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Understanding access to higher education amongst humanitarian migrants in Australia

Francisco Perales, Matthias Kubler, Ning Xiang and Wojtek Tomaszewski 2021

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List of abbreviations

ABS	Australian Bureau of Statistics
ACMID	Australian Census and Migrants Integrated Dataset
AIFS	Australian Institute of Family Studies
AMEP	Adult Migrant English Program
ATSI	Aboriginal and Torres Strait Islander
BNLA	Longitudinal Study of Humanitarian Migrants
COB	Country of birth
DEET	Department of Employment Education and Training
DET	Department of Education and Training
DHA	Department of Home Affairs
DSS	Department of Social Services
HEIMS	Higher Education Information Management System
MADIP	Multi-Agency Data Integration Project
MYAN	Multicultural Youth Advocacy Network
NBEET	National Board of Employment Education and Training
NCSEHE	National Centre for Student Equity in Higher Education
NESB	Non-English Speaking Background
OECD	Organisation for Economic Co-operation and Development
OR	Odds ratio
QILT	Quality Indicators for Learning and Teaching
SD	Standard deviation
STEM	Science, Technology, Engineering and Mathematics
TAFE	Technical and Further Education
UNHCR	United Nations High Commissioner for Refugees

Executive summary

The significance of education participation and success amongst humanitarian migrants

Between 2006 and 2016, Australia provided settlement opportunities to more than 145,000 humanitarian migrants. Despite the breadth of services offered by government and third-sector institutions, they remain amongst the most vulnerable population groups in Australian society.

An important channel for humanitarian migrants to successfully integrate into mainstream society is participation in the local education system and, particularly, higher education. Yet individuals from humanitarian-migrant backgrounds face multiple and unique barriers to education participation and success, over and above those faced by other migrant groups.

Few studies to date have empirically examined the ties between humanitarian-migrant status and circumstances and higher education participation and attainment in Australia. This report fills this significant gap in knowledge.

Leveraging unique and under-utilised data resources

This report provides novel analyses of recent survey and administrative data sources using state-of-the-art statistical methods. It systematically queries two data sources that—despite being ideal to examine humanitarian migrants' interactions with the Australian education system—remain severely under-utilised for such purposes.

Our initial analyses of the *2016 Australian Census and Migrants Integrated Dataset* (ACMID) supplemented with the *2016 Census of Population and Housing* (the Census) offer a thorough overview of the relative rates of education/higher education participation and attainment of humanitarian migrants in Australia, compared to other migrants and Australian-born people.

Our subsequent analyses of longitudinal survey data from *Building a New Life in Australia* (BNLA) add further nuance by providing novel evidence on the factors that act as enablers and barriers to education/higher education participation and success amongst a recent cohort of humanitarian migrants.

Both sets of analyses consider potential differences between men and women, thereby recognising that processes of education participation and success are often gendered.

New evidence on humanitarian migrants' engagement with the Australian education system

Our comparative analyses of ACMID/Census data revealed that:

- Despite their younger age profile overall, humanitarian migrants tended to enrol in higher education at later ages (23+ years) than other migrants and the Australian-born population and were less likely to participate in higher education during normative ages (18-21 years).
- Humanitarian migrants were clearly disadvantaged in relation to attaining higher education qualifications: they were approximately half as likely as Australian-born individuals to have a university degree, a third as likely as family migrants and a fifth as likely as skilled migrants.
- Humanitarian-migrant women were more likely to participate in higher education than humanitarian-migrant men, particularly in the younger age groups. However, humanitarian-migrant men caught up later in life through mature age higher education participation.

Our in-depth analyses of the humanitarian-migrant group using BNLA data revealed that:

- While only a small share of humanitarian migrants upskilled early into their settlement period, there was an upwards trend over the five-year observation window. By the end of the fifth year, 15.4% of humanitarian migrants were enrolled in a course (other than an English-language course) and 26.1% had attained a qualification.
- Engagement with higher education amongst humanitarian migrants in Australia is modest. Of all humanitarian migrants enrolled in any course other than an English-language course (i.e., a degree; a trade/technical course; or some other course/work experience), only 14.2% pursued a higher education option. Similarly, of all completions, only 7.6% involved a higher education course.
- While multiple socio-demographic factors played a role in structuring humanitarian migrants' engagement with the Australian education system, two such factors consistently predicted higher engagement: English-language proficiency and pre-arrival education level. Specifically, developing English-language proficiency and limited prior educational experiences were core barriers to education/higher education participation and success in Australia within this cohort.
- The results revealed significant differences in the probability of studying a course, having attained a course and planning to study further by humanitarian migrants' country of origin. Humanitarian migrants from Iraq—the largest group—exhibited comparatively poorer outcomes than humanitarian migrants from other countries.

Implications for equity policy and practice

These results bear important lessons to inform equity policy and practice. Taken together, they support the notion that humanitarian migrants experience unique barriers to participation and success in the Australian education system and should be the focus of policy attention.

The results also provide evidence of heterogeneity in education access and success with the humanitarian-migrant group, suggesting that certain subpopulations require additional, targeted support—including migrants who come from Iraq, those whose English-language proficiency is low and those who enter Australia with low or no education credentials.

These results suggest that the Australian approach to equity in higher education should be revised: humanitarian migrants should be separated from the Non-English-Speaking-Background category and consideration should be given to positioning them as a standalone equity group.

Key recommendations

Several key recommendations emerge from the findings presented in this report:

- The Australian Government should devote increased policy attention to the engagement of humanitarian migrants with the Australian education system: humanitarian migrants not only possess lower educational credentials than other migrants and the local population, but are also less likely to participate in the Australian higher education system during normative ages.
- Certain subpopulations within the broader humanitarian-migrant population require targeted attention from equity practitioners and policymakers, as their rates of higher education participation and attainment are particularly low. This includes:
  - humanitarian migrants from Iraq
  - humanitarian migrants with low levels of English-language proficiency
  - humanitarian migrants entering Australia with low/no educational qualifications.
- Tailored programs aimed at eliminating core barriers to higher education participation among humanitarian migrants should be implemented, similar to initiatives targeting other groups that face ongoing disadvantage in the context of higher education. Programs should be multi-faceted, aiming at building education aspirations and foundational skills to facilitate successful participation in higher education, while also providing financial resources and access to mentoring and social support networks. Recent Government efforts to offer new migrants opportunities to improve their English-language skills are well guided.
- The Australian Government should reconsider the placement of humanitarian migrants within the higher education equity category of “people from a Non-English Speaking Background”: the degree of higher education disadvantage experienced by humanitarian migrants is more pronounced than that experienced by other groups within this category and by members of the category overall.
- The Australian Government should invest additional resources to gather data that can be reliably used to monitor the higher education participation and outcomes of humanitarian migrants to Australia. These could take the form of linked administrative data and/or a new longitudinal study capturing a more recent cohort of migrants than *Building a New Life in Australia*.
- Researchers should devote further attention to trialling and evaluating existing programs and interventions aimed at improving higher education participation and success among humanitarian migrants, and to examining the post-graduation experiences of humanitarian migrants—including their labour-market integration.

Introduction

Between 2006 and 2016, the Australian Government provided settlement opportunities to more than 145,000 humanitarian migrants (Parliament of Australia, 2017). Despite the breadth of services offered by Australian government institutions and the support of third-sector organisations, these migrants remain amongst the most vulnerable population groups in Australian society. In addition to experiencing negative sequels stemming from discrimination and persecution in their countries of origin (e.g., post-traumatic stress disorder or chronic mental illness), humanitarian migrants often find it challenging to settle into Australia for reasons including discrimination, lack of English-language skills and non-recognition of their education credentials (Hugo, 2011). Multiple empirical markers of socioeconomic disadvantage highlight the poor socioeconomic prospects for this group. As a key example, the employment rates of recently arrived, working-age humanitarian migrants in Australia—estimated at 33.3% for men and 7.5% for women (DSS, 2017)—are substantially below those recorded for the overall Australian population (81.1% for men and 69.6% for women) (Wilkins & Lass, 2018).

An important channel for humanitarian migrants to successfully settle into Australia is participation in the local education system. Attainment of Australian educational credentials—particularly higher education credentials—not only creates employment pathways for these individuals, but can also improve their English-language and cultural-competency skills, widen their social networks and provide them with a sense of fulfilment and a source of subjective wellbeing. However, individuals from humanitarian-migrant backgrounds face multiple and unique barriers to participation and success in the Australian higher education system — such as insufficient base English-language skills, family responsibilities, ill health or non-recognition of qualifications attained prior to their arrival in Australia (Baker, Ramsay & Lenette, 2019; Correa-Velez, Barnett & Gifford, 2015; Hartley et al., 2018; Smart et al., 2017), over and above those faced by the average migrant from a non-English Speaking Background (Terry et al., 2016). For these reasons, Australian scholars and policymakers have called for further support for this group to engage in higher education (Baker et al., 2019; Correa-Velez & Osando, 2009; Delaporte & Piracha, 2018; Hartley et al., 2018;) and for the recognition of humanitarian migrants as an additional equity group (Mestan, 2016). This is reflected in the findings and recommendations of a recent *Review of identified equity groups* (Tomaszewski et al., 2020, forthcoming).

Yet, few studies to date have empirically examined the ties between humanitarian-migrant status and circumstances and higher education participation and attainment in Australia (Mestan, 2016; Sladek & King, 2016; Terry et al., 2016). While there have been recent efforts in countries such as Sweden, the United States (US), the United Kingdom (UK) and Germany (Manhica et al., 2019; Connor, 2010; Gateley, 2015; Kogan, 2010), differences in their educational and legislative frameworks and in the characteristics and circumstances of their humanitarian-migrant populations make it difficult to extrapolate their learnings to the Australian context. Given the scarcity of previous research (particularly quantitative research), it is imperative to generate new and robust empirical evidence on the experiences of humanitarian migrants in Australian society and its education system. Because of the greater economic and social rewards that stem from participation in higher education (see e.g., ABS, 2017; Desjardins & Lee, 2016; Heckman, Humphries & Veramendi, 2016), it is particularly significant to consider participation of humanitarian migrants into the Australian higher education system. This report fills this gap in knowledge.

Specifically, the analyses reported here generate rich and unique empirical evidence on the levels of higher education participation and attainment amongst humanitarian migrants in Australia, as well as the factors that act as enablers or barriers to their engagement with the higher education system. To accomplish this, this report analyses a combination of recent survey and administrative data sources using state-of-the-art statistical methods. It innovates by systematically querying two data sources that—despite being ideal to examine humanitarian migrants' interactions with the Australian education system—remain severely under-utilised for such purposes. Initial analyses of the *2016 Australian Census and Migrants Integrated Dataset* (ACMID) supplemented with data from the *2016 Census of Population and Housing* (the Census) offer a thorough overview of the relative rates of higher education participation and attainment of recent humanitarian migrants in Australia, compared to other migrants and the Australian-born population. Subsequent analyses of longitudinal survey data from *Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants* (BNLA) add further nuance by providing novel evidence on the factors that act as enablers and barriers to higher education participation and success amongst a recent cohort of humanitarian migrants. Both sets of analyses consider also potential differences between men and women, thereby recognising that processes of education participation and success and status attainment more broadly, are often gendered (e.g., Harris, Spark, & Ngum Chi Watts, 2015; Hatoss & Huijser, 2010; Seck, 2015).

The project will answer three sets of interrelated Research Questions:

1. What share of humanitarian migrants participates in higher education in Australia? What share of humanitarian migrants in Australia possesses higher education qualifications? How do the higher education participation and attainment rates of humanitarian migrants in Australia compare to those of other migrant groups (e.g., skilled and family migrants) and Australian-born individuals?
2. What are the characteristics of recently arrived humanitarian migrants in Australia who participate in education compared to those who do not participate in education? (e.g., country of origin, education level at entry into Australia, health status, English-language proficiency and family responsibilities). What are the characteristics of humanitarian migrants in Australia who study higher education courses, compared to those of humanitarian migrants who follow other educational pathways?
3. Is there evidence of gender differences in the relative higher education participation and attainment rates of humanitarian migrants in Australia? Do the main enablers/barriers to education participation and success operate uniformly for humanitarian-migrant men and women?

In answering these questions, the analyses provide a robust evidence base to guide the design and implementation of equity policies aimed at improving the educational prospects of individuals from humanitarian-migrant backgrounds. These policies are likely to have significant reverberations in improving humanitarian migrants' outcomes in other life domains — such as employment, health and wellbeing.

Background

Humanitarian migration across the globe

As noted by the Organisation for Economic Co-operation and Development (OECD), the terms “refugee”, “asylum seeker” and “humanitarian migrant” are often used interchangeably in public and academic debate (OECD, 2016). There are nevertheless some differences in the formal definitions of these terms, as well as some overlap. According to the 1951 United Nations Convention on the Status of Refugees and its 1967 Protocol, the term “refugee” refers to

> *a person who has fled their country of origin and is unable or unwilling to return because of a well-founded fear of being persecuted because of their race, religion, nationality, membership of a particular social group or political opinion.*

The term “asylum seekers” denotes “*people who have formally applied for asylum, but whose claim is pending*”, whereas the term “humanitarian migrants” denotes “*people who have successfully applied for asylum and have been granted some sort of protection — refugee or other status*” (OECD, 2016, p.7). Humanitarian migrants also encompass migrants resettled through humanitarian programs with the assistance of the United Nations High Commissioner for Refugees (UNHCR) or through private sponsorship — which is often the case in Australia, Canada and the United States (OECD, 2016, p.7). When reviewing the available academic evidence, this report considers studies focusing on refugees, humanitarian migrants and/or asylum seekers — noting that these definitions are not always employed consistently across studies. Given data availability, the empirical analyses in relation to Australia presented here will **focus on humanitarian migrants — as formally defined by Australian permanent visa categories**. As a result, the experiences of the group of refugees and asylum seekers on temporary protection visas and safe haven enterprise visas are not reflected in the findings of this report. This is important, as the latter group is particularly disadvantaged in relation to their education participation, as they are only able to access higher education as international students (Hartley et al., 2018).

The global population of forcibly displaced individuals stands at a historical high, at approximately 70.8 million, with a ~2.3 million people increase in 2018 alone (UNHCR, 2018). Of these, ~20.4 million people are formally recognised as refugees under the UNHCR mandate.[i] In 2017, over two thirds of the global refugee population came from just five countries: Syria, Afghanistan, South Sudan, Myanmar and Somalia (UNHCR, 2018). While 127 countries on six continents host refugees, ~85% of them stayed in countries within the same region as their countries of origin. Since 2014, Turkey has been the country hosting the largest refugee population (~3.7 million at the end of 2018), followed by Pakistan (~1.4 million), Uganda (~1.2 million), Sudan (~1 million) and Germany (~1 million). Other countries hosting significant refugee populations at the end of 2018 included the Democratic Republic of Congo (529,100), Chad (451,200), Kenya (421,200), Cameroon (380,300) and France (368,400) (UNHCR, 2018).

According to UNHCR data, Australia, with ~57,000 individuals meeting the official refugee definition, occupies a lower position in the global ranking of host countries. However, in 2018 Australia was one of the countries with the largest number of pending asylum-seeking cases (60,645) and with the largest refugee resettlement intake over the year (12,700 refugees out of a global total of 92,400) (UNHCR, 2018). The next section provides further details on the nature of humanitarian migration to Australia.

An overview of humanitarian migration to Australia

Australia is a traditional destination country for migrants from across the globe and currently maintains multiple schemes or programs that guide its immigration intake. This includes a Skilled Migration program "designed to attract migrants who make a significant contribution to the Australian economy, and fill positions where no Australian workers are available" (DHA, 2020). Australia also has a Family Migration Program, which predominately comprises visas to partners and close relatives that enable Australians to reunite with family members from overseas and provide them with pathways to citizenship (DHA, 2020). The Australian Government also maintains a Refugee and Humanitarian Migration Program. Australia's Refugee and Humanitarian Program helps people in humanitarian need who are (i) outside Australia ("offshore") and need to resettle to Australia when they do not have any other durable solution available, as well as (ii) people in humanitarian need who are already in Australia ("onshore") and seek protection after arriving in Australia. Most humanitarian visas to Australia are granted through the Offshore Humanitarian Program. There are different visa types associated with different applications. For offshore humanitarian visa applications, the types of visas available are: Refugee Visa (Subclass 200); In-country Special Humanitarian Program Visa (Subclass 201); Global Special Humanitarian Program Visa (SHP) (Subclass 202); Emergency Rescue Visa (Subclass 203); and Woman at Risk Visa (Subclass 204). Onshore applicants can apply for a Protection Visa (Class XA) (Subclass 866), although not all people seeking asylum onshore have the right to apply for it. An applicant who is successful in gaining a Protection Visa must: be a refugee as defined by the Refugees Convention; pass the health and character tests; and sign the Australian Values Statement.

The Australian Government reports providing settlement opportunities to more than 150,000 humanitarian migrants between 2006 and 2016 (Parliament of Australia, 2016). Over 17,000 humanitarian visas were granted under this program during 2018–19 alone, with the numbers steadily increasing in recent years (DHA, 2019). Official data also show that the demographic make-up of the humanitarian-migrant population in Australia has remained stable over time (DHA, 2019). There was an almost equal split of humanitarian-migrant men and women, ~40% were minors aged 0–17 years and ~50% were adults aged 18–49 years. The relatively young age profile of the humanitarian-migrant population in Australia is therefore a factor to be considered when assessing their comparative levels of educational participation and attainment upon settling in Australia.

Consistent with international trends (OECD, 2019a), the countries of origin of people moving into Australia as humanitarian migrants have changed and become more diverse over time. In the 1980s, refugees to Australia arrived mainly from Asia and Latin America, whereas those in the 1990s arrived mainly from the Middle East and Yugoslavia. In the past two decades, refugees to Australia tend to arrive from African countries (e.g., Sudan and the Democratic Republic of Congo) and the Middle East (e.g., Afghanistan, Iran and Iraq) (Cerna, 2019). According to the most recent data (DHA, 2019), in the 2018–19 period, the largest number of humanitarian visas were granted to people born in Iraq (41.5%), Democratic Republic of Congo (12.4%), Myanmar (11.7%), Syria (10.7%) and Afghanistan (7.7%). Of the 78,727 visas granted over the last five years (2014–19), 55.5% were granted to people born in Syria or Iraq.

Socioeconomic outcomes of humanitarian migrants in Australia

Humanitarian migrants remain amongst the most vulnerable population groups in Australia (Hugo, 2011) and globally (Baum, Lööf, Stephan, & Zimmermann, 2020), despite government institutions and third-sector organisations offering a range of support services. Humanitarian migrants often find it difficult to settle into Australian society due to discrimination, developing English-language skills and failure to have their pre-existing educational qualifications recognised in Australia (Hugo, 2014). Studies often highlight that labour-market integration is particularly challenging for humanitarian migrants, with their employment outcomes lagging far behind not only those of Australian-born individuals, but also behind those of other migrant groups (ABS, 2018a; Correa-Velez, Barnett, & Gifford, 2015). This is consistent with global evidence showing that many refugees around the world are unemployed, under-employed or work in jobs that do not match their skills (Szkudlarek, 2019). As mentioned previously, the employment rates of recently arrived working-age refugees in Australia (DSS, 2017) are substantially lower than those of the Australian-born population (Wilkins & Lass, 2018), particularly those of humanitarian-migrant women. Comparisons with other groups of migrants also show significant outcome gaps. For example, in 2016, ~38% of individuals aged over 15 years in the humanitarian-migration program were employed, compared to ~57% of individuals of the same ages in the family-migration program and ~77% of individuals of the same ages in the skilled-migration program (ABS, 2018a).

Even when humanitarian migrants find employment, they often find themselves in a disadvantaged labour-market position. For instance, Hugo (2011) documents that first-generation humanitarian migrants in Australia who had degree-level qualifications were less likely to be employed in professional and managerial positions than their Australian-born counterparts (see also Sherrell, 2017). According to ABS (2016), almost two-thirds of humanitarian migrant taxpayers were in low-skilled occupations in the first year after arrival. In 2011–12, the main major occupational group for humanitarian migrants was Labourer and their median employee income was A$27,150, which constitutes a substantially lower figure than that for the median Australian taxpayer (A$43,405). Humanitarian migrants who resettled in regional areas tended to report greater discrimination and found it more difficult to secure employment than humanitarian migrants who resettled in metropolitan areas. For instance, in a study conducted by Correa-Velez & Onsando (2009), a higher proportion of humanitarian migrants in regional than metropolitan areas reported serious difficulties finding work (70% versus 52%) and was dissatisfied with their current job (67% versus 22 %). Further, it takes a considerable amount of time for humanitarian migrants to fully settle into the host-society labour market. For example, 2008 data from several European Union countries indicate that it takes five to six years for humanitarian migrants to attain similar employment rates as those of other migrants (OECD, 2016).

Critically, education plays a major role in the labour-market success of humanitarian migrants. For example, Hugo (2011) found that in Australia, humanitarian migrants with higher educational qualifications exhibited better labour-market outcomes than their peers with lower educational qualifications. Given this, it is important to understand the links between humanitarian migration and engagement with the education system and higher education in particular. Equity policies are of particular relevance here, despite the lack of explicit recognition of humanitarian migrants in the Australian higher education equity framework.

Equity in the Australian higher education system: Where do humanitarian migrants fit?

The Australian higher education system

The Australian higher education system comprises a range of institutions that deliver higher education. As of 2018, these institutions comprised 43 universities and 93 non-university higher education providers (Department of Education Skills and Employment, 2019).[ii] The last few decades have witnessed remarkable growth in the Australian higher education sector, an expansion that was directly supported by successive Australian Governments. For instance, the number of students attending a higher education institution increased from 30,630 in 1949 to 1,562,520 in 2018 (Department of Education Skills and Employment, 2019).

In 2008, the Commonwealth Government commissioned the 2008 *Review of Australian higher education* (Bradley, Noonan, Nugent, & Scales, 2008), better known as "the Bradley Review". The Bradley Review recommended two long-term goals in relation to higher education participation and equity: (i) that 40% of 25–34-year-old Australians held a bachelor degree by 2025; and (ii) that higher education places held by people in the lowest socioeconomic status quartile increased from 15% in 2008 to 20% by 2020. Following the Bradley Review, in 2012, the Australian Government introduced a demand-driven higher education system, with universities receiving uncapped Commonwealth funding for all bachelor degree students, except for those studying medicine (Productivity Commission, 2019). In 2017, nearly 42% of 19-year-olds in Australia were enrolled in a higher education institution (Grattan Institute, 2018).

While the demand-driven system successfully increased higher education enrolments, it was criticised for its financial unsustainability and the high drop-out rates of students who were underprepared for tertiary study (Kemp & Norton, 2014; Productivity Commission, 2019). Such system came to an end in late 2017, when the Government froze the Commonwealth Grant scheme at 2017 levels (which effectively capped the number of students that universities can enrol).

Equity in the Australian higher education system

Concurrently with the expansion of the higher education sector, since the 1960s successive Australian Governments have developed an interest in equity in higher education. Such focus was based on the concern that the underrepresentation of certain groups in higher education reflected underutilised talent, as well as on the premise that education is crucial in improving broader societal outcomes (NBEET, 1996). In 1988, the Federal Government demonstrated a commitment to improving equity in higher education in a White Paper on higher education policy (Dawkins, 1988). The Dawkins White Paper outlined barriers and associated inequalities in access to and success in higher education for certain population groups, providing the foundations for the seminal report *A fair chance for all: National and institutional planning for equity in higher education* (DEET, 1990). The latter report outlined the six "equity groups" that have constituted the focus of the Australian Government's higher education equity policy ever since: (i) people from socioeconomically disadvantaged backgrounds; (ii) Aboriginal and Torres Strait Islander people; (iii) women — with particular emphasis on those participating in non-traditional courses and in research and higher degrees; (iv) people from a Non-English Speaking Background (NESB); (v) people with disability; and (vi) people from regional and remote areas of Australia.

These six groups were identified as equity groups because their perceived underrepresentation in higher education was presumed to reflect inequality of opportunities and, as such, go against principles of social justice (Tomaszewski et al., 2020, forthcoming). Economic considerations were also an important underlying rationale for the development of

the equity group system, such that “disadvantaged groups form a large and diverse pool of under-used resources” who should “contribute their skills to developing a more highly skilled and efficient workforce” (DEET, 1990, p. 6). Recent research also documents that students from certain disadvantaged backgrounds have not benefitted from the expansion of higher education sector to the same extent as their peers from more advantaged backgrounds, supporting the notion that a strategic approach would be required to enable greater equity in higher education (Harvey, Burnheim, & Brett, 2016).

Humanitarian migrants and the Non-English Speaking Background equity category

The NESB equity group is particularly relevant to the present study, given that individuals from humanitarian-migrant backgrounds are conventionally included in this category. Multiple scholars have nevertheless documented that this practice is problematic. Empirical studies demonstrate that the NESB category—when considered as a whole—exhibits better outcomes than other equity Groups and the non-equity population across multiple indicators. For example, Tomaszewski et al. (2020, forthcoming) found that individuals in the NESB group were—on average—more likely to access higher education, successfully complete undergraduate degrees, enrol in postgraduate degrees and attend Group of Eight (Go8) universities than Australian-born individuals.[iii] As a result, the Australian equity policy landscape is progressively shifting its focus away from the NESB category (Sladek & King, 2016; Tomaszewski et al., 2020, forthcoming). However, the above-average performance of the NESB group in the Australian higher education system obscures the fact that the category amalgamates diverse populations with highly diverging higher education outcomes (Stevenson & Baker, 2018; Tomaszewski et al., 2020, forthcoming). For instance, Tomaszewski et al. (2020, forthcoming) found that—compared to native English speakers—individuals from particular language groups (e.g., Pacific Austronesian Languages, Australian Indigenous Languages, Hmong-Mien and Burmese) exhibited lower chances of participating in higher education. Similarly, humanitarian migrants were more likely than the Australian population to access higher education at a later age and had a lower probability of completing their studies (Tomaszewski et al., 2020, forthcoming).

The disadvantage experienced by humanitarian migrants in the Australian higher education system, coupled with their increasing numbers in Australian society, has led many to advocate for the identification of this population as a separate equity group (Mestan, 2016; Sladek & King, 2016; Stevenson & Baker, 2018; Terry et al., 2016; Tomaszewski et al., 2020, forthcoming). Similarly, others have voiced the need to systematically collect and report data on the higher education participation and success of humanitarian migrants from individual universities to facilitate national-level monitoring (Sladek & King, 2016). As demonstrated in the next chapter, these claims are backed up by international and Australian literature indicating that individuals from humanitarian-migrant backgrounds face a range of unique and complex barriers to participation in higher education — such as insufficient English-language skills, family responsibilities, trauma, ill-health, lack of information on the education system and non-recognition of previous courses/qualifications (Baker et al., 2019; Correa-Velez et al., 2015; Earnest et al., 2015; Harris & Marlowe, 2011).

Altogether, the contents of this chapter make it apparent that, given their rising numbers and comparatively poor outcomes, attention should be paid to how individuals from humanitarian-migrant backgrounds engage with the education system in Australia and elsewhere. The next chapter reviews the available empirical evidence on these issues.

Literature review

Participation in education amongst humanitarian migrants

Despite recent efforts to improve humanitarian migrants' educational participation in countries such as Sweden, the US, the UK and Germany (e.g., Jungblut et al., 2020; Mangan & Winter, 2017; Manhica et al., 2019; Morrice, 2009; Ramsay & Baker, 2019), international evidence suggests that the educational status of this population remains a matter of concern (Streitwieser et al., 2018; UNHCR, 2019). For example, globally, only ~63% of refugee children attended primary school in 2018 and just ~24% of refugee adolescents attended secondary school (UNHCR, 2019). The picture is particularly bleak for tertiary education, with only ~3% of college-eligible refugees being enrolled in tertiary education in 2018, compared to ~37% of non-refugee adolescents. Recognising the crucial role of education in the successful resettlement of refugees, the UNHCR set up the ambitious target "to achieve enrolment of 15% of college-eligible refugees in tertiary or connected higher education programmes in host and third countries" (UNHCR, 2019, p. 13).

Across countries, the exact proportion of the refugee population who participates in higher education remains unclear due to a lack of reliable data (Cerna, 2019; Jungblut et al., 2020; Stevenson & Baker, 2018). In Germany, for example, there are no official data sources capturing higher education access, progress and completion by individuals from refugee backgrounds, as these individuals are registered as ordinary international students in German higher education institutions (Jungblut et al., 2020). Similarly, students from refugee backgrounds holding permanent visas are categorised as "domestic students" for fee-status purposes in both the UK and Australia and as such it is hard to ascertain the exact number of these students (Stevenson & Baker, 2018).

Constrained by data availability, quantitative researchers have had to rely on survey or census data to estimate the degree of educational participation amongst refugees (see e.g., Brücker et al., 2016; Terry et al., 2016). For example, Brücker et al. (2016) used data from a recent sample of 4,500 newly-arrived refugees sourced from the German Socio-Economic Panel's Survey of Refugees. Using these unique data, the authors estimated that, between 2013 and 2017, approximately 5% of adult refugees participated in an educational course (including school courses, training programs and university courses).

Barriers to participation in higher education amongst humanitarian migrants

Much of the literature on refugee education has focused on access to primary and secondary education (Streitwieser et al., 2018). However, a growing body of studies explores refugee participation in higher education (see Ramsay & Baker, 2019 for a review). There are three approaches to framing the unique difficulties that refugee students face on their path to higher education: an approach focusing on "barriers" (e.g., Bajwa et al., 2017; Hatoss & Huijser, 2010; UNHCR, 2019), one focusing on "individual needs" (OECD, 2019a) and a third focusing on "institutional support" (Jungblut et al., 2020).

Previous research has identified a number of barriers to tertiary education that refugees encounter (Bajwa et al., 2017; Hatoss & Huijser, 2010; UNHCR, 2019). These can be categorised into: material/financial barriers, health barriers, informational barriers and gendered barriers. Material and financial barriers refer to issues such as the lack of financial resources to pay for tuition, materials or transportation and other education-related fees (UNHCR, 2019). Financial barriers may also emerge when refugee students need to prioritise family financial needs over higher education; for instance, when they have to work to support their family instead of undertaking higher education studies (UNHCR, 2019).

Health barriers refer to the fact that refugees often experience health *sequelae* stemming from traumatic experiences of persecution, violence or retention — including mental disorders such as post-traumatic stress disorder (see e.g., Ibrahim & Hassan, 2017). In addition, refugee children may exhibit delays in their cognitive and socio-emotional developmental trajectories due to spending long portions of their childhood in refugee camps (Cerna, 2019).

Informational barriers refer to difficulties with accessing professional support and navigating educational pathways (Bajwa et al., 2017; Morrice, 2009). For example, Morrice (2009) documents that individuals from refugee backgrounds find it hard to access accurate information that helps them navigate the UK educational system. Similarly, Bajwa et al. (2017) found that refugee students in Canada struggled to find useful information on how to have their credentials assessed, finance their higher education studies, or utilise higher education online resources.

Gendered barriers refer to the fact that refugee women tend to face particular challenges stemming from their cultural background and identities when they pursue higher education (e.g., Harris et al., 2015; Hatoss & Huijser, 2010; Seck, 2015). For example, drawing on interviews with 14 Sudanese refugees who recently arrived in Australia, Hatoss and Huijser (2010) documented how cultural factors played a key role in restricting opportunities for women to pursue higher education. Specifically, traditional gender norms in Sudan dictate that women should look after children and support their husbands, while men should pursue education and employment careers. Empowering women through educational opportunities is thus perceived as a deviation from normative cultural values. As Bermúdez Torres (2007, p. 21) puts it, men often view women's educational advancement as "a sign of 'moral decay' where 'women no longer respect their husbands'" (see also Turner, 2000).

Alternatively, the difficulties that refugee students face in accessing higher education could be recognised in terms of their unique needs (OECD, 2019a). For instance, in a recent report reviewing migrants' education, the OECD (2019a) identified three broad categories of needs: learning needs (e.g., learning the host country language and adjusting to a new education system); social needs (e.g., communicating and bonding with others and developing a strong personal identity); and emotional needs (e.g., feeling safe and coping with separation, loss and trauma). Importantly, these needs must be addressed simultaneously rather than sequentially as they are intertwined with and exacerbate each other. For example, some refugees might find it hard to learn the host-country language due to traumatic experiences and ensuing mental health issues, which could be worsened due to lack of language ability and hence difficulty in gaining information on how to access professional support.

When considering refugees' needs or barriers to higher education, it is important to avoid deficit perspectives that treat these factors as attributes inherent to the individual. Some studies frame these barriers in terms of the support that institutions provide for refugee students in pursuing higher education or as the product of structural inequalities (e.g., Naylor et al., 2019). For example, Jungblut et al. (2020) identified three main institutional barriers to access higher education faced by refugees in Germany — namely, the scarcity of preparatory German-language courses, the absence of a central educational-credential recognition authority and humanitarian migrants' inability to provide official documents that prove their course eligibility (e.g., previously earned diplomas).

Emerging Australian evidence

Only a single quantitative study, to date, has examined the higher education participation of humanitarian migrants in Australia. Specifically, Terry et al. (2016) analysed 2009–14 data from the Higher Education Information Management System (HEIMS) provided by the Commonwealth Department of Education and Training (DET) to draw a picture of refugee

students' higher education participation. The authors defined refugee students as those who identified themselves as having a permanent humanitarian visa in their citizenship indicator in the HEIMS data and tracked their numbers over time. To approximate the share of refugees who attended higher education, the authors compared the number of refugee higher education students from four key sending countries (Iraq, Afghanistan, Myanmar and Bhutan) against the number of humanitarian visas to individuals from those countries awarded between 2008 and 2014.

The findings in Terry et al. (2016) indicated that the number of students from humanitarian-migrant backgrounds enrolling in Australian higher education increased from 1,687 in 2009 to 3,506 in 2014 (which corresponds to between 0.21% and 0.34% of all domestic students). The 2014 higher education participation ratio was 0.76 for Myanmar, 0.64 for Iraq and 0.75 for Afghanistan (Naylor et al., 2019).[iv] While the percentage of refugee-women students also increased from 30% to about 40% of all refugee students, this share varied markedly by country of origin—ranging from 22.5% for Bhutan to 51.3% for Iraq. Their results also indicated that, in 2014, the majority of refugee students were mature aged, with only ~12% of them being less than 20 years old and approximately half (48.7%) of them being 26 years old, or older. In addition, the share of refugee students who opted for undergraduate courses decreased from 79.2% in 2009 to 76% in 2014, while the share of them who opted for postgraduate studies increased from 13.7% to 17%. This means that there are large differences in course type between students from refugee backgrounds and the overall Australian student population, of which 69.2% engage in undergraduate studies and 27.4% in postgraduate studies (Terry et al., 2016). The most popular fields of study for higher education refugee students were STEM fields (e.g., Physical Science and Information Technology and Engineering, 31.1%), Society and Culture (20.7%), Health (20%) and Management and Commerce (17.3%). Interestingly, the proportion of refugee students enrolled in STEM fields (31.1%) was higher than that of the overall higher education student population (19.9%) (Terry et al., 2016).

Consistent with the international literature, Australian studies have also shown that humanitarian migrants in Australia face a range of barriers to settlement into the host society. For example, the Multicultural Youth Advocacy Network (MYAN) set up a National Youth Settlement Framework to guide support to young humanitarian migrants to settle in Australia (MYAN, 2016). The framework highlights a number of barriers to accessing support, such as low English-language skills, disrupted schooling, different cultural norms and values surrounding help-seeking behaviour, lack of social and cultural capital and discrimination.

There is also emerging Australian research aimed at understanding the extent to which such barriers apply to humanitarian migrants' participation in higher education, more specifically. This includes a series of case studies documenting the experiences of students with humanitarian-migrant backgrounds admitted into Australian universities (e.g., Baker et al., 2019; Earnest et al., 2010; Harris et al., 2015; Harris & Marlowe, 2011; Hartley et al., 2018; Hatoss & Huijser, 2010; Joyce et al., 2010; Kong et al., 2016; Naidoo, 2015). These studies not only confirm that the barriers identified in the MYAN framework apply to higher education participation, but also point out that humanitarian migrants face additional barriers within the higher education system. These barriers include strenuous family and/or financial responsibilities while undertaking their studies (e.g., supporting family in Australia or back home) (Joyce et al., 2010), challenges adapting to new educational contexts and high community expectations (Harris & Marlowe, 2011) and inadequate higher education support systems that fail to recognise refugee's unique needs (Earnest et al., 2010). For example, Harris and Marlowe (2011) interviewed 20 humanitarian-migrant higher education students from African countries and 10 teaching staff in an Australian university. Students coming from educational systems emphasising one-off tests found it hard to adapt to Australian university programs relying on continuous assessment. Other difficulties included concerns

about the wellbeing of their families within their home countries and community obligations (e.g., participation in a high number of social or religious activities). Similarly, teaching staff expressed difficulties in providing appropriate support to their humanitarian-migrant students, given the limited resources at their disposal (e.g., class tutors were only paid 30 minutes per student, but needed to spend longer amounts of time supporting humanitarian-migrant students).

Stevenson and Baker (2018) discuss the barriers to higher education participation for humanitarian-migrant students along three stages of student life cycle: higher education access, higher education participation, and transitions out of higher education. Interrupted educational experiences and past and ongoing trauma were the main barriers impairing humanitarian-migrant students' chances to progress and succeed in the Australian higher education system. These students also remain "an invisible group" (Stevenson & Baker, 2018, p. 51) due to (i) being treated as domestic students once they have attained a permanent visa or Australian citizenship (or as "standard" international students if they do not); (ii) being amalgamated into the broader NESB category; and (iii) a lack of information in higher education systems that allow identification of students from refugee backgrounds (Stevenson & Baker, 2018).

Incipient Australian evidence of gendered processes in the integration of humanitarian migrants in the higher education system has also been reported. Specifically, Terry and colleagues (2016) found that, while the proportion of refugee-women students had been increasing, it was still substantially lower than that of the average population. 55% of Australian higher education students are women, but the corresponding figure amongst refugees ranged between 30% and 40% over the observation period. Based on such evidence, the UNHCR (2019) has specifically called for equitable opportunities for and access to education for refugee girls and women.

The current report and its contributions

While a growing body of research has addressed humanitarian migrants' participation in higher education, there are significant knowledge gaps in the reviewed studies. In fact, as Cerna (2019) noted, research on this area remains "rather limited, fragmented and case specific" (p. 4). A first limitation of the available evidence base is that the vast majority of studies follows a qualitative methodological approach, both internationally and in Australia (Cerna, 2019; Ramsay & Baker, 2019). Ramsay and Baker (2019) reviewed 46 journal articles and noted "a strong commitment to qualitative inquiry in the field" (p.79). Specifically, all 32 empirical articles included in the review relied on qualitative methods. While some studies collected data via mixed methods (typically a small-scale survey in conjunction with individual interviews or focus groups), the quantitative data collected in these studies were not representative and rarely analysed using rigorous statistical techniques (Ramsay & Baker, 2019). This report contributes to the evidence base by undertaking robust quantitative analyses of two large-scale survey and administrative datasets and so it provides a generalisable picture of the experiences of Australian humanitarian migrants.

Secondly, there are very few studies that focus on humanitarian migrants' interactions with the higher education system in the Australian context. Building an Australian evidence base is important. The distinctiveness of the characteristics of humanitarian migrants to Australia and the Australian higher education system mean that findings from other countries cannot be extrapolated to Australia.

Thirdly, the few available Australian studies have focused on humanitarian migrants who had already been admitted into universities (e.g., Baker et al., 2019; Joyce et al., 2010; Kong et al., 2016; Naidoo, 2019; O'Rourke, 2011). Hence, their findings are most relevant to identifying barriers to success in—rather than access to—higher education. Studies focusing on barriers at the access stage are scarce. The only previous quantitative Australian study

considering access to higher education amongst humanitarian migrants is Terry et al. (2016). While this offers valuable insights into these matters, it remains a descriptive study. Further, due to data availability, the analyses rely on self-identification of students as humanitarian visa holders and require some strong assumptions to calculate participation ratios.

Within this context, this report constitutes a major step forwards in building robust, Australian-specific, quantitative evidence on the higher education experiences of humanitarian migrants. Such evidence can be of significant value in devising policies and practices that ensure that this vulnerable population can fully benefit from the many resources that education participation can yield.

To answer the key research questions outlined in the introduction, the project relies on two data sources that are yet to be used to understand the educational experiences of humanitarian migrants in Australia: the Australian Census and Migrants Integrated Dataset (ACMID) and Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants (BNLA). This project utilises the ACMID dataset to answer Research Questions (1) and (3). This is accomplished by systematically comparing the educational levels and student status of different types of migrants (humanitarian, family, skilled) and the local-born population, taking into account gender differences. The BNLA data is used to answer Research Questions (2) and (3) — identifying the characteristics of those humanitarian migrants in Australia that are associated with participation in education and the types of courses that these migrants study and any gender differences in these associations.

ACMID/census analyses

Methods in brief

ACMID is an administrative dataset that contains 2016 Australian Census of Population and Housing data linked to Permanent Migrant Settlement Data (ABS, 2018b). ACMID contains data from people who responded to the 2016 Census and who had a permanent migrant settlement record with a date of arrival between January 2000 and August 2016. Data for the local-born population was sourced from the 2016 Census, as ACMID is restricted to migrants.

The *migrant sample* used in the analysis consists of all ACMID records from individuals who were born outside Australia, aged 18 to 64 years, on a humanitarian, family or skilled visa and who had valid information on higher education participation and attainment. The *Australian-born sample* used in the analysis consists of all records from the 2016 Census from individuals who were born in Australia, aged 18 to 64 years and who had valid information on higher education participation and attainment. This yields the group sizes displayed in Table 1.

Two outcome variables are operationalised in the ACMID/Census data. *Higher education participation* is a binary variable taking the value one for respondents who reported attending “university or other higher education institution” and the value zero otherwise. *Higher education attainment* is a binary variable taking the value one for respondents who reported having obtained a bachelor or higher-degree qualification, and the value zero otherwise. Variables capturing age group and gender were also extracted from the ACMID and Census datasets to contextualise the analyses.

The key objective of ACMID/Census analyses is to explore differences in higher education participation and attainment rates between humanitarian migrants, other migrants and the Australian-born population. To this end, we use a set of descriptive statistics.

A more detailed exposition of the ACMID data and methods is presented in Appendix A.

Table 1. Analytic sample for ACMID and Census analysis

Population	*n* (weighted)
Humanitarian migrants [a]	143,622
Family migrants [a]	534,155
Skilled migrants [a]	984,038
Australian-born individuals [b]	8,437,889

Notes: a Sourced from ACMID 2016 using TableBuilder in December 2019. b Sourced from the 2016 Census using TableBuilder in December 2019.

Sample characteristics

The distribution of age, gender and higher education participation and attainment within the three migrant groups (humanitarian, family, skilled) and the Australian-born population is shown in Table 2. Demographically, humanitarian migrants seemed to be a fairly distinct group. Of the four population groups, the humanitarian-migrant group had the lowest share of women (45.2%), followed by the skilled migrant group (47%), the Australian-born group (50.2%) and the family-migrant group (65.1%). Further, humanitarian migrants tended to be younger than the other three groups, with greater-than-average proportions in the 18-year-old to 29-year-old age range.

Table 2. Descriptive statistics for analytic variables

	Migrants [a]			Australian-born [b]
	Humanitarian %	Family %	Skilled %	%
Outcome variables				
Participating in higher education	10.0	5.7	9.1	8.2
Have attained higher education qualification	12.7	38.4	60.4	24.3
Explanatory variables				
Woman	45.2	65.1	47.0	50.2
Age				
18 years	2.8	0.9	1.5	2.5
19 years	2.9	0.9	1.4	2.4
20 years	3.1	1.1	1.4	2.4
21 years	3.3	1.1	1.3	2.5
22 years	3.1	1.2	1.2	2.4
23 years	2.9	1.3	1.2	2.4
24 years	2.7	1.7	1.2	2.4
25–29 years	15.0	15.1	11.5	11.4
30–34 years	15.2	21.6	21.5	10.9
45–39 years	13.2	19.1	20.3	10.2
40–44 years	11.4	13.6	15.5	11.0
45–54 years	16.2	14.3	18.1	21.1
55–64 years	8.3	8.2	4.0	18.4
n	143,622	534,155	984,038	8,437,889

Notes: [a] Sourced from ACMID 2016 using TableBuilder in December 2019. [b] Sourced from the 2016 Census using TableBuilder in December 2019. Permanent migrants and Australian-born aged 18–64 years.

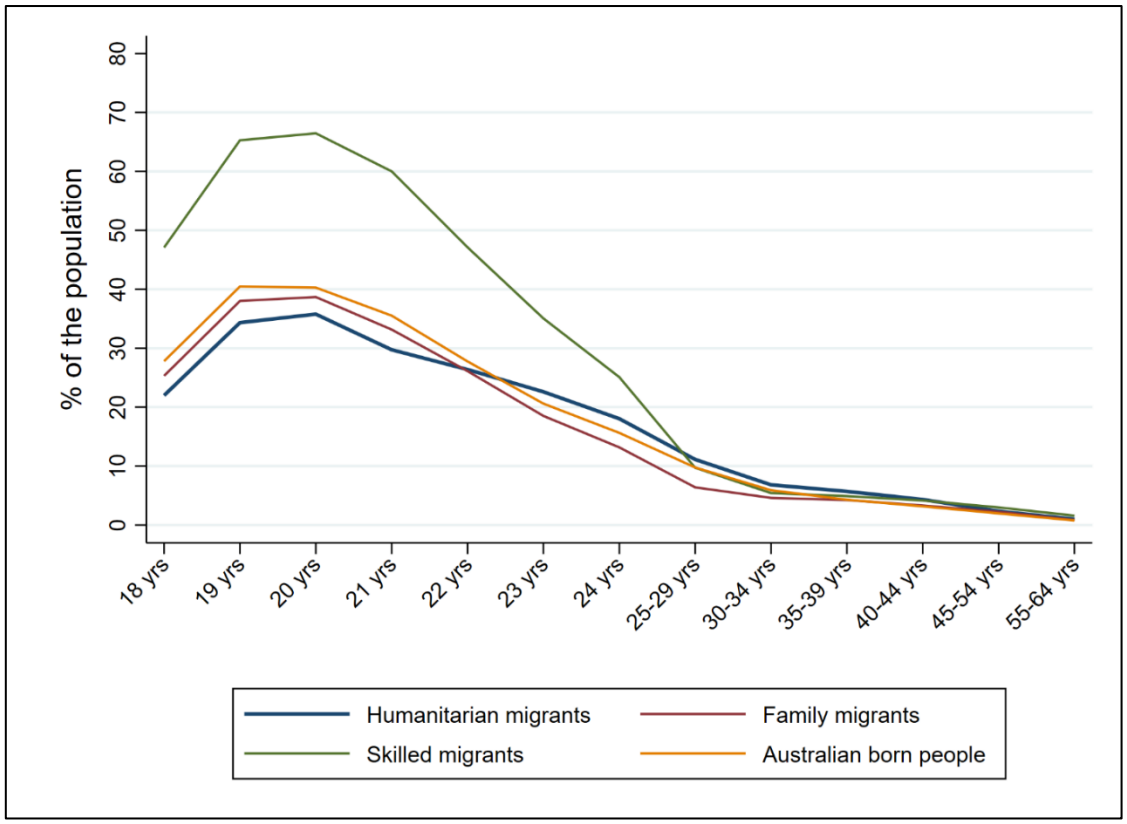
Results

Higher education participation

Based on the overall sample information in Table 2, higher education participation rates appeared to be relatively high for humanitarian migrants aged 18–64 years (10%) relative to the other three populations (5.7% for family migrants, 8.2% for Australian-born individuals and 9.1% for skilled migrants).[v] The age-specific higher education participation rates for the different groups of interest are shown in Figure 1 (for the tabular data, see Table 8 in Appendix B). Humanitarian migrants had the lowest participation rates at ages 18 to 21 and the highest participation rates at ages 25 to 45. This means that humanitarian migrants' participation rates are comparatively low at those ages in which higher education participation is most likely amongst all four groups. These results are consistent with recent findings indicating that humanitarian migrants who attend university tend to be older than domestic students who are Australian citizens or permanent residents (Tomaszewski et al., 2020, forthcoming).

Interestingly, despite the relatively low participation rates of humanitarian migrants at normative ages for higher education participation, their overall higher education participation rate of 10% was the highest of all four groups aged 18–64. This result partially emerges due to differences in the age distribution between the four population groups, as can be observed in Figure 13 in Appendix B. The figure plots the deviation of the three migrant populations' age distributions from the age distribution of the Australian-born (represented by the horizontal yellow line). Of the four groups considered, humanitarian migrants featured the highest proportion of people aged 18 to 24 years and a relatively high proportion of people aged 25 to 29 years (blue line). In other words, the proportion of humanitarian migrants in the age groups that have a higher likelihood of higher education participation is comparatively large. As a result, the participation rates of these younger age groups have a larger impact on their overall higher education participation rate than they have for the other population groups.[vi] It is also possible that the higher education participation levels of humanitarian migrants identified in ACMID are upward biased (i.e., that they are overestimated), something that is discussed in more detail in the concluding chapter of the report and in Appendix C.

Figure 1. Age-specific higher education participation rates

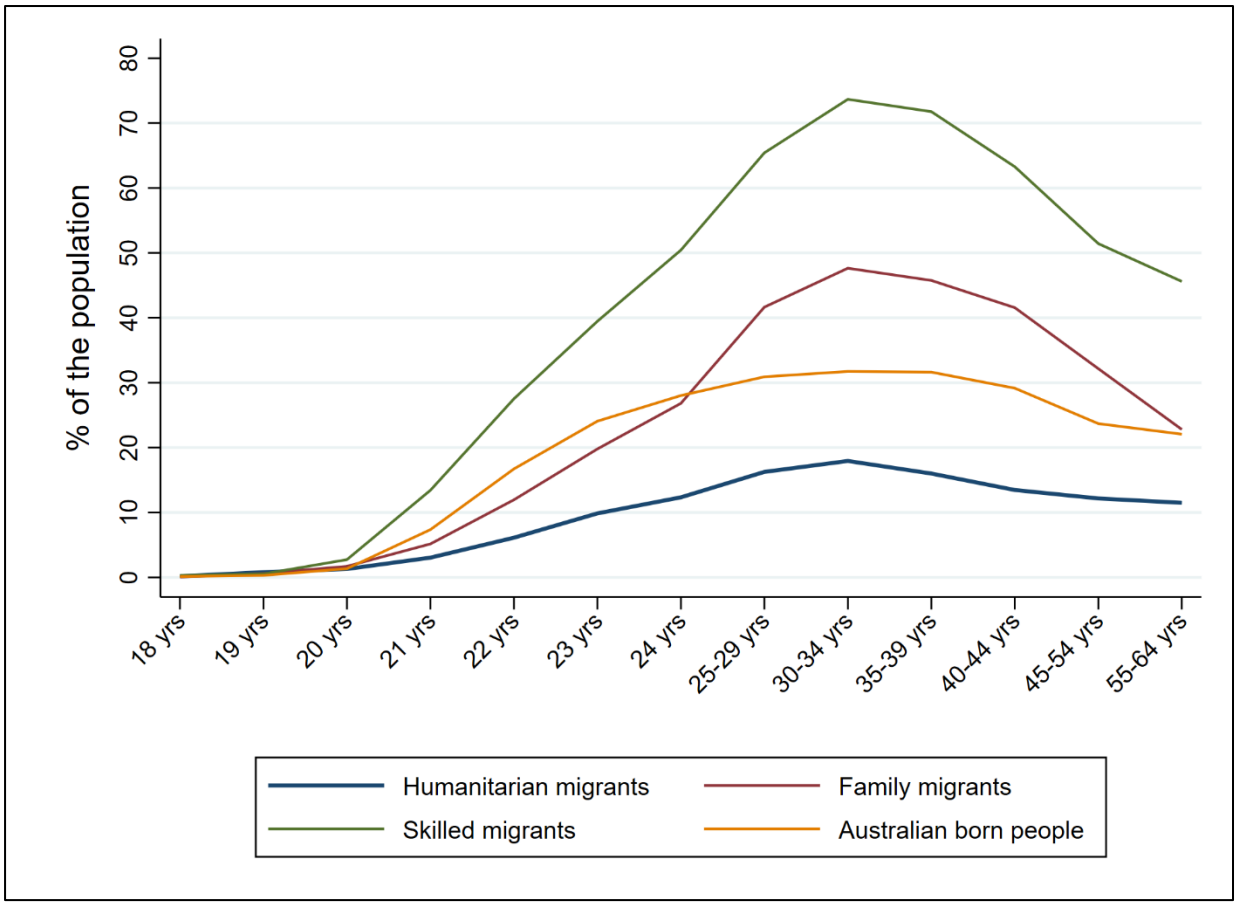


Notes: Migrant data sourced from ACMID 2016 (excludes Australian-born) using TableBuilder in December 2019. Australian-born data sourced from the 2016 Census using TableBuilder in December 2019. *n* = 143,622 humanitarian migrants, 534,155 family migrants, 984,038 skilled migrants, and 8,437,889 Australian-born individuals.

Higher education attainment

Based on the overall sample information in Table 2, humanitarian migrants' higher education attainment rates were strikingly low (12.7%, compared to 24.3% for Australian-born individuals, 38.4% for family migrants and 60.4% for skilled migrants). To shed further light, the age-specific higher education attainment rates for each of the four population groups are shown in Figure 2 (see also Table 9 in Appendix B). These are calculated in the same way as the age-specific higher education participation rates discussed before. In relation to the attainment of higher education qualification, humanitarian migrants appear to be clearly disadvantaged, a pattern that is apparent across most age groups. Overall, humanitarian migrants are approximately half as likely as Australian-born individuals to have a university degree, a third as likely as family migrants and a fifth as likely as skilled migrants. These results may reflect both the tendency for humanitarian migrants to enter Australia with comparatively low educational credentials, as well as their inability to participate in the Australian higher education system.

Figure 2. Age-specific higher education attainment rates



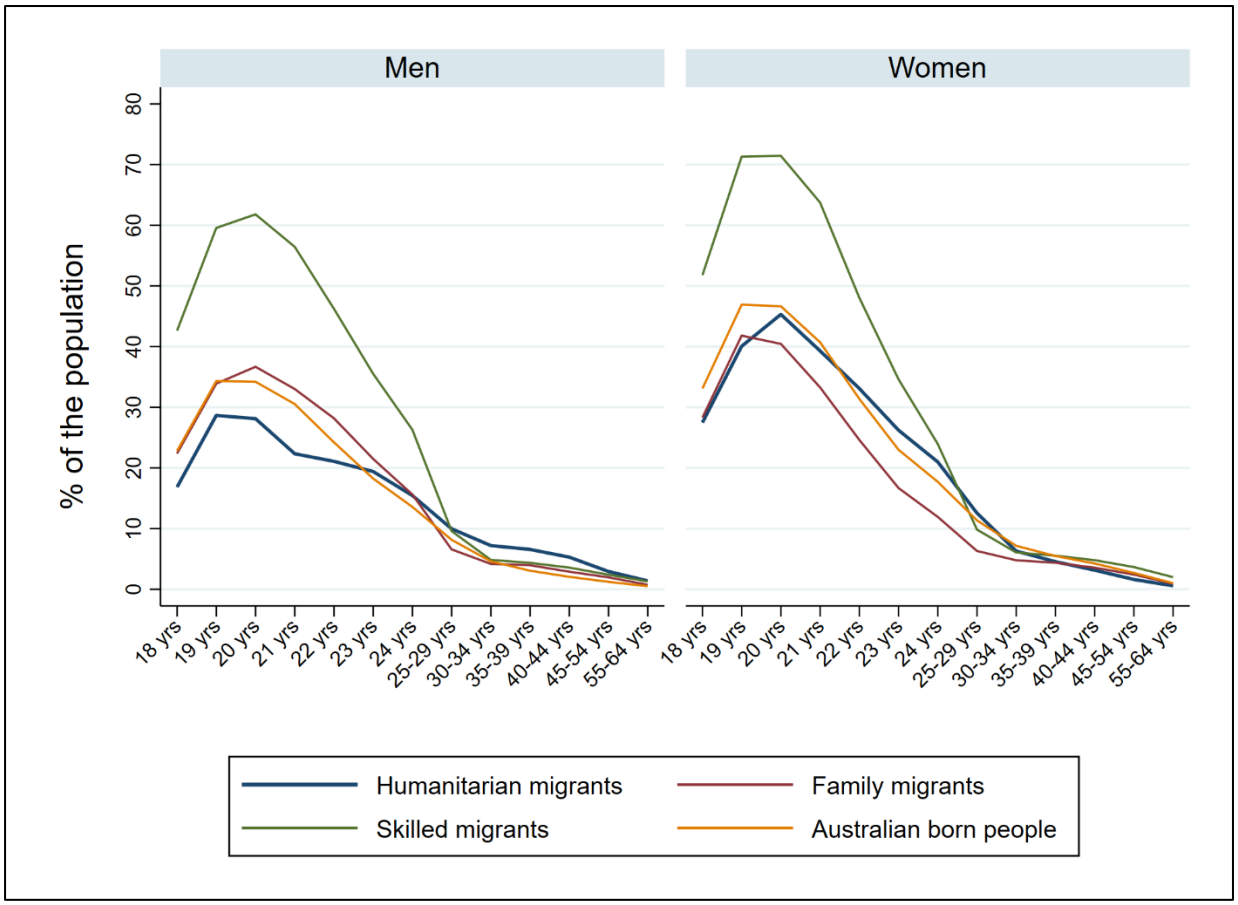
Notes: Migrant data sourced from ACMID 2016 (excludes Australian-born) using TableBuilder in December 2019. Australian-born data sourced from the 2016 Census using TableBuilder in December 2019. *n* = 143,622 humanitarian migrants, 534,155 family migrants, 984,038 skilled migrants, and 8,437,889 Australian-born individuals.

Gender differences

Compared to men, women had higher overall higher education participation rates amongst humanitarian migrants (11.1% compared to 9.2%), skilled migrants (10.2% compared to 8.2%) and the Australian-born population (9.6% compared to 6.8%) (Table 3, left panel). Amongst family migrants, women and men were about equally likely to participate in higher education (5.7% and 5.8%, respectively). To add further nuance, age-specific higher education participation rates for men and women were also examined separately (Figure 3).

One of the most notable patterns is the substantially higher participation rates in higher education of skilled-migrant men and women (green lines) in the younger age groups. These rates peak at approximately 70% for women and 60% for men at the age of 20. This reveals a considerable gender difference within the skilled migrant group. Smaller gender differences are also apparent amongst humanitarian migrants (blue lines), the Australian-born population (yellow lines) and, to some extent, family migrants (red lines). The gender differences were particularly visible at those ages that are associated with the highest higher education participation rates. Another distinct pattern in the graphs is that groups that experience lower levels of higher education participation at younger ages are often found to exhibit greater higher education participation at older ages. Particularly, humanitarian-migrant men (the group with the lowest higher education participation rates at younger ages) are more likely to participate in higher education after the age of 30 than all other groups.

Figure 3. Age-specific higher education participation rates, by gender



Notes: Migrant data sourced from ACMID 2016 (excludes Australian-born) using TableBuilder in December 2019. Australian-born data sourced from the 2016 Census using TableBuilder in December 2019. n (men) = 78,721 humanitarian migrants, 186,504 family migrants, 521,647 skilled migrants, and 4,199,285 Australian-born individuals. n (women) = 64,901 humanitarian migrants, 347,651 family migrants, 462,391 skilled migrants, and 4,238,604 Australian-born individuals.

Moving onto higher education attainment rates, the results in the right panel of Table 3 reveal that women's higher education attainment rates were notably higher than men's within the Australian-born and family-migrant groups, by about eight percentage points. Skilled-migrant women were also more likely to have a higher education qualification than skilled-migrant men (by about three percentage points) while humanitarian-migrant men were somewhat more likely to hold a higher education qualification than humanitarian-migrant women (by approximately one percentage point). The age-specific results in Figure 4 suggest that both humanitarian-migrant men and women are clearly less likely than their counterparts in the other groups to have a higher education qualification. Across all four population groups, women are more likely than men to hold university qualifications at younger ages. At older ages, the higher education attainment rates of men and women tend to converge. For the three migrant groups, men's rates actually surpass women's (after the age of 45 for skilled and family migrants and after the age of 35 for humanitarian migrants).

The gender analysis reveals greater higher education participation levels by women at younger ages across all four population groups and a catch-up effect for men in the humanitarian-migrant group at later ages. The same holds true for the age-specific higher education attainment levels of humanitarian-migrant men and women. However, it is not certain whether this evidences that humanitarian-migrant men obtain higher education qualifications in Australia at older ages than humanitarian-migrant women or whether amongst migrants who arrived in Australia at older ages men have greater higher education attainment levels than women.

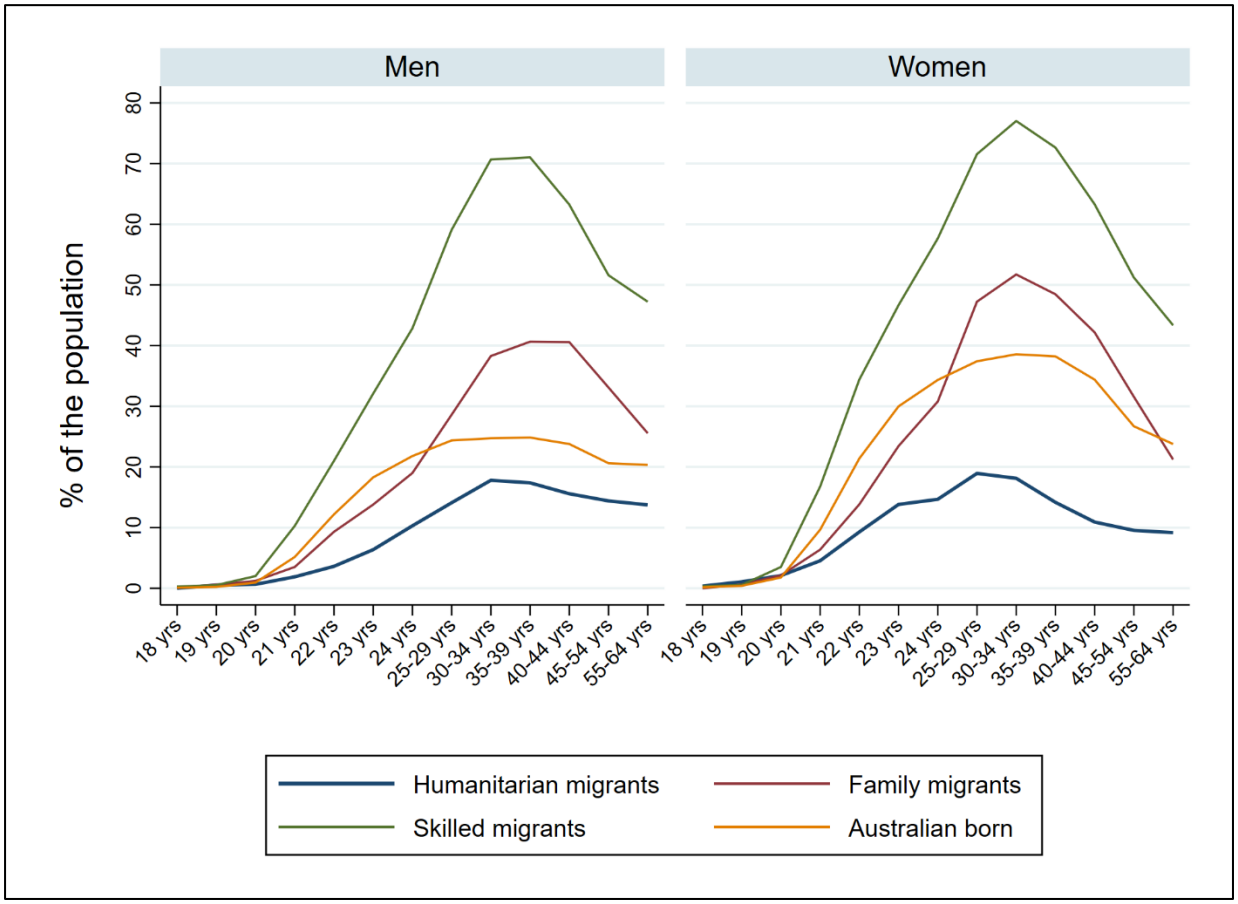
Altogether, with some exceptions, the results indicate that differences in participation and attainment between humanitarian-migrant men and men in the other groups resemble differences between humanitarian-migrant women and women in the other groups. In addition, within the humanitarian-migrant group, the age distributions for men and women in participation and attainment rates look similar.

Table 3. Higher education participation and attainment rates, by gender

	Higher education Participation		Higher education Attainment	
	Men %	Women %	Men %	Women %
Humanitarian migrants [a]	9.2	11.1	13.1	12.2
Family migrants [a]	5.8	5.7	32.9	41.3
Skilled migrants [a]	8.2	10.2	58.8	62.3
Australian-born individuals [b]	6.8	9.6	20.1	28.6

Notes: a Sourced from ACMID 2016 (excludes Australian-born) using TableBuilder in December 2019. b Sourced from the 2016 Census using TableBuilder in December 2019. Permanent migrants and Australian-born individuals aged 18–64 years. n (men) = 78,721 humanitarian migrants, 186,504 family migrants, 521,647 skilled migrants, and 4,199,285 Australian-born individuals. n (women) = 64,901 humanitarian migrants, 347,651 family migrants, 462,391 skilled migrants, and 4,238,604 Australian-born individuals.

Figure 4. Age-specific higher education attainment rates, by gender



Notes: Migrant data sourced from ACMID 2016 (excludes Australian-born) using TableBuilder in December 2019. Australian-born data sourced from the 2016 Census using TableBuilder in December 2019. *n* (men) = 78,721 humanitarian migrants, 186,504 family migrants, 521,647 skilled migrants, and 4,199,285 Australian-born individuals. *n* (women) = 64,901 humanitarian migrants, 347,651 family migrants, 462,391 skilled migrants, and 4,238,604 Australian-born individuals.

BNLA analyses

Methods in brief

The second data source used in this project is BNLA: an internationally distinctive, longitudinal study of humanitarian migrants in Australia (Edwards et al., 2017). BNLA has interviewed a sample of 2,399 humanitarian migrants from 1,510 households within Australia on an annual basis between 2013/2014 (Wave 1) and 2017/2018 (Wave 5). The in-scope population for the BNLA study comprises adult humanitarian migrants settling in Australia with a permanent visa during 2013, with the sample selected using complex probabilistic methods (AIFS, 2018).

The study collects information from "offshore migrants" who received a permanent humanitarian visa overseas and arrived in Australia between May 2013 and December 2013 and "onshore migrants" who sought asylum after arriving in Australia and were subsequently granted a permanent humanitarian visa between May 2013 and December 2013 (AIFS, 2018, p. 3). Our analyses of BNLA data include responding individuals of working age (18 to 64 years). The analytic sample size was 8,668 person-year observations from 2,109 different respondents.

Several outcome variables are operationalised from the BNLA data. These capture whether, at the time of the interview, the respondent (i) was studying a course at an Australian educational institution, (ii) had obtained an Australian qualification, and (iii) reported planning to do any study in Australia in the future. Importantly, all of these variables exclude English-language courses. BNLA contains also rich information on respondents' socio-demographic circumstances, which was used to examine their education participation. This included generating and using variables capturing respondents': gender, age, English-language proficiency, general health, highest educational qualification pre-arrival, number of children, migration pathway, area of residence, employment status, employment history, length of stay in Australia, and country of birth.

The initial BNLA analyses rely on descriptive statistics to examine the distribution of the outcome and explanatory variables, as well as trends over time in the outcome variables. These are followed by multivariate analyses aimed at establishing the associations between the socio-demographic traits of humanitarian and their interactions with the Australian education system. Specifically, random-effect logistic regression models are utilised (Wooldridge, 2010). These models account for the multilevel structure of the panel data while also recognising that the outcomes capturing education participation are all dichotomous variables.

A more detailed exposition of the BNLA data and methods is provided in Appendix A.

Sample characteristics

Table 4 presents means and standard deviations for the variables used in the analyses of the BNLA data. In this table, observations from survey participants across observation points are pooled. In 45.3% of the observations respondents were women and the mean age was 37.3 years (SD=11.6 years). On a scale from 1-4, the mean self-reported English-language proficiency was 2.3 (SD=0.8) and, on a scale of 1-6, mean general health was 3.0 (SD=1.4). Concerning the pre-arrival levels of education, in 15.2% of the cases humanitarian migrants arrived into Australia without any educational credentials, in 67.8% of the cases with some schooling, in 6.1% with a trade qualification and in 10.8% with a university degree. Across the pooled time periods, 62.6% of respondents were married or partnered, 10% were divorced, separated or widowed and 27.4% were single (never married). On average, there were 1.1 children in the sample households (SD=1.2), 14.7% of humanitarian migrants

qualified as onshore migrants and 8.5% lived in a regional area. Humanitarian migrants were employed in just 20.4% of the cases, with 56% of them having ever worked for pay prior to arriving in the country. The distribution of observations by time since arrival and country of origin is presented towards the bottom of the table. Importantly, the sample seems to be driven by a large share of migrants coming from Iraq (41.7%), Afghanistan (25.6%) and Iran (11.1%).

Table 4. Sample means and standard deviations for analytic variables

	Mean/%	Standard deviation
Outcome variables		
Currently studying in Australia (%)		
Any course	12.6	
Degree course	1.7	
Trade/technical course, or a paid traineeship	5.0	
Some other course, or work experience	5.3	
Has completed Australian qualification (%)		
Any course	13.9	
Degree course	1.2	
Trade/technical course, or a paid traineeship	6.5	
Some other course, or work experience	8.1	
Currently studies towards—or has completed—course/qualification (%)		
Any course/qualification	25.1	
Degree course/qualification	2.8	
Trade/technical course/qualification, or a paid traineeship	11.3	
Some other course/qualification, or work experience	13.1	
Plans to study in Australia in the future (%) [a]	60.8	
Explanatory variables		
Woman (%)	45.3	
Age	37.3	11.6
Spoken English proficiency (1-4)	2.3	0.8
General health (1-6)	3.9	1.4
Level of education pre-arrival (%)		
None	15.2	
Some schooling	67.8	
Trade qualification	6.1	
Degree qualification	10.8	
Marital status (%)		
Married, partnered	62.6	
Divorced, separate or widowed	10.0	
Single, never married	27.4	
Number of children in the household	1.1	1.2
Onshore migrant (%)	14.7	

Lives in a regional area (%)	8.5	
Currently in paid employment (%)	20.6	
Ever in paid employment pre-arrival (%)	56.0	
Time in Australia (%)		
<1 year	21.0	
1 year	20.1	
2 years	18.8	
3 years	19.1	
4+ years	21.0	
Country of origin (%)		
Egypt	1.0	
Libya	0.9	
Sudan	0.5	
Iran	11.1	
Iraq	41.7	
Syria	1.1	
Myanmar	5.8	
Bhutan	4.3	
India	0.4	
Nepal	0.6	
Pakistan	2.4	
Sri Lanka	1.5	
Afghanistan	25.6	
n (observations)		8,668
n (groups)		2,109

Notes: BNLA, Waves 1–5 (2013-2017). [a] Waves 1 (2013), 3 (2015) and 5 (2017), Primary Applicants only.

Results

Trends in educational engagement

The top of Table 4 presents sample averages for the educational variables of interest. Overall, 12.6% of humanitarian migrants were studying towards a qualification in Australia; 1.7% were completing a degree, 5% were completing a trade/technical course or doing a paid traineeship and a further 5.3% were studying another course or participating in a work experience program.[vii] That is, around 14.2% of all *students* were studying towards a degree. Concerning the completion of Australian qualifications, it can be observed that—over the sample window—13.9% of respondents had completed a qualification; 1.2% had completed a degree, 6.5% a trade qualification and 8.1% some other course/qualification. In other words, approximately 7.6% of all *completions* involved a degree. Finally, 60.8% of humanitarian migrants planned to study in Australia at a subsequent point in time.[viii]

The figures discussed before pertain to the overall sample and thus do not yield any insights into temporal trends. The results presented in Table 5, however, are split by survey wave. These reveal that the percentage of humanitarian migrants who were studying any course increases between Wave 1 (10.5%) and Wave 3 (15.4%), but decreased thereafter (11.2% in Wave 5). This same, curvilinear pattern is observed for trade/technical courses (or paid traineeships) and other courses or work experience. The percentage of humanitarian migrants who studies towards a degree, however, increased linearly over time: from 0.5% in Wave 1 to 2.6% in Wave 5. The rate of completion of qualifications, as can be expected, increased linearly over time. While just 1.9% of humanitarian migrants had completed any qualification in Wave 1, 26.1% had done so by Wave 5. At that point, 2.2% had obtained a degree-level qualification, 14.3% a trade qualification and 15.2% some other qualification. Lastly, the share of the sample who intended to continue studying in Australia decreased linearly from 68.3% in Wave 1 to 54.2% in Wave 5.

Table 5. Sample means for outcome variables, by survey wave

	Mean/%				
	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5
Outcome variables					
Currently studying in Australia (%)					
Any course	10.5	14.1	15.4	12.4	11.2
Degree course	0.5	1.2	2.2	2.5	2.6
Trade/technical course, or a paid traineeship	1.9	7.3	5.8	6.7	4.3
Some other course, or work experience	5.0	6.5	7.2	3.6	4.3
Has completed Australian qualification (%)					
Any course	1.9	9.7	13.7	21.9	26.1
Degree course	0.4	0.8	1.2	1.6	2.2
Trade/technical course, or a paid traineeship	0.4	3.5	5.4	11.2	14.3
Some other course, or work experience	1.0	5.5	8.6	12.5	15.2
Some other course/qualification, or work experience	5.9	12.0	15.7	15.7	18.8
Plans to study in Australia in the future (%) [a]	68.3		57.6		54.2
n (observations)	2,079	1,695	1,585	1,609	1,568

Notes: BNLA, Waves 1-5 (2013-2017). [a] Waves 1 (2013), 3 (2015) and 5 (2017), Primary Applicants only.

Predictors of being *a* current student

This section compares the characteristics of migrants who participated in the Australian education system to those of migrants who did not. The first set of analyses models the socio-demographic factors associated with being a current student in Australia. As explained in the Methods section, this is accomplished by fitting random-effect logistic regression models. The results of these models are shown in columns (1) and (2) in Table 6. For ease of interpretation, model results are expressed as odds ratios (ORs) — i.e., as exponentiated coefficients. ORs greater than 1 indicate that a one-unit increase in a given explanatory variable is associated with an increase in the odds of respondents taking the value 1 in the outcome variable — all else being equal. Correspondingly, ORs smaller than 1 indicate that a one-unit increase in a given explanatory variable is associated with a decrease in the odds of respondents taking the value 1 in the outcome variable—all else being equal. In addition, to better interpret the magnitude of the associations of interest, the model results are transformed into predicted probabilities (Figure 14 in Appendix B).

The results for being a current student in any educational stream are presented in Column (1). All else being equal, the following factors significantly increased the odds of being a current student in Australia: being a woman (OR=1.54, $p<0.01$); higher levels of spoken English-language proficiency (OR=2.43, $p<0.01$); better health (OR=1.12, $p<0.01$); being single (never married), rather than married/partnered (OR=2.43, $p<0.01$); and coming from Afghanistan (OR=1.44, $p<0.05$), Iran (OR=2.48, $p<0.01$), Myanmar (OR=5.22, $p<0.01$) or another country (OR=1.76, $p<0.01$), rather than from Iraq. Meanwhile, other factors significantly decreased the odds of being a current student, *ceteris paribus*: having already completed an Australian qualification (OR=0.18, $p<0.01$); having no educational qualifications (OR=0.36, $p<0.01$), some schooling (OR=0.46, $p<0.01$) or a trade qualification (OR=0.63, $p<0.1$), compared to a degree, prior to arriving in Australia; being an onshore rather than an offshore migrant (OR=0.59, $p<0.01$); undertaking paid employment (OR=0.68, $p<0.01$); and having been in Australia less than one year (OR=0.45, $p<0.01$) or one year (OR=0.74, $p<0.05$), compared to two years. Other factors did not significantly affect the probability of humanitarian migrants being current students in Australia. These included respondent's age; the number of children in the respondent's household; living in a regional rather than an urban area; and having ever been in paid employment pre-arrival.[ix]

The magnitude of these associations is better grasped by visual inspection of Figure 14 (Appendix B). This hints at which of the relationships of interest are substantially—as opposed to statistically—significant. As can be appreciated in the figure, the differences in humanitarian migrants' participation in the Australian education system were greatest across the categories of pre-arrival education, country of birth, English-language proficiency and—to a lesser extent—general health. Take, for example, the observed differences by the educational qualifications humanitarian migrants held at the point of arriving in Australia. Adjusting for the model controls, those who entered Australia with no qualifications participated in the education system in 10.1% of the observations. The analogous figures are visibly higher amongst those who entered Australia with some schooling (11.9%), a trade qualification (14.5%) and—particularly—a university degree (19%). The gradient for English-language proficiency is equally striking: respondents who reported speaking "not at all" English had a 5% probability of being a student, compared to a much higher 28.5% amongst respondents who reported speaking English "very well".

Column (2) in Table 6 shows the results of a model examining which characteristics were associated with individuals studying towards a degree rather than other courses, out of those individuals who were studying towards any type of qualification. The few statistically significant model coefficients indicated that such odds were higher amongst women than men (OR=2.45, $p<0.1$), amongst those who had been employed pre-arrival compared to those who had not (OR=2.67, $p<0.1$) and increased with English-language proficiency (OR=4.46, $p<0.01$) and time since arrival. The odds of studying towards a degree were,

however, negatively associated with having arrived in Australia with no qualifications (OR=0.01, p<0.05) or only some schooling (OR=0.09, p<0.05), compared to having arrived with a university degree. Of note, some of the ORs in the model appear to be large but are not statistically significant. This is likely due to reduced statistical power stemming from the smaller sample size in this model, which is restricted to individuals who were studying for any type of course. A visual representation of the magnitude of these results is displayed in

Figure 15 (Appendix B).

Predictors of attaining an Australian qualification

The analyses of the BNLA data continue by examining the factors predicting whether such migrants successfully completed a qualification while in Australia. The model results are again presented as ORs—Columns (3) and (4) in Table 6 — and as predicted probabilities (see Figure 16 in Appendix B). The results for having attained any type of Australian qualification are presented in Column (3). All else being equal, the factors that were significantly associated with increased odds of having attained a qualification included: respondent's age (OR_{age}=1.30, p<0.1; $OR_{age\_squared}$=1.00, p<0.05); English-language proficiency (OR=3.10, p<0.01); being in paid employment (OR=3.99, p<0.01); being in paid employment prior to arriving in Australia (OR=2.27, p<0.1); having spent three years (OR=28.68, p<0.01) or four or more years (OR=394.46, p<0.01), compared to two years, in Australia; and coming from Afghanistan (OR=4.47, p<0.01), Iran (OR=10.77, p<0.01), Myanmar (OR=49.56, p<0.01), or another country (OR=19.29, p<0.01), rather than Iraq.

Net of confounding, other factors were significantly associated with decreased odds of having attained an Australian qualification. These included: having no educational qualifications (OR<0.01, p<0.01), some schooling (OR<0.01, p<0.01) or a trade qualification (OR=0.01, p<0.01), compared to a degree, prior to arriving in Australia; having additional children in the household (OR=0.70, p<0.05); being an onshore migrant (OR=0.05, p<0.01); and having spent less than one year (OR<0.01, p<0.01) or one year (OR=0.02, p<0.01), compared to two years, in Australia. Some of the other factors considered in the models did not significantly affect the probability of humanitarian migrants having attained an Australian qualification — including gender, health, marital status and residence in a regional area.

Figure 16 in Appendix B illustrates the magnitude of these associations. As can be inferred from it, higher levels of education pre-arrival, time since arrival, country of birth and English-language proficiency were all factors that had considerable effect on the probability of humanitarian migrants attaining an Australian qualification. Differences in such probability by the time since arrival, for instance, indicated that this increased from 0.8% for those humanitarian migrants that had spent less than one year in Australia, to 6% for those who had spent one year, 11.9% for those who had spent two years, 18.1% for those who had spent three years in Australia and 23% for those who had spent four or more years. Similarly, the level of education pre-arrival was also strongly associated with the propensity for humanitarian migrants to have attained Australian qualifications over the observation window. For those who entered Australia with no educational qualifications, the associated probability was 8.6%, which is lower than the probabilities for those entering Australia with some schooling (10.9%), a trade qualification (13.3%) and—particularly—a degree qualification (22.2%).

Column (4) in Table 6 shows the results of a model examining the characteristics of individuals who had attained an Australian university degree, specifically, out of those who had attained any type of Australian qualification. The results reveal that higher levels of spoken-English proficiency (OR=3.36, p<0.05); having arrived in Australia with degree-level qualifications rather than some schooling (OR=0.01, p<0.01) or a trade qualification (OR=<0.01, p<0.01); having being in Australia for 4 or more years (OR=17.20, p<0.01) compared to 2 years and coming from a country other than those listed in the table

(OR=29.56, p<0.05), all increased the odds of having attained a degree qualification instead of other types of qualifications. Again, some model ORs are large but not statistically significant. This is due to the model having a smaller sample size due to being restricted to individuals who had attained an Australian qualification. The model results are displayed graphically in Figure 17 in Appendix B.

Table 6. Odds ratios from random-effect logistic regression models

	Currently studying [a]		Attained a qualification [a]		Plans to study [c]
	Any course	Degree [c]	Any course	Degree [d]	
Model number	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Already completed Australian qualification					
No *(reference)*	1.00	1.00			1.00
Yes	0.18***	3.26*			1.15
Current student in Australia					
No *(reference)*					1.00
Yes					2.18***
Gender					
Man *(reference)*	1.00	1.00	1.00	1.00	1.00
Woman	1.54***	2.62*	0.90	3.38	1.34**
Age	1.03	0.85	1.30*	1.08	1.03
Age squared	1.00	1.00	1.00**	1.00	1.00**
Spoken English proficiency (1-4)	2.43***	4.46***	3.10***	3.36**	1.70***
General health (1-6)	1.12***	1.33	1.05	1.10	0.92**
Level of education pre-arrival					
None	0.36***	0.01**	<0.01***	[e]	0.28***
Some schooling	0.46***	0.09***	<0.01***	0.01***	0.47***
Trade qualification	0.63*	0.21	0.01***	<0.01**	0.60*
Degree qualification *(reference)*	1.00	1.00	1.00	1.00	1.00
Marital status					
Married, partnered *(reference)*	1.00	1.00	1.00	1.00	1.00
Divorced, separate or widowed	1.12	2.11	2.09	0.52	0.92
Single, never married	2.43***	2.92	1.75	0.72	0.87
Number of children in the household	1.01	0.71	0.70**	1.26	1.03
Onshore migrant					
No *(reference)*	1.00	1.00	1.00	1.00	1.00
Yes	0.59***	1.03	0.05***	4.44	0.74
Lives in a regional area					
No *(reference)*	1.00	1.00	1.00	1.00	1.00
Yes	1.32	2.50	0.37	0.05	1.30

Currently in paid employment					
No *(reference)*	1.00	1.00	1.00	1.00	1.00
Yes	0.68***	0.85	3.99***	0.48	0.86
Ever in paid employment pre-arrival					
No *(reference)*	1.00	1.00	1.00	1.00	1.00
Yes	0.84	2.67*	2.27*	3.38	1.07
Time in Australia					
<1 year	0.45***	0.41	<0.01***	0.68	1.95***
1 year	0.74**	0.63	0.02***	0.13	1.29
2 years *(reference)*	1.00	1.00	1.00	1.00	1.00
3 years	0.85	5.58***	28.68***	1.04	0.78
4+ years	0.84	8.61***	394.46***	17.20***	0.75**
Country of origin					
Iraq *(reference)*	1.00	1.00	1.00	1.00	1.00
Afghanistan	1.44**	2.09	4.47***	8.76	1.43**
Iran	2.48***	3.14	10.77***	0.68	2.34***
Myanmar	5.22***	0.07	49.56***	3.78	0.62**
Other country	1.76***	2.30	19.29***	29.56**	1.52**
n (observations)	8,492	1,070	8,492	1,096	3,361
n (groups)	2,109	668	2,109	462	1,461
Pseudo R^2	0.04	0.12	0.37	0.40	0.02

Notes: [a] BNLA, Waves 1-5 (2013-2017). [b] BNLA, Waves 1 (2013), 3 (2015) and 5 (2017), Primary Applicants only. [c] Conditional on studying for a qualification of any kind. [d] Conditional on having attained a qualification of any kind. Statistical significance: * $p<0.1$, ** $p<0.05$, *** $p<0.01$. [e] In Model 4, "having no educational qualifications pre-arrival" was a perfect predictor of not having attained a University degree in Australia. Hence, individuals with no educational qualifications prior to entering Australia were not used in estimation in that model and no coefficient was estimated for that variable.

Predictors of planning to undertake further study

Additional analyses—Column (5) in Table 6 and Figure 18 in Appendix B—examined how socio-demographic factors influenced the odds that humanitarian migrants reported planning to undertake further studies in Australia in the future. In this model, the following factors significantly increased the odds of planning to undertake future studies: being a student (OR=2.18, $p<0.01$); being a woman (OR=1.34, $p<0.05$); English-language proficiency (OR=1.70, $p<0.01$); being in Australia for less than 1 year, compared to 2 years (OR=1.95, $p<0.01$); and coming from Afghanistan (OR=1.43, $p<0.05$), Iran (OR=2.34, $p<0.01$), or another country (OR=1.52, $p<0.05$), rather than Iraq.

Factors that significantly decreased the odds of planning to undertake future studies included: being healthier (OR=0.92, $p<0.05$);[x] having no educational qualifications (OR=0.28, $p<0.01$), some schooling (OR=0.47, $p<0.01$), or a trade qualification (OR=0.60, $p<0.1$), compared to a degree, prior to entering Australia; having been in Australia for 4 or more years, compared to 2 years (OR=0.75, $p<0.05$); and coming from Myanmar (OR=0.62, $p<0.05$) rather than Iraq. Having completed an Australian qualification, age, marital status, number of children, onshore migrant status, area of residence and current or pre-arrival paid employment did not significantly influence the outcome.

Figure 18 in Appendix B visualizes effect magnitude by converting the ORs into predicted probabilities. The variables with the greatest impact on the chances of planning to undertake

future study in Australia were pre-arrival education, time since arrival, country of birth, age and level of spoken English-language proficiency. For instance, plans to do further study decreased linearly with age: 76.2% of 20-year-old humanitarian migrants reported so, compared to 71.6% of 30-year-olds, 62.8% of 40-year-olds, 49.1% of 50-year-olds and 31.8% of 60-year-olds.

Gender differences

A final set of BNLA analyses compares the educational outcomes of humanitarian-migrant men and humanitarian-migrant women. They begin by presenting selected summary statistics for the education outcomes stratified by gender (Table 7). Key results indicate that, across survey waves, more humanitarian-migrant women (14.3%) than humanitarian-migrant men (11.2%) were current students, whereas the reverse holds true for having attained a qualification in Australia (15.6% of men and 11.8% of women). A marked gender difference emerged for the likelihood of attaining a TAFE qualification: 10.3% of humanitarian-migrant men did so, compared to just 5.4% of humanitarian-migrant women. This is consistent with patterns in the Australian-born population (Ranasinghe, Chew, Knight, & Siekmann, 2019).

The results also point to differences in time trends between the men and women in the BNLA sample. For example, the share of women who are current students raises from 10.7% in Wave 1 to 14.4% in Wave 5, while a decrease is observed for men (from 10.3% to 8.4%). Men, on the other hand, complete qualifications at a faster rate: from 2.5% of the sample in Wave 1 to 28.3% in Wave 5 (compared to 1.3% of the sample in Wave 1 to 23.5% in Wave 5 amongst women). The analyses also yield evidence that plans to study in Australia decrease at a faster rate amongst humanitarian-migrant men than humanitarian-migrant women.

The gender analyses continue by examining whether there were differences between humanitarian-migrant men and women in the predictors of being a student, having completed an Australian qualification and planning to study further in Australia.[xi] This was accomplished by fitting models analogous to those presented in Table 6, but in which all of the explanatory variables were interacted with a “woman” dummy variable. The results of these interactive models—presented in Table 10 in Appendix B—are quite extensive and difficult to interpret. For this reason, the discussion here focuses on a selection of key findings; specifically, the results of socio-demographic factors for which statistically significant gender differences were observed are discussed. For the most insightful results, graphs illustrating the associated gender-specific predicted probabilities are also presented.

The results for the gender-interactive model predicting the odds of being a current student revealed statistically significant gender differences in a handful of variables. These variables included having previously completed an Australian qualification, time spent in Australia, employment status and marital status. A review of the predicted probabilities associated with these parameters (not shown) indicated that the most substantial differences were those pertaining to time in Australia, employment status and marital status. These are discussed in turn.

Figure 5 evidences that both humanitarian-migrant men and humanitarian-migrant women seem to engage with the education system at similar rates in the first two years in the country. However, while women’s rates grow over time, men’s rates decrease. This may reflect the type of qualifications sought by humanitarian-migrant men and humanitarian-migrant women, with women being more likely than men to opt for longer, degree-level courses.

Figure 6 shows how paid employment seems to be a slight deterrent to educational participation amongst humanitarian-migrant men, but markedly increases the probability that humanitarian-migrant women participate in the education system. This suggests that a

greater share of humanitarian-migrant women than humanitarian-migrant men juggles work and study, which could contribute to slower progress or fewer completions amongst humanitarian-migrant women compared to humanitarian-migrant men. Finally, Figure 7 makes it apparent that being single is a significant incentive for humanitarian-migrant women but not humanitarian-migrant men to become a student. This may reflect a reliance on a male-breadwinner model amongst humanitarian-migrant women, with those who are single being incentivised to upskill and, in doing so, augment their labour-market prospects.

The results for the gender-interactive model predicting the odds of having attained an Australian qualification yielded evidence of statistically significant gender differences for the role of time spent in Australia and country of origin. However, an inspection of the associated predicted probabilities (not shown) revealed that none of these relationships was of substantive importance and worthy of further discussion.

Estimates from the models examining gender differences in the odds of planning to study in Australia in the future revealed statistically significant gender differences for employment status, time in Australia, pre-arrival employment and country of origin. Of particular interest was the difference in having undertaken paid work prior to arriving in Australia, which is plotted in Figure 8. Pre-arrival experiences of paid work slightly reduce the probability that humanitarian-migrant men plan to study in the future, while they moderately raise the probability that humanitarian-migrant women plan to do so. Given the prevailing gender norms in their countries of origin (Forrest, Baxter, & Perales, 2017), it is possible that pre-arrival employment is a marker of adherence to non-traditional gender roles amongst humanitarian-migrant women. This may explain why it is related to a propensity to seek further education opportunities for humanitarian-migrant women.

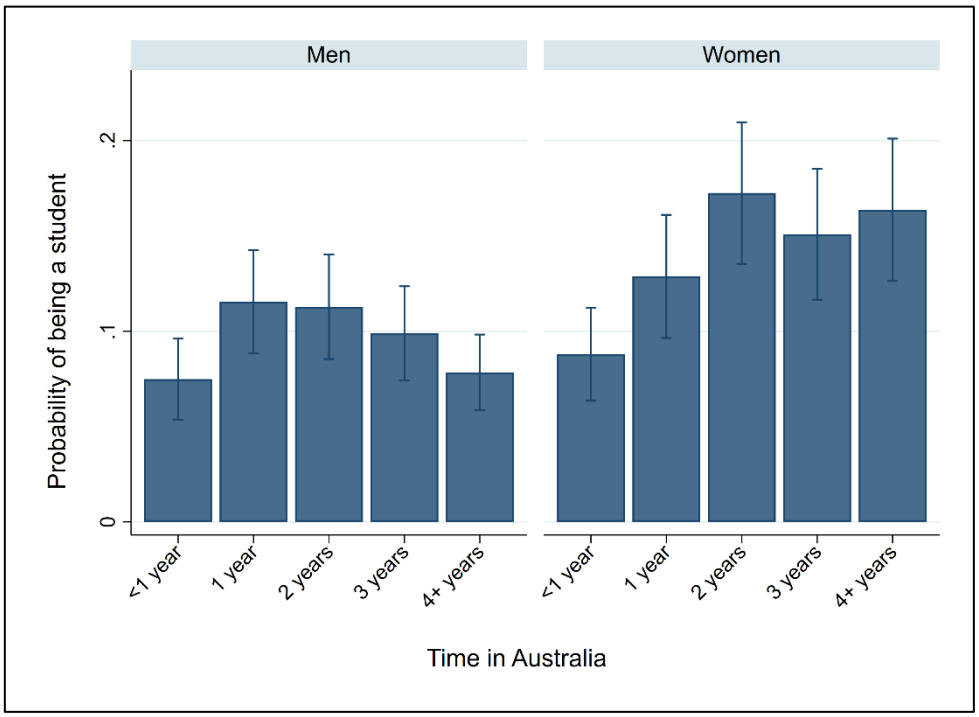
Altogether, the results provide only some evidence that the variables associated with being a current student, having attained an Australian qualification and planning to undertake further studies in Australia differ between humanitarian-migrant men and women. Exceptions included factors such as time in Australia, work experience and employment and marital status.

Table 7. Sample means for outcome variables, by gender and survey wave

	All waves		Wave 1		Wave 5	
	Men	Women	Men	Women	Men	Women
Currently studying	11.2	14.3	10.3	10.7	8.4	14.4
Currently studies a degree	1.4	2.1	0.4	0.8	1.7	3.6
Currently studies a trade/technical course, or does a paid traineeship	4.6	5.5	2.3	1.4	2.9	6.0
Currently studies some other course, or undertakes “work experience”	5.0	5.7	5.4	4.4	3.7	5.0
Completed Australian qualification	15.6	11.8	2.5	1.3	28.3	23.5
Completed Australian degree qualification	1.2	1.1	0.3	0.5	2.2	2.4
Completed Australian TAFE qualification	6.4	6.7	0.5	0.3	14.0	14.6
Completed Australian “other’ qualification”	10.3	5.4	1.4	0.4	18.8	11.0
Plans to study in Australia [a]	60.4	61.7	69.6	65.1	51.4	59.9
n (observations)	4,739	3,929				
n (individuals)	1,158	951	1,146	933	844	724

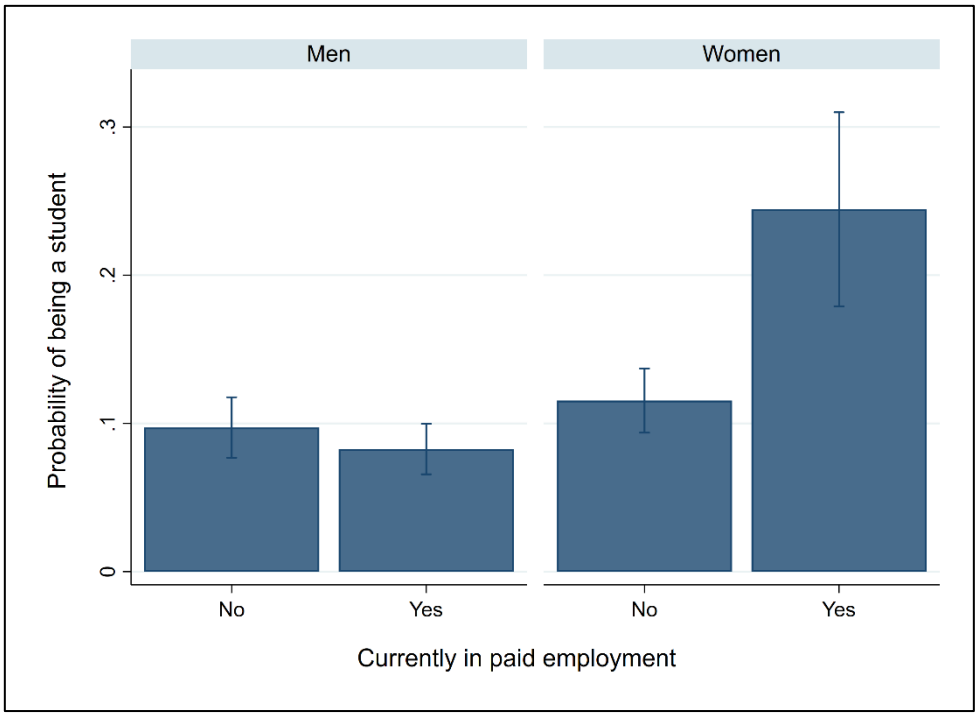
Notes: BNLA, Waves 1-5 (2013–17). [a] Waves 1 (2013), 3 (2015) and 5 (2017), Primary Applicants only.

Figure 5. Predicted probabilities from random-effect logistic regression models of the odds of being a student, by gender and time in Australia



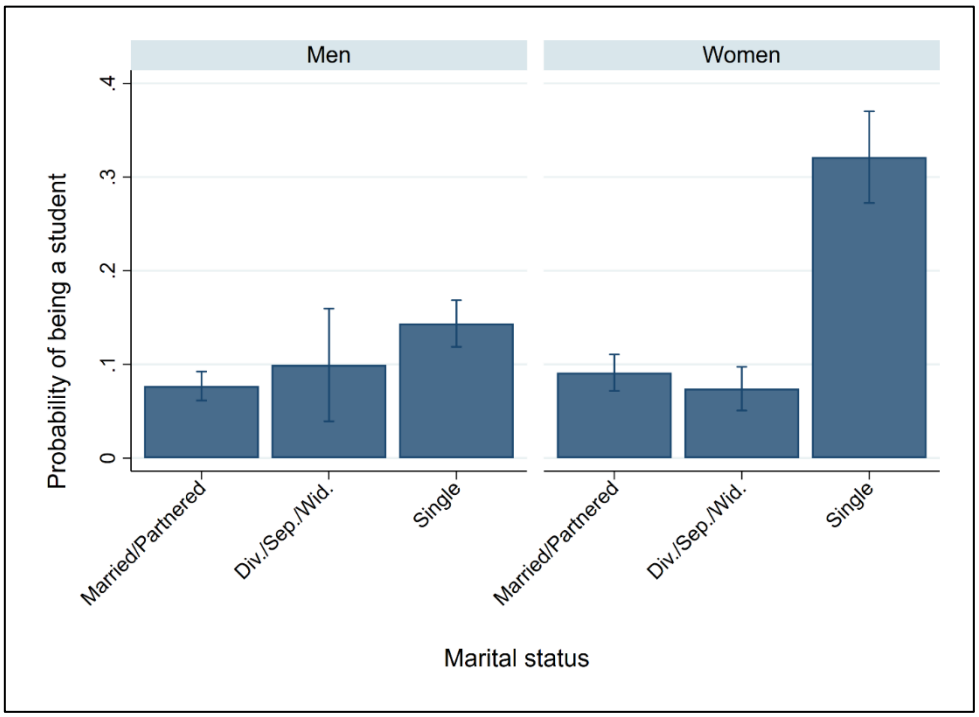
Notes: BNLA, Waves 1–5 (2013–17). Based on results from the model presented in Column (1) in Table 10. *n* = 8,492 observations from 2,109 individuals.

Figure 6. Predicted probabilities from random-effect logistic regression models of the odds of being a student, by gender and employment status



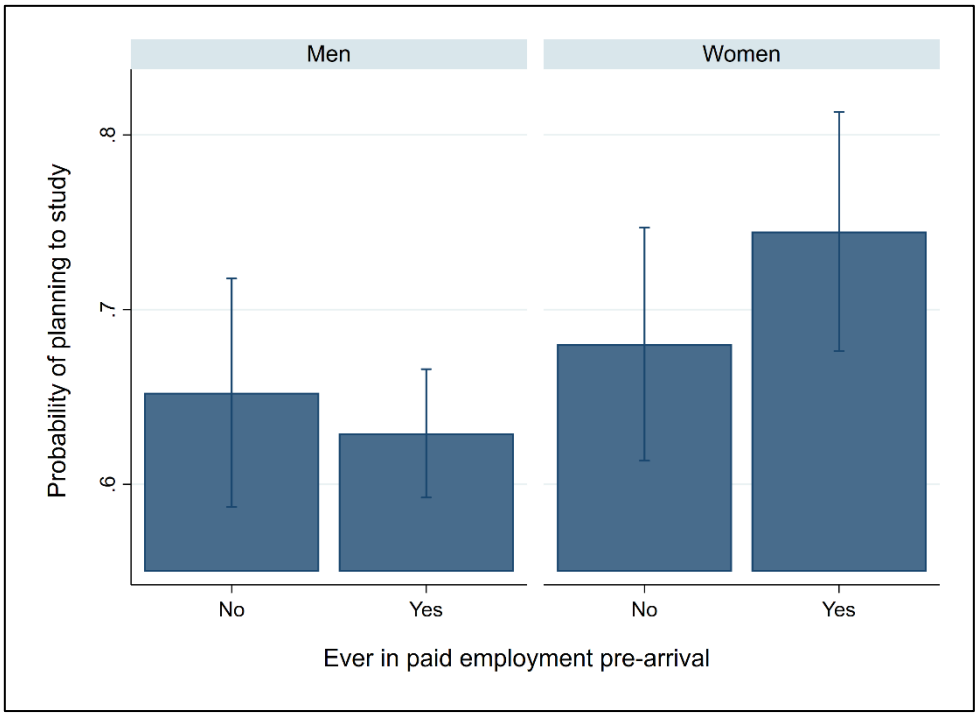
Notes: BNLA, Waves 1–5 (2013–17). Based on results from the model presented in Column (1) in Table 10. *n* = 8,492 observations from 2,109 individuals.

Figure 7. Predicted probabilities from random-effect logistic regression models of the odds of being a student, by gender and marital status



Notes: BNLA, Waves 1-5 (2013–17). Based on results from the model presented in Column (1) in Table 10. *n* = 8,492 observations from 2,109 individuals.

Figure 8. Predicted probabilities from random-effect logistic regression models of the odds of planning to study in Australia in the future, by gender and marital status



Notes: BNLA, Waves 1 (2013), 3 (2015) and 5 (2017), Primary Applicants only. Based on results from the model presented in Column (3) in Table 10. *n* = 3,361 observations from 1,461 individuals.

Discussion and conclusion

Report aims and contributions

A wealth of literature has documented that humanitarian migrants experience complex and unique challenges when resettling into a host country, with evidence pointing to suboptimal life outcomes for this population group in domains such as health, wellbeing and employment (e.g., ABS, 2018a; Correa-Velez et al., 2015; Hugo, 2011; Streitwieser et al., 2018; UNHCR, 2019). However, scholars have also highlighted the potential transformative role that participation in the local education system—and, particularly, higher education—can play in fostering the socioeconomic integration of humanitarian migrants (OECD, 2016). The review of the literature, however, identified only a few empirical studies examining access to and experiences of higher education amongst humanitarian migrants in Australia and internationally (see e.g., Cerna, 2019; Ramsay & Baker, 2019). Further, this existing body of evidence is not encompassing in its scope, with multiple high-quality qualitative contributions but very few quantitative contributions (for a review, see Ramsay & Baker, 2019). Besides, the available scholarship is heavily skewed towards humanitarian migrants who had already entered the higher education system, failing to incorporate their experiences in the access phase.

Within this context, this report set out to contribute unique empirical evidence on the comparative levels of engagement in education/higher education amongst humanitarian migrants in Australia and the socio-demographic factors that act as barriers or enablers to their participation and success. The approach was novel in that it leveraged unique—yet under-utilised—secondary quantitative datasets. These included the Australian Census Migrant Integrated Dataset (ACMID), the 2016 Australian Census of Population and Housing (the Census) and Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants (BNLA). To analyse these powerful and complex data, a suite of state-of-the-art statistical techniques for cross-sectional and panel data was deployed. Reliance on these different data sources allowed this report to: (i) distinguish educational participation from educational attainment, (ii) compare the circumstances of humanitarian migrants with those of other types of migrants and the Australian-born population, (iii) undertake nuanced analyses within a cohort of recently arrived humanitarian migrants and (iv) understand how individuals' gender may moderate all of these processes. The findings, which are discussed in the next section, fill an important vacuum of scholarly knowledge and bear important implications for equity policy and practice.

Summary of key findings

Research Question 1

Our inquiry was guided by three sets of interrelated research questions. The first set of research questions asked about the share of humanitarian migrants in Australia that participates in higher education and the share that possesses higher education qualifications. To contextualise such information, it was considered how these numbers compared to analogous figures for other types of migrants (skilled and family migrants) as well as individuals born within Australia. While these may be seen as foundational questions, there is a surprising dearth of reliable information that can be used to answer them. To provide more robust answers to these important queries, a suite of descriptive analyses of the 2016 ACMID and Census data was undertaken. Through this process, a series of key findings emerged.

First, humanitarian migrants in the ACMID data appeared to have a relatively high level of overall higher education participation (~10%) compared to other migrant populations and Australian-born individuals (~6-9%). However, upon closer scrutiny, it was identified that this difference was partially attributable to differences in the age distributions of the different population groups. Specifically, the share of humanitarian migrants in younger age groups (which have a greater likelihood of higher education participation) was comparatively large—humanitarian migrants were younger than family and skilled migrants and the local-born population. As a result, the higher

education participation rates of individuals in these younger age groups have a greater impact on the overall higher education participation rate amongst humanitarian migrants than amongst other population groups. However, in these younger age groups (18–21 years) humanitarian migrants exhibited relatively low higher education participation rates. Despite this, the results from the ACMID data analyses suggest a higher level of higher education participation amongst humanitarian migrants than previously estimated (Terry et al., 2016) and in the participation level found in the BNLA analyses. As elaborated on in Appendix C, the reasons for these divergences remain unclear and should be the focus of further inquiry.

Second, humanitarian migrants are clearly disadvantaged in relation to attaining higher education qualifications. Overall, humanitarian migrants were approximately half as likely as Australian-born individuals to have a university degree, a third as likely as family migrants and a fifth as likely as skilled migrants. These results are consistent with previous literature in Australia and internationally (see e.g., ABS, 2018a; Streitwieser et al., 2018; UNHCR, 2019). In the Australian context, these results serve to validate findings from previous studies based on in-depth interviews with humanitarian migrants enrolled in higher education institutions (e.g., Earnest et al., 2010; Harris et al., 2015; Harris & Marlowe, 2011; Hatoss & Huijser, 2010; Joyce et al., 2010; Kong et al., 2016). As discussed before, these studies reported that humanitarian migrants who study higher education courses tend to be mature age students and encounter multiple challenges, such as financial concerns, mental health issues, or issues adapting to a new educational system. The results also reflect that—as observed in the BNLA data—few of the humanitarian migrants who enter Australia at a mature age have completed higher education qualifications in their countries of origin or countries of previous residence. One implication of these findings is the need for continuous institutional-level support to refugee students in higher education both before and after the enrolment phase.

> **Recommendation.** The Australian Government should devote increased policy attention to the engagement of humanitarian migrants with the Australian education system: humanitarian migrants not only possess lower educational credentials than other migrants and the local population, but are also less likely to participate in the Australian higher education system during normative ages

Research Question 2

Having established how humanitarian migrants' higher education participation and attainment compare to those of other groups in Australia (a between-group comparison), a second set of research questions was designed to explore variation in these processes within the humanitarian-migrant population (a within-group comparison). Specifically, this part focused on identifying the socio-demographic characteristics associated with the chances of recently arrived humanitarian migrants participating in the Australian education/higher education system and attaining Australian education/higher education qualifications. To accomplish this, another powerful, unique and under-utilised secondary quantitative dataset—BNLA—was analysed. The BNLA analyses yielded several key findings.

First, while only a small share of humanitarian migrants upskilled early into their settlement period, an upwards trend over the 5-year observation window was observed. By the end of the fifth year, 15.4% of humanitarian migrants were enrolled in a course (2.6% in a higher education course) and 26.1% had already attained a qualification (2.2% a higher education qualification). These time trends are therefore reason for moderate optimism and so is the large share of humanitarian migrants who plan to undertake further study in their fifth year in Australia (~54%). It seems therefore that engagement with the higher education system amongst humanitarian migrants in Australia is modest. Of all students, only 14.2% pursued higher education and, of all completions, only 7.6% involved a higher education course. This evidence supports the notion that this population group does indeed experience barriers to participation and success in the Australian

education/higher education system and should be the focus of policy attention. However, as explained below, the results also provide evidence of heterogeneity in access to and success in education/higher education within the humanitarian-migrant group.

Second, two factors consistently predicted greater engagement with the Australian education system and with higher-order options within it: (i) English-language proficiency and (ii) education level at the time of arrival. In other words, within this cohort of humanitarian migrants, developing English-language proficiency and limited educational experiences acted as key barriers to education/higher education in Australia. The importance of other factors that could be perceived as plausible barriers to education/higher education amongst humanitarian migrants was surprisingly small in the adjusted models. Such factors included age; general health; marital status; parenthood; and onshore migration.

To illustrate the magnitude of the advantage associated with speaking English proficiently, let us compare the expected outcomes of two hypothetical humanitarian migrants in Australia: one who reports speaking English “not well” and one who reports speaking English “very well”. Of note, there are also humanitarian migrants in the sample who report not speaking any English “at all”, but these individuals were excluded from the comparison because their inability to enter certain education pathways is manifest. The hypothetical humanitarian migrant who speaks English “not well” has a 10% probability of studying a course (and a 6% probability that the course is a degree), a 11% probability of having completed a course (with a 6% probability that this was a degree) and a 59% probability of intending to study further. In comparison, the hypothetical humanitarian migrant who speaks English “very well” has a 29% probability of studying a course (with a 19% probability that this was a degree), a 15% probability of having completed a course (and a 10% probability that it was a degree) and a 76% probability of intending to study further. These differences, which emerged despite adjusting the models for a comprehensive set of covariates, are both substantial and statistically significant.

The critical role of mastery in the English language observed here is, however, not surprising. In fact, improving local-language proficiency has been identified by the OECD as a priority area for the educational integration of refugees (Cerna, 2019, p. 34). In a recent report, Cerna (2019) discusses a number of strategies across OECD countries aimed at improving refugees’ skills in the host country language at different stages of their educational trajectories. These strategies include a range of introductory/welcome language courses and transition-to-mainstream-language programs to facilitate language acquisition amongst newly arrived refugees. For example, Germany provides several models of Willkommensklasse (Welcome Class) to refugee students (Cerna, 2019). In Australia, the Adult Migrant English Program (AMEP) has historically provided up to 510 hours of English-language tuition to eligible humanitarian migrants to help them learn the foundations of the English language, as well as cultural skills that enable them to participate socially and economically in Australian society (Department of Home Affairs, 2020). As discussed in more detail below, the findings suggest that increasing access to these sort of programs amongst the humanitarian migrant population and/or the intensity of their exposure may go a long way in enhancing their educational prospects.

Similarly, arriving in Australia with degree-level qualifications was also a factor that consistently predicted engagement and success in the Australian education system. Comparing humanitarian migrants who entered Australia with “some schooling” and those who entered with degree-level qualifications, clear advantages amongst the latter were observed. The advantages apply to the predicted probability of studying a course (19% vs. 12%) and a degree course (21% vs. 9%), attaining a course (22% vs. 11%) and a degree course (14% vs. 5%) and planning further study (73% vs. 61%). These differences clearly evidence that education pre-arrival is a factor that critically structures the educational engagement of recent humanitarian migrants in Australia. While not considered in this example, as shown in the results section, humanitarian migrants who entered Australia with no educational credentials exhibited even worse outcomes.

These results are somewhat concerning, as they suggest that those humanitarian migrants with greater need to participate in the Australian education system (i.e., those with low or no

educational credentials at arrival) are those who appear to be most excluded from it. As Cunha and Heckman (2007) recognised, “skills beget skills”. In their work, Cunha and Heckman used this phrase in relation to early skill development to refer to the idea that providing children with early foundational capabilities increases their chances to acquire higher-order capabilities later in life. Akin to this notion, humanitarian migrants who enter Australia with higher-order skills from their countries of origin were observed to be more likely to seek the same higher-order skills from the Australian education system. In this case, skills do indeed beget skills, but in a horizontal rather than a vertical sense. And this finding does not simply reflect that highly-skilled humanitarian-migrants may be more likely to have sufficient educational credentials to be admitted into a higher education course. In fact, this group was also more likely than the low-skilled group to participate in non-higher education courses, complete non-higher education courses and plan to study further in the future.

A possible explanation is that highly educated humanitarian migrants may arrive in Australia with advanced skills and an appreciation of the importance of education for improving their socioeconomic prospects, but may hold education credentials that are not officially recognised. For this group of humanitarian migrants, participation in education (particularly higher education) may be a pathway to validate their existing skills with a formal Australian qualification. Altogether, these results underscore the importance of reaching low-skilled humanitarian migrants for any policies or programs aimed at improving humanitarian-migrants’ educational trajectories in Australia. Policies aimed at improving the educational engagement of low-skilled humanitarian migrants may focus on developing their aspirations for higher education participation, as well as improving the financial capacity to do so and building up skills required for successful higher education participation (e.g., general literacy and numeracy).

Fourthly, the results revealed significant differences in the probability of studying a course, having attained a course and planning to study further by humanitarian migrants’ country of origin. Specifically, humanitarian migrants from Iraq were generally found to display poorer outcomes than humanitarian migrants coming from other countries. It is possible that humanitarian migrants from Iraq experience the most elevated rates of post-traumatic stress disorder, owing to the intensity, duration and contemporaneity of conflict in their country (Slewa-Younan et al., 2015). Indeed, a wealth of psychological literature documents the long-term consequences of trauma amongst refugee populations post-resettlement (Ibrahim & Hassan, 2017). This finding also echoes previous research highlighting the diversity in humanitarian migrant experiences (e.g., Cerna, 2019; Naylor et al., 2019) and the ensuing complexity in designing intervention programs (OECD, 2016). The observed pattern of results is clearly a cause for concern, as Iraqi entrants are the largest group of recent humanitarian migrants in Australia—amounting to 41.5% of those who arrived in the 2018/19 period (DHA, 2019). Hence, the finding underscores the urgency of providing additional, targeted support to humanitarian migrants from this source country. Either way, the findings underscore the importance of supporting Iraqi humanitarian migrants specifically, above and beyond the assistance that may be provided to humanitarian migrants from other countries of origin.

> **Recommendation.** Certain subpopulations within the broader humanitarian-migrant population in the cohort under examination in this report require targeted attention and additional support from equity practitioners and policymakers, as their rates of higher education participation and attainment are particularly low. This includes: (i) humanitarian migrants from Iraq, (ii) humanitarian migrants with low levels of English-language proficiency, and (iii) humanitarian migrants entering Australia with low/no educational qualifications. Importantly, this support should be in addition to, rather than instead of, the support offered to humanitarian migrants overall.

Research Question 3

A third and final set of research questions was developed to probe into the potential gendering of the processes discussed thus far. Specifically, the analyses tested for gender differences in the relative higher education participation and attainment rates of humanitarian migrants in Australia and the factors enabling/constraining education participation and success within this population. Answering these questions involved re-analysing the ACMID, Census and BNLA data using a gender lens and matching empirical techniques.

A core finding emerging from the between-group gender analyses of the ACMID/Census data was that humanitarian-migrant women were more likely to participate in higher education than humanitarian-migrant men. This pattern of results was particularly pronounced for the younger age groups, when the greatest higher education participation rates are observed. A similar gender difference was also apparent for skilled migrants and the Australian-born population. However, the analyses also found that humanitarian-migrant men caught up with the other groups at later ages, displaying comparatively high participation rates after the age of 30. Further, across all population groups, women were more likely than men to hold university qualifications at younger ages. At older ages, the higher education attainment rates of men and women tended to converge. In fact, amongst skilled and family migrants, men's higher education attainment rates surpassed women's after the age of 45 and, amongst humanitarian migrants, they did so after the age of 35. With the data at hand, however, it is not possible to ascertain whether these patterns are the product of life cycle, cohort or period effects, or a combination of these.

These findings might suggest some improvement in the higher education participation of humanitarian-migrant women since 2014, when Terry et al. (2016) reported a 40 (women) / 60 (men) gender breakdown concerning representation in the higher education system. Such shifts are consistent with efforts by government and third-sector organisations to increase higher education participation amongst humanitarian-migrant women (see e.g., UNHCR, 2019). However, the shifts could also be the product of changes in the composition of the humanitarian-migrant population. For example, humanitarian migrants from Iraq, Iran and Myanmar had a fairly even gender representation among the higher education student population in 2014, unlike humanitarian migrants from Afghanistan, Sudan or Bhutan (Terry et al., 2016). A proportionally larger intake of humanitarian migrants from the former countries since 2014 could thus have affected the relative gender representation in the higher education student population. The discrepancies between these results and those reported by Terry and colleagues (2016) may have also emerged due to differences in data and methodology. Terry et al. (2016) arrived at their participation ratios by comparing 2009-14 higher education enrolment data with external data on the number of humanitarian visas awarded between 2009 and 2014, focusing only on migrants from four specific countries. In contrast, this report used 2016 Census-based information on self-reported higher education attendance amongst migrants from all source countries to arrive at gender-specific participation levels.

The within-group analyses of the BNLA data found that—compared to humanitarian-migrant men in Australia—humanitarian-migrant women exhibited a greater adjusted likelihood of being a student, studying for a degree and planning to study further in the future. However, there were no gender differences in the propensity to attain Australian qualifications in general, or degree-level Australian qualifications more specifically. These findings are largely consistent with those for the ACMID/Census data described before. The timing of education participation differed somewhat between humanitarian migrants of either gender: the share of humanitarian-migrant men who participated in education decreased with time since arrival, whereas the share of humanitarian-migrant women who participated in education increased with time since arrival. Humanitarian-migrant men, on the other hand, completed qualifications at a faster rate than humanitarian-migrant women. This pattern of results may be explained by the lower likelihood of humanitarian-migrant men compared to humanitarian-migrant women to opt for longer higher education programs.

The absence of a "female penalty" in relation to education participation amongst humanitarian migrants in Australia constitutes a surprising finding. This is because, compared to humanitarian-migrant men, humanitarian-migrant women are disadvantaged in other life domains, most notably in relation to their labour-market outcomes (ABS, 2018a; Delaporte & Piracha, 2018; OECD, 2019b). Similarly, while it was theoretically plausible that humanitarian-migrant women experienced different barriers to education/higher education participation and success than humanitarian-migrant men, the BNLA results portrayed a picture of similarity rather than one of difference. There were few statistically significant gender differences in the estimated effect of the socio-demographic predictors on the likelihood of studying, having attained a qualification, or planning to study further. A possible explanation is driven by the properties of the data. The statistical interactions effectively split the BNLA sample between respondents who are men and women, thereby halving the statistical power to detect statistically significant differences. For a few of the variables across the models, however, there were *statistically* significant gender disparities. However, these differences were seldom *substantially* significant — that is, their magnitude was rarely large.

Strengths, limitations and avenues for further research

This report has filled a major gap in the scholarly literature by leveraging powerful and under-utilised survey and administrative datasets to provide an encompassing overview of the ways in which humanitarian migrants in Australia interact with the local higher education system. In doing so, the study had a number of strengths. Above all, the analyses are based on robust data that is largely representative of the Australian population as a whole, or recent cohorts of humanitarian migrants to Australia. As such, the report findings can be generalised to these reference groups with a moderate-to-high level of confidence. This stands in direct contrast with earlier Australian (e.g., Terry et al., 2016) and international (e.g., Brücker et al., 2016) evidence, which has largely relied on small-scale, purposive samples. Further, the combined analysis of ACMID and Census data facilitated valid comparisons between the three main migrant groups in Australia and the Australian-born population. This constitutes a rare comparative approach in the literature on humanitarian migrants' engagement with the host country's higher education system.

However, there are also study limitations that must be acknowledged, some of which point to potentially fruitful avenues for further research. First, the results from the ACMID/Census and the BNLA analyses are based on different samples, with the former including persons who arrived in Australia between 2000 and 2016 and the latter including persons who arrived in Australia predominantly in 2013. Time spent in Australia influences higher education participation amongst migrant groups and this could have contributed to the greater higher education participation and attainment levels observed in the ACMID/Census data relative to the BNLA data (see Appendix C). Further, the humanitarian migrants covered in these datasets exclude refugees on temporary protection visas and safe haven enterprise visas, who are arguably the most disadvantaged subgroups in relation to their participation in the Australian (higher) education system (Hartley et al., 2018).

Second, there are potential limitations with the higher education participation measure in the ACMID/Census data. Due to language and cultural differences, the terms used to define the education categories (e.g., "technical or further educational institution" and "other higher education institution") may be interpreted in different ways by migrants and Australian-born individuals. Additionally, the higher education participation measure in the ACMID/Census data does not specify which type of educational activity is being undertaken. As such, it is possible that migrants from non-English speaking backgrounds attend tertiary institutions to undertake English-language courses or preparatory courses for further education, instead of degree-level qualifications. Further, the Census data collection is designed so that one person completes a household Census form on behalf of all household members. If individuals are unaware of other household members' education history, this practice may result in measurement error. These potential biases in the higher education participation measure in the ACMID/Census data may have contributed towards the relatively high participation levels for humanitarian migrants detected in such data.

Third, there are also possible shortcomings with the operationalisation of higher education attainment in the ACMID/Census data for the purposes of this project. The information does not determine whether qualifications were obtained in Australia, or whether they have been (or can be) formally recognised in Australia. Relatedly, coding of open-ended responses about level and field-of-study may be problematic when qualifications were not obtained in Australia. These shortcomings may disproportionately affect migrants' records.

The data-driven limitations outlined in the previous paragraphs stress the importance of considering whether or not Australia has a sufficient stock of data to fully understand the education experiences of humanitarian migrants and, by extension, the extent and drivers of their socioeconomic disadvantage. The ACMID dataset showcases the power of linking administrative datasets to multiply analytical options. Yet, these data have not been linked to other registers that may further increase its potential (for example, higher education-related data from HEIMS, health-related data from Medicare, income support data from DSS, or income tax data from the Australian Taxation Office). Linked data that captures a greater number of life domains would provide a much richer picture of humanitarian migrants' barriers to successful participation in higher education. While BNLA offers important advantages in terms of the richness of the data collected and its longitudinal design, it does not enable direct comparisons between humanitarian migrants and other population groups. Further, the data pertain to a single cohort of migrants who arrived at a specific socio-historical point in time and will rapidly lose currency in explaining the outcomes of newer cohorts of humanitarian migrants with different characteristics and pre-settlement pathways. Data from a new cohort may be needed. These are considerations that need to be taken into account by government agencies when devising strategies to improve current understandings of humanitarian migrants resettling into Australia and the capacity to act in efficient and effective ways to improve their socioeconomic position.

> **Recommendation.** The Australian Government should invest additional resources to gather data that can be reliably used to monitor the higher education participation and outcomes of humanitarian migrants to Australia. These could take the form of linked administrative data and/or a new longitudinal study capturing a more recent cohort of migrants than Building a New Life in Australia. These datasets should include humanitarian migrants of all visa types, not just those with permanent visas.

In addition to the need for better data, the findings also point to other areas in which future research is needed. One important avenue for further scrutiny involves gaining a more holistic understanding of humanitarian migrant experiences after graduation. Collectively, the findings of this report and those from earlier studies have documented significant educational disadvantage for humanitarian migrants with respect to the access and participation stages of the student life cycle. There is nevertheless little evidence on whether or not humanitarian migrants face difficulties upon completing their higher education studies and transitioning into the labour market. Australian evidence for other disadvantaged groups has yielded mixed findings (Tomaszewski et al., 2019) and evidence for humanitarian migrants is limited in size and scope (for an exception, see Hugo, 2011). As such, studies using Australian data to answer questions such as "do humanitarian migrants with higher education educational credentials attain greater labour-market outcomes than humanitarian-migrants with lower educational credentials?" or "are the benefits of higher education comparable for humanitarian migrants and other populations?" are sorely needed.

Another key avenue for further research is trialling and evaluating programs and interventions aimed specifically at improving higher education participation and success among humanitarian migrants, as well as broader initiatives aimed at building foundational skills among this group. Recent advances in administrative data integration, with resources such as the Multi-Agency Data Integration Project (MADIP) becoming more readily available, offer promising opportunities to facilitate the evaluations of such initiatives. One specific example is the aforementioned AMEP, where integrated datasets such as MADIP could serve as the backbone for a robust evaluation of

the program outcomes, including its causal effects on humanitarian migrants' higher education participation.

> **Recommendation**. Researchers should devote further attention to trialling and evaluating existing programs and interventions aimed at improving higher education participation and success among humanitarian migrants, and to examining the post-graduation experiences of humanitarian migrants—including their labour-market integration.

Implications for policy and practice

Collectively, the findings presented here support earlier claims that the engagement of humanitarian migrants with the Australian education/higher education system should be the subject of policy attention. Not only do humanitarian migrants possess lower educational credentials than other migrants and the local-born population, but they are also less likely to participate in the Australian higher education system during normative ages (i.e., late teens and early 20s). This finding suggests that tailored programs aimed at eliminating core barriers to higher education participation among humanitarian migrants should be considered, similar to initiatives targeting other groups that face ongoing disadvantage in the context of higher education—such as people from low socioeconomic backgrounds or Indigenous backgrounds. Ideally, such programs should be multi-faceted; for example, they should build education aspirations and foundational skills to facilitate successful participation in higher education, while also providing financial resources and access to mentoring and social support networks.

Yet the within-group analyses of the humanitarian-migrant population revealed that specific segments of it were comparatively less likely to participate in Australian higher education or attain higher education credentials. Hence, the findings suggest that a "one size fits all" policy strategy may be neither sufficient nor appropriate to boost the chances of humanitarian migrants reaping the benefits of higher education. Instead, certain subpopulations within the broader humanitarian-migrant population deserve special attention from equity practitioners and policymakers—including humanitarian migrants from Iraq, those with low levels of English-language proficiency and those entering Australia with low/no educational qualifications.

One prominent example of an existing program that targets a specific barrier or need is AMEP (Department of Home Affairs, 2020). The program, which has been operating since 1948, targets new migrants and humanitarian entrants with less than functional English and aims to build their English skills to enable them to successfully participate socially and economically in Australian society. As explained before, AMEP has historically provided up to 510 hours of English-language tuition to humanitarian and other migrants to help them improve their English-language skills (Department of Home Affairs, 2020). However, a recent evaluation of this program reported that tuition streams failed to meet student needs and should be adapted to reflect, amongst others, students' age, literacy and pre-migration education level (Tynan et al., 2019). The program's demand also exceeded its availability and robust evidence is still lacking to confirm whether program participation translates into improved educational attainment (including higher education) and labour-market outcomes. Consistent with the recommendations of the AMEP evaluation (Tynan et al., 2019) and the findings in this report, the Australian Government recently announced that it would allocate $250 million per year into an enhanced English-language program supporting up to 60,000 migrants (Tudge, 2020). This new program—deemed to be flexible and non-compulsory—would enable and incentivize new migrants to access more than the original 510 hours available through AMEP, while also relaxing some the eligibility criteria. Judging from our data, these efforts are well-guided and should be consolidated.

> **Recommendation.** Tailored programs aimed at eliminating core barriers to higher education participation among humanitarian migrants should be implemented, similar to initiatives targeting other groups that face ongoing disadvantage in the context of higher education. Programs should be multi-faceted, aiming at building education aspirations and foundational skills to facilitate successful participation in higher education, while also providing financial resources and access to mentoring and social support networks. Recent Government efforts to offer new migrants opportunities to improve their English-language skills are well guided and should be consolidated.

An important debate in the context of equity in the Australian higher education system is where humanitarian migrants fit. As discussed previously, humanitarian migrants fall—by definition—within the NESB category and this course of action obscures their disadvantaged circumstances relative to other populations who also fall within this group (e.g., Stevenson & Baker, 2018; Tomaszewski et al., 2020, forthcoming). This report has demonstrated this through comparisons of humanitarian migrants and skilled/family migrants, but others have previously made similar claims (e.g., Tomaszewski et al., 2020, forthcoming). Therefore, the results presented here add weight to arguments highlighting the need to reconsider the NESB category, potentially by disaggregating it into more meaningful and specific sub-groups based on visa type and ethnic/cultural origin.

> **Recommendation.** The Australian Government should reconsider the placement of humanitarian migrants within the higher education equity category of “people from a Non-English-Speaking Background”: the degree of higher education disadvantage experienced by humanitarian migrants is more pronounced than that experienced by other groups within this category and by members of the category overall.

References

Australian Bureau of Statistics (ABS). (2016). *3418.0 - Personal Income of Migrants, Australia, 2011-12: Focus on humanitarian migrants*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics (ABS). (2017). *Education and work, Australia, May 2017*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics (ABS). (2018a). Understanding Migrant Outcomes - Insights from the Australian Census and Migrants Integrated Dataset, Australia, 2016, CAT No. 3417.0. Canberra: Australian Bureau of Statistics. Available online at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/3417.0Main%20Features22016?opendocument&tabname=Summary&prodno=3417.0&issue=2016&num=&view=.

Australian Bureau of Statistics (ABS). (2018b). *Microdata: Australian Census and Migrants Integrated Dataset 2016,* CAT No. *3417.0.55.001.* Canberra: Australian Bureau of Statistics. Available online at: http://www.abs.gov.au/Ausstats/abs@.nsf/0/889792D645A7CC7FCA2582CD0015C002?OpenDocument.

Australian Bureau of Statistics (ABS). (2018c). *TableBuilder, User Guide,* CAT No. *1406.0.55.005*. Canberra: Australian Bureau of Statistics. Available online at: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1406.0.55.005~User%20Guide~Main%20Features~Introduction~1.

Australian Institute of Family Studies (AIFS). (2018). *Building a New Life in Australia Data Users Guide Release 4.0*. Victoria: Australian Institute of Family Studies. Available online at: http://www3.aifs.gov.au/bnla/userguide/docs/BNLA%20Data%20Users%20Guide%20Release%204.pdf.

Bajwa, J. K., Couto, S., Kidd, S., Markoulakis, R., Abai, M., & McKenzie, K. (2017). Refugees, higher education, and informational barriers. *Refuge: Canada's Journal on Refugees/Refuge: revue canadienne sur les réfugiés, 33*(2), 56-65.

Baker, S., Irwin, E., Taiwo, M., Singh, S., Gower, S., & Dantas, J. (2019). Methodological diversity as an asset for transition-focused higher education research with students from refugee backgrounds. *Review of Education, 7*(1), 5-32.

Baker, S., Ramsay, G., & Lenette, C. (2019). Students from Refugee and Asylum Seeker Backgrounds and Meaningful Participation in Higher Education: From Peripheral to Fundamental Concern. *Widening Participation and Lifelong Learning, 21*(2), 4-19.

Baum, C. F., Lööf, H., Stephan, A., Zimmermann, K. F. (2020). Occupational Sorting and Wage Gaps of Refugees, GLO Discussion Paper, No. 562. Essen: Global Labor Organization (GLO).

Bermúdez Torres, A. (2007). FMO thematic guide: Gender and forced migration. Retrieved from https://www.alnap.org/help-library/fmo-thematic-guide-gender-and-forced-migration.

Bradley, D., Noonan, P., Nugent, H., & Scales, B. (2008). *Review of Australian Higher Education*. Canberra: Department of Education, Employment and Workplace Relations.

Brücker, H., Rother, N., Schupp, J., von Gostomski, C. B., Böhm, A., Fendel, T., . . . Vallizadeh, E. (2016). Forced migration, arrival in Germany, and first steps toward integration. *DIW Economic Bulletin, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin, 6*(48), 541-556.

Cerna, L. (2019). *Refugee education: Integration models and practices in OECD countries*. Paris: OECD.

Connor, P. (2010). Explaining the Refugee Gap: Economic Outcomes of Refugees versus Other Immigrants. *Journal of Refugee Studies*, 23(3), 377-397.

Correa-Velez, I., & Onsando, G. (2009). Educational and occupational outcomes amongst African men from refugee backgrounds living in urban and regional Southeast Queensland. *Australasian Review of African Studies, 30*(2), 114-127.

Correa-Velez, I., Barnett, A. G., & Gifford, S. (2015). Working for a better life: Longitudinal evidence on the predictors of employment among recently arrived refugee migrant men living in Australia. *International Migration, 53*(2), 321-337.

Cunha, F., & Heckman, J. (2007). The technology of skill formation. *American Economic Review*, *97*(2), 31-47.

Dawkins, J. (1988). *Higher education: A policy statement*. Canberra: Australian Government Publishing Service.

Delaporte, I. & Piracha, M. (2018). Integration of humanitarian migrants into the host country labour market: evidence from Australia. *Journal of Ethnic and Migration Studies*, 44 (15), 2480-2505.

Department of Education Skills and Employment. (2019). *2018 student summary tables*. Canberra: Department of Education, Skills and Employment

Department of Employment Education and Training (DEET). (1990). *A fair chance for all: National and institutional planning for equity in higher education*. Canberra: Australian Government Publishing Service.

Department of Home Affairs (DHA). (2019). *Australia's Offshore Humanitarian Program: 2018–19*. Canberra, ACT: Commonwealth of Australia.

Department of Home Affairs (DHA). (2020). Retrieved from https://immi.homeaffairs.gov.au/what-we-do/skilled-migration-program on 18 May 2020.

Desjardins, R., & Lee, J. (2016). *Earnings and employment benefits of adult higher education in comparative perspective: Evidence based on the OECD Survey of Adult Skills (PIAAC)*. Los Angeles: UCLA.

Department of Social Services (DSS). (2017). *Building a New Life in Australia (BNLA): The Longitudinal Study of Humanitarian Migrants — Findings from the first three waves*. Canberra: Department of Social Services.

Earnest, J., Joyce, A., De Mori, G., & Silvagni, G. (2010). Are universities responding to the needs of students from refugee backgrounds? *Australian Journal of Education, 54*(2), 155-174.

Earnest, J., Mansi, R., Bayati, S., Earnest, J. A., & Thompson, S. C. (2015). Resettlement experiences and resilience in refugee youth in Perth, Western Australia. *BMC research notes, 8*(1), 236.

Edwards, B., Smart, D., De Maio, J., Silbert, M., & Jenkinson, R. (2017). Cohort Profile: Building a New Life in Australia (BNLA): the longitudinal study of humanitarian migrants. *International Journal of Epidemiology*, 47(1), 20-20h.

Forrest, W., Baxter, J., & Perales, F. (2017). Continuity or change? Labour force participation amongst humanitarian migrant women. *Annual Conference of The Australian Sociological Association*, University of Western Australia, Perth, Australia, 27-30 November 2017.

Gateley, D. E. (2015). A policy of vulnerability or agency? Refugee young people's opportunities in accessing further and higher education in the UK. *Compare: A Journal of Comparative and International Education*, 45(1), 26-46.

Grattan Institute. (2018). *Demand driven facts and figures*. Carlton, VIC: Grattan Institute.

Harris, A., Spark, C., & Ngum Chi Watts, M. C. (2015). Gains and losses: African Australian women and higher education. *Journal of Sociology, 51*(2), 370-384.

Harris, V., & Marlowe, J. (2011). Hard Yards High Hopes: The educational challenges of African refugee university students in Australia. *International Journal of Teaching, Learning and Higher Education 23*(2), 186-196

Hartley, L., Fleay, C., Baker, S., Burke, R., & Field, R. (2018*). People seeking asylum in Australia: Access & support in higher education*. Perth, Western Australia: National Centre for Student Equity in Higher Education, Curtin University.

Harvey, A., Burnheim, C., & Brett, M. (Eds.). (2016). *Student Equity in Australian Higher Education: Twenty-five years of A Fair Chance for All*. Singapore: Springer.

Hatoss, A., & Huijser, H. (2010). Gendered barriers to educational opportunities: Resettlement of Sudanese refugees in Australia. *Gender Education, 22*(2), 147-160.

Heckman, J. J., Humphries, J. E., & Veramendi, G. (2016). *Returns to education: The causal effects of education on earnings, health and smoking*. Cambridge, MA: National Bureau of Economic Research.

Hugo, G. (2011). *A significant contribution: the economic, social and civic contributions of first and second generation humanitarian entrants: summary of findings*: Commonwealth of Australia, DIAC.

Hugo, G. (2014). The economic contribution of humanitarian settlers in Australia. *International Migration, 52*(2), 31-52.

Ibrahim, H., & Hassan, C. Q. (2017). Post-traumatic stress disorder symptoms resulting from torture and other traumatic events among Syrian Kurdish refugees in Kurdistan Region, Iraq. *Frontiers in psychology, 8*, 241. doi: 10.3389/fpsyg.2017.00241.

Kogan, I. (2010). New Immigrants- Old Disadvantage Patterns? Labour Market Integration of Recent Immigrants into Germany. *International Migration*, 49(1), 91-117.

Joyce, A., Earnest, J., De Mori, G., & Silvagni, G. (2010). The experiences of students from refugee backgrounds at universities in Australia: Reflections on the social, emotional and practical challenges. *Journal of Refugee Studies, 23*(1), 82-97.

Jungblut, J., Vukasovic, M., & Steinhardt, I. (2020). Higher education policy dynamics in turbulent times–access to higher education for refugees in Europe. *Studies in Higher Education, 45*(2), 327-338. doi:10.1080/03075079.2018.1525697

Kemp, D., & Norton, A. (2014). *Review of the demand driven funding system report*. Canberra: Minister for Education, Parliament House.

Kong, E., Harmsworth, S., Rajaeian, M. M., Parkes, G., Bishop, S., AlMansouri, B., & Lawrence, J. (2016). University Transition Challenges for First Year Domestic CALD Students from Refugee Backgrounds: A Case Study from an Australian Regional University. *Australian Journal of Adult Learning, 56*(2), 170-197.

Mangan, D., & Winter, L. A. (2017). (In) validation and (mis) recognition in higher education: the experiences of students from refugee backgrounds. *International Journal of Lifelong Education, 36*(4), 486-502.

Manhica, H., Berg, L., Almquist, Y. B., Rostila, M., & Hjern, A. (2019). Labour market participation among young refugees in Sweden and the potential of education: a national cohort study. *Journal of Youth Studies, 22*(4), 533-550.

Mestan, K. (2016). Access, achievement and outcomes among students from non-English speaking backgrounds. In A. Harvey, C. Burnheim, & M. Brett (Eds.), *Student equity in Australian higher education* (pp. 125-141): Springer.

Morrice, L. (2009). Journeys into higher education: The case of refugees in the UK. *Teaching in Higher Education, 14*(6), 661-672.

The Multicultural Youth Advocacy Network (MYAN). (2016). *National Youth Settlement Framework*: The Multicultural Youth Advocacy Network (Australia).

Naidoo, L. (2015). Educating refugee-background students in Australian schools and universities. *Intercultural Education, 26*(3), 210-217.

Naidoo, L. (2019). Traversing the terrain of higher education: experiences of refugee youth on the inside. *International Journal of Inclusive Education*, 1-14.

National Board of Employment Education and Training (NBEET). (1996). *Equality, diversity and excellence: Advancing the national higher education equity framework*. Canberra: Australian Government Publishing Service.

Naylor, R., Terry, L., Rizzo, A., Nguyen, N., & Mifsud, N. (2019). Structural Inequality in Refugee Participation in Higher Education. *Journal of Refugee Studies, fez077*.

Norton, A., & Cakitaki, B. (2016). *Mapping Australian higher education 2016*. Carlton, VIC: Grattan Institute.

O'Rourke, D. (2011). Closing pathways: refugee-background students and tertiary education. *Kotuitui: New Zealand Journal of Social Sciences Online, 6*(1-2), 26-36.

Organisation for Economic Co-operation and Development (OECD). (2016). *Making Integration Work: Refugees and others in need of protection*. Paris: OECD.

Organisation for Economic Co-operation and Development (OECD). (2019a). *OECD reviews of migrant education: The road to integration education and migration*. Paris: OECD.

Organisation for Economic Co-operation and Development (OECD). (2019b). *International Migration Outlook 2019*. Paris: OECD Publishing.

Parliament of Australia. (2016). *Regugee resettlement to Australia: What are the facts?* Canberra: Department of Parliamentary Services.

Parliament of Australia. (2017). *Australia's Humanitarian Program: a quick guide to the statistics since 1947*. Available online at: https://parlinfo.aph.gov.au/parlInfo/download/library/prspub/3599552/upload_binary/3599552.pdf

Productivity Commission. (2019). *The Demand Driven University System: A Mixed Report Card*. Canberra: The Productivity Commission.

Quality Indicators for Learning and Teaching (QILT). (2018). 2017 Graduate Outcomes Survey: National report. The Quality Indicators for Learning and Teaching.

Ramsay, G., & Baker, S. (2019). Higher education and students from refugee backgrounds: A meta-scoping study. *Refugee Survey Quarterly, 38*(1), 55-82.

Ranasinghe, R., Chew, E., Knight, G., & Siekmann, G. (2019). *School-to-work pathways*. Adelaide: National Centre for Vocational Education Research (NCVER).

Seck, M. M. (2015). Female West African immigrants in the United States: Challenges and empowering strategies. *Social Development Issues, 37*(2), 68-79.

Sherrell, H. (2017). *Settling better: Reforming refugee employment and settlement services*. Sydney: Centre for Policy Development.

Sladek, R. M., & King, S. M. (2016). Hidden from view? Bringing refugees to the forefront of equity targets in Australian higher education. *International Studies in Widening Participation, 3*(1), 68-77.

Slewa-Younan, S., Mond, J. M., Bussion, E., Melkonian, M., Mohammad, Y., Dover, H., . . . Jorm, A. F. (2015). Psychological trauma and help seeking behaviour amongst resettled Iraqi refugees in attending English tuition classes in Australia. *International Journal Mental Health Systems, 9*(5). doi:https://doi.org/10.1186/1752-4458-9-5

Smart, D., De Maio, J., Rioseco, P., & Edwards, B. (2017). *English skills, engagement in education, and entrance into employment of recently arrived humanitarian migrants (Building a New Life in Australia Research Summary)*. Melbourne: Australian Institute of Family Studies.

Stevenson, J., & Baker, S. (2018). *Refugees in Higher Education: Debate, Discourse and Practice*: Emerald Publishing Limited.

Streitwieser, B., Loo, B., Ohorodnik, M., & Jeong, J. (2018). *Access to higher education for refugees: A Review of Interventions in North America and Europe*. Washington, D. C.: Graduate School of Education & Human Development, the George Washington University.

Szkudlarek, B. (2019). *Engaging business in refugee employment: The employers' perspective*. Sydney: the University of Sydney.

Terry, L., Naylor, R., Nguyen, N., & Rizzo, A. (2016). *Not there yet: An investigation into the access and participation of students from humanitarian refugee backgrounds in the Australian Higher Education system*. Perth: National Centre for Student Equity in Higher Education.

Tomaszewski, W., Kubler, M., Perales, F., Western, M., Rampino, T., & Xiang, N. (2020, forthcoming). *Review of identified Equity Groups*. Brisbane: ISSR, UQ prepared for the Australian Department of Education and Training.

Tomaszewski, W., Perales, F., Xiang, N., & Kubler, M. (2018). *Beyond graduation: Long-term socioeconomic outcomes amongst equity students*. Perth: the National Centre for Student Equity in Higher Education (NCSEHE).

Tudge, A. (2020). *More class hours available to help migrants learn English*. Available online at: https://minister.homeaffairs.gov.au/alantudge/Pages/More-class-hours-available-to-help-migrants-learn-English.aspx

Turner, S. (2000). Vindicating masculinity: The fate of promoting gender equality. *Forced Migration Review (English Edition)*. (9), 8-9.

Tynan, M., Gralton, E., McCredden, J., Mihalic Tynan, T., Kan, M., & Kennedy, R. (2019). *Evaluation of the Adult Migrant English Program New Business Model*. Available online at https://immi.homeaffairs.gov.au/amep-subsite/Files/amep-evalution-new-business-model.pdf

United Nations High Commissioner for Refugees (UNHCR). (2018). *Global trends: Forced displacement in 2018*: United Nations High Commissioner for Refugees.

United Nations High Commissioner for Refugees (UNHCR). (2019). *Refugee education 2030: A strategy for refugee inclusion*: United Nations High Commissioner for Refugees.

Wilkins, R., & Lass, I. (2018). *Household, Income and Labour Dynamics in Australia Survey: selected findings from Waves 1 to 16: the 13th Annual Statistical Report of the HILDA Survey*. Melbourne: Melbourne Institute of Applied Economic and Social Research.

Wooldridge, J. M. (2010). Econometric Analysis of Cross Section and Panel Data. MIT Press.

Appendices

Appendix A – Details on the data sources and study methodology

The Australian Census and Migrants Integrated Dataset

ACMID 2016 is a unique, recently released, administrative dataset which contains 2016 Australian Census of Population and Housing data from the ABS linked to Permanent Migrant Settlement Data from DSS (ABS, 2018b). The scope of the population in ACMID 2016 is people who responded to the 9 August 2016 Census of Population and Housing and who had a permanent migrant settlement record with a date of arrival between 1 January 2000 and 9 August 2016. About 88% of 2,166,014 records from the Permanent Migrant Data were linked to the 2016 Census data using a combination of deterministic and probabilistic matching methodologies. The ABS assessed the data linkage accuracy as "very high". Each linked record was then assigned a weight between 1.0 and 3.2 to account for non-linkage of permanent migrant records with Census data and to approximate known permanent-migrant population totals. This process effectively re-established the original size of the in-scope population (*n*=2,166,014). More information on the linkage, weighting and quality of the ACMID 2016 is available elsewhere (see ABS, 2018b).

The Census component of ACMID brings in data on, amongst others, individuals' highest level of education attained and type of educational institution attended, whereas the settlement component brings in key insights on individuals' visa subclass (humanitarian, skilled, family…). Because ACMID is a population-level dataset, it allows detailed analyses of small population groups—such as humanitarian migrants and subgroups of these, something which is not possible using traditional social surveys.

Data for the local-born population was obtained from the 2016 Census database, as the ACMID sample is restricted to migrants. Data from ACMID and the Census were extracted using the ABS TableBuilder (ACMID) and Census TableBuilder (Census) tools. These tools allow the design and extraction of complex tables. To protect the confidentiality of ABS data, the TableBuilder tools apply a randomisation procedure, called perturbation, which randomises counts in cells of a table so that individuals cannot be identified (ABS, 2018c). A consequence of this procedure is that the extracted counts can vary slightly across tables. Given the focus on higher education outcomes and for consistency with the BNLA analyses, the analyses of ACMID and Census data are confined to the population aged 18 to 64 years.[xii]

The following information was extracted from the ACMID and Census datasets using TableBuilder: age, gender, type of institution attending and highest educational attainment. Extracting age and gender allows controlling for differences in the demographic composition of the different populations when comparing educational participation and attainment. Information on age is relevant because participation in tertiary education varies widely between the ages of 18 and 64. Information on gender is important because there are differences in patterns of educational participation and attainment by gender (e.g., male overrepresentation in VET and female overrepresentation at University). Institution attending and educational attainment are used to derive the outcomes of interest (namely, higher education participation and higher education attainment). Educational attainment, attendance, age and gender were extracted from ACMID for migrant populations and from the Census for the Australian-born population.[xiii]

The main difference between the populations targeted by ACMID and BNLA is the timeframe within which the in-scope humanitarian migrants first arrived in Australia. As explained before, in ACMID, respondents' year of arrival ranged between 1 January 2000 and 9 August 2016, whereas in BNLA it was mostly the year 2013. To establish more direct comparisons across data sources, information on humanitarian migrants' year-of-arrival information was also extracted from ACMID, following the same procedures outlined in an earlier section of this report.

The *migrant sample* used in the analysis consists of all (weighted) ACMID records from individuals who were born outside Australia, aged 18 to 64 years, on a humanitarian, family or skilled visa and

who had valid information on higher education participation and attainment. The *Australian-born sample* used in the analysis consists of all records from the 2016 Census from individuals who were born in Australia, aged 18 to 64 years and who had valid information on higher education participation and attainment. The ACMID and Census data were separately extracted using their respective ABS TableBuilder tools and subsequently combined into a single dataset to conduct the analyses.[xiv] This resulted in the group sizes displayed in

Table 1, which constitute the analytic sample for the main analysis presented in the body of the report. Additional analyses reported in Appendix C were based on separate data extractions with different samples sizes, as reported under the respective tables.

Measures

Two outcome variables are operationalized in the ACMID/Census data: higher education participation and higher education attainment. The key variables on educational participation and attainment in ACMID were sourced from the 2016 Census, which allowed comparisons between migrants and Australian-born individuals who participated in the 2016 Census.

Higher education participation. Information on higher education participation was sourced from the 2016 Census variable "type of educational institution attending". This is based on answers to the question *"What type of educational institution is the person attending?"*, with respondents being asked to select amongst a set of predetermined response options (Figure 9). Higher education participation is operationalized as a binary variable taking the value one for respondents who selected "university or other higher education institution" and the value zero for respondents who selected any of the other responses.[xv]

Higher education attainment. Information on higher education attainment was sourced from the variable "level of highest educational attainment". Such information was derived from several Census questions. The first question (Figure 10) asked about the highest year of school someone had completed. The second question (Figure 11) asked whether the person had completed any post-school educational qualification. Those who responded "yes" were subsequently asked to answer questions about the level of the highest qualification obtained (

Figure 12). The open-ended responses were coded by the ABS to level-of-education and field-of-education categories according to the 2011 Australian Standard Classification of Education. This report defines higher education attainment as having obtained a Bachelor or higher-degree qualification (value one), or not (value zero).

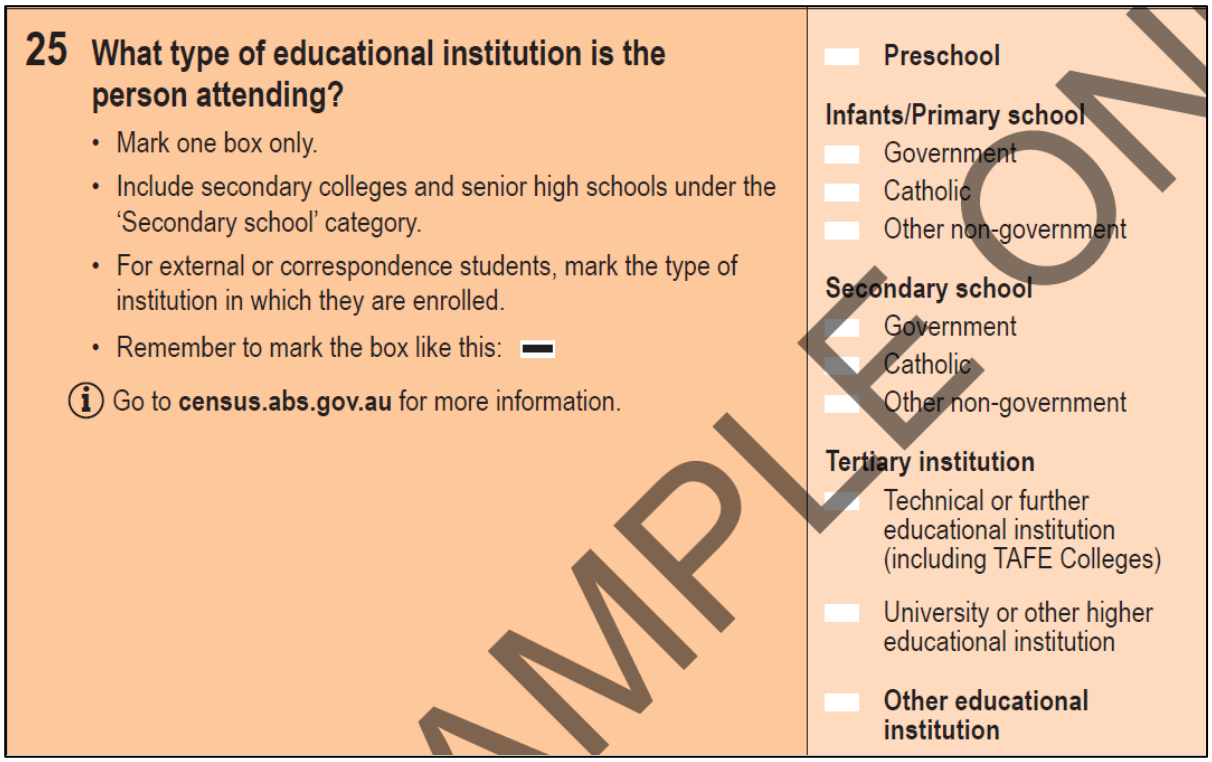
Several variables were extracted from the ACMID and Census datasets to contextualise the analyses. These include the following:

- a focal population type variable separating individuals from humanitarian, family and skilled migration schemes and the Australian-born population;
- a set of dummy variables capturing age groups featuring fine detail on life-course stages where higher education participation is typical and less detail in life-course stages where it is not (18 years/19 years/20 years/21 years/22 years/23 years/24 years/25-29 years/30-34 years/35-39 years/40-44 years/45-54 years/55-64 years); and
- a dummy variable capturing whether the respondent is a woman (yes/no).

Analytic approach

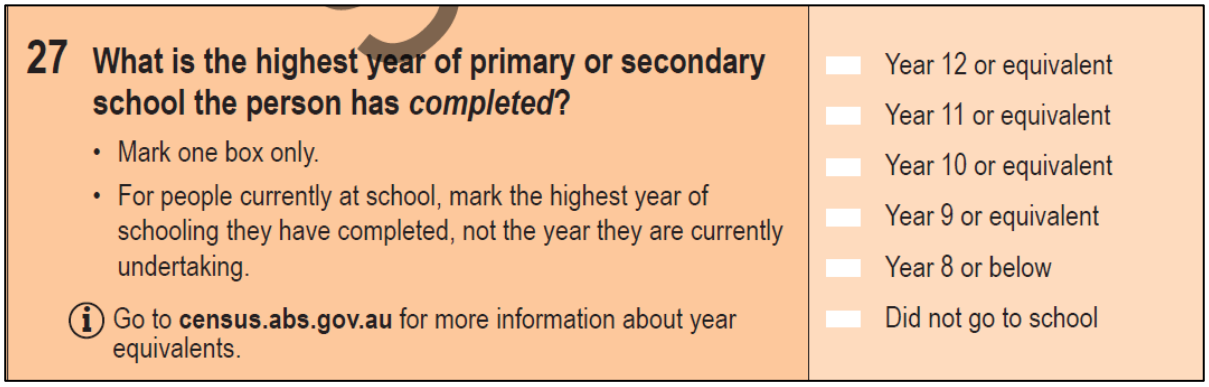
The key objective of the analyses of ACMID/Census data is to explore differences in higher education participation and higher education attainment rates between humanitarian migrants on the one hand and other migrants and the Australian-born population on the other. To shed additional light on the overall results, group differences in higher education participation/attainment over the age distribution and by gender are also inspected. These analyses rely on descriptive statistics.

Figure 9. Question 25, ABS Census Household Form, 2016



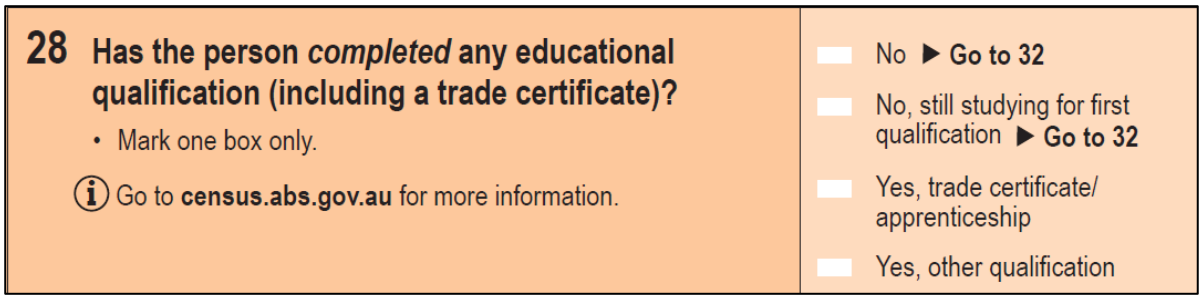
Notes: The full 2016 Census form can be accessed from https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Main%20Features802016/$FILE/2016%20Census%20Sample%20Household%20Form.pdf.

Figure 10. Question 27, ABS Census Household Form, 2016



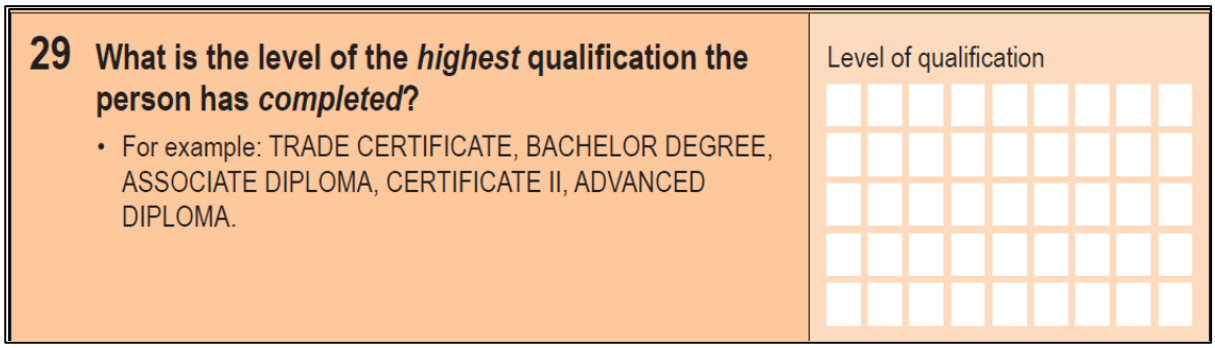
Notes: The full 2016 Census form can be accessed from https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Main%20Features802016/$FILE/2016%20Census%20Sample%20Household%20Form.pdf.

Figure 11. Question 28, ABS Census Household Form, 2016



Notes: The full 2016 Census form can be accessed from https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Main%20Features802016/$FILE/2016%20Census%20Sample%20Household%20Form.pdf.

Figure 12. Question 29, ABS Census Household Form, 2016



Notes: The full 2016 Census form can be accessed from https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Main%20Features802016/$FILE/2016%20Census%20Sample%20Household%20Form.pdf.

Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants

The second source of data used in this project is BNLA: an internationally distinctive, longitudinal study of humanitarian migrants in Australia (Edwards et al., 2017). This is used to answer Research Questions (2) and (3). BNLA was devised as a unique data resource that could *"provide a broad evidence base to assist policy development and program improvement for humanitarian migrants"* especially by increasing *"the knowledge base around factors that aid successful settlement and identify barriers that hinder positive outcomes"* (AIFS, 2018, p.2). The BNLA study is managed by the National Centre for Longitudinal Data within DSS, with AIFS being responsible for the study's design, administration and processing and Colmar Brunton Social Research for the fieldwork.

BNLA has interviewed a sample of 2,399 humanitarian migrants from 1,510 households within Australia on an annual basis between 2013/2014 (Wave 1) and 2017/2018 (Wave 5). In Waves 1, 3 and 5, data were collected through a face-to-face interview in the respondent's household, while in Waves 2 and 4 they were collected through a shorter telephone interview. All survey materials were translated into the respondents' mother-tongue or preferred languages and bilingual interviewers and interpreters were engaged as required. The study's initial response rate was ~55%, with the subsequent wave-on-wave response rates being ~80%.

The in-scope population for the BNLA study comprises adult humanitarian migrants settling in Australia with a permanent visa between May and October 2013, with the sample selected using complex probabilistic methods (AIFS, 2018). The study collects information from two types of humanitarian migrants: (i) "offshore migrants" who received a permanent humanitarian visa overseas and arrived in Australia between May 2013 and December 2013 and (ii) "onshore migrants" who sought asylum after arriving in Australia and were subsequently granted a permanent humanitarian visa between May 2013 and December 2013 (AIFS, 2018, p.3). The

onshore group includes migrants within the following visa schemes: Refugee visa (subclass 200), In-Country Special Humanitarian visa (subclass 201), Global Special Humanitarian visa (subclass 202), Emergency Rescue visa (subclass 203) and Woman at Risk visa (subclass 204). The offshore group includes migrants who arrived in Australia by boat without a valid visa and those who applied for asylum after having arrived on a valid visa.

The study's sampling frame was the Settlement Database maintained by DSS. The migrating unit (which comprises all individuals who migrated to Australia as part of the same migration application as the Principal Applicant) was the primary sampling unit. A Principal Applicant (PA) was then selected as the main project participant. The PA was the person on the visa application upon which the approval to immigrate was based and had to be at least 18 years of age to be eligible for the study. A Secondary Applicant (SA) is any other migrating-unit member named on the visa application (e.g., partners and children) aged 15 years and over and residing with the PA. This includes an SA Adolescent subsample comprising respondents who were between 15 and 17 years of age and for whom a PA or SA was their parent/guardian. The study follow-up rules dictate that SAs will continue participating in later waves of the study even if they move to a different household than the PA.

The key benefit of the BNLA data is that they provide more granular information than the Census about the educational destinations of humanitarian migrants in Australia, including engagement with study or training in Australia, specific courses and educational levels and plans to study in the future. They are also richer in their ability to capture humanitarian migrants' socio-demographic characteristics that may be correlated with their level of engagement with the Australian education system. The individual-level analyses of the BNLA data complement those of ACMID by providing more granular evidence of associations between the socio-demographic circumstances and the educational experiences of humanitarian migrants in Australia.

Our analyses of BNLA data include responding individuals of working age (18 to 64 years). Observations from individuals outside this age range and/or who are part of the Adolescent SA subsample (*n*=8,668 person-year observations) are excluded. Person-year observations with missing data in any of the explanatory variables are also excluded from estimation (*n*=2,109 person-year observations).

Measures

The richness of the BNLA data is exploited to derive a number of outcome variables measuring humanitarian migrants' engagement with the Australian education system. First, a series of binary variables capturing whether at the time of the interview the respondent is studying a course at an Australian educational institution are developed. Importantly, all of these variables exclude English-language courses. The variables take the value 1 if the respondent is engaged in a course and the value 0 otherwise. Consideration is given to both (i) participation in *any* type of course and (ii) participation in specific types of courses. The latter involves differentiating between (a) University degrees, (b) trade or technical qualifications (1-3 years) and paid traineeships and (c) other training/qualifications—including work experience, secondary school (grades 7-12) and short courses (1-6 weeks).

Similarly, a series of binary outcome variables denoting whether at the time of the interview the respondent had obtained an Australian qualification were developed (1="Yes", 0="No"). Again, measures are developed for having completed any type of qualification, a University degree, a trade or technical qualification and any other training/qualification. Finally, a binary outcome variable capturing whether during the interview the respondent reported planning to do any study in Australia in the future, other than English-language classes, was created (1="Yes", 0="No"). All of the outcomes variables are available in BNLA Waves 1 to 5, except for the variable capturing plans for further study—which is only asked of Principal Applicants in Waves 1, 3 and 5.

BNLA contains rich information on respondents' socio-demographic circumstances, which allows creating measures for a range of factors known to affect individuals' decisions concerning their economic and education participation. These include:

- a binary variable capturing whether the respondent is a woman (yes/no);
- a continuous measure of respondent's age (expressed in years) and its square (to capture non-linear relationships);
- a variable denoting respondent's self-assessed spoken-English proficiency (not at all/not well/well/very well), treated as continuous;
- a variable capturing respondent's self-assessed general health (very poor/poor/fair/good/very good/excellent), also treated as continuous;
- a set of dummy variables capturing the respondent's highest educational qualification prior to arriving in Australia (no qualifications/some schooling/trade qualification/degree qualification);
- a set of dummy variables capturing respondent's partnership status (married or partnered/divorced, separated or widowed/single);[xvi]
- a continuous measure of the number of children in the respondent's household;
- a dummy variable differentiating between migrant types (onshore/offshore);
- a dummy variable capturing the location of the respondent's area of residence (regional /urban);
- a dummy variable capturing respondent's employment status (employed/not employed);
- a dummy variable identifying whether the respondent was ever in paid work prior to arriving in Australia (yes/no);
- a set of dummy variables capturing the length of time the respondent has been in Australia (<1 year/1 year/2 years/3 years/4+ years);
- and—finally—a set of dummy variables separating respondents by their countries of birth (Iraq, Afghanistan, Iran, Myanmar, other country).

Analytic approach

The initial BNLA analyses will rely on descriptive statistics. These analyses are used to show the distribution of all of the outcome and explanatory variables in the data, as well as trends over time in the outcome variables. Our multivariate analyses of BNLA data aim at establishing the associations between the socio-demographic traits of humanitarian migrants described in the previous section and humanitarian migrants' interactions with the Australian education system. Because BNLA is a panel dataset in which each respondent is observed on up to 5 occasions, models that take into account the nesting of observations within the same individuals are fitted—more specifically, random-effect logistic regression models. These models account for the multilevel structure of the panel data and estimate the coefficients on the explanatory variables using a weighted average of the between and within effects (Wooldridge, 2010). The analyses use *logistic* random-effect regression models because the outcomes capturing education participation are all dichotomous variables. Formally, the models take the following form:

$$log\left(\frac{pr(P_{it}=1)}{1-pr(P_{it}=1)}\right) = \alpha + (\boldsymbol{\beta}\boldsymbol{S}_{it}) + u_i \quad (1)$$

where subscripts *i* and *t* stand for individual and time period, respectively; *P* is a binary measure capturing participation in or completion of a certain education course in Australia, or having plans to study further in Australia; *S* represents the set of socio-demographic variables introduced before*; α* is a model intercept; and *β* is the vector of coefficients of interest to be estimated; and *u* is a person-specific random intercept (i.e., a random effect).

Appendix B – Additional tables and figures

Table 8. Higher education participation rates, by age

Age group	Migrants [a]			Australian born [b]
	Humanitarian %	Family %	Skilled %	%
18 years	22.0	25.3	47.1	27.8
19 years	34.3	38.0	65.3	40.5
20 years	35.8	38.7	66.5	40.3
21 years	29.7	33.2	60.0	35.5
22 years	26.4	26.1	47.1	27.8
23 years	22.6	18.5	35.1	20.6
24 years	18.0	13.2	25.1	15.6
25-29 years	11.1	6.4	9.7	9.8
30-34 years	6.8	4.6	5.4	5.9
35-39 years	5.7	4.2	4.9	4.3
40-44 years	4.3	3.3	4.2	3.2
45-54 years	2.3	2.2	3.0	2.0
55-64 years	1.0	0.9	1.6	0.8
All ages, combined	10.0	5.7	9.1	8.2

Notes: [a] Sourced from ACMID 2016 (excludes Australian born) using TableBuilder in December 2019. [b] Sourced from the 2016 Census using TableBuilder in December 2019. Permanent migrants and Australian born aged 18-64 years *n* = 143,622 humanitarian migrants, 534,155 family migrants, 984,038 skilled migrants, and 8,437,889 Australian-born individuals.

Table 9. Higher education attainment rates, by age

Age	Migrants [a]			Australian born [b]
	Humanitarian %	Family %	Skilled %	%
18 years	0.2	0.1	0.3	0.1
19 years	0.8	0.6	0.5	0.3
20 years	1.3	1.7	2.7	1.3
21 years	3.0	5.2	13.4	7.4
22 years	6.1	12.0	27.5	16.7
23 years	9.9	19.8	39.5	24.1
24 years	12.3	26.8	50.4	28.0
25-29 years	16.3	41.6	65.4	30.9
30-34 years	17.9	47.6	73.7	31.7
35-39 years	16.0	45.8	71.8	31.6
40-44 years	13.5	41.6	63.3	29.2
45-54 years	12.2	32.2	51.4	23.7
55-64 years	11.5	22.8	45.6	22.1
All ages, combined	12.7	38.4	60.4	24.3

Notes: [a] Sourced from ACMID 2016 (excludes Australian born) using TableBuilder in December 2019. [b] Sourced from the 2016 Census using TableBuilder in December 2019. Permanent migrants and Australian born aged 18-64 years. *n* = 143,622 humanitarian migrants, 534,155 family migrants, 984,038 skilled migrants, and 8,437,889 Australian-born individuals.

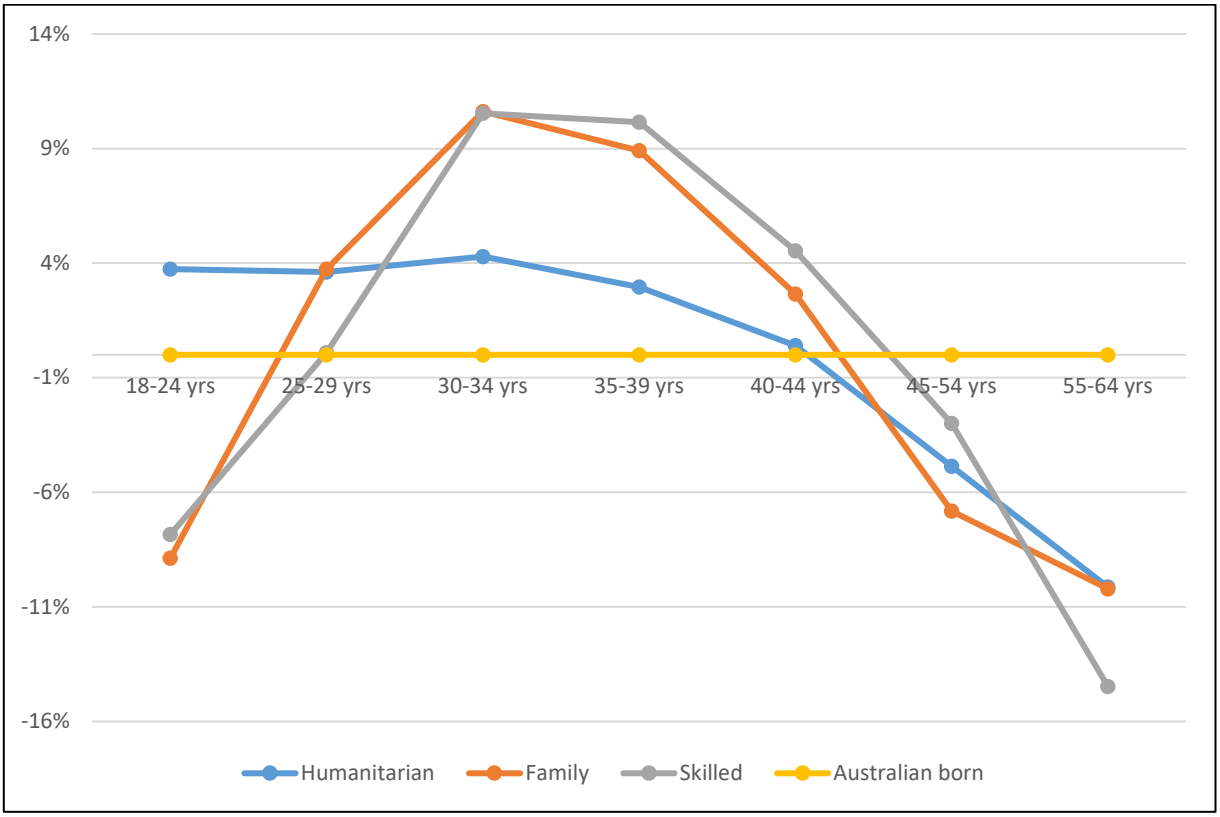
Table 10. Odds ratios from random-effect logistic regression models with gender interactions

	Currently studying: Any course [a]	Attained a qualification: Any course [a]	Plans to study [b]
Model number	(A1)	(A2)	(A3)
Main effects			
Woman	0.21	0.21	0.30
Already completed Australian qualification	0.24***		1.32
Current student in Australia			2.33***
Age	0.99	1.19	1.01
Age squared	1.00	1.00	1.00
Spoken English proficiency (1-4)	2.29***	3.24***	1.55***
General health (1-6)	1.11**	1.11	0.91**
Education: None	0.42**	0.00***	0.41***
Education: Some schooling	0.60**	0.00***	0.45***
Education: Trade qualification	0.72	0.01***	0.49**
Marital status: Divorced, separate or widowed	1.80	7.87*	1.01
Marital status: Single, never married	1.40	1.29	0.91
Number of children in the household	1.04	0.65**	1.09
Onshore migrant	0.61**	0.04***	0.98
Lives in a regional area	1.62**	0.26*	1.20
Currently in paid employment	0.55***	3.00***	1.07
Ever in paid employment pre-arrival	0.73*	2.24	0.85
Time in Australia: <1 year	0.52***	0.00***	2.35***
Time in Australia: 1 year	0.93	0.03***	1.18
Time in Australia: 3 years	0.88	10.41***	0.67
Time in Australia: 4+ years	0.74	134.47***	0.64***
Country of origin: Afghanistan	1.35	7.37***	1.23
Country of origin: Iran	2.84***	65.41***	1.81**
Country of origin: Myanmar	6.27***	93.80***	0.73
Country of origin: Other	1.77**	42.92***	1.39*
Interaction effects			
Woman interacted with…			
Already completed Australian qualification	0.45***		0.64
Current student in Australia			0.69
Age	1.11	1.19	1.05
Age squared	1.00	1.00	1.00
Spoken English proficiency (1-4)	1.12	0.75	1.32
General health (1-6)	1.01	0.82	1.06
Education: None	0.95	0.18	0.43

Education: Some schooling	0.69	0.73	1.41
Education: Trade qualification	0.85	8.80	2.53
Marital status: Divorced, separate or widowed	0.71	0.17	1.27
Marital status: Single, never married	3.15***	3.63	1.20
Number of children in the household	0.91	1.35	0.86
Onshore migrant	1.44	1.77	0.47
Lives in a regional area	0.59	2.96	1.11
Currently in paid employment	2.86***	2.50	0.45**
Ever in paid employment pre-arrival	1.18	1.40	1.81**
Time in Australia: <1 year	0.78	9.26	0.61*
Time in Australia: 1 year	0.61**	0.74	1.95
Time in Australia: 3 years	0.96	4.83**	1.63
Time in Australia: 4+ years	1.38	3.28*	1.54
Country of origin: Afghanistan	1.08	0.37	1.79
Country of origin: Iran	0.66	0.02***	2.21*
Country of origin: Myanmar	0.61	0.19	0.60
Country of origin: Other	0.95	0.13*	1.42
n (observations)	8,492	8,492	3,361
n (groups)	2,109	2,109	1,461
Pseudo R^2	0.04	0.37	0.01

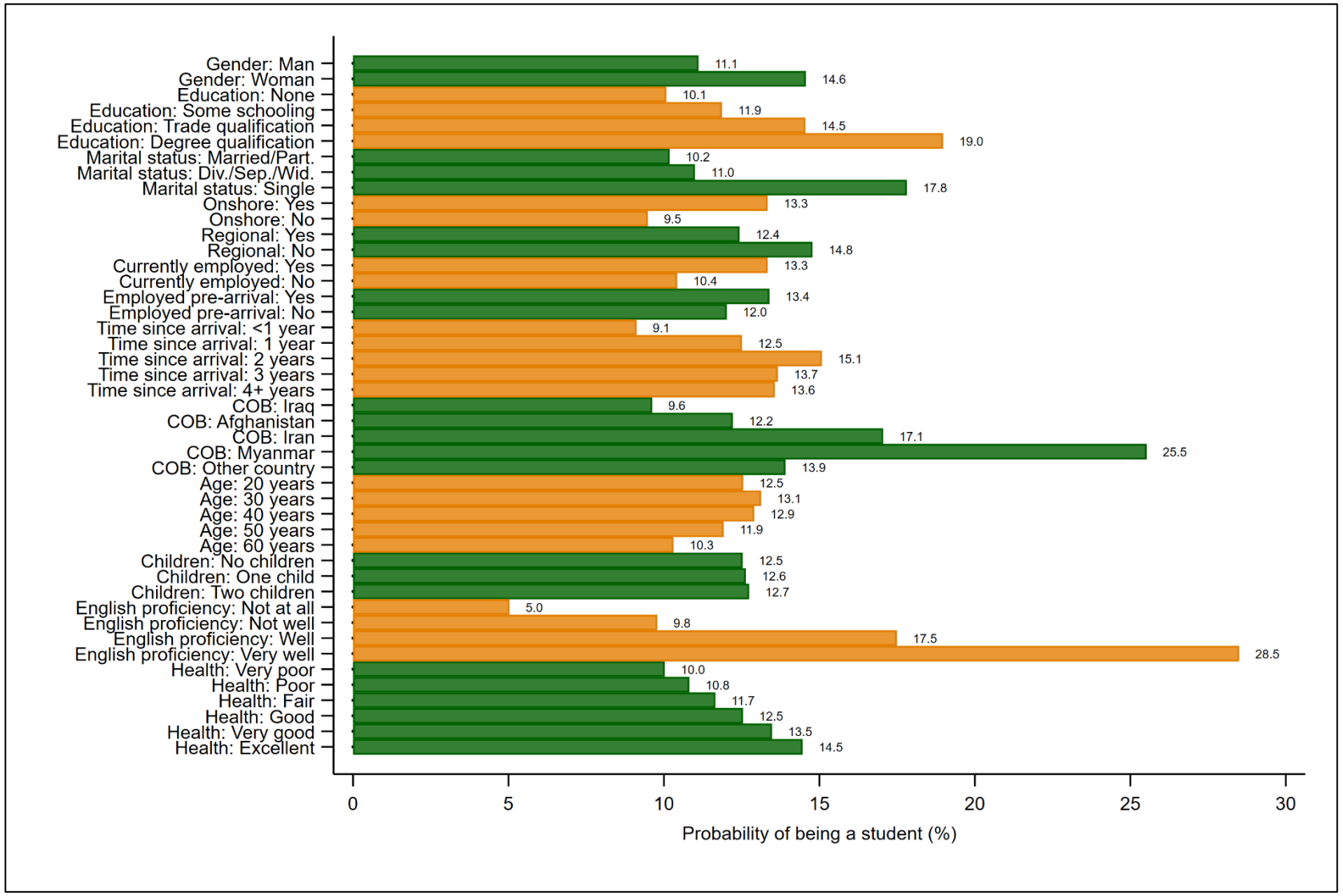
Notes: [a] BNLA, Waves 1-5 (2013-2017). [b] BNLA, Waves 1 (2013), 3 (2015) and 5 (2017), Primary Applicants only. Statistical significance: * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Figure 13. Deviation of the migrant groups' age distributions from the age distribution of the Australian-born population



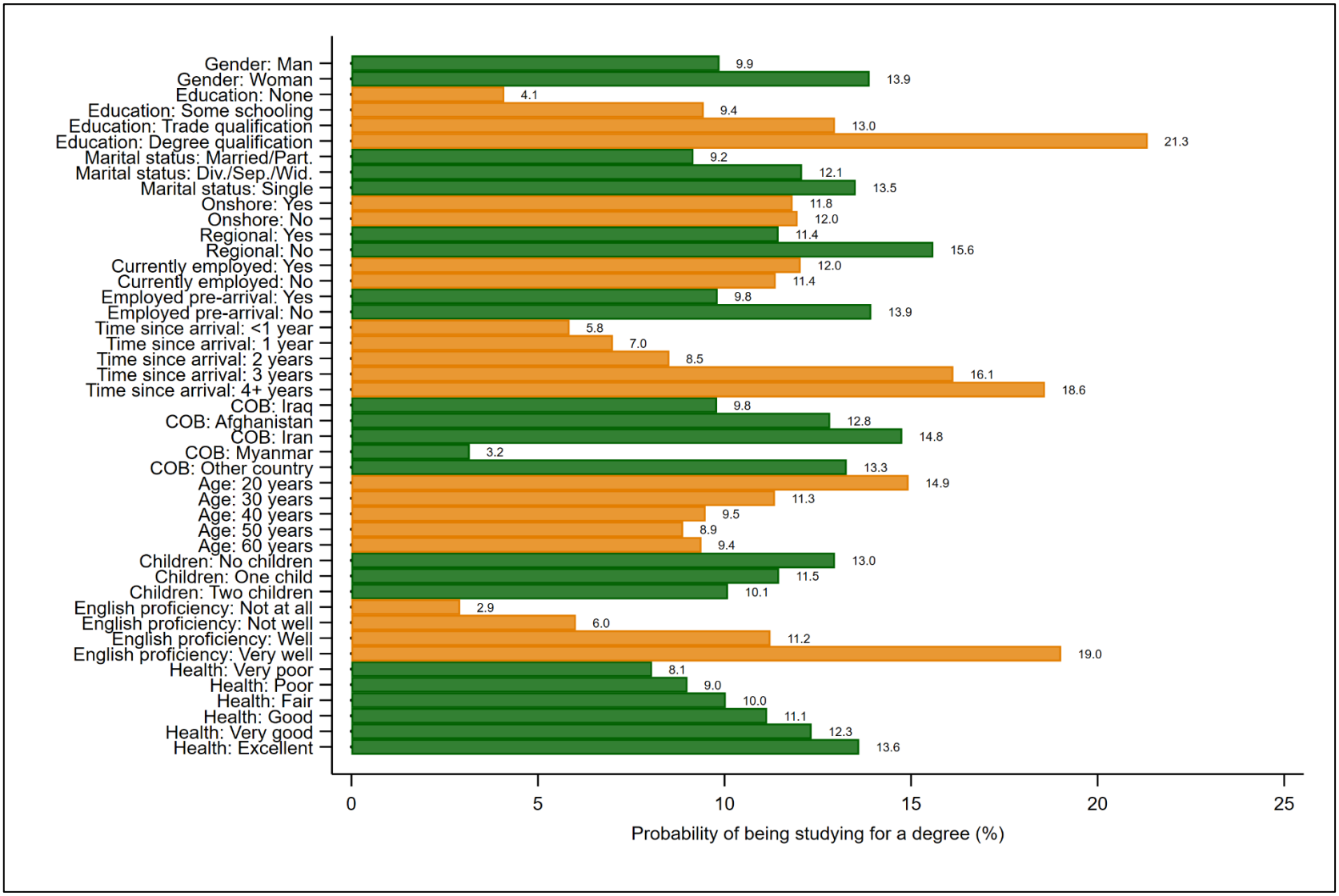
Notes: Migrant data sourced from ACMID 2016 (excludes Australian born) using TableBuilder in December 2019. Australian-born data sourced from the 2016 Census using TableBuilder in December 2019. *n* = 143,622 humanitarian migrants, 534,155 family migrants, 984,038 skilled migrants, and 8,437,889 Australian-born individuals.

Figure 14. Predicted probabilities from random-effect logistic regression models of studying towards an Australian qualification



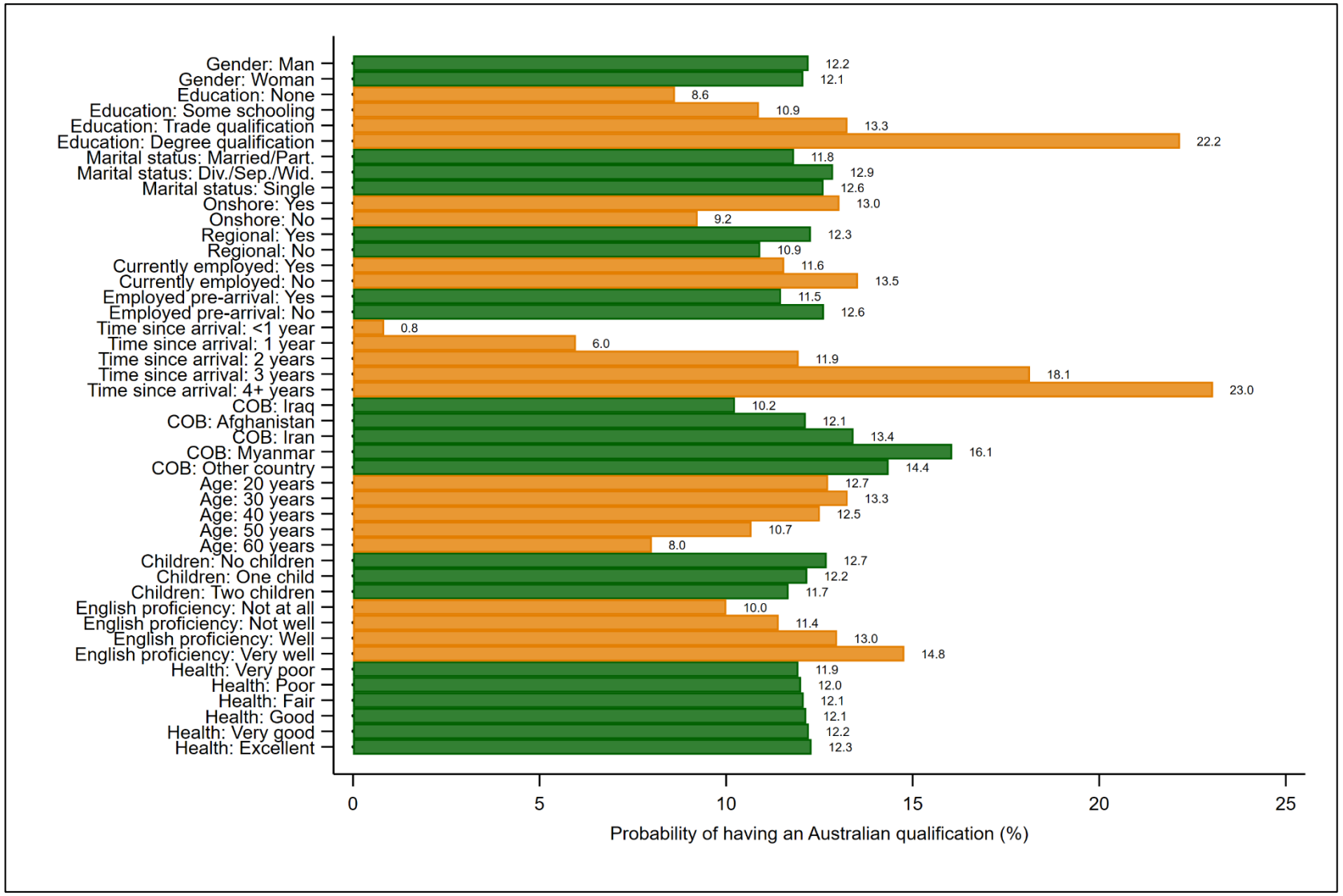
Notes: BNLA, Waves 1-5 (2013-2017). Based on results from the model presented in Column (1) in Table 6. *n* = 8,492 observations from 2,109 individuals.

Figure 15. Predicted probabilities from random-effect logistic regression models of studying towards a degree, conditional on studying a course of any kind



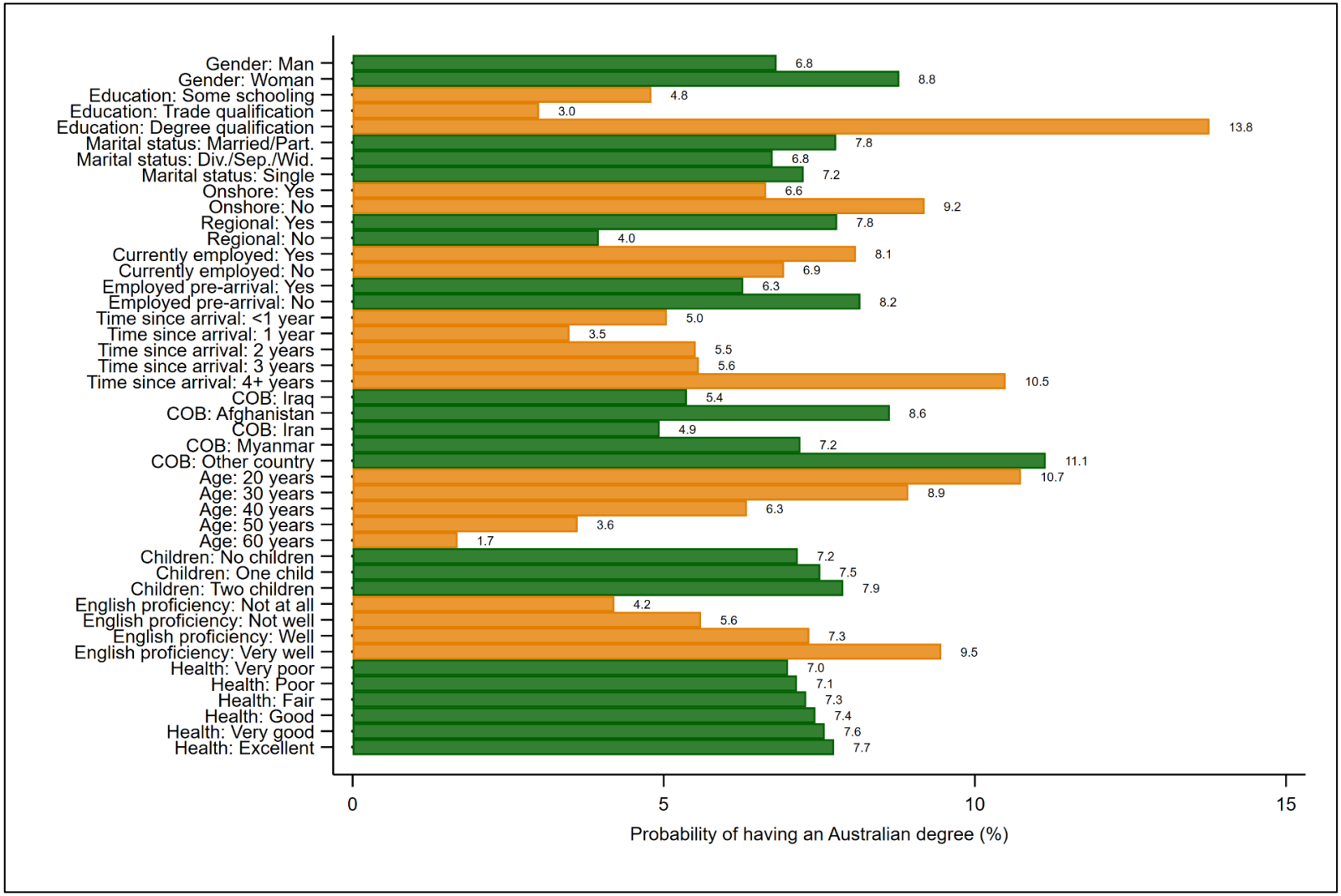
Notes: BNLA, Waves 1-5 (2013-2017). Based on results from the model presented in Column (2) in Table 6. n = 1,070 observations from 668 individuals.

Figure 16. Predicted probabilities from random-effect logistic regression models of having attained an Australian qualification



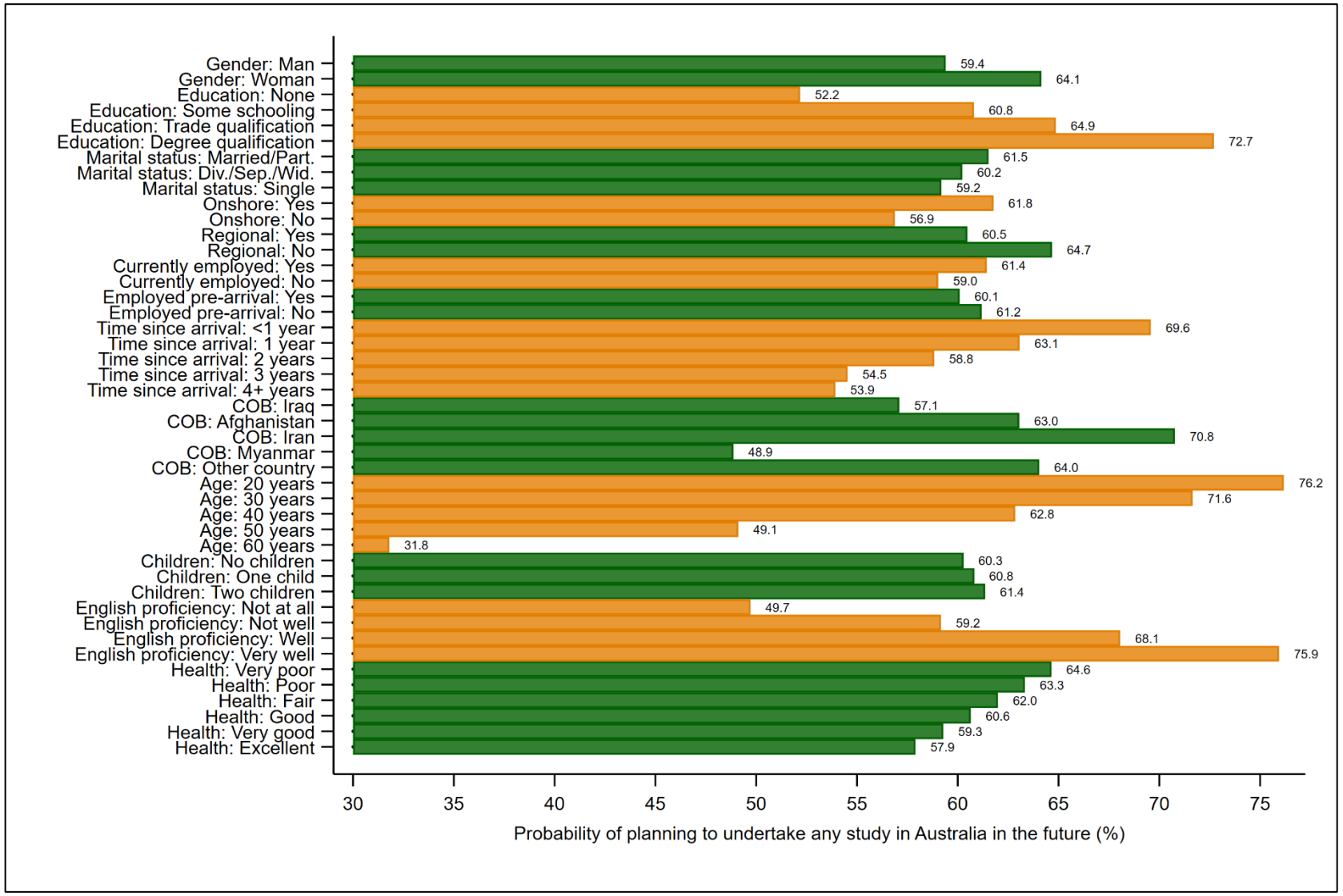
Notes: BNLA, Waves 1-5 (2013-2017). Based on results from the model presented in Column (3) in Table 6. *n* = 8,492 observations from 2,109 individuals.

Figure 17. Predicted probabilities from random-effect logistic regression models of having attained an Australian degree, conditional on having attained a qualification of any kind



Notes: BNLA, Waves 1-5 (2013-2017). Based on results from the model presented in Column (4) in Table 6. *n* = 1,096 observations from 462 individuals.

Figure 18. Predicted probabilities from random-effect logistic regression models of planning to study in Australia in the future



Notes: BNLA, Waves 1 (2013), 3 (2015) and 5 (2017), Primary Applicants only. Based on results from the model presented in Column (5) in Table 6. *n* = 3,361 observations from 1,461 individuals.

Appendix C – Reconciling inconsistencies in the higher education participation and attainment of humanitarian migrants in ACMID and BNLA

Based on the results discussed in Table 2 (ACMID) and (BNLA), the levels of educational participation for humanitarian migrants in ACMID appear to be higher than those observed in BNLA. This section presents the results of several analyses aimed at reconciling these seemingly inconsistent findings. One plausible explanation is differences in the underlying populations: the BNLA sample had largely arrived in Australia in the previous 3 years, whereas most humanitarian migrants in ACMID had arrived a longer time ago (Table 11). Such differences in the number of years spent in Australia between the two samples could plausibly generate the higher levels of higher education participation/attainment observed in ACMID. This notion is supported by the fact that the higher education participation rate of humanitarian migrants in ACMID was strongly associated with the length of time spent in Australia (see Table 12).

To approximate the survey frame that was the basis for the BNLA sample, these analyses zoomed into the outcomes of those humanitarian migrants in ACMID who arrived in 2013.

Table 13 presents the age-specific participation rates for the different migrant types who arrived in 2013 against those of the Australian-born population. Compared to all groups of humanitarian migrants, the participation rates for this cohort is much lower for the younger ages (18 to 29 years), as can be observed in Figure 19. Overall the higher education participation rate is 6%, compared to 10% in Table 8. This figure is still visibly higher than in BNLA (where it was 2.4% by Wave 4 in 2016). Possible explanations for it include other differences in sample characteristics (e.g., proficiency in spoken English and household characteristics) and methodological differences in capturing and defining higher education participation—for example, the possibility that the higher education category in the Census captures humanitarian migrants who are undertaking language or preparatory courses run at higher education institutions.[xvii] With the data at hand, it is not possible to ascertain which of these explanations is correct.

The same analyses were repeated for higher education attainment, although differences in levels of higher education attainment between ACMID and BNLA were not as stark as differences in higher education participation. Table 14 shows the age-specific higher education attainment rates for migrants who arrived in 2013 (see also Figure 20). Overall, 10.2% of humanitarian migrants who arrived in 2013 had a university degree in 2016. This is closer to the results in BNLA, where 10.8% of respondents had a degree pre-arrival and 1.6% had an Australian degree by Wave 4 (2016).

Altogether, it seems that the ACMID estimates of the educational participation and attainment of humanitarian migrants in Australia are higher than those observed in BNLA, more so for participation than attainment. Further research is needed to identify the source and meaning of these divergences.

Table 11. Year of arrival, humanitarian migrants aged 18-64

	Column percentage
Arrived prior to 2000 [a]	2.4%
Arrived 2000 - 2002	15.3%
Arrived 2003 - 2005	16.8%
Arrived 2006 - 2008	18.1%
Arrived 2009 - 2011	21.3%
Arrived 2012 - 2014	16.5%
Arrived 2015 - 9 August 2016	6.6%

Year of arrival not stated	1.5%
Country of birth not stated	1.5%

Notes: Sourced from ACMID 2016 using TableBuilder in January 2019. [a] Some cases in ACMID have a year of arrival prior to 2000, which is out-of-scope for the official ACMID population (arrivals between 1 January 2000 and 16 August 2016). This is due to discrepancies between the year of arrival information in the Permanent Migrant Settlement Data, which was used to define the ACMID sample and the year of arrival information in the Census, which was the source for the year of arrival information in ACMID. *n* =143,947.

Table 12. Crude university attendance rate by year of arrival, humanitarian migrants aged 18-64

Year of arrival	Higher education participation rate
Arrived prior to 2000 [a]	6.3%
Arrived 2000 - 2002	11.8%
Arrived 2003 - 2005	14.6%
Arrived 2006 - 2008	12.7%
Arrived 2009 - 2011	9.3%
Arrived 2012 - 2014	6.0%
Arrived 2015 - 9 August 2016	2.7%

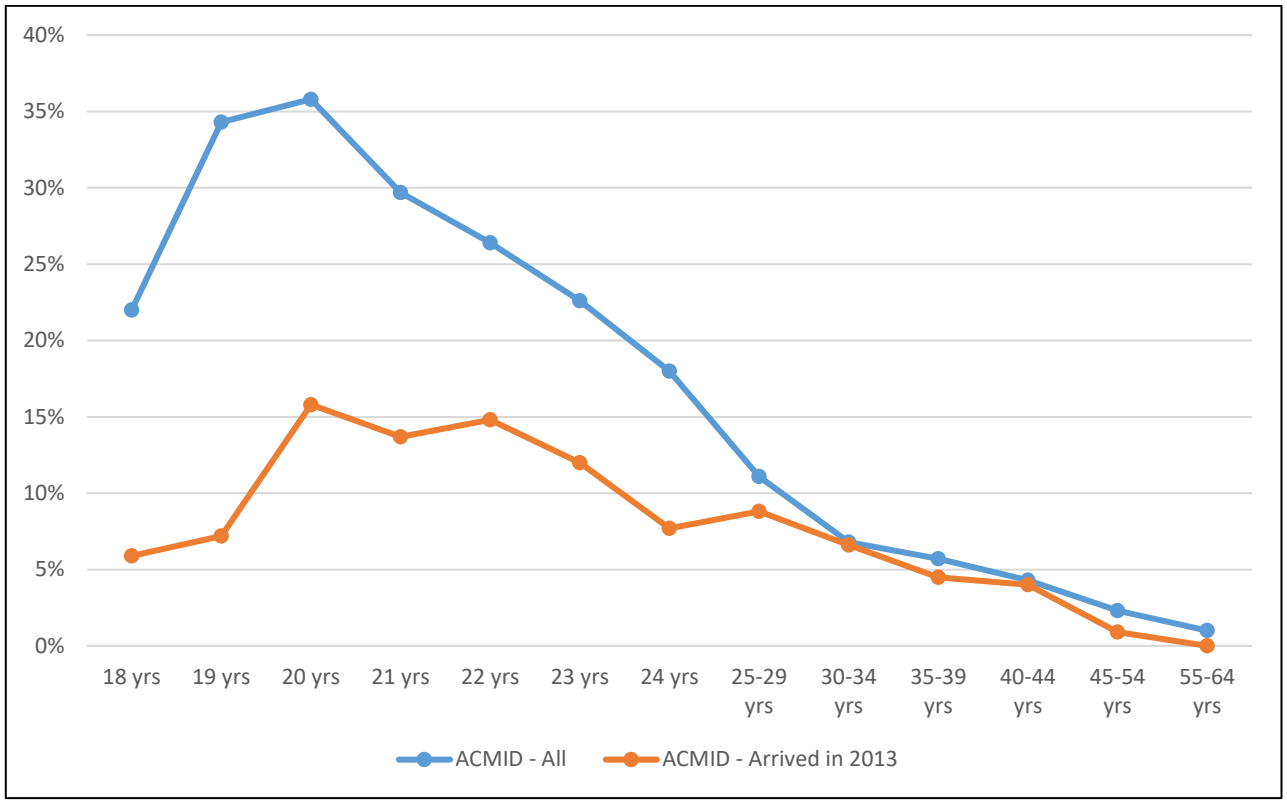
Notes: Sourced from ACMID 2016 using TableBuilder in March 2020. [a] Some cases in ACMID have a year of arrival prior to 2000, which is out-of-scope for the official ACMID population (arrivals between 1 January 2000 and 16 August 2016). This is due to discrepancies between the year of arrival information in the Permanent Migrant Settlement Data, which was used to define the ACMID sample and the year of arrival information in the Census, which was the source for the year of arrival information in ACMID. *n* = 143,947.

Table 13. Higher education participation rates by age, permanent migrants who arrived in 2013 and Australian born aged 18-64 years

Age	Migrants [a]			Australian born [b]
	Humanitarian	Family	Skilled	
18 years	5.9%	13.3%	33.0%	27.8%
19 years	7.2%	24.7%	56.7%	40.5%
20 years	15.8%	25.9%	72.8%	40.3%
21 years	13.7%	21.3%	68.3%	35.5%
22 years	14.8%	18.1%	46.6%	27.8%
23 years	12.0%	8.4%	34.3%	20.6%
24 years	7.7%	6.3%	17.0%	15.6%
25-29 years	8.8%	4.5%	7.7%	9.8%
30-34 years	6.6%	3.6%	5.7%	5.9%
35-39 years	4.5%	3.1%	4.7%	4.3%
40-44 years	4.0%	2.9%	2.9%	3.2%
45-54 years	0.9%	1.3%	2.4%	2.0%
55-64 years	0.0%	0.3%	0.7%	0.8%
All ages, combined	6.0%	4.7%	7.8%	8.2%

Notes: [a] Sourced from ACMID 2016 using TableBuilder in December 2019. [b] Sourced from the 2016 Census using TableBuilder in December 2019. *n* = 8,541 humanitarian migrants, 32,373 family migrants, 41,707 skilled migrants, and 8,437,889 Australian-born individuals.

Figure 19. Age-specific higher education participation rates, humanitarian migrants aged 18-64 (all and those who arrived in 2013)



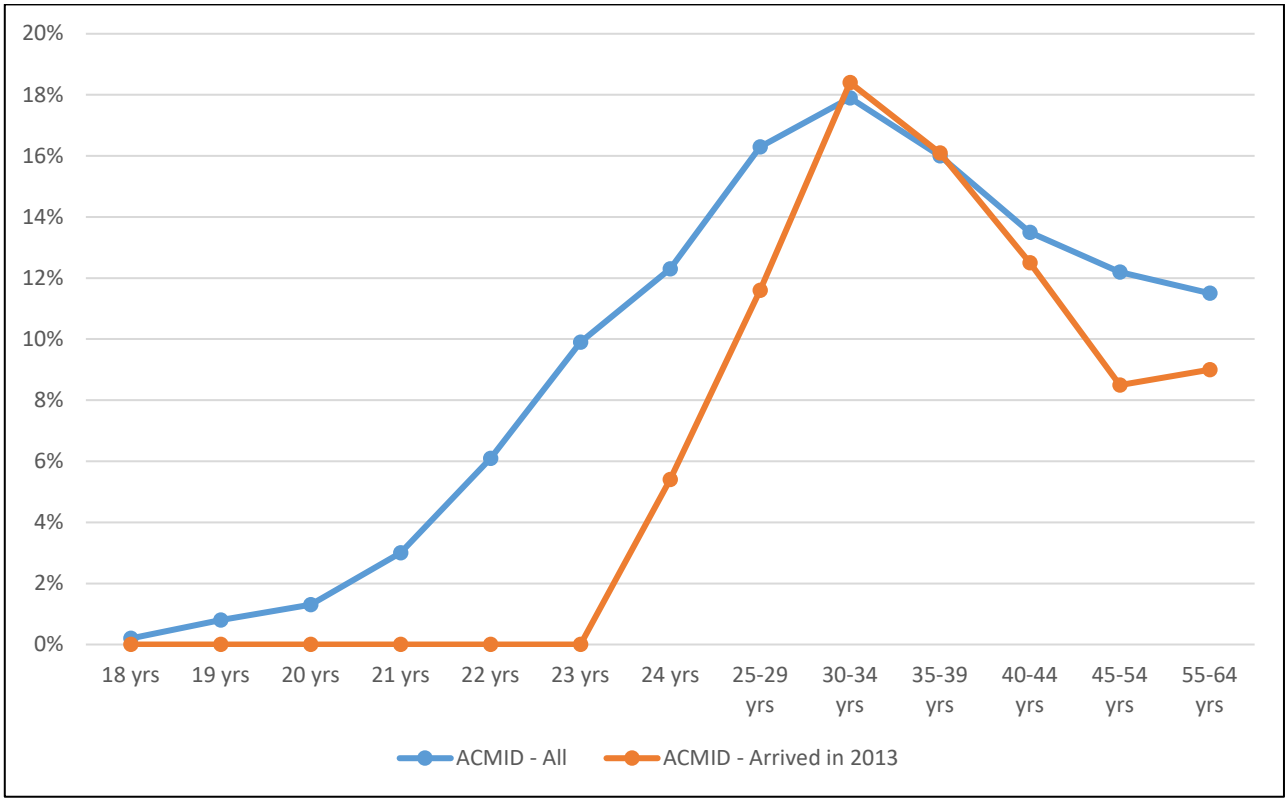
Notes: Sourced from ACMID 2016 using TableBuilder in March 2020. *n* (all) = 143,622; *n* (arrived in 2013) = 8,541.

Table 14. Higher education attainment rates by age, permanent migrants who arrived in 2013 and Australian born aged 18-64 years

Age	Migrants [a]			Australian born [b]
	Humanitarian	Family	Skilled	
18 years	0.0%	0.0%	0.0%	0.1%
19 years	0.0%	0.0%	0.0%	0.3%
20 years	0.0%	0.0%	0.0%	1.3%
21 years	0.0%	0.5%	11.1%	7.4%
22 years	0.0%	5.1%	20.1%	16.7%
23 years	0.0%	11.5%	30.0%	24.1%
24 years	5.4%	20.0%	49.6%	28.0%
25-29 years	11.6%	49.4%	76.4%	30.9%
30-34 years	18.4%	52.1%	79.2%	31.7%
35-39 years	16.1%	43.6%	72.5%	31.6%
40-44 years	12.5%	36.9%	62.9%	29.2%
45-54 years	8.5%	25.4%	51.1%	23.7%
55-64 years	9.0%	23.3%	42.7%	22.1%
All ages, combined	10.2%	38.5%	66.9%	24.3%

Notes: [a] Sourced from ACMID 2016 using TableBuilder in December 2019. [b] Sourced from the 2016 Census using TableBuilder in December 2019. *n* = 8,541 humanitarian migrants, 32,373 family migrants, 41,707 skilled migrants, and 8,437,889 Australian-born individuals.

Figure 20. Age-specific higher education attainment rates, humanitarian migrants aged 18-64, and those who arrived in 2013



Notes: Sourced from ACMID 2016 using TableBuilder in March 2020. *n* (all) = 143,622; *n* (arrived in 2013) = 8,541.

ENDNOTES

[i] The UNHCR is a United Nations agency with the mandate to protect refugees, forcibly displaced communities and stateless people and assist in their voluntary repatriation, local integration or resettlement to a third country.

[ii] Non-university higher-education providers are usually private-sector, teaching-only organizations specialising in entry-level courses (Norton & Cakitaki, 2016).

[iii] However, individuals in the NESB category are on average disadvantaged in their post-graduation labour-market outcomes (see Tomaszewski, Perales, Xiang, & Kubler, 2018). For example, NESB graduates have a substantially lower full-time employment rate than their Australian-born counterparts (54% vs. 72%), as well as a lower median salary at 4 to 6 months after graduation (AU$56,400 vs. AU$60,000) (QILT, 2018).

[iv] The participation ratio is defined as the proportion of individuals from a particular group enrolled in higher education in a given year, divided by the proportion of individuals from the rest of the population enrolled in higher education (Naylor et al., 2019, p.4).

[v] Of note, measures of statistical inference are not necessary when dealing with a full population, such as that used in our Census analyses. Nevertheless, all differences in the main effects pertaining to migrant and native-born populations and all gender differences in main effects throughout the section are statistically significant at the 95% level ($p<0.05$).

[vi] From this example, it can be seen that differences in the distribution of characteristics that are relevant to higher education participation can lead to unexpected or unintuitive findings. In this case, it can be observed that the age distribution is an important factor to consider when comparing the higher education participation levels of humanitarian migrants and those of other population groups.

[vii] The percentages for the different education categories (in this case, 5.3+5+1.7) do not add up to the overall percentage (in this case, 12.6) because a small number of respondents reported undertaking multiple courses falling into more than one of the categories. This also applies to other education variables within Table 4 and Predictors of attaining an Australian qualification

[viii] Taken together, the levels of educational participation for humanitarian migrants in ACMID (

Table 2) appear to be higher than those in BNLA (). Additional analyses aimed at reconciling these seemingly inconsistent results are presented in Appendix C.

[ix] Other specifications for the age variable—such as a set of dummy variables—yielded similar results.

[x] The negative and statistically significant association between higher levels of self-reported general health and humanitarian migrants' likelihood of planning to undertake further study is intriguing. It is possible that humanitarian migrants who are healthier are studying or have completed their studies, whereas those who are not healthy plan to study in the future instead. The pattern of results may also reflect that those humanitarian migrants who are healthier may be more likely to pursue employment than education opportunities in the future. Of note, the descriptive association between general health and plans to study is in fact positive and statistically significant and it turns negative and statistically significant when adjusting the regression model for age and its square.

[xi] Due to small cell sizes when disaggregating the sample by gender, it was not possible to undertake analyses of whether the qualifications that humanitarian migrants studied for or had attained were university degrees or other type of courses.

[xii] While many commencing undergraduate students are 17 years old at the beginning of their studies, in the Census data higher education participation of people below the age of 18 is very low. For example, in the 2016 Census, just 2.7% of 17-year-olds attended a university or other higher educational institution. This is due to the timing of the Census (August) relative to the usual higher education enrolment period (January/February).

[xiii] The ACMID data included a small proportion of individuals with a migrant visa that were born in Australia (1.1%). These migrants were excluded to facilitate cleaner comparisons between migrants and the Australian-born population.

[xiv] To facilitate data analyses of the combined Census and ACMID data, fractional values in the ACMID weights were rounded to integer values. This practice did not change the results presented in this report in any meaningful way.

[xv] As discussed in the last chapter of the report and in Appendix B, this measure may overestimate higher education participation amongst humanitarian migrants.

[xvi] This information was not asked of SAs in Wave 2. For this subsample and study wave, the Wave-1 values were brought forwards into Wave 2.

[xvii] To elaborate on the latter point, humanitarian migrants tend to have lower proficiency in the English language than other migrants and the Australian-born population. For example, in 2016, 32% of humanitarian migrants aged 18-64 years were not proficient in spoken English, compared to 17% of family migrants and 5% of skilled migrants (source: ACMID 2016). This makes it likely that a higher number of humanitarian migrants attend language courses, such as those organised under the Adult Migrant English Program. This and other language programs are often delivered by universities or other institutions located at university campuses. Other providers are housed in tertiary colleges with diverse names that, from a humanitarian migrant's point of view, may be deemed as "other higher educational institution" (as per the wording in the Census question). It is therefore possible that, in the Census form, humanitarian migrants or their proxy respondents erroneously nominate attendance at a "university or other higher educational institution" at a higher rate than other groups.