“Brain waste” - Underemployment of migrants in the Wellington region

Discussion document

June 2014

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berl economics

Background

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Executive Summary

An economy in which a sizeable proportion of the labour force is working fewer hours and or below their skill levels cannot be described as an economy operating at full employment. But such a mismatch is difficult to measure; this research is the first step to develop a stronger empirical evidence base on underemployment.

BERL investigated three measures of underemployment in this research. The first measurement is the visible and most common measurement used globally, where the number of people working in part-time jobs, since they could not find full-time jobs, is used as a proxy for the number of underemployed people in the economy. The second and third measurements are invisible underemployment and are based on measuring the disparity between education in relation to income as well as the disparity between occupation in relation to income.

The research has shown some significant differences in employment, education, income and occupations depending on your country of birth. Some of the high level observations are:

Labour force status of migrants

- Unemployment rate of migrants are similar to the unemployment rate of the total population in Wellington
- However, Middle east, African and Pacific migrants have a one percent higher level of unemployment than the total migrant population
- 36 percent of European migrants are not in the labour force

Labour force status of migrant that have been in the country for less than two years

- Significant hike in unemployment rate of especially Middle east, African and Pacific migrants
- Numbers for migrants not in the labour force also increase significantly for especially Middle east, African, Asian, Pacific and other migrants

Total migrant population

- Strong correlation between education and income, on par with the total population in Wellington
- European migrants are doing better than the total Wellington population, with 46 percent having a university degree and 59 percent earning more than $50,000 per year
- Only 24 percent of Pacific migrants earned more than $50,000 per year, and Pacific migrants had the lowest number of University degree holders, only 15 percent

Asian migrants

- 42 percent of employed Asian migrants in the Wellington region had a University degree, but only 25 percent of the total employed earned more than $50,000 per year
- Even more pronounced for migrants who have been in the country for less than five years. More than half earned less than $20,000 per year and only 17 percent earned more than $50,000 although 43 percent had a University degree

Education and occupation

Overall there is strong correlation between education and occupation. There is however significant differences, depending on your country of origin. This is especially prevalent for Asian and Pacific migrants.

- Asian migrants are the only group where there were more qualified at Level 1 (University qualification) that were working at Level 1 jobs.
- Whereas the European migrants, 46 percent had a Level 1 qualification and 57 percent worked in Level 1 occupations
- Pacific migrants had the lowest percentage of Level 1 education and the highest percentage with no qualifications (level 4) and working in low skilled occupations

Focus groups and individual interviews were conducted to verify the results from the Census. Migrants were generally happy with the decision to migrate and settle in the Wellington region including the job opportunities that were available in Wellington.

Some of the repeating themes that came to the forefront through the focus groups and individual interviews were:

- As a migrant you need to build a really good network to ensure access and grow your employment opportunities
- The biggest obstacles to job opportunities are:
    - Lack of New Zealand experience
    - English language proficiency
- Other migrants are more willing to provide opportunities to new migrants
- High level of lack of understanding the culture in New Zealand by migrants – social and work culture
- Better preparation for relocation is needed by providing and accessing information on especially:
    - Law and order
    - Language
    - Economic systems such as banking, government departments and the housing system

One of the participants from Samoa stressed that:
"Unless migrant communities start to own their destiny in this foreign land they will always be underprivileged"

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1 Introduction

This proposal follows on from the research that BERL completed for WRS in 2013 on *The Immigration Policy Review*. The research investigated the current immigration patterns, outcomes, policies and practices, and issues arising for the Wellington Region from this. The research has shown that migrants face many challenges in employment such as their skills being devalued compared to locally trained employees, even if the quality of their skills is equivalent or better. The following action was proposed as part of the follow-up from the research:

- **Securing funding and research partners for**
    - **further research into quantifying the "brain waste" phenomena.** There is anecdotal evidence that this is a rather prevalent issue. Need to develop an evidence base on the brain waste to be able to inform policy decisions.

This proposal is in response to this action to develop an evidence base on the brain waste phenomena, to better inform policy decision-making.

1.1 Defining "brain waste"

The methodology for measuring brain waste will be based on quantitative and qualitative research methods, and our analysis of underemployment. Underemployment differs from unemployment in that a person is working, but lacks an adequate "person-job" fit (TIEDE, 2008). Situations of underemployment include:

- underpaid or lower job status compared to workers with similar skills and education;
- not receiving adequate hours at work and/or preference for full-time status;
- working outside field of formal education and training;
- having greater skills and/or work experience than required for a given job;
- individual perception that a job is generally lacking or unfulfilling.

The research will develop an economic evidence base on migrants in the Wellington region to determine the level of underemployment. BERL validated the results through focus groups and individual interviews of migrants.

1.1.1 Underemployment

Migrants in occupations that underuse their experience, training, and skills are classified as underemployed. These migrants might be receiving salaries below what they believe they can earn; they might also be unsatisfied with their jobs or work fewer hours than they desire. It is generally assumed that underemployed migrants could leave their current position for another job where their characteristics are better used. Thus, the underemployed migrants are believed to present a significant pool of untapped labour that can be better matches to their skills, training, and experience (Bonnal, 2009). There are two types of underemployment, according to the international Organization for Economic Cooperation and Development (OECD): visible and invisible (Amadeo, 2012).

Visible underemployment includes employees who are working fewer hours than is typical in their field. These part-timers are willing and able to work more hours, but cannot get full-time work. They often work two part-time jobs, just to make ends meet.

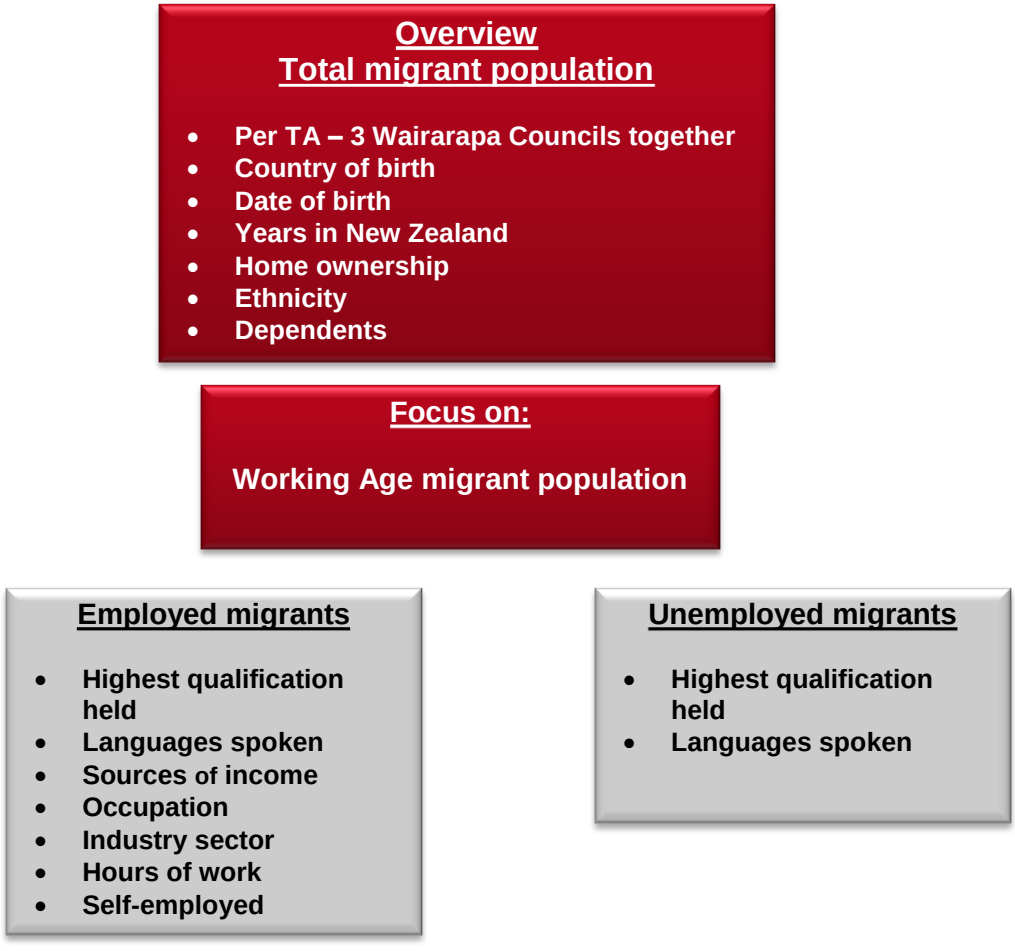
In invisible underemployment, workers are in full-time jobs, but their skills are not being thoroughly used and or they are being paid less in relation to their skill sets. This type of underemployment is nearly impossible to measure without extensive surveying and a comparative analysis of skills vs job requirements. Very often, the workers themselves don't realise their skills could be better utilised, whether in the same or different jobs. (OECD Glossary, Underemployment)

There is another category of underemployed who fall into a statistical no man's land. Even though they don't have a job, they aren't counted among the unemployed by Statistic NZ. Why not? The Statistics only includes those who have looked for a job in the last four weeks. Within the "not in the labour force" there is a sub-group who have just given up looking for work altogether.

1.2 Methodology

In order to develop an economic evidence base of the level of underemployment in migrants living in the Wellington region, BERL focused on undertaking a qualitative analysis of underemployment and the migrant population through the use of an interactive econometric model. This model was based entirely on migration information collected from the Statistics New Zealand 2013 Census of Population and Dwellings.

The model was layered, with the first layer based on total migrants in the Wellington Region; the second layer divided the total migrant population into employed and unemployed. This split is show in the figure below:



The model was set up with various cross tabulations to enable drilling down into the information.[1] BERL evaluated the information contained within the model and a discussion of the model's results can be found in the following sections of this report. We intended to investigate questions such as:

- Are there migrants from particular regions, whose time of arrival make them more or less vulnerable to underemployment?
- Does the length of time since arrival in New Zealand have a direct influence on underemployment?
- Does country of birth have a direct influence on underemployment?
- How do fully-employed migrants relate to the overall migrant population in the region?
- How do migrants who are underemployed relate to the overall migrant population in the region?
- What industries and occupations have the highest levels of migrant underemployment?
- What industries and occupations provide migrants with the greatest income levels?
- Do industry, occupation and income vary depending on country of birth?
- Do industry, occupation and income vary depending on time since arrival?

When conducting analysis needed to answer questions such as this, cross tabulations is the best quantitative research method. Cross tabulations provide a way of analysing and comparing the results for one or more variables with the results of another (or others). Cross tabulations enabled us to examine the relationships within the data that might not have been readily apparent from studying a single variable. Without using cross tabulations the results would have been based solely on the aggregate total – meaning, the data tables would have been based on the entire group of migrants within the Wellington Region.

The cross tabulations allowed the results of the entire group of census respondents to be presented, as well as the results of several sub-groups.

Level of detail for census tables

The best way to visualise census data is to imagine you have a limited number of bricks, you can either pile them high in narrow pile, or you can spread them wide in a thin pile. In this regard census data can either be highly detailed for a very limited number of variables, or can be moderately detailed for a wide range of variables.

In order to build an Excel model capable of answering questions such as those noted above, all of the census data needs a common link between the variables so that all of the data can be linked together. For this linking we used "country of birth" and "time since arrival", the two main variables we initially believed would have the greatest influence on migrant underemployment in Wellington.

Because underemployment is measured by the employment of the individual and the number of hours people work. This meant we needed to include variables such as the occupation and industry of employed migrants and their highest qualification, the languages they speak and their income.

[1] Cross tabulation is a statistical process that summarises categorical data to create a contingency table. It provides a basic picture of the interrelation between two variables and can help find interactions between them.

To ensure the highest quality data, each census table we requested needed to include a reasonable number of categories within each variable, otherwise we ran too high a risk that Statistics New Zealand will determine the count within each individual cell was too low for dissemination. This would have led to majority of our data ending up being confidential, and therefore suppressed within the tables.

1.3 Focus Groups and individual interviews

Focus groups and individual interviews were conducted to test the quantitative results from the Census. The focus groups and interviews were made up of migrants from diverse backgrounds. These focus groups and individuals included migrants from Asia, Africa, Pacific and other. The groups included new arrivals that have been in the country for less than a month, to migrants who have been in the country for 40 years. The participants had a diverse compilation of skills from unskilled to highly skilled migrants. Altogether 20 migrants participated in the research.

The focus groups and individuals were asked to share

- their experience of entering into the labour market in New Zealand for the first time; and
- their work history since arrival.

2 Migrants play an important part in our labour market

International migration has a big impact on the population of New Zealand—although more on the composition than size of the population, which is about 4.4 million with about one-quarter of the population being foreign born (IMSED, 2010).

Understanding the economic impact of immigration is particularly important for New Zealand, given that past international inward and outward migration flows have contributed to a population of which an estimated 1 in 4 is foreign born—a figure well above the OECD average of 1 in 10. Thus, it is vital to better understand and quantify the importance of immigration, as well as its consequences, in terms of supporting and developing New Zealand's economy as well as the Wellington regional economy.

2.1 Wellington region

According to Census 2013 there were 113,031 migrants living in the Wellington region, Table 1 provides a breakdown of the migrant population per TLA for the Census 2013.

Table 1: Census 2013, Migrant population per TLA

TLA	Total	Africa and middle East	Asia	Australia	Europe	Northern America	Pacific	Other
Total Wellington Region	113,031	9,177	29,895	6,906	45,750	4,818	14,964	1,524
Wellington City	55,665	4,908	18,456	3,348	20,586	3,060	4,365	939
Kapiti Coast	10,356	660	1,017	765	7,074	441	333	69
Lower Hutt City	21,897	1,545	6,732	1,155	7,182	591	4,443	243
Porirua City	11,937	810	1,641	612	3,678	288	4,755	153
Upper Hutt City	7,848	915	1,494	498	3,975	201	681	84
Wairarapa	5,331	339	552	528	3,249	237	387	36

Note: Sub totals are subject to Statistic New Zealand rounding and may not add up to the total.

Of the 113,031 migrants in the Wellington region, nearly 50 percent are based in Wellington City. Lower Hutt City has the second biggest migrant population, with nearly 20 percent of the Wellington

region migrant population living in Lower Hutt City. Wairarapa has the smallest migrant community with only 5 percent of the migrant population being based in the Wairarapa.

By country of birth, Europeans are the biggest migrant group with 40 percent of the migrants coming from Europe. The Asian migrant population are the second biggest group with 26 percent of the migrant population coming from Asia.

There has been a 12 percent increase in migrants in the Wellington region from the 2006 Census to the 2013 Census. The region has seen increases in the migrant population in all of the TLA's as shown in Figure 2. Migration per country of birth has seen significant increases from Asian migrants and other migrant groups (although from a very low base). Pacific Island migrants have seen a decrease in migration of 2 percent.

Table 2: Percentage change from Census 2006 to 2013 migrant population

TLA	Total	Africa and middle East	Asia	Australia	Europe	Northern America	Pacific	Other
Total Wellington Region	12%	19%	31%	0%	11%	28%	-2%	81%
Wellington City	14%	14%	24%	-2%	11%	34%	-8%	75%
Kapiti Coast	15%	63%	45%	5%	8%	27%	42%	35%
Lower Hutt City	5%	1%	38%	-10%	-8%	22%	-5%	76%
Porirua City	13%	34%	61%	8%	9%	19%	0%	292%
Upper Hutt City	14%	71%	40%	5%	-1%	16%	15%	75%
Wairarapa	18%	13%	47%	17%	14%	8%	30%	33%

2.2 Labour force status of the migrant population

The labour force status of the migrant population (aged 15 plus) showed that 51,009 migrants were employed full time, an increase of 16 percent from the previous Census. Migrants employed part time were 13,017, an increase of 6 percent from the previous Census. Unemployed migrants jumped from 3,351 in the 2006 Census to 4,947 (48 percent increase) in the 2013 Census. A significant proportion was not in the labour force 34,326 and increase of 8 percent from the previous Census.

3 Measuring "brain waste" - underemployment

It was John Maynard Keynes who first argued that economies can get stuck operating below full employment, in "underemployment equilibrium." (Skidelsky, 2013) In this report the distinction is made between underemployment and unemployment. Given that underemployment is not simply about how many people have jobs, underemployment equilibrium can exist even when unemployment is relatively low. Involuntary unemployment does not mean that workers are idle. Workers may, as a last resort, fill positions in which they earn a lower real wage than they potentially could. Migrants from different parts of the world have different levels of underemployment.

3.1 Various measures related to underemployment

BERL investigated three measures of underemployment in this research. The first measurement is the visible and most common measurement used globally, where the number of people working in part-time jobs since they could not find full-time jobs is used as a proxy for the number of underemployed people in the economy. The second and third measurements are invisible underemployment and are based on the correlation between education in relation to income and occupation in relation to income respectively.

3.1.1 Measurement One: time related underemployment - hours worked

The number of people working in part-time jobs since they could not find full-time jobs is used as a proxy for the number of underemployed people in the economy.

Underemployment can be thought of as the unmet need for paid employment (CLC, 2014). For example, a person may be unable to find full-time work, but manages to find part-time work. There is still an unmet need for more hours of work, even though this person is no longer counted as unemployed. A person may want a job, and be actively seeking work, but they are not immediately available. Alternatively, a person may wish to work, but has given up searching, and possibly even engaged in unpaid activities such as care work. In each of these cases, usually grouped together as marginal labour force attachment, there is still an unmet need for paid employment (CLC, 2014).

3.1.2 Measurement Two: correlation between education and income

BERL investigated underemployment in relation to education and income. These variables were categorised into four broad levels to provide a proxy for underemployment.

	Education	Income
Level 1	University degree	$50,001 or More
Level 2	Vocational training	$30,001 - $50,000
Level 3	School qualification	$20,001 - $30,000
Level 4	No school qualification	0 - $20,000

3.1.3 Measurement Three: Education and Occupation

BERL investigated the education levels correlation to occupation levels. These variables were again categorised into four broad levels to provide a proxy for underemployment.

	Education	Occupation
Level 1	University degree	Managers Professionals
Level 2	Vocational training	Technicians Trades workers
Level 3	School qualification	Community and personal service workers Clerical and administrative Sales workers
Level 4	No school qualification	Machine operators and drivers Labourers

4 Measurement One: Time related underemployment in Wellington region

Key observation:

Labour force status of migrants

- Unemployment rate of migrants are similar to the unemployment rate of the total population in Wellington
- However, Middle east, African and Pacific migrants have a one percent higher level of unemployment than the total migrant population
- 36 percent of European migrants are not in the labour force

Labour force status of migrant that have been in the country for less than two years

- Significant hike in unemployment rate of especially Middle east, African and Pacific migrants
- Numbers for migrants not in the labour force also increase significantly for especially Middle east, African, Asian, Pacific and other migrants

The number of people working in part-time jobs since they could not find full-time jobs is used as a proxy for the number of underemployed people in the economy and this is typically tested through surveys to ensure that the people who are working part time are actually available for full time work.

The Census does not ask the question and thus the part time employed migrants in the Wellington region are used as an indication of the level of underemployment, and these assumptions were further tested through the focus groups.

Figure 3 shows that the labour force status of all migrants in the Wellington region is on par with the total Wellington region population, although there is slightly more migrants not in the labour force than for the total population in Wellington region. This might be out of choice, or that migrants have given up looking for work. It is interesting to note that the unemployment rate for Middle East, Africa as well as for Pacific migrants is significantly higher than for other migrant groups.

Table 3: Wellington region, Labour force Status (age 15 plus)

	TOTAL population	TOTAL Migrants	Middle East and Africa	Asia	Pacific	Europe	North America	Other
Employed Full-time	49%	49%	51%	51%	46%	48%	58%	50%
Employed Part-time	13%	13%	13%	12%	12%	13%	13%	15%
Unemployed	5%	5%	7%	5%	7%	3%	5%	6%
Not in the Labour Force	29%	33%	28%	32%	35%	36%	23%	29%

European migrants have the highest proportion not in the labour force. This is a reflection of the age compilation as 28 percent of the European migrants are over 65 and 82 percent of this age group is not in the labour force.

"I came from the UK ten years ago. My in-laws have just moved out here from the UK as well to retire in the Wellington region. They are currently house hunting on the Kapiti Coast"

Figure 4 illustrates the labour force status of migrants that have been in the country for less than two years. These figures are markedly different, with full time employment dropping to 47 percent, total unemployment rate shooting up to 8 percent and part time employment dropping down to 10 percent.

The majority of migrant participants in the focus groups have indicated that they were prepared to do any job when they first arrived in New Zealand.

"*I came from Malaysia and was a kitchen hand when I first came to New Zealand; I struggled for two years to find a decent job"*

Table 4: Labour force status (age 15 plus) for migrants who have been in New Zealand for less than two years

	TOTAL population	TOTAL Migrants	Middle East and Africa	Asia	Pacific	Europe	North America	Other
Employed Full-time	49%	47%	38%	33%	27%	68%	62%	39%
Employed Part-time	13%	10%	9%	13%	10%	18%	19%	7%
Unemployed	5%	8%	13%	9%	12%	6%	7%	11%
Not in the Labour Force	29%	34%	40%	45%	51%	18%	22%	44%

Clearly illustrated is that Asian migrants and Pacific migrants does not have the same level of ease into entering into the labour market than other migrant groups in the first two years in the country. A significant proportion of the Asian and Pacific migrants are not in the labour force.

"People from the Pacific do not have the same level of education than people in New Zealand; they struggle to find work when they first arrive"

European and North American migrants do not have the same level of difficulty although the proportion of part time workers does hike up from 13 to 18 percent and 13 to 19 percent respectively.

"I was recruited from the UK and arrived with a job and my wife was able to find a job within the first three weeks with no significant problems"

5 Measurement Two: Correlation between education and income

Key observation:

Total migrant population

- Strong correlation between education and income, on par with the total population in Wellington
- European migrants are doing better than the total Wellington population, with 46 percent having a university degree and 59 percent earning more than $50,000 per year
- Only 24 percent of Pacific migrants earned more than $50,000 per year, and Pacific migrants had the lowest number of University degree holders, only 15 percent

Asian migrants

- 42 percent of employed Asian migrants in the Wellington region had a University degree, but only 25 percent of the total employed earned more than $50,000 per year
- Even more pronounced for migrants who have been in the country for less than five years. More than half earned less than $20,000 per year and only 17 percent earned more than $50,000 although 43 percent had a University degree

There should be a strong correlation between education levels and income earned. If a migrant has a degree level qualification and only earn $20,000 per annum, it might be clear indication that the migrant is underemployed and are most likely working in a job that is significantly below their education and occupation level.

5.1 Total migrant population

With the total migrant population there is a strong correlation at the higher levels of education and income. As illustrated in Table 5, 43 percent of employed migrants had a University degree and 46 percent earned more than $50,000 per annum. Moving down to Level 2 and 3 the picture changes significantly and the correlation between education and income become less distinct. At level 4, only 7 percent of the migrant population had no qualifications; however 17 percent earned less than $20,000 per annum.

Table 5: Education and income of the total employed migrants in Wellington region based on Census 2013

	Education	Income
Level 1	43%	46%
Level 2	9%	24%
Level 3	37%	11%
Level 4	7%	17%

In 2013, the proportion of migrants with a university degree was nearly 10 percent higher than the proportion of the total labour force in the Wellington region with a university degree as seen in Table 6.

Table 6: Percentage of total Wellington region labour force by education and income levels based on Census 2013

	Education	Income
Level 1	34%	44%
Level 2	20%	24%
Level 3	36%	15%
Level 4	10%	16%

Despite this high level of schooling, their earnings are; in general, lower than for the total labour force.

5.2 Asian migrants

5.2.1 The correlation between education and income is severely skewed for especially Asian migrants.

From Table 7 it is evident that although 42 percent of employed Asian migrants in the Wellington region had a University degree, only 25 percent of the total employed earned more than $50,000 per year. It is also noteworthy that only 13 percent of the employed had no qualifications, however nearly 43 percent earned less than $20,000 per year. There has been a marked increase in the number of Asian migrants with University degrees from Census 2006 to 2013. In 2006 the Asian migrant labour force with a University degree was 35 percent and only 15 percent of the Asian migrant labour force earned more than $50,000 per annum.

Table 7: Education, occupation and income of the total employed Asian migrants in Wellington region as percentage of total employed based on Census 2013

	Education	Income
Level 1	42%	25%
Level 2	8%	20%
Level 3	38%	12%
Level 4	13%	43%

Comparing the Asian migrant population with the total population in the Wellington region showed that 46 percent of the total population in the Wellington region earned more than $50,000 per year, although only 34 percent had a University degree.

"I was a qualified dental technician from Burma, with 20 years' experience, but could only get a job as an apprentice"

"Coming from China, language was a big barrier; not being able to express myself very well in English has made it difficult to find a decent job"

This is even more pronounced for migrants who have been in the country for less than five years as shown in Table 8. More than half earned less than $20,000 per year and only 17 percent earned more than $50,000 although 43 percent had a University degree.

"Building networks is very important for new migrants, it is one of the more successful ways you can secure a better job in the future."

Table 8: Education and income of employed Asian migrants who have been in the country for less than five years in the Wellington region as percentage of total employed

	Education	Income
Level 1	43%	17%
Level 2	9%	18%
Level 3	40%	11%
Level 4	8%	55%

This form of underemployment among new migrants could be attributed to their recent arrival, their lack of information about the labour market, and their lack of contacts, but the differences would be expected to disappear over time. Table 9 illustrates that for Asian migrants even after ten years the differences have not disappeared. Even though 48 percent of Asian migrants that have been in the country for more than ten years have a University degree, only 43 percent earned more than $50,000 per annum.

"Asian migrants tend not to speak up due to their culture, this tend to disadvantage them in the long run in the job market"

Table 9: Education, occupation and income of employed Asian migrants who have been in the country for more than ten years in the Wellington region as percentage of total employed

	Education	Income
Level 1	48%	43%
Level 2	7%	27%
Level 3	33%	13%
Level 4	9%	16%

The increases for established Asian immigrants suggest that the difficulties, which have plagued recent migrants, are today affecting established migrants as well, which also suggests that difficulties experienced by recent Asian migrants are not necessarily temporary.

"Government is not doing enough to resettle migrants, especially in getting an understanding of the New Zealand culture, nuances in language and life in New Zealand in general. As a result, some migrants never settle into good jobs and their new country."

5.2.2 Occupations and industry

Asian migrants were well represented in the higher skilled occupations, with 32 percent in professional occupations and 14 percent in management positions.

The top four industries that Asian migrants worked in were:

Accommodation and food services	15%
Professional, scientific and technical services	12%
Retail trade	12%
Health care and social assistance	11%

5.3 European migrants

5.3.1 The correlation between education and income is high for especially European migrants.

From Table 10 it is evident that although a high proportion of European employed migrants in the Wellington region had a University degree, and that 59 percent of total employed earned more than $50,000 per year. It is also noteworthy that only 4 percent of the employed had no qualifications, and only 13 percent earned less than $20,000 per year.

Table 10: Education and income of the total employed European migrants in Wellington region as percentage of total employed based on Census 2013

	Education	Income
Level 1	46%	59%
Level 2	11%	19%
Level 3	38%	8%
Level 4	4%	13%

Comparing the European employed migrant population with the total employed population in the Wellington region showed that the European migrants were doing much better than the rest of the population, with 59 percent compared to 46 percent of the total population in the Wellington region earning more than $50,000 per year.

5.3.2 Occupations and industry

European migrants were well represented in the higher skilled occupations, with 38 percent in professional occupations and 19 percent in management positions.

The top four industries that European migrants worked in were:

Professional, scientific and technical services	17%
Public administration and safety	13%
Education and training	11%
Health care and social assistance	11%

5.4 African and Middle East migrants

5.4.1 The correlation between education and income is skewed for African and Middle East migrants.

From Table 11 it is evident that employed African, Middle East migrants in the Wellington region that had a University degree, only 25 percent of the total employed earned more than $50,000 per year. It is also noteworthy that only 4 percent of the employed had no qualifications; however 19 percent earned less than $20,000 per year.

"I am from Ghana, and initially I did volunteer work, which I got through a fellow African migrant, to be able to gain New Zealand experience, as I was told that it was important to gain New Zealand experience to secure a better job"

"I studied in New Zealand, coming from Africa, but I still think immigrants are not treated the same as New Zealanders, I still struggled to find a job matching my skills"

Table 11: Education and income of the total employed Middle East, African migrants in Wellington region as percentage of total employed based on Census 2013

	Education	Income
Level 1	38%	49%
Level 2	13%	21%
Level 3	41%	10%
Level 4	4%	19%

These numbers might be skewed by the substantial group of South Africans in this category, which anecdotal evidence has shown that they have a similar portfolio than their European counterparts.

5.4.2 Occupations and industry

African, Middle East migrants were well represented in the higher skilled occupations, with 35 percent in professional occupations and 15 percent in management positions.

The top four industries that African and Middle East migrants worked in were:

Professional, scientific and technical services	15%
Public administration and safety	12%
Health care and social assistance	12%
Education and training	8%

5.5 North American migrants

5.5.1 North American migrants earn much more proportionally to their education.

From Table 12 Table 11it is evident that the majority of employed North American migrants in the Wellington region earned more than $50,000 per year. It is also noteworthy that only 1 percent of the employed had no qualifications; however 14 percent earned less than $20,000 per year.

Table 12: Education and income of the total employed North American migrants in Wellington region as percentage of total employed based on Census 2013

	Education	Income
Level 1	33%	58%
Level 2	6%	18%
Level 3	29%	8%
Level 4	1%	14%

5.5.2 Occupations and industry

North American migrants were well represented in the higher skilled occupations, with 49 percent in professional occupations and 15 percent in management positions.

The top four industries that North American migrants worked in were:

Professional, scientific and technical services	17%
Public administration and safety	15%
Education and training	14%
Health care and social assistance	8%

5.6 Pacific migrants

From Figure 13 it is evident that a significant proportion of Pacific migrants have no qualifications, the highest of any migrant group.

Table 13: Education and income of the total employed Pacific migrants in Wellington region as percentage of total employed based on Census 2013

	Education	Income
Level 1	15%	24%
Level 2	7%	35%
Level 3	47%	16%
Level 4	21%	19%

Pacific migrants have the lowest proportion of migrants with a University degree.

"Migrating from a developing country to a developed country comes with a lot of challenges. A lot of Pacific countries do not have access to higher education and entire families migrate with lower skills."

5.6.1 Occupations and industry

Pacific migrants were under represented in the higher skilled occupations, with only 16 percent in professional occupations and 17 percent in management positions, significant lower than any other migrant group.

The top four industries that Pacific migrants worked in were:

Education and training	14%
Manufacturing	11%
Public administration and safety	8%
Retail trade	8%

5.7 Australian migrants

5.7.1 Australian migrants earn much more proportionally to their education.

From Table 14 it is evident that the majority of employed North American migrants in the Wellington region earned more than $50,000 per year. It is also noteworthy that only 1 percent of the employed had no qualifications; however 14 percent earned less than $20,000 per year.

Table 14: Education and income of the total employed Australian migrants in Wellington region as percentage of total employed based on Census 2013

	Education	Income
Level 1	41%	51%
Level 2	10%	21%
Level 3	43%	10%
Level 4	5%	17%

5.7.2 Occupations and industry

Australian migrants were under represented in the higher skilled occupations, with 35 percent in professional occupations and 17 percent in management positions.

The top four industries that Australian migrants worked in were:

Professional, scientific and technical services	14%
Public administration and safety	13%
Education and training	9%
Health care and social assistance	9%

6 Measurement Three: Education and occupations

Key observation:

Overall there is strong correlation between education and occupation. There is however significant differences, depending on your country of origin. This is especially prevalent for Asian and Pacific migrants.

Education and occupation

- The Asian migrants are the only group where there were more qualified at Level 1 that were working at Level 1 jobs.
- Whereas the European migrants, 46 percent had a Level 1 qualification and 57 percent worked in Level 1 occupations
- Pacific migrants had the lowest percentage of Level 1 education and the highest percentage with no qualifications (level 4) and working in low skilled occupations

There should be a correlation between migrant's education level and occupations. This should indicate if migrants' skills were being utilised within the appropriate occupations. Overall there is strong correlation between education and occupation as shown in Table 15. There is however significant differences, depending on your country of origin. This is especially prevalent for Asian and Pacific migrants.

Table 15: Percentage of total employed migrant population per education and occupation level for Census 2013

	Education	Occupation
Level 1	43%	48%
Level 2	9%	10%
Level 3	37%	27%
Level 4	7%	10%

6.1 Asian migrants – correlation between education and income

The Asian migrants as shown in Table 16 are the only group where there were more qualified at Level 1 that were working at Level 1 jobs. Whereas the European migrants, 46 percent had a Level 1 qualification and 57 percent worked in Level 1 occupations.

"Once they heard I had an Asian accent, I was not good enough for the job"

Table 16: Percentage of Asian employed migrant population per education and occupation level for Census 2013

	Education	Occupation
Level 1	49%	46%
Level 2	8%	11%
Level 3	31%	30%
Level 4	7%	13%

6.2 Pacific migrants – correlation between education and income

Pacific migrants had the lowest percentage of Level 1 education and the highest percentage with no qualifications (level 4) and working in low skilled occupations as shown in Table 17.

"Education is a hot topic for Pacific migrants, our education levels are not up to national standards for New Zealand"

Table 17: Percentage of Pacific employed migrant population per education and occupation level for Census 2013

	Education	Occupation
Level 1	15%	23%
Level 2	7%	10%
Level 3	47%	30%
Level 4	21%	29%

6.3 European migrants – correlation between education and occupation

European migrants had the second highest proportion of people with a Level 1 qualification, but definitely the highest proportion of people earning more than $50,000 per annum as shown in Table 18. Europeans had the lowest proportion of migrants with no qualifications, and only 5 percent earned less than $20,000 per annum.

"I think highly qualified European migrants are a lot more mobile, and if they do not like New Zealand, they have the means to go back to Europe easily"

Table 18: Percentage of European employed migrant population per education and occupation level for Census 2013

	Education	Occupation
Level 1	46%	57%
Level 2	11%	9%
Level 3	38%	25%
Level 4	4%	5%

"*New Zealand firms do not like to appoint migrants to really high senior positions without New Zealand experience; I had a really senior position in the UK, but was only appointed to a really senior position after three years in the country.*"

7 Entrepreneurial activities

Migrants that are employers or self-employed varied between ethnicities as seen in Table 19. North American migrants had the highest number of self-employed

Table 19: Percentage of migrants that are employers or self employed

	Employer	Self employed
Total	4%	11%
European	4%	13%
Asian	5%	10%
Africa, Middle East	4%	12%
North America	3%	16%
Pacific	2%	6%
Other	3%	9%

The Asian migrants had the highest number for businesses employing other people at 5 percent.

“I came from Burma and after a good few years in Wellington I bought my own business to ensure that my potential could be realised. Previously I had to do three jobs to make ends meet, now I employ people and provide opportunities”

Pacific migrants had the lowest number of employers and self-employed.

“The environment in Samoa is not entrepreneurial. The focus is on a subsistence economy, does not encourage entrepreneurial activities”

Participants have also indicated that other migrants were more likely to offer them a job than local businesses.

8 Conclusion

The exact effects of underemployment on the Wellington region economy is difficult to measure and will remain hidden at some level due to lack of dependable data sources. This research is a first step in quantifying underemployment of migrants. The Census data and qualitative research has shown that migrants in general have a similar portfolio to the total population in Wellington, however some significant issues have emerged for specific migrant groups.

This evidence base suggests that there is a mismatch for specific migrant groups between income, skills and occupation. It also indicated that there has been a shift in Wellington towards lower wage jobs for specific migrant groups – even university graduates working well below their skill levels - especially Asian migrants.

International research into underemployment indicates that if underemployment continues, migrant workers lose the ability to update their skills with on-the-job training. These migrant workers may eventually find they can never return to their former field without training, or must retrain for another field, or simply downscale their lifestyle and accept long-term underemployment.

Migrants may find they never get a good start to their career. Forced to take jobs that are beneath their skills, they don't get on the right career track. They don't receive the mentoring needed to get increased responsibility that would update their skills. By the time they have settled in, they are competing with a new batch of migrants and local high school or college graduates for entry-level positions in their fields.

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