

# CRIME AND JUSTICE BULLETIN

NUMBER 236 | MARCH 2021

## What factors influence police and court bail decisions?

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Our study has three objectives. The first is to identify factors associated with the probability that the police refuse bail. The second is to identify factors associated with the probability that the courts refuse bail. The third is to determine whether these factors differ for juveniles and adults.

**METHOD**

We use two datasets in our study. The first is an extract from the New South Wales (NSW) Police Force's Computerised Operational Policing System. The second is an extract from the NSW Bureau of Crime Statistics and Research's Reoffending Database. After the application of certain inclusion criteria, our study considered 504,369 bail determinations from which we estimate regression models with fixed effects in order to identify associative relationships.

**RESULTS**

For cases included in the study, the police refuse bail in 13.8 per cent of cases for adults and in 22.7 per cent of cases for juveniles. Police are most likely to refuse bail for defendants who have more concurrent offences, more prior offences and/or where the offence is either one that carries a presumption against bail (i.e., Show Cause offence) or is domestic violence related. They are also more likely to refuse bail to male and/or Aboriginal defendants, although these factors are less influential than the aforementioned legal concerns. Among defendants who have already been denied bail by the police, the courts refuse bail to 45.3 per cent of adults and 39.6 per cent of juveniles. As with police, courts are also more likely to refuse bail to males, those accused of a Show Cause offence and those with more concurrent and/or prior offences. Courts are less likely to refuse bail for cases that are domestic violence or alcohol related. We also find substantial variation in bail decisions across different magistrates and police jurisdictions, even after adjusting for other relevant factors.

**CONCLUSION**

Legal factors, in particular prior and concurrent offending, have the largest impact on both the police and court decisions to refuse bail. The influence of certain extra-legal factors, including Aboriginality, in bail determinations warrants further research.

**KEYWORDS**

Aboriginal people

Bail/remand

Children, juveniles and young people

Courts

Domestic violence

Police

## INTRODUCTION

The New South Wales (NSW) prison population has been rapidly rising over the last decade. Between 2012 and 2019, the adult prison population rose by more than 40 per cent from 9,614 to 13,635 inmates (NSW Bureau of Crime Statistics and Research [BOCSAR], 2020). Given that the annual average cost associated with housing an inmate in a NSW correctional centre is estimated at \$96,028 (Steering Committee for the Review of Government Service Provision, 2020), the growth in the custodial population places a significant additional financial burden on the State. A substantial and growing proportion of the prison population are held on remand awaiting their matter to be heard in court. In January 2012, inmates on remand accounted for 26 per cent of the prison population but by the end of 2019 this had risen to 34 per cent (BOCSAR, 2020). In addition to the financial costs to the State, there are also severe social, economic, legal and emotional consequences for an individual who is remanded in custody (see Kirk and Wakefield, 2018, for a summary).

Previous work by BOCSAR has suggested that at least some of the growth in the NSW remand population is due to the new bail laws that were introduced in 2014, and later amended in 2015 (Thorburn, 2016; Yeong & Poynton, 2018). The *Bail Act 2013* (NSW) was initially introduced in order to simplify the bail decision-making process by removing offence-based presumptions, and in so doing “achieve the goal of ensuring that bail decisions are more consistent with the terms of the law” (Smith, 2013, p.2). However, a later legislative amendment reinstated offence-based presumptions, setting bail refusal as the default for a particular set of offences known as “Show Cause” offences. Evaluating the impact of these changes, Yeong and Poynton (2018) found that defendants charged with non-minor offences after the Show Cause amendments came into effect were 11 per cent more likely to be bail refused by the court and eight per cent more likely to be refused bail by the police compared with those charged while the *Bail Act 1978* (NSW) (hereafter referred to as the “old Bail Act”) was in force. An even greater impact on bail refusal rates was observed for high-risk offenders (i.e., those with prior prison sentences) and adult Aboriginal defendants. The latter finding is particularly concerning given the growth in Aboriginal imprisonment in NSW since 2012 (Weatherburn & Holmes, 2017).

No research has yet considered whether the new bail regime achieves its objective of promoting more consistency in the bail decision-making process. This bulletin seeks to improve our understanding of the application of the new bail laws by examining the influence of various factors on bail decisions made by the police and courts. In this bulletin, we analyse the relative importance of both statutory offence-based presumptions and defendant characteristics in the decision about whether to grant or refuse bail. We also examine the consistency of bail decisions across Police Area Commands (PACs) and judicial officers. Enhanced understanding of the application of the current bail laws is critical to guide future bail reform policy.

### The bail decision-making process in NSW

Bail decisions in NSW are governed by the Bail Act. This legislation stipulates that all bail authorities must apply an “unacceptable risk test”. Under this test, bail authorities must determine if there is an unacceptable risk that the defendant, if released on bail, 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 one or more of these risks can be addressed with bail conditions, then the accused is to be granted conditional bail. If not, then bail is to be refused.

The Act specifies a number of considerations that bail authorities can take into account when deciding whether or not an individual should be granted bail. The considerations in the legislation are broad and include: the nature and seriousness of the offence, the accused’s criminal history and community ties, their pattern of compliance with previous bail conditions and other orders, whether they have any need to be free, and whether they are young, Aboriginal, or have a cognitive impairment.<sup>1</sup>

<sup>1</sup> A complete list is available under section 18 of the Bail Act.

In addition, a subset of serious offences (including certain child sex, serious violence, commercial drug, or firearm offences) is subject to the Show Cause provisions. Adults charged with a Show Cause offence must be bail refused unless they can show cause as to why bail is justified.<sup>2</sup> The Act does not specify what satisfies the Show Cause test, and the Show Cause clause does not apply to juvenile defendants.

The bail process proceeds as follows. After charging a defendant with one or more offences, police are tasked with deciding whether to release the defendant to await their court appearance in the community or to refuse bail. Defendants released into the community can be either formally “on bail” and subject to reporting or other conditions, or they can have “bail dispensed with”. In this bulletin all defendants released into the community are considered to be “on bail”.

If police elect to refuse bail, then the accused is held on remand, typically for a period of 24 hours or less, until they can be brought before a magistrate<sup>3</sup> for their first court bail hearing. The magistrate then decides whether or not to overturn the police decision and grant bail, or continue to remand the defendant in custody. A court may also choose to impose bail conditions, and specifically in the case of juvenile defendants these conditions may include an accommodation requirement. The accommodation requirement and a lack of suitable accommodation for juveniles is often cited as a reason why juveniles are remanded into custody (see Richards & Renshaw, 2013, for a summary).

## Past research

Sacks, Sainato, and Ackerman (2014) divide factors that influence a bail decision into two groups: legal and extra-legal factors. Legal factors typically include the severity of an offence and a defendant’s criminal history. Extra-legal factors typically include a defendant’s age, gender, race and socioeconomic status. Unsurprisingly, there is strong empirical evidence that legal factors affect bail decisions. Snowball, Roth, and Weatherburn (2010) and Weatherburn and Snowball (2012) examine court bail decisions in NSW under the old Bail Act and find that the presence of concurrent offences, prior convictions, and prior breaches of court-imposed orders all increase the probability of bail refusal. The old Bail Act divided offences into those with a presumption against bail, presumption for bail, neither a presumption for nor against bail, and offences where bail should only be granted in exceptional circumstances. Snowball et al. (2010) find that the probability of court bail refusal increases when a defendant is charged with an offence where there is a presumption against bail or where bail should only be granted in exceptional circumstances. However, factors including the concurrent and prior offending of a defendant exert a stronger influence on the probability of bail refusals than the statutory presumptions surrounding bail. Research from other jurisdictions confirms the importance of legal factors in court decisions to grant bail. For example, Allan, Allan, Giles, Drake, and Froyland (2005) examine the first court appearance of 648 defendants in Perth, and determine the factors that are most influential in bail decisions. They find that bail refusal is most likely to occur in cases where there are a higher number of charges, where there are existing legal orders in place, where the prosecutor opposes bail, and where the defendant is unrepresented. Schlesinger (2005) uses a similar strategy to examine bail decision-making in the United States, finding that legal variables such as offence seriousness, offence type and criminal history exert the strongest influence on pretrial bail decisions.

Extra-legal factors have also been found to influence bail decisions. For example, Schlesinger (2005) finds that both African Americans and Latinos are more likely to be denied bail than white Americans, even after controlling for factors such as prior prison, prior felony convictions, and the number of charges. Similarly, Sacks et al. (2014) find in New Jersey that African American and Hispanic defendants are more likely to have a financial bail requirement than white Americans, and to have a higher bail surety amount. However, both of these studies fail to adequately account for unobserved characteristics of defendants which could also impact the bail decision (e.g., criminal associations). A study undertaken by Arnold,

<sup>2</sup> A complete list of Show Cause offences is available under section 16B of the Bail Act.

<sup>3</sup> In fact the court bail decision may also be made by a registrar. A registrar is defined as an authorised justice under the Bail Act and therefore has the power to hear bail applications. Throughout this bulletin we use the term magistrate to refer to any judicial officer that is authorised to make a bail determination.

Dobbie, and Yang (2018) addresses this limitation by exploiting the quasi-random assignment of bail judges to defendants in Miami and Philadelphia, in order to account for unobserved factors affecting the bail decision. They too find that bail judges are much more likely to grant bail to white defendants than African-American defendants, even where the defendant has the same risk of reoffending on bail or failing to appear at their court date. Other extra-legal factors such as the socioeconomic status of the neighbourhood have also been examined. Williams and Rosenfeld (2016) find that defendants arrested in American neighbourhoods with a higher proportion of non-poor residents receive a higher bail surety amount. The results from these American studies may not be directly applicable to bail decisions in an Australian context given the significant differences in laws and legal process across jurisdictions. A surety bond for bail is common in the United States, but not in Australia. Bail laws also vary between jurisdictions in terms of the legal factors authorities are directed to consider. For example, the Bail Statute in New York in 1983, did not direct judges to consider the risk of a defendant reoffending (Nagel, 1983), while the Bail Act explicitly instructs bail authorities in NSW to examine this aspect of the case.

Australian research provides mixed evidence on the influence of extra-legal factors. Examining bail decisions under the old NSW bail laws, Snowball et al. (2010) and Weatherburn and Snowball (2012), both find that Aboriginal defendants, male defendants, and those aged under 25 (including juveniles) are more likely to be denied bail, even after controlling for criminal history and offence severity. However, the authors note that this may reflect their inability to control for other important bail considerations such as a defendant's ties to the community and the strength of evidence against the defendant. On the other hand, Allan et al. (2005) in Perth, find that extra-legal factors are not predictive of bail outcomes. Gender, age, Aboriginality, and marital status were not statistically significant predictors of bail for adult and juvenile defendants. For juveniles, the number of charges was the only predictive variable in their model, but this may be due to the very small sample size used in this study (just 63 juvenile defendants).

Nagel (1983) argues that there are more extra-legal factors relevant to bail decisions than just demographic factors such as race, age and sex. She makes the distinction between "social bias" and "bench bias" in decision-making. Social bias refers to bias based on demographic factors and is defined as "consistent discrimination for or against a class of people" (Nagel, 1983, p. 506). Bench bias refers to biases that individual judges may exhibit, resulting in them being harsher or more lenient in bail decisions, or emphasising certain aspects of the law. In an analysis of bail decision data from New York, Nagel (1983) finds that although race and sex influence the bail decision, the effects are small and the extra-legal factor of bench bias is more predictive of the bail decision. Despite this, legal factors in the New York Bail Statute were found to play a more important role in explaining bail decisions than any of the extra-legal factors examined.

Dhami (2005) expands on this concept of bench bias by distinguishing between unsystematic and systematic variability in judicial bail decisions. Unsystematic variability refers to inconsistencies in decisions due to random fluctuations, such as differences in perception, attention and mood. This unsystematic variation may explain why different judges could make different decisions on identical cases, but also why the same judge may arrive at a different bail decision on cases that are essentially the same. Systematic variation, on the other hand, can include principled individual differences among judges, such as how they interpret the law. Systematic variation implies that while different judges could make different decisions, the same judges would tend to make consistent decisions on similar cases. To empirically examine these concepts, Dhami (2005) asks judges in England and Wales to decide whether or not to grant bail in 27 simulated cases. She finds that even though judges receive the exact same case there is significant variability in the decisions reached. In one simulated case nearly 60 per cent of judges disagree with the most frequent decision, where the choices are unconditional bail, conditional bail or bail refusal. Greater disagreement is found to occur when the modal decision was more punitive, that is where bail denial is more frequently selected.

Finally, although it is a study of sentencing rather than bail, it is worth noting some of the effects found by Lawrence and Homel (1992) in their study on drink driving penalties in Australia. They argue that judicial biases differ on many dimensions beyond a leniency-harshness paradigm. In particular, judges will have different perspectives on the relevance of different pieces of information, based on their beliefs about offending and the specific offence before them (e.g., drink driving). These differences may include: contrasting perspectives on the role of judges in deterring crime in the community, differences in whether to use an individualised approach to sentencing or to apply a tariff approach (i.e., one in which they simply consider a salient factor like blood alcohol level in determining a penalty), and differences in the assessment of a defendant's potential for rehabilitation (i.e., in the case of drink-driving their susceptibility to alcohol dependency). Lawrence and Homel (1992) find that the harshness of penalties imposed is related to not only offenders' prior offences and offence severity (i.e., blood alcohol levels), but also depends in part on magistrates' beliefs on the above dimensions. Men and young offenders are found to be treated more harshly, while unemployed offenders are fined less but disqualified for longer periods of time.

There is remarkably little quantitative research on factors influencing police bail decisions. Jones (1987), using a data set that included all defendants charged or summonsed<sup>4</sup> in England and Wales in 1980, examined factors influencing the rate of bail refusal at a police force level.<sup>5</sup> He finds that most of the disparity in police force bail rates is due to different charging practices (e.g., police tendency to charge instead of issuing a summons) and different caseload characteristics (i.e., different demographic compositions of defendants). However, this analysis only examined data at the police force level and failed to account for individual characteristics affecting the police bail decision.

### The current study

This study examines factors influencing police and court bail decisions in NSW for both adults and juveniles. Very little research to date has explored police bail decision-making and while studies on court decisions are more frequent in the literature, the significant jurisdictional differences in bail legislation reduces their generalisability to the NSW context. Studies that have been completed in the NSW context examined bail decisions under the old bail legislation and considered bail outcomes at the finalisation of matters rather than at the time of charge (Snowball et al., 2010; Weatherburn & Snowball, 2012). The current study also has a much larger sample size than the studies cited above, and therefore has greater statistical power to detect small effects if they exist.

Further, this study also makes an important novel contribution to the literature by examining the consistency (or lack of consistency) in bail decisions across Police Area Commands (PACs). Previous research has demonstrated wide variability in decisions reached by judges and magistrates in bail and sentencing matters. However, ours is the first study to consider how the police area where an individual is charged affects the likelihood of being granted bail.

Compared with previous studies in this area we are also able to examine a richer set of legal factors, including: the seriousness of the offence; whether an offender was already on bail or another sentencing order; the number of prior and concurrent offences; and whether the police identified any risks associated with failing to appear, committing a serious offence, endangering the safety of the community, or interfering with a witness. These are all relevant considerations for bail authorities under the Bail Act. We also include demographic characteristics such as Aboriginality, age and socioeconomic status in the analysis, as well as controls for the day of the week that a defendant was charged, to examine the consistency of bail decisions across defendants once offence-based presumptions and other relevant legal factors have been taken into account.

<sup>4</sup> In NSW, a summons is most equivalent to being issued a Field Court Attendance Notice which is always associated with bail being dispensed with. In our study we consider having bail dispensed with as being equivalent to granting bail. In this way, similar to Jones (1987), our study is not susceptible to bias caused by differing police practices in dispensing with bail.

<sup>5</sup> In NSW, this would be equivalent to a PAC in metropolitan areas and a Police District (PD) in regional and rural areas.

It is worth noting here that the estimated relationships reported in this bulletin are associative, not causal. Although we control for a broad range of factors and use fixed effects (FE) to account for temporal and area-level variation, it is entirely possible that other unobserved factors (e.g., the defendant's ties to the community, or whether the defendant is dependent on alcohol or other drugs) are driving the relationships reported in Tables 2 and 3. We therefore recommend some caution when interpreting the estimates reported in the results section.

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## METHOD

### Data sources

We use two datasets in our analysis. The first dataset is an extract from the NSW Police Force's Computerised Operational Policing System (COPS). The COPS extract contains information relating to police bail determinations for defendants charged between 28 January 2015 and 28 November 2019. The second is an extract from the BOCSAR's Reoffending Database (ROD). This dataset contains information relating to all criminal court appearances finalised in either the NSW Children's or Local Court between 28 January 2015 and 28 November 2019. This time period commences from when the "Show Cause" amendments came into effect, ensuring that all matters in the analysis are subject to the same bail legislation.

Our study focusses on the first police and court bail decision associated with criminal court appearances finalised in the Local and Children's Court. We exclude matters finalised in the higher courts because the vast majority of cases (97.4%) are finalised in either the Children's or Local Court and cases heard in the higher courts are typically more serious. We also exclude prosecutions initiated by agencies other than the NSW police (e.g. the Australian Federal Police, the Australian Securities and Investments Commission), infringement notices where a defendant has elected to go to court and breaches of community-based sentences. Any person that receives a Court Attendance Notice (CAN) that satisfies the prior sample restrictions is included in our sample. This includes persons issued a Bail CAN, Future CAN or Field CAN.

After merging these data, we are left with a suite of information for 504,369 first bail determinations.<sup>6</sup> For each bail determination, we can observe information relating to both the police and court bail decision. With respect to the police bail decision, we can observe the outcome of the decision; the PAC responsible for charging the defendant; the date upon which they charged the defendant; the number of offences they charged the defendant with; the ANZSOC code associated with the most serious offence;<sup>7</sup> the relative severity of the most serious offence as indicated by the Median Sentence Ranking (MSR);<sup>8</sup> the police determination regarding whether or not the incident was drug, alcohol and/or domestic violence (DV) related; and finally, the Unacceptable Risk Test category that police gave a defendant (if one was given). Regarding the offence severity of the defendant, we also observe whether the offence committed was a minor offence. A minor offence is defined as in Yeong and Poynton (2018), which is an offence listed under the *Summary Offences Act 1988* (NSW) or a minor offence in the old Bail Act. Although the current Bail Act does not specifically define a minor offence, it does reference offences in the Summary Offences Act as carrying a presumption in favour of bail. Yeong and Poynton (2018) also argue that the definition and treatment of minor offences are similar under both the old and current bail legislation.

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<sup>6</sup> That is, each row in the data corresponds to a finalised court appearance, and within each finalised court appearance we can observe the first police and first court bail decision. We cannot, however, observe bail decisions relating to subsequent offences that are also finalised within the same court appearance. For example, if a defendant is granted bail by police (and therefore the courts) for their first offence, but is then caught offending whilst on bail, provided that both offences are finalised at the same court appearance, we would not consider any bail decision made in relation to the second offence.

<sup>7</sup> ANZSOC codes are used to group offences by type across Australian and New Zealand jurisdictions. Readers are directed to Australian Bureau of Statistics (2011) for more information.

<sup>8</sup> The MSR is a proxy for how serious an offence is. It ranks offences from 1 to 135, by how harsh a penalty the median person received for the offence. Lower values correspond to more serious offences (e.g., rank 1 is murder). Further information is provided by MacKinell, Poletti, and Holmes (2010).

With respect to the court bail decision, we can observe the decision made by the magistrate; an identifier for the magistrate responsible for making the decision; the date that the bail decision was made; and finally, the location of the courthouse. With respect to the defendant, we can observe their age; gender; Aboriginality (i.e., whether the defendant ever identified as Aboriginal or Torres Strait Islander at any contact with the police); SEIFA percentile rank;<sup>9</sup> whether or not they were already on bail for another matter at the date of their first court bail hearing; whether they were on an order (e.g., a community or intensive corrections order) or a bond (either supervised or unsupervised) at the date of their first court bail hearing; and finally, measures of their offending history. All priors, including prior court appearances, prior breaches of justice orders, prior violent offences, and prior prison episodes, are measured within five years of the index contact for a defendant. An exception is prior breaches of bail. Data on prior breaches of bail are available from January 2015 to May 2019.

Variables have been selected to closely reflect the legal factors that bail authorities are allowed to consider as per section 18 of the Bail Act. However, our list is not exhaustive and this limitation is explored further in the discussion. We consider demographic factors, location variables including PAC, the magistrate presiding over a bail application, and the day of the week of the bail decision as extra-legal factors,<sup>10</sup> while all other variables are generally considered legal factors.<sup>11</sup>

## Descriptive statistics

Descriptive statistics for the variables included in the analysis are provided in Table 1. Columns 1 to 3 present this information for adults while Columns 4 to 6 present this information for juveniles. Among matters in scope, police refuse bail in 13.8 per cent of cases for adults and in 22.7 per cent of cases for juveniles. The courts only refuse bail in 6.2 per cent and 9.0 per cent of cases for adults and juveniles respectively. When police refuse bail, the courts will overturn this decision and grant bail in 54.7 per cent of cases for adults and in 60.4 per cent of cases for juveniles.<sup>12</sup> The top four offences that adults are accused of at first court appearance are traffic offences (31.2%), assault (21.5%), drug offences (12.5%), and theft (7.7%), while for juveniles they are most often accused of assault (24.5%), theft (14.4%), traffic offences (11.1%) and public order offences<sup>13</sup> (8.4%).

The average adult defendant in our sample is male (78.6%), non-Aboriginal (79.1%), 35 years old, has a below average level of socioeconomic disadvantage as measured by their SEIFA rank and 1.8 prior court appearances with a proven offence within the last five years. Around 7.0 per cent of adult defendants have one or more prior breaches of bail, 22.5 per cent have one or more breaches of a justice order, 24.3 per cent have one or more prior proven violent offences, and 14.8 per cent have one or more prior prison episodes. The average juvenile defendant is male (77.2%), non-Aboriginal (53.5%), 16 years old, has a below median SEIFA rank and 1.5 prior court appearances with a proven offence within the last five years. Around 22.2 per cent of juveniles have one or more prior breaches of bail, 24.9 per cent have one or more breaches of justice orders, 34.2 per cent have one or more prior violent offences, and 9.5 per cent have one or more prior prison episodes. The average adult MSR is 82.8, meaning they are accused of a crime ranked 83<sup>rd</sup> (out of 135) in seriousness, while the average juvenile is accused of a more serious crime, having an MSR of 69.1.

9 SEIFA scores are a relative measure of socioeconomic disadvantage based on the defendant's postcode of residence at the time of finalisation. Specifically, the SEIFA measure used is the Index of Relative Disadvantage (IRSD) classified into quartiles of disadvantage. Lower scores indicate more socioeconomic disadvantage relative to higher scores. Defendants held on remand at the time that their matter was finalised have missing SEIFA scores in our data. In order to address this issue we create an indicator variable for these defendants to prevent them from dropping out of the regression. Interested readers are directed to Australian Bureau of Statistics (2016) for more information pertaining to SEIFA scores.

10 Some demographic factors such as Aboriginality and age are in fact mentioned in the Bail Act as factors that bail authorities may consider. However, keeping in line with the literature, we will consider it as an extra-legal factor.

11 We consider police flags of an offence being drug, alcohol or DV related as legal factors, as they relate to clause 18(b) of the Bail Act: "the nature and seriousness of the offence".

12 In 94.2 per cent of cases these two decisions are made either on the same day that a defendant is charged or the following day.

13 Most commonly trespass.

For adults, police flagged the offences to be alcohol, drug and DV related in 32.3, 18.7 and 21.6 per cent of cases, respectively. For juveniles, offences were flagged to be alcohol, drug and DV related in 13.3, 8.2 and 21.6 per cent of cases, respectively. Finally, regarding the unacceptable risk test categories, the police flagged a defendant at risk of failing to appear, committing a serious offence, endangering the safety of the community, and interfering with a witness in 4.0, 5.6, 7.9, and 3.3 per cent of cases respectively for an adult, and in 7.3, 16.2, 18.4 and 6.9 per cent of cases respectively for a juvenile. On average, 3.6 per cent of adult defendants are accused of a Show Cause offence.

**Table 1. Descriptive statistics**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Obs	Proportion	Std. Dev.	Obs	Proportion	Std. Dev.
Police refuse bail	479,407	.138	.34	24,962	.227	.42
Courts refuse bail	479,407	.062	.24	24,962	.090	.29
Police refuse & courts grant bail	66,092	.547	.50	5,675	.604	.49
Offence type (ANZSOC code)						
Homicide (01)	479,407	.000	.02	24,962	.001	.02
Assault (02)	479,407	.215	.41	24,962	.245	.43
Sexual assault (03)	479,407	.009	.09	24,962	.022	.15
Dangerous or negligent acts (04)	479,407	.029	.17	24,962	.026	.16
Abduction and harassment (05)	479,407	.008	.09	24,962	.008	.09
Robbery and extortion (06)	479,407	.002	.05	24,962	.057	.23
Break and enter (07)	479,407	.015	.12	24,962	.078	.27
Theft (08)	479,407	.077	.27	24,962	.144	.35
Fraud (09)	479,407	.026	.16	24,962	.018	.13
Drug offences (10)	479,407	.125	.33	24,962	.046	.21
Weapons offences (11)	479,407	.024	.15	24,962	.013	.11
Property damage (12)	479,407	.034	.18	24,962	.073	.26
Public order offences (13)	479,407	.041	.20	24,962	.084	.28
Traffic offences (14)	479,407	.312	.46	24,962	.111	.31
Offences against justice procedures (15)	479,407	.075	.26	24,962	.071	.26
Miscellaneous offences (16)	479,407	.008	.09	24,962	.003	.05
Female	479,402	.214	.41	24,962	.228	.42
Aboriginality						
Aboriginal	479,407	.209	.41	24,962	.465	.50
Unknown	479,407	.095	.29	24,962	.040	.20
Age						
10-17*				24,962	16.120	1.42
18-24	479,407	.253	.43			
25-34	479,407	.310	.46			
35-44	479,407	.234	.42			
45+	479,407	.203	.40			



Table 1. Descriptive statistics - (continued)

Variable	Adults			Juveniles		
	(1) Obs	(2) Proportion	(3) Std. Dev.	(4) Obs	(5) Proportion	(6) Std. Dev.
SEIFA Quartile						
(Most disadvantaged) 1	479,407	.277	.45	24,962	.315	.46
2	479,407	.255	.44	24,962	.292	.45
3	479,407	.242	.43	24,962	.222	.42
(Least disadvantaged) 4	479,407	.151	.36	24,962	.117	.32
Unknown	479,407	.075	.26	24,962	.053	.22
Show Cause Offence	479,407	.036	.19			
Already on bail	479,407	.071	.26	24,962	.135	.34
Already on order or bond	479,407	.109	.31	24,962	.196	.40
Number of prior breaches of bail						
0	479,407	.931	.25	24,962	.778	.42
1	479,407	.042	.20	24,962	.082	.27
2+	479,407	.028	.16	24,962	.140	.35
Number of prior breaches of orders						
0	479,407	.776	.42	24,962	.752	.43
1	479,407	.068	.25	24,962	.073	.26
2+	479,407	.157	.36	24,962	.176	.38
Number of prior court appearances						
0	479,407	.435	.50	24,962	.498	.50
1	479,407	.180	.38	24,962	.177	.38
2	479,407	.113	.32	24,962	.106	.31
3+	479,407	.272	.45	24,962	.219	.41
Number of concurrent charges						
0	479,407	.635	.48	24,962	.464	.50
1	479,407	.221	.41	24,962	.283	.45
2	479,407	.087	.28	24,962	.148	.35
3+	479,407	.058	.23	24,962	.106	.31
Median Sentence Ranking (MSR)*	479,407	82.770	27.00	24,962	69.100	30.70
Number of prior violent offences						
0	479,407	.757	.43	24,962	.658	.47
1+	479,407	.243	.43	24,962	.342	.47
Number of prior prison episodes						
0	479,407	.852	.36	24,962	.905	.29
1+	479,407	.148	.36	24,962	.095	.29
Situational factors						
Alcohol related	479,407	.323	.47	24,962	.133	.34
Drug related	479,407	.187	.39	24,962	.082	.27
Domestic violence related	477,998	.216	.41	24,880	.216	.41

Table 1. Descriptive statistics - (continued)

Variable	Adults			Juvéniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Obs	Proportion	Std. Dev.	Obs	Proportion	Std. Dev.
<b>Unacceptable risk categories</b>						
Serious offence	479,407	.056	.23	24,962	.162	.37
Community safety	479,407	.079	.27	24,962	.184	.39
Failure to Appear	479,407	.040	.20	24,962	.073	.26
Witness concern	479,407	.033	.18	24,962	.069	.25
<b>Day of the week charged by police</b>						
Monday	479,407	.127	.33	24,962	.136	.34
Tuesday	479,407	.135	.34	24,962	.152	.36
Wednesday	479,407	.142	.35	24,962	.159	.37
Thursday	479,407	.151	.36	24,962	.161	.37
Friday	479,407	.147	.35	24,962	.142	.35
Saturday	479,407	.153	.36	24,962	.124	.33
Sunday	479,407	.145	.35	24,962	.126	.33

Note.\* Refers to a variable that is continuous, and therefore the mean is shown instead of a proportion. Sample size, proportion (or mean) and standard deviation are shown for each variable in the sample for both adults (aged 18 or over) and juveniles (aged 10 – 17). Show Cause offences do not apply to juveniles. Observations refer to non-missing observations, if there is no missing category included in the table. Obs = Observations, Std. Dev = Standard deviation, ANZSOC= Australian and New Zealand Standard Offence Classification.

## Statistical Analysis

To examine factors associated with the probability that police refuse bail, we estimate an Ordinary Least Squares (OLS) regression of Equation 1. We employ robust standard errors clustered at the PAC level, with 57 PACs in our sample.

$$Pr(\text{Refuse}_{ijpt}) = \alpha + \gamma X_{it}' + \delta_j + \theta_p + \lambda_t + \varepsilon_{ijpt} \quad (1)$$

In Equation 1,  $\text{Refuse}_{ijpt}$  is a binary variable equal to one if the defendant in case  $i$ , accused of offence  $j$ , by police from PAC  $p$ , is refused bail in month-year  $t$ , and zero otherwise.  $\delta_j$  represents a set of offence Fixed Effects (FEs) which control for variation in the likelihood of bail refusal stemming from the severity of the offence (i.e., these FEs limit our comparison to defendants accused of an offence within the same ANZSOC category).<sup>14</sup>  $\theta_p$  is a set of PAC FEs that control for time invariant systematic differences in police practice between PACs<sup>15</sup> (e.g., fixed budgeting allocations and local priorities regarding specific types of offences and defendants).  $\lambda_t$  is a set of month-year FEs which control for factors common to all PACs which vary over time (e.g., state-wide unemployment, seasonality in crime, and legislative changes).  $X_{it}'$  represents the set of defendant-case specific variables of interest to our study (i.e., those outlined in Table 1, except for the unacceptable risk test categories). Finally,  $\varepsilon_{ijpt}$  is the error term. We exclude unacceptable risk test categories as the police determine both the unacceptable risk test categories and bail refusal, and in this context it is unclear in what order this occurs. Given this, it is also unclear, what the interpretation of coefficient estimates for the unacceptable risk test categories would be.

In order to examine what factors contribute to the court bail decision, we restrict our sample to cases that meet three conditions: first, the police had to have refused bail;<sup>16</sup> second, the police and court bail decision had to have occurred within one day of each other,<sup>17</sup> and third, all defendants must have a

14 That is,  $\delta_j$  represents a set of binary variables each taking value one for an ANZSOC code described in Table 1. One may be concerned that this level of FEs is too broad. However, we show that our results hold even when using a narrower definition of offences (i.e., lawpart codes). An explanation of lawpart codes and the corresponding estimates are available in Table A1 of the Appendix.

15 PACs are defined by their current structure which came into effect in 2018. In 2018 there was a restructure in the boundaries of some PACs, moving from 76 former "Local Area Commands (LACs)" to 58 current PAC/PDs.

16 Although it is possible for police to grant bail and subsequently for the courts to refuse bail, this rarely occurs in practice. Out of the 434,246 cases in our sample that were granted bail by police, only 1,363 or 0.31 per cent of those were subsequently refused bail on their first appearance by the court.

17 This represents 93.86 per cent of the cases and is the most policy relevant portion of the sample. Estimates are very similar when not restricting the sample.

unacceptable risk test or Show Cause flag.<sup>18</sup> We then predict the probability that the courts also refuse bail, by estimating an OLS regression of Equation 2. We employ robust standard errors clustered at the magistrate level, with 550 magistrates in our sample.

$$Pr(\text{Refuse}_{ijpmt}) = \beta + \zeta W_{it}' + \delta_j + \theta_p + \phi_m + \lambda_t + v_{ijpmt} \quad (2)$$

Where  $\text{Refuse}_{ijpmt}$  is a binary variable equal to one if magistrate  $m$  refuses bail and therefore upholds the police decision, zero if they overturn the police decision and grant bail.  $W_{it}'$  represents the full set of defendant-case characteristics from Table 1,  $\phi_m$  is a set of magistrate FEs which control for differing degrees of leniency between magistrates that are constant over time,  $v_{ijpmt}$  is the error term, and all other variables have the same definitions as in Equation 1.

Investigating the coefficients contained within  $\gamma$  and  $\zeta$ , will determine what factors contribute to the police and court bail decisions. In Equations 1 and 2, positive numbers indicate a higher probability that the police and courts refuse bail, respectively.

We estimate both models 1 and 2 using OLS instead of competing non-linear models (e.g. a Logistic or Probit regression) for a number of reasons. Gomila (2020) argues that OLS has a number of benefits over non-linear models when examining binary outcomes in regression analysis. One key benefit is its ease of interpretability, as OLS directly estimates an average treatment effect. Beyond this, the OLS estimator is consistent, unbiased, and robust to heteroskedasticity when using robust standard errors which this bulletin reports. Importantly, nonlinear models perform poorly in the presence of FEs (Gomila, 2020). We directly analyse PAC and magistrate FEs in later sections which is why it is important for us to estimate these effects with OLS. Angrist and Pischke (2008, p. 80) have further argued that there is little meaningful difference between the estimated marginal effects from linear and nonlinear models when using a binary outcome variable, and provide support for the use of linear models in this context as they are substantially easier to interpret. As a robustness check we estimate equations (1) and (2) using Probit regressions and we report the results in Tables A2 and A3. The results are consistent with the OLS results. However, regarding prediction, Logistic and Probit models are superior to OLS as predicted probabilities are bounded between zero and one. Given this, when examining the predicted probabilities in bail refusal associated with different characteristics, we use the predicted probabilities from the Probit models estimated in Tables A2 and A3.

## RESULTS

### Factors influencing police bail refusal

Table 2 reports estimates from an OLS regression of Equation 1. Positive estimates indicate a higher probability that the police refuse bail for a defendant with that particular characteristic, and negative numbers indicate a higher probability that they grant bail for a defendant with the associated characteristic. The estimate multiplied by 100 gives the percentage point (p.p.) change in the probability of bail refusal associated with the particular characteristic. While the relative change refers to the percentage change from the mean rate of police bail refusal (which is 13.8% for adults and 22.7% for juveniles) associated with that variable. If the variable is categorical (e.g., as in the case of gender and Aboriginality) the relative change refers to a change in the variable from zero to one. If the variable is continuous (e.g., as in the case of MSR and age for juveniles) the relative change refers to a change from the 1st to 99th percentile of that variable. The relative change is only shown for statistically significant coefficients (i.e., for coefficients with a  $p$ -value less than or equal to .05).

<sup>18</sup> This drops a further 3.68 per cent of the adult sample and 1.82 per cent of the juvenile sample. According to the Bail Act, police should only deny bail if the defendant poses an unacceptable risk or committed a Show Cause offence. Having defendants who have neither in our sample may suggest that a data entry error occurred or that bail was denied for a reason of which we were unaware.

The main conclusion from Table 2 is that legal factors have the strongest influence on the police bail decision, both in terms of magnitude and statistical significance. For example, if an adult defendant is accused of a Show Cause offence, police are 57.7 p.p. more likely to refuse bail, an increase of 417.9 per cent compared to the mean police bail refusal rate. Similarly, if a defendant is already on bail, police are 2.4 p.p. or 17.2 per cent more likely to refuse bail. One prior court appearance increases the probability of bail refusal by 1.4 p.p. (10.1%), which rises to 4.3 p.p. (30.8%) if the defendant has three or more prior court appearances. One prior bail breach increases the probability of bail refusal by 4.7 p.p. (34.0%) and two or more prior breaches increases this probability by 6.7 p.p. (48.5%). A defendant with two or more prior breaches of justice orders is 4.1 p.p. (29.7%) more likely to be bail refused, while a defendant with one or more prior prison episodes is 8.1 p.p. (58.9%) more likely to be bail refused. Two or more concurrent charges increase an adult defendant's probability of police bail refusal by 11.1 p.p. (80.4%). Each of these coefficients is statistically significant at a 1 per cent level of significance. If police flag the case to be DV related, defendants are 14.0 p.p. more likely to be refused bail (101.2%), and, if police flag the incident as alcohol related, defendants are 0.4 p.p. (2.8%) more likely to be refused bail. Finally, defendants accused of less serious offences (as measured by the MSR) are less likely to be refused bail, and every additional ranking down the severity scale results in a 0.2 p.p. reduction in the probability of bail refusal. Similarly, defendants accused of a minor offence are 2.8 p.p. less likely to be bail refused. The relationship between legal factors and police bail refusal is largely the same for juveniles.

However, there are also extra-legal factors that have a statistically significant relationship with the police bail decision. Two of the more influential extra-legal factors are Aboriginality and gender. After accounting for other relevant case characteristics, Aboriginal defendants are 2.8 p.p. (20.4%) more likely to be refused bail by police. Similarly, female defendants are associated with a 2.2 p.p. (16.3%) reduction in the probability of being police bail refused. Age is also significantly associated with police bail refusal. Defendants aged between 35 and 44 years are 13.5 per cent more likely to be bail refused compared to defendants aged between 18 and 24. There are other extra-legal factors that are significant but are relatively small in magnitude (e.g., the day of the week that a defendant is charged, with police being more lenient on weekends). Police bail likelihood is found not to vary by SEIFA.<sup>19</sup> Extra-legal factors influencing police bail refusal were similar for adult and juvenile defendants. One difference is that the relative change effect sizes are smaller for young female and young Aboriginal defendants. A second difference is that older juveniles are found to be less at risk of bail refusal with each additional year of a juvenile's age decreasing the probability of bail refusal by 1.0 p.p. This is likely because the police more frequently issue cautions under the *Young Offenders Act 1997* (NSW) to younger juveniles (Ringland & Smith, 2013), thus diverting them from court. Younger juveniles proceeded against to court are therefore likely to be of higher risk.

<sup>19</sup> One concern is that there is not enough variation in SEIFA quartile within each PAC, and this is why we are not seeing a significant effect. There is no evidence for this. This is demonstrated in Table A4. Additionally, the coefficient Unknown SEIFA is significant in our model. The SEIFA is reported at the finalisation of the case, and those in custody at this time are recorded as an Unknown SEIFA. Therefore, this coefficient suggests that people who will be in custody for their offence are more likely to be bail denied for the same offence.

**Table 2. Factors influencing police bail refusal for adult and juvenile defendants**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Estimate	Std. Err.	Relative change %	Estimate	Std. Err.	Relative change %
<i>Panel A: Demographics</i>						
Female	-.022	.002	-16.26	-.018	.007	-7.86
Aboriginality						
Aboriginal	.028	.002	20.39	.028	.008	12.17
Unknown	.018	.001	13.02	.031	.006	13.87
Age						
25-34	.017	.001	12.42	-.010	.002	-24.93
35-44	.019	.002	13.50			
45+	.014	.002	10.05			
SEIFA Q1	.001	.003		-.018	.011	
SEIFA Q2	.005	.003		-.012	.011	
SEIFA Q3	.005	.003		.001	.010	
Unknown SEIFA	.038	.004	27.47	.058	.021	25.63
<i>Panel B: Offence type and concurrent offending</i>						
Show Cause Offence	.577	.005	417.91			
Minor Offence	-.028	.002	-20.38	-.050	.005	-21.85
On bail	.024	.003	17.16	.103	.010	45.50
On order or bond	.047	.002	33.84	.039	.009	17.36
Concurrent charges						
1	.015	.001	10.77	.035	.006	15.36
2+	.111	.003	80.40	.137	.007	60.17
Median Sentence Ranking (MSR)	-.002	.000	-167.60	-.002	.000	-107.73
<i>Panel C: Prior offending</i>						
Prior court appearances						
1	.014	.002	10.13	.052	.006	23.08
2	.031	.002	22.32	.056	.011	24.88
3+	.043	.003	30.84	.044	.011	19.44
Prior breach of bail						
1	.047	.003	33.99	.115	.012	50.73
2+	.067	.006	48.47	.139	.013	61.03
Prior breach of orders						
1	.004	.002	3.24	.023	.013	
2+	.041	.002	29.66	.045	.010	19.89
Prior prison						
1+	.081	.004	58.92	.079	.020	34.94
Prior violent offence						
1+	.027	.002	19.46	.018	.007	8.05
<i>Panel D: Police determinations</i>						
Alcohol related	.004	.002	2.83	.011	.007	
Drug related	.017	.004	12.09	.028	.014	12.34
Domestic violence related	.140	.005	101.22	.137	.010	60.34
<i>Panel E: Day of the week charged by police</i>						
Tuesday	-.001	.002		-.011	.009	
Wednesday	.000	.001		-.003	.010	
Thursday	.000	.002		-.001	.008	
Friday	-.003	.002		-.024	.008	-10.45
Saturday	-.008	.002	-5.92	-.010	.008	
Sunday	-.009	.002	-6.25	-.002	.008	

**Table 2. Factors influencing police bail refusal for adult and juvenile defendants - (continued)**

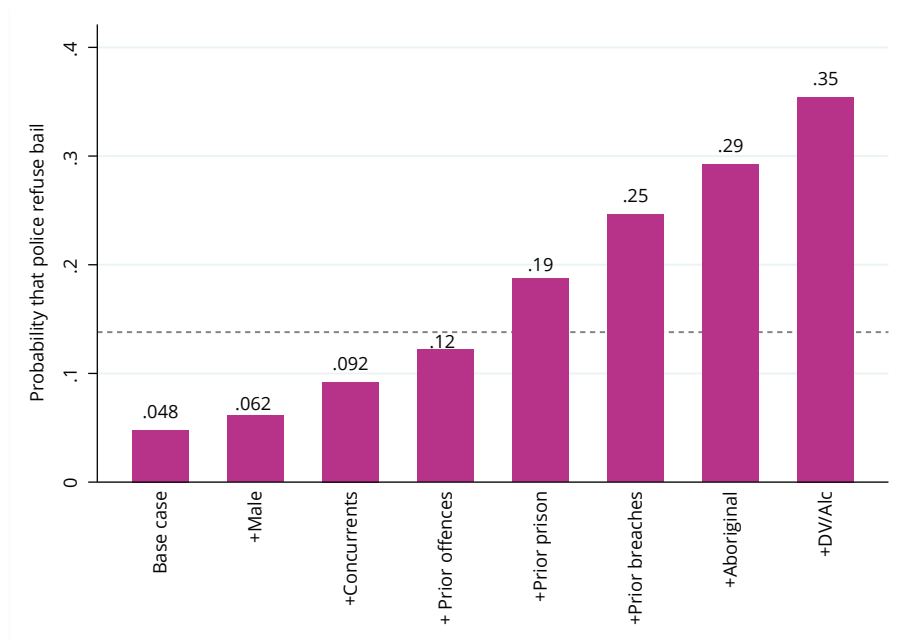
Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Estimate	Std. Err.	Relative change %	Estimate	Std. Err.	Relative change %
Offence FEs	Yes			Yes		
Time FEs	Yes			Yes		
PAC FEs	Yes			Yes		
Observations	476,261			24,704		

Note. All models are estimated using OLS, with the dependent variable equal to one if the police refused bail, and zero otherwise. Relative changes are only shown for coefficients which are statistically significant at a 5% level of significance ( $p < .05$ ). Robust Standard errors are clustered at the PAC level. Show Cause offences do not apply to juveniles. The relative change refers to the percentage change from the mean police bail refusal rate associated with that coefficient. If the coefficient is binary, the relative change refers to a change in the independent variable from zero to one. For the median sentence ranking, the relative change refers to a change from an offence ranked in the 1st percentile to an offence ranked in the 99th percentile. For a juvenile's age the relative change refers to the change from a juvenile aged in the 1st percentile of the distribution to one aged in the 99th percentile. For an adult's age, the reference group is those aged between 18 and 24. The variance inflation factor (VIF) is also examined to test our coefficients for multicollinearity. For adults, no variable reported in Table 2 has a VIF above 3.06 and for juveniles no variable has a VIF above 4.06, which are acceptable levels regarding multicollinearity. FE= fixed effects, PAC= Police Area Command, std. err. = standard error.

### Predicted probabilities for different case studies

Figure 1 illustrates the results reported in Table 2 using eight case studies. Each case study plots the predicted probability of police bail refusal for adults with a select group of characteristics.<sup>20</sup> Our base case refers to a female, non-Aboriginal, adult defendant, accused of an offence that was not drug or alcohol related, with no concurrent charges, no prior offences, no prior prison sentences, and no prior breaches. A defendant with these characteristics has a 4.8 per cent chance of being denied bail by the police, which is much lower than the average rate that police refuse bail (13.8%; which is shown by the dashed line in Figure 1).

**Figure 1. Predicted probabilities of police bail refusal for adult defendants**



Note. The estimated probabilities reported in Figure 1 are generated using a Probit regression of Equation 1. We vary each of the variables displayed on the horizontal axis. Each variable is a binary variable, equalling one if there were one or more occurrences and zero otherwise. Prior breaches is equal to one for one or more breach of bail or any other justice order, DV/Alc is equal to one if a defendant received a DV or Alcohol flag. All other variables are held constant at their average values. The dashed line marks the average rate of police bail refusal (13.8%)

<sup>20</sup> We use a Probit regression instead of an OLS regression because Probit regressions generate superior estimates when the objective is prediction. When the objective is causal inference, however, OLS estimates have been shown to be robust to nonlinearities induced by binary dependent variables. Interested readers are directed to Angrist and Krueger (2001) for a discussion regarding these competing models. The full set of Probit average marginal effects associated with Figure 1 are included in Table A1 of the Appendix.

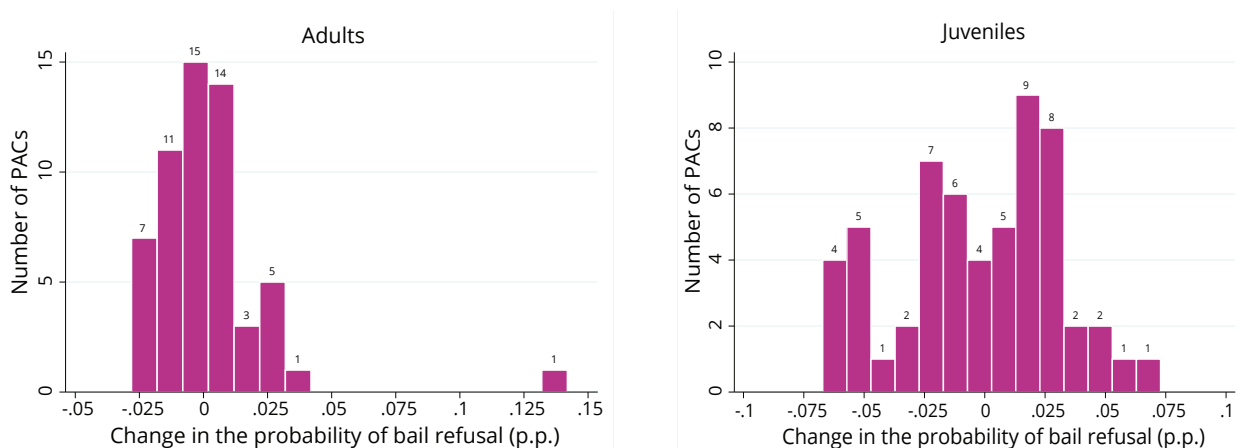
Now that we have established our base case, we change the characteristics of the base case, one by one, to see how the risk of police bail refusal increases. The first characteristic we alter is gender: a male (that is otherwise identical to our base case) has a 6.2 per cent chance of being bail refused. This case, which is a non-Aboriginal male with no prior or concurrent offences, is the most common case of the eight different cases we consider in this figure, representing 6.7 per cent of the sample. Next we change the number of concurrent charges. A male defendant with at least one concurrent charge has a 9.2 per cent chance of being bail refused. The remainder of Figure 1 repeats this exercise for the remaining characteristics. Moving along the horizontal axis we can see that the probability of being police bail refused increases with each additional characteristic, such that our final case (an Aboriginal male accused of a DV and/or Alcohol related offence with at least one concurrent charge, a prior offence, a prior prison sentence and a breach of bail/justice order) has a probability of 35.4 per cent of being bail refused by the police. The predictive ability of our model is excellent with an Area Under the receiver operating characteristic Curve (AUC) of 0.92 (see Table A2). This suggests that the factors included in our model are able to account for the vast majority of variance in police bail decisions.

Figure 1 is for illustrative purposes and each individual will have a different mix of characteristics that may not be captured by the eight cases we have considered above. Even so, no case is unusual or unlikely to occur in our sample. Even the eighth case, where a defendant has all of the characteristics considered in Figure 1, represents 5,026 defendants or 1.0 per cent of the sample.

### Variation in bail refusals by PAC

As previously mentioned, in Equation 1, we control for time-invariant systematic differences in police practices between PACs when examining the factors that influence police bail refusal. Said differently, we only compare bail decisions for defendants accused of an offence by police within the same PAC. We do this to control for local patterns in bail decision-making. However, the variation in police bail refusals *between* PACs may be of interest in itself. In this section we examine whether some PACs are systematically more or less likely to refuse bail than others after adjusting for both case-level and person-level characteristics. This is analogous to prior research showing that some magistrates are systematically more (or less) likely to refuse bail than others (see for example, Rahman, 2019).

Figure 2. Change in the probability of bail refusal by PAC



Note. Histograms of PAC coefficients from the estimation of Model 1 are shown (i.e., the average change in the probability of bail refusal associated with a particular PAC, controlling for all the factors in Table 2). Left refers to the adult sample, while right refers to the juvenile sample. The PAC that is excluded is the PAC that has the median rate of bail refusals. Differences are expressed as a p.p. deviation from the PAC with the median bail refusal rate, controlling for the factors in Table 2.

To answer this question, we report our estimates of the PAC fixed effects<sup>21</sup> from Table 2 in the histograms of Figure 2. The histogram shows the percentage point change associated with a defendant being arrested in a given PAC relative to a referent PAC, this is a different PAC for the adult and juvenile histograms. The referent PAC/PD is selected as the PAC/PD with the median rate of bail refusal among all PAC/PDs. How spread out PACs are is of most interest in this analysis. If PACs are more spread out from each other this indicates that there is greater disagreement in bail decisions for defendants with similar characteristics.

For adults, the two most extreme PACs (i.e., the most lenient PAC compared with the harshest PAC) are within 16.6 p.p. of one another. This indicates that a defendant arrested in the harshest PAC is 16.6 p.p. more likely to be bail refused than a defendant who is otherwise identical, based on all other characteristics in our model, but is arrested in the most lenient PAC. This means that moving from the most lenient to the harshest PAC would have the second largest increase in the probability of bail refusal among all factors in Table 2, behind the increase associated with having a Show Cause offence. For juveniles, the PACs/PDs are all within about 13 p.p. of one another. This amounts to a non-negligible effect of PAC/PD on the probability of bail denial.

The comparison above illustrates the difference in probabilities between the two most extreme PACs. However, even if we examine the difference between PACs in the first quartile and third quartile (i.e., the difference between the two PACs that are more lenient than 75% and 25% of all other PACs, respectively), there is still a substantial change in the probability of bail refusal. For adults, moving from a PAC in the first quartile to the third quartile changes the probability of bail refusal by 1.8 p.p., which is more than the change in probability associated with having one prior court appearance. For juveniles, moving from a PAC in the first quartile to the third quartile changes the probability of bail refusal by 4.4 p.p., which is slightly less than the change in probability associated with having two or more prior breach of orders compared to having no prior breaches of orders.<sup>22</sup>

## Factors influencing court bail refusal

Table 3 restricts the sample to defendants refused bail by police and then examines the court bail decision. Positive estimates indicate a greater likelihood that the court refuses bail for a defendant with that characteristic, while negative estimates indicate a greater likelihood that bail will be granted. The estimate multiplied by 100 gives the percentage point change in the probability of bail refusal associated with the particular characteristic. The relative change refers to the percentage change from the mean rate of court bail refusal (which is 45.3% for adults and 39.6% for juveniles) associated with that coefficient. This is calculated in the same way as for the police bail decision, and relative changes are only shown for statistically significant coefficients ( $p < .05$ ).

From Table 3 it is apparent that the courts are also strongly influenced by legal factors when considering bail applications. In particular, the courts are 24.1 p.p. (53.1%) more likely to deny bail to adult defendants accused of Show Cause offences and are 14.5 p.p. (32.0%) more likely to refuse bail to defendants that have at least one prior prison episode. The courts are also more likely to refuse bail for more serious offences. For example, moving from the 99th percentile in offence seriousness (as defined by the MSR) to the 1st percentile increases the probability of bail refusal by 53.6 per cent. Additionally, the courts are more likely to refuse bail if the police flagged that there is an unacceptable risk of the defendant committing a serious offence while on bail. This increases the likelihood of bail refusal by 6.2 p.p. (13.8%). However, a court is less likely to refuse bail if police flag an offence as DV or alcohol related. Where an offence is flagged as DV related, the likelihood of bail refusal decreases by 10.8 per cent.

21 PAC coefficients are highly significant. For adults, the joint Wald test of all PAC FEs being equal to zero produces a test statistic of  $F(56, 56) = 1,000,000,000$  with a  $p$ -value of  $p < .001$ . For juveniles,  $F(55, 55) = 20022.76$  with a  $p$ -value of  $p < .001$ .

22 It should be noted that PACs are defined by their current structure. In 2018 there was a restructure in the boundaries of some PACs, moving from 76 former "local area commands (LACs)" to 58 current PAC/PDs. By aggregating police subdivisions into the corresponding geographically-larger PAC/PDs, it is likely that we may underestimate the variation in bail denial between the geographically-smaller LACs in the pre-2018 period.



**Table 3. Factors influencing court bail refusal for adult and juvenile defendants**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Estimate	Std. Err.	Relative change %	Estimate	Std. Err.	Relative change %
<i>Panel A: Demographics</i>						
Female	-.077	.006	-17.02	-.039	.017	-9.97
Aboriginality						
Aboriginal	.002	.005		-.009	.014	
Unknown	-.066	.040		-.098	.168	
Age				.006	.005	
25-34	.040	.005	8.77			
35-44	.044	.006	9.76			
45+	.025	.006	5.61			
SEIFA Q1	.027	.007	6.04	.022	.033	
SEIFA Q2	.017	.008	3.76	-.019	.030	
SEIFA Q3	.014	.007		-.006	.027	
Unknown SEIFA	.206	.009	45.57	.104	.032	26.32
<i>Panel B: Offence type and concurrent offending</i>						
Show Cause Offence	.241	.008	53.13			
Minor Offence	-.042	.026		-.030	.101	
On bail	.007	.006		.057	.014	14.35
On order or bond	.029	.005	6.42	.038	.017	9.57
Concurrent charges						
1	.041	.005	9.15	.021	.017	
2+	.105	.006	23.28	.055	.017	13.85
Median Sentence Ranking (MSR)	-.002	.000	-53.64	-.002	.001	-69.64
<i>Panel C: Prior offending</i>						
Prior court appearances						
1	-.012	.008		-.011	.018	
2	.012	.008		.049	.031	
3+	.035	.009	7.71	.057	.032	
Prior breach of bail						
1	.022	.006	4.96	.043	.018	10.92
2+	.032	.008	7.10	.104	.016	26.20
Prior breach of orders						
1	.016	.006	3.43	.056	.027	14.18
2+	.023	.005	4.99	.031	.020	
Prior prison						
1+	.145	.005	31.95	.246	.021	62.14
Prior violent offence						
1+	.019	.005	4.21	.035	.018	
<i>Panel D: Police determinations</i>						
Alcohol related	-.028	.005	-6.18	-.002	.019	
Drug related	.018	.007	3.92	.010	.029	
Domestic violence related	-.049	.006	-10.83	-.042	.018	-10.50
Failure to appear	.034	.005	7.44	.023	.013	
Endanger community safety	.033	.006	7.26	.049	.017	12.40
Commit a serious offence	.062	.004	13.78	.041	.015	10.47
Interfere with witnesses	.019	.004	4.17	-.003	.013	

**Table 3. Factors influencing court bail refusal for adult and juvenile defendants - (continued)**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Estimate	Std. Err.	Relative change %	Estimate	Std. Err.	Relative change %
<i>Panel E: Day of the week charged by police</i>						
Tuesday	.008	.007		-.018	.021	
Wednesday	-.001	.006		.014	.022	
Thursday	.006	.007		.012	.023	
Friday	.009	.008		.019	.025	
Saturday	.020	.010	4.41	.012	.026	
Sunday	-.006	.008		.004	.020	
Offence FEs	Yes			Yes		
Time FEs	Yes			Yes		
PAC FEs	Yes			Yes		
Magistrate FEs	Yes			Yes		
Observations	57,710			5,100		

Note. All models are estimated using OLS regression on the restricted sample of those who have been refused bail by the police. The dependent variable is equal to one if the courts refused bail, and zero otherwise. Relative changes are only shown for coefficients which are statistically significant at a 5% level of significance ( $p < .05$ ). Robust standard errors are clustered at the magistrate level. Show Cause offences do not apply to juveniles. The relative change refers to the percentage change from the mean rate of court bail refusal associated with that coefficient. If the coefficient is binary, the relative change refers to a change in the independent variable from zero to one. For the median sentence ranking, the relative change refers to a change from an offence ranked in the 1st percentile to an offence ranked in the 99th percentile. For a juvenile's age, the relative change refers to the change from a juvenile aged in the 1st percentile of the distribution to one aged in the 99th percentile. The variance inflation factor (VIF) is also examined to test our coefficients for multicollinearity. For adults, no variable reported in Table 2 has a VIF above 4.25 and for juveniles no variable has a VIF above 5.49, which are acceptable levels regarding multicollinearity. FE= fixed effects, PAC= Police Area Command, std. err. = standard error.

In terms of extra-legal factors, females are 7.7 p.p. (17.0%) less likely to be bail refused by the court than males, while defendants aged between 35 and 44 are 4.4 p.p. (9.8%) more likely to be court bail refused than 18-24 year olds. Defendants that live in more disadvantaged suburbs (i.e., SEIFA Q1) are 6.0 per cent more likely to be bail refused compared to those living in the most advantaged suburbs.<sup>23</sup> The day of the week on which a defendant is charged has little impact on the court bail decision.

The factors influencing court bail refusal are largely the same for juveniles as for adults, with two important exceptions (1) no extra-legal factors are significant for juveniles, excluding gender; and (2) several legal factors are greater in magnitude. For example, having one or more prior prison episodes as a juvenile increases the probability of bail refusal by 62.1 per cent compared with 32.0 per cent for adults. In terms of the unacceptable risk categories, endangering community safety has a larger influence on the probability of court bail denial for juveniles than for adults (increasing the likelihood of bail denial by 12.4% and 7.3%, respectively).

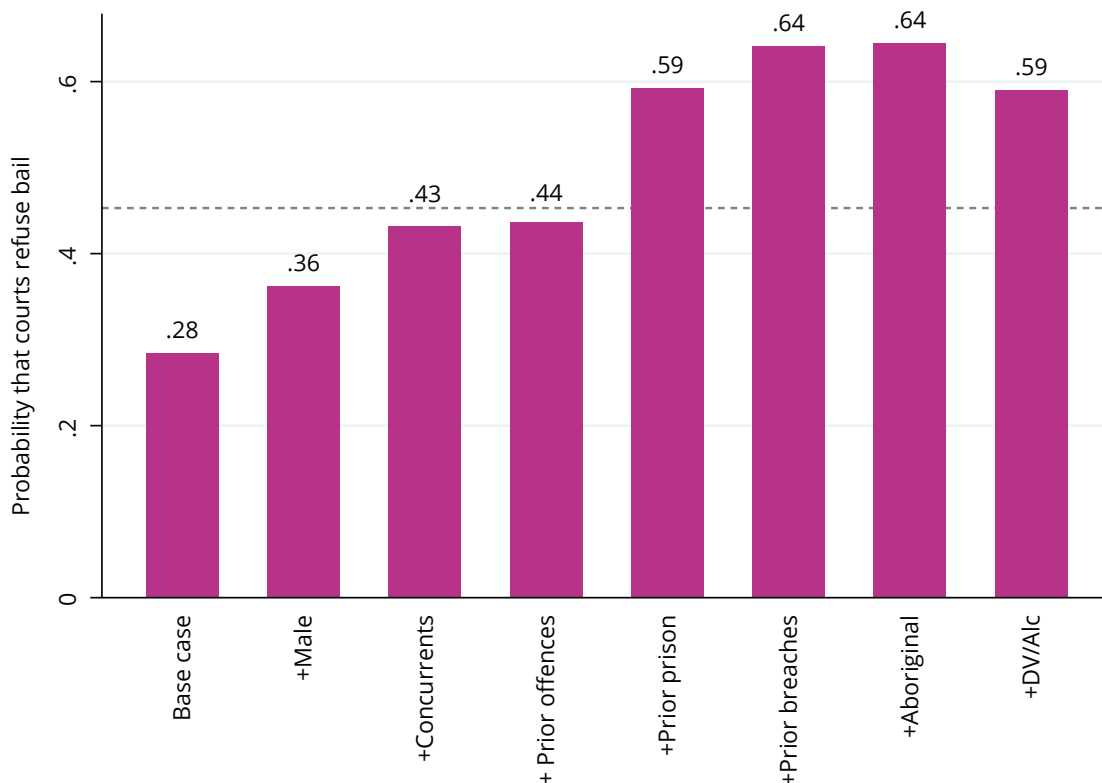
### Predicted probabilities for different case studies

Figure 3 illustrates the estimates from Table 3 using the same procedure described earlier (in relation to Figure 1). From Figure 3 we can see that our base case (a female, non-Aboriginal, adult defendant that has already been bail refused by police, with no concurrent charges, no prior offences that proceeded to court, no prior prison sentences, no prior breaches of any kind and no DV or alcohol flag) has a 28.4 per cent chance of being denied bail by the court. This is much lower than the average rate that courts refuse bail (45.3%; represented by the dashed line in Figure 3). However, the probability that courts will refuse bail increases to 64.5 per cent for an Aboriginal male defendant with concurrent charges, prior court appearances, prior prison, prior breaches and an index offence which is not flagged as DV or alcohol

<sup>23</sup> The coefficient for Unknown SEIFA is significant in our model. The SEIFA is reported at the finalisation of the case, and those in custody at this time are recorded as an Unknown SEIFA. Therefore this coefficient suggests that people who will be in custody for their offence are more likely to be bail denied for the same offence.

related. A defendant with all of these characteristics, as well as a DV or alcohol related index offence, will have a 59.0 per cent probability of being denied bail. However, it is unusual for defendants with base case characteristics to reach the court bail stage, and they only represent 105 defendants or 0.18 per cent of the court bail sample. The final three cases, which incorporate breaches, Aboriginality and DV/Alcohol are much more common, each representing more than 4.5 per cent of the sample (e.g., the sixth case study is representative of 2,707 defendants). The predictive ability of our model is acceptable with an AUC of 0.78 (as shown in Table A2).

**Figure 3. Predicted probabilities of court bail refusal for adult defendants**



Note. The estimated probabilities reported in Figure 3 are generated using a Probit regression of Equation 2. The y-axis refers to the probability that courts refuse bail if the police have already refused bail. We vary each of the variables displayed on the horizontal axis. Each variable is a binary variable, equalling one if there were one or more occurrences and zero otherwise. Breaches is equal to one for one or more breach of bail or any other order, DV/Alc is equal to one if a defendant received a DV or Alcohol flag. All other variables are held constant at their average values. Dashed line refers to the average rate that the court refuses bail to an adult if the police have already refused bail to them (45.3%).

### Variation in bail refusals by authorised justice

The variation in court bail refusal associated with different authorised justices is reported in Figure 4. While registrars are defined as authorised justices under the Bail Act and therefore have the power to hear bail applications, most bail applications are heard by magistrates, with magistrates presiding over 78.5 per cent of the bail decisions in Table 3. Henceforth, the term magistrate is used to refer to any authorised justice.

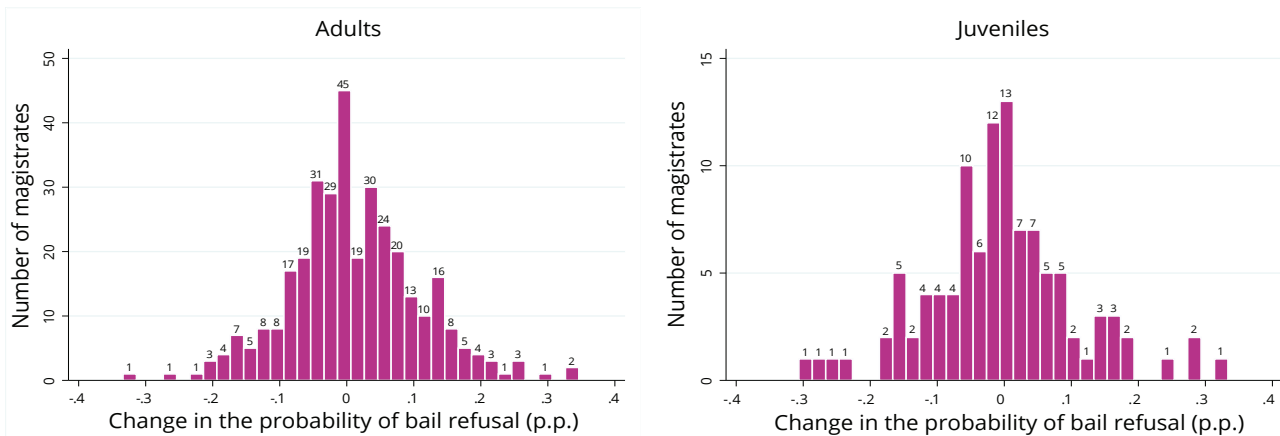
This exercise is analogous to the one performed in Figure 2 for police bail decisions. That is, we examine how much variability there is in bail decisions across different magistrates<sup>24</sup> after controlling for each of the characteristics shown in Table 3. From Figure 4, we can see that there is considerably more variation in magistrates’ bail decisions than previously shown for PACs. Recall from Figure 2 that, by-and-large, the

24 The magistrate FEs are highly significant. For adults, the joint Wald test of all magistrate FEs being equal to zero produces a test statistic of  $F(168, 461) = 58345.76$  and a p-value of  $p < .001$ . For juveniles,  $F(164, 263) = 66670.40$  and a p-value of  $p < .001$ .

most extreme PACs are within roughly 10 p.p. of each other. From Figure 4 we can see that magistrates are less clustered around the median bail refusal rates, with the average rate of bail denial differing between the most lenient and harshest magistrates by 66.9 p.p. for adults and 63.7 p.p. for juveniles. This means that two adults sharing the exact same characteristics, that we have controlled for in Table 3, will be 66.9 p.p. more likely to be denied bail if their bail hearing is presided over by the harshest magistrate compared to the most lenient magistrate. Moving between these two extremes is associated with a larger increase in the probability of bail refusal than any factor present in Table 3.

However, this refers to the difference between the two most extreme magistrates (out of a total of 338 magistrates in the adult sample and 105 magistrates in the juvenile sample). We also examine the difference between magistrates falling in the first quartile (i.e., harsher than 25% of all magistrates) and the third quartile (i.e., harsher than 75% of all magistrates). For adults, moving from a magistrate in the first quartile to the third quartile is associated with an 11.5 p.p. change in the probability of bail refusal. This is greater than the change in probability associated with a defendant having two or more concurrent charges. For juveniles, moving from a magistrate in the first quartile to the third quartile is associated with an 11.2 p.p. increase in the probability of bail refusal. This is greater than the expected change in the probability of bail denial from having more than two prior breaches of bail. This indicates that while the police are more likely to refuse bail, they are much more consistent in their decision-making. In contrast, while magistrates are more lenient overall, there is greater variability across authorised justices in their bail decisions.

**Figure 4. Change in the probability of bail refusal by magistrate**



Note. Histograms of the estimated coefficients for judicial officers from model 2 (i.e., the average change in the probability of bail refusal associated with a particular magistrate, controlling for all the factors in Table 3) are shown. Left refers to the adult sample, while right refers to the juvenile sample. The magistrate that is excluded is the magistrate that has the median rate of bail refusals. Differences are expressed as a p.p. deviation from the magistrate with the median bail refusal rate, controlling for the factors in Table 3. All magistrates that have made bail decisions on less than 10 cases are excluded from this histogram.

## DISCUSSION

This study examined three questions. Firstly, what are the factors associated with the probability that police refuse bail? Secondly, what are the factors associated with the probability that courts refuse bail? Finally, how do the factors which affect bail decisions differ for adult and juvenile defendants?

Regarding the first two questions, we find that the police and the courts are generally influenced by the same factors when deciding whether or not to grant bail. Both bail authorities are strongly influenced by legal factors. The most significant of these factors is whether the defendant is charged with an offence where the presumption is against bail (i.e., a Show Cause offence). Defendants charged with a Show Cause

offence are 57.7 p.p. more likely to be denied bail by the police and 24.1 p.p. more likely to be denied bail by the courts. The number of concurrent charges, severity of the index offence and prior criminal history of the defendant are also strongly associated with the decision to refuse bail. For example, those with one or more prior prison episodes are 8.1 p.p. more likely to be refused bail by police and 14.5 p.p. more likely to be refused bail by the courts. These results are largely consistent with previous bail research (see Allan et al., 2005; Snowball et al., 2010; Weatherburn & Snowball, 2012). However, we also find that certain extra-legal factors are significantly (and independently) associated with the likelihood that the police and courts refuse bail. For example, net of controls, the police and the courts are 2.2 p.p. and 7.7 p.p., respectively, less likely to refuse bail to a woman. Similarly, both police and the courts are more likely to refuse bail to defendants aged between 35 and 44 years than to defendants aged between 18 and 24 years. Finally, we find that PACs and magistrates vary significantly in their propensity to grant bail to defendants with the same set of characteristics. While magistrates are overall more likely to grant bail than the police, they are much less consistent in their bail decisions. The level of judicial disparity in bail decisions found in our study is greater than that reported by Nagel (1983) in her research on judges' decision-making in New York bail matters, but is similar to prior research conducted in NSW by Rahman (2019).

Turning to the last research question considered in this study, we find that the factors influencing bail refusal are largely the same for both juveniles and adults. There are, however, three important differences. Firstly, extra-legal factors appear to exert less influence in bail decisions involving juvenile defendants. In particular, we find that no extra-legal factors, except for gender, are statistically significant with respect to the probability of court bail refusal for juvenile defendants. The magnitude of the associative effect sizes for gender and Aboriginality in police bail decisions are also smaller for juvenile defendants compared with adults. Secondly, bail related factors exert more influence on bail decisions for juveniles compared with adults. For example, if a juvenile is already on bail when they are arrested, they are 45.5 per cent more likely to be refused bail by the police, and 14.4 per cent more likely to be refused bail by the court compared with those who are not on bail at the time of arrest. For adults, being on bail at the time of arrest only increases the likelihood of police refusal by 17.2 per cent and is not a significant factor in the court bail decision. Thirdly, with respect to the unacceptable risk categories, courts appear to be most influenced by whether the police have flagged a juvenile as at risk of endangering community safety, but for adults they are most influenced by whether police have flagged the defendant at risk of committing a serious offence.

Our research also highlights a number of important differences between the police and court bail decisions. We find that Aboriginality has no association with the likelihood of court bail, but that it is significantly associated with the police bail decision. The results indicate that adult Aboriginal defendants are 2.8 p.p. or 20.4 per cent more likely to be refused bail by police, even after accounting for other relevant case characteristics. We also find that defendants accused of DV related offences, and, to a lesser extent alcohol related offences, are more likely to be bail refused by police but less likely to be bail refused by the courts. One explanation for the differences in police and court bail decisions could be that assessments of bail concerns vary over time. For example, a defendant charged with a DV offence might pose more risk to victims or first responders in the minutes/hours immediately following the offence. However, when brought before the court the next day, the risk of harm to the victim and community may be lessened or able to be mitigated through the imposition of certain bail conditions. Similarly, the police may assess an intoxicated person who has committed a violent offence to be an immediate threat to public safety and therefore deny them bail, but when the defendant appears before the court sober, magistrates assess the risk to be low or are satisfied that bail conditions can be imposed to alleviate any concerns. Further, the NSW police have a policy that "encourages investigating officers to give the strongest consideration to arresting offenders of domestic and family violence" (NSW Police, 2018, p. 3), which likely adds to the probability that police will be more likely to refuse bail to DV offenders than the courts.

While our findings are suggestive of an association between extra-legal factors and the probability of bail, they should not be interpreted as causal. It is possible there are other important variables that are correlated with Aboriginality, age and/or gender which are omitted from our models. This would cause

us to overestimate the effect of these factors on bail outcomes. Matters that the police and courts can consider as part of their bail decision are outlined in section 18 of the Bail Act. Most of these are included in our models but there are several factors that we cannot observe (such as “circumstances and community ties” and “any criminal associations”) and these, too, may play an important role in shaping bail decisions. For example, a magistrate, when considering circumstances and community ties, might take into account a defendant’s carer responsibilities. Women are typically the primary care-giver of dependent children and as such may be less likely to be refused bail by the courts compared with their male counterparts. Similarly, a bail authority may consider housing stability to be an indicator of a defendant’s ties to the community and therefore relevant to their risk of absconding whilst on bail. In this scenario, Aboriginal Australians may be refused bail more often than non-Aboriginal Australians because they are more likely to be homeless or have transient accommodation (Australian Institute of Health and Welfare, 2014).

Despite this limitation, our results have several important policy implications, and suggest a number of avenues for future research. Firstly, this study highlights the need for further research to better understand why such a large proportion of defendants who are refused bail by the police are subsequently assessed by the courts as suitable for release. As shown in Table 1, the courts grant bail to 54.7 per cent of adult defendants and 60.4 per cent of juvenile defendants for whom police have already refused bail. This equates to around 36,152 adult defendants and 3,428 juvenile defendants being held on short-term remand over the time period of our analysis (i.e., from 2015 to 2019). Our analysis suggests that courts are much more likely to overturn the police bail decision in cases involving fewer and less serious offences (as measured by the MSR) and where the defendant has little or no criminal history. For example, the probability that a non-Aboriginal defendant with no prior offences or concurrent charges, who has been denied bail by the police, will also be refused bail by the courts is only 28.4 per cent for females and 36.2 per cent for males. This would suggest that perhaps police are setting a lower threshold than the courts to refuse bail in cases where there are no clear legal factors to reliably assess bail concerns. If true, then modifying the standard risk assessment tools used by police to determine bail could significantly reduce instances of short-term remand. Further, our analysis suggests that instances of short-term remand are also higher among defendants who are flagged as committing a DV related offence. Future work should assess the effectiveness of this approach to managing DV offenders and, in particular, whether the benefits to victim and community safety outweigh the cost of such high rates of short-term remand. This is especially important as policies which mandate that police arrest DV offenders are generally considered to be ineffective both in reducing reoffending and protecting victims (Mazerolle et al., 2018).

Secondly, our finding that both the police and the courts are influenced by extra-legal factors, particularly that Aboriginal defendants with similar characteristics to non-Aboriginal defendants are more likely to be bail refused by the police, warrants further investigation. This is especially pertinent considering the over-representation of Aboriginal people in custody. In the last quarter of 2019 Aboriginal people represented 25.5 per cent of adult prisoners in NSW (BOCSAR, 2020), which is significantly higher than the percentage of the total NSW population that identify as Aboriginal (approximately 3.4%; Australian Bureau of Statistics, 2018). Qualitative research examining other factors relevant to bail decisions which could not be observed in our data, such as carer responsibilities, the strength of community ties and insecure housing, would be informative. Section 18(k) of the Bail Act allows bail authorities to consider special vulnerabilities or needs of the defendant when considering whether to grant bail. Age and Aboriginality are specifically referred to in this section. In the current study, it is not possible for us to ascertain what impact this clause has on the bail decision, but given our results for Aboriginal defendants, the application of this clause should also be examined further.

Finally, consistent with Dhami (2005), Nagel (1983) and Rahman (2019), we find significant variation in bail decision by both magistrates and PACs. Moving from having a bail decision made by a magistrate in the first quartile to another magistrate in the third quartile of the distribution of magistrate leniency has a greater effect on the probability of bail denial than many legal factors. Such large variation in bail decisions for matters with equivalent case characteristics is concerning as defendants are entitled to equality before

the law. It is also concerning given that bail refusal has been shown to be causally related to the likelihood of imprisonment (Rahman, 2019). In New York, Kleinberg, Lakkaraju, Leskovec, Ludwig, and Mullainathan (2018) have considered whether a machine learning algorithm might perform as well or better than judges in assessing bail risk. They conduct simulations where the algorithm makes a decision on whether to grant or refuse bail to a defendant based on a set of observable characteristics, and then examine the rate of failure to appear in court and reoffending on bail. Essentially, they estimate what the rate of these outcomes would be if the algorithm had decided the bail decision rather than the judge. Their simulations are extremely promising, suggesting that the use of an algorithm may result in crime reductions of up to 24.7 per cent with no change in imprisonment rates, or an imprisonment rate reduction of 41.9 per cent with no increase in crime rates. Further, they find that these reductions also apply to violent crime, and can reduce racial disparities in bail decisions.

The results of Kleinberg et al. (2018) are promising but certainly do not signal the end of bail decisions made by a police officer or magistrate. The police and courts will always need to exercise some discretion in bail decisions, as they are often privy to risk-relevant information that cannot be captured in an algorithm (e.g., the risk that a defendant may interfere with witnesses). Even so, a risk assessment tool that can accurately predict whether someone will offend while on bail or fail to appear in court, and which is based on easily accessible administrative data, may be beneficial as a guide for bail authorities and, ultimately, serve to increase consistency in bail decisions.

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## ACKNOWLEDGEMENTS

We would like to thank Suzanne Poynton, Jackie Fitzgerald, Clare Ringland, and Stewart Boiteux for their exceptional feedback on earlier drafts; Mai Ho and Darren Kwok for providing the ROD extract; the external reviewers for their helpful suggestions; Florence Sin for desktop publishing this bulletin; and of course, Hamish Thorburn for inspiring this project.

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## APPENDIX

### Lawpart Fixed Effects

One concern with models 1 and 2 as reported in Tables 2 and 3, respectively, is that although we control for offence type, the offence types that we control for (e.g., assault) may be too broad, resultantly leading to the comparison of defendants that are too dissimilar. To address this concern, in Table A1 we employ FEs at the lawpart code level, instead of the offence FEs used to construct coefficient estimates in Tables 2 and 3. Lawpart codes are “unique codes for all New South Wales offences and Commonwealth offences dealt with in New South Wales” (Judicial Commission of New South Wales, n.d.), and these FEs therefore allow us to compare defendants charged with the exact same offences. Given that the larger sample size allows for a better estimation of this model, we undertake this analysis only for adults. Models are estimated with OLS regression. Although some coefficients in Table A1 are slightly lower in magnitude than the corresponding estimates in columns 1 to 3 of Tables 2 and 3, the vast majority retain their statistical significance.

**Table A1. Factors influencing police and court bail refusal for adults when incorporating lawpart fixed effects**

Variable	Police Bail Denial			Court Bail Denial		
	(1)	(2)	(3)	(4)	(5)	(6)
	Estimate	Std. Err.	Relative change %	Estimate	Std. Err.	Relative change %
<i>Panel A: Demographics</i>						
Female	-.020	.002	-14.32	-.077	.006	-17.09
Aboriginal	.026	.002	19.19	.003	.004	
Unknown	.017	.001	11.97	-.055	.041	
Age						
25-34	.017	.001	12.60	.042	.005	9.22
35-44	.017	.002	12.65	.047	.006	10.45
45+	.012	.002	8.59	.026	.007	5.71
SEIFA Q1	.003	.003		.026	.007	5.81
SEIFA Q2	.006	.003		.018	.008	3.90
SEIFA Q3	.006	.003	4.43	.013	.007	
Unknown SEIFA	.038	.004	27.64	.206	.009	45.40
<i>Panel B: Offence type and concurrent offending</i>						
Show Cause Offence	.563	.006	407.79	.218	.008	48.08
Minor Offence	.012	.003	8.62	-.031	.030	
On bail	.023	.003	16.71	.016	.006	3.53
On order or bond	.038	.002	27.77	.031	.005	6.81
Concurrent charges						
1	.028	.001	20.23	.046	.005	10.19
2+	.115	.003	83.38	.104	.007	23.03

**Table A1. Factors influencing police and court bail refusal for adults when incorporating lawpart fixed effects - (continued)**

Variable	Police Bail Denial			Court Bail Denial		
	(1)	(2)	(3)	(4)	(5)	(6)
	Estimate	Std. Err.	Relative change %	Estimate	Std. Err.	Relative change %
<i>Panel C: Prior offending</i>						
Prior court appearances						
1	.014	.002	10.23	-.008	.008	
2	.031	.002	22.58	.017	.008	3.71
3+	.046	.003	33.63	.041	.009	8.97
Prior breach of bail						
1	.045	.003	32.59	.024	.006	5.28
2+	.065	.006	47.40	.038	.008	8.42
Prior breach of orders						
1	.003	.002		.015	.006	3.24
2+	.031	.002	22.53	.026	.005	5.82
Prior prison						
1+	.081	.004	58.88	.140	.005	30.89
Prior violent offence						
1+	.020	.002	14.77	.024	.005	5.27
<i>Panel D: Police determinations</i>						
Alcohol related	.009	.003	6.27	-.028	.005	-6.28
Drug related	.041	.003	29.52	.019	.007	4.10
Domestic violence related	.085	.005	61.32	-.019	.008	-4.14
Failure to appear				.033	.005	7.36
Endanger community safety				.030	.006	6.66
Commit a serious offence				.051	.004	11.25
Interfere with witnesses				.016	.004	3.47
<i>Panel E: Day of the week charged</i>						
Tuesday	-.001	.002		.007	.007	
Wednesday	.000	.001		-.002	.007	
Thursday	-.001	.002		.003	.007	
Friday	-.003	.002	-2.45	.008	.008	
Saturday	-.008	.002	-5.79	.023	.010	5.03
Sunday	-.008	.002	-5.55	-.005	.008	
Lawpart FEs	Yes			Yes		
Time FEs	Yes			Yes		
PAC FEs	Yes			Yes		
Magistrate Fes	No			Yes		
Observations	475,630			57,439		

Note. All models are estimated using OLS, on the adult sample. The dependent variable is equal to one if the police refuse bail for columns (1) - (3), and zero otherwise. For columns (4) - (6), the dependant variable is equal to one if the courts refused bail, given that the police already refused bail, and zero otherwise. Standard errors are clustered at the magistrate level. Relative changes are only shown for coefficients which are statistically significant at a 5% level of significance ( $p < .05$ ). The relative change refers to the percentage change from the mean rate of court bail refusal, associated with that coefficient. If the coefficient is binary, the relative change refers to a change in the independent variable from zero to one. For a juvenile's age the relative change refers to the change from a juvenile aged in the 1st percentile of the distribution to one aged in the 99th percentile. FE= fixed effects, PAC= Police Area Command, std. err. = standard error, AUC= area under the receiver operating characteristic curve.

## Probit Estimates

We compare the estimates reported in Tables 2 and 3, which use linear regression models, with estimates from a non-linear regression model. Table A2 reports results of model 1 estimated with a Probit regression. Coefficients correspond to those in Table 2. Table A3 reports results of model 2 estimated with a Probit regression. Coefficients correspond to those in Table 3. Coefficient estimates in Table A2 are largely the same as those reported in Table 2. One exception is that coefficients related to SEIFA are statistically significant at a 5 per cent level of significance for adult defendants. However, they are still quantitatively small. Further, it must be noted that our ability to predict police bail outcomes for our sample with the Probit models is exceptional. The adult model has an AUC of 0.92, while the juvenile model has an AUC of 0.85. There are no large differences between the coefficient estimates reported in Table A3 and those in Table 3. However, our ability to predict the court bail decision using a Probit model specification is slightly reduced, but still in the acceptable to excellent range. The AUC for the estimation of model 2 with a Probit regression is 0.78 for adult defendants and 0.81 for juvenile defendants.

**Table A2. Predictors of police bail refusal (Probit)**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Average marginal effect	Std. Err.	Relative change %	Average marginal effect	Std. Err.	Relative change %
<i>Panel A: Demographics</i>						
Female	-.023	.002	-16.57	-.021	.007	-9.22
Aboriginal	.023	.001	16.96	.030	.008	13.41
Unknown	-.054	.003	-39.06	-.104	.028	-45.82
Age				-.010	.002	-26.15
25-34	.020	.001	14.82			
35-44	.023	.001	17.01			
45+	.018	.002	12.92			
SEIFA Q1	.006	.003	4.34	-.011	.011	
SEIFA Q2	.009	.003	6.83	-.009	.011	
SEIFA Q3	.009	.002	6.48	.004	.011	
Unknown SEIFA	.033	.003	24.18	.048	.019	21.18
<i>Panel B: Offence type and concurrent offending</i>						
Show Cause Offence	.422	.005	305.62			
Minor Offence	-.066	.002	-47.73	-.136	.011	-59.79
On bail	.023	.002	16.38	.092	.009	40.64
On order or bond	.029	.001	20.81	.031	.007	13.53
Concurrent charges						
1	.023	.001	16.62	.037	.005	16.19
2+	.088	.002	64.03	.125	.006	54.92
Median Sentence Ranking (MSR)	-.001	.000	-107.98	-.002	.000	-112.84

**Table A2. Predictors of police bail refusal (Probit) - (continued)**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Average marginal effect	Std. Err.	Relative change %	Average marginal effect	Std. Err.	Relative change %
<i>Panel C: Prior offending</i>						
Prior court appearances						
1	.021	.001	15.37	.065	.007	28.51
2	.039	.002	28.16	.072	.011	31.76
3+	.053	.002	38.23	.070	.010	30.77
Prior breach of bail						
1	.027	.002	19.49	.099	.011	43.72
2+	.038	.003	27.81	.111	.011	48.84
Prior breach of orders						
1	.005	.001	3.72	.014	.011	6.11
2+	.017	.001	12.68	.026	.008	11.44
Prior prison						
1+	.048	.002	34.42	.051	.015	22.63
Prior violent offence						
1+	.013	.001	9.67	.012	.006	5.47
<i>Panel D: Police determinations</i>						
Alcohol related	.000	.002		.008	.007	
Drug related	.007	.002	5.31	.022	.012	
Domestic violence related	.077	.003	55.70	.117	.009	51.65
<i>Panel E: Day of the week charged</i>						
Tuesday	.000	.002		-.010	.009	
Wednesday	.000	.001		-.001	.009	
Thursday	.000	.002		.001	.007	
Friday	-.002	.001		-.021	.007	-9.31
Saturday	-.008	.002	-5.76	-.004	.008	
Sunday	-.008	.001	-5.83	.000	.008	
Offence FEs	Yes			Yes		
Time FEs	Yes			Yes		
PAC FEs	Yes			Yes		
AUC	0.92			0.85		
Observations	476,261			24,690		

Note. All models are estimated using Probit regression, and average marginal effects are shown. The dependent variable is equal to one if the police refused bail, and zero otherwise. Robust standard errors are clustered at the PAC level. Relative changes are only shown for coefficients which are statistically significant at a 5% level of significance ( $p < .05$ ). The relative change refers to the percentage change from the mean police bail refusal rate associated with that coefficient. If the coefficient is binary, the relative change refers to a change in the independent variable from zero to one. For the MSR, the relative change refers to a change from an offence ranked in the 1st percentile to an offence ranked in the 99th percentile. For a juvenile's age the relative change refers to the change from a juvenile aged in the 1st percentile of the distribution to one aged in the 99th percentile. All observations for which there are no variation in the bail decision within a FE, (e.g. a magistrate has granted bail to all defendants that they see) are dropped. FE= fixed effects, PAC= Police Area Command, std. err. = standard error, AUC= area under the receiver operating characteristic curve.

**Table A3. Factors influencing court bail refusal (Probit)**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Average marginal effect	Std. Err.	Relative change %	Average marginal effect	Std. Err.	Relative change %
<i>Panel A: Demographics</i>						
Female	-.077	.006	-17.05	-.042	.016	-10.54
Aboriginal	.002	.004		-.007	.014	
Unknown	-.071	.042		-.110	.146	
Age				.005	.005	
25-34	.040	.005	8.78			
35-44	.044	.006	9.69			
45+	.025	.006	5.57			
SEIFA Q1	.027	.008	5.99	.017	.032	
SEIFA Q2	.017	.008	3.85	-.025	.030	
SEIFA Q3	.015	.007	3.22	-.010	.027	
Unknown SEIFA	.215	.009	47.50	.103	.032	25.98
<i>Panel B: Offence type and concurrent offending</i>						
Show Cause Offence	.242	.008	53.39			
Minor Offence	-.035	.024		-.018	.096	
On bail	.006	.006		.055	.013	13.82
On order or bond	.029	.005	6.30	.037	.016	9.34
Concurrent charges						
1	.042	.005	9.27	.021	.016	
2+	.105	.007	23.20	.053	.016	13.46
Median Sentence Ranking (MSR)	-.002	.000	-51.18	-.002	.001	-69.74
<i>Panel C: Prior offending</i>						
Prior court appearances						
1	-.011	.008		-.008	.019	
2	.015	.008		.048	.030	
3+	.037	.009	8.13	.052	.031	
Prior breach of bail						
1	.022	.006	4.93	.045	.018	11.25
2+	.032	.008	7.10	.105	.015	26.62
Prior breach of orders						
1	.015	.006	3.35	.050	.025	12.64
2+	.023	.005	4.99	.032	.019	
Prior prison						
1+	.139	.005	30.64	.234	.022	59.10
Prior violent offence						
1+	.019	.005	4.26	.037	.018	9.22
<i>Panel D: Police determinations</i>						
Alcohol related	-.027	.005	-6.01	-.006	.018	
Drug related	.017	.007	3.76	.018	.028	
Domestic violence related	-.047	.006	-10.46	-.041	.018	-10.36
Failure to appear	.029	.005	6.50	.020	.013	
Endanger community safety	.033	.006	7.24	.042	.017	10.57
Commit a serious offence	.059	.004	12.98	.042	.016	10.67
Interfere with witnesses	.019	.004	4.17	-.005	.014	

**Table A3. Factors influencing court bail refusal (Probit) - (continued)**

Variable	Adults			Juveniles		
	(1)	(2)	(3)	(4)	(5)	(6)
	Average marginal effect	Std. Err.	Relative change %	Average marginal effect	Std. Err.	Relative change %
<i>Panel E: Day of the week charged</i>						
Tuesday	.008	.007		-.017	.022	
Wednesday	-.003	.006		.014	.023	
Thursday	.005	.007		.011	.023	
Friday	.008	.008		.017	.025	
Saturday	.019	.010	4.09	.015	.025	
Sunday	-.006	.008		.005	.020	
Offence FEs	Yes			Yes		
Time FEs	Yes			Yes		
PAC FEs	Yes			Yes		
Magistrate FEs	Yes			Yes		
AUC	0.78			0.81		
Observations	57,673			5,023		

Note. All models are estimated using Probit regressions and average marginal effects are shown. The dependent variable is equal to one if the courts refused bail given that the police already refused bail, and zero otherwise. Robust standard errors are clustered at the magistrate level. Relative changes are only shown for coefficients which are statistically significant at a 5% level of significance ( $p < .05$ ). The relative change refers to the percentage change from the mean rate of court bail refusal, associated with that coefficient. If the coefficient is binary, the relative change refers to a change in the independent variable from zero to one. For the MSR, the relative change refers to a change from an offence ranked in the 1st percentile to an offence ranked in the 99th percentile. For a juvenile's age the relative change refers to the change from a juvenile aged in the 1st percentile of the distribution to one aged in the 99th percentile. All observations for which there are no variation in the bail decision within a FE, (e.g. a magistrate has granted bail to all defendants that they see) are dropped. FE= fixed effects, PAC= Police Area Command, std. err. = standard error, AUC= area under the receiver operating characteristic curve.

### SEIFA coefficients

One concern with the models presented in Tables 2 and 3 is that they only examine bail decisions within each PAC. This is generally beneficial and means that our estimates are not biased by different police practices that vary between PAC. However, one disadvantage is that there may not be sufficient variation in some variables within each PAC. SEIFA quartiles which measure socioeconomic advantage and disadvantage may be one example of this. Some PACs, especially those in urban areas, are geographically small and therefore may cover suburbs that are solely in one quartile of socioeconomic disadvantage (which is what SEIFA measures). In this case we would estimate insignificant coefficients related to SEIFA quartile, not because bail decisions do not vary by SEIFA quartile, but because our model does not capture this variation. To examine this possibility, we re-estimate Tables 2 and 3 with no PAC FEs, reporting only the coefficient estimates corresponding to SEIFA quartiles in Table A4. Panel A shows the estimates corresponding to Table 2, and panel B shows the estimates corresponding to Table 3. Table A4 shows that we can largely reject the hypothesis that we are removing variation in SEIFA quartiles. No estimate that was not statistically significant in Tables 2 and 3 became statistically significant when removing PAC FEs from the models in Table A4, with the exception of the coefficient on SEIFA Q3 for adult court bail decisions.

Table A4. SEIFA coefficients from OLS regressions with no PAC fixed effects

Variable	Adults			Juveniles		
	Estimate	Std. Err.	p-value	Estimate	Std. Err.	p-value
<i>Panel A: Police Bail Refusal</i>						
SEIFA Q1	-.002	.00	.60	.00	.01	.80
SEIFA Q2	-.001	.00	.80	-.00	.01	.70
SEIFA Q3	.003	.00	.30	.01	.01	.60
Unknown SEIFA	.035	.00	.00	.07	.02	.00
Demographic controls	Yes			Yes		
Offence type controls	Yes			Yes		
Police determination controls	Yes			Yes		
Day of week controls	Yes			Yes		
Time FEs	Yes			Yes		
PAC FEs	No			No		
<i>Panel B: Court Bail Refusal</i>						
SEIFA Q1	.041	.01	.00	.03	.03	.30
SEIFA Q2	.023	.01	.00	-.01	.03	.70
SEIFA Q3	.019	.01	.01	.00	.02	.90
Unknown SEIFA	.215	.01	.00	.10	.03	.00
Demographic controls	Yes			Yes		
Offence type controls	Yes			Yes		
Police determination controls	Yes			Yes		
Day of week controls	Yes			Yes		
Time FEs	Yes			Yes		
PAC FEs	No			No		
Magistrate FEs	Yes			Yes		

Note. SEIFA coefficients correspond to those presented in Tables 2 and Table 3. Models are similarly estimated using OLS regression, with the exception that PAC FEs have been excluded. FE= fixed effects, PAC= Police Area Command, std. err. = standard error.