

Far Removed: An Insight into the Labour Markets of Remote Communities in Central Australia

Michael Dockery, Curtin Business School

Judith Lovell, Charles Darwin University

Abstract

There are ongoing debates about the livelihoods of Aboriginal and Torres Strait Islander Australians living in remote communities, and the role for policy in addressing socio-economic equity and the economic viability of those communities. The characteristics and dynamics of remote labour markets are important parameters in many of these debates. However, remote economic development discourses are often conducted with limited access to empirical evidence of the actual functioning of labour markets in remote communities – evidence that is likely to have important implications for the efficacy of policy alternatives. Unique survey data collected from Aboriginal and Torres Strait Islanders living in 21 remote communities in central Australia for the Cooperative Research Centre for Remote Economic Participation's *Population Mobility and Labour Markets* project are used to examine these labour markets, with a focus on the role of education and training. Examining access to education, employment opportunity and other structural factors, it is clear that the reality of economic engagement in these communities is far removed from the functioning of mainstream labour markets. The assumptions about, or lack of distinction between remote and urban locations, have contributed to misunderstanding of the assets and capabilities remote communities have, and aspire to develop. Evidence from the survey data on a number of fronts is interpreted to suggest policies to promote employment opportunity within communities offer greater potential for improving the livelihoods of remote community residents than policies reliant on the assumption that residents will move elsewhere for work.

ECONLIT classifications: R1. General Regional Economics; R2. Household analysis; R4. Transport economics

Keywords: Location economics, regional and remote, Australia

Michael Dockery, Principal Research Leader | Population Mobility and Labour Markets, CRC for Remote Economic Participation. Principal Research Fellow | Bankwest Curtin Economics Centre. Curtin Business School. Corresponding author: mike.dockery@cbs.curtin.edu.au
Judith Lovell, Principal Research Leader | Synthesis and Integration, CRC for Remote Economic Participation. Senior research Fellow, Northern Institute, Charles Darwin University: judith.lovell@cdu.edu.au

1. Introduction

Remote communities have been under the spotlight for many years because of a perceived lack of economic opportunity, their demands on the public purse, and comparatively poor outcomes on a range of health and wellbeing measures (Australian Government, 2016; Productivity Commission, 2015). The objective of the Population Mobility and Labour Markets project (2010-2017) is to improve understanding of temporary mobility of people living in remote and very remote Aboriginal and Torres Strait Islander communities, and to provide evidence of labour force characteristics that can contribute to planning and decision-making by communities themselves, service providers, policymakers and employers. The functioning of labour markets and associated opportunities for employment has an important bearing on key debates surrounding the future of discreet Indigenous communities and the appropriate role for public policy in enhancing the livelihoods of their remote residents.

Recent debates on the future of discreet Indigenous communities include Noel Pearson's arguments on the detrimental effects of welfare dependency (see, for example, Pearson 2000, 2011, and 2014); the coexistence of and interaction between activities in the market, state and customary sectors (Altman 2010, Wolf 1993); and the trade-offs between relocating to access employment opportunities in the mainstream labour market with loss of access to traditional lands, and the potential implications for cultural survival (Curchin 2015, p. 422-23). Intermingled within these debates are issues surrounding the role of the now defunct Community Development Employment Projects Scheme (CDEP) which, having elements of both a community development program and labour market program (Hunter and Gray 2013), was variously seen as a means to reduce welfare dependency and as a mechanism for normalising it (Dockery & Milsom 2007, Hunter 2009).

These discourses oscillate between normative and ideological rationale reflecting different positions on a 'preferred' future for Aboriginal and Torres Strait Islanders and what constitutes a morally just process to get there. This paper does not attempt to resolve these policy debates, but to contribute to the less ambitious but necessary step of improving understanding of the realities of labour markets and any associated role that education and training pathways might contribute to labour markets in peripheral community contexts. This is important because the formulation of good policy requires policy-makers who know how individuals are likely to respond to the incentives created by the policy parameters put in place. For example, discreet Indigenous communities in Australia are subject to high government regulation through active welfare policies, public housing administration, land tenure, property rights and delivery of essential public services. However, relatively little is

Acknowledgements: We would like to acknowledge the invaluable role of Karl Hampton in the development of the Mobility Survey and oversight of the fieldwork, plus the work of the Ninti One Aboriginal Community Researchers. This paper was instigated by as part of the Synthesis and Integration Project across the various CRC-REP projects. The paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the authors and should not be attributed to either DSS or the Melbourne Institute.

known about the nature of remote labour markets and the interactivity of them with opportunities in education and training.

Data on labour market functioning is as sparse as the country, and what data are available are influenced to an unknown degree by the effects of the CDEP, and ensuing active welfare policy programs (Fowkes & Sanders, 2015). This paper is based on unique data from survey work being undertaken as part of the Population Mobility and Labour Markets project (2010-2017) and concepts of remote economic participation developed through the Synthesis and Integration project (2015-2017) under the Cooperative Research Centre for Remote Economic Participation (CRC-REP). It builds on a previous working paper (Dockery and Hampton, 2015), which was based on an earlier set of survey responses, and by focusing on data items relating to education and training not previously analysed in detail.

The following section clarifies what is meant by discreet Indigenous communities in the geographic and demographic sense. Section 3 provides some background to government policy debates on the future of remote communities and the need for a greater understanding of the reality of remote labour markets. Section 4 presents the mobility survey data and analysis, with implications discussed in the final section.

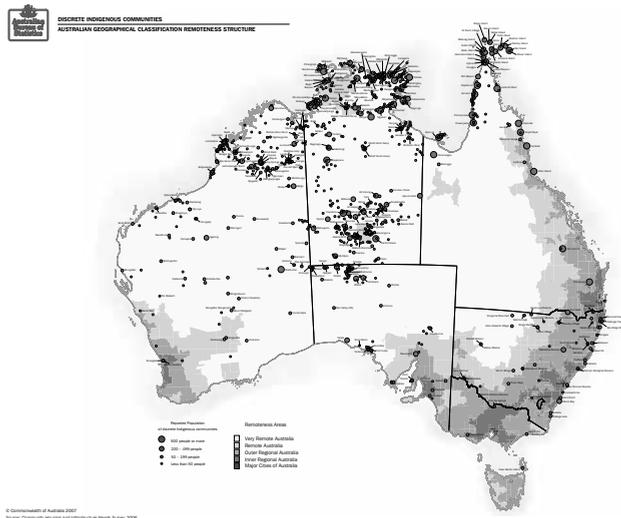
2. Remoteness, Population and Employment

While geographical regions classified as 'remote' and 'very remote' represent around 80 per cent of the Australian land mass, those regions are home to less than 3 per cent of the Australian population. Relative to their share in the overall population, a high proportion of Aboriginal and Torres Strait Islanders reside in the more remote areas of Australia. Based on 2011 Census data, people who identified as Aboriginal and Torres Strait Islander made up 2.55 per cent of the Australian population. However, they represented 13 per cent of the population in remote Australia and 41 per cent of persons living in very remote Australia. While around 70 per cent of the Australian population live in the major cities, only one-third of Aboriginal and Torres Strait Islanders do.

There are well documented problems of underrepresentation of remote Aboriginal and Torres Strait Islander populations in national data collections (Taylor 2014). As best can be surmised from 2011 Australian Bureau of Statistics (ABS) Census data, there were an estimated 117,200 Aboriginal and Torres Strait Islanders living in remote and very remote Australia and 490,400 non-Indigenous Australians, such that Aboriginal and Torres Strait Islanders constituted just under one-quarter of the remote and very remote population. Many of those Indigenous people live in 'discrete Indigenous communities' defined according to the Community Housing and Infrastructure Needs Survey (CHINS) (ABS, 2006 reissue) as: 'A geographic location, bounded by physical or cadastral (legal) boundaries, and inhabited or intended to be inhabited predominantly (i.e. greater than 50 per cent of usual residents) by Aboriginal or Torres Strait Islander peoples, with housing or infrastructure that is managed on a community basis' (ABS 2007, p. 109).

Noting that there was some element of subjectivity in deciding whether a location met the criteria, a total of 1,112 communities were identified in remote and very remote areas, of which 90 per cent (1,008) were very remote. Three-quarters of those had an estimated population of less than 50 persons. Some of these are likely to be satellite settlements commonly known as outstations or homelands (ABS 2006), and may be inhabited on a seasonal basis. They may not have been included in the CHINS (2006) survey, and may be underrepresented in Census collections. As reported by ABS Census (2006, 2011), the proportion of usual residents who identify as Aboriginal or Torres Strait Islander is typically over 80 per cent of the population in these communities. A significant proportion of the non-Aboriginal population living in very remote Australia also work in non-market service delivery, or in governance roles related to administration and legislation effecting those communities and organisations.

Figure 1 - Australian Bureau of Statistics, Map of discrete Indigenous communities, 2007



Employment estimates

Estimates of employment in remote communities are beset with a number of additional issues overlaying the problems of initial enumeration of the population. Chief among these is the effect of changes to the way active welfare participants are counted in the labour force (as employed or as unemployed), and the significant reduction in CDEP activity between the 2006 and 2011 census points. There has been much debate on whether active welfare participation should be classed as employment or welfare (see Gray, Howlett and Hunter 2014, p. 498). A comparison of Indigenous and non-Indigenous employment and unemployment rates based on 2006 and 2011 Census data is provided in Table 1. The definition of employment used in these figures includes CDEP participants, whose number was significantly reduced in line with the Northern Territory Emergency Response policy reforms from 2007. Complete disbandment of CDEP in

2009 changed the employment status of many remote residents, and is estimated to have led to a percentage point increase in estimates of Aboriginal and Torres Strait Islander unemployment in remote and very remote areas in 2011 (ABS 2014).

The key messages from Table 1 are (a) employment opportunity is markedly lower, with commensurately higher unemployment rates, for Indigenous Australians relative to non-Indigenous Australians; (b) in remote Australia employment rates are yet lower for Indigenous Australians and the Indigenous/non-Indigenous divide accentuated; (c) there is minimal, if any, evidence of improvement in employment for remote Indigenous residents between 2006 and 2011. These key features of remote labour markets are corroborated by figures that adjust census data to derive non-CDEP employment estimates (see Gray, Howlett & Hunter 2013).

Table 1 - Indigenous and non-Indigenous Australians' labour force status, 2006 & 2011 Census, remote and non-remote Australia

	<i>Indigenous</i>		<i>Non-Indigenous</i>		<i>Indigenous to non-Indigenous ratio</i>	
	<i>2006</i>	<i>2011</i>	<i>2006</i>	<i>2011</i>	<i>2006</i>	<i>2011</i>
Remote Australia						
Emp to population ratio	44.7	38.9	72.5	73.2	0.62	0.53
Unemployment rate (per cent)	11.8	17.8	2.9	2.7	4.08	6.61
Participation rate (per cent)	50.7	47.3	74.6	75.2	0.68	0.63
Non-remote Australia						
Emp to population ratio	46.2	45.3	61.7	61.9	0.75	0.73
Unemployment rate (per cent)	16.4	16.9	5.1	5.4	3.24	3.13
Participation rate (per cent)	55.3	54.6	65.0	65.4	0.85	0.83

Notes: Labour force figures relate to persons aged 15 years and over. The definition of employment includes CDEP participation.

3. Land, People and Polity

Over thousands of years climatic events, access to resources and tribal incursions influenced the dispersal of peoples across the continent (Smith & Jackson, 2006). In more recent times the numerous and ongoing demands of European colonisation resulted in the forced settlement of custodians onto some of the most marginal and remote regions of the Australian landmass (Woinsarski, Traill, & Booth, 2014). Meanwhile significant change has impacted on traditional practices, reducing strategies for resilience, survival and habitation including mobility, and access to resources and trade that were previously available (Wallace & Lovell, 2009). Remote communities, and the living conditions within them should be understood in such light, rather than just as manifestations of Aboriginal or Torres Strait Islander culture or lifestyle choices. That withstanding, their perceived incompatibility with mainstream goals for economic development has meant that remote communities have been a hotbed for policy debates relating to Indigenous affairs in Australia.

A key dimension of Aboriginal economic development in the decades since the 1967 referendum first recognised Aboriginal and Torres Strait Islanders as citizens (Altman, Biddle, & Hunter, 2005) has been the struggle between opposing politics of self-determination and assimilation (Dockery 2010). Proponents of self-determination would argue that the choice to remain on country is a legitimate choice that Aboriginal and Torres Strait Islander people have the right to exercise, irrespective of the implications this may have for mainstream socio-economic outcomes (Central Land Council, 2015). The assimilationist view would privilege the imperative to improve outcomes over such choices through 'living as members of a single Australian community...' (Commonwealth of Australia, 1961, p. 1051). The logic of assimilation suggests that to achieve socio-economic parity with other Australians, Aboriginal and Torres Strait Islanders would need access to the same systems of education, health and other services, and to labour market opportunities that are not generally available in remote communities (Australian Government, 2015, Commonwealth of Australia, 1961).

Following the 1967 referendum, political pressure mounted for Indigenous Australians to be granted land rights and greater involvement in decision-making and management of their own affairs. Land rights were first introduced in Australia in the Northern Territory with the passing of the *Aboriginal Land Rights (Northern Territory) Act 1976* through the Commonwealth Parliament. They were vastly expanded by the High Court's 1992 Mabo judgement that ruled Aboriginal groups who could show a continuous connection to their lands since 1788 held native title rights over those lands, provided title had not subsequently been extinguished through another Act of Parliament. As this represented a major shake-up of land administration in Australia and created a great deal of uncertainty, legislative measures were subsequently introduced to create a native title regime that sought to balance interests of traditional owners with those of national economic development, most significantly the *Native Title Act of 1993* and the *Native Title Amendment Bill of 1997* (Kildea 1998, COAG 2015).

Land claims initiated since land rights and native title legislations have led to around 40 per cent of Australia's land mass formally recognised as being owned by traditional owners (COAG 2015, p. 21) with substantial areas of land also subject to ongoing claims. The *Aboriginal Land Rights Act (NT)* predates the Native Title acts, and preserves Aboriginal sovereignty over approximately 80 per cent of the Northern Territory (Northern Territory Government, 2015). The potential for native title to provide an economic base in remote Australia has been particularly recognised with regard to the extractives industry, given the magnitude of the recent resources boom and that much mining activity occurs in remote areas and on Indigenous owned land (Langton & Longbottom 2012; O'Faircheallaigh 2010, 2013). While the native title regime is still evolving, there are grounds to believe there are limited employment or other benefits flowing to Indigenous peoples in remote Australia (see, for example, Bauman, Strelein and Weir 2013; Dockery 2014; O'Faircheallaigh 2015).

In 1972 the then prime minister, Whitlam opened government administration of Indigenous affairs to include Aboriginal and Torres Strait Islanders, on the principle that they should be involved in the decision-making and management of their own affairs (Rowse, 2002). Between 1972 and 1990 there was at least one national, elected Aboriginal and Torres Strait Islander representative body, with a role in advising

government. In 1989 the Hawke-Keating government established the Aboriginal and Torres Strait Islander Commission (ATSIC), a representative and coordinated framework through which local delegates from regions across Australia informed government policy, implementation and priorities for Aboriginal Affairs (Pratt & Bennett, 2004, p. 4). ATSIC was disbanded by the Howard government in 2005 and, for the first time since 1972, Aboriginal and Torres Strait Islanders were without nationally elected representation to government.

To replace the 'experiments in Aboriginal administration' 'mainstreaming' of service delivery was implemented (Pratt & Bennett, 2004, p.14), which included the transfer of Indigenous programs into existing national departments, with the Office of Indigenous Policy Coordination (OIPC) established to oversee the restaffing of ATSIC regional offices and coordinate their engagement with mainstream departments (2005-2013). The Council of Australian Governments (COAG) was also established post-ATSIC to improve the coordination and delivery of Indigenous services across government tiers (Pratt & Bennett, 2004, p.12). Continuing throughout these recent attempts to realign remote Aboriginal and Torres Strait Islanders to mainstream norms has been the policy-led intervention in an 18 billion dollar Australian Government Indigenous Affairs coordinated effort to 'close the gap'; initiated in 2007 and ongoing (Productivity Commission, 2015).

OIPC was itself disbanded under the Abbott government, who then oversaw a transition of the so-called 'Stronger Futures' policy with over 100 programs, into the current 'Indigenous Advancement Strategy' (IAS). Most Indigenous programs and services were moved once again; this time from mainstream departments into the Department of Prime Minister and Cabinet (2014). All programs were then sent to tender in a process which saw less than 50 per cent of service provision flow to Indigenous organisations (Australian Government, 2014). This hit the mechanisms in remote and very remote Australia particularly hard, with less choice of service provider and therefore less opportunity for self-management and administration. The IAS has retained a focus on remote economic development, employment and training and continues to monitor these using as its main evaluative process 'Closing the Gap' targets (Productivity Commission, 2015; Steering Committee for the Review of Government Service Provision, 2014).

This constant reshuffling of program funding and responsibilities is important for residents of remote communities where a lack of infrastructure and access to services, such as health, education and social services, has been highlighted as a causal factor in inferior socio-economic outcomes. Housing, in particular, has been identified as an area where needs of the community go unmet (Department of Finance and Deregulation 2009). The cost of providing infrastructure and services in remote communities at the level of access and quality needed to bridge this gap in outcomes lies at the heart of arguments that communities are 'unviable' or 'unsustainable'. The Productivity Commission estimates that in 2012-13, government services expenditure per person was \$43,449 for Aboriginal and Torres Strait Islanders, compared to \$20,900 for other Australians, with the greater intensity of use of services accounting for 68.5 per cent of that difference and the greater cost of providing services to Aboriginal and

Torres Strait Islander Australians (including due to location) accounting for 31.5 per cent of the difference (SCRGSP 2014, p. 1). In late 2014 the Western Australian government foreshadowed the withdrawal of services from a number of the smaller and more remote communities in WA, with media reports suggesting as many as 150 communities may be affected, due partly to the extent of cross-subsidisation of those communities in the face of the withdrawal of Commonwealth funding (WA Today 2014a, 2014b).

Against these arguments there is an extensive literature pointing to problems in remote communities being as much a failure of government as a failure of those communities, and that issues surrounding the cost and accessibility of services could be addressed by more flexible, coordinated and appropriate delivery of services (Fisher 2011; Walker, Porter and Marsh 2012). Altman (2010, p. 266) argues that the debate over smaller versus large communities is, in some respects, a false one given the social interconnection and mobility between them – they are not separate, sedentary populations.

There is also evidence that connection to culture and country provided by remote communities has a positive effect on health, wellbeing and some economic indicators (Campbell et al. 2011; Dockery 2010, 2012). Evidence makes it clear that Aboriginal and Torres Strait Islanders who move to major population centres suffer from a range of other issues that negatively impact on their wellbeing, including from discrimination (Dockery 2012) and psychological stresses of attempting to live between two cultures (Ranzijns, McConnochie and Nolan 2010). As suggested by Table 1, Census data indicate that labour market outcomes for Aboriginal and Torres Strait Islander Australians are not a great deal better for those living in non-remote Australia. Based on analysis of data from the 2001 and 2006 ABS Census, Biddle (2009, 2010) cautions policy makers that Aboriginal and Torres Strait Islanders who moved from remote areas to non-remote areas in the inter-censal period appeared to fare no better in the labour market than those who remained in remote areas. Combined with other potential negative externalities in destination areas, such as housing and social cohesion (Biddle 2009, p. 29), it is not clear that measures to encourage out-migration from remote communities and rationalisation of the number and scale of remote communities would offer either the financial saving or the improvement in outcomes implied by simplistic comparisons between remote and non-remote communities.

The pragmatics of assimilation are reinforced in the current National Indigenous Reform Agenda, the centrepiece of which are ‘Closing the Gap’ targets to reduce statistical inequality between Indigenous and non-Indigenous Australians along a range of socio-economic indicators. The ‘Closing the Gap’ framework includes only passing acknowledgement of the structural inequalities inherent in the interface between policy and custom in remote locations. ‘Closing the Gap’ and ensuing frameworks have remained silent about the relationship between culture, capability and the future aspirations of Aboriginal and Torres Strait Islanders in remote Australia, assessing instead failure or success in achieving parity in health, wealth, and education between remote and urban, Indigenous and non-Indigenous Australians. The framework is devoid of the cultural mapping necessary to the preservation of Indigenous Knowledge and customary activity essential to the rights of Aboriginal

and Torres Strait Islander sovereignty, and the collectivised structures of property ownership. Yet these are determinants of capability and the capacity to aspire reflected in literature as essential to empowerment (Appadurai, 2013; Tremblay, 2010).

The one area in which there does seem to be a convergence is the importance of accessible and appropriate education as a means to improving outcomes for Aboriginal and Torres Strait Islanders. Hughes (2007) and WA premier Barnett emphasised the lack of access to education in remote communities as limiting economic opportunity. Pearson (2011) identifies education as a central tenet of empowered communities and the Wunan Foundation (2015) designs optional empowerment pathways upon access to local educational foundations that establish the capacity for older children to access mainstream education at any level. The National Indigenous Reform Agenda similarly states:

Human capital development through education is key to future opportunity. Responsive schooling requires attention to infrastructure, workforce (including teacher and school leader supply and quality), curriculum, student literacy and numeracy achievement and opportunities for parental engagement and school/community partnerships. Transition pathways into schooling and into work, post school education and training are also important. (Council of Australian Government 2012, p. 6)

Views differ, of course, on the extent to which enhanced education should be achieved by improved delivery of education services to remote communities as opposed to people leaving remote communities to access services available elsewhere. The goals of local schools would also differ accordingly with emphasis on mainstream benchmarks enabling transition into institutions elsewhere, or more emphasis on links between education and training for increased local capability, with pathways to new and existing local enterprise and community development outcomes.

For the foreseeable future, remote communities will continue to be at the centre of these policy debates. This paper does not seek to address these larger issues, rather we note that in order for policy-makers to appreciate which policy alternatives will and won't be effective, it is important to understand how labour markets in remote communities operate. The functioning of remote labour markets is critical to the capacity of Aboriginal and Torres Strait Islanders to leverage benefits from native title; for how services can be delivered effectively and with what degree of local autonomy; for the design of remote education systems and employment programs to address welfare dependency. Equally, people's preferences between market and cultural activities will shape how labour markets operate. In light of limited existing evidence, as highlighted above, the following section draws on data from the Mobility Survey to provide primary, empirical evidence on the reality of labour markets in remote Aboriginal communities.

4. The CRC-REP Mobility Survey

Surveying of Aboriginal people living in remote communities for the CRC-REP's Mobility project commenced in May of 2014. The methodology developed includes an initial survey collecting baseline data and then a series of follow-up surveys conducted

with those same individuals collecting detailed information on recent trips. The survey has been progressively rolled out across communities, with a target of four follow up surveys to be completed by each respondent at roughly three month intervals to capture seasonal variation in mobility.

A two-stage sampling frame was designed consisting of a sample of 25 remote Aboriginal communities around Alice Springs, and within those communities a sample of individuals. The scope for the sample of communities was any remote Aboriginal community in which people would potentially access Alice Springs as a regional service centre; however, residents of some of the communities may also travel to other regional centres, such as Tennant Creek or Katherine. The sample was targeted to give reasonable representation of communities by size (population) and proximity to Alice Springs and of the language groups around Alice Springs. This was to include a handful of communities in the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands to the south of Alice Springs and across the border in South Australia. However, approval to work in those communities could not be secured in time to include these communities in the project.

In-scope individuals within the communities included all people aged 15 and over who were happy to participate. The target samples were stratified by age and gender based on Census population data for each community. The target sampling-to-population ratio declines with the population of the community, with the overall ratio designed to produce a sample of 1,500 respondents to the initial questionnaire and with the hope of 750 people responding to all five surveys after allowing for attrition.

The initial questionnaire and a template for the follow-up questionnaires were developed following focus groups conducted in two remote communities (Ntaria and Ltyentye Apurte) and with policymakers, service providers and other community representatives and stakeholders. The questionnaires were composed using the iSurvey software to be administered using iPads. These were tested and revised by trained Aboriginal Community Researchers (ACRs) employed by Ninti One's Business Development Unit. The ACRs can usually conduct surveys in the language the respondent prefers, which is essential given the surveys were undertaken amongst speakers of 6 primary Aboriginal language groups, but with 12 language groups represented in total. The first of the follow-up surveys was further refined following a review of the experiences with the initial questionnaire instrument and further testing by ACRs. This process helped to identify key questions and develop the questionnaire constructs and flow, and also led to the omission of questions that were considered culturally inappropriate.

While the sample design served as a guide, the reality of working in remote communities is that samples will always be 'convenience' samples to some extent. Soliciting information of acceptable quality requires researchers to work in communities where they are known, and therefore have a warm start, and hence the selection of communities was biased towards those with which the ACRs had established working relationships. Undoubtedly this similarly applies to the selection of individuals within the communities on the basis of familiarity with the ACRs although the research teams strive to convene as a group who, between them, can access the broadest cross-section of participants in each community.

The analysis presented in this paper is based on responses to the baseline survey collected up to mid-November, 2015. With the field work being unable to commence in the communities in the APY lands, this is likely to be the final sample for the study. Hereafter referred to as the 'Mobility Data', this dataset consists of responses from 1,075 people from 21 communities who at least partially responded. It should be noted that the full process of checking, validating and cleaning the data has yet to be completed. The results reported here are based on unweighted survey data, as population weights for individuals have yet to be computed and incorporated into the datasets. However, the sampling targets stratified within communities by age and gender based on 2011 Census data were relatively closely followed by the ACRs.

5. Data Analysis

The limitations of existing data collections to accurately capture the dynamic realities of demography and of labour market and economic engagement of Aboriginal and Torres Strait Islanders living in remote Australia have been widely documented, particularly with respect to the Census (see, for example, Taylor 2006; and Zoellner and Lovell, forthcoming). Though not without its own limitations, the Mobility Data provides a unique opportunity to enhance our understanding of such remote labour markets. The classifications of labour force status are similar in concept to those used in the official ABS Labour Force Survey, but not technically comparable as the same set of questions were not used as in the labour force survey. People were asked whether they were currently working for wages. If they responded yes, they were further classified as working full-time (35 hours or more) or part-time (less than 35 hours) on the basis of a follow-up question on how many hours worked in a week. People who were not working for wages but indicated they had been looking for work are classified as unemployed, and those neither working for wages nor looking for work as not participating in the labour force. It is noted that there may be some conflation between reported 'working for wages' and what might be considered as income support attached to program participation. At the time of the survey the previous CDEP programs were being replaced by the Remote Jobs and Communities Program which also provided for payments to individuals for participation in community development activities.

5.1 Education, training and labour market outcomes in remote Aboriginal communities

Early assessment of the Mobility Data painted a picture of a population characterised by low levels of formal educational attainment, low rates of employment, high welfare dependency and residents who travel vast distances to access services (Dockery & Hampton 2015, p. 13). Table 2 shows the labour force status for the surveyed population by age.

The labour force participation rate of 63.8 per cent for people in these remote communities is in fact much higher than the 47.3 per cent observed for Aboriginal and Torres Strait Islanders in remote Australia in the 2011 Census. This is likely to largely reflect that the additional criterion for being unemployed of having actively looked for work in the past four weeks was not imposed in the mobility survey as it is in the census. Consistent with this the unemployment rate of 30 per cent is also well in excess of the

17.8 per cent figure recorded in the Census, but the employment to population ratio quite comparable (33.8 per cent in our sample, 38.9 per cent for Aboriginal and Torres Strait Islanders living in remote areas in 2011). Another important contextual difference is that the communities in the Mobility sample are predominately 'very remote', with just 2 of the communities classified as remote rather than very remote. The approximated unemployment rate is markedly higher for younger residents of the communities.

Table 2 - Labour force status by age, Mobility survey

	<i>15-24 years (per cent)</i>	<i>24-39 years (per cent)</i>	<i>40-54 years (per cent)</i>	<i>Total (per cent)</i>
Labour force state:				
Employed full-time	8.4	12.9	17.0	12.0
Employed part-time	13.7	29.7	24.2	21.8
Unemployed	49.3	34.0	20.0	30.0
Not in the labour force	28.6	23.4	38.9	36.2
Total	100.0	100.0	100.0	100.0
Ratios: Unemployment rate				
Emp. to population. ratio	69.1	44.3	32.7	47.0
Participation rate	22.0	42.6	41.1	33.8
Observations	71.4	76.6	61.1	63.8
	227	427	265	1071

Table 2. shows that more than half of the respondents were not in paid employment. Among these, the most commonly reported activities were home duties (87 per cent of females and 73 per cent of males), cultural activities (31 per cent and 34 per cent, respectively) and looking for work (9 per cent of females and 18 per cent of males). It is difficult to find statistics from other sources against which to compare this sample, but perhaps the most similar are data from the ABS 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS), for which estimates are available for persons living in remote and very remote Australia. These data similarly report 49.8 per cent of the population aged 15 and over to be in employment, and a labour force participation rate of 58.5 per cent (ABS 2009).

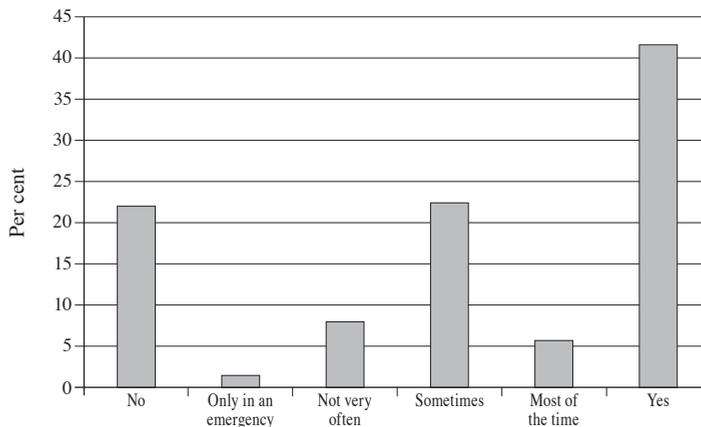
Due to cultural differences in family structures and obligations, the survey avoided using constructs based on biological children and 'dependent children' that are used in mainstream surveys. Rather people were asked whether there were children they looked after and living in the same house. This was the case for 80 per cent of female respondents and 75 per cent of males. Employment rates are surprisingly similar for females conditional upon child raising duties, while for men those living with children they looked after were markedly more likely to be in employment (41 per cent) compared to those without children they looked after (29 per cent).¹

1 The difference in the mean of the employment dummy for men with and without child raising responsibilities is significant at the 5 per cent level by the standard t-test.

For those who were not working but reported they wanted to work, the Mobility Survey asked what was stopping them. The most common reason indicated was that there were no jobs available, accounting for around one in four of responses to this question, and a further 5 per cent indicating inadequate or mismatched skills. Very close behind the lack of available jobs was caring responsibilities, primarily with relation to children. Poor health accounted for 20 per cent of responses, with a further 7 per cent suggesting other personal barriers to working.

Very few people indicated that a lack of transport for getting to work was a barrier. This is surprising given that analysis of an earlier subset of the same data revealed that a significant proportion of respondents did not hold a driver's licence and/or had limited access to a vehicle, and this was correlated with markedly lower propensity to be in employment (Dockery & Hampton 2105). Frequencies from the current sample show that only 40 per cent held a current driver's licence. As shown in Figure 1, less than half of the sample reported that they could access a vehicle when they need to or could do so most of the time. Over half indicated restricted access, with almost one-third selecting the options of 'not very often', 'only in an emergency' or simply 'no'.

Figure 2 - Can you always get access to a vehicle if you need one?



5.2 Educational attainment and engagement

Table 3 shows the highest level of education reported by the respondents. It can be seen that around a quarter of people surveyed either never went to school or attended only primary school. The modal level of attainment is just Year 9 high school, and very few people hold post-school qualifications at only 3 per cent. Note, however, that 'certificates' have not been included in this reckoning of the highest level of education attained, as it is unclear what their equivalent level of attainment is. Certificates potentially encompass a broad range of activities, from a few hours attendance at a workshop to a vocational education and training (VET) qualification. The survey asked people to indicate whether they held a range of qualifications, of which certificate was one option. As the final column of Table 3 indicates, 38 per cent of

respondents indicated having completed a certificate, and a substantial proportion did so irrespective of their other level of educational attainment. The proportion ranges from a low of 19 per cent for those who did not go to high school to a high of 71 per cent for those who also held a trade qualification.

Table 3 - Education attainment and proportion holding a certificate, Mobility Survey

<i>Highest level attained</i>	<i>Number of Persons</i>	<i>per cent</i>	<i>Proportion with a Certificate</i>
Primary only/never went to school	252	23.5	19.0
High school to Year 9 or less	292	27.2	33.6
High school to Year 10	247	23.0	44.1
High school to Year 11	153	14.3	57.5
High school to Year 12	90	8.4	47.8
Diploma or trade qualification	31	2.9	71.0
University degree or higher	8	0.7	50.0
Total	1073	100.0	38.4

Table 3. Notes: 2 observations had missing values.

In addition to past educational attainment, people were asked about any current study or training they were undertaking. Just under 20 per cent, or roughly 200 individuals, indicated that they were, a figure that is perhaps surprisingly high.² However, this was closely related to employment status, with around one-third of those employed currently undertaking study or training compared to just 9 per cent of those not working for wages. Accordingly, workplace training was the predominant form of training provided, nominated by 60 per cent of those currently in study or training. However, 15 per cent of those currently undertaking a course also reported studying through a university.³ Most reported doing their study or training part-time (60 per cent).

In terms of the mode of study 53 per cent reported attending either weekly classes or in blocks, while 31 per cent reported studying by remote/distance education or on-line courses. Just half of those currently undertaking training or study indicated that they had to travel away from their community to do so. This was quite consistent across the different modes of study, including for on-line courses and by distance or remote education. It seems the digital age has not obviated the need to travel to access education and training, but it may have reduced the amount of travel students and trainees need to do. The most common forms of transport for attending education and training were by work vehicle, private car, and bus.

² The figure for Aboriginal and Torres Strait islander people living in remote and very remote Australia from the 2008 NATSISS was 12.5% (ABS 2009).

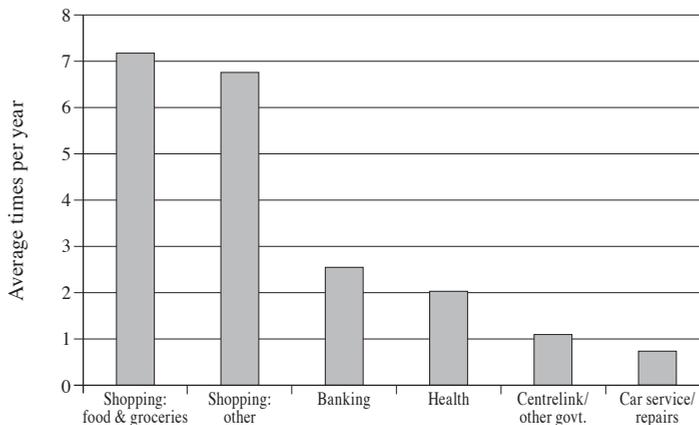
³ Included in the 15% figure are those who selected the option of 'University or other higher degree training organisation' and those who selected 'Other' and then indicated Charles Darwin University or Batchelor Institute in the free text field.

5.3 Accessing services

One of the main objectives of the Mobility Survey is to provide information on how the need to access services and different service delivery models shape the mobility patterns of Aboriginal and Torres Strait Islander peoples living in remote Australia. In the initial survey people were asked about a range of specific services, whether they needed to travel away from the community to access these and, if so, how often and where they went. This included travelling away from the community for education and training courses. As determined by the sampling frame, the most common place people went to access services was Alice Springs. Figure 3 shows the estimated frequency with which people reported travelling away from the community to access those services asked about. Education and training did not feature highly as a reason for travel. While around 1 in five reported sometimes leaving the community for education and training, the vast bulk of these indicated they did so at most once per year. Less than 2 per cent of people reported leaving the community for education or training as regularly as monthly.

By comparison, around 80 per cent of people reported leaving the community to shop for food and groceries, with one in four reporting that they did so at least monthly (see Figure 3). From the data it is possible to estimate that people leave the community to access services around once every 2 to 3 weeks, and the average distance travelled for those who do is approximately 840 kilometres per month. Hence the population in these remote communities do leave the communities relatively frequently and travel long distances. By and large, however, they do not do so for the purposes of accessing education and training providers.

Figure 3 - Leaving the community to access services: Main services by frequency of trips



5.4 Returns to education and training

This section looks at indicators of the gains to individuals from education and training, commencing with a multivariate model of employment outcomes. As noted, employment status has been defined on the basis of whether a respondent indicated that they were working for wages.

5.4.1 Employment outcomes: multivariate analysis

Table 4 presents the results of multivariate logit models of the probability of the respondent being employed. These are reported in the form of odds ratios, which show the estimated effect of a variable on the probability of being in employment (working for wages) relative to its default or omitted category. An odds ratio of 1 indicates no difference between two categories, while an odds ratio above (below) one indicates the percentage increase (decrease) in the likelihood of employment. The odds ratio of 1.33 for males, for example, indicates that males are estimated to be 33 per cent more likely (that is $1.33-1.00=+0.33$) than a female to be in employment. The odds ratio of 0.45 on being aged 15–24 years in the model for all persons indicates that those young people are 55 per cent less likely ($0.45-1.00=-0.55$) to be employed than a person aged 25–44 years (the default category). For continuous variables – number of adults living in the household and log of the distance to Alice Springs – the estimated effect is the change in the likelihood of being employed for each 1 unit increase in that variable. In interpreting the results, the caveats noted above regarding potential conflation between employment and program participation equally apply.

The results suggest that employment probability peaks between the ages of 25 years and 44 years for women, and 45 to 54 for men. The odds of being in employment for people residing in these communities drops sharply beyond the age of 55. Married women are estimated to be around 25 per cent less likely to be employed than unmarried women, but this effect fails to attain significance at the 10 per cent level ($p=0.15$). There are opposing effects of living with children in your care by gender, though neither estimate is statistically significant. The coefficient for men suggests that having care of children is associated with around a 50 per cent higher chance of being in employment, but we cannot confidently reject the possibility that the true effect is zero ($p=0.14$).

In their earlier analysis, Dockery and Hampton noted that the number of adults living in the household was associated with a decline in employment propensity. They suggest this may be due to the effect of crowding, insecure tenure, or of disincentives to earn income created by ‘humberging’ within the household (2015, p. 12-13). Alternatively it may reflect omitted variable bias in which crowding is negatively related to the level of infrastructure in the community. Separate estimation by gender now shows that the effect applies only for women. For each additional adult resident, the probability that a co-resident woman is employed is estimated to fall by 14 per cent. This would suggest that the effect is more likely to be related to social or household dynamics, such as the within-household division of labour between paid and unpaid work, rather than community effects.

Before turning to the results for variables capturing educational attainment, note that a variable indicating whether the individual holds a certificate has been defined independently of the other variables capturing the highest level of qualification. This follows from the observation above that having completed a certificate was relatively commonplace irrespective of other qualifications held. Generally, there is rather weak evidence that educational attainment is associated with a higher probability of being employed. Note that estimates relating to post-school qualifications are very imprecise in a statistical sense because very few people in the sample hold such qualifications.

Relative to those who completed Year 12, women who reported either never having gone to school or only having attended primary school are substantially less likely to be employed, and women holding a trade certificate or diploma more likely to be employed – the estimated effect is large but only weakly significant. For men, however, there are no statistically significant estimates. In the model estimated for all persons, only the estimate for having not progressed past primary school is significant.

Table 4 - Odds ratios from logistic regression of the probability of being employed, by gender

<i>Variable</i>	<i>Females</i>	<i>Males</i>	<i>Persons</i>
Male	n.a.	n.a.	1.33 *
Age: 15–24 years	0.37 ***	0.54 *	0.45 ***
25–44 years	—	—	—
45–54 years	0.82	1.40	1.06
55–64 years	0.36 **	0.35 **	0.35 ***
65 and over	0.13 *	0.26 **	0.23 ***
Married/partnered	0.74	1.01	0.87
Looks after kids	0.81	1.58	1.13
Number of additional adults living in households	0.86 ***	0.96	0.91 ***
Highest education level:	0.30 ***	0.89	0.51 **
Never went/primary school			
Some high school, but not Yr 12	0.72	1.82	1.06
Finished Year 12	—	—	—
Trade qualification or diploma	8.80 *	1.27	1.56
University degree or higher	0.70	n.a.b	3.37
Has a certificate	3.06 ***	1.97 ***	2.51 ***
Has a current licence	3.14 ***	3.20 ***	3.17 ***
Community variables:	1.62 *	1.43	1.50 *
Serviced by bus			
Log distance to Alice Springs	0.62 ***	0.70 *	0.65 ***
Observations	651	398	1049
Likelihood ratio	205.2 ***	87.3 ***	268.8 ***

Notes: a. Number of adults in addition to self and partner, where applicable. b. estimate infeasible due to small sample and lack of within-category variation in employment status ***, ** and * denote that the estimated coefficient is significant at the 1 per cent, 5 per cent and 10 per cent levels, respectively.

These estimates are in stark contrast to those relating to the holding of a certificate. These show that, in these remote communities, people who hold a certificate are two and a half times – 250 per cent - more likely to be working for wages than those who do not hold a certificate! In turn, these results are in stark contrast to those normally observed in studies for mainstream labour markets, in which certificates tend to be associated with minimal improvement in labour market outcomes. It is

important to be cautious as to what can be read into these estimates. Most obviously, there is a high chance of reverse causation (or endogeneity), whereby people have gained certificates as a consequence of being in a job, such as through working in a Ranger program. However, this still requires that people would have had to hold on to those jobs, or tend to rapidly regain jobs, for the coincidence of certificate holding and employment to be observed in the cross-sectional data. Exactly why certificates should be associated with vastly improved labour market outcomes in remote communities when (a) certificates do not have this positive effect in mainstream labour markets and (b) there seems limited return to more recognised forms of educational attainment, is certainly a question warranting further analyses.

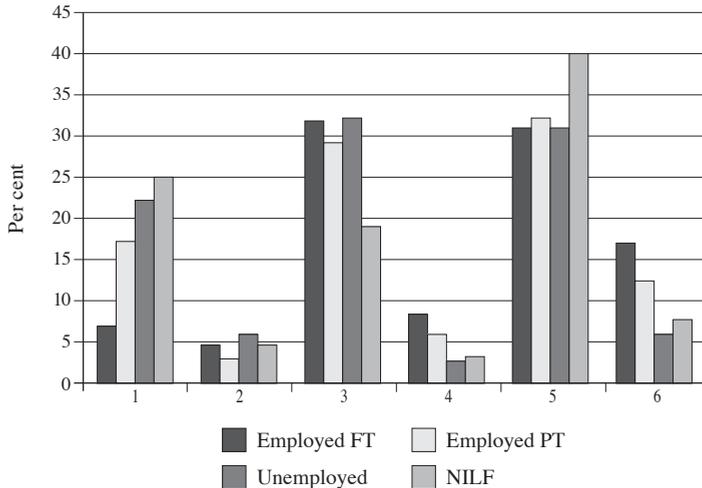
The positive effect of having a drivers' licence can also be seen in the multivariate results. The literal interpretation is that a person with a drivers' licence is more than three times more likely to be working than someone without a licence. This variable has been used in preference to the vehicle access variable due to potential endogeneity between employment and access to a vehicle, such as a work or community vehicle. However, including the 1 to 6 scale depicted in Figure 1 in the logistic regression model instead of the drivers' licence dummy also returns a large and significant result in the expected direction. Vehicle access becomes insignificant if both variables are included jointly.

A number of community level variables were tested in the model. As can be seen, living in a community with a bus service is associated with higher employment propensities, while employment propensity drops off with the distance of the community from Alice Springs. Seventeen of the 21 communities were serviced by a bus. For all but two of these the bus service to and from the community operates on only one or two days per week.

5.4.2 Financial prosperity or 'money situation'

It was not considered feasible or appropriate to collect data on actual wages earned. However, a question was included that attempted to measure individuals' financial prosperity. Specifically, people were asked to select which answer from a set of given options best described their money situation. The options given were: 'I run out of money before payday', 'I sometimes have to borrow or bookdown', 'I keep just enough money to get us through to the next pay', 'most weeks there is money left over, which I spend', 'I save up sometimes' and 'I always save'. These options, as developed in consultation with ACRs and remote community residents, were intended to represent a progressive, ordered scale from least financially well-off through to most financially comfortable. Figure 4 shows the distribution of this variable by labour force status. At the two extremes of the scale, there is a clear relationship of greater prosperity, or less financial stress, for those in employment and in full-time employment in particular. The relationship is less clear for the intermediate assessment of one's financial situation.

Figure 4 - Money situation by labour force status (1=least financially well off, 6=most well off)



Notes: 1 = 'I often run out of money before payday'; 2 = 'I sometimes have to borrow or book down'; 3 = 'I keep just enough money to get us through to the next pay'; 4 = 'Most weeks there is money left over, which I spend'; 5 = 'I save up sometimes'; 6 = 'I always save'.

To assess factors that shape financial wellbeing further multivariate models were estimated using dependent variables based on individuals' reported financial situation. In the first model we simply create a dummy indicator of financial stress that is assigned a value of 1 if the individual reported running out of money or sometimes having to borrow or bookdown, and 0 otherwise. The model of financial stress is again estimated as a logit model. Second the 6-pt scale was converted to a 3-point scale with 1 corresponding to running out of money or having to book down; 2 corresponding to having just enough money or having a bit left over which is spent; and 3 corresponding to saving up sometimes or always. The model using this variable was estimated as an ordered probit model. The variables relating to holding a licence and vehicle access were dropped due to potential endogeneity, and in any case testing revealed neither was significant.

The results are reported in Table 5. For both financial stress and financial situation, the models are initially estimated without including a variable for employment status (models 5.1 and 5.3, respectively). This reduced-form specification is adopted to test the pay-off from education in terms of its impact on financial circumstances. A dummy variable indicating whether or not the individual is employed is then added to test whether any such effects are mediated through the impact of educational attainment on employment status (models 5.2 and 5.4).

For the logit model, the odds ratios relate to the probability of being in financial stress, so a figure greater than one suggests an undesirable outcome. The coefficients for the ordered probit model relate to the effect of the variable on the probability that

the individual will report a more financially comfortable position, and hence a positive coefficient represents a desirable effect.

Looking at models 5.1 to 5.4, there are few significant results. Males are much more likely to report running out of money and less likely to report that they can save any money. However, reported financial situation seems insensitive to age, marital status, having care of children or the number of adults living in the household. Self-assessed financial wellbeing appears to drop off with remoteness, as proxied by distance from Alice Springs. Of most relevance here, there appears no relationship between educational attainment and people's assessment of their financial situation. The exceptions are again with respect to holding a certificate, which seems to reduce the likelihood of running out of money or having to borrow (significant at the 10 per cent level), and a higher incidence of financial stress for those who never went to high school. Holding a certificate is also associated with a more positive rating of one's financial situation (model 5.3), but the estimated effect is small and insignificant.

When employment status is included as a regressor, the results show a large beneficial and highly significant effect of being in employment on financial wellbeing. The estimated odds ratio (model 5.2) implies being in employment is associated with a 44 per cent drop in the likelihood of reporting financial stress. The inclusion of this variable has a modest impact on the estimated effects for educational attainment, consistent with some of the effect of educational attainment on prosperity acting through the propensity to be in employment. This holds also for the effect of holding a certificate, consistent with the positive association observed between holding a certificate and the probability of being in employment.

To illustrate the contrast between these results, which are based on a sample of individuals from very remote communities, and those pertaining to mainstream labour markets the final set of models (5.5 and 5.6) replicate as closely as possible the ordered probit models for financial prosperity using data from Wave 14 of the Household, Income and Labour Dynamics in Australia survey (HILDA). HILDA is household panel survey designed to be nationally representative of private dwellings in Australia, with a number of exceptions. Those exceptions include 'people living in remote and sparsely populated areas' (Summerfield et al. 2015, p. 132; Zoellner & Lovell, in press; see also <http://www.melbourneinstitute.com/hilda/> for details on the HILDA survey). The sample for estimation here is further restricted to include only people who are not of Aboriginal or Torres Strait Islander descent. The much larger sample means that many more of the estimated coefficients attain statistical significance. Interviews to collect the Wave 14 data were mostly conducted in 2014, the same year data collection for the Mobility Project commenced.

As with the ordered probit models for financial situation using the Mobility Data (models 5.3 and 5.4), the dependent variable in the models using the HILDA data takes on values from 1 to 3. These are based on HILDA's question on self-assessed prosperity, with 1 corresponding to 'very poor', 'poor' or 'just getting along', 2 corresponding to the modal response of 'reasonably comfortable', and 3 corresponding to 'very comfortable' or 'prosperous'. It is possible to derive all other variables used in the models on a roughly comparable basis with the exception of the variables relating to distance from Alice Springs and having a bus service (which in any case are not relevant to the HILDA sample). The results for 'mainstream' Australia show stronger demographic influences on self-assessed financial wellbeing, with assessed prosperity significantly lower in the prime working years of 25-44, higher for persons who are married, higher for each additional adult in the house, and lower for those with dependent children. None of these associations are apparent within the Mobility sample. Possibly this reflects a greater degree of sharing of resources and reciprocity along kinship and cultural lines within Aboriginal and Torres Strait Islander society in remote Australia, such that one's sense of financial wellbeing is less affected by stage of the life cycle or demographic circumstances.

It is difficult to compare the relationships between educational attainment and financial circumstances. Broadly, in both the remote and mainstream contexts the sign and magnitude of the coefficients indicate higher educational attainment is associated with a more comfortable financial position, but as noted these coefficients are mostly insignificant for the Mobility sample. In both contexts there is a large and positive association between being in employment and one's self-assessed financial situation. Where the results differ is with respect to holding a certificate. For the HILDA sample holding a certificate has been defined as ever having completed a post-school qualification at the Certificate level 5 or 6 based on the Australian Standard Classification of Education (see ABS 2001), with the exception of a Certificate level 514 (which includes trade certificates and therefore included among the 'Trade qualification or diploma' category). In the HILDA sample, 38 per cent reported holding such a certificate, which turns out to be precisely the same figure as for the Mobility sample. However, the contexts are very different since those in the wider HILDA sample have far higher levels of post-school educational attainment overall. For the HILDA sample 28 per cent had a university level qualification and 23 per cent a trade or diploma; compared to just 0.7 per cent and 2.9 per cent, respectively for the Mobility sample (see Table 3), making the certificate virtually the only non-school qualification held among people in the remote communities.

In mainstream labour markets, however, holding a certificate is associated with lower assessed financial wellbeing (highly significant), and this is not mediated by the inclusion of employment status to any substantive degree.

6. Discussion

In the context of ongoing debate on economic opportunity, demands on the public purse, and comparatively poor outcomes on a range of health and wellbeing measures this paper attempts to shed light on some of the characteristics of labour markets in

discreet Indigenous communities. Education and training is often flagged as a solution to addressing disadvantage and creating equality in opportunity. In some cases education and training may provide access to mainstream labour markets, which will assist those who want to transition out of remote communities; a favoured impact for those who ultimately see the demise of such remote communities as the solution to addressing Indigenous socio-economic disadvantage.

Overall the Mobility Survey results show a population with a low level of employment and educational attainment. The main problem perceived for employment is simply the lack of available jobs within these communities. However, other barriers to employment are widespread, including many people taking on caring and cultural roles and widespread health and other personal work limitations. For example, analyses of the Mobility data suggests that, while not self-reported as a barrier to work, the lack of a drivers' licence is associated with a marked reduction in the probability of being in employment.

These more detailed community level data also provide a more nuanced insight into Biddle's (2009, 2010) observations based on aggregate census data that employment outcomes generally did not improve for those who migrate from remote communities. Given the levels of skill attained compared to that expected in many 'mainstream' jobs, and the likelihood of endemic health issues, and language barriers it is very doubtful that remote residents would be more likely to participate or, if so, to be competitive in the labour markets of larger communities, regional towns or major cities. Kinship is a significant source of social capital of remote residents, and once relocated they would face additional issues relating to maintaining (or missing out on) kinship ties, discrimination, access to services, and the stress of cultural adjustment. It is doubtful the communities and families they would be leaving or the receiving communities would benefit from such movement.

There are also reasons to be guarded about the potential of education as the panacea it is often touted to be. There is little evidence that remote residents are willing to go out of their way to access education and training opportunities and the uptake of on-line modes of study also appears limited; albeit possibly due to limited telecommunications infrastructure. Workplace training is the main form of human capital accumulation, and in some instances this couples with the governance of local organisations and assets. Moreover, this form of human capital accumulation towards triple bottom line outcomes (social, cultural and financial) seems justified as the available evidence points to very limited benefits from the sort of educational qualifications that are valued in the mainstream labour market, either in terms of employment propensity or financial wellbeing. Add to this the mystery of the strong association between employment outcomes and the completion of certificates in the remote communities sample, when such certificates hold little value elsewhere. It seems the returns to different types of education and training vary substantially in the remote and mainstream contexts.

A possible explanation for these variations is that in the relatively 'dense' mainstream labour market, educational attainment plays a substantial signalling role in matching individuals to jobs, with attainment taken as a proxy for individual attributes (or capability). The holding of a certificate will not signal positive attributes given the

proportion of those who complete Year 12 and hold higher post-school qualifications in mainstream Australia. The extent of such competition and matching will be very limited in remote Aboriginal communities. Certificates are often gained outside of formal 'off-the-job' tuition, instead providing very practical skills through on-the-job application and experience. Rather than act as a signal of individual capability, the effect of a certificate is more likely to relate to a direct productivity enhancing effect of job-related training the individual has received. That such modes of training offer higher returns in remote communities echoes findings from the CRC-REP's Remote Education Systems project that engaging Indigenous children in education in remote communities requires schooling and curriculum to be directly relevant to their needs.

On the positive side, there seems much that potentially can be done to promote employment outcomes within remote communities. There are many people in these communities willing and wanting to work. Evidence continues to accumulate that barriers to mobility are a significant constraint to employment. This is most obvious in the large gap in employment outcomes for those with and without a driver's licence, but can also be seen in differences by level of vehicle access and conditional upon public transport services – in this case whether or not the community is serviced by the Bush Bus. It is well known many Aboriginal and Torres Strait Islander people lose their licences for relatively trivial offences, notably non-payment of fines. Investments in vehicles, improved licensing systems, public transport and road infrastructure may well offer high returns. A substantial majority do not have sealed road access (Smoker 2011), and Spandonide (2015) estimates that 15 per cent more people commute for work from communities where there are sealed roads. Only three of the 21 communities in the Mobility sample can be reached by sealed road. As we have seen, intensive education is not necessarily required to leverage such employment outcomes, only relevant on-the-job training at the certificate level.

Previous research has noted the resilience of Aboriginal and Torres Strait Islander peoples against past attempts to shape their mobility and geography (Memmott, Long & Thompson 2006, Morphy 2010). This further suggests that returns to measures to promote employment within communities may be much higher than attempting to lure or push residents out of remote communities. Policy-makers must be cognisant of the things that Aboriginal and Torres Strait Islander people value if they are to understand their mobility and formulate effective labour market policy (Dockery 2016). For good reasons, people are not going to respond in the way policy makers may anticipate from perceptions and models based on mainstream labour markets (Lovell, Guenther, & Zoellner, 2015).

While the Mobility survey does address some of the shortcomings of existing data collections it is of course subject to its own limitations. Because of survey fatigue and an inherent lack of trust in the motives behind research, or of the likelihood of it bringing any benefits to the participants, it was considered important to keep the Mobility Survey as short as possible, and not to collect data that may be sensitive or not directly related to the key research questions. It was also important to pay due respect to views expressed during community consultations in the process of framing the questionnaires. Some important limitations include the lack of information on household relationships between participants or on other members of the participants' households

(such as their employment status). This precluded including household level data in the modelling (other than the number of people living in the household) or to control for selection effects. Questions on substance abuse and incarceration of participants or their relatives were not included as these are considered personal, and not tangibly related to mobility, and there was no supportive argument as to how the mobility research would contribute to positive change regarding those factors. The issue of 'survey fatigue' was raised in locations in which longitudinal studies on early years education and on health are underway, some of which did discuss substance abuse and incarceration within household level data. Residents expressed some frustration that the same questions were being asked of them by different researchers, without any evidence of change as a result of participation. In that light, substance abuse and incarceration were placed outside the scope of what the mobility project collected. It is acknowledged that omitted factors also have substantial impacts on the lives of many Aboriginal and Torres Strait Islander people living in remote Australia and it should not be assumed that they are without weight in any ensuing synthesis of findings. However, the benefits of participatory research design with remote residents have contributed to a unique data set, which, like all research designs, includes anticipated shortcomings.

7. Summary and conclusion

Around one in five of all Aboriginal and Torres Strait Islanders live in remote and very remote Australia, many within distinct remote Aboriginal communities. The appropriateness of policies designed to address issues surrounding socio-economic outcomes for those residents and the economic sustainability of those communities thus has important implications for a substantial proportion of Indigenous Australians and for attempts to bridge inequality. The nature of remote labour markets has a bearing on a number of debates around these issues, including tensions between employment and other support programs and welfare dependency, leveraging benefits from native title, the design of models of service delivery and access, and options of promoting economic development within communities as opposed to promoting pathways to outside opportunities. Limits to existing information on basic aggregates, let alone the dynamics of those remote labour markets, increases the likelihood of inappropriate policy responses being applied to remote communities.

The analysis of data from 21, mostly very remote, communities in Central Australia provides important initial insights into the functioning of such labour markets. In addition to the well-known low rates of employment, salient features include low levels of education with relatively muted returns in terms of employment opportunity or financial prosperity associated with higher educational attainment, and lack of access to a vehicle or transport constituting a significant barrier to employment. Many people, however, do hold a certificate qualification and, in contrast to mainstream labour markets, this is strongly associated with better employment outcomes. Thus there appears to be a higher relative benefit to direct job-related training when compared to general education in these labour markets; and such context-specific human capital may not translate well to employment opportunities outside of the communities. Housing factors also appear to shape female employment outcomes.

There is a need for more information on how cultural connections and aspirations shape these peculiarities and other characteristics of remote labour markets if policy responses are to be appropriate and effective, for the assumptions underlying policy settings in mainstream labour markets are far removed from the barriers, processes and incentives that operate in remote communities.

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