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Waiving the Standards: The Effect of Recruitment Waivers in the Royal Australian Air Force

March 2024

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.

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ABSTRACT

The Australian Defence Force faces a recruitment challenge, prompting all services to increasingly rely on recruitment waivers to temporarily match enlistment standards with personnel requirements. This study assesses the growing utilization of waivers by the Royal Australian Air Force (RAAF), evaluating how they may affect RAAF's ability to both achieve its recruiting requirements and not incur losses during time spent under training. Using linear probability models to analyze historic enlistment and waiver issuance data from 2016 through 2021, this study reveals a statistically significant yet negligible effect of recruitment waivers on the successful service of past aviator cohorts. An examination of waiver categories, characteristics and military occupation groups uncover further positive and negative effects. Medical waivers exhibit a significant negative impact on service, while waivers related to driver's license, physical fitness, security background and criminal history can positively influence select occupation groups. The findings serve as positive indicators for the effectiveness of the current recruitment waiver policy. Based on the observed impact from prior usage, the continued strategic deployment of waivers is recommended ensuring their use aligns with RAAF's risk tolerance and recruitment needs. It is essential for RAAF to recognize that waivers are not a solution for the recruitment challenge but rather a tool to enhance the strategy into the future.



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To Carl, thank you for everything. Completing this master's program wouldn't have been possible without your unwavering love, never ending support, boundless patience, and encouragement. I am forever grateful for you.

To the Royal Australian Air Force, thank you for providing me with this opportunity of a lifetime.



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LIST OF ACRONYMS AND ABBREVIATIONS

ADF	Australian Defence Force
AFQT	Armed Forces Qualification Test
DAT	Drug/Alcohol Test
DEP	Delayed Entry Program
DFR	Defence Force Recruiting
IMPS	Initial Minimum Period of Service
RAAF	Royal Australian Air Force
SME	Subject Matter Expert
STEM	Science, Technology, Engineering and Mathematics
TAPAS	Tailored Adaptive Personality Assessment System
USAF	United States Air Force
USMC	United States Marine Corps



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I. INTRODUCTION

The Australian Defence Organisation stands as one of Australia's largest employers, entrusted with safeguarding the Commonwealth of Australia and defending its national interests (Department of Defence, 2022). In a landscape of increasing global competition and instability, optimizing Australia's defense capability, posture and readiness has become paramount (Australian Government, 2023). The foremost priority of the Australian Government is to protect the security, interests and livelihood of its citizens, and to do so requires an integrated and capable military force. In response to the escalating uncertainty, enhancing the Australian Defence Force (ADF) by increasing the number of soldiers, sailors, and aviators is deemed necessary (Defence Media, 2022b). The Royal Australian Air Force (RAAF) serves as the principal air capability within the ADF and employer of aviators.¹ Leveraging a powerful synergy of skilled aviators and cutting-edge technology, RAAF excels in providing technical, tactical, and operational expertise to achieve control of the air, precision strike, intelligence, surveillance and response, as well as air mobility (Royal Australian Air Force, n.d.c).

Since 2016 the ADF has consistently received direction from the Australian Government to grow, restructure and modernize. Consequently, the ADF and RAAF, are grappling with a considerable expansion to their workforce targets as the demand for labor increases. This directed workforce growth stands at the cornerstone of developing a credible military force necessary of delivering and operating the essential warfighting capabilities required to secure Australia (Defence Media, 2021). Recruiting to these growth targets presents a significant undertaking for the ADF as they operate in a challenging labor market.

Historically an employer of choice, the ADF has been successful in achieving their recruiting requirements, consistently reporting above 90% fulfillment (Australian National Audit Office, 2003; Department of Defence 2018; 2019; 2020). Recent reports however

¹ In 2021, RAAF transitioned from using the term "airmen" to "aviators." The inclusive term encompasses all RAAF personnel and is no longer exclusively tied to the role of pilots or aircrew (Defence Media, 2021).



indicate a decline and signal a recruiting challenge. During the 2021–22 financial year,² the ADF achieved 75.6% of their target, and in the 2022–23 financial year reported achieving less than 75% (Department of Defence, 2022; 2023). Consequently, a labor deficiency has been identified. The labor deficiency is a product of increasing demand and decreasing supply, and a lack of preparedness to adapt to these circumstances. Under the direction of the Australian Government, the ADF's demand for labor has increased as workforce targets have drastically grown. Changes in the labor market composition, altered participation rates, and increasing competition from the civilian sector have simultaneously disrupted and decreased the external labor supply. A declining interest and eligibility for military service, exacerbated by strict entry requirements, has further downsized the available labor pool (Australian Government, 2023). The supply and demand for labor are in conflict, creating challenging conditions for recruitment.

In addressing the recruitment challenge, RAAF is intensifying its use of recruitment waivers to mitigate labor shortages stemming from entry requirements. A recruitment waiver provides a provisional adjustment to entry standards, enabling individuals with certain disqualifying factors to be considered for service. It is important to note that a recruitment waiver can only be employed once an applicant has initiated the application process. Recruitment waivers are not extensively publicized or advertised. When leveraging recruitment waivers RAAF broaden the pool of eligible individuals which helps in achieving the directed personnel numbers. While waivers may facilitate the enlistment of a greater quantity of aviators, there is uncertainty as to whether they contribute to RAAF's long-term attainment of workforce targets.

My thesis investigates the growing use of recruitment waivers within RAAF and evaluates the potential impact on service completion. In this context service completion is defined as the fulfillment of both initial military and initial employment training. Through an examination of the enlistment and performance patterns of approximately 3,000 aviators between 2016 and 2021, I seek to understand the impact of recruitment waivers. I anticipate

² The Australian financial year commences on 01 July and concludes 30 June each calendar year. The period serves as the timeframe for business and personal taxation, budgeting and financial reporting activities (Australian Taxation Office, n.d.).



that the effects of a recruitment waiver on service completion will vary, primarily influenced by waiver category and occupation group, with expectations of both positive and negative outcomes. By scrutinizing and comprehending the potential implications of recruitment waivers, I draw conclusions as to whether waivers are assisting or hindering RAAF's long-term workforce growth.

The remainder of this thesis consists of eight chapters. Chapter II establishes contextual relevance, while Chapter III presents a literature review on previous academic research. In Chapter IV the data is introduced and a preliminary assessment is conducted to uncover key insights. The examination unfolds in Chapter V with an exploration of the waiver liberalization trend within RAAF, followed by a quantitative analysis in Chapter VI. Chapter VII offers recommendations derived from the analysis and Chapter VIII serves as the concluding chapter.



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II. AUSTRALIAN DEFENCE FORCE WORKFORCE COMPOSITION

The composition of the ADF is outlined by the Australian Government. The government-of-the-day will undertake methodical reviews into Australia's environment and dictate any necessary growth, reduction or stabilization necessary to ensure the ADF is effectively postured to meet arising strategic challenges. Determining an appropriate composition of the ADF is critical in positioning the force to defend Australia's national interests (Australian Government, 2023). In a landscape of increasing global competition and instability, the challenge of safeguarding Australia has increased and prompted the government to direct growth.

A. CONSISTENT GROWTH

Prior to 2016 the ADF's composition requirements remained relatively stable. Under the government's direction the ADF had undergone modest growth, and despite global economic uncertainty in 2013 had achieved the mandated force structure objectives (Australian Government, 2013). The ADF was maintaining a consistent and reliable capability as they deployed on humanitarian, domestic and international operations (Australian Government, 2013; 2016). In 2016 the permanent ADF workforce stood at approximately 58,000, boasting a range of diverse skills including combat, technical, engineering, intelligence, strategy and policy, and capability development and sustainment (Australian Government, 2016).

The scheduled 2016 Australian Defence White Paper was then released. It was described as "the most rigorous and comprehensive" white paper in Australia's history (Australian Government, 2016, p. 9). Culminating from an exhaustive review of capability, and driven by factors such as military modernization and technological disruption, the paper revealed that "the Government will undertake the largest single rebalance of the Defence workforce in a generation" (Australian Government, 2016, p. 23). Central to the paper was the requirement to align strategy, capability and resources. The need for an improvement in the labor force capability of the ADF was recognized and plans for



restructuring and growth within each of the services identified. The 2016 White Paper affirmed that “one of the most important and challenging jobs ... in the coming decades will be maintaining the capability of the ADF ... workforce to achieve the Strategic Defence Objectives” (Australian Government, 2016, p. 145).

Under the paper a new workforce target was established. This target directed that over the coming decade the workforce was to increase to 62,400, “returning the permanent ADF to its largest size since 1993” (Australian Government, 2016, p. 146). Quantity wasn’t the sole focus as the paper revealed the workforce must support the introduction of new and more complex systems, including “air, land and sea combat roles as well as intelligence, cyber security and enabling capabilities” (Australian Government, 2016, p. 146). An accompanying strategic workforce plan was simultaneously delivered outlining the precise skills needed and providing initiatives for attracting the people. A workforce shift was underway and a significant increase in the ADF’s labor demand becoming obvious.

The year 2020 brought about two unprecedented documents, the 2020 Australian Defence Strategic Update and the supplementary 2020 Australian Defence Force Structure Plan. These publications acknowledged that “Australia’s strategic environment has deteriorated more rapidly than anticipated,” rendering the 2016 white paper outdated (Australian Government 2020b, p. 3). These two documents replaced the white paper and made important adjustments to strategic priorities and objectives (Australian Government, 2020a; 2020b).

Although the ADF had been delivering on the planned workforce growth required under the 2016 White Paper, successfully increasing the force to approximately 59,200, the 2020 Force Structure Plan called for additional growth surpassing the previous direction (Australian Government, 2020a). The renewed analysis of the strategic environment, coupled with increasing humanitarian assistance and disaster relief requests, meant that “the demands of the workforce are changing” (Australian Government, 2020a, p. 103). The 2020 Force Structure Plan stated that the ADF “must also reshape and reskill to transition to new platforms and build capacity in emerging capabilities such as cyber, intelligence, electronic warfare, and space” (Australian Government, 2020a, p. 103). To commence the



growth, the plan directed an increase of an initial additional 800 ADF personnel in the short-term, including 100 RAAF personnel by 2024, setting a total workforce target of 71,000 (Australian Government, 2020a).

In March 2022 the Australian Government made another significant announcement. “To keep Australians safe in an increasingly uncertain global environment,” the Prime Minister announced a plan to “increase the number of ADF personnel by around 30% by 2040” (Defence Media, 2022b). The plan will take the workforce target to 80,000, representing a further expansion beyond the previously outlined growth in the 2020 Force Structure Plan (Defence Media, 2022b). The focus once again extends beyond quantity as the Minister for Defence revealed the need to build specialized expertise and “resilience in the critical areas” such as the space, information and cyber domains (Defence Media, 2022b). The Australian Government then reaffirmed their commitment to “invest in the growth and retention of a highly-skilled Defence workforce,” prioritizing ADF workforce growth through the latest strategic document, the 2023 Australian National Defence Strategic Review (p. 107).

In a period of seven years (2016 through 2023), the Australian Government has directed an increase of 22,000 permanent ADF personnel, which represents a 37% growth. This growth is a drastic increase in labor demand; unprecedented demand that is placing a tremendous spotlight on the nexus between the recruitment framework and the available supply of people with a propensity to join.

B. THE RECRUITING FRAMEWORK

The ADF outsource recruitment by contracting external agencies to deliver recruiting services (Australian National Audit Office, 2003). Prior to July 2023, ManpowerGroup, trading as Defence Force Recruiting (DFR), were the responsible entity, however a change in contract saw Addecco Australia commence services resulting in a rebrand to ADF Careers (Defence Media, 2022a). ADF Careers assumed the responsibilities of DFR which include assessing applicants on behalf of the services in pursuit of recruitment targets (Australian National Audit Office, 2003). ADF Careers is



entrusted with recruiting the right individuals whilst also ensuring an equal employment opportunity for all Australians.

Although contracted, ADF recruitment operates under a composite arrangement whereby ADF Careers is staffed, in part, by uniformed personnel who play an active role in the recruitment process. Recruiters, career coaches, case managers and interviewers will evaluate each applicant's eligibility based on established ADF standards, specific service prerequisites and particular employment conditions prevalent to the applicant's desired occupation. The Australian Defence Regulations of 2016 outline that "before a person is appointed or enlisted, consideration must be given as to whether the person is a fit and proper person to perform duties" (p. 6). This regulation must be adhered to by all services and forms the basis of the recruiting framework.

During the recruitment process an applicant will undergo various tests to measure their aptitude, medical and fitness levels, desire for service, moral character and values. Each component of the recruitment process is designed to assess one's suitability and competence for military service. An applicant may be recommended for service only once ADF Careers are satisfied with their suitability. If recommended, an applicant will typically be enlisted directly into service against an available target. Recruitment targets are set by the individual services and underpinned by the Australian Government's direction.

C. A RECRUITMENT CHALLENGE

Despite a robust recruiting framework, the ADF is facing a significant recruitment challenge driven by increasing labor demands and decreasing labor supply (Australian Government, 2023; Defence Media, 2022a). This is an immediate issue for the ADF and is reflective of broader national challenges (Australian Government, 2023; Department of Defence, 2023).

As the ADF continually increase their workforce targets and subsequent recruitment action, they are competing against a declining interest in military service, low unemployment rates, increasing civilian competition and skill shortages (Department of Defence, 2022; 2023). These circumstances have led to an extremely tight labor market, particularly in the science, technology, engineering, and mathematical (STEM) fields, and



specialist professions and trades that are paramount a military workforce (Defence Media, 2022a; Department of Defence, 2021; 2022; 2023).

RAAF forms the smallest of the services with approximately 14,800 permanent aviators (Department of Defence, 2022). At the direction of the Australian Government, RAAF delivers air power to enable the joint force in peace and war (Royal Australian Air Force, n.d.c). However, the delivery of air power requires a workforce with specialized technical skills that are becoming increasingly difficult to obtain. In a daring stance, RAAF are confronting the challenge by embracing a bold and innovative approach to recruitment.

D. ADAPTIVE APPROACH TO RECRUITMENT

In efforts to align with the required growth trajectory, RAAF have implemented an adaptive approach to recruitment to better engage with the Australian community. While the ADF have always employed waivers, the growing use marks a change as are RAAF increasingly challenging pre-established standards and perquisites. By introducing greater flexibility into a previously strict framework, RAAF can choose to enlist an applicant who otherwise would have been deemed unsuitable. RAAF are demonstrating that they are willing to take the risk of enlisting an applicant who is on the margin, rather than waiting for the perfect applicant who may never come along. This adaptive strategy signifies a shift as RAAF aims to improve the labor pool and subsequently increase recruitment (Department of Defence, 2023). However, the adaptive strategy approach can only benefit applicants who have initiated the application process. While waivers expand the labor pool, there remains a loss of potential applicants due to an unawareness of the existence of waivers. Regardless of this loss, by temporarily aligning entry standards to the available labor supply, RAAF can still enlist more individuals, particularly those in specialized and technical fields.

Under this adaptive approach RAAF recognize that falling short of an entry standard should not automatically impede enlistment, nor should it outright render one ineligible. Instead, the fit and proper person consideration is emphasized. Under RAAF's direction, ADF Careers are encouraged to raise a recruitment waiver against any one, or multiple, entry standards. In these instances, an applicant must have initiated their



recruitment application, possess a desired skillset and exhibit broad potential for military service, but lack a core standard that would otherwise render them ineligible. For example, an applicant may have a tertiary engineering qualification but are not an Australian citizen. Through waivers, the recruiting framework can ultimately be tailored to the individual.

E. RECRUITMENT WAIVER ISSUANCE PROCESS

A recruitment waiver may pertain to any one of the ADF or RAAF specific entry standards and may fall under the following broad categories: age, aptitude test, bankruptcy, beard or religious dress, citizenship, criminal history, driver's license, education, medical or physical fitness, psychological fitness, or security background. An applicant may receive one or multiple waivers during their recruitment process.

Each waiver, depending on the type, involves a different and individual approval process. The fundamental procedure commences with the ADF Careers Recruiter initiating the waiver application on behalf of the applicant. The recruiter, together with the applicant, will collate the necessary supporting documentation and complete a waiver request. In the prior example, the applicant has not met the Australian citizenship entry requirement and therefore requires a citizenship waiver. Supporting documentation may be evidence of the citizenship application.

The completed waiver request will undergo a review by the Senior Military Recruiting Officer at ADF Careers, consultation with relevant subject matter experts (SME) or delegates within RAAF, and culminate in a final decision by the Recruiting Liaison Officer. An SME or delegate may include an ADF Medical Officer or an employment category sponsor.

When assessing a waiver application, the expected longevity of the applicant's service in RAAF is considered, given their unique circumstances. Additional and pertinent considerations include the applicant's likelihood of success along with any support, adaptations or accommodation required. In the provided example, as the citizenship waiver progresses considerations may include the stage of the Australian citizenship application and the expected time until citizenship is granted. Finally, the prospect of military service negatively exacerbating an applicant's circumstances is measured. Ultimately, when



considering a recruitment waiver, RAAF are measuring the risk an applicant may attrite during training, or prior to completion of their Initial Minimum Period of Service (IMPS), against the risk of not achieving the required recruitment number at all.

The Recruiting Liaison Officer's decision is then returned to the ADF Careers Recruiter and the applicant informed of the outcome. Should the waiver be approved, the applicant will progress in the recruitment process and may, or may not, enlist into RAAF. Upon successful enlistment, the recruitment waiver, or waivers, are no longer relevant to an aviator's service. A record of the waiver will remain on their recruitment file, however once in service the aviator is subject to standard RAAF conditions of service or transitioned to the alternate in-service system to be accommodated accordingly. For example, a waived medical condition requiring on-going care will be captured and managed under the in-service Medical Employment Classification system.



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III. LITERATURE REVIEW

The size of military forces and levels of military personnel have long held significant interest and importance amongst governments and scholars alike, particularly over the past four decades as much of the Western world transitioned to all-volunteer forces. Following the Cold War, a decrease in defense labor supply has been observed (Asch et al., 2007). The reduction, attributed to an increasing diversity in individual preferences, decreasing confidence in military forces and a significant expansion in civilian employment, has adversely impacted the labor supply pool (Asch et al., 2007). In today's environment the biggest challenge lies in recruiting and retaining the necessary quantity and quality of military labor as a growing number of civilians are deemed unfit, unqualified or simply uninterested in military service. Concurrently, various factors are influencing the demand for military labor, including the constant reorganization of military structures, economic pressures, technology advancements and most recently a dramatic increase in force structure goals (Asch et al., 2007). In a landscape of increasing global competition and instability, the challenge of safeguarding national security and maintaining a capability, posture and readiness to defend one's nation is paramount.

The current combination of supply shortages and increasing demand has created an escalating recruitment challenge for militaries. Militaries, when facing such challenges, have historically employed waivers within the recruitment and accession process to ultimately improve the labor supply (Gallaway et al., 2013; Malone & Carey, 2011; Robson et al., 2021). The use of recruitment waivers however often generates debate within militaries and more broadly in society as to their effectiveness and value.

Critics anecdotally attribute recruitment waivers with a reduced standard, leading to a decline in the quality of a military force (Malone & Carey, 2011; Robson et al., 2021). They also cite an associated increase in negative behavior violations or early separation amongst waived individuals (Robson et al., 2021). Supporters of recruitment waivers will suggest that falling short of an entry standard shouldn't automatically impede one's ability to serve and claim that waivers allow the enlistment of individuals who demonstrate the potential a military is looking for.



In a strained recruiting climate, such as the present, understanding the use and impact of recruitment waivers becomes even more necessary. Given their prevalence, and potential costs and benefits associated, many researchers have looked at the effect of recruitment waivers on performance and success, each producing varied results. This literature review examines select studies on military recruitment waivers, exploring their findings and associated implications on accession, performance, and attrition.

A. DIFFERENCES IN WAIVERED RECRUITS

Most researchers suggest that, within the U.S. military, waived recruits are systematically different from non-waived. Through an analysis of U.S. Navy and Marine Corps (USMC) data, stemming fiscal year 1988 through 1990, Etcho (1996) noted that enlistees granted moral conduct waivers more frequently identify as white males and do not hold a high school diploma or qualification. Within the U.S. military, a moral waiver is an exemption granted to an individual whose past behavior may otherwise disqualify them from military service based on moral character standards (Etcho, 1996).

Distifeno (2008) conducted a comparison of individual attributes between Army recruits receiving a moral conduct waiver during fiscal year 2000 through 2006 to recruits who did not. A moral conduct waiver may be used during the recruitment process to forgive instances of criminal behavior, substance abuse or any morally questionable interactions with law enforcement that would otherwise disqualify an individual from service (Distifeno, 2008). Similar to Etcho (1996), Distifeno's (2008) moral conduct waived population was characterized by white males without a high school diploma or qualification. Additionally, a moral conduct waived soldier was found to be typically 1.4 years older than a non-waived soldier (Distifeno, 2008).

More recently, Malone and Carey (2011) examined characteristics of both waived and non-waived populations, comparing factors such as age at enlistment, geographic origin, marital status, education achievement and initial paygrade. They divided the population based on whether a recruit received any type of waiver rather than focusing on a specific waiver category. Using data spanning fiscal year 1999 through 2008, their findings mirror Distifeno (2008) and Etcho (1996). Generally, the waived population



exhibited a higher prevalence of older married males, suggesting that within the U.S. military waived recruits are more likely to possess such characteristics (Malone & Carey, 2011). However, the fact the waived population is older could be considered somewhat intuitive as this group has had more time to acquire the characteristics that necessitate waivers in contrast to their younger counterparts. Additionally, they noted that a greater proportion of waived recruits in their sample originated from America's East North Central region, with fewer from the Pacific and Mid-Atlantic regions (Malone & Carey, 2011). Like Distifeno (2008) and Etcho (1996), Malone and Carey's (2011) waived individuals also tended to lack a high school qualification, categorizing them as tier II or III recruits.

Overall, these results indicate that individuals entering service with a recruitment waiver differ significantly in various factors from those entering without a waiver, regardless of the branch. On average, a waived recruit in the U.S. tends to be more likely male, white, older and with a lower educational attainment when compared to their non-waived counterpart (Distifeno, 2008; Etcho, 1996; Malone & Carey, 2011). Recognizing these patterns among the waived population contributes to a deeper understanding of recruitment dynamics.

Beyond the visible distinctions, it is further hypothesized that the two populations differ in unobservable ways. Malone and Carey (2011) propose that factors such as career aspirations, personal drive and commitment to long-term service may further differentiate the behavior of waived and non-waived recruits. Understanding these systematic selection differences in recruit quality is crucial for assessing performance metrics and behavioral tendencies across both groups.

B. PERFORMANCE OF WAIVERED RECRUITS

Scholars have also found that, within the U.S. military, the performance of waived recruits varies significantly and is based on individual service expectations, waiver type, performance outcomes and time of measurement. This makes it challenging to identify any causal effects of recruitment waivers as waivers have further been correlated with numerous specific circumstances.



Malone and Carey (2011), under the request of the U.S. Department of Defense, undertook a quantitative analysis investigating whether the way in which waived individuals are recruited into service could be changed to minimize any risk of early separation. They concluded that, in general, waived recruits are not inherently risky to the services and the mere presence of a recruitment waiver does increase the risk of early attrition (Malone & Carey, 2011). When comparing waived recruits to those enlisted with low or no education credentials (tier II/ III recruits), Malone and Carey (2011) found that waived recruits tend to perform better in terms of promotion. They further cite that recruits with low or no education levels present a higher risk of early separation when compared to waived recruits (Malone & Carey, 2011).

Amongst those recruited with a waiver, Malone and Carey (2011) further evaluated the effect of visible characteristics on attrition probability. Employing controls such as marital status and education scores, they found that within the U.S. Air Force (USAF) male recruits with dependent children typically separate less during their initial 24- to 48-months of service, with each child decreasing the attrition rate by an additional eight to 10 percentage points (Malone & Carey, 2011). The most significant predictors of early separation within USAF waived recruits were tier II and III enlistment status and an Armed Forces Qualification Test (AFQT) score below 30, a score considered remarkably low (Malone & Carey, 2011). The early separation predictors remained similar across the other three services. In contrast, individuals recruited to a paygrade above E1 were found less likely to attrite early regardless of the service (Malone & Carey, 2011).

Malone and Carey (2011) then explored the impact of specific and individual waiver categories to early separation. Employing individual variables to represent each waiver type, they used marginal effects to determine which waived population or category posed the highest risk to each service. Holding all other factors constant, a marginal effect represents the impact of belonging to a specific waiver population, for example a moral conduct waiver or possessing a visible characteristic such as male, on the probability of early attrition (Malone & Carey, 2011).

When comparing early separation probability, having a positive drug or alcohol test (DAT) waiver in USAF was found to be large and negative, but statistically insignificant.



The insignificance attributed to the small sample representation as USAF had granted just 13 DAT waivers (Malone & Carey, 2011). The tier II and III population returned the most sizable and significant effect on early attrition whereby a tier II and III waived recruit was 10 and 15 percentage points more likely than their non-waivered counterpart to separate by 24- and 48-months, respectively (Malone & Carey, 2011). Overall, those recruited into USAF with an aptitude waiver returned the greatest rate of attrition (25% at 24 months) while those with a physical or dependent waiver were found to be the least likely to attrite (18% and 15% respectively at 24 months) (Malone & Carey, 2011). Across the remaining three services, the DAT and aptitude waived populations were also found most likely to separate early, though at differing rates.

Since Malone and Carey (2011) only compared waived recruits to non-waivered tier II and III recruits their results may not hold when extrapolating to the entire military population. Tier II and III recruits represent the lower end of accessions and cannot be considered a fair representation of the entire military population. Regardless, finding that DAT waived recruits are the riskiest waived population amongst all four services led to the suggested elimination of DAT waivers. Malone and Carey (2011) further recommend that services, when considering a recruitment waiver, carefully screen applicants with the visible characteristics found to be riskier, such as those with low AFQT scores.

They conclude that individual services can best manage waived recruits by firstly identifying expectations and performance metrics, then determining the most appropriate measures that can be implemented to reduce any increased risk waived recruits may present (Malone & Carey, 2011). For example, if the goal is to access individuals to remain in service beyond the first-term employing dependent waivers may be an appropriate method to achieve a sufficient return on investment, as dependent waived recruits were found to have one of the lowest likelihoods of attrition. Similarly, if a service requires a short-term boost to workforce numbers aptitude waivers may be considered appropriate as a quarter of the population is predicted to attrite within 24 months. They underscore that any level of risk is dependent on how an individual service chooses to define such risk (Malone & Carey, 2011).



Unlike Malone and Carey (2011) who investigated the effect of all recruitment waivers across the services, Distifeno (2008) focused on how the policy regarding moral conduct waivers may affect service quality specific to the U.S. Army. Distifeno (2008) examined attrition rates at the 180- and 365-day mark, as well as at the end of first-term. First-term refers to the initial contract signed by the soldier. The study incorporated standard controls such as age and rank upon enlistment, initial contract length, relevant bonus size, gender, race, AFQT score, education attainment and prior military exposure including youth program participation (Distifeno, 2008).

The sample population was carefully selected to ensure comparisons could be made against the average recruit. It comprised soldiers signing three- and four-year initial contracts exclusively and excluded recruits enlisting above the rank of E4 (Distifeno, 2008). The base, or reference case, was defined as a white unmarried male with no dependents who graduated high school; a stereotypical army recruit (Distifeno, 2008). This careful consideration enhanced the study and allowed the results to be better extrapolated as the sample could be considered an accurate representative of the wider U.S. Army population.

Using probit regression, Distifeno (2008) concluded that the attrition rates of waived and non-waived soldiers fluctuates. For example, at the initial 180-day mark, it was discovered that a moral conduct waiver decreases attrition probability by a significant 17% (Distifeno, 2008). By the 365-day mark this effect becomes smaller, at 11%, but remains negative and therefore continues to reduce the probability of attrition (Distifeno, 2008). However, by the end of the first-term (the three- and four-year mark) the effect is reversed, indicating that a moral conduct waiver now increases the likelihood of attrition by 13% (Distifeno, 2008). This reversal pattern suggests that attrition rates are time dependent and ultimately influenced by the time of measurement.

Characteristic control effects remained constant across the three measurement points, wherein black and Hispanic males, as well as those with prior military experience, exhibit a reduced likelihood of attrition (Distifeno, 2008). Specifically, the 180-day model revealed reductions of 75%, 35% and 40% respectively (Distifeno, 2008). Conversely, married soldiers were 9.5% more likely to separate, and where relevant the presence of a



dependent further increased that separation likelihood by 3.5% per dependent (Distifeno, 2008). This finding appears as a reversal of Malone and Carey's (2011) results, but it must be noted that their positive effect was associated with USAF only. Finally, age was also connected with increased attrition whereby each additional year of age increased the likelihood of early separation by 3.5% (Distifeno, 2008).

When controlling for individual sub-categories of moral conduct waivers Distifeno (2008) found further fluctuations in attrition. Sub-categories of moral conduct waivers may include major misconduct, misconduct, non-traffic offenses and traffic offenses (Distifeno, 2008). The initial low attrition rates amongst waived soldiers were attributed to those enlisting with serious traffic and minor non-traffic offenses, suggesting that those two sub-categories do not cause an increase in early separation likelihood (Distifeno, 2008). The reversal in behavior was driven by the serious non-traffic and felony waivers, indicating that these two sub-categories increase the early separation likelihood (Distifeno, 2008). Amongst the population, soldiers with prior drug offenses were 38% more likely to attrite before first-term completion, the strongest impact found amongst the sub-categories (Distifeno, 2008). This finding coincides with Malone and Carey (2011) who concluded that drug related waived recruits are the riskiest population for early separation.

To investigate interactions between moral conduct waivers and control variables, Distifeno (2008) introduced linear probability models. Four significant interactions emerged, suggesting that the relationship of control variables to attrition varies based on moral conduct waiver status. Consistent with the probit results, the linear model revealed that blacks and Hispanics attrite less often in the first year when compared to non-blacks and non-Hispanics respectively (Distifeno, 2008). When considering additional waiver status, a soldier enlisting with both a medical and moral conduct waiver exhibits lower attrition rates than a soldier with a medical waiver alone (Distifeno, 2008). Regarding education attainment, non-high school graduates enlisting with a moral conduct waiver are found to have a higher attrition probability compared to high-school graduates with a moral conduct waiver (Distifeno, 2008). The negative effect caused by a lack of high-school completion supports Malone and Carey's (2011) assertion that lower education credentials negatively affect long-term service.



Inspired by the time dependent effect, Distifeno (2008) used survival analysis to illustrate the anticipated first-term tour survival rates of soldiers enlisting with moral conduct waivers. Attrition served as the point of interest, with first-term tour completion the event of interest. The analysis findings parallel the regression results, showing that initially a waived recruit demonstrates a higher survival rate compared to a non-waived recruit (Distifeno, 2008). However, any positive effect is reversed by the end of first-term, or the three- to four-year measurement mark. The survival analysis identified the point of inflection to be 1.5-years into service (Distifeno, 2008). Distifeno (2008) attributes the initial success of waived soldiers to unobservable factors such as grit or a positive response to close supervision that non-waived recruits may lack. He concludes that the U.S. Army should leverage these characteristics to enhance retention; a low-cost retention initiative (Distifeno, 2008).

In a more recent paper, Gallaway et al. (2013) proposes that U.S. Army soldiers granted moral conduct waivers are correlated with heightened negative behavior in-service and are more inclined to separate from military service for related reasons. Examples of negative behavior include substance abuse or domestic violence incidents leading to misconduct violations and involuntary attrition.

Analyzing data on soldiers enlisted in one of two brigade combat teams between 2003 and 2008, Gallaway et al. (2013) concludes that soldiers with a moral conduct waiver for prior substance use or serious non-traffic offenses, when compared to no moral conduct waiver, have a 100% increased likelihood of testing positive for an illicit substance during service. Moreover, the waived soldiers are more prone to misconduct violations leading to involuntary attrition (Gallaway et al., 2013). A noteworthy result that is similar to Malone and Carey (2011) and Distifeno (2008) wherein it was found that individuals with a history of substance use have higher attrition rates in the military. However, it is worth noting that Gallaway's et al. (2013) sample selection is restricted and the selected dataset may not be an accurate representation of the broader U.S. Army population. Hence, the large effect may not be generalizable.

To further explore the relationship between moral conduct waivers and negative behavior, Gallaway et al. (2013) calculated adjusted odds. After incorporating fixed effects



to control for waiver status and standard demographic factors, such as enlistment age, rank and location, gender, race, marital status and length of service, Gallaway et al. (2013) found that waived soldiers have a 1.5 adjusted odds ratio of testing positive for illicit substances compared to non-waived soldiers. Among the waived soldiers, those with a history of substance use and serious non-traffic violations exhibited the highest odds ratio (3.3) of testing positive for illicit substances during service, and a high ratio (2.9) of experiencing involuntary separation (Gallaway et al., 2013). A moral conduct waiver for substance use was also associated with a higher likelihood of attrition compared to no waiver (odds ratio of 1.6) (Gallaway et al., 2013).

Gallaway et al. (2013) did not report on the specific effects of demographic factors, but ultimately conclude that U.S. Army soldiers granted moral conduct waivers pertaining to substance offences are significantly more likely to attrite from service. They state that accession policies increasing the enlistment of such populations has increased the likelihood of negative outcomes for the Army (Gallaway et al., 2013). They recommend that leadership should consider these findings and anticipate any second-order effects that this may have on the quality of the service.

While not the primary intent of their study, Gallaway et al. (2013) observed a notable decrease in attrition likelihood among soldiers granted a moral conduct waiver for felony offences or serious non-traffic violations when compared with non-waived soldiers (40% and 20% respectively). This finding contradicts the results reported by Distifeno (2008). Gallaway et al. (2013) recognized that individuals with a criminal history may encounter limited job prospects outside of the military and views this as a significant contributing factor to the decreased attrition probability (Gallaway et al., 2013).

In another study focusing on the U.S. Army, Hassin (2019) constructed prediction models to evaluate the impact of conduct waivers on the probability of first-term attrition. The study used data from fiscal years 2009 through 2013 to construct five preliminary models to predict attrition. Following evaluation, the random forest and logistic regression models were identified as the most precise and effective predictors, and deemed suitable for the analysis (Hassin, 2019). Hassin (2019) opted to employ the random forest model for the ongoing analysis due to its non-parametric nature which better aligned with the



characteristics of the provided dataset. Overall, Hassin (2019) concluded that a conduct waiver is not a significant predictor of early attrition.

Within the random forest model, standard control variables were integrated and the Gini Index applied to each variable to measure its significance in predicting early separation. Among these variables, age emerged as the most crucial variable as indicated by a high mean decrease in Gini (Hassin, 2019). This is a result similar to previous findings whereby older individuals are considered more likely to separate from service early (Distifeno, 2008; Malone & Carey, 2011). Additionally, initial contract length and paygrade were identified as valuable predictors of early attrition, with each factor reflecting the duration of service (Hassin, 2019). Despite waived soldiers being 1.5% more prone to attrition, the conduct waiver exhibited a low mean decrease in Gini, suggesting its insignificance as a predictor of first-term attrition within the dataset (Hassin, 2019).

Shifting the focus to the impact of the Tailored Adaptive Personality Assessment System (TAPAS), an assessment tool employed by the U.S. military, Hassin (2019) examined whether the categorical scores served as significant predictors of initial contract fulfillment. The Gini Index revealed that TAPAS dimensions exhibited a high mean decrease indicating that TAPAS scores play a pivotal role in forecasting early attrition (Hassin, 2019). The can-do and will-do dimensions of TAPAS were found to be significant and positive predictors whereby higher scores reduce the probability of early attrition (Hassin, 2019). Once more, aptitude levels emerge as a noteworthy variable impacting early separation amongst the military services. Based on these findings Hassin (2019) recommends that the U.S. Army discontinue the use of conduct waivers and instead suggest that TAPAS scores be used for candidate screening. Like Malone and Carey (2011), Hassin (2019) advocates that this approach may better facilitate the attainment of recruitment objectives.

Using logistic regression models, Huth (2007) examined the U.S. Navy's enlisted screening process to determine the impact of moral waivers. Waiver and attrition data spanning calendar years 2003 and 2004 were analyzed to determine whether there was a change to the performance and success of recruits enlisted with waivers compared to those without. The research took a two-phased approach. Initially, the historical completion rates



were compared to forecast success from the commencement of the Delayed Entry Program³ (DEP) through first-term. The analysis then narrowed to the period a sailor entered into active-duty through to first-term completion, again comparing success rates.

It was found that sailors with moral waivers demonstrated higher success rates in completing the DEP, however exhibit lower success rates during active-duty suggesting that moral waivers are detrimental to long-term service (Huth, 2007). Furthermore, moral waived recruits were linked to an increased likelihood in moral-related involuntary attrition from the service (Huth, 2007). A moral-related separation arising when a sailor violates moral or ethical standards enforced, such as a failure to uphold core values or unprofessional and criminal behavior (Huth, 2007). This result coincides with Gallaway's et al. (2013) finding that Army soldiers receiving a moral conduct waiver represent a higher probability of negative behavior in-service and an associated involuntary separation.

Huth (2007) then determined that across both points of measurement certain characteristics such as being male, prior military experience and a pay grade above E1 were significant and positive predictors of success, along with not having a moral waiver. Married sailors older than 34 with prior service experience achieved the highest first-term success rates (80% or higher), indicating that marital status, age and prior experience can also positively influence long-term success (Huth, 2007). The finding that older sailors exhibit a higher success-rate contrasts with Distifeno (2008), Hassin (2019) and Malone and Carey (2011) who found that age decreased the probability of long-term service. Moreover, Hispanic, Asian Pacific Islander and Native American characteristics also emerged as significant, indicating a positive effect on first-term success probability (Huth, 2007).

In the DEP model a bonus below \$12,000 marginally favored predicted success over no bonus (Huth, 2007). While in the second phase, Huth (2007) found no bonus to be a more positive indicator of predicted long-term success. In this context however, Huth

³ The Delayed Entry Program (DEP) is a program designed used by U.S. military to accommodate individuals into the armed forces before they ship out to basic training. The popular enlistment option allows individuals who have enlisted in the military to delay their start date as they prepare for entry (Veteran.com, 2021).



(2007) suggests that a bonus is not considered a reliable variable in predicting performance and success as high-quality sailors typically do not qualify for an enlistment bonus thus creating a bias.

Overall, the research found a statistically significant and favorable correlation between moral waivers and the completion of DEP amongst sailors (Huth, 2007). However, it then revealed an adverse association between moral waivers, performance and success during active-duty (Huth, 2007). Huth (2007) attributes the short-term success to the increased mentorship and support from recruiters that is available during DEP rather than differing characteristics of the individuals receiving waivers. Huth (2007) concludes that the U.S. Navy should screen moral waivers based on the above traits found to be significant in predicting long-term success, namely prior service experience, age and marital status.

Specific to the USMC, Etcho (1996) utilized binary logistic regression to predict the probability of unsuitability attrition and to determine the potential influence of moral waivers. Unsuitable attrition in this study refers to Marines who have been involuntarily separated from service due to a failure to meet minimum behavioral or performance criteria, as delineated by their separation code.

Etcho (1996) took a similar approach to Huth (2007) by analyzing attrition behavior. Employing standard control variables such as age upon enlistment, gender, education attainment and AFQT score, low education levels emerged as the most influential factor in predicting unsuitable attrition (Etcho, 1996). Specifically, a Marine lacking a high school diploma experienced a more than 10 percentage point increase in the probability of unsuitable attrition compared to a high school graduate (Etcho, 1996). AFQT score also displayed a significant association with unsuitability attrition whereby lower scores corresponded to larger probability of attrition, specifically category IV (below 30) increased the probability of attrition by 7.4 percentage points (Etcho, 1996). Similar result in later studies by Distifeno (2008), Hassin (2019) and Malone and Carey (2011) reinforce the finding that low education levels significantly detract from successful and long-term military service.



Additionally, race played a mixed role in unsuitability attrition prediction whereby being black increased the probability of unsuitability attrition by one percentage point, alternatively being Hispanic decreased the probability by 4.9 percentage points when compared to whites (Etcho, 1996). Age was also found to elevate the probability of unsuitability by 0.7 percentage points annually, while being male lowered the probability by one percentage point (Etcho, 1996).

Controlling for sub-categories, Etcho (1996) observed that five sub-categories of moral waivers further elevated the probability of unsuitability when compared to no waiver. A felony returned the most substantial effect on unsuitability attrition, with Marines possessing such waivers being five percentage points more likely to attrite when compared to Marines without a moral waiver (Etcho, 1996). This result aligns with the findings of Distifeno (2008). Moral waivers pardoning individuals with substance use, minor non-traffic offenses and misdemeanor offenses also increased the likelihood of unsuitability attrition by three percentage points on average (Etcho, 1996). Notably, moral waivers for traffic offenses returned an insignificant relationship (Etcho, 1996).

While the results warrant the recommendation that the USMC discontinue the issuance of moral waivers to individuals with questionable past behavior, Etcho (1996) concludes that such a course of action is impractical. Instead, the study advocates for the denied entry to those with previous felony convictions and proposes the introduction of additional educational screening measures or criteria for those individuals with minor non-traffic offenses, drug use, alcohol abuse or misdemeanors (Etcho, 1996).

Outside of Malone and Carey (2011) there remains limited analytical research evaluating the performance of waived recruits in USAF. This is likely owing to the relatively small size of the waived population in-service. Malone and Carey (2011) further suggest that USAF is the most selective of the services and demonstrates differing needs for waivers. In 2021 however, under the request of USAF, Robson et al. sought to explore any social and cultural implications associated with the proposed tailoring of medical standards.



The team conducted a qualitative analysis of stakeholder focus groups and interviews, drawing results from 559 airmen across 14 specialty codes or occupation groups (Robson et al., 2021). They used weight and hearing standards within the cyber field as an illustrative example, proposing that the reduced physical demands of the technical role no longer necessitate the standard medical requirements (Robson et al., 2021).

The findings predict negative cultural implications to arise following tailored medical standards in USAF. Robson et al. (2021) conclude that tailored medical standards are unlikely to be accepted by current airmen. Their interview results suggest that any tailored standards may create a cultural divide whereby those enlisted under an alternate standard may be viewed as different or lesser (Robson et al., 2021). Furthermore, themes surrounding deployment and the need to maintain operationally ready standards were raised, suggesting that the tailoring of standards may detract from the capability of a force (Robson et al., 2021). Robson et al. (2021) recommend that any benefits of increased recruitment that may arise from tailored medical standards must be measured against the cultural consequences.

Social perceptions towards overweight airmen were found to be predominately negative, linking excess weight to a perceived lack of self-discipline and unfairness due to its controllable nature (Robson et al., 2021). The notion of having a commander with differing medical standards was a particular point of contention, suggesting that it may undermine their leadership. Discussion related to hearing standards primarily revolved around safety and performance issues rather than being construed as a personal attack (Robson et al., 2021). Additionally, the study briefly touched upon perceptions concerning other medical conditions such as asthma or depression but did not delve into specific results.

The authors concluded by suggesting that waivers, both permanent or temporary, may be a viable way to gradually introduce altered medical standards as they provide the opportunity to more thoroughly explore any cultural implications (Robson et al., 2021). This approach would allow airmen to directly experience the effects of the change rather than speculating about them, and may result in more positive perspectives towards the



change. Additionally, through this process any conflicts between altered medical standards and other policies, such as deployment standards, could be identified and addressed in a timely matter. Robson et al. (2021) reinforce the need to balance the force's labor needs with the cultural implications, and recommend that transparent and clear communication, along with training and education are essential for overcoming barriers and for the successful implementation of tailored standards.

There are no known academic studies investigating the effect of recruitment waivers on Australian military service.

C. CONCLUSION

Across the studies documenting military recruitment waivers, the resulting implications on accession, performance and attrition varied significantly. Malone and Carey (2011) suggest that waived recruits are not the riskiest group in terms of early attrition across the services. Hassin (2019) found that conduct waivers were not negative predictors of success in the Army, whereas Distifeno (2008) and Huth (2007) found conduct waivers in general to be negative predictors of long-term success in the Army and Navy respectively. Distifeno (2008) and Etcho (1996) both found that conduct waivers excusing a felony are significantly and negatively associated with performance and attrition within the Army and USMC, whereas Gallaway et al. (2013) reports felony waivers as a positive predictor of long-term success in the Army. Conversely, moral waivers excusing traffic offenses were found to be insignificant or positively associated with long-term and quality service within the Army and USMC by Distifeno (2008) and Etcho (1996). Finally, moral waivers associated with substance use were consistently and negatively associated with all military service and repeatedly correlated with negative behavior in-service and involuntary separation (Distifeno, 2008; Etcho, 1996; Gallaway et al., 2013). These diverse outcomes pose difficulty in measuring the specific and generalizable impact of waiver usage on military service.

The studies did however reveal common predictors, or characteristics, relevant when analyzing military service success. Across results, a male was found to have higher success rates and therefore lower attrition risk (Distifeno, 2008; Huth, 2007; Malone &



Carey, 2011). Education achievement, TAPAS and AFQT scores were of most significance across all the studies, whereby a low AFQT score (less than 30) and a lack of high school diploma or qualification was consistently associated with decreased performance and increased likelihood of early attrition from the services (Distifeno, 2008; Etcho 1996; Hassin, 2019; Huth, 2007; Malone & Carey, 2011). Age was identified as a significant variable in prediction but returned mixed effects with Distifeno (1996), Etcho (1996), Hassin (2019) and Malone and Carey (2011) identifying that each year of age increases the likelihood of early separation, whereas Huth (2007) identified an opposite decrease. Whilst the individual characteristics yielded more consistent results compared to recruitment waivers, the variability in their effects further complicates the determination of causal relationships. What can be ascertained however is that the individual characteristics of age, gender and education levels are critical.

My thesis builds on the existing literature by assessing the effects of recruitment waivers on successful service in an Australian context. Guided by prior research, I analyze a set of observable individual characteristics such as age upon enlistment and gender, along with a rich set of waiver categories and employment groups to compare whether waived aviators in RAAF are more or less likely to be successful in service. This thesis will present empirical evidence essential for shaping RAAF's recruitment strategy in the future.



IV. DATA

A. DATA SOURCE

The dataset, provided by RAAF, encompasses all aviators enlisted between 2016 through 2021 and tracked until April 2023, resulting in an approximate sample size of 3,000. Each aviator is assigned a unique and randomly generated identification number that is not associated with their official service number or PMKeyS.⁴ The dataset includes aviator characteristics at their point of enlistment, their success along the training pipeline, and separation status.

B. DATA RESTRICTIONS

This sample population is restricted to initial enlistment only, excluding any aviators with prior military service. Aviators with prior service are described in two ways. Firstly, any aviator who returned after previously attempting service in the past two years is counted only once. For example, an aviator who separated after being unsuccessful in their first attempt of initial military training and then returned is counted once as an unsuccessful aviator regardless of the second outcome. This is controlled through identification numbers whereby an aviator would reenlist under the same identification number if their return was within two years of their separation. Secondly, the sample does not recognize aviators who re-mustered and instead classifies them as unsuccessful. Re-mustering refers to when an aviator changes occupation groups or roles. For example, if an aviator enlisted within the health occupation group and did not complete their initial employment training but then re-mustered to the logistics group and completed the training, they are counted as unsuccessful in health for the purposes of this study. There are six re-mustered aviators in the sample population, primarily owing to the aviation occupation group. The exclusion of these six observations does not substantially alter the findings.

⁴ The Personnel Management Key Solution (PMKeyS) system is a personnel management system used within the ADF, a PMKeyS number refers to the unique primary identifier assigned to each ADF member (Department of Veterans' Affairs, n.d.).



These exclusions are necessary to narrow the study population as prior service experience or re-mustering could bias an individual's future performance. Removing enlistees who could be considered different from the average aviator also helped create a common baseline for analysis. The overall goal of the analysis is to ensure the study population is accurate and representative of the broader RAAF population.

C. SUMMARY STATISTICS

The summary statistics are provided in Table 1. Approximately 59% of the sample are male, 86% are Australian born citizens and 7% identify as Indigenous Australians. There is a fair spread within the sample from each of the occupation groups, with engineering, maintenance and construction being the most common representing nearly 25% of the sample. This is commensurate with RAAF patterns.

Notably, there is increasing representation within the sample of being enlisted in or after 2019, whereby 2016 enlistees represent 15% of the entire sample while 2021 enlistees represent 21%; this is reflective of the increasing labor demands.



Table 1. Summary Statistics

Variable	Entire Sample	Waivered	Non-Waivered
N	3,082	375 (12.2%)	2,707 (87.8%)
Enlistment Age	24.270	26.067	24.021
Female	1,278 (41.5%)	168 (44.8%)	1,110 (41.0%)
Indigenous	215 (7.0%)	52 (13.9%)	163 (6.0%)
Birth-right Citizen	2,650 (85.9%)	288 (76.8%)	2,362 (87.3%)
Enlisted in 2016	459 (14.9%)	9 (2.4%)	450 (16.6%)
Enlisted in 2017	431 (14.0%)	26 (6.9%)	405 (15.0%)
Enlisted in 2018	460 (14.9%)	55 (14.7%)	405 (15.0%)
Enlisted in 2019	484 (15.7%)	70 (18.7%)	414 (15.3%)
Enlisted in 2020	594 (19.3%)	81 (21.6%)	513 (19.0%)
Enlisted in 2021	654 (21.2%)	134 (35.7%)	520 (19.2%)
Aviation	118 (3.8%)	23 (6.1%)	95 (3.5%)
Combat & security	570 (18.5%)	56 (14.9%)	514 (19.0%)
Communication & cyber	380 (12.3%)	41 (10.9%)	339 (12.5%)
Engineering, maintenance & construction	767 (24.9%)	102 (27.2%)	665 (24.6%)
Enterprise & command support	201 (6.5%)	25 (6.7%)	176 (6.5%)
Health	100 (3.2%)	11 (2.9%)	89 (3.3%)
Intelligence	560 (18.2%)	54 (14.4%)	506 (18.7%)
Logistics	386 (12.5%)	63 (16.8%)	323 (11.9%)



D. CHARACTERIZING AVIATORS

Comparing the average characteristics of waived and non-waived aviators illustrates their distinctions across a range of visible individual and military attributes. I present the differences across two groups, aviators with a waiver vice no waiver.

Within the sample, a waived aviator, when compared to a non-waived aviator, is more likely to be an older, female, non-birth-right Australian citizen (meaning they were not born in Australia). This finding, in part, conflicts with prior studies which suggested that U.S. waived recruits tended to be male rather than female (Etcho, 1996; Distifeno, 2008; Malone & Carey, 2011). However, the finding that Australian waived aviators are older coincides with prior literature (Distifeno, 2008; Malone & Carey, 2011). A waived aviator is also more likely to have only one waiver pertinent to their enlistment, rather than multiple, and more likely to be from the engineering, maintenance and construction employment group.

E. KEY VARIABLES

This dataset contains nine characteristics that are identified as relevant to the research question. Associated variables have been generated. The chosen format of the variables is guided by the literature review, then customized to fit the Australian context and data structure.

1. Dependent Variable

The dependent or response variable in my analysis is successful service. The dichotomous variable of **successful service** is derived from the raw characteristics surrounding an aviator's training. I define service completion, or successful service, as the completion of both initial military and initial employment training. I do not consider an aviator's IMPS or contractual engagement within my study. Initial military and initial employment training were instead chosen as indicators of overall success as this is the point that an aviator is no longer under training and is considered to be contributing to the capability of RAAF. The time required for service completion will vary. While each aviator will undergo the same nine-week initial military training, initial employment training



length is differentiated by occupation and can range from four weeks to 95 weeks. On average, an aviator will become successful in 47 weeks, or 10 months. There are 2,511 successful aviators, or 81.5% of the sample. The wastage rate of 18.5%, or 571 aviators, is attributed to either training failures, medical issues or a personal choice to withdraw from military service.

2. Independent Variables

There are 26 independent or explanatory variables in this analysis. Below is a review and discussion on the relevance of each variable to the dependent variable, successful service.

The **age** variable is a continuous variable capturing an aviator's age at their enlistment. The minimum age to join RAAF is 17. The maximum age varies but typically an applicant must be able to complete their IMPS before reaching 60, the compulsory retirement age. The eligible enlistment age range employed by RAAF is therefore 17–58. The average age in my sample is 24 years with a standard deviation of 6.2.

Capturing enlistment age is critical for characterizing the waiver population. It is also crucial to determine whether age has any effect on successful service probability given its prominence in prior literature. In conflict to other studies I hypothesize that age will have a negligible effect on successful service in RAAF. This is due to the older and broader dispersion of RAAF's population. Guided by Malone and Carey (2011), I expect a positive effect to be driven by younger and more physically capable aviators and negative effect driven by older aviators with heightened emotional capability and stability to create an overall insignificant effect.

The **birth-right citizen** variable is a dichotomous variable indicating whether an aviator is an Australian-born citizen, otherwise known as a birth-right citizen. This variable is derived from categorical data capturing an aviator's birth country. I have chosen to include the citizenship variable as prior literature found birth-country and race to be a significant predictor within the U.S. military population.



Within my study I predict an overall null effect for citizenship, owing to the rich multicultural diversity within Australia and the ADF, along with the lengthy citizenship process. I do however suspect the variable to be of some relevance when considering particular waiver types such as security background or education due to the nature of the entry requirement, but I do not expect a high significance level.

The **Indigenous** variable is a dichotomous variable that captures whether an aviator identifies as an Indigenous Australian. I expect this variable to better capture racial effects compared to the birth-right citizen variable as racial issues within Australia are dominated by the inequality of Indigenous Australians rather than internationally-born citizens. The inclusion of the Indigenous variable allows for the capture of predicted racial effects, which when combined with the birth-right citizenship variable, ensures an accurate understanding of the racial effects on successful service can be developed.

Enlistment year is captured through multiple dichotomous variables representing the year an aviator enlisted into service. The six variables take the value of 2016, 2017, 2018, 2019, 2020 and 2021. The inclusion of these variables is essential to control the influence of external fluctuations that may occur year to year, such as economic factors or workforce demands, that may have altered the probability of success beyond whether an aviator is waived or not.

The **female** variable is a dichotomous variable that takes the value of one if an aviator identifies as female. This variable will capture any gender differences in success probability. The literature review revealed that gender is of significance within the U.S. military with a bias towards males both positive and negative. I expect gender will be of relevance in my study. At the broadest sense I do not expect males and females to have differing success probabilities but when narrowing the focus to particular waiver types, I expect an effect where being female may decrease or increase the likelihood of success.

The **aviation, combat and security, communications and cyber, engineering, maintenance and construction, enterprise and command support, health, intelligence and logistics** are dichotomous variables representing an aviator's occupation group. The titles are reflective of the naming conventions used within RAAF. The variables are created



to measure the differing effects of waivers on occupation groups, but to also control for individual effects within each group.

The **any waiver** variable is a dichotomous variable that takes the value of one if an aviator enlisted with at least one waiver. This variable is necessary to separate the sample population into waived and non-waived groups, and is critical to capturing the broad effects of a waiver on successful service. Prior research has used a similar approach in defining the populations. While I predict this variable to produce an effect, the lack of detail will limit its usefulness.

The **multiple waiver** variable is a dichotomous variable that takes the value of one if the waiver count variable is equal to two or greater. If an aviator enlists with more than one waiver both any waiver and multiple waiver are equal to one. This variable is created to capture the effect of multiple waivers on successful service, whereby the effect is expected to be significant and negative. A binary variable has been chosen over a numerical variable as the majority of the waived sample have one or two waivers. Within the dataset, only two observations have greater than two waivers rendering the sample too small for numerical waiver count to have statistical relevance.

Waiver type is captured in multiple dichotomous variables, each binary variable taking the value of one for those aviators who received that waiver type for enlistment. There are 14 waiver categories included in this raw dataset: age, aptitude test, bankruptcy, beard or religious dress, body embellishment, bronze med, citizenship, criminal history, driver's license, education, medical, physical fitness assessment, psychological and security background. Some of these categories have no observations and others a small number of observations. The age, aptitude test, bankruptcy, beard and religious dress, and bronze med waiver categories contained no observations and the variables removed.

The remaining nine waiver categories are compressed into seven. Body embellishment waivers recategorized into medical waivers, and citizenship recategorized into security background waivers. This was essential in ensuring the effects are adequately captured. Therefore, the seven waiver categories and their associated variables included in my study are **criminal history waiver, driver's license waiver, education waiver,**



medical waiver, physical fitness waiver, psychological waiver and security background waiver.

A criminal history waiver can be granted to applicants with a criminal or civil conviction history that is incommensurate with RAAF standards but considered a low risk. For example, an applicant who has previously lost their driver's license. Based on prior literature, I predict a criminal history to be negatively associated with successful service. I also expect aviators receiving criminal history waivers to also be older.

A driver's license waiver can be granted to an applicant who does not hold the necessary license relevant to their occupation group. Generally, RAAF requires all enlisted aviators to hold a current Australian driver's license. I expect driver's license waivers to be positively associated with success and that aviators receiving this waiver are younger.

An education waiver can be granted if an applicant does not meet the minimum education standards in accordance with the employment profile relevant to their occupation group or role. At a minimum RAAF requires enlisted aviators to have completed year 10 English or equivalent. Like prior studies I expect education to be a significant variable, but due to the varying difficulties and capacity requirements within each occupation group I expect differing effects. I predict that in occupation groups such as aviation or engineering, maintenance and construction the effect will be negative, whereas other occupations like the logistics group I predict a null effect. I also expect the aviators to be older.

A medical waiver may be granted if an applicant does not meet the medical or dental standards applicable to RAAF or their employment group. Some occupation groups, such as aviation, have additional standards. I expect medical waivers to be negatively associated with successful service due to the connection with in-service readiness requirements. Body embellishment waivers are also collapsed into medical waivers and capture waivers issued to individuals with tattoos or other modifications that are incongruent with RAAF dress and bearing standards. Body embellishment waivers represent a small number of waivers issued.

A physical fitness waiver may be issued to an applicant who is unable to complete the pre-entry fitness assessment within four weeks of their enlistment. The pre-entry fitness



assessment requires applicants to demonstrate their fitness by completing 20 sit-ups and obtaining a 5.1 or 6.1 score on the shuttle run for females and males respectively. The waiver may be issued if an applicant is unsuccessful, unable to attend a location to complete the test or if an applicant demonstrates their fitness in an alternate manner, such as completing a 2.4 kilometer run instead of the shuttle run. I expect physical fitness waivers to have a negative effect on successful service as once in-service, fitness standards are higher.

A psychological waiver relates to psychometric standards and may be granted to applicants who do not possess the cognitive ability or skills required of their chosen occupation group. They predominately pertain to the job skills assessment, or aptitude test, and will waive the result to grant the applicant their occupation preference. As a psychological waiver can be considered a proxy to an AFQT waiver in the U.S. military, I expect a substantial and negative influence on successful service. Mirroring my prediction for education waivers, I expect the effect of psychological waivers to be larger in more cognitively demanding occupation roles.

A security background waiver may be issued if an applicant lacks the verifiable background required to obtain a security clearance applicable to their employment group. A ten-year checkable background is necessary for applicants to attain the minimum-security clearance required in RAAF. I expect security background waivers to have a negative effect, particularly in occupation groups with higher security clearance needs such as intelligence, as failing to obtain a security clearance will preclude one from successful service. Citizenship waivers are collapsed into security background due to the related nature.



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V. WAIVER LIBERALIZATION TREND

The sample population revealed a significant increase in waiver issuance over the observation period, lending itself to a waiver liberalization trend within RAAF. The waiver liberalization trend is commensurate with surmounting pressure from the Australian Government to increase the force structure. The increase in recruitment targets has generated a higher demand for labor, and when coupled with shifts in the labor market and changes to the labor supply has driven the usage of waivers. In short, RAAF is employing waivers to recruit a larger number of aviators and to enlist individuals who were previously ineligible. The waiver liberalization trend therefore also represents RAAF’s increasing risk profile.

The waiver liberalization trend can be measured by comparing the annual waivers issued as a ratio of the total annual enlistments. This considers the growing demand for labor and resultant increase of yearly enlistments. Table 2 presents the waiver liberalization trend numerically. The total waiver count corresponds to the number of aviators receiving an enlistment waiver and does not take into consideration aviators enlisting with multiple waivers.

Table 2. Count of Recruitment Waivers Issued by Years 2016 through 2021

Year	No-Waiver	Waiver	Total
	2,707 (87.83%)	375 (12.17%)	3,082
2016	450 (98.04%)	9 (1.96%)	459
2017	405 (93.97%)	26 (6.03%)	431
2018	405 (88.04%)	55 (11.96%)	460
2019	414 (85.54%)	70 (14.46%)	484
2020	513 (86.36%)	81 (13.64%)	594
2021	520 (79.51%)	134 (20.49%)	654

Of the 3,082 aviators in the sample 375 enlisted with at least one recruitment waiver, or 12.17%. In 2016, just under 2% of aviators, or nine aviators in total, enlisted into RAAF with at least one waiver. In 2021 this number had grown to 20.5%, or 134 aviators, an 18.5 percentage point difference. The numbers clearly indicate a substantial



increase in recruitment waivers granted by RAAF from 2016 through 2021. The percentages calculated in Table 2 are displayed in Figure 1. This visual representation reinforces the waiver liberalization trend within RAAF.

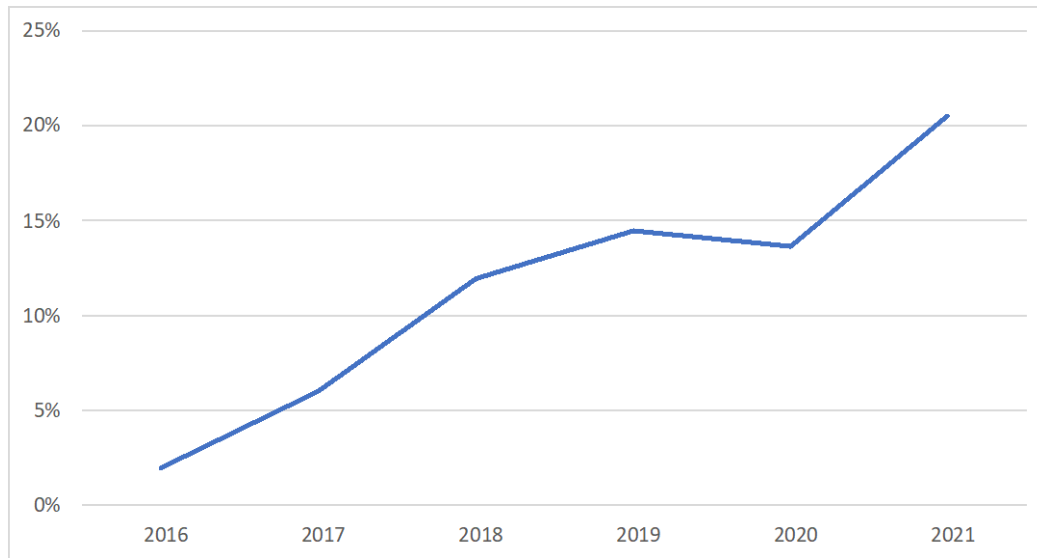


Figure 1. Waiver Liberalization Trend: Percentage of Recruitment Waivers Issued as a Ratio of Annual Enlistments for Years 2016 through 2021

The year 2020 presents an anomaly in the trend where there is an almost stabilization in waiver issuance, see Figure 1. This aligns with the onset of the COVID-19 pandemic, a period characterized by substantial global disruption affecting both individuals and economies worldwide (O’Sullivan et al., 2020). Despite Australia’s successful response to curb the spread of the virus, the Australian population still experienced adverse effects on both economic and social fronts. Of most relevant was the surge in unemployment and heightened job insecurity (O’Sullivan et al., 2020). These external conditions led to a notable increase in enquiries to join the ADF as the military provides a stable employment option (Heanue, 2020).

In 2020 the ADF reported a substantial 42% rise in recruitment enquiries when compared to the previous year, indicating a widened labor pool (Heanue, 2020). With a larger recruitment pool, RAAF’s increasing labor demand was assumed to be better matched with the available supply reducing the need for waivers. However, the

increased enquiries did not translate to increased enlistments as many applicants did not complete process. The stabilization in waiver issuance can therefore not be attributed to a wider labor pool.

The stabilization is more likely due to RAAF’s systematic engagement with waivers during that period, in particular physical fitness waivers. Rather than delaying recruitment of many applicants, RAAF chose to offer waivers to counteract the disruptions and limitations caused by COVID-19. It is purely coincidental that this rate somewhat reflected the prior year. In the following year, 2021, the waiver issuance trend returned at a substantial rate. This trend coincides with the first year ADF were unable to reach their recruitment targets (Department of Defence, 2022).

A. BY WAIVER CATEGORY

The waiver liberalization trend can be characterized by waiver category to investigate any underlying trends, such as whether one type is used more prominently. Figure 2 displays the distribution among the seven waiver categories considered in this study. It includes all waivers issued between 2016 through 2021 and accounts for the 32 aviators enlisting with multiple.

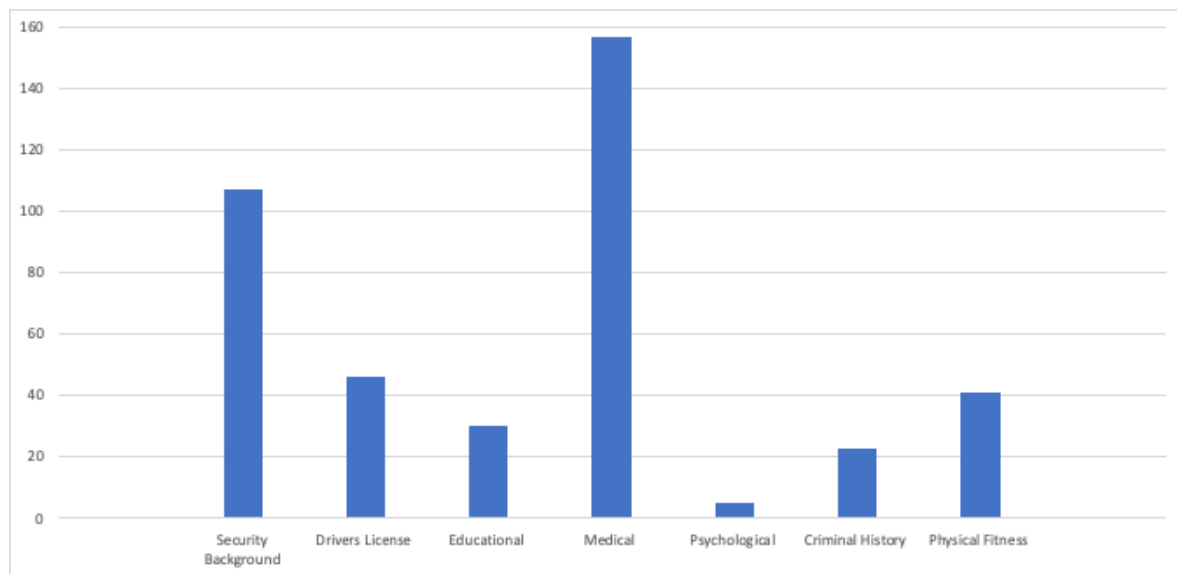


Figure 2. Recruitment Waiver Distribution by Waiver Category for Years 2016 through 2021



The sample includes a total of 409 recruitment waivers. The most prevalent is medical with 157 issued over the six years, representing nearly 40% of all waivers; this includes five body embellishment waivers. Medical waivers are closely followed by security background waivers. The least prevalent is a psychological waiver with just five waivers issued, or 1.2%.

Although Figure 2 identifies medical waivers, followed by security waivers, as the most widely used across RAAF, it shows little in terms of trends and does not allow for an in-depth analysis. Figure 3 instead displays the annual trends of the four most distributed waiver categories: medical, security background, driver’s license and physical fitness. Criminal history, education and psychological have been omitted due to their small representation. The line displays the percentage of the category’s annual waivers as a ratio of the total waivers issued each year.

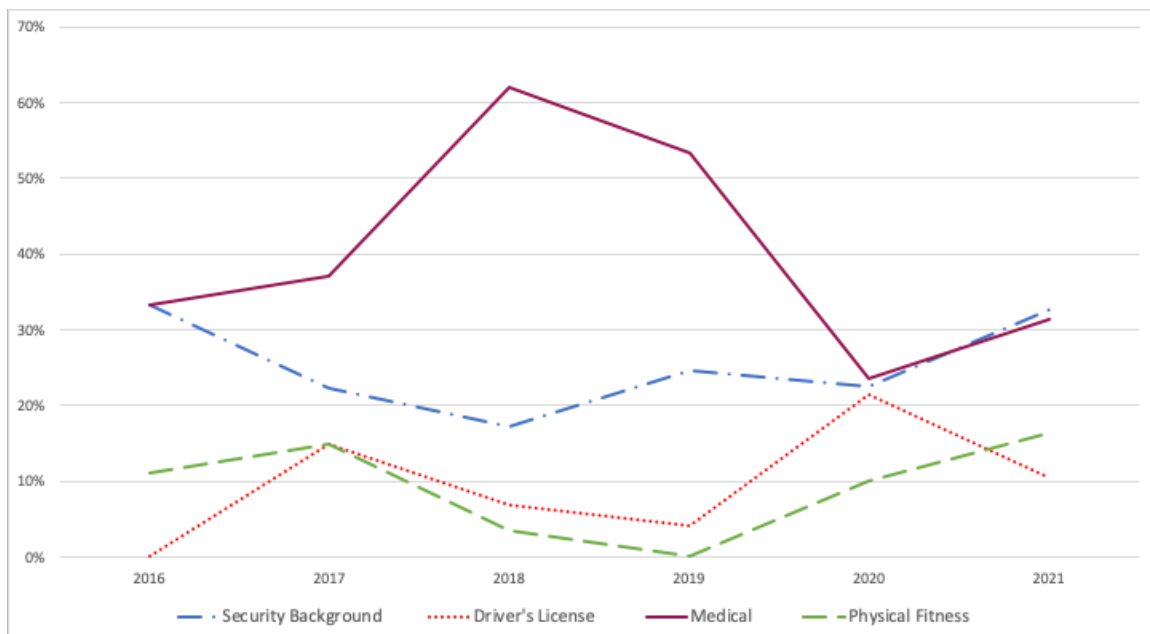


Figure 3. Recruitment Waiver Distribution Trend: Percentage of Recruitment Waivers Issued as a Ratio of Annual Waivers Issued for Years 2016 through 2021

The two visuals (Figures 2 and 3) present the waiver distribution trend in different lights. Figure 2 identifies medical waivers (including body embellishment) as the most



prominent overall. However, Figure 3 shows that in 2016 and 2020 security and medical waivers performed similarly, whereby they both account for approximately 30% and 24% of annual waivers issued respectively. In fact, in 2021 security background waivers can be seen to surpass medical waivers to become the most prevalent, representing 33% of the annual issuance vice 31% for medical waivers.

Figure 3 also reveals that in 2020 RAAF increased their use of physical fitness and driver's license waivers, a conflict with the overall decrease of waiver use found in Figure 1. The increase is likely explained by the pandemic rather than a behavior trend and is considered an anomaly. During this time, the Australian Government imposed restrictions which limited non-essential face-to-face interactions and inhibited travel (Parliament of Australia, 2021). These restrictions severely impacted many activities including driving tests as one could not attend their local government facility and therefore their driver's license was delayed.

The restrictions also impacted the ADF's recruitment. In 2020 RAAF internally report an increase in physical fitness waiver requests due to COVID-19 related issues, such as not being able to travel and attempt the pre-entry fitness test (Royal Australian Air Force, 2022). This demonstrates that RAAF chose to systematically increase their use of physical fitness and driver's license waivers rather than delay recruitment for many individuals. This increased use of physical fitness and driver's license waivers is therefore not considered a reflection of any waiver issuance trends, rather an external impact from the pandemic.

Overall, characterizing the waiver liberalization trend by waiver category does not reveal any significant patterns. It does not indicate whether RAAF is becoming more or less risk tolerant in one specific aspect, instead it suggests that RAAF remains responsive to external labor market changes.

B. BY OCCUPATION GROUP

The waiver liberalization trend can also be characterized by occupation group to determine whether RAAF favor recruitment waivers in specific roles. Table 3 separates



waivers issued by the eight occupation groups. It considers aviators receiving multiple waivers and includes all 409 recruitment waivers issued between 2016 and 2021.

Table 3. Count of Recruitment Waivers Issued by Occupation Group for Years 2016 through 2021

	Total
N	409
Aviation	23
Combat and security	61
Communications and cyber	45
Engineering, maintenance and construction	109
Enterprise and command support	27
Health	11
Intelligence	59
Logistics	74

The engineering, maintenance and construction group has the highest representation with 109 waivers. The smallest representation comes from the health group with 11 waivers. These two groups however are the largest and smallest population in the dataset, as displayed in Table 1, and therefore these numbers on their own are misleading.

Figure 4 removes the bias by presenting the percentage distribution within each occupation group in terms of waived and non-waived aviators. The visual counteracts the findings in Table 3 but presents a more accurate analysis of the waiver liberalization trend.



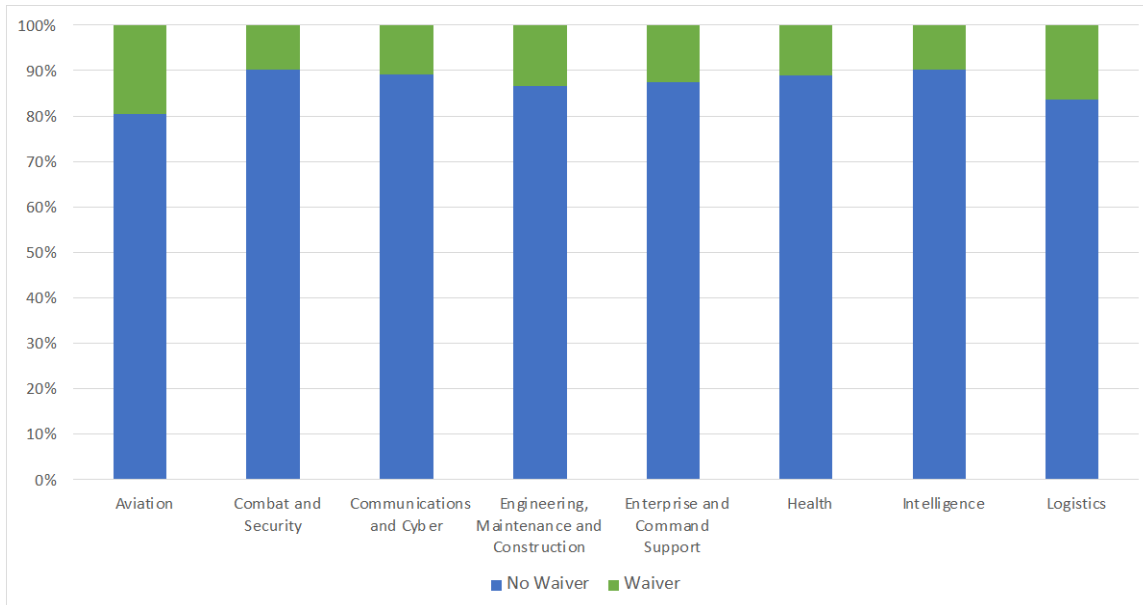


Figure 4. Waivered and Non-Waivered Aviator Distribution by Occupation Group for Years 2016 through 2021

Figure 4 reveals that the aviation occupation group has the highest ratio of waivers with 19% of individuals enlisting with a waiver. This is followed closely by the logistics group with 16%. Although Table 3 identified the engineering, maintenance and construction occupation group as having the highest prominence of waivers, Figure 4 shows that the waived aviators within represent only 13% of the group. Remaining occupation groups perform very similarly with approximately 10% of the workforce enlisting with a recruitment waiver. While Figure 4 allows for a better understanding of which groups have a higher percentage of waived aviators, further analysis is required to understand any trends.

Figure 5 displays the annual issuance trends across three occupation groups: engineering, maintenance and construction, intelligence and logistics. Remaining occupation groups are omitted due to either their small size or indistinct behavior. The line displays the percentage of the waivers issued to that particular occupation group as a ratio of the total waivers issued per year.





Figure 5. Recruitment Waiver Issuance Trend: Percentage of Recruitment Waivers Issued across Select Occupation Groups for Years 2016 through 2021

Figure 5 reveals the issuance trend within the three occupation groups is relatively random. For example, in 2016 the engineering, maintenance and construction occupation group accounts for 22% of the annual waivers. However, this number drops to 13% in 2018 and rises again to 32% in 2020. Logistics and intelligence groups display similar unsystematic behavior.

There is somewhat of an underlying trend whereby waiver issuance becomes more prevalent in occupation groups of concern. RAAF recruitment addresses quantity and quality, whereby targets will be specific to certain occupation groups or roles. Where personnel shortfalls are identified or there is a significant increase in demand, an occupation group will be prioritized (Department of Defence, 2023; Joint Standing Committee, 2023). The occupation group will be classified as critical when the predicted shortfalls present a risk to the overall capability of the force (Joint Standing Committee, 2023). After classification, a remediation plan with the specific intent of rectifying the workforce pressure will be implemented which can often involve an increase in advertisement and recruitment activity (Joint Standing Committee, 2023). There is some

evidence of the liberalization trend aligning with occupation groups previously classified as critical. For example, in 2019 some roles relating to the intelligence occupation group were deemed critical due to increased labor demand, this coincides with an increase in waiver issuance (Department of Defence, 2020). Further, in 2020 some roles within the engineering occupation group were classified as critical for a similar reason, which is coupled with an upwards trend of waiver issuance (Department of Defence, 2021). However, there is insufficient evidence overall for this to be considered a systematic trend.

C. COMPARISON WITH SUCCESSFUL SERVICE

The waiver liberalization trend, evolving since 2016, is evident and prominent, as highlighted in Figure 1. However, the trend is not dominated by any one waiver category nor one occupation group. To further the analyze the trend, an investigation of the effects on service completion is important. RAAF’s success rate over the same period can be compared to ascertain whether there is a change in successful service outcomes or service completion. Table 4 presents the number of total successful aviators based on enlistment year, regardless of waiver status. These are aviators who completed both their initial military and initial employment training only. It does not include aviators who re-mustered to an alternate role and undertook a second initial employment training.

Table 4. Count of Aviators Successfully Completing Initial Military and Employment Training for Years 2016 through 2021

Year	Successful
Total	2,511
2016	367
2017	379
2018	380
2019	410
2020	468
2021	507



Of the aviators enlisting into RAAF in 2016 367 are successful, meaning they graduated both initial and employment training. This number grows to 507 for the 2021 enlistees. This numerical analysis shows that there is a trending increase in successful aviators that is commensurate with RAAF’s workforce growth. The analysis however does not consider unsuccessful aviators. By calculating the annual percentage of successful aviators as a ratio of all enlisted aviators, the success rate can be better understood. Figure 6 displays the annual success rate for 2016 to 2021.

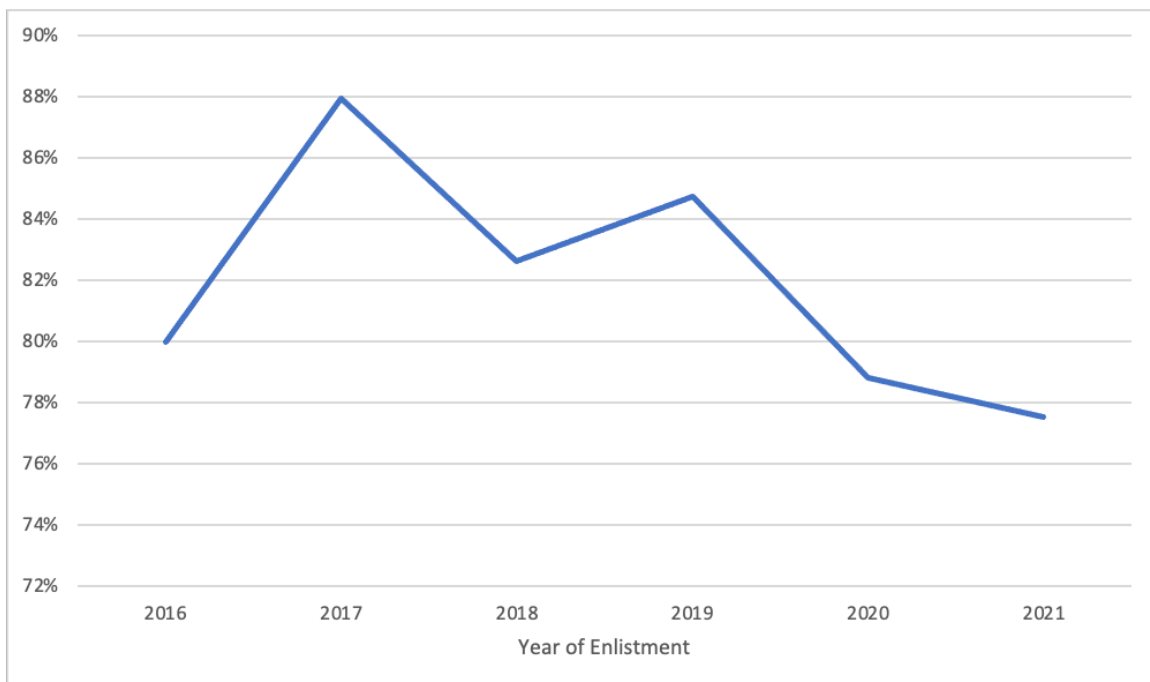


Figure 6. Success Rate: Percentage of Aviators Successfully Completing Initial Military and Employment Training per Enlistment Year for Years 2016 through 2021

In 2016, of the total 459 aviators enlisted into RAAF 367 are successful, creating a success rate of 80%. In 2021, of the 654 aviators enlisted 507 are successful, reducing the success rate to 77.5%. The average success rate over the six-year period is 82%. The year 2017 has the most success with a peak of 88%, whereas 2021 represents the lowest. It is important to note that the trending decrease in the success rate from 2020 through 2021 may be bias due to data limitations. The dataset contains aviators who enlisted in 2020 or



2021 and have yet to finish their training due to insufficient time passage. This study considers these aviators unsuccessful, which is an incorrect assumption. Despite this partial bias, Figure 6 still shows a decline in RAAF's success rate since 2016.

D. CONCLUSION

This preliminary assessment reveals three important observations. Firstly, there is evidence that RAAF is responding to the Australian Government's direction to increase their workforce size. Secondly, there is a significant increase in waiver issuance over the six-year period, reinforcing the waiver liberalization trend within RAAF. The frequency of waiver usage throughout the recruitment process is rising and, based on the trajectory, is expected to continue. These two observations are related. As RAAF becomes more liberal towards enlistment standards whilst also increasing their recruitment numbers, there is likely to be a higher number of marginal candidates observed.

The third observation found that despite the increasing enlistment numbers, RAAF is also experiencing a declining overall success rate. Over the past six years, there has been an observable increase in the number of successful aviators but also unsuccessful aviators. The increase of unsuccessful aviators is potentially attributable to the growing use of recruitment waivers, indicating that waivers are having a dual effect. My proceeding quantitative analysis will further explore the influence of recruitment waivers on service completion, enabling me to draw precise conclusions.



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VI. METHODOLOGY AND RESULTS

Through my quantitative analysis I aim to ascertain the influence of recruitment waivers on RAAF. Using statistical programming language and software package, Stata, I assess the differing success rates between aviators enlisting with recruitment waivers and those without. I employ linear probability models and interpret the beta coefficients to determine the change in probability of successful service or service completion.

The analysis is conducted in two phases. Firstly, I explore the impact of recruitment waivers on successful service for aviators in general. Subsequently, I refine the population to individual occupation groups, conducting the same model on the subset populations. I apply standard controls across all models and include fixed effects.

A. RECRUITMENT WAIVERS BROADLY

In the initial phase of my analysis I examine the impact of recruitment waivers on successful service for all aviators. I apply two models to two different populations: an unrestricted cohort comprising all 3,082 observations and a restricted cohort that excludes 135 observations. The excluded observations are those who have completed their initial military training but have not completed initial employment training and do not show observable attrition. Reasons for incomplete training is unknown and may include factors such as insufficient time passage, back-coursing or training delays. The potential cause for incompleteness can be attributed to both the individual and organization, and thus cannot be characterized accurately. By applying the models to both cohorts, I aim to prevent any potential bias within my results driven by those aviators with unknown outcomes.

The first model investigates the broad effect of a recruitment waiver by incorporating a control for any waiver. The any waiver variable is a dichotomous variable capturing whether an aviator enlists with at least one waiver. The second model removes the any waiver variable and introduces controls for each of the seven waiver categories. In this model I'm seeking to identify differing or noteworthy effects for the individual waiver types. The outcome of both models is successful service, a



dichotomous variable indicating whether an aviator succeeded in both their initial military and initial employment training.

Across both models I control for demographic factors, including enlistment age, gender, citizenship rights, Indigenous status and military occupation group. Fixed effects for enlistment year are added to capture external environmental factors. The reference group comprises a male, Australian-born citizen, enlisting in 2016 as an engineering, construction and maintenance aviator without a recruitment waiver. This is the most prevalent observation within my sample population. The results of the phase one analysis are presented in Table 5.



Table 5. Regression Results for Successful Completion of Initial Military and Employment Training

Successful Service				
	Unrestricted Sample		Restricted Sample	
Any Waiver	-0.055** (0.022)		-0.060*** (0.023)	
Security Background Waiver		-0.034 (0.039)		-0.047 (0.039)
Driver's License Waiver		0.055 (0.052)		0.040 (0.051)
Education Waiver		-0.091 (0.078)		-0.090 (0.080)
Medical Waiver		-0.078** (0.035)		-0.072** (0.036)
Psychological Waiver		0.087 (0.198)		0.279*** (0.049)
Criminal History Waiver		-0.065 (0.086)		-0.074 (0.085)
Physical Fitness Waiver		-0.031 (0.059)		-0.045 (0.062)
Female	0.034** (0.014)	0.034** (0.014)	0.032** (0.014)	0.032** (0.014)
Indigenous	-0.067** (0.031)	-0.068** (0.031)	-0.058* (0.032)	-0.063** (0.032)
Aviation	-0.719*** (0.031)	-0.717*** (0.031)	-0.643*** (0.060)	-0.641*** (0.061)
Combat & Security	0.013 (0.022)	0.013 (0.022)	-0.027 (0.021)	-0.028 (0.021)
Communication & Cyber	0.100*** (0.021)	0.103*** (0.021)	0.064*** (0.020)	0.067*** (0.020)
Enterprise & Command Support	-0.006 (0.033)	-0.004 (0.033)	-0.041 (0.032)	-0.039 (0.032)
Health	-0.157*** (0.049)	-0.155*** (0.049)	-0.112** (0.049)	-0.111** (0.049)
Intelligence	0.074*** (0.020)	0.076*** (0.020)	0.042** (0.019)	0.044** (0.019)
Logistics	0.067*** (0.023)	0.067*** (0.023)	0.027 (0.022)	0.028 (0.022)
Yearly Fixed Effects	Yes	Yes	Yes	Yes
Observations	3082	3082	2947	2947
R ²	0.171	0.172	0.081	0.082

Robust standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$



1. Any Waiver Effect

The results of the first model show a decrease in the probability of successful service for aviators enlisting with a recruitment waiver. Specifically, within both the unrestricted and restricted sample enlisting with a waiver is associated with a reduced probability of 5.5 and 6.0 percentage points respectively, see Columns A and C of Table 5. Significance levels at 1 and 5% level indicate a high degree of confidence that the observed differences are not due to chance.

The two populations yield relatively similar results, with a slightly higher probability of successful service for those waived aviators in the unrestricted sample. This increased likelihood is expected and reflective of the more accurate classification in the restricted sample. The removal of 135 aviators who are incorrectly considered unsuccessful in the unrestricted sample somewhat enhances the regression analysis and consequently the statistical efficacy. Regardless of whether considering the restricted or unrestricted sample, the relatively consistent negative finding is compelling. It can be concluded that a recruitment waiver decreases the likelihood of successful service for an aviator, on average.

In exploring the waiver liberalization trend within RAAF, I found a declining success rate and suggest a partial attribution to the growing use of recruitment waivers. The results found in the first model affirms this inference and indicates that RAAF is in fact experiencing higher levels of unsuccessful aviators due to an increase in waivers. While this finding is significant for RAAF, its broad nature limits its meaningful impact.

2. Individual Waiver Category Effects

In the second model of my phase one analysis, I refine the examination and introduce an independent variable for each of the seven waiver categories: criminal history, driver's license, education, medical, physical fitness, psychological and security background. I execute the new model on both the restricted and unrestricted sample which once again produces relatively comparable results. I present the results in Columns B and D of Table 5.



Among the seven waiver categories, two waiver categories yield statistically significant results. Medical waivers identify as having a negative impact, decreasing the probability of successful service by 7.8 percentage points for the unrestricted and 7.2 percentage points for the restricted sample. This is significant at the 5% level. While statistically significant, the nature of medical waivers makes it challenging in pinpointing specific implications RAAF.

Medical waivers cover a wide array of circumstances such as allergies, hearing, dental, dermatology, autoimmune, cardiovascular, musculoskeletal, ophthalmology, neurodiversity and other mental health conditions. Furthermore, a medical waiver may be granted for multiple medical circumstances making it difficult to attribute the negative association with any one particular condition. RAAF should be aware of this finding. Irrespective of specific medical condition, the fact that a medical waiver is found to be statistically and negatively associated with successful service warrants attention. Medical waivers pose a heightened risk to RAAF and therefore should be used cautiously. Having collapsed body embellishment waivers into the medical waiver category, the small representation of body embellishment waivers may be positively biasing the results as body modifications are associated with a conflict in dress and bearing standards rather than a specific medical condition. It is possible that the inclusion of body embellishment waivers is reducing the negative effect attributed to medical waivers.

Psychological waivers return the most statistically significant result, whereby an aviator enlisting with such waiver is expected to have an increased probability of successful service by 27.9 percentage points in the restricted sample only. This is a noteworthy result. However, it is coupled with a very small sample representation with psychological waivers accounting for only five of the total waivers issued, or 1.2%. Further, psychological waivers are observed in the sample in 2020 and 2021 only. Their infancy and small sample size limit the interpretability of this result. I recommend consideration be given to conducting an analysis into the effect of psychological waivers once a more mature dataset is available.

Remaining waiver categories, namely criminal history, education, security background and physical fitness yield negative results. A driver's license waiver however



produces a positive effect on the probability of successful service. All results are statistically insignificant and preclude me from drawing any specific correlation conclusions.

Nonetheless, the negative results should still hold importance to RAAF as they indicate that aviators enlisting with criminal history, education, security background or physical fitness waivers are, to some degree, less likely to achieve success when compared to their counterparts. This indicates that there is still some risk posed by these categories of recruitment waivers and that the enlistment standards holistically appear to be valid. RAAF should consider this increased risk against the cost of not recruiting someone at all. The positive result, on the other hand, represents an opportunity to RAAF that should be further explored.

The initial phase on my analysis found that recruitment waivers, in general, tend to have more negative implications for RAAF than positive ones. It also revealed differing effects resulting from the individual waiver categories which remain to be fully understood. The second phase of my analysis will be crucial in developing a more comprehensive understanding of the effects and additional influence of occupation groups on outcomes.

3. Individual Characteristic Effects

Phase one of my analysis revealed individual characteristics that are relevant when analyzing the probability of success in RAAF aviators. I found that, when compared to males, female aviators are statistically more likely to achieve successful service by three percentage points. This is a consistent finding across both the restricted and unrestricted sample, and at the 5% level is the most significant individual characteristic. This result contrasts with the U.S. literature which associated males with reduced attrition rather than females. The disparity may be due to the differing outcome variable of successful service versus reduced attrition, but also may be attributed to the gender diversity programs implemented within RAAF.

These programs, such as Project WINTER (Women in Non-Traditional Roles) and WINGS (Women's Integrated Networking Groups), allocate increased resources for attracting and retaining RAAF women (Royal Australian Air Force, n.d.a). This finding



indicates the effectiveness of the additional support provided through these projects and suggests that RAAF should with continue such investments.

Indigenous status is also found to be statistically significant, with Indigenous males being approximately six percentage points less likely to be successful in service compared to white males. This is significant at the 5% level for the unrestricted sample and decreasing to the 10% level for the restricted sample. The result likely reflects the inherent disadvantages faced by Indigenous Australians (Parliament of Australia, 2004).

Difficulties such as poorer living conditions, unequal access to education and healthcare and disparate treatment in the criminal justice system can negatively impact the physical, social, emotional, and mental health of Indigenous Australians (Parliament of Australia, 2004). These characteristics can be considered essential for successful military service. The negative effect found within Australia mirrors the U.S. studies where racial differences were generally attributed to increased attrition.

It is acknowledged that RAAF has committed to engaging and recruiting Aboriginal and Torres Strait Islander personnel with increased funding, and tailored recruitment and employment for Indigenous Australians (Royal Australian Air Force, n.d.b). While the results may be slightly skewed as the older data may not be capturing the full effect of the programs, it is recommended that RAAF regularly assess whether the current programs for Indigenous support are adequate and seek ongoing opportunities for improvement.

All other individual characteristics, namely enlistment age and citizenship rights, are found to be insignificant and omitted from Table 5. The very small and insignificant result for age is contrary to U.S. studies and as predicted, is attributed to RAAF's broader dispersion. It shows that age does not detract from military training within this context. Finding a weak relationship between age and successful service suggests that RAAF need not be overly concerned with the enlistment age of their aviators. This is a significant finding for RAAF and encourages the recruitment of a wider range of individuals. Using this result, I recommend the elimination of the age waiver. Similarly, a small and insignificant result for citizenship rights indicates a null effect on the probability of



successful service. For RAAF, this means that an aviator's birth location is not relevant once they acquire Australian citizenship.

Finally, the inclusion of fixed effects for enlistment year prove to be of low significance to success probability. Among the five enlistment years (2017 through 2021 as 2016 is the reference group), only 2017 returns a statistically significant result in both the restricted and unrestricted sample. Enlisting in 2017, compared to 2016, is found to increase the probability of successful service by approximately five percentage points. A significant result at the 5% level. This effect is attributed to RAAF's increased recruitment efforts in response to the 2016 White Paper which directed the ADF to increase the workforce for the first time in three years.

Despite the isolated significance of 2017, overall an aviator's year of enlistment is found to have little effect on successful service. This is an ideal result for RAAF as it reveals that while there is a liberalization in waivers, the approval standard has remained consistent and only the volume of waivers issued is increasing. It can be concluded that the impact of recruitment waivers on RAAF has not and should not vary over time, assuming no significant change in approval standards. An increase in volume should not alter the fundamental results and the implications drawn from this study can be extrapolated.

4. Occupation Group Effects

Across the restricted and unrestricted samples, I observe some significant fluctuations in the occupation group effect on the probability of successful service. Within the restricted sample, the communications and cyber, intelligence and logistics groups all exhibit increased success rates when compared to the base group, engineering, maintenance and construction. Of these, communications and cyber, and intelligence are highly statistically significant at the 1 and 5% level respectively. Conversely, the aviation, combat and security, enterprise and command support, and health groups are associated with lower success probability, whereby aviation and health are highly statistically significant at the 1 and 5% level.

In comparison, the unrestricted sample instead returns a positive effect for the combat and security group when compared to the engineering, maintenance and



construction group. The result however remains statistically insignificant. The logistic group continues to return a positive result however becomes highly statistically significant. All other groups returned similar results as the restricted sample. The change in the combat and security group's direction is of little concern due to the insignificance of the results. However, the dramatic change of significance in the logistics occupation group perplexing.

The restricted sample shows little change in terms of the logistics group as the removed 135 aviators includes only one from the logistics group. The dropped aviators are predominately from the aviation, and the engineering, maintenance and construction groups. Thus, the change is not attributed to a differing sample within the logistic group. The changing effect is likely then attributed to the change in the base category, the engineering, maintenance and construction group, as it has created a different comparison that has subsequently influenced the logistics coefficient.

The change in significance level is not necessarily problematic but warrants a cautious approach in interpretation. It can be concluded that the logistics occupation group, waived or not, is more likely to be successful in service, to some degree, when compared to the base category. The differing success rates likely owing to the length of training and degree of difficulty. RAAF should be considerate of this result but not compelled.

Of the remaining occupation groups, the aviation group result is notable. Compared to males enlisting in the engineering, maintenance and construction group, those enlisting in the aviation group exhibit an almost 70-percentage point lower likelihood of success. The result is consistent across the restricted and unrestricted samples in terms of both significance level and size. This remarkably lower likelihood of success is likely owing to the higher training standards demanded by RAAF rather than a statistical error. The aviation occupation has significantly intricate training and the highest failure rate regardless of waiver status. This fact is evidenced in the dataset, where just 10 out of the 118 aviators are successful, or 8%. This should be of significant concern to RAAF. I recommend consideration be afforded to the conduct of an analysis into whether any over-training exists relative to the minimum requirements for operating as part of the trained force, as over training could undermine the achievement of the required inventory.



5. Conclusion

The key findings from the initial phase of my analysis indicate that, in general, recruitment waivers are negatively associated with successful service in RAAF. A recruitment waiver is found to decrease the probability of successful service, or service completion, by at least 5.5 percentage points. A small but negative effect for RAAF. When examining individual waiver categories, a medical waiver stands out as statistically and negatively correlated with an aviator's likelihood of success. A medical waiver is found to decrease the probability of successful service by at least 6.4 percentage points. A psychological waiver is also found to be statistically significant, increasing the likelihood of success. However, when the result is considered alongside the small and infant sample, it does not present as reliable. Remaining waiver categories are found to be statistically insignificant in their effect, and except for driver's license, yield negative results and decrease the likelihood of success.

When considering individual characteristics, female aviators are three percentage points more likely to be successful compared to their male counterparts, while male Indigenous Australians are six percentage points less likely to be successful when compared to white males. These characteristics should be noted by RAAF and taken into consideration for the development or advancement of existing programs. Of importance, enlistment age was found to be an insignificant influencer of successful service, suggesting that RAAF need not place excessive emphasis on the enlistment age of their aviators. This finding supports the eradication of age waivers. Year of enlistment fixed effects further produced limited effect, showing that RAAF's increasing usage of recruitment waivers has not changed the probability of unsuccessful service.

Within the occupation groups, aviators enlisting in the aviation or health group are statistically expected to experience less success when compared to the base category, engineering, maintenance and construction. While aviators in the communications and cyber, intelligence and logistic groups are statically expected to experience higher success compared to the base category. However, these broad occupation group effects are of little relevance when understanding the effects of recruitment waivers.



B. RECRUITMENT WAIVERS BY OCCUPATION GROUP

In the second phase of my analysis I refine the sample population to individual occupation groups. This enables a more precise examination of the impact of recruitment waivers and allows for more specific recommendations to be developed. I apply the two aforementioned models to the eight occupation groups, continuing to control for individual characteristics and incorporating enlistment year fixed effects. The outcome of interest remains successful service.

Conducting phase one of my analysis on the restricted and unrestricted samples yielded relatively similar results for the coefficients of interest, namely waiver status and individual characteristics. I therefore determine the populations are qualitatively the same in the core elements and conduct the phase two analysis on the unrestricted population only. Below I present the statistically significant results, however I provide a brief discussion of the findings across all occupation groups.

1. Aviation

The aviation group yields no statistically significant results across recruitment waiver status or individual characteristics. The overall effect of a recruitment waiver is found to be very small, 0.7 percentage points, and positive. This suggests that enlisting with a recruitment waiver in the aviation occupation group slightly increases the probability of success when compared to enlisting without a waiver. However, the lack of statistical significance makes this finding inconclusive.

When examining the individual waiver categories, all except medical return a negative effect which indicates that their presence in the enlistment process reduces one's likelihood of success. The magnitude varies with the largest negative effect seen in security background waivers at 19.7 percentage points, while medical shows the only positive effect at 16.7 percentage points. Despite these variations, all results lack statistical significance and are associated with large standard errors. Individual characteristics, namely gender and Indigenous status, also reveal limited points of interest.

Considering the aviation group's high waiver issuance and the findings in phase one, these results are unexpected. It is unlikely that the lack of statistical significance is



attributable to the limited sample size as the aviation population has a high prevalence of waivers. Overall, these findings suggest that recruitment waivers have little observable effect on the success of aviation individuals within RAAF. Instead, it can be inferred that the high failure rate within the aviation group has a more substantial influence on successful service, vice waiver status. I therefore reinforce my prior recommendation of further analysis of the aviation occupation group.

2. Combat and Security

In the combat and security group the impact of a recruitment waiver on the probability of successful service mirrors that of the overall population. The results show that a waiver is associated with a decrease of 6.7 percentage points, however this lacks statistical significance. Among the waiver categories, driver’s license, education and physical fitness waivers are found to be statistically significant and are presented in Table 6. No individual characteristics are of significance.

Table 6. Statistically Significant Regression Results for Successful Completion of Initial Military and Employment Training within Combat and Security Group

	Successful Service
Driver’s License Waiver	0.225*** (0.045)
Education Waiver	-0.401* (0.209)
Physical Fitness Waiver	-0.563* (0.288)
Demographic Controls	Yes
Yearly Fixed Effects	Yes
Observations	570
R ²	0.051

Robust standard errors in parentheses
 * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The driver’s license waiver is highly statistically significant and positive, indicating that enlisting with this waiver increases the probability of success by 22.5 percentage points when compared to having no waiver. This finding aligns with a conflict between enlistment standards and Australian licensing laws.



RAAF enlistment standards collide with Australian law regarding the legal driving age and eligibility for a driver's license. RAAF standards demand aviators to hold a valid complete Australian driver's license upon enlistment. Applicants may apply if they do not hold a license, have a provisional license or have an automatic-approved license,⁵ and may be enlisted under a waiver. An enlistment application can commence at 16.5 years old but applicants must reach 17 years on the day they officially join the service. In contrast, Australian laws dictate a minimum age of 17 years to apply for a driver's license and require a minimum two-year probationary period. The necessity for a driver's license waiver becomes evident as many individuals applying to enlist may be ineligible to obtain a complete license by Australian standards simply due to age.

In such cases, unlicensed or under licensed applicants typically represent a low-risk enlistment for RAAF and the positive effect on successful service is therefore logical. A driver's license is not a requirement for initial military or employment training. A waiver provides a way for RAAF to access these applicants at an earlier stage rather than waiting for them to obtain a license. These low-risk applicants can enter service, commence their training and obtain their driver's license at a later date. In these circumstances, the cost of a driver's license waiver becomes positive as RAAF ultimately benefits from their use.

In contrast, education and physical fitness waivers return statistically significant and negative results. An education waiver is found to decrease the probability of successful service by 40 percentage points. While remarkable, the finding is tempered by a wide standard error which indicates variability and uncertainty. The large standard error may be attributed to low observations as just five of the 56 recruitment waivers within the combat and security group are education waivers. Similarly, physical fitness waivers, projected to reduce the probability of successful service by 56 percentage points, also exhibit a wide standard error. This wide error may again be attributed to the low number of observations where only three aviators received physical waivers.

Despite their statistical insignificance, it can be concluded that education and physical waivers introduce a recruitment risk to RAAF and may negatively impact the

⁵ A holder of an automatic-approved licence cannot legally drive a vehicle with a manual transmission.



success of aviators within the combat and security occupation group. Notably, RAAF should pay particular attention to the substantial negative influence of physical fitness waivers given the crucial role of physical standards in combat and security roles. To mitigate this, RAAF should consider introducing tailored in-service physical conditioning programs for the combat and security workforce.

3. Communication and Cyber

The communication and cyber occupation group stands out as the sole group to return a statistically significant and positive result for any recruitment waiver, with an increase in the probability of successful service by 5.9 percentage points. This is at the 10% significance level. When considering the notable challenges in recruiting to this group, driven by skills shortages and surging demand, this is a promising result for RAAF.

In addition to the overall effect for any waiver, criminal history, physical fitness and security background also return statistically significant results. As displayed in Table 7, each of these categories show positive results, increasing the increased likelihood of successful service by an average 10 percentage points.

Table 7. Statistically Significant Regression Results for Successful Completion of Initial Military and Employment Training within Communication and Cyber Group

	Successful Service
Security Background Waiver	0.100*** (0.031)
Criminal History Waiver	0.087* (0.052)
Physical Fitness Waiver	0.121** (0.047)
Demographic Controls	Yes
Yearly Fixed Effects	Yes
Observations	380
R^2	0.088

Robust standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The positive results associated with a criminal history and security background waiver are unexpected, particularly considering the nature of the roles. RAAF mandates



that aviators hold a minimum-security clearance appropriate to their employment with certain jobs, such as those within the communication and cyber group, requiring a higher clearance level. While it was anticipated that individuals requiring a security background waiver might pose a high-risk enlistment, the positive findings suggest otherwise. The results show that RAAF is employing a robust assessment process for security waivers, however it raises a question as to whether such a robust process remains necessary. Further analysis may be appropriate to determine the appropriate balance. A criminal history waiver is closely associated with a security waiver and warrants a similar approach. These two results may present a solution to the recruiting challenge RAAF is experiencing within the group.

Similarly, the positive result for physical fitness waivers conflicts with my expectations. Physical fitness enlistment requirements are consistent across occupation groups with all applicants expected to meet the minimum pre-entry standard. Once in service, aviators are required to adhere to the in-service minimum standards that arguably necessitate a higher level of fitness. The positive result indicates that RAAF does not need to insist on communication and cyber applicants demonstrating the necessary level of pre-entry fitness. Instead, the results suggest that deficiencies are being addressed during initial training. This too is a favorable outcome for RAAF.

These findings are advantageous for RAAF as they allow for an expanded pool of eligible applicants to be considered without increasing risk. RAAF can enhance their recruitment and potentially attract a broader range of skilled individuals to contribute to the communication and cyber group without compromising capability.

Conversely, Indigenous Australians are found to decrease the probability of successful service by 36.5 percentage points. This result is statistically significant at the 1% level but accompanied by a large standard error. Similar to the recommendation made when assessing the effect of individual characteristics, consideration should be afforded by RAAF as to whether more effective tailored programs are required following enlistment.



4. Engineering, Maintenance and Construction

The analysis of the engineering, maintenance and construction occupation group identifies three factors as statistically significant in determining successful service. Medical waivers are found to decrease the probability of success by 18.5 percentage points and Indigenous status decreasing it by 16.5 percentage points. The results are significant at the 5 and 1% level. Meanwhile, a psychological waiver returned a highly significant positive effect, increasing the likelihood of success by 58.9 percentage points.

The engineering, maintenance and construction group, along with enterprise and command support, and health, are the three occupation groups where medical waivers are found to be statically significant. Given the prevalence of physically demanding and trade-specific roles within the group, medical fitness can be considered crucial. The negative finding suggests that a flexible approach to medical standards within this group is increasing the risk to RAAF. To mitigate this, RAAF should continue to adopt a considered approach in approving medical waivers.

Similar to the communication and cyber group, the significant finding associated with Indigenous status reinforces that RAAF should consider tailored in-service programs.

The engineering, maintenance and construction group is the only group to return a statistically significant result for psychological waivers. The very large effect appears staggering, however further analysis reveals that there is only one psychological waiver attributed to the group. The small sample representation limiting any causal interpretation of the result. However, the result provides an insight into the role of aptitude related waivers and supports the recommendation for further separate analysis.

On a similar note, education waivers also return a positive result, however it is statistically insignificant. The engineering, maintenance and construction group has one of the highest education requirements for enlistment, akin to aviation, and their employment training has a high mathematical and physics focus. Taking into account the cognitive level required for the occupation along with one of the longest training courses, it was predicted that education waivers would be increasingly negative and significant. The result therefore surprising but positive for RAAF. The lack of significance found can be attributed to the



small sample size, with only seven of the 102 waivers being education, or 6%. RAAF should be encouraged by this finding overall, as when coupled with the psychological result, implies that applicants who need such waivers may not pose an increased risk.

5. Enterprise and Command Support

The enterprise and command support occupation group yield one of the highest results on a recruitment waiver of any kind, with a negative effect of 9.5 percentage points, although it is statically insignificant. The group returns four significant results, three relating to waiver categories as shown in Table 8, and one associated with gender.

Table 8. Statistically Significant Regression Results for Successful Completion of Initial Military and Employment Training within Enterprise and Command Support Group

	Successful Service
Education Waiver	0.329** (0.156)
Criminal History Waiver	0.318** (0.147)
Medical Waiver	-0.253* (0.139)
Demographic Controls	Yes
Yearly Fixed Effects	Yes
Observations	201
R^2	0.182

Robust standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

An education waiver is found to have the largest and most unexpected effect, increasing the probability of success by 32.9 percentage points. This outcome is particularly surprising considering the group necessitates the lowest education enlistment standards. RAAF mandates that applicants must have completed year 10 with a pass in English before enlistment. Additionally, a pass in mathematics is desirable, and proficiency in areas of spelling and grammar is preferable. Given Australia's compulsory education system which requires all citizens to be in formal education until year 10, or age 16, the significance of education waivers is unclear. The prevalence of education waivers within the enterprise and command support group is low, amounting to only 4% of 25 waivers,



suggesting that the significant influence may not be as straightforward as the results indicate. A small sample size, coupled with a wide standard error, makes the finding somewhat unconvincing.

Similarly, a criminal history waiver returns comparable results to an education waiver, increasing the probability of success by 31.8 percentage points. However, with only two criminal history waivers in the sample and a wide standard error, the reliability of these findings is also reduced. Despite these limitations, the insights suggest that using criminal history and education waivers within the enterprise command and support group may present an increase to the likelihood of success within RAAF and allow access a broader recruitment pool.

In contrast, a medical waiver is found to decrease the probability of success by 25.3 percentage points, a statistically significant and relevant result. The finding is reliable despite the wide standard error, which can be attributed to the broad nature of medical waivers rather than the small sample size. Medical waivers account for nearly half of the waivers issued within the group and therefore is a reliable representation. This result has significant implications for RAAF and emphasizes the importance of adherence to stringent medical enlistment standards. While roles within the enterprise and command support group are not physically demanding, they frequently deploy and thus aviators within must maintain the in-service readiness standards.

The last significant result pertains to gender where being female increases the probability of success by 30 percentage points when compared to being male. This is the highest return for females across any of the models and is significantly higher than the entire sample population.

6. Health

The health occupation group exhibits the smallest representation of both waivers and aviators, with only 11 waived observations belonging to this group. The small sample size poses a challenge as it limits statistical evidence and prevents me from drawing tangible conclusions or inferences.



7. Intelligence

The intelligence occupation group generates an overall negative yet insignificant result for a waiver of any kind. Positive and significant effects are found for driver’s license, education and physical fitness waivers. As shown in Table 9, these findings are coupled with small standard errors and represent some of the strongest outcomes across the occupation groups.

Table 9. Statistically Significant Regression Results for Successful Completion of Initial Military and Employment Training within Intelligence Group

Successful Service	
Driver’s License Waiver	0.142*** (0.046)
Education Waiver	0.108*** (0.039)
Physical Fitness Waiver	0.073** (0.035)
Demographic Controls	Yes
Yearly Fixed Effects	Yes
Observations	560
R ²	0.026

Robust standard errors in parentheses
 * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The effect of a driver’s license waiver, although slightly smaller when compared to the combat and security group, is equally significant. The rationale remains consistent with a suspected conflict between RAAF enlistment standards and Australian licensing laws. Similar to the combat and security group, a driver’s license waiver within the intelligence group enables RAAF to access applicants earlier and can have a positive long-term effect.

An education waiver positively increases the probability of successful service by 10 percentage points, a somewhat unexpected but reassuring result. Adopting a flexible approach to the education requirements within the intelligence group does not appear to have decreased the risk of successful service. RAAF can therefore continue their use of education waivers allowing access to a wider labor pool without increasing risk. There are no observations of psychological waivers in this occupation group.



Likewise, the discovery that physical fitness waivers do not negatively impact successful service is promising for RAAF. The intelligence group, which like communications and cyber, faces challenges in recruitment due to increasing civilian competition and skill shortages. The positive influence of a physical waiver indicates that RAAF should not demand intelligence applicants meet strict pre-entry fitness standards. RAAF should consider the recommendation made for the communication and cyber occupation group, whereby strategically employing physical fitness waivers may enhance recruitment and broaden the access to skilled individuals.

8. Logistics

The logistics occupation group returns one highly statistically significant result, indicating that a driver's license waiver positively increases the likelihood of success by 16.9 percentage points. This finding further underscores that driver's license waivers are instrumental in enabling RAAF to access individuals earlier without concurrent increases to their risk profile. The significance of this result across the three occupation groups suggests that a flexible approach to driver's license standards, allowing successful enlistment for applicants who may not meet standard licensing criteria but possess other valuable skills or qualifications, is beneficial and does not compromise success rates.

9. Conclusion

In the second phase of my analysis, key findings highlight the nuanced impact of recruitment waivers across each occupation group. Notably, within three occupation groups, namely combat and security, intelligence and logistics, a driver's license waiver is identified as a positive influence and increases the likelihood of successful service by at least 10 percentage points. This suggests that a driver's license waiver has a positive effect on RAAF, enabling the enlistment of individuals without increasing risk or compromising the workforce.

Reflective of phase one results, medical waivers emerge as statistically negative within the enterprise and command support, health, and engineering, maintenance and construction occupation groups. The complexity of the results is compounded by the diverse range of conditions represented by a medical waiver, however when considering



the physical demands of these roles and deployment standards alone, a flexible approach to the current enlistment medical standards is deemed risky. Medical waivers are therefore having a negative effect on RAAF and inhibiting the workforce.

The impact of physical fitness waivers varies among occupation groups. In some roles, such as combat and security, the effect is negative, while in other groups, namely communication and cyber, and intelligence, it is positive. This is reflective of the physical fitness and job demands of the groups. Consequently, RAAF's approach towards physical enlistment standards and associated waiver approvals should align with the specific requirements for each group and individual role. Similarly, variability is observed in the effect of education waivers, necessitating a similar and tailored approach by RAAF.

Two individual characteristics, Indigenous status and female, emerge as highly significant within the engineering, maintenance and construction, and the enterprise and command support occupation groups. Indigenous status has a negative effect on service, while being female has a positive effect. Additionally, criminal history waivers are found to be a positive influence within the communication and cyber, and the enterprise and command support occupation group.

By narrowing the scope of the analysis to individual occupation groups, a more granular examination of the effects of recruitment waivers on successful service is achieved. Leveraging these findings, specific recommendations to RAAF as to the employment of recruitment waivers can be formulated to enhance the likelihood of successful workforce growth.

C. MULTIPLE RECRUITMENT WAIVERS

In the final phase of my analysis, I delve into the impact of having multiple recruitment waivers on successful service within RAAF. The analysis focused exclusively on waived aviators which created a sample size of 375. Here, I no longer use the any waiver control variable and replace it with the multiple waiver control. The multiple waiver control is a dichotomous variable used to identify the 32 aviators who received more than one waiver upon enlistment. I employ the same additional controls for individual and



military characteristics and continue to include enlistment year fixed effects. The outcome variable remains successful service and robust standard errors used.

The resulting effect is found to be very small and insignificant, with multiple waivers resulting in a mere 0.1 percentage point negative influence on successful service. This leads to the conclusion that having multiple waivers does not impart any additional effects on successful service probability when compared to having one recruitment waiver.



VII. POLICY RECOMMENDATIONS

RAAF have adopted a daring stance as they embrace waivers to recruit the workforce needed and to progress towards increasingly difficult goals. Overall, my research found that recruitment waivers can have both a positive and negative influence on the workforce. My analysis reveals predominantly small and insignificant results which can be positive indicators of policy effectiveness. I conclude that recruitment waivers, when used well, can help RAAF achieve their recruitment and workforce targets without compromising training success. However, RAAF must avoid indiscriminate waiver utilization.

The continued successful use of recruitment waivers is reliant on a balanced and renewed approach. It is recommended that RAAF continue to leverage waivers to increase recruitment, strategically deploying them in a way that will reduce risk while also increasing success. Using my results, I make six recommendations to enhance the effectiveness of recruitment waivers and shape RAAF's recruitment strategy into the future.

This initial analysis reveals that there are waiver categories that have not been used in the past seven years, namely age, aptitude test, bankruptcy, beard or religious dress and bronze med. Some of these waivers are in now conflict with current dress and bearing standards, such as beard or religious dress, while others appear no longer relevant, for example the age waiver. Eliminating these legacy waivers will streamline and modernize the recruitment waiver system ensuring that it is relevant to RAAF into the future.

The quantitative analysis reveals that a driver's license waiver has a significant and positive influence on successful service within RAAF. Their use is strongly encouraged across most occupation groups to allow RAAF earlier access to applicants rather than waiting for an applicant to obtain a complete license. Consideration should be afforded to the revision of RAAF's licensing requirements relative to the required standard for successful service. In particular, determining whether a probationary license is an acceptable minimum standard, as the results suggest a complete license may now be



redundant. By doing so, the administrative burden of unnecessary waivers may be reduced and allow for faster recruitment.

Having found that medical waivers have a large and negative effect on service it is recommended that a stringent and heightened approval process continue to be employed across all occupation groups. The cost of medical waivers is high in terms of workforce growth but also capability, and RAAF should maintain caution when considering medical waivers.

It is recommended that RAAF continue to use physical fitness waivers within the communication and cyber, and the intelligence occupation groups. Alternate use of physical fitness waivers should strictly align to the physical requirements of the occupation role or group. The use of security background and criminal history waivers within the communication and cyber, and the enterprise and command support group is also recommended, ensuring the review process remains commensurate. The continued strategic employment of these waivers will allow RAAF to broaden their labor pool without compromising the workforce. I further recommend consideration be given as to a review of the physical enlistment standards pertaining to the communications and cyber, and the intelligence occupation group to ensure they are not deterring potential applicants. This is of particular importance given the shortages and recruitment challenge.

Similarly, having found that education and psychological waivers have both a positive and negative influence on successful service it is recommended that further analysis be conducted. In the meantime, RAAF should continue to employ education waivers within the intelligence, enterprise and command support, and the engineering, maintenance and construction group to recruit more talent into the service.

Finally, the introduction or expansion of tailored programs are recommended for Indigenous Australians once in-service to address and mitigate the social disadvantages faced. Tailored in-service physical conditioning programs are also recommended for occupation groups with increased physical standards such as combat and security. Implementing such measures would allow RAAF to best manage the waived workforce and seek to reduce any increased risk.



Recruitment waivers are not the solution to the RAAF's recruitment challenge, but they are an effective tool that can be used to progress workforce growth. Their usage comes with an inherent risk though and ultimately becomes a numbers game. On the balance, recruitment waivers can play a positive role in RAAF's recruitment strategy by increasing the number of aviators enlisted into service and support the achievement of government expectations. Their strategic use facilitates a greater access to potential applicants which ultimately increases the labor supply pool. However, recruitment waivers also increase the number of unsuccessful aviators and if overused or inappropriately employed, the cost will outweigh the benefit. The strategic deployment of recruitment waivers, coupled with a modernization of the policy from the above recommendations, will maximize their benefits while minimizing potential negative consequences.



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VIII. CONCLUSION

The ADF, and by extension RAAF, are facing significant challenges in recruiting the necessary workforce. Driven by the Australian Government's direction to boost the size of the workforce, low employment rates and a competitive job market, RAAF are facing a recruiting challenge. To combat the challenge, RAAF have employed an adaptive approach to recruitment as they increase the proportion of aviators enlisting with recruitment waivers. The increased use of recruitment waivers allows RAAF to better match their entry requirements to their workforce needs. However, the impact of waivers on the achievement of recruitment targets and workforce goals remain unknown. This study sought to quantify any effects.

An initial examination of RAAF recruitment waivers over the period 2016 through 2021 revealed a discernable trend towards liberalization. This trend has been relatively ad hoc with variations of waiver usage across category and occupation group. The waiver liberalization trend further indicated an overall increasing number of both successful and unsuccessful aviators within RAAF.

Using linear probability models, it was found that, in the broadest sense, a recruitment waiver reduces the probability of successful service by 5.5 percentage points, a statistically significant but negligible effect. Medical waivers stand out as the most significant waiver, negatively influencing the likelihood of success in RAAF. Female and Indigenous status emerge as statistically significant individual factors that also impact the probability of successful service both positively and negatively respectively. The precise impact of recruitment waivers is nuanced across the occupation groups with varied effects observed.

I conclude that, when used strategically, recruitment waivers can help RAAF achieve their recruitment and workforce requirements, but issue a warning as to their liberalization. For ongoing success, I recommend the elimination of legacy waivers that are in conflict with current policy, such as beard or religious dress, and unused waivers to modernize the system. Removing unnecessary waivers will better shape the recruitment



framework. I also encourage the strategic use of criminal history, driver's license, education, criminal history, physical fitness and security background waivers, while discourage the use of medical waivers. Similarly, I recommend the review and potential relaxation of certain enlistment standards to ensure they are not unnecessarily deterring potential applicants. I further suggest the introduction and expansion of tailored programs to better support the workforce once in-service. Recruitment waivers are not a sole solution to the recruitment challenge, rather they should be carefully deployed to align with RAAF standards, workforce requirements and risk tolerance.

This research marks a pioneering effort in studying an Australian military population and as such has certain constraints. The study population is purposely limited to enlisted aviators. It excludes officers and the wider ADF as their assessment goes beyond the scope of this initial investigation. Future research is advised conducting a similar investigation into the broader ADF workforce. This study also lacked the desired level of data surrounding education, psychological and aptitude levels. Further research as to their effect on successful service is also recommended.

This research is not intended to be predictive in nature, and while the results may lead to recommendations of a predictive nature, the analysis does not employ statistical techniques to predict successful service based on waiver status. Subsequent research is proposed to develop a separate model predicting the likelihood of aviator success based on their characteristics.



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