</sup> Such assertions about personal safety also shaped the debate over tax disclosure in Japan and in the U.S. Indeed, the infamous Lindbergh kidnapping helped bring down the system of public tax disclosure that once existed in the U.S. (Lenter et al., 2003).

<sup>6</sup> Australian-owned was defined as a company that was not more than 50 percent owned by a foreign shareholder.

select number of companies specifically mentioned in the Australian media surrounding the disclosure. We also casually investigate the social media response to these disclosures.

### **3.1. Media**

While the ATO did make available a website listing of firms and their tax payments, most ordinary Australians likely learned about this event (if at all), and the firms involved, through the media.<sup>7</sup> To pursue the extent of media attention, we search all Factiva news articles that were published in Australia and calculate the number of articles containing the phrase “paid no tax” and, separately, the number of articles about the Australian Taxation Office (using Factiva’s ability to isolate articles about specific entities).

Panel A of Figure 1 documents the results. Most days, there are zero articles that reference “paid no tax”, but there is a clearly discernible increase in these articles, from a fairly consistent baseline of 0, up to 17 on the day of the disclosure, and 13 the day after. There was certainly some media coverage regarding the fact that some Australian firms paid no taxes.<sup>8</sup> Second, we also see a notable increase in the number of articles with the ATO as a subject, up to a maximum of 35 on the day of the disclosure. Articles found had titles such as “Almost 600 major corporations did not pay tax in 2013-14 financial year, Australian Taxation Office says”, and “ATO report shows nearly 600 big companies paid no tax in 2013-14”. While this evidence does not necessarily suggest any consequences of tax disclosure, it does show that the Australian media did find the disclosure episode important enough to cover the event.

### **3.2 Wikipedia Page views**

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<sup>7</sup> Attempts to get web analytic data regarding usage of the raw data from the ATO have been unsuccessful. Of note is that only 8 people are registered as “following” the specific page where the data are posted (<https://data.gov.au/dataset/corporate-transparency>) and, despite having an icon where the URL for that page can be shared via Twitter, we are unable to find anyone that has actually shared the URL via Twitter (<https://twitter.com/search?f=tweets&q=https%3A%2F%2Fdata.gov.au%2Fdataset%2Fcorporate-transparency&src=typd>).

<sup>8</sup> The mean number of articles in December is 1.9, with a standard deviation of 3.94, suggesting that the value on December 17, 2015 of 17 is 3.82 times the mean value for the month.

As an alternative way to document whether the disclosure spurred public interest, we examine the Wikipedia page views for a number of different pages we expect to be affected by the disclosure. First, based on an article in the *Sydney Morning Herald* headlined “Top ten Australian companies paying no tax”,<sup>9</sup> we search for the Wikipedia pages for the top ten largest companies paying no tax. Several of these companies are subsidiaries of foreign corporations, and do not have Wikipedia pages of their own. However, of the 10, we located four companies highlighted in the media as having paid no taxes, and examine the number of times their Wikipedia page was viewed in December 2015. The firms are Qantas, CITIC Resources, Hope Downs and Virgin Australia. Finally, we also examine page views for the Wikipedia page for the Australian Taxation Office and the page “Taxation in Australia”.

We graph the results, using a logarithmic scale, in Panel B of Figure 1. There is no noticeable increase around December 17 for the Wikipedia pages of three Australian companies that have overall many more page views, and are likely already relatively well known—Qantas, CITIC Resources and Virgin Australia. The Wikipedia page for Hope Downs, a mining company, appears to have received a noticeable increase in traffic surrounding the disclosure event in December 2015. The mean number of page views for Hope Downs in December was 20, with standard deviation 12.28. On December 17, Hope Downs had 65 page views, 3.6 standard deviations higher than the mean. We conclude that the disclosure may have encouraged a slight increase in public interest in some companies shown to be non-taxpaying, especially smaller ones, but the effect was modest.<sup>10</sup>

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<sup>9</sup> Here: <http://www.smh.com.au/business/the-economy/top-ten-australian-companies-paying-no-tax-20151217-glpr80.html>.

<sup>10</sup> This result is in contrast to the dramatic increase in Wikipedia searches surrounding some news events in the United States related to tax disclosure (Hoopes et al., 2015). In the Australian context, for example, this pales in comparison to increases in attention to other political events. When Malcolm Turnbull announced, on September 14, 2015, that he would challenge Tony Abbott, Wikipedia pageviews increased dramatically. There were 944 pageviews for Turnbull’s page on September 13, on September 14 there were 264,245 (see the data here:

### 3.3. Social Media

Finally, we examine social media outlets to see what people are saying about the tax disclosures. The tenor of the overall reaction was negative, with many calling for tax payments from firms that had remitted nothing.<sup>11</sup> For example, Panel C of Figure 1 contains examples of Tweets surrounding the zero tax payment by Qantas, and some other Australian firms, singled out in the media for having paid no tax.

## 4. Consumer Response to Tax Disclosure

We next investigate consumer response to the disclosures. One potential cost of the disclosures highlighted by various groups was reputational damage. For example, *The Group of 100*, a government policy oriented organization of Australian CFOs, suggested in a letter to the ATO on April 24, 2013 that the disclosure regime presented “significant risk of reputational damage even for taxpayers with excellent compliance history and a conservative approach to tax risk.” Ernst & Young opined that the disclosure had “the potential to unfairly tarnish the reputation of Australian businesses in the eyes of the public, even if those entities have good standing and relationships with the ATO and other countries’ revenue authorities.”<sup>12</sup>

Presumably any observed stock market reaction, studied below, could be picking up both an expected consumer backlash and a policy backlash if any public outrage engendered tax (or other) policy changes. It could also, as Hanlon and Slemrod (2009) suggest, reflect positively if it impresses investors as to a company’s optimally aggressive tax-planning behavior. Similarly, if

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[https://tools.wmflabs.org/pageviews/?project=en.wikipedia.org&platform=all-access&agent=user&start=2015-09-01&end=2015-09-30&pages=Malcolm Turnbull](https://tools.wmflabs.org/pageviews/?project=en.wikipedia.org&platform=all-access&agent=user&start=2015-09-01&end=2015-09-30&pages=Malcolm%20Turnbull)).

<sup>11</sup> In reality, it is difficult to imagine a positive response on Twitter. It is difficult to fathom a hypothetical tweet such as “@qantas Good job on the zero tax bill. Keep up the good work!” or “@qantas Excellent work managing your tax bill!”

<sup>12</sup> Both the E&Y letter and the ‘The Group of 100’ letter can be accessed here: <http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2013/Transparency-of-business-tax/Submissions>.

corporations take actions to avoid the tax disclosure, or to seem less tax aggressive when disclosed, it may well be due to firms' fears of prompting consumer ire.

Consumer sentiment, or a snapshot of how people feel about brands, is typically measured in surveys. We analyze data from two measures of consumer sentiment. The first is based on a survey conducted on an ongoing basis by YouGov, an international Internet-based market research firm. The second is a survey that we designed ourselves and administered through a third party in Australia surrounding the March 22, 2016 release of tax data for Australian-owned private firms.

The YouGov data showed that consumers had noticed an earlier tax-related episode; claims of tax avoidance leveled at Starbucks in the U.K. in 2012.<sup>13</sup> Figure 2 Panel A shows that Starbucks' Buzz Score (Buzz score is a metric YouGov uses, which combines answers from several survey responses) declined around three key dates of this episode. By June of 2013, when Starbucks remitted its first tax payment related to the allegations, the Buzz Score had bounced back, but was still short of its value prior to the allegations. Figure 2 Panel B shows the social media attention Starbucks received via Twitter the day it announced it was making its first tax payment on June 23, 2013. This provides an example of a firm using social media to let as many consumers as possible know when it is doing something good, perhaps in an attempt to recover from damage done in the past.

#### **4.1 General Consumer Sentiment**

The Starbucks episode suggests that tax-related news can, in some situations, affect consumer sentiment. But did the Australian tax-return disclosures do so for a large group of firms? To answer this question, we first examine changes in consumer sentiment surrounding the December episode of tax disclosure using data obtained from YouGov, which monitors

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<sup>13</sup> For more detail see <https://yougov.co.uk/news/2013/06/26/starbucks-uphill-battle-resuscitate-its-brand/>.

consumer sentiment for thousands of brands across the world on a daily basis. YouGov administers online surveys that first ask participants if they are familiar with a set of brands, and then asks a series of questions regarding the firms they are aware of. We obtained data at the respondent level from YouGov for 230 brands that they covered in Australia from June of 2015 to June of 2016.

While YouGov asks a number of different questions, we focus on the three we deem to be most relevant to our research questions.<sup>14</sup> First, we examine the *Reputation* of the brand. After consumers are asked which firms they are aware of, they are asked two questions—one about which brands they think have a positive reputation, and one about which brands they believe have a negative reputation. From these respondent level data, we obtain *Reputation*, which takes the value -1 if the consumer indicated the brand had a negative reputation, 0 if they did not believe it had a negative or positive reputation (but were still aware of the brand), and +1 if the consumer believed the reputation was positive. Next, we measure the *Impression* of the brand on consumers. YouGov asks consumers “Overall, of which of the following brands do you have a POSITIVE impression?” and, if a specific brand is selected, then we code that brand as having *Impression as +1*. YouGov also asks “Now which of the following brands do you have an overall NEGATIVE impression?” For brands indicated to present a negative *Impression*, we code *Impression as -1*. Finally, if the consumer indicated neither a positive nor negative *Impression*, but was aware of the brand, we set *Impression* to zero. Finally, we measure *Buzz*, which is coded to equal 1 if the consumer indicated that “Over the PAST TWO WEEKS, which of the following brands have you heard something POSITIVE about (whether in the news, through advertising, or talking to friends and family)?”, and coded -1 if the consumer selected

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<sup>14</sup> For example, we do not believe that tax disclosures should materially affect whether consumers are current users of a product, have recently seen advertising for the product, etc.



the brand when given the prompt “Now which of the following have you heard something NEGATIVE about over the PAST TWO WEEKS?”

We then take these three measures and estimate the following regression:

$$\text{YouGov Measure} = \beta_0 + \beta_1 \text{Subject to Disclosure} + \beta_3 \text{Subject to Disclosure} \times \text{December 17, 2015 Indicator} + \text{Respondent Fixed Effects} + \text{Day Fixed Effects} \quad (1),$$

where *YouGov Measure* is either *Reputation*, *Impression*, or *Buzz*. As YouGov data capture consumer sentiment on a daily basis, we define the variable *December 17, 2015 Indicator* as an indicator that is equal to one for December 17, 18 or 19<sup>th</sup>, 2015, and zero otherwise. This allows us to test for any effect on consumer sentiment immediately after the disclosure. *Subject to Disclosure* is an indicator variable equal to one if the firm was subject to public disclosure, and zero otherwise. As a single survey respondent provides responses for many different brands, we cluster the standard errors at the respondent level, and include respondent and day fixed effects. A negative  $\beta_3$  estimate suggests that disclosure reduced the level of *Reputation*, *Impression*, or *Buzz* on the days following the disclosure for disclosed firms, relative to non-disclosed firms. We estimate this regression on the panel of brands covered by YouGov for December 2016, retaining brand/day observations only when at least 30 individuals answered the question.

Table 1 Panel A displays the descriptive statistics for the sample used to estimate model (1). There are 35,439 survey respondent/day/brand observations. Table 1 Panel B tabulates the results of estimating model (1). Across all models, the positive and significant coefficients on *Subject to Disclosure* suggests the brands from firms that were disclosed had a higher mean value of all three dependent variables, consistent with disclosure being based on the volume of sales and brands of companies with more sales having higher reputations. Across all three measures, in Columns 1, 2 and 3, for *Reputation*, *Impression*, or *Buzz*, we estimate a value of  $\beta_3$

that is not statistically different from zero at any conventional level, consistent with disclosure not meaningfully changing public perception for the average firm subject to public disclosure.

In probing our failure to document a change in public perception following the disclosure event, we conduct many untabulated analyses. First, we supplement model (1) with brand fixed effects, taking into account the fixed heterogeneity across brands. Inclusion of these fixed effects does not produce significance on the interaction terms. Next, many of the brands covered by BrandIndex are foreign brands with a presence in Australia (Apple, Microsoft, HSCB, Virgin, etc.), and Australians may simply not have the same sort of perceptions of foreign brands, relative to domestic brands, or expect the same tax behavior. However, when eliminating large, multinational, non-Australian brands from the sample, we continue to fail to find a result. Next, it may be that public perceptions are slower to respond to the change than our initial coding of *December 17, 2015 Indicator* allows. However, if we recode our *December 17, 2015 Indicator* to equal one for the 10 days following December 17<sup>th</sup>, our results are unchanged.

Next, there is some variance in how many people respond to a given survey question regarding a brand on a given day—for some brands, few people may respond on a given day, for some brands, many people. We already partially resolve this issue by limiting our sample to only brands with at least 30 respondents in the day. However, if we use weighted least squares regressions, and weight by the number of survey respondents in the day for the brand, our results are qualitatively unchanged. Finally, it may be the case that mere disclosure is not sufficient to sway public perception. It well may be the case that the public only knows about the disclosure, and the brands disclosed, through the media. To investigate this possibility, we limit our analysis to the set of firms that was disclosed, and examine whether a set of firms specifically mentioned

in the media had systematically different perceptions. We also fail to find any meaningful result in this test.

Our failure to document a result may be for many different reasons. Perhaps the average consumer is not affected by these tax events, but enough consumers are affected to concern firms. Perhaps our broad panel of brands is not, on average, affected, but, across some as-of-yet unidentified cross-section of brands, the impact is meaningful. Perhaps the effect exists, but is small, such that we do not have sufficient power in order to capture the effect. It may also simply be the case that for the large, influential brands that YouGov covers, public perception is not easily shaken by tax disclosure.

#### **4.2 Tax-Specific Consumer Sentiment**

While our results from the YouGov surveys suggest that, among large public brands, there was no change in public perception, these surveys did not include questions specific to tax compliance, or specifically mentioning scandal. Further, we had no control over which brands were included in the YouGov survey, or over the sample size. In this section, we report on the results of a survey that we designed ourselves and administered before and after the March 22, 2016 disclosure of Australian-owned private firms.<sup>15</sup> To measure consumer backlash (and perhaps indirectly policy backlash), we implemented an online survey to ask people in Australia, both before and after the public release of the tax data on March 22, 2016, about their impression of these firms. We administered our survey through TurkPrime, Amazon's online platform.

No respondent was allowed to participate more than once in the survey. The survey was administered on five days, two prior to the March 22 disclosure (March 17 and March 20) and three after (March 23, March 27, April 21). For each survey date, TurkPrime ensured a minimum

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<sup>15</sup> We embarked on this research project too late to administer a survey before and after the December 17, 2015 disclosure.

of 1,400 respondents per every 1-2 days (e.g., March 17 or 18, March 20 or 21, etc.). Thus, the number of responses per firm varies depending on the level of familiarity respondents' have with that firm and whether, conditional upon being familiar with that firm, they were willing to answer all of the questions in the survey.

As a first step, we identified the 30 largest Australian-owned private companies (based on sales, which we use as a proxy for total income, the metric that defines the threshold for disclosure) most likely to be subject to disclosure using Bureau van Dijk's Orbis database.<sup>16</sup> To obtain the largest number of responses per firm, and similar to the YouGov survey methodology, the respondent was initially asked the following question with regard to the list of 30 companies: "Here is a list of Australian companies. Which of these companies are you generally familiar with? (Highlight all that you know of)" From the subset of companies with which they were familiar, and for a maximum of 15 companies, we then asked, "For those companies you are generally familiar with, answer the following questions:

- (1) In your personal opinion, how favorable is your perception of X?
- (2) Assuming you were in a position to need to do business with a company like X, how likely is it that you would do business with X, instead of one of its competitors?
- (3) How ethical do you think X is?
- (4) Do you feel that X pays as much in taxes as it should?
- (5) Have you heard of any recent scandals involving X?"

We measure *General Perception*, *Willing to do Business*, *Ethical Perception*, and *Pays Sufficient Tax* along a seven-point Likert scale according to how respondents answered questions (1) through (4), respectively. A response of one indicates "Not Favorable", "Not Likely", "Not Ethical", or "No" while a response of seven indicates "Very Favorable", "Very Likely" "Very Ethical" or "Yes" depending on the question being asked. We measure *Heard of Scandal* as an

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<sup>16</sup> The ATO shared the anticipated disclosure date—March 22, 2016—with us but did not share the list of Australian-owned private companies that would be subject to disclosure. Thus, we had to use unconsolidated financial accounting data on sales to anticipate firms subject to disclosure in order to administer the survey.

indicator variable equal to one if the respondent indicates that they have heard of a recent scandal involving the company, and zero otherwise. We also collected demographic information such as gender, age, income, and political party affiliation of each respondent.

We then estimate the following regression to explore whether being subject to disclosure affects respondents' views of the firm:

$$\begin{aligned} \textit{Sentiment Measure} = & \beta_0 + \beta_1 \textit{ March 22, 2016 Indicator} + \beta_2 \textit{ Subject to Disclosure} \\ & + \beta_3 \textit{ March 22, 2016 Indicator X Subject to Disclosure} \end{aligned} \quad (2),$$

where *Sentiment Measure* is either *General Perception*, *Willing to do Business*, *Ethical Perception*, *Pay Sufficient Tax*, or *Heard of Scandal*. We use a sample of responses pertaining to 14 firms for which we have sentiment measures before and after the disclosure.<sup>17</sup> The variable *March 22, 2016 Indicator* is an indicator that is equal to one for survey responses collected after the March 22, 2016 disclosure event, and zero otherwise. *Subject to Disclosure* is an indicator variable equal to one if the firm's tax return data was included in the March 22, 2016 disclosure, and zero otherwise. The estimated coefficient on the interaction term in model (2) measures the incremental effect of the disclosure event for firms included in the tax transparency report. As a single respondent provides responses for multiple firms, and responses for multiple firms are collected across multiple surveys, we cluster standard errors by firm and respondent.

As changes in consumer sentiment potentially arise only if consumers take notice of the disclosure event, we explore the role of the media by estimating the following:

$$\begin{aligned} \textit{Sentiment Measure} = & \beta_0 + \beta_1 \textit{ Covered in the Media} + \beta_2 \textit{ Paid No Tax} \\ & + \beta_3 \textit{ Covered in the Media X Paid No Tax} \end{aligned} \quad (3),$$

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<sup>17</sup> The specification varies here slightly from the model used with the YouGov data because of the data available. The YouGov data has over 200 brands, every day for a full year, allowing for an extensive set of date and brand fixed effects. Due to limitations of our surveying procedure, our sample was much more modest, and so a slightly different model is required.

where *Sentiment Measure* is as defined in model (2). Here, we use a sample of responses pertaining to 12 firms that were subject to disclosure for whom we have sentiment measures after the disclosure only, but for whom we capture variation in media coverage and the disclosed amount of tax payable.<sup>18</sup> From our initial set of 30 firms, we replaced 12 firms that were not included in the March disclosure with 12 firms that were included in the March disclosure. Thus we have data only for these 12 firms after the March disclosure. The reason for this change is that only 6 firms from our initial set of 30 were actually included in the disclosure, and we wanted to maximize the inferences one could draw from the three post-disclosure surveys. Our strategy for selecting 12 new firms to estimate model (3) was to choose 6 that were covered in the media (3 that paid tax and 3 that did not pay tax) and 6 that were not in the media (3 that paid tax and 3 that did not pay tax), so that we could learn something about the effect of the media on consumer impressions of firms that were subject to disclosure, and if this varied by whether they paid tax or not.

The variable *Covered in the Media* is an indicator variable equal to one if the firm was highlighted in an Australian news source based on a search of all Factiva articles on March 22, 2016 for either “ATO” or “tax transparency”, and zero otherwise. *Paid No Tax* is an indicator variable set equal to one if the ATO disclosure reveals a zero tax payable for the firm, and zero otherwise. The estimated coefficient on the interaction term in model (3) measures the incremental effect on public sentiment of being covered in the media for firms showing a zero tax liability. Again, we cluster standard errors by firm and survey respondent.

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<sup>18</sup> Based on our survey design, we should have at least some responses for all firms in our sample before and after the disclosure. However, not all 30 firms included in our survey administered prior to the actual disclosure on March 22, 2016 were included in the ATO disclosure. This is the result of the fact that we had to use publicly available financial accounting information about private companies in Australia from Orbis to construct a list of firms for our survey, which did not provide us with accurate enough information about the tax return number on which the disclosure threshold of 100 million AUD was based.

Table 2 Panel A displays the descriptive statistics for the samples used to estimate models (2) and (3). The descriptive data for the sentiment measures - *General Perception*, *Willing to do Business*, *Ethical Perception*, *Pay Sufficient Tax* and *Heard of Scandal* – show the maximum number of responses that we received for each measure (out of total survey participation of 40,249). On average, respondents ranked their general impression of the firm higher (mean of 5.013) than their view on whether the firm paid enough tax (mean of 4.504), with the most variation in responses coming from the latter. The most responses were received for *Heard of Scandal*, which simply asks whether they had heard of a recent scandal involving the company, rather than what they thought about the company. The majority of respondents had not heard of a scandal (mean of 0.155). The mean value for *Subject to Disclosure* of 0.284 reflects our inability to predict which firms would be included in the disclosure (discussed above). The mean values for *Covered in the Media* and *Paid No Tax* approaching 50 percent reflects our strategy for selecting 12 new firms to estimate model (3) (discussed above). The number of observations for these 12 firms across 3 survey dates of 3,454 reflects a lower level of familiarity among respondents relative to the firms that we replaced from our initial set of 30.

We report the results of estimating model (2) in the first five columns of Table 2 Panel B. The estimated coefficient on the interaction term is negative and statistically significant in columns (1) through (4), suggesting that, on average, consumer sentiment declined as a result of the disclosure. In terms of magnitude, results on *Pay Sufficient Tax* are the largest. The coefficient of -0.146 suggests that this sentiment measures declines by 0.146 (compared to one standard deviation of 1.866) more after the disclosure event, and only for firms that are subject to disclosure. In column (5) of Table 2 Panel B, when the independent variable is *Heard of Scandal*, we see that whether the respondent has heard of the firm being involved in a scandal

increases in frequency after the disclosure, but—somewhat surprisingly—not more so for firms included in the March disclosure. This suggests that the media coverage surrounding the disclosure event led consumers to associate the business community more generally with a scandal, but did not single out disclosed firms.

To explore media coverage in more detail, we report the results of estimating model (3) in columns (6) through (10) of Table 2 Panel B. The results in columns (6) through (9) suggest that media coverage of the disclosure event reduces respondents' assessment of how ethical is the firm, but has no effect on their general perception of the firm, their willingness to do business with the firm, or their view on whether the firms pays enough tax. In column (10) of Table 2 Panel B, when the independent variable is *Heard of Scandal*, we find that media coverage has no impact on whether the respondent has heard of the firm being involved in a scandal. This suggests that consumers learned about the disclosure event from other sources, such as social media. Finally, the results show that the effect of media coverage is not conditional on whether the firm was disclosed as having paid tax or not.

## **5. Investor Response to Tax Disclosure**

We have established that the disclosure event itself garnered a substantial amount of media attention and that the March disclosure event appears to have affected consumer sentiment towards the firms disclosed (and even those not disclosed in some cases). A natural next step is to examine to what extent the legislation was perceived by capital markets as having any implications for firm value. In this section, we study stock returns surrounding a legislative event leading up to the December disclosure, and then surrounding the disclosure event itself.

There were several significant dates leading up to the legislation that required the public disclosure on December 17, 2015. First, on February 4, 2013, the Assistant Treasurer issued a



press release suggesting that the government was considering proposals that would mandate public disclosure of tax information.<sup>19</sup> Absent were concrete policy parameters; for example, no mention was made of what firms would be subject to the disclosure. On April 3, 2013, more specific policy recommendations were proposed, and a public comment period was opened. On April 3, specific thresholds were proposed, and it was these thresholds that were ultimately used for the public disclosure mandate. After a comment period, the bill was offered in the House of Representatives on May 29, 2013, and in the Senate on June 17, 2013. After various readings that were moved on, debated on, and ultimately agreed to, the specific legislation was passed on June 29, 2013. For a clean event test, we require a date where new information was available to the market about an identifiable set of firms. Of the above dates, April 3, 2013 appears to be the only date that qualifies. The market reaction on that date for firms subject to the disclosure represents the market's prediction not only about what specific firms would ultimately be subject to disclosure, but also the content of that disclosure, consumer reactions to that disclosure, etc.

We also examine the actual disclosure date, December 17, 2015. Unlike the April 3, 2013 date, on December 17 the firms subject to disclosure were revealed with certainty, and the contents of the disclosure were also revealed. The tax information disclosed on December 17 potentially contained a variety of not mutually exclusive signals to the market. For instance, it contained information about the firm's tax affairs, including the outcome of its tax planning activities. Firms with very low tax rates could be perceived as having successfully tax-planned and avoided cash tax payments. Investors interested in after-tax value might appreciate these planning efforts, and consider this information tradable.

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See <http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2013/005.htm&pageID=003&min=djba&Year=&DocType>.

However, this evidence of tax planning may have also had other implications. For example, as evidenced by our consumer surveys and the media attention that followed the disclosure, this evidence of tax planning may be a negative signal to certain consumers, and may result in lower future sales as consumers refuse to buy products from known tax avoiders. Hanlon and Slemrod (2009) find that the stock market appears to have impounded tax evasion more negatively for consumer-focused firms than for other firms. In the Australian case, it may be that the market discounts the stock price of firms' that have been viewed as engaging in tax planning that lowers tax payments because the market anticipates that this news will reduce consumer demand for products.<sup>20</sup>

To be sure, cash tax payments are low for a variety of reasons. Firms can engage in various tax planning techniques that lower their tax payments, but low-tax firms may simply be unprofitable, or have unused net operating losses from prior years that reduce current year tax payments.<sup>21</sup> While financial accounting information may have revealed some information about this lack of profitability in the past, because the tax and book accounting system in Australia is not perfectly conformed, the tax-return information may contain incremental information about firm profitability. In short, taxable income has long been alleged to contain information usable to financial markets, and the revelation of taxable sales, and taxable income, may result in financial markets changing opinions about firms' values (e.g., Hanlon, 2005; Hanlon et al., 2005; Hanlon and Shevlin, 2005; Lev and Nissim, 2004).

All of the above discussion is predicated upon the ATO disclosure information being new to the market. If, for example, there are other ways that investors and consumers can infer the

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<sup>20</sup> Note that Hanlon and Slemrod (2009) investigate only cases of tax shelter use that was ultimately challenged in court by the IRS, while no tax payment made public by the ATO has been associated with allegedly illegal behavior.

<sup>21</sup> There are also other reasons that the disclosed information may be confusing, such as generating income from tax-favored investments or receiving government subsidies that lower cash taxes paid for legitimate policy reasons.

level of a firm’s tax-planning (i.e., from the firm’s financial statements), then one may expect no change in either volume or price surrounding the ATO disclosures on December 17, 2015. If, on the other hand, the disclosure corrected misperceptions, we may observe market reactions opposite what would be naturally expected (if, for example, market participants had thought a firm engaged in more tax planning than it actually did, as revealed by the ATO disclosure).

### 5.1 Market Reaction Tests: Australian Public Firms

We first examine investor reaction in the population of Australian publicly traded firms. We examine the three-day window around our two event days—April 3, 2013, and December 17, 2015, by estimating the following regression:

$$\begin{aligned} \text{Return} = & \beta_0 + \beta_1 \text{Subject to Disclosure} + \beta_2 \text{Date Indicator} \\ & + \beta_3 \text{Subject to Disclosure} \times \text{Date Indicator} + \text{Industry Fixed Effects} \end{aligned} \quad (4),$$

where *Return* is the three-day buy-and-hold return, centered around each event date. *Subject to Disclosure* is an indicator variable equal to one if the firm was ultimately subject to disclosure. For the tests on April 3, 2013, the market would have to infer from available information whether the firm would be subject to disclosure, for the December 17, 2015 test, this was known with certainty to the market. *Date Indicator* is either *April 3, 2013*, an indicator variable coded one on dates April 2, 3, or 4, 2013 (the three-day period surrounding the announcement of the specific parameters of the legislation), or, *December 17, 2015*, an indicator variable coded one for December 16, 17 and 18 (the three days surrounding the disclosure event). The estimated coefficient on the interaction term,  $\beta_3$ , measures the extent to which returns surrounding our two event dates were different for firms subject to disclosure.

For the April 3, 2013 tests, we restrict the sample period to March 1 – May 31, 2013. For the December 17, 2015 tests, we restrict the sample to November 1, 2015 – January 31, 2016. There are 54,566 (54,114) firm/days in the April 3 (December 17) time period, respectively. To

keep the control and treatment group comparable, we also restrict the sample to firms just on the margin of disclosure—we use only the 100 smallest firms subject to disclosure, and the 100 largest firms not subject to disclosure (based on Compustat SALE in fiscal 2014).<sup>22</sup> This brings the sample down to 7,913 (8,487) firm/day observations for the April 3 (December 17) tests.

The estimation results for the April 3, 2013 tests are tabulated in Table 3 Panel A, columns (1) and (2). In Column (1),  $\beta_3$  is estimated to be -0.010, significant at all conventional levels, suggesting that the market estimated that the disclosure regime would reduce firm value for the disclosed firms by about 1%. In column (2), we replace the dependent variable with *Indicator for Negative Return*, and find that on the date of legislation being proposed, firms that would be subject to disclosure were 10% more likely to experience a negative return.

Estimation for the December 17, 2015 tests are tabulated in Table 3 Panel A, columns (3) and (4). In Column (3),  $\beta_3$  is estimated to be -0.003, a small effect. In contrast to the date of the proposed disclosure, the actual disclosure date appears to have conveyed less negative information to the market about the consequences of tax disclosure. This suggests that perhaps being subject to disclosure at all, rather than the specific information conveyed, was actually what the market was concerned about. In column (4), we again replace the dependent variable with *Indicator for Negative Return*, and find that on the date of the disclosures, disclosed firms were 9% more likely to experience a negative return.

## 5.2 Market Reaction Tests: Foreign Public Firms with Australian Operations

Here, we examine investor reaction to disclosure in a sample of foreign public firms with Australian operations. Recall from Section 2 that Australian subsidiaries of non-Australian firms

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<sup>22</sup> One assumption of the difference-in-difference model is that, but for the disclosure event, *Subject to Disclosure=1* firms have similar return patterns as *Subject to Disclosure=0* firms. Because *Subject to Disclosure=1* firms are measurably larger (the median market value of equity throughout both sample periods of *Subject to Disclosure=1* firms is 470 million AUD, whereas the median market value for *Subject to Disclosure=0* is substantially lower, at 19 million AUD), use of all public firms creates arguably non-comparable treatment and control samples.

such as Target, Apple and Siemens were also subject to disclosure. Therefore, it is possible that these non-Australian firms may have experienced some change in price as a result of the disclosure. The same arguments that can be made for why the disclosure should affect Australian firms also applies to non-Australian firms—the disclosure is a signal of the firms’ tax avoidance strategies and possibility profitability that have meaning for investors and consumers. However, for these non-Australian firms, the relatively smaller scope of their operations in Australia could mitigate any market response we were able to detect in Australian firms.

As an example, subsidiaries of Apple were subject to tax disclosure in Australia. In fiscal year 2014, the Australian Apple subsidiary, Apple PTY LTD had sales of approximately \$4.7 billion in Australia, compared to global consolidated sales of \$183 billion for Apple, so that their Australian sales comprised just 2.6% of their global operations.<sup>23</sup> Whatever implications tax disclosure has for firm value, it is likely the case that because less than 3% of Apple’s global sales are in Australia, the effect of disclosure for Apple should be less than for Australian firms that presumably have more sales in Australia.

To investigate the effect of tax disclosure on the share prices of foreign public firms, we begin with the sample of foreign-owned private firms subject to Australian disclosure. We find 320 of these firms with publicly traded parent companies and with all necessary data. For example, 38 parent companies are headquartered in the United Kingdom, 94 in Japan, etc. We obtain the three-day buy-and-hold return for these parent companies. We also obtain the three-day buy-and-hold return for the primary stock exchange on which the parent firm is traded. We

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<sup>23</sup> Interestingly, Apple failed to disclose the existence of their Australian subsidiary in their 2014 Exhibit 21. See Dyreng et al (2016) for evidence on the determinants of firms’ decisions about whether to disclose subsidiaries.

then calculate the *Abnormal Return*, which we define as the firm's return minus the value-weighted return of all firms listed on the same exchange as the firm.<sup>24</sup>

We start by examining if *Abnormal Return* is different from zero on December 17, 2015 using a simple t-test for the sample of foreign firms. The mean of *Abnormal Return* across all 320 non-Australian firms is -0.0065, and the t-value is 4.069, suggesting that the (negative) average abnormal return was different from zero on that day, albeit small. Next, we count the number of instances on December 17 that *Abnormal Return* is greater than zero. Of the 320 firms in the sample, 199 have *Abnormal Return* larger than zero. Assuming that returns have an equal chance of being zero or below, or above zero, obtaining 199/320 instances of positive returns would occur randomly with probability 1/2, suggesting that the instance of positive returns is significantly greater than zero.

Finally, as a cross-sectional test, we examine whether firms with greater exposure to Australia have lower abnormal returns on the disclosure date by estimating the following:

$$\begin{aligned} \text{Abnormal Return} = & \beta_0 + \beta_1 \text{Percentage Australian Sales} + \beta_2 \text{December 17, 2015} \\ & + \beta_3 \text{Percentage Australian Sales} \times \text{December 17, 2015} \end{aligned} \quad (5),$$

where *December 17, 2015* is an indicator variable coded to equal one for observations on December 17, 2015. *Percentage Australian Sales* is the value of the firm's sales that are derived from its Australian subsidiary, calculated as total income as per the ATO disclosure, divided by the consolidated global sales as per the Compustat Global database. In our sample of 320 firms, on the disclosure date the median firm has 3% of its sales deriving from Australian, and the 75<sup>th</sup> percentile of is 9%. Table 3 Panel B tabulates the regression results. The coefficient on *Percentage Australian Firms* is -0.007, suggesting that if a firm went from having no Australian

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<sup>24</sup> In the Australia-only tests, the abnormal return was defined merely by including all public firms in the regression while including an intercept, as we had a single event date, and all firms traded in the same market.

presence to 100% of its sales in Australia its return on the date of disclosure would be 0.007 lower.

## **6. Analysis of Behavioral Response by Firms**

### **6.1 Escaping Disclosure by Reducing Reported Income**

Thus far, we have examined consumer and investor response to the disclosure regime. Here, we examine whether firms altered their behavior in expectation of the disclosure requirement. One possible dimension of behavioral response is for firms to reduce reported total income on the tax return enough to fall below the reporting threshold. Recall that Hasegawa et al (2013) find evidence of this behavior for small private firms in Japan in response to the Japanese tax-return disclosure regime. This behavior would be consistent with the firm avoiding the potential cost of consumer backlash or the release of sensitive proprietary information.

In order to examine the distribution of reported total income around the disclosure threshold, we obtain assistance from the ATO, as this analysis requires proprietary tax data that is not accessible to non-ATO researchers.<sup>25</sup> Having assistance from the ATO in running these analyses ensures that the threshold for disclosure, line 6S from the Australian Company Tax Return, is the same number used to conduct these analyses. When we examine the distribution of reported total income around the disclosure threshold, we look for evidence of excess mass in the distribution just below the threshold and a “hole” in the distribution just above the threshold. Such a pattern would be consistent with some firms adjusting their reported total income in order to fall below the threshold and thereby avoid disclosure.

Although we examine public and private companies separately, the 100 million AUD

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<sup>25</sup> We attempted this analysis with public financial statement data, but the differences between the financial accounting number and the tax return number are too great for this type of distributional analysis which requires great precision around an exact threshold. Further, our use of publicly available financial accounting data from Orbis on Australian firms performed poorly when we tried to predict which firms would be subject to disclosure (see Section 4.2)

threshold applies to all companies for these tests.<sup>26</sup>

Looking at public companies first, as reported in Figure 3 Panel A, the number of firms reporting between 95 million and 100 million jumps from 34 to 54 between 2013 (the tax year prior to the disclosure) and 2014 (the tax year of the disclosure), while the number between 100 million and 120 million holds fairly steady, going from 162 to 166. Panel B replicates this graph, but, using data from private firms. And, while the difference between 2013 and 2014 for public firms for the bin just under the threshold (95 – 100 million in total income) is positive, this increase is even more dramatic for private firms. Among private firms, the number of firms between 95 and 100 million in total income increase from 42 to 69 from 2013 to 2014, a large increase. In comparison, in the income group 100 to 105, the number of firms actually declines from 2013 to 2014, from 55 to 48. Thus, we observe an increase in the number of firms just below the disclosure threshold, but, the increase seems to be especially concentrated among private firms. This may be because the methods used to decrease total income may be more available to private firms (the cost of manipulation is lower), or, because the perceived benefit of avoiding disclosure is larger for private firms. This alter explanation would be consistent with our analysis wherein we find decreases in public perception for private firms in the March disclosure, but, no such decrease for public firms in the December disclosure.

Finally, we also partition firms by those that Paid No Tax, and, those that Paid Tax. For each of these categories, and for firms in each Total Income bin, we subtract the number of firms in 2014 from the number of firms in the bin in 2013. The previous two panels document the

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<sup>26</sup> When the legislation was passed on June 29, 2013 for the tax year from July 1, 2013 to June 30, 2014, all companies filing a tax return in Australia with total income of 100 million AUD (about 75 million USD) or more anticipated being subject to disclosure. The legislation originally applied to all companies whether public or private and whether Australian-owned or foreign-owned. Discussion of an exception for Australian-owned private companies began on June 4, 2015. So until that point, all companies believed they were subject to disclosure if over the 100 million AUD threshold. By the time the amendment to subject Australian-owned private companies to a 200 million AUD threshold was passed, they would have already filed the tax return pertaining to the March 22, 2016 disclosure.



increase in both public and private firms in the 95M to 100M bin. What is unexpected in Panel C is that the big jump in the 95 million to 100 million range is almost entirely made up of firms disclosed to have paid some tax. This is consistent with taxable firms trying to avoid disclosure in general, regardless of the negative reputation effects of being disclosed as having paid no tax. If taxable firms are profitable in Australia, these firms may be additionally concerned about disclosure of reported income in Australia for competitive reasons.

Looking next at the behavior of private companies, also reported in Figure 3 Panel C, the number of firms reporting between 95 million and 100 million increases from 42 to 69 between 2013 and 2014, while the number between 100 million and 120 million holds relatively steady, going from 167 to 164. With respect to the composition of the jump in the 95 million to 100 million range, taxable firms go from 32 to 52 while non-taxable firms go from 10 to 17. This increase is consistent with private firms anticipating greater costs from disclosure because information was not previously publicly available. Therefore, regardless of whether they pay tax or not, which should be correlated with income, they strive to avoid disclosure of income for privacy reasons.

## **6.2 Changing Taxes Paid**

Another possible behavioral response by companies fearing disclosure is to alter what will become publicly disclosed (this is, perhaps, the intended response by the politicians who created the disclosure legislature). For example, some firms may opt to remit some positive amount of tax, rather than zero tax, thus avoiding the likely headline category of having paid nothing at all. Alternatively, for those firms already remitting a positive tax liability, they may increase taxes paid as a consequence of the more transparent environment. Again with assistance from the ATO, we examine this potential behavioral response using the 100 million AUD

disclosure threshold and, as in our previous tests, look for evidence of differential change in behavior of companies just below versus above the threshold.

The top two lines in Figure 4 Panels A and B plot the proportion of public and private firms, respectively, that report zero tax liability on the Australian company tax return in the 3 years leading up to and including the disclosure year, 2014. In each panel, the black line represents firms just under the disclosure threshold, while the gray line represents firms above the threshold. Only in the private sample do we see patterns consistent with disclosure inducing companies to resist reporting zero tax liability. That is, in Panel B, the upward trend appears to reverse in 2014 for firms subject to disclosure. Public companies appear to behave inconsistent with this hypothesis with the upward trend reversing for firms *not* subject to disclosure.

The bottom two lines in Figure 4 Panels A and B plot the aggregate ratio of tax payable to total income reported on the Australian company tax return over the same time period. Based on these figures, it is unlikely that there is any significant effect of disclosure on the amount of tax paid, conditional on firms having a positive tax liability, suggesting that the legislation may not have actually netted any increase in payments to the Australian Treasury. Overall, it appears that the strongest effect of disclosure on the behavior of firms is to induce more private companies to report a positive tax liability.

## **7. Conclusions**

The tax affairs of companies have come under intense scrutiny by various stakeholders, resulting in increased disclosure requirements both to the public and to taxing authorities. Supporters of more disclosure argue that increased transparency will improve tax compliance, while opponents argue that it will divulge sensitive information that is, in many cases, misunderstood. The public release of corporate tax information in Australia was preceded by a

vigorous debate that of necessity was informed by little or no reliable empirical information about its likely consequences. The analyses described in this paper, which to our knowledge constitute the most comprehensive empirical analysis of corporate public tax disclosure, shed some light on the short-term ramifications of that policy, and may illuminate future policy debates about similar policies (or the elimination of existing policies).

Collectively, our evidence points to several interesting effects of company tax return disclosure on companies as well as their stakeholders. First, consumers appear to respond, at least in the short term, by holding a more negative view towards companies that are subject to disclosure. In some cases, these negative views appear to be a consequence of media coverage, but interestingly, not conditional on the firm's actual tax payments disclosed. Investor response appears to be negative surrounding the disclosure event, suggesting that they perceive disclosure to be costly. Finally, we find evidence that some firms preempt disclosure by manipulating reported total income on the tax return around the disclosure threshold. This implies that firms anticipate that, all in all, disclosure will be costly, consistent with investor's perceptions based on our market test. The longer-term effects of the disclosure regime in Australia, including the impact on tax compliance, will require more time to analyze.

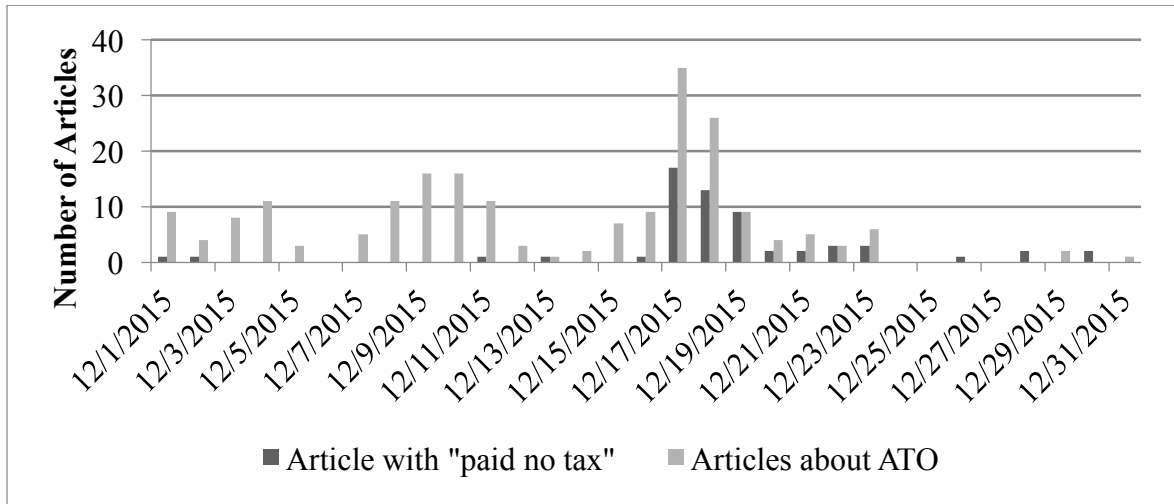
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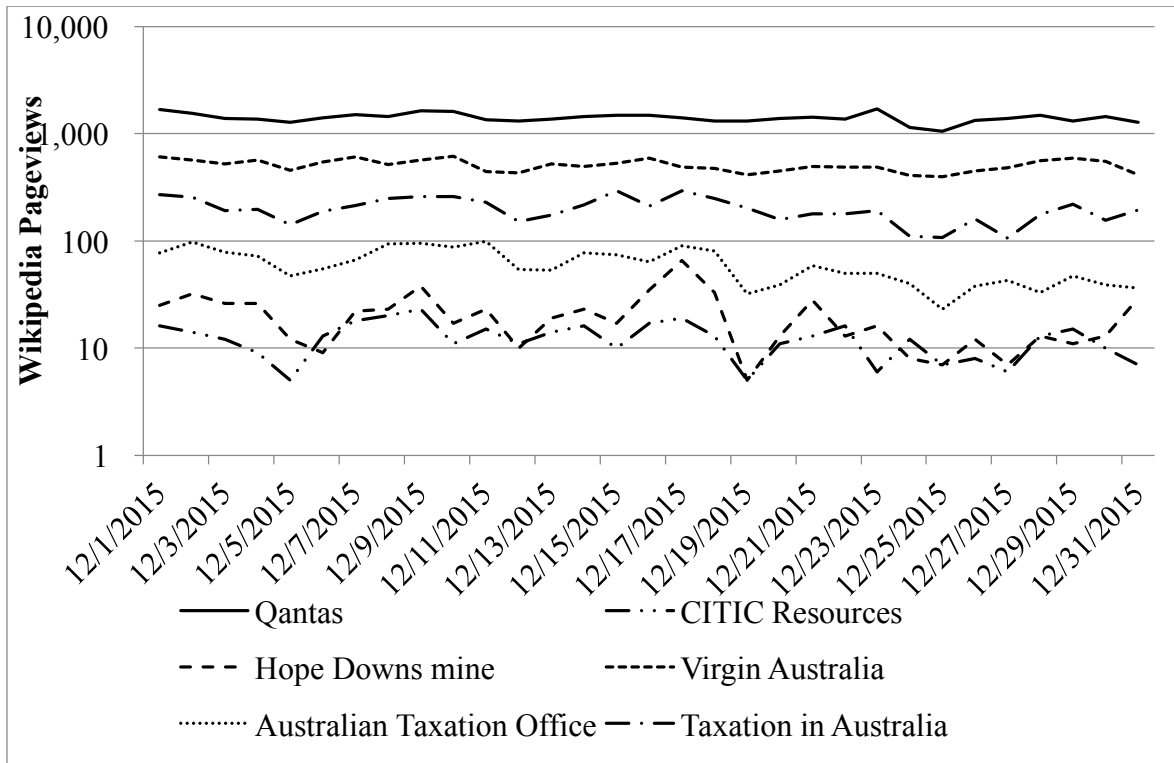
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**Figure 1. Did Anyone Notice?**

**Panel A. Articles in Media**



**Panel B. Wikipedia Pageviews (logarithmic scale)**



**Notes.** Panel A graphs the number of times articles with the phrase “paid no tax” (dark lines) or about the ATO (as determined by Lexis Nexis) occur in the Australian Media, during December 2015. Panel B contains the number of pageviews of six different Wikipedia pages for December 2015.

## Figure 1. Did Anyone Notice (cont.)

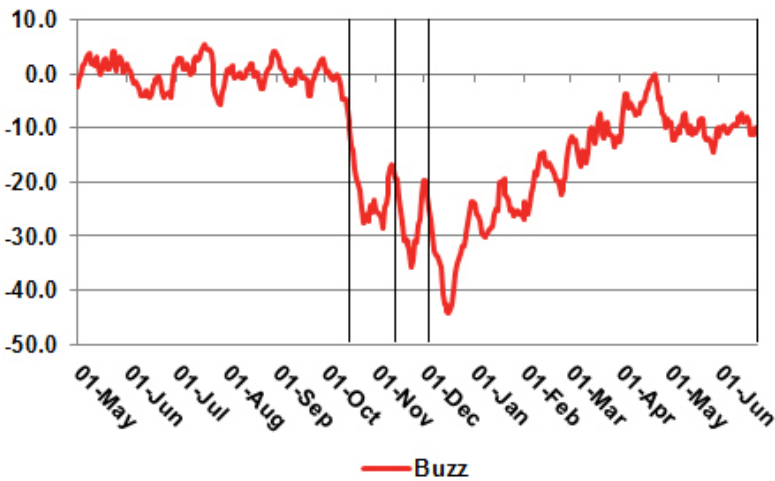
### Panel C. Examples of Twitter Posts About Qantas Tax Payments

- [@abcnews](#) I'd love to see a "boycott list" of sorts. Eg. [@FordAustralia](#) & GM ([@holden\\_au](#)) paid 0 tax while [@Volkswagen](#) paid...
- [@ato\\_gov\\_au](#) So Major Corps make billons and pay no Tax. So stop stealing my \$
- [@exxonmobil](#) how much did you pay the US in income tax this year? [#representationwithouttaxation](#)
- [@Qantas](#) [#auspol](#) zero tax?Are you fair dinkum? criminal you should pay something would you support everyone pays some
- [@Qantas](#) \$1.6 billion turn-around from 2014, \$975 million profit, strongest since GFC according to your annual report, and still no tax?
- [@Qantas](#) [@LendLeaseGroup](#) [@exxonmobil](#) All 3 of these companies paid less in tax in Australia than you and I .. As in zero [#corporate welfare](#)
- [@Qantas](#) [@LendLeaseGroup](#) [@newscorp](#) among companies that didn't pay [#tax](#) in 2013-14 [#ato](#) <http://bit.ly/1Mi3W3r>
- [@Qantas](#) how much income tax did you pay? Oh [#politicaldonations](#)
- [@Qantas](#) If you're the "Spirit of Australia" Pay some\*%\$\*\$& tax eh? [#auspol](#)
- [@Qantas](#) meanwhile Qantas makes 14BILLION in revenue and pays no tax. Shameful.
- [@Qantas](#) the "Australia" airline - \$14.9 billion in revenue in 2014-15 and paid NO TAX in Australia. [#auspol](#)
- [@Qantas](#) - why should Aussies support a company paying zero tax - leaner? Not impressed. [#auspol](#) [#leaners](#) [#MYEFO](#)
- [@VirginAustralia](#) final happy sale? any tax being paid on that? scamming tax evasion criminals. The old pommie with a beard should be ashamed
- Australia: 0% tax, continued: [@Honda](#) [@FordAustralia](#) Interestingly, some companies pay SOME tax on SOME earning, e.g. Apple...
- Australia's biggest companies pay no tax 1: [@Qantas](#), GHP, [@exxonmobil](#), [@LendLeaseGroup](#), Citic Resources [#auspol](#)
- Australia's biggest companies pay NO tax 3. [@VirginAustralia](#), General Motors Australia [#auspol](#)
- Great! How about researching turning record profits into US tax revenue next? [@exxonmobil](#)
- Hey, PM [@TurnbullMalcolm](#) - can you explain why [@exxonmobil](#) Australia earned \$9.6 billion dollars and paid zero tax??
- It seems I paid more tax than [@Qantas](#) [@VirginAustralia](#) [@VodafoneAU](#) [@exxonmobil](#) [@LendLeaseGroup](#) and [@channelten](#) - we all did [#commongood](#)
- Shame on the big corporations who didn't pay tax (or 1%) in 2014! [@qantas](#) [@exxonmobil](#) [@ato\\_gov\\_au](#) [#taxavoidance](#)
- So [@exxonmobil](#) pay no tax on their AU\$9.6b income and the "Christian" [@ScottMorrisonMP](#) says it's welfare cheats that are the problem [#auspol](#)
- Virgin Australia, earned \$4.3 billion and payed no Australian tax [@ScottMorrisonMP](#) [@VirginAustralia](#) [#taxnot](#)
- Vodaphone pays no tax but gets government tender [#taxrort](#) [#auspol](#)
- Wow. [@Stockland](#), [@holden\\_au](#), [@VodafoneGroup](#), [@exxonmobil](#), [@LendLeaseGroup](#) et al paid NO tax in 13/14: [@MayneReport](#)
- You and I pay more tax than 500+ multi-million dollar companies. What the ...? <http://getup.to/L8ndQsokVtrWxIWw9> ... [@GetUp](#) [@ato\\_gov\\_au](#) [@TurnbullMalcolm](#)

**Notes.** Panel C contains examples of tweets sent out about the ATO disclosure, mostly emphasizing firms having paid nothing in tax.

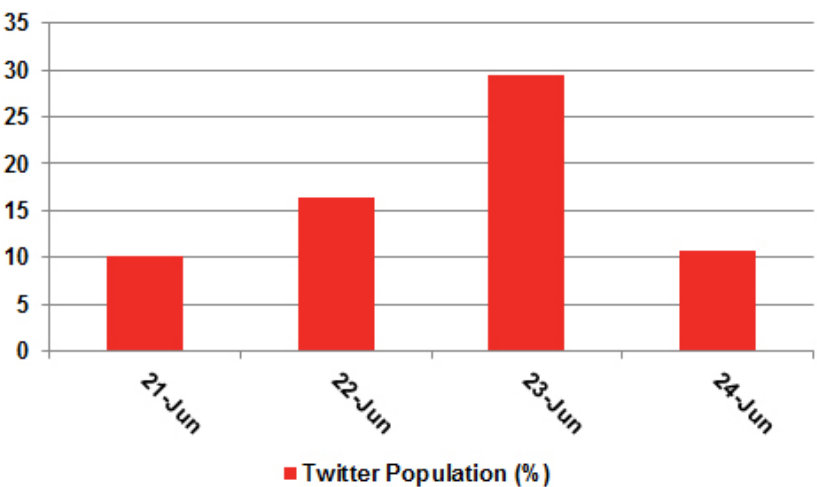
**Figure 2. Illustration of YouGov Data in the Tax Setting**

**Panel A. Starbuck’s Buzz Score in the UK from May 2012 through June 2013**



**Notes.** YouGov’s Buzz score for a brand measures whether people have heard anything positive or negative about the brand in the media or via word of mouth. Specifically, *Buzz Score* is positive (negative) if the consumer indicated “Over the PAST TWO WEEKS, which of the following brands have you heard something POSITIVE (NEGATIVE) about (whether in the news, through advertising, or talking to friends and family)”. Three key dates (indicated by the vertical lines) related to allegations of tax avoidance by Starbucks in the UK are: (1) October 15, 2012: Reuter’s published a news article exposing some of Starbuck’s international tax arrangements, (2) November 12, 2012: Starbucks executives appeared before the Public Accounts Committee; (3) December 6, 2012: Starbucks announced that it intends to remit £20 million U.K. tax, but admits no wrongdoing. Source: YouGov.

**Panel B. Starbuck’s Twitter Usage Surrounding Date of First Tax Payment**

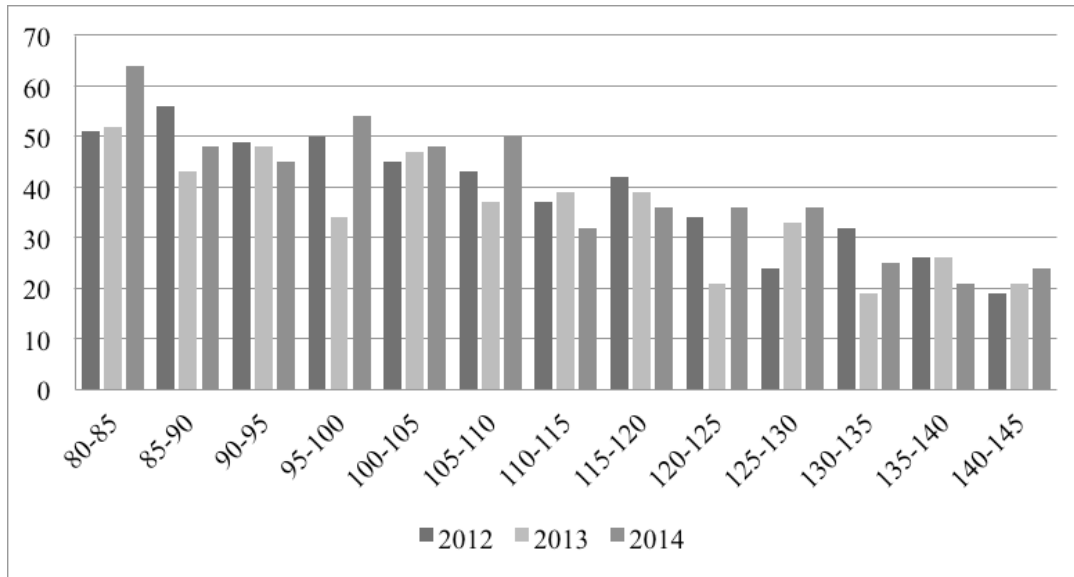


**Notes.** This chart shows increased attention by Twitter users that follow Starbucks surrounding Starbuck’s announcement on June 23, 2013 that it remitted its first £10 million payment related to the in 2012. The increased attention specifically mentioned the word “tax”. Source: YouGov.

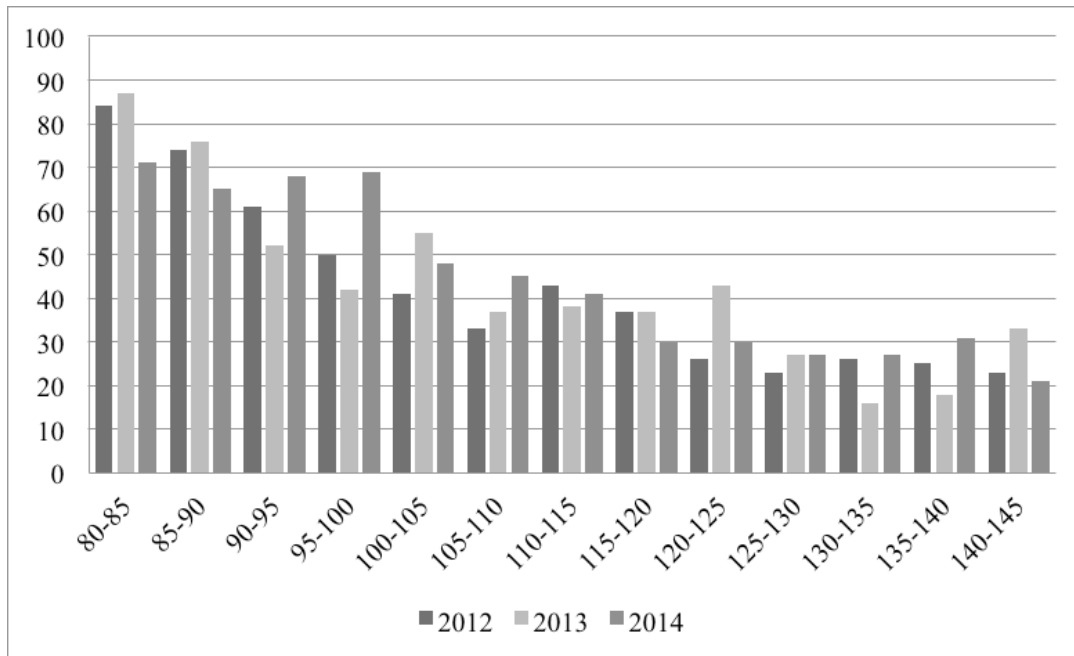


**Figure 3. Analysis of Changes in Reported Total Income**

**Panel A. Public Firms**



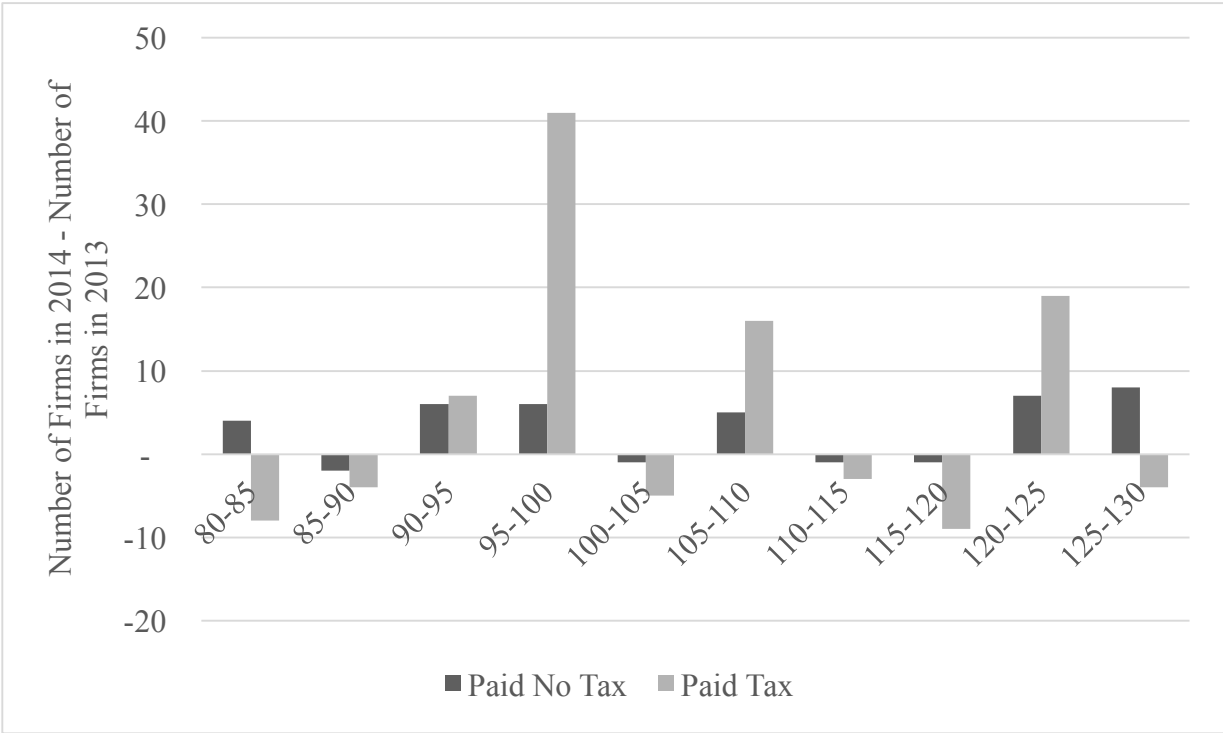
**Panel B. Private Firms**



**Notes.** Panel A (Panel B) graphs the distribution of the number of public (private) firms filing a company tax return in Australia in 2012, 2013, and 2014. Source: ATO.

**Figure 3. Analysis of Changes in Reported Total Income (cont.)**

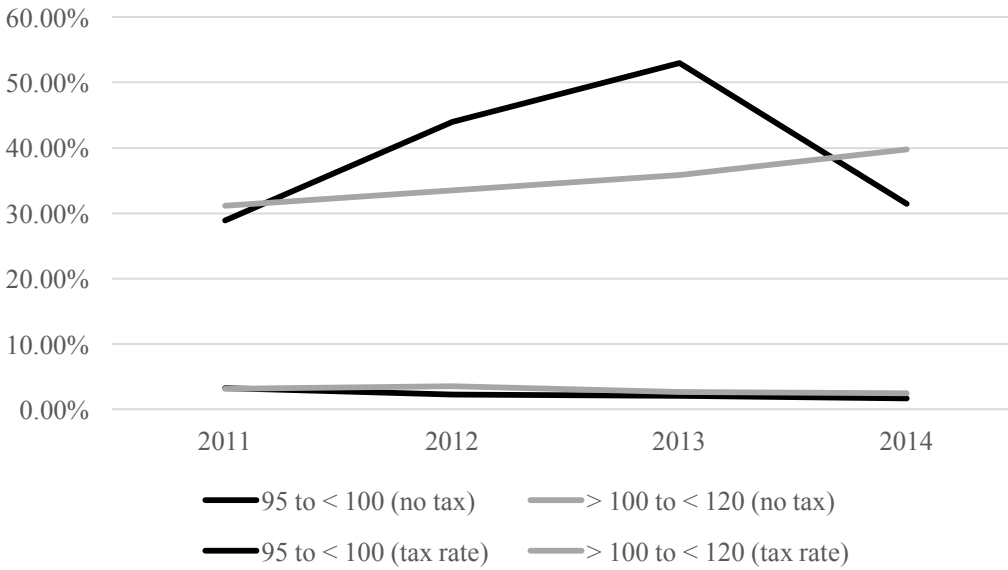
**Panel C. Distribution Separated by Tax Status**



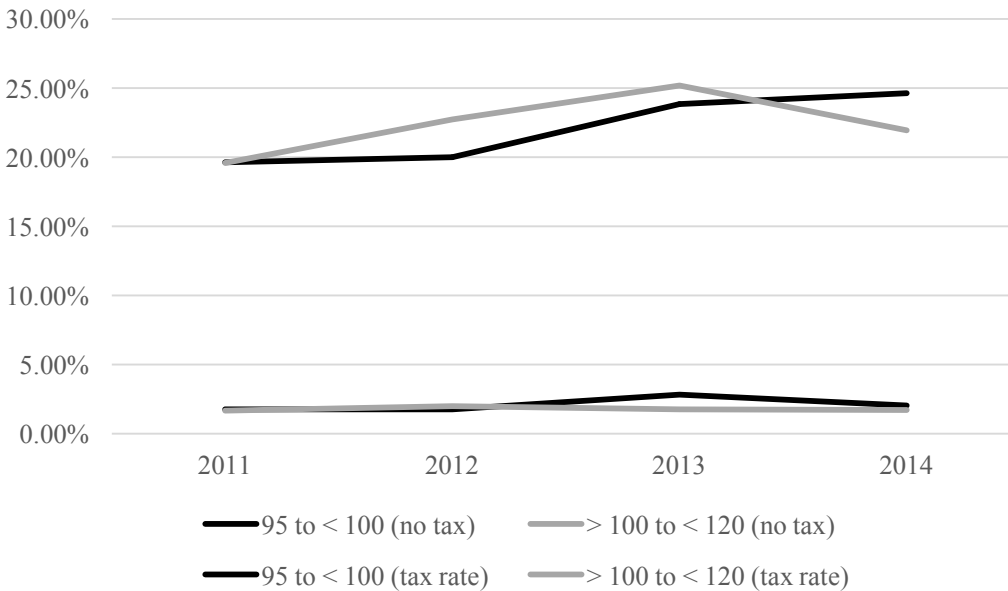
**Notes.** Panel C graphs the difference in the number of firms in each group – Paid No Tax, and Paid Tax – that reported total income in each bin on their Australian company tax return in 2014 versus 2013. Source: ATO.

**Figure 4: Analysis of Changes in Taxes Paid**

**Panel A: Public Firms**



**Panel B: Private Firms**



**Notes.** The top two lines in each panel plot the percentage of firms in each year that report a zero tax liability on the Australian company tax return. The bottom two lines in each panel plot the aggregate ratio of tax liability to total income reported on the Australian company tax return in each year. Black lines represent the sample of firms just under the disclosure threshold. Gray lines represent the sample of firms over the disclosure threshold. Source: ATO.

**Table 1. Consumer Response Measured with YouGov Data****Panel A. Descriptive Statistics**

Variable	n	Mean	S.D.	Min	0.25	Mdn	0.75	Max
Reputation	35439	0.200	0.550	-1.000	0.000	0.000	1.000	1.000
Impression	35439	0.290	0.600	-1.000	0.000	0.000	1.000	1.000
Buzz	35439	0.120	0.440	-1.000	0.000	0.000	0.000	1.000
December 17, 2015 Indicator	35439	0.100	0.310	0.000	0.000	0.000	0.000	1.000
Subject to Disclosure	35439	0.530	0.500	0.000	0.000	1.000	1.000	1.000

**Panel B. Regression Results**

VARIABLES	(1) Reputation	(2) Impression	(3) Buzz
Subject to Disclosure	0.048*** (8.15)	0.030*** (4.68)	0.017*** (3.45)
Subject to Disclosure X December 17, 2015 Indicator	0.020 (0.98)	0.022 (0.99)	0.000 (0.02)
Date Fixed Effects	Yes	Yes	Yes
Respondent Fixed Effects	Yes	Yes	Yes
Respondent Clustering	Yes	Yes	Yes
Observations	35,439	35,439	35,439
R-squared	0.30	0.23	0.25

**Notes.** *Reputation* is -1 if the consumer indicated the brand had a negative reputation, 0 if they did not believe it had a negative or positive reputation (but were still aware of the brand), and +1 if the consumer believed the reputation was positive. *Impression* is -1 if the consumer answers that the brand has a negative impression, 0 if they did not have a positive or negative impression, or (but were still aware of the brand), and +1 if the consumer had a positive impression of the brand. *Buzz* is -1 if over the last two weeks the consumer has heard anything negative about the brand, 0 if had heard nothing about the brand, and +1 if had heard something positive about the brand. *December 17, 2015 Indicator* is an indicator that is equal to one for December 17, 18 or 19<sup>th</sup>, 2015, and zero otherwise. *Subject to Disclosure* is an indicator variable equal to one if the firm was subject to public disclosure, and zero otherwise. In Panel B, standard errors are clustered by respondent, with t-stats displayed in parentheses below the coefficient estimates. \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

**Table 2: Consumer Response Measured with Sentiment Survey Data****Panel A: Descriptive Statistics****Dependent Variables (Sentiment Measures)**

<b>Variable Name</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Standard Deviation</b>
General Perception	32,407	5.013	5.000	1.629
Willing to do Business	31,867	4.860	5.000	1.731
Ethical Perception	29,192	4.813	5.000	1.635
Pays Sufficient Tax	23,231	4.504	5.000	1.866
Heard of Scandal	35,466	0.155	0.000	0.362

**Independent Variables**

<b>Variable Name</b>	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Standard Deviation</b>
March 22, 2016 Indicator	40,249	0.647	1.000	0.478
Subject to Disclosure	40,249	0.284	0.000	0.451
Covered in the Media	3,454	0.472	0.000	0.242
Paid No Tax	3,454	0.415	0.000	0.493

**Notes.** *General Perception*, *Willing to do Business*, *Ethical Perception*, and *Pays Sufficient Tax* are measured along a seven point Likert scale according to how respondents answered questions (1) through (4), respectively. A response of one indicates “Not Favorable”, “Not Likely”, “Not Ethical”, or “No” while a response of seven indicates “Very Favorable”, “Very Likely” “Very Ethical” or “Yes” depending on the question being asked. Question (1): In your personal opinion, how favorable is your perception of X? Question (2): Assuming you were in a position to need to do business with a company like X, how likely is it that you would do business with X, instead of one of its competitors? Question (3): How ethical do you think X is? Question (4): Do you feel that X pays as much in taxes as it should? We measure *Heard of Scandal* as an indicator variable equal to one if the respondent indicates that they have heard of a recent scandal involving the company, and zero otherwise. *March 22, 2016 Indicator* is an indicator variable that is equal to one for survey responses collected after the March 22, 2016 disclosure event, and zero otherwise. *Subject to Disclosure* is an indicator variable equal to one if the firm’s tax return data was included in the March 22, 2016 tax transparency data, and zero otherwise. *Covered in the Media* is an indicator variable equal to one if the firm was highlighted in an Australian news source based on a search of all Factiva articles on March 22, 2016 for either “ATO” or “tax transparency”, and zero otherwise. *Paid No Tax* is an indicator variable that is equal to one if the ATO disclosure reveals a zero tax payable for the firm, and zero otherwise.

**Table 2: Consumer Response Measured with Sentiment Survey Data (cont.)**

**Panel B: Regression Results**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	General Perception	Willing to do Business	Ethical Perception	Pay Sufficient Tax	Heard of Scandal	General Perception	Willing to do Business	Ethical Perception	Pay Sufficient Tax	Heard of Scandal
March 22, 2016 Indicator	0.009 (0.35)	0.004 (0.14)	-0.002 (-0.07)	-0.019 (-0.43)	0.013** (2.42)					
Subject to Disclosure	-0.199 (-0.94)	-0.089 (-0.42)	-0.203 (-0.94)	-0.269 (-1.00)	0.007 (0.10)					
March 22, 2016 Indicator X Subject to Disclosure	-0.081** (-2.37)	-0.092*** (-2.61)	-0.061* (-1.89)	-0.146*** (-3.27)	-0.010 (-1.20)					
Covered in the Media						-0.103 (-0.73)	-0.109 (-1.01)	-0.238** (-2.30)	-0.017 (-0.28)	0.093 (1.33)
Paid No Tax						-0.186 (-1.47)	-0.156 (-1.03)	-0.176 (-1.34)	-0.133 (-0.90)	0.122 (1.27)
Covered in the Media X Paid No Tax						0.113 (0.67)	0.027 (0.15)	0.150 (0.84)	-0.170 (-0.64)	-0.048 (-0.47)
Constant	5.062*** (42.31)	4.886*** (39.71)	4.854*** (43.09)	4.572*** (41.60)	0.138** (2.50)	5.049*** (40.59)	4.982*** (50.80)	5.053*** (62.54)	4.811*** (79.86)	0.170*** (2.62)
Observations	29,884	29,373	26,831	21,122	32,588	2,523	2,494	2,361	2,109	2,878
R-squared	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02

**Notes.** The sample in columns (1) through (5) includes responses pertaining to 14 firms for whom we have sentiment survey data before and after the disclosure. The sample in columns (6) through (10) includes responses pertaining to 12 firms that were subject to disclosure and for whom we only have sentiment survey data after the disclosure. All variables are defined in Panel A. Standard errors are clustered by firm and survey respondent, with t-stats displayed in parentheses below the coefficient estimates. \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

**Table 3. Market Reaction to Tax Disclosure****Panel A: Australian Public Firms**

	(1)	(2)	(3)	(4)
	Three Day Buy and Hold Return	Indicator for Negative Return	Three Day Buy and Hold Return	Indicator for Negative Return
Subject to Disclosure	-0.002 (-1.54)	0.033*** (2.68)	0.002* (1.89)	-0.026** (-2.20)
April 3, 2013	-0.010* (-1.94)	0.046 (1.13)		
Subject to Disclosure X April 3, 2013	-0.010*** (-5.02)	0.099*** (2.69)		
December 17, 2015			0.016*** (8.40)	-0.166*** (-8.42)
Subject to Disclosure X December 17, 2015			-0.003** (-2.10)	0.089*** (6.97)
Sample Period	March 1, 2013 - May 31, 2013		November 1, 2015 - January 31, 2016	
Industry Fixed Effects	Yes	Yes	Yes	Yes
Day Clustering	Yes	Yes	Yes	Yes
Observations	7,913	7,913	8,487	8,487
R-squared	0.03	0.02	0.02	0.01

**Notes.** *Three Day Buy and Hold Return* is the three-day buy-and-hold return. *Indicator for Negative Return* is an indicator variable coded to equal zero if the three-day buy and hold return is negative. *Subject to Disclosure* is an indicator variable coded to equal one if the firm was ultimately subject to disclosure. *April 3, 2013* is an indicator variable coded to equal one for observations falling on April 2, 3 or 4 of 2013. *December 17, 2015* is an indicator variable coded to equal one for observations falling on December 16, 17 or 18, 2015. \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

**Table 3. Market Reaction to Tax Disclosure (cont.)**

**Panel B: Foreign Public Firms with Australian Operations**

VARIABLES	Abnormal Return
Percentage Australian Sales	0.001 (0.72)
December 17, 2015	0.012*** (6.75)
Percentage Australian Sales X December 17, 2015	-0.007** (-2.30)
Firm Clustering	Yes
Observations	18,938
R-squared	0.00

**Notes.** *Abnormal Return* is the three-day buy-and-hold return for the primary stock exchange on which the parent firm is traded minus the value-weighted return of all firms listed on the same exchange as the firm. *Percentage Australian Sales* is the value of the firm's sales that are derived from its Australian subsidiary, calculated as the taxable sales as per the ATO disclosure, divided by the consolidated global sales as per the Compustat Global database. *December 17, 2015* is an indicator variable coded to equal one for observations on December 17, 2015. \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).