Did the 2013 Bail Act increase the risk of bail refusal?

Evidence from a Quasi-Experiment in New South Wales

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Aim: *To estimate the causal effect of the introduction of the Bail Act 2013 (NSW) on the likelihood of being bail refused by NSW bail authorities.*

Method: *Data on bail hearings occurring between 1 January 2012 and 31 January 2017 in NSW were extracted from the NSW Police Force's Computerised Operational Policing System (COPS) and the NSW Justicelink system for use in this analysis. Using a Difference-in-Differences (DiD) setup we compare bail decisions before and after the legislative changes for defendants accused of `minor offences', which carry the general right to bail irrespective of the policy change, with defendants accused of all other non-minor offences. We explore the effect of the change on two separate outcomes: first, the probability that police refuse bail and, second, the probability that the courts refuse bail. We then proceed to employ various sample restrictions in order to estimate how the new legislation may have affected juveniles, women, Indigenous defendants, defendants with no prior convictions, and defendants with at least one prior prison sentence.*

Results: *Overall, we find the legislative change to have increased the probability of the courts refusing bail to a defendant accused of a non-minor offence by 0.8 percentage points. Given the mean pre-policy refusal rate for these defendants was 7.3 per cent; this implies a relative increase of about 11 per cent. The impact of the legislation appears to be greater for high-risk defendants. Defendants with prior prison sentences are now about three percentage points more likely to be refused bail by the courts. In relative terms this represents an increase of 8.5 per cent off pre-policy levels.*

Conclusions: *The NSW Bail Act (2013 (as amended)) increased the probability that the average defendant is refused bail by the courts by about 11 per cent. This represents an additional 1,500 bail refusals by NSW courts in the 2-year post reform period.*

Keywords: *difference-in-differences, bail, remand, NSW Bail Act, show cause amendments, bail refusal, impact evaluation.*

INTRODUCTION

When an individual is charged with an offence by the NSW Police Force, police issue one of four Court Attendance Notices (CANs) to the accused; Bail CAN, No-Bail CAN, Field CAN or Future CAN.[1] Should police elect to issue a Bail CAN and then also refuse bail, the accused is arrested, taken to the police station and held on remand until he/she can be brought to court (usually within 24 hours) for a bail hearing. The court then decides whether or not to continue bail refusal or grant bail to the accused.[2] In making these bail decisions, police and judicial officers implicitly trade-off, on one hand, the liberty of the individual yet to be found guilty, and on the other, the risk to the community as a whole, while maintaining the integrity of the justice system for both. Bail laws provide guidance for bail authorities in making these decisions and can serve to reduce bias and increase consistency in the decision making process (see for example Dhami & Ayton, 2001; Kellough & Wortley, 2002; McGrath, 2016; Stubbs, 2010; Weatherburn & Snowball, 2012).

A BRIEF HISTORY OF BAIL LAWS IN NSW

From the late 1970s to early 2014, bail decisions were made in accordance with the *Bail Act 1978 (NSW)*. This Act was the result of the 1976 Report of the Bail Review Committee which recommended the establishment of a general right to bail for all offences not punishable by imprisonment and a presumption in favour of bail for all imprisonable offences.[3] However, at the time of its enactment, the government of the day came under significant political pressure to make bail more difficult to obtain. This pressure was generated by a high-profile case in which a

bank manager was shot during an armed robbery. As a result, an exception to the presumption in favour of bail was made for armed and violent robbery offences effectively making these offences 'bail neutral'. This exception paved the way for a variety of legislative amendments designed to restrict bail for certain groups of offences.

The first major amendment, the Bail (Amendment) Act 1986 (NSW), removed the presumption in favour of bail for persons charged with possession or supply of commercial quantities of prohibited drugs. Using court data for cases finalised two years prior to the amendments, Weatherburn, Quinn and Rich (1987) investigated bail refusal and absconding rates for individuals accused of these drug offences. Weatherburn et al. (1987) found that individuals charged with offences targeted by the amendments were already more likely to be bail refused before any policy change was made. Moreover, their analysis indicated that of the defendants charged with a drug offence targeted by the reforms that were granted bail, only 10 per cent absconded thus implying a success rate of 90 per cent before any change.

Between this first amendment and 2010, 17 additional amendments were made in order to make bail more difficult to obtain. The frequency of these changes made it difficult (if not impossible in some cases) to estimate the causal effect of each change. Studies that have been done provide some evidence of improvements in rates of absconding, at least for repeat offenders (Fitzgerald & Weatherburn, 2004), however their results also suggest that additional restrictions placed on bail adversely affect vulnerable populations such as Indigenous defendants and juveniles (Fitzgerald & Weatherburn, 2004; Vignaendra, Moffatt, Weatherburn & Heller, 2012).

Snowball, Roth and Weatherburn (2010) provide the most comprehensive evaluation of the *Bail Act 1978*. At the time of their study, offences in NSW fell into one of five categories; 'minor offences' carrying the general right to bail, offences carrying the presumption in favour of bail, offences carrying the presumption against bail, bail neutral offences carrying no presumption either way, and finally, offences where bail could be granted in exceptional circumstances. When making bail decisions, bail authorities were required to consider both the bail presumption associated with the offence and the criteria for bail set out in Section 32 (s.32) of the Act.

Using data from 37,165 cases, Snowball et al. (2010) identified several inconsistencies within the legislation. For example, Snowball et al. (2010) found the risk of bail refusal was substantially higher for individuals charged with a bail neutral offence than for those charged with an offence carrying the presumption against bail. Snowball et al. (2010) explain this finding by noting that offences carrying the presumption against bail are numerically dominated by repeat property offenders while bail neutral offences contain serious violent offences like attempted murder, armed robbery, grievous bodily harm and aggravated sexual assault. As such, when faced with a defendant who would ordinarily be granted bail (as they meet most or all of

the criteria in s.32) but who had been placed into a category with the presumption against bail due to prior offences or their index offence, the courts tend to place a heavier weight on the bail criteria. In support of this proposition, Snowball et al. (2010) find that legal factors pertaining to the characteristics of the case were significantly more relevant for predicting a bail decision than the presumption carried by the offence.

THE 2013 NSW BAIL ACT

Following a review undertaken in 2013 by the NSW Law Reform Commission, the *NSW Bail Act (1978)* was repealed and replaced with a simplified framework which aimed to better align decisions made by police and the courts. *The Bail Act 2013 (NSW)* (hereafter referred to as 'the Act') came into effect on 20 May 2014. The Act replaced the presumption system with an unacceptable risk test. The unacceptable risk test had two stages. In the first stage, the relevant bail authority had to identify whether there is any unacceptable risk that the accused person, if released from custody, would: (a) fail to appear at any proceedings for the offence, (b) commit a serious offence, (c) endanger the safety of victims, individuals or the community, or (d) interfere with witnesses or evidence. If an unacceptable risk was not identified in stage one then the accused is granted bail. If an unacceptable risk was identified, then in stage two the bail authority had to consider whether or not these risks could be mitigated with bail conditions. If the risks could be mitigated, then the accused was to be granted conditional bail; if not, then the accused was refused bail.

Shortly after commencement of the Act, a series of controversial high-profile bail decisions created significant political pressure to strengthen the restrictions on bail.[4] The subsequent Show Cause (SC) amendments altered the Act in two important ways. First, for a particular set of offences, known as the SC offences, bail refusal was set as the default. That is, individuals charged with a SC offence are to be refused bail unless they are able to show cause as to why bail is justified. Second, the unacceptable risk test was altered. The amendments collapsed the assessment of risk into a single stage process, whereby the relevant bail authority identifies whether a risk exists and simultaneously considers whether or not this risk can be mitigated with conditions. If the bail authority identifies an unacceptable risk then bail must be refused. If no unacceptable risk is identified, a release decision must be made (and bail conditions may be imposed to address bail concerns).[5] The SC amendments came into effect on 28 January 2015.

Before continuing it is worth clarifying an important point. Under the old Bail Act there was a general right to bail for defendants accused of a minor offence, although bail could still be refused in cases where the defendant failed to meet the criteria for bail set out under s.32. Similarly under the new Bail Act, there is also a general right to bail for defendants accused of a minor offence, although bail can now be refused if the defendant is deemed to be of an unacceptable risk.[6] The effect of the Act and the amendments (hereafter referred to as the policy change)

on defendants accused of a minor offence therefore hinges on the distinction between the criteria for bail under the old Bail Act and the risk assessment framework under the new Bail Act. This distinction is crucial to our identification strategy and is thus covered in the empirical approach section.

Weatherburn and Fitzgerald (2015) provide a first look at the impact of the changes to bail. Using aggregate police and court data, they examined monthly trends in bail refusals and the remand population. Comparing police and court refusal rates before and after each of the legislative changes they found no evidence of a discernible impact on bail refusal. They did find that the remand population rose substantially after the reforms commenced, but attributed this to an increase in the proclivity of police to detect or charge defendants breaching their bail conditions. Thorburn (2016) employed a similar approach but with an extended time series. He found no significant change in the number (or proportion) of defendants refused bail following the introduction of the new Bail Act. However, when restricting the sample to 'bail eligible' defendants, he found a significant five percentage point increase in the average proportion of defendants refused bail each month.[7]

THE CURRENT STUDY

The true test of any bail law is whether it provides an adequate balance between protecting the interests of an accused person, minimizing the risk to the community as a whole and maintaining the integrity of the justice system. It is impossible to tell, however, whether an accused person refused bail would have committed a new offence, absconded on bail, or interfered with jurors or witnesses if they had been set free. We cannot therefore determine whether the *NSW Bail Act (2013)* has improved the quality of bail decisions. The question of whether changes to bail laws increase the risk of bail refusal, both overall and for certain classes of defendant (e.g. Indigenous defendants) is, however, both testable and of interest to policy makers.

The objective of the current study is to estimate the causal effect of the policy change from the old bail laws to the new bail laws as they stand today. We investigate the effect of this policy change on the probability that each NSW bail authority refuses bail to a defendant at their respective first points of contact for a finalised matter. This study represents an advance on earlier studies of the impact of the *NSW Bail Act (2013)* in that it controls for a range of extraneous factors (e.g. changes in offence and offender profile) that might otherwise account for any increase in the likelihood of bail refusal by police or courts.

METHOD

Data

Data on all bail hearings occurring between 1 January 2012 and 31 January 2017 in NSW were extracted from the NSW Police Force's Computerised Operational Policing System (COPS) and the NSW Justicelink system for use in this analysis.[8] We

restrict this sample to retain only a defendant's first bail hearing for each finalised court appearance. That is, the data only allows us to observe bail decisions for newly charged offences, and as such we are unable to observe or control for breach of bail conditions between hearings within a finalised appearance.[9] After restricting our sample to a defendant's first bail hearing for a finalised matter we are left with 501,212 bail hearings for 318,559 individuals. This data allows us to identify the primary offence each defendant is accused of;[10] when they were charged; the initial bail decision made by police; which Local Area Command (LAC) was responsible for the decision; the date of, and decision made by the courts at the bail hearing; the date on which their matter was finalised; the law part code for the offence;[11] as well as the defendant's, age, gender, Indigenous status, prior criminal history, and number of concurrent charges/offences at their bail hearing. Law part codes contained in these data are used to identify 'minor offences' carrying the general right to bail both before and after the policy change. Unfortunately, using law part codes to determine whether or not an offence is (or would have been) designated as a SC offence is impossible in many cases given available data.[12]

EMPIRICAL APPROACH

The policy package (consisting of both the Act and the SC amendments) has three components of interest. First, the original (two-stage) risk assessment framework initially introduced with the Act, second, the (single-stage) risk assessment framework introduced with the SC amendments, and finally, having Bail Refusal as the Default (BRD) for the specified list of SC offences. Unfortunately, isolating the effect of each component of the policy is impossible given concerns surrounding the implementation of the original risk assessment procedure and the lack of available data on SC offences.[13] Instead we focus on estimating the effect of switching from the old (1978) Bail Act to the new (2013) Bail Act after the SC amendments. Note that this involves us explicitly excluding the nine months between the introduction of the Act and the SC amendments from the analysis.[14]

In order to identify the effect of the policy change on the likelihood of bail refusal we employ a Difference-in-Differences (DiD) approach. Ideally, in order to estimate the effect of the policy change one would compare bail outcomes for comparable alleged offences committed in NSW with offences committed in another state, before and after the policy change. However in the absence of interstate data, the best we can do is compare bail outcomes for a group of defendants who are least likely to be affected by the policy change with all other defendants.

Section 8 of the *Bail Act 1978 (NSW)* identified a group of 'minor offences' for which there was the general right to bail. Section 21 of the *Bail Act 2013 (NSW)* also lists a group of offences for which there is the general right to bail. The offences listed under both sections are almost identical.[15] These offences comprise all those not punishable by a sentence of imprisonment and all offences under the *Summary Offences Act 1988 (NSW)*. In our data, the

vast majority of these offences refer to traffic offences like driving under the influence, speeding and/or driving without a licence. We proceed by identifying defendants accused of a minor offence and then compare bail outcomes for these defendants with all other defendants (accused of a non-minor offence) before and after the policy change.

Our identification strategy is summarised in Equation 1 below.

$$\Pr(y_{ijlct}=1) = \beta_0 + \beta_1 A_t + \beta_2 I_{ij} + \beta_3 D_{ijt} + \boldsymbol{\theta}' \mathbf{X}_{it} + \alpha_j + \Upsilon_l + \delta_c + \lambda_t + \varepsilon_{ijlct} \qquad (1)$$

Where:

y_{ijlct} is a binary variable equal to one if individual i, accused of offence j, by officers from LAC l, whose bail hearing is heard at court c, is refused bail at time t, zero otherwise.

A_t is a binary variable equal to one after the policy change, zero before.

I_{ij} is a binary variable equal to one for defendants accused of a non-minor offence, zero otherwise.

D_{ijt} is a treatment indicator equal to one for individuals charged with a non-minor offence after the policy change, zero otherwise.

$\mathbf{X}_{it}$ is a vector of individual level controls that include an indicator for Indigenous status, the defendant's age and age squared, number of concurrent charges, prior prison sentences and finalised court appearances with at least one proven offence at their bail hearing.

α_j, Υ_l, δ_c and λ_t are offence, LAC, court and time Fixed Effects (FEs), respectively.[16]

ε_{ijlct} is the error term.

We use Equation 1 to investigate the effect of the policy change on two outcome measures. First, a binary variable equal to one if police initially refuse bail to the defendant, zero otherwise. Second, a binary variable equal to one if the courts refuse bail to the defendant at his/her first bail hearing for a finalised case, zero otherwise. What we are interested in is the change in the likelihood being bail refused between defendants accused of a treated (non-minor) offence, and those accused of a control (minor) offence, before and after the policy change. In our model this is reflected by β_3 (which is referred to as the DiD estimator throughout the remainder of this bulletin). β_3 can be interpreted as the average percentage point change in the probability of a bail authority refusing bail as a result of the policy change. We estimate Equation 1 using Ordinary Least Squares (OLS) and report heteroskedasticity robust standard errors clustered at the LAC or court level when estimating the effect of the policy change for the police and court bail decision, respectively.[17]

The identifying assumption underpinning our analysis is that those accused of a minor offence are able to provide a (conditionally) valid counterfactual outcome for individuals accused of a non-minor offence in the absence of the policy change. In order for this to hold, two conditions must be met. The first condition is that defendants accused of a minor offence are unaffected by the policy change. While the general right to bail exists for defendants

accused of a minor offence irrespective of the policy change, bail can still be refused should the defendant fail to meet the criteria for bail under the old Bail Act, or should the defendant fail to pass the risk assessment test under the new Bail Act. Our identification strategy therefore hinges on the similarity between the criteria for bail and the risk assessment test between Acts. Fortunately both pieces of legislation require bail authorities to make near identical considerations when making a bail decision.[18] Second, if defendants accused of minor offences are indeed able to provide a valid counterfactual for defendants accused of a non-minor offence in the absence of the policy change, then the average bail refusal rate for defendants accused of these offences should share common pre-policy trends. The common trends assumption is investigated in the next section.

RESULTS

DESCRIPTIVE STATISTICS

Figure 1 plots two mean monthly series for NSW; first, the proportion of cases in which bail is refused by the police (the solid series) and second, the proportion of bail hearings where bail is refused by the courts (the dashed series).[19] The two vertical lines represent the introduction of the Act and the SC amendments in May 2014 and January 2015, respectively. Three points are of note with respect to Figure 1.[20] First, the likelihood of being bail refused by police is always greater than the likelihood of being bail refused by the courts. The difference remains approximately constant at about 8 percentage points. Second, there is a sharp transient dip in the police refusal rate immediately following the introduction of the Act. Reports from senior police suggest that a lack of familiarity with the risk assessment procedure may have been driving this drop. This suggestion is supported by evidence presented by Weatherburn and Fitzgerald (2015), who note a substantial but temporary decline in use of Bail CANs following the introduction of the Act. Third, it appears that the overall police refusal rate is slightly lower in the period after the policy change compared to the period before the policy change.

Table 1 quantifies this before/after comparison by presenting results from several tests comparing the average refusal rate before and after the policy change.[21] The first Column of Table 1 presents results from a simple mean difference test, the second Column controls for time FEs, and the third Column controls for time, LAC and court FEs. Table 1 is divided into two panels. Panel A) compares average bail refusal outcomes before and after the policy change for the police decision, while Panel B) makes this same comparison for the court's decision. Within each Panel are three Rows, Row 1 looks at all defendants within our sample, Row 2 looks at (control) defendants accused of a minor offence, and finally, Row 3 looks at (treated) defendants accused of a non-minor offence.

The entries in Table 1 (when multiplied by 100) represent the average percentage point change in the risk of bail refusal. For example, in Panel A), Row 1, Column 1, we can see that after controlling for time FEs, the average bail refusal rate is

0.8 percentage points lower in the post-policy period. When we investigate this difference for defendants accused of minor and non-minor offences separately it can be seen that for both types of offences, bail refusal dropped by a significant 0.9 percentage points. After controlling for FEs, there appears to be no significant difference for those accused of a minor offence, while bail refusal for defendants accused of a non-minor offence dropped by 2.3 percentage points. When controlling for LAC, Time and Court FEs, the difference in bail refusal for minor offences remains insignificant and the drop in bail refusal for non-minor offences shrinks to 1.3 percentage points.

Turning our attention to Panel B), overall there doesn't appear to be convincing evidence of a significant difference in the probability of being bail refused by the courts, however once again, when we look at defendants accused of minor and non-minor offences separately, we find no significant difference for those accused of a minor offence, but defendants accused of a non-minor offence are now about one percentage point less likely to be bail refused.

At face value Table 1 appears to support our DiD approach. The control group exhibits no significant difference between periods, while the treatment group is significantly less likely to be held on remand in the post-policy period. However this interpretation of the data is naïve as it makes no effort to account for changes in the risk profile of defendants accused of either or both types of offences. For example if defendants accused of non-minor offences are significantly less 'risky' following the policy change, then the likelihood of bail refusal would be expected to be lower in the post-policy period irrespective of the new legislation. Table 2 investigates this possibility in further detail.

Table 2 examines changes in defendant characteristics after the new Act was introduced. Column 1 investigates the mean age of defendants; Column 2 presents the proportion of defendants with at least one prior prison sentence; Column 3 presents the average number of prior finalised court appearances with at least one proven offence; and Column 4 presents the average number of concurrent offences at the defendant's bail hearing

(including the primary charge).[22] Table 2 contains three panels: Panel A) examines how these characteristics may have changed for defendants accused of any offence, Panel B) examines defendants accused of minor offences and finally, Panel C) examines defendants accused of non-minor offences. Within each Panel are two Rows. Row 1 presents the difference between
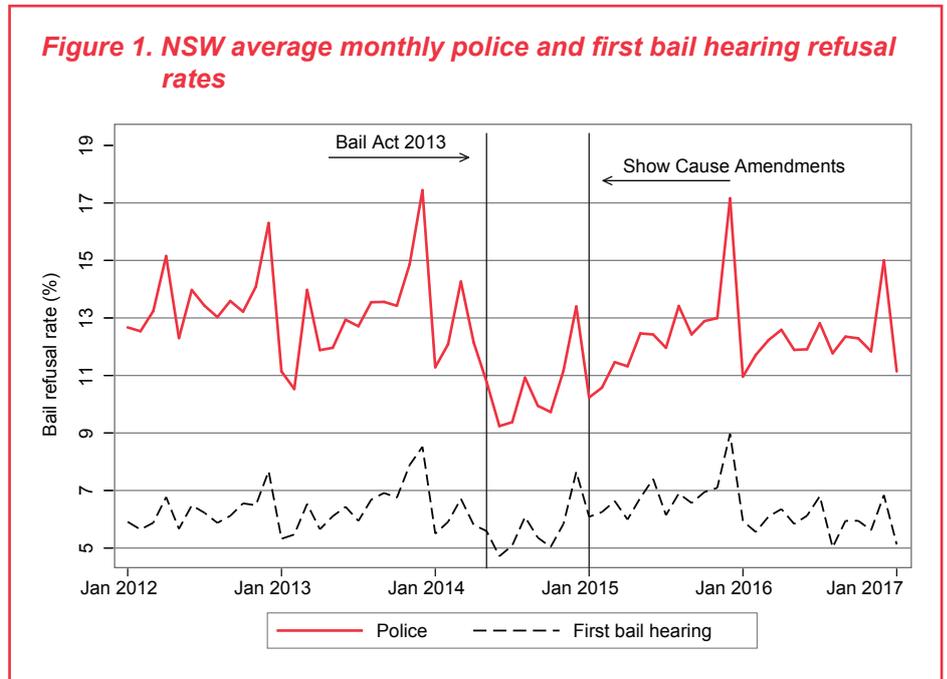
Figure 1. NSW average monthly police and first bail hearing refusal rates

Table 1. Comparison of average bail refusal rates before and after the policy

	(1)	(2)	(3)
			Time, LAC and court FE
	Simple t-test	Time FE	
	Panel A) Police refuse bail		
All offences N=435,067	-0.008***	-0.015***	-0.008*
	(0.001)	(0.005)	(0.004)
Minor offences N=73,763	-0.009***	-0.007	-0.005
	(0.001)	(0.006)	(0.006)
Non-minor offences N=361,304	-0.009***	-0.023***	-0.013***
	(0.001)	(0.006)	(0.005)
	Panel B) Courts refuse bail		
All offences N=435,067	0.001	-0.008**	-0.005
	(0.001)	(0.003)	(0.003)
Minor offences N=73,763	-0.002*	0.004	0.004
	(0.001)	(0.004)	(0.004)
Non-minor offences N=361,304	0.000	-0.013***	-0.008**
	(0.001)	(0.004)	(0.004)
Time FE	NO	YES	YES
LAC FE	NO	NO	YES
Court FE	NO	NO	YES

Note. N = Number of observations, FE = Fixed Effects, LAC= Local Area Command, robust standard errors in parentheses.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 2. Comparison of defendant characteristics before and after the introduction of the Bail Act and the Show Cause amendments

	(1)	(2)	(3)	(4)
	Defendant's age	**Proportion of defendants with at least one prior prison sentence**	**Number of prior finalised court appearances with at least one guilty finding**	**Number of concurrent offences**
	Panel A) All offences			
Δ After	0.722***	0.014***	0.257***	0.004
	(0.038)	(0.001)	(0.018)	(0.004)
Before	32.831***	0.187***	3.513***	1.446***
	(0.026)	(0.001)	(0.011)	(0.003)
N	434,997	435,067	435,067	435,067
	Panel B) Minor offences			
Δ After	1.065***	0.019***	0.427***	0.004
	(0.100)	(0.002)	(0.038)	(0.007)
Before	33.345***	0.119***	2.436***	1.328***
	(0.066)	(0.002)	(0.023)	(0.004)
N	73,745	73,763	73,763	73,763
	Panel C) Non-minor offences			
Δ After	0.661***	0.012***	0.208***	0.002
	(0.041)	(0.001)	(0.020)	(0.005)
Before	32.723***	0.202***	3.740***	1.471***
	(0.028)	(0.001)	(0.013)	(0.003)
N	361,252	361,304	361,304	361,304

Note. N = Number of observations, robust standard errors in parentheses.

***   *p*<0.01, ** *p*<0.05, * *p*<0.1.

the pre- and post-policy averages for each Column and Row 2 presents the pre-policy average.[23]

Column 1 indicates that irrespective of the offence they're accused of, the average defendant is about 33 years old prior to the policy change and 34 after the policy change. Column 2 indicates that the proportion of defendants with at least one prior prison sentence has increased by about 1.4 percentage points (up from 18.7% before the policy change). When we look at defendants accused of minor and non-minor offences separately, we can see that the post-policy increase in prior prison is larger for those accused of a minor offence (a 1.9 percentage point increase from 11.9%) compared to those accused of a non-minor offence (a 1.2 percentage point increase from 20.2%). That said, even after the policy change those accused of a non-minor offence are still almost twice as likely to have received a prior prison sentence. From Column 3 we can see that the average defendant has significantly more priors following the policy change (an increase from about 3.5 to 3.8) but this difference seems quite small in absolute terms. The increase for those accused of a minor offence is larger than for those accused of a non-minor offence, but again even after the change those accused of a non-minor offence are still substantially more risky. Column 4 indicates that the average defendant, regardless of which offence they're accused of, has about one concurrent

offence at their bail hearing. There appears to be no significant post-policy difference for defendants accused of either offence type.

Table 2 allows us to draw the following three conclusions. First, defendants accused of a non-minor offence are more risky than their control counterparts. Second, while both types of defendants are more risky in the post-policy period, the size of the increase is larger for those accused of a minor offence. Finally, although statistically significant, the increase in risk profile of our defendants is consistently small (in absolute terms). Taken together, Table 2 allows us to rule out the possibility that a decrease in the risk profile of treated defendants is driving the results shown in Table 1.

COMMON TRENDS

Before presenting estimates from our DiD regressions, we first turn our attention to the assumption underlying these estimates. Figures 2 and 3 explore the validity of the common trends assumption. Figure 2 looks at the police bail decision while Figure 3 looks at the courts bail decision. Both Figures plot the average refusal rate for minor offences (the dashed line) and non-minor offences (the solid line). Introduction of the Act and the SC amendments are given by the two vertical lines at May 2014 and January 2015, respectively.

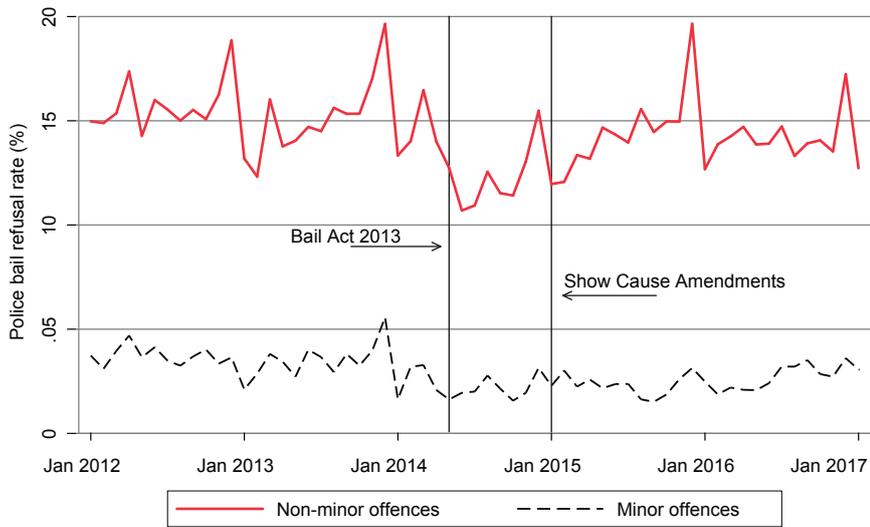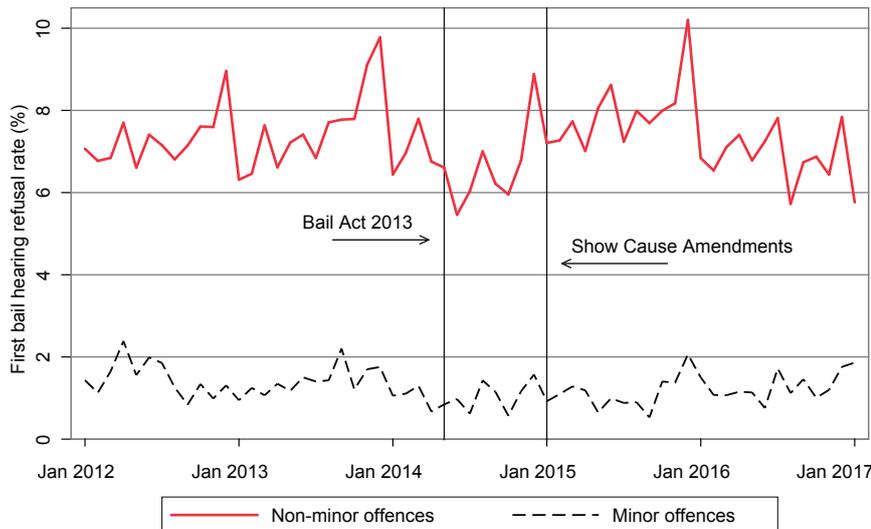*Figure 2. Common trends assumption for police refusal rate*

Figure 3. Common trends assumption for court refusal rate

Four points are of note with respect to Figure 2. First, there appears to be a consistent difference between refusal rates of approximately 12 percentage points. Intuitively this makes sense as we are, by construction, comparing refusal rates for offences based on severity. Second, neither series appears to be following an upward or downward trend. Moreover, the two series appear to share common pre-policy trends. Third, the treated (non-minor) offence series appears to be lower in the post-policy period. This is consistent with Figure 1 and Table 1. Finally, one problematic point worth noting is the fact that the minor offence series appears to change following the introduction of the policy. The series appears to decrease in both levels and volatility. If the

policy somehow induced police to grant bail more often (and more consistently) to defendants accused of a minor offence, then this would induce us to overestimate the impact of the policy on the probability of police refusing bail. It is impossible to determine whether or not the change in police bail decisions is a result of a change in police practice resulting from the policy or an offence specific idiosyncratic shock but the relative stability of the minor offence series from Figure 3 suggests that it is likely the former. In the discussion we explore possible causes for the apparent change in police behaviour toward those accused of a minor offence.

Figure 3 is more promising for our analysis. Both series appear to share common pre-policy trends, the pre-policy difference in levels remains constant at approximately six percentage points, the minor offence series appears to be unaffected by the policy change and finally, the court refusal rate for non-minor offences appears slightly higher in the post-policy period. Figure 3 supports both our identification strategy and the proposition that the policy has increased the likelihood of the courts refusing bail to a defendant at his or her first bail hearing.

OVERALL IMPACT ON BAIL DECISIONS

Table 3 presents DiD estimates for the overall impact of the policy change. In Row 1 we estimate the effect of the policy change on the probability that the defendant is refused bail by police, and in Row 2 we estimate the effect of the policy change on the probability that the courts refuse bail at the defendant's first bail hearing. Table 3 presents five DiD estimates for each outcome measure. Column 1 presents the DiD coefficient from Equation 1 without controlling for defendant characteristics or any Fixed Effects (FEs). Neither coefficient is significant, indicating that the policy has had no significant effect on either bail decision. In Column 2 we build on this by controlling for defendant characteristics. The coefficient for the police decision is now slightly positive, but still insignificant. The size and sign of the coefficient for the court bail decision is carried over from Column 1, but now the estimate is significant at the 10 per cent level. When we control for offence FEs in Column 3 the size and significance of our estimates increase substantially. The policy change appears now to have increased the probability of the police and courts refusing bail by 0.7 percentage points each.

Table 3. Difference-in-Differences estimates for the overall effect of the Bail Act and Show Cause amendments on bail refusal

Outcome variable in Rows	(1) Basic DiD	(2) + Controls	(3) + Offence FE	(4) + Time FE	(5) + Court and LAC FE
Police refuse bail	0.000	0.001	0.007***	0.006***	0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Courts refuse bail	0.004	0.004*	0.007***	0.007***	0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
N	435,067	434,994	434,994	434,994	434,994
Individual controls	NO	YES	YES	YES	YES
Offence FE	NO	NO	YES	YES	YES
Time FE	NO	NO	NO	YES	YES
Court FE	NO	NO	NO	NO	YES
LAC FE	NO	NO	NO	NO	YES

Note. N=Number of observations, DiD = Difference-in-Differences, FE = Fixed Effects, LAC= Local Area Command, cluster robust standard errors in parentheses, clusters refer to LACs in Row 1 and courts in Row 2, there are 76 LACs and 147 courts in each specification.

*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

The sign, significance and approximate size of these estimates are retained after controlling for time FEs (in Column 4) and then court and LAC FEs (in Column 5).

Our preferred specification (Column 5) suggests that the policy has increased the mean probability of the police refusing bail to a defendant accused of a non-minor offence from its pre-policy average of 15.2 per cent to 16 per cent. This change represents an absolute difference of 0.8 percentage points (as reported in Table 3), but a relative increase of about 5 per cent. Column 5 also indicates that the policy has raised this same probability for the courts by 0.8 percentage points from a pre-policy average of 7.3 per cent to 8.1 per cent. Again when interpreted as a relative change, this 11 per cent increase is actually quite large.[24]

A battery of robustness checks (see Part A of the Appendix) calls the validity of our estimates for the police bail decision into question, however these same checks largely support our estimates for the courts bail decision.[25] The issue of the police bail decision for defendants accused of a minor offence carries over into the next section.

IMPACT ON SELECTED GROUPS OF DEFENDANTS

Table 4 utilises the full DiD model from Equation 1 (as in Column 5 of Table 3) and then proceeds to employ various sample restrictions in order to explore how the policy may have affected bail decisions for specific groups of defendants.[26]

In Column 1 we restrict the sample to defendants that are at most 18 years old at the time their matter is finalised. The effect of the policy is now insignificant for both outcome measures. However the coefficient for the courts bail decision is now negative, suggesting a possible decreased likelihood of bail refusal after the legislative change. It is possible that the lack of significance of

this estimate is driven by a lack of power.[27] This is an interesting finding and there are compelling reasons to think that the new bail laws may have induced such a change. For example, a relatively large proportion of repeat property offenders are juveniles. Prior to the new laws a presumption against bail for these offences was in place but the new laws effectively removed this presumption. It is also possible that there was a differential effect of the new laws on juveniles as the SC amendments do not apply to juveniles. However, Panel B) of Figure B1 (in Part B of the Appendix) illustrates another possibility. There was an ex-ante downward trend in the refusal rate for treated juvenile defendants, while the pre-policy refusal rate for control defendants looks to be flat. This is a problem for our analysis, as the common trend assumption is violated, but it also indicates that juveniles may have been less likely to be bail refused irrespective of the new bail laws.

In Column 2 we restrict the sample to female defendants. The effect for the police bail decision is now slightly higher than the overall effect; raising the refusal rate from about 9 to 10 per cent (a relative change of 11%). The effect for the court's bail decision is now about half of that of its Table 3 counterpart in absolute terms, representing an increase from 3.3 to 3.7 per cent (a relative change of about 12%).

In Column 3 we restrict the sample to Indigenous defendants. The effect sizes for both outcome measures are substantially larger than the effect sizes from Table 3. The effect of the policy change for the police decision has more than tripled to a 3.3 percentage point increase, while doubling to a 1.9 percentage point increase for the court decision. However, these estimates need to be interpreted with caution as the common trends assumption may be violated in both cases (see Part B of the Appendix for further details). That said, it is worth noting these increases are quite large in both relative and absolute terms; a 12 per cent increase for the police bail decision (off a pre-policy base of about 27%),

Table 4. Difference-in-Differences estimates for the effect of the Bail Act and Show Cause amendments on bail refusal for selected defendant groups

Outcome variable in Rows	(1) Juveniles	(2) Females	(3) Indigenous	(4) No prior proven offences	(5) At least one prior prison sentence
Police refuse bail	0.006	0.010***	0.033***	0.011***	0.028***
	(0.007)	(0.003)	(0.007)	(0.002)	(0.008)
Courts refuse bail	-0.003	0.004**	0.019***	0.009***	0.028***
	(0.004)	(0.002)	(0.005)	(0.002)	(0.008)
N	34,450	88,429	84,304	180,126	84,389
Individual controls	YES	YES	YES	YES	YES
Offence FE	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES
Court FE	YES	YES	YES	YES	YES
LAC FE	YES	YES	YES	YES	YES

Note. N=Number of observations, FE = Fixed Effects, LAC= Local Area Command, cluster robust standard errors in parentheses, clusters refer to LACs in Row 1, courts in Row 2, there are 76 LACs and 147 courts in each specification.

*** *p*<0.01, ** *p*<0.05, * *p*<0.1.

and a 13 per cent increase for the court's decision (off a pre-policy base of about 15%).

In Column 4 we restrict the sample to defendants with no prior convictions and find no substantive (absolute) difference between these estimates and those in Table 3. We do, however, find that the relative change for these defendants has been substantial. The relative changes in the probabilities of the police and courts refusing bail have increased by about 14 per cent (up from a pre-policy average of 8.1%) and 29 per cent (up from 3.1%), respectively.

In Column 5 we restrict the sample to defendants with at least one prior prison sentence. The effect size for both outcome measures has more than doubled to a 2.8 percentage point increase in the likelihood of being bail refused. Once again, when interpreted as relative changes the effect of the policy appears to be much larger; an 8 per cent increase for the police bail decision (up from a pre-policy average of 35.3%) and a 12 per cent increase for court bail (up from a pre-policy average of 22.6%).

DISCUSSION

The objective of this study was to determine whether or not a defendant is more or less likely to be refused bail under the new bail laws introduced in NSW in 2014. In order to estimate the causal effect of the new legislation we compared changes in bail decisions for defendants accused of a minor offence (for which there is the general right to bail irrespective of the legislative change) with defendants accused of all other (non-minor) offences in a Difference-in-Differences (DiD) setup. We found the policy to have increased the probability that the police and courts refuse bail by 0.8 percentage points each. This represents a five per cent increase in the average probability of the police refusing bail to a defendant accused of a non-minor offence and

an 11 per cent increase for the court bail decision. The impact of the legislation appears to be even greater (in both absolute and relative terms) for high risk defendants whom already had a moderate risk of bail refusal prior to the policy change. Defendants who had previously been imprisoned were found to be nearly three percentage points more likely to be refused bail by the police and the courts after the legislative change; a relative increase of 8 per cent for the police bail decision (up from a pre-policy average of 35.3%) and a 12 per cent increase for court bail (up from a pre-policy average of 22.6%).

There is an important caveat with respect to the validity of our estimates for the police bail decision. Figure 2 illustrated a clear change in the police bail refusal rate for minor offences following the introduction of the Act. Immediately after the Bail Act (2013) commenced, the mean rate of bail refusal by police appeared to be lower and less volatile, suggesting that police were less likely to refuse bail and were more consistent in bail decisions. The absence of a similar finding with respect to the court bail decision indicates that an offence specific idiosyncratic shock isn't likely to be driving this effect. A more plausible explanation is that there was a change in police practice that coincided with the new legislation. It is possible, for example, that police found the new Bail Act easier to apply in cases where defendants were charged with relatively minor offences. While the substance of bail concerns outlined in both pieces of legislation are essentially the same, the wording and language used in the old Bail Act is considerably more lengthy and complex. The risk assessment approach adopted under the new legislation is also more consistent with routine policing practice and therefore potentially simpler for police to apply. NSW Police undertook extensive officer training and introduced significant modifications to their operational system in anticipation of the new legislation which may also have enhanced police understanding of the criteria that must be considered in bail decisions.

Regardless of the cause, the violation of the common trend assumption in our control series raises concerns about the validity of the DiD approach to estimate the impact of the legislative changes on the probability of a police refusal. These concerns unfortunately also extend to our estimates of the effect of the policy change on selected groups of defendants; specifically juvenile and Indigenous defendants. In the analyses focusing on these sub groups, our identifying assumption did not appear to hold (for either outcome measure) and our estimates should therefore be interpreted with caution. Further research is necessary using a more appropriate design to better assess changes in bail outcomes for these particularly vulnerable groups.

Our estimates for the overall effect of the policy change on the court's bail decision are more conclusive. Refusal rates for both the treated and control series share common pre-policy trends and neither of the two possibilities outlined earlier could plausibly affect the court's bail decision. Moreover, the court's decision is of greater consequence as a defendant refused bail by a judicial officer will be remanded in custody until their matter is finalised; which, particularly in the case of matters committed to the Higher Courts, would be a lengthy period.

Our sample included over 500,000 bail hearings for well over 300,000 individuals. Hence, a small percentage point change would result in a notable increase in the number of defendants being remanded in custody. While the exact number of additional defendants who entered custody as a result of the new legislation is difficult to quantify from the available data (as the same remand episode for a defendant can relate to several different bail hearings for different charges), we estimate that in the 2-year period after the legislation was introduced there were 1,500 additional bail refusals by NSW courts for non-minor offences. The associated cost to the criminal justice system would be substantial.

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NOTES

1   Bail CANs are issued by police when they have some concern around granting bail and thus wish to set bail conditions or refuse bail entirely. These CANs are generally reserved for individuals accused of serious offences. No-Bail CANs are issued to individuals accused of minor offences when police have no major concern regarding the accused absconding. Field CANs operate much like No-Bail CANs but are issued on the spot like an infringement notice. Future CANs (previously referred to as a summons) are sent to accused individuals in the mail on a date often several weeks after the alleged offence.

2   Note that in cases where police decide to grant bail, the courts can still refuse bail to the defendant although this rarely occurs in NSW.

3   Among other changes, the committee also sort to shift the focus of conditional bail from monetary to non-monetary considerations of whether or not an accused person was likely to appear in court. Interested readers are directed to Weatherburn, Quinn and Rich (1987) for a complete summary of events.

4   See Dole (2014) and McNally (2014) for examples.

5   The difference between the original risk assessment and the risk assessment introduced under the SC amendments is that if an unacceptable risk is identified under the original framework, an individual can be granted bail if the risk can be sufficiently mitigated, while under the amended framework this same person would be refused bail.

6   There are a few slight differences between whether or not an offence carries the general right to bail under each piece of legislation. This is covered in more detail in the empirical approach section.

7   Thorburn (2016) defines bail eligible defendants as those receiving a Bail CAN from NSW police.

8   To be clear we are looking at first bail hearings occurring between 1 January 2012 and 31 January 2017 for matters that went on to be finalised between 4 January 2012 and 31 August 2017.

9   For concreteness consider the following example. A man commits an offence, is caught by police and then refused bail. 24 hours later he has his first bail hearing at which point the courts grant him conditional bail. He is later caught breaching one of his bail conditions (which is not in itself an offence) and brought before the courts for his second bail hearing, at which point he is again granted bail. Suppose now he commits another offence, is caught by police, and brought before the courts for his third bail hearing. This time he is refused bail and held on remand until both of his offences are finalised at the same court appearance. In this case, we would observe only his first and third bail hearings. Given that the outcome of his third bail hearing is likely to be at least partially dependant on his prior bail condition breach (which we do not observe); looking at this third bail hearing would cause us to incorrectly attribute an increase in his likelihood of bail refusal from breaching his bail conditions to the policy change. We get around this issue by restricting our sample to a defendant's first bail hearing as we have full information on the defendant's priors at this point.

10 For each bail hearing, we take the primary offence to be the law part corresponding to the first offence sequence number listed on the bail hearing date provided that the associated offence date is either on the same day or before the bail hearing date.

11 Law part codes provide a way to uniquely identify offences in NSW. Law part codes are assigned and maintained by the Judicial Commission of NSW.

12 For example, some drug offences are only designated to be SC if the quantity in question is twice that of the indictable amount. We do not have information on the quantity involved in specific cases. Similarly, some offences are only designated SC if the accused was on parole at the time the alleged offence occurred. We also do not have this information in our data.

13 We do not attempt to estimate the effect of the first risk assessment framework because of concerns around the implementation of the original risk assessment procedure. Figure 1 illustrates a substantial transient dip in the NSW police's bail refusal rate following the introduction of the Act. There have been suggestions (see Weatherburn & Fitzgerald, 2015) from senior police that a lack of police familiarity with the first risk assessment framework caused this drop. If it is true that police were granting bail to defendants that they would have otherwise refused bail to had they had more time to familiarise themselves with the risk assessment procedure, then bail decisions made during this period are not useful in determining the long-run effect of the policy change. Similarly, our inability to differentiate between (the majority of) SC and non-SC offences confounds our capacity to isolate the effects of the (second) risk assessment framework from having BRD for SC offences.

14 In Part A of the Appendix we re-introduce bail hearings occurring in the nine months between the introduction of the Act and the amendments. We treat these nine months as pre-policy periods and find no meaningful change to the estimates for the courts bail decision. As expected, this does however change the results for the police bail decisions. Interested readers are directed to the Appendix for further details.

15 There are some circumstances in which we cannot tell whether or not an offence would have been considered minor or non-minor after the policy change. For example, obscene exposure is always a minor offence under the old Bail Act, but not considered to be a minor offence under the new Bail Act if the defendant has already been convicted of this offence. We cannot tell whether or not a defendant has been previously convicted of this type of offence. Cases like this represent about six per cent of our potential control group. We proceed as if these offences were in fact minor, thus providing a conservative estimate of the policy's impact. In Part A of the Appendix we also completely exclude these six per cent of cases from the analysis with no meaningful change to the main results.

16 The offence FEs have two parts. The first part contains a vector of binary variables each taking value one for a sub-division level Australian and New Zealand Standard Offence Classification (ANZSOC) code. Interested readers

are referred to ABS (2011) for more information pertaining to ANZSOC codes. The second part is a set of nine binary variables indicating the maximum penalty associated with the offence. Each dummy takes value one if the maximum penalty associated with the offence is; non-custodial, 2 years imprisonment, between 2 and 5 years imprisonment, between 5 and 7 years imprisonment, between 7 and 10 years imprisonment, between 10 and 14 years imprisonment, between 14 and 20 years imprisonment, between 20 and 25 years imprisonment and finally, life imprisonment. The time FEs refer to a vector of interacted month and year dummies.

17 In Part A of the Appendix we also check the robustness of our results against competing non-linear models and a battery of different standard errors with no meaningful change to the main results.

18 Interested readers are directed to Section 32 of the *Bail Act 1978 (NSW)* and Sections 17 and 18 of the *Bail Act 2013 (NSW)* for the explicit criteria considered under each piece of legislation.

19 Note that these rates may differ somewhat from previous BOCSAR releases as prior releases counted the number of Police-H numbers, while we are counting the number of bail hearings. A defendant can have multiple Police-H numbers at a single bail hearing.

20 Also worth noting is the substantial month to month variation in bail refusal rates around the December/January period of each year. This variation is largely driven by the NSW courts Christmas closure period.

21 Table 1 reports the average difference in bail refusal rates before and after the policy change. Readers interested in the actual average bail refusal rates before and after the policy change are directed to Table A3 contained in Part A of the Appendix.

22 Here we are counting unique offence reference numbers within each bail hearing.

23 Note that standard errors and significance levels are reported for both the pre-policy mean and the post-policy change as we construct Table 2 by regressing the variable in each Column on A_t from Equation 1.

24 Interested readers are directed to Table A3 in Part A of the Appendix for the pre- and post-policy average bail refusal rates from which these relative changes are calculated.

25 These checks include re-estimating Equation 1 using Maximum Likelihood, proceeding as if the policy occurred one year prior to its actual introduction and then treating periods before the policy change as our post-policy period, restricting the sample to a 6 and 12 month interval on either side of the policy change, generating a random sub-sample consisting of a single bail hearing for each unique defendant, excluding the 6% of cases in which we are unable to tell whether the offence would be considered minor or not from the analysis entirely, re-introducing the bail hearings

occurring during the nine months between the introduction of the Act and the SC amendments into the analysis, including LAC, court and offence specific linear trends, replacing the time FEs with a set of year dummies and an interaction between a vector of seasonal effects and each LAC and court, and finally, including an interaction between the vector of maximum penalty dummies and the post-policy period indicator from Equation 1.

26 Interested readers are directed to Part B of the Appendix for Figures (similar to that of Figures 2 and 3) that explore the validity of the common trends assumption for the regressions in Table 4.

27 For example, in order to detect a 0.5 percentage point reduction with a power of 80%, a significance level of 5%, a mean bail refusal rate for the control group of 6%, and a treatment to control group ratio of about 80/20, we would need to more than double the sample size in Column 1. Note that the 6% mean bail refusal rate for defendants accused of minor offences and the 80/20 spilt between treatment and control defendants are reflective of the pre-policy averages in our data.

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