

Introducing underutilisation in the labour market

15 September 2021: On page 9 under the section ‘The underemployed’, we corrected the second sentence in the first paragraph to read ‘the underemployed are people working part-time (someone who works fewer than 30 hours per week)’. This originally stated that people who work part-time work 30 or fewer hours per week, which was incorrect.



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1 Purpose

This paper introduces a new set of underutilisation measures which, together with existing labour market indicators, will provide a picture of labour underutilisation in New Zealand, existing and potential labour resources, and the extent to which they are underutilised.

We will produce underutilisation statistics using data from the Household Labour Force Survey (HLFS) and include the statistics from now on as part of our quarterly labour market statistics. The next release will be on 3 August 2016 (NB: HLFS data release delayed until 17 August 2016).

This paper explains the need for measures of underutilisation, what underutilisation is, and how we will measure it.



2 The need for underutilisation measures

The number of people unemployed and the unemployment rate are widely used as indicators of labour market performance and unutilised labour resources in the economy. For many years the measure of unemployment and the unemployment rate have been criticised from both an economic and social perspective. Some of the main criticisms are that the unemployment rate:

- fails to capture labour market downturns in all contexts
- does not fit with common perceptions of ‘lack of work’
- is no longer sufficient on its own in increasingly diversifying labour markets to describe all aspects of attachment to the labour market and insufficiency in paid work
- fails to capture the economic hardship experienced by individual workers.

In response to these criticisms, the International Labour Organization (ILO) undertook work to review unemployment measures and other current indicators of the labour market. As a result of this work, the ILO published the report *Beyond unemployment: Measurement of other forms of labour underutilisation* in 2008. It concludes that:

“...the standard definition of unemployment is essentially sound and the resulting data meaningful. The concept should be maintained and continue to be measured as precisely as possible. But, at the same time, the statistical community should devote serious efforts to introduce, at a par with unemployment, a supplementary concept which measures the employment problem as experienced by individual workers. Thus, the measure should be able to reflect not only total lack of work as measured by unemployment, but also other insufficiencies in the volume of work ...”(ILO Working Group on Underutilization, 2008).

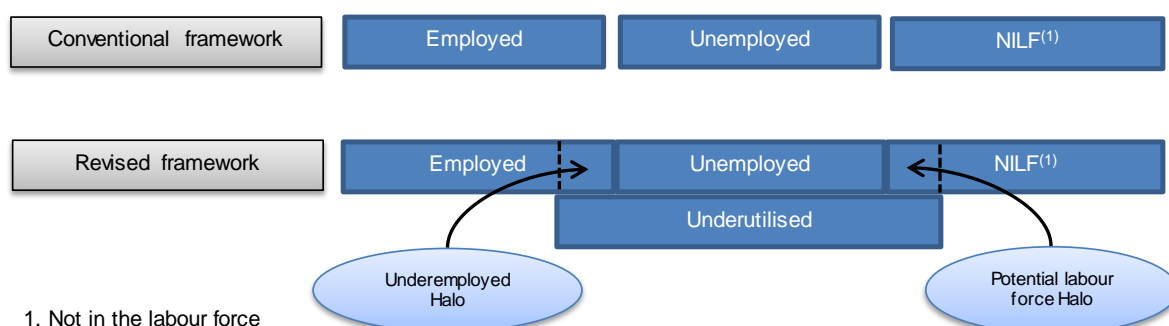
In October 2013 at the 19th International Conference of Labour Statisticians, new recommendations for the standard measurement and reporting of underutilisation measures were agreed upon as this supplementary concept.

3 The underutilised

Labour underutilisation reflects the total number of people in the labour force who are not being fully utilised, as well as some who are outside of the labour force who can be considered 'potential labour supply'. The measure is concerned with issues of quantity of employment, rather than quality of employment.

The employed, unemployed, and not in the labour force groups are traditionally treated as discrete categories in the conventional labour force framework. If we view labour market activity as a continuum (see revised framework in figure 1), a group on either side of unemployment shares some characteristics with the unemployed. These two groups can be viewed as the 'halos' of unemployment – together with the unemployed, they form the population considered to be underutilised. The two halos are the underemployed (on the 'employment' side) and the potential labour force (on the 'not in the labour force' side).

Figure 1
The conventional and revised labour force frameworks



1. Not in the labour force

Source: Statistics New Zealand

The underemployed

There are several types of underemployment. The measure used here is time-related underemployment, which exists when an employed individual wants to work more hours than they usually do and is available to do so.

The ILO guideline (ILO, 2013) defines the underemployed as employed individuals who:

- worked less than a specified threshold of hours (usually part-time), and
- would like to work more hours, and
- were available to do so in the reference week.

The unemployed

According to the international standard definition of unemployment (ILO, 2013), the unemployed comprises all individuals who in the reference week:

- were not in employment, and
- were available to work, and
- were actively seeking employment.

The potential labour force

The potential labour force consists of people who are not in the labour force but can be considered to be 'just outside it'. They meet two of the three criteria (listed above) needed to be considered unemployed. Two main groups of individuals are in the potential labour force:

1. unavailable jobseekers – people who were actively seeking work, were not available to have started work in the reference week, but would become available within a short subsequent period
2. available potential jobseekers – people who are not actively seeking work but were available in the reference week and want a job (the 'discouraged' are included in this group).

The first group is considered to have slightly closer attachment to the labour market than the second group, but both have much stronger attachment than other groups who are not in the labour force.

The extended labour force

In addition to the measures outlined above that form the underutilised population, a further measure has also been introduced, the extended labour force. It measures the total labour force (those employed and unemployed) plus the potential labour force. This is used as the denominator when constructing the underutilisation rate.



4 International practice

Many countries are already releasing data on the number of underutilised, the subgroups of underutilisation, and the associated rates.

In 2010, Eurostat started releasing three new indicators to supplement the unemployment rate: part-time underemployed, persons seeking work but not available, and persons available for work but not seeking it.

The latest numbers showed that in 2015, 23.0 million people were unemployed in the EU-28, an additional 10.0 million were underemployed workers, almost 2.2 million people were seeking work but were not available, and 9.3 million were available for work but not seeking work – making the underutilised population almost double that of the unemployed alone (Eurostat, 2016).

The U.S. Bureau of Labor Statistics also releases measures of underutilisation with a suite of indicators ranging from long-term unemployment, to the total underutilisation rate. Their latest figures showed that in May 2016, the seasonally adjusted unemployment rate was 4.7 percent, while the underutilisation rate was 9.7 percent (U.S. Bureau of Labor Statistics 2016).

5 Measures of underutilisation in the HLFS

Statistics NZ will produce official underutilisation statistics using data from the quarterly HLFS. The HLFS redesign will enable more accurate reporting of underutilisation statistics, in line with the recommendations of the International Labour Organisation (ILO, 2013).

As part of the outputs released from the June 2016 quarter, we will include the underutilisation rate as a key statistic. Underutilisation measures in the HLFS will replace the previously produced 'jobless' data.

Underutilisation data will be available from the March 2004 quarter of the HLFS. The full criteria for defining the potential labour force is available only from the June 2016 quarter onwards. This may cause a discontinuity in the time series (see detail on component measures below for further information).

The definitions used for the New Zealand measures are detailed below.

The unemployed

International standard measures of unemployment have been available from the HLFS since the survey began in 1986. In the HLFS, the unemployed are people who:

- were not employed in the reference week, and
- were actively seeking work in the four weeks before the reference week or had a job to start in the next four weeks, and
- were available to start work in the reference week.

The unemployment rate expresses the number of unemployed persons relative to the size of the labour force, as the following equation shows:

$$\text{Unemployment rate} = \frac{\text{Number of unemployed persons}}{\text{Labour force}} \times 100$$

Where the labour force is the total number of people employed and unemployed.

The underemployed

Measures of underemployment are available from the HLFS from the March 2004 quarter. In the HLFS, the underemployed are people working part-time (someone who works fewer than 30 hours per week), who would like to work more hours, and are available to do so (see [Introducing new measures of underemployment](#) for more information).

The redesigned HLFS has updated the 'available' criteria for underemployment. Before the redesign, individuals were asked if they would have been available to have worked extra hours in the previous week if they had been offered. In the redesigned HLFS, this question has been changed to ask whether an individual would be available to work extra hours in the next four weeks if they were offered. This has the potential to create a discontinuity in time series.

The underemployment rate expresses the number of underemployed persons relative to the size of all employed people, as the following equation shows:

$$\text{Underemployment rate} = \frac{\text{Number of underemployed persons}}{\text{Employed}} \times 100$$

The potential labour force

In the new HLFS, the potential labour force will include people not in the labour force who were:

- a) actively seeking work but were not available to have started work in the reference week but would become available within the next four weeks (ie unavailable jobseekers), or
- b) not actively seeking work but would like a paid job and were available in the reference week (ie available potential jobseekers).

Before the redesigned HLFS, the 'available potential jobseeker' group cannot be measured accurately as there was no question on whether an individual who was not seeking work would like a job or not. We created a time series back to the March 2004 quarter of the HLFS, but note that there may be a discontinuity due to the inclusion of full criteria from the June 2016 quarter forward.

The underutilised

The underutilised population are people who were either unemployed, underemployed, or in the potential labour force.

The underutilisation rate expresses the number of underutilised persons relative to the size of the extended labour force, as the following equation shows:

$$\text{Underutilisation rate} = \frac{\text{Number of underutilised persons}}{\text{Extended labour force}} \times 100$$

Where the extended labour force is the total of the labour force (ie the number of persons employed and unemployed) and the potential labour force.

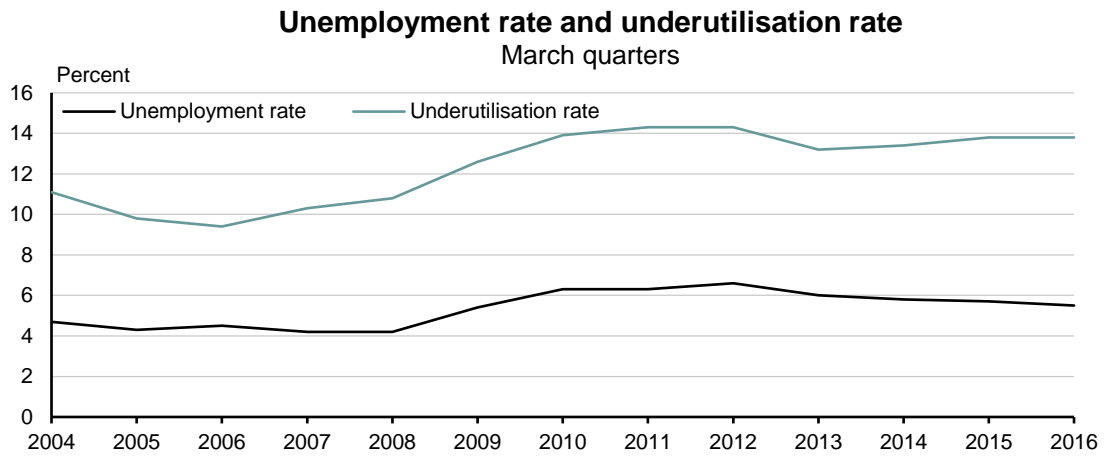
The data

The data in this section takes into account the upcoming revisions to unemployment and underemployment as advised in *Household Labour Force Survey – revisions to labour market estimates* (Statistics NZ, 2016).

Figure 2 compares the unemployment rate and underutilisation rate while figure 3 shows the total number of underutilised broken down by the different component measures. As the data we used is unadjusted survey data, we compared March quarters to help remove any seasonal effects.

What can be seen in figure 2 is that while the unemployment rate and underutilisation rate follow broadly similar patterns, the underutilisation rate shows a higher level of unutilised labour resource than the unemployment rate.

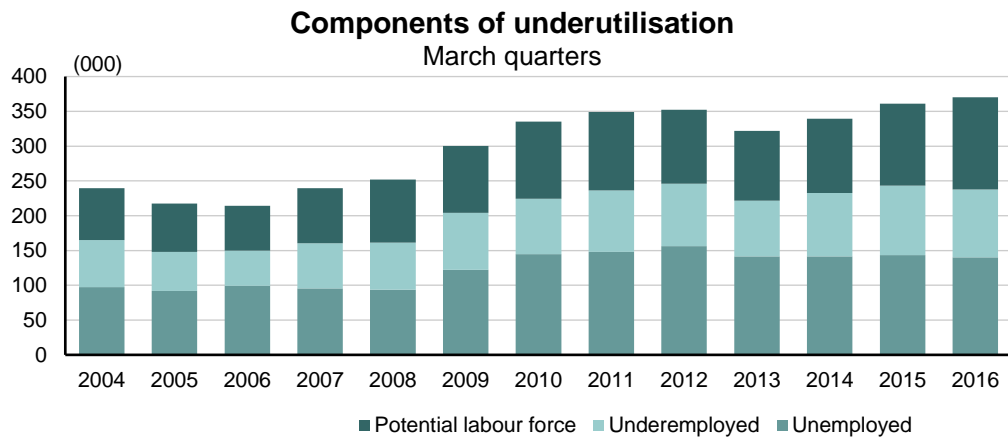
Figure 2



Source: Statistics New Zealand

Figure 3 shows that the number of unemployed people has generally been decreasing since the March 2012 quarter (when compared with the previous March quarter). Over the same period, the number of people in the potential labour force has actually been increasing.

Figure 3



Source: Statistics New Zealand



6 Examples of underutilisation measures

The following examples illustrate different types of underutilisation.

- Jane has been looking for work for many months now, and has been available to work in the last week. Finally, Statistics NZ offered her a job. She hasn't started yet, but her first day is in two weeks' time. Jane is 'unemployed'.
- Pete only works five hours a week. He is currently looking for a new job with more hours because his job doesn't offer him enough work even though he is available to work more hours. Pete is 'involuntarily' in part-time work – he is 'time-related underemployed'.
- John has just finished school and is really keen to start working somewhere, and could have started last week if something had been offered. However, he hasn't really started looking yet. John is an 'available potential jobseeker'.
- Jackie has been contacting employers and giving them copies of her CV. She is still sitting her final exams, so wouldn't be able to start working just now. She will be free once exams are finished in three weeks' time. Jackie is an 'unavailable jobseeker'.
- Bob is retired. He doesn't want a job as he is enjoying his retirement after 46 years of paid employment. Bob is 'not in the labour force and not underutilised'.

7 Information in the redeveloped HLFS

We will publish underutilisation data as part of the quarterly labour market statistics information release. The next release will be on 3 August 2016.

Output categories

We will include the following categories in the labour market statistics tables:

- underemployed
- official unemployed
- potential labour force
 - available potential jobseekers
 - unavailable jobseekers
 - total potential labour force
- extended labour force
- underutilised
- underutilisation rate.

The table will be further broken down by sex: males, females, and total.

Data on Infoshare

From 3 August 2016, underutilisation data will also be available on [Infoshare](#), including a breakdown by sex and regional council. The data series will be available back to March 2004.

The following table shows the new and updated tables on Infoshare that will include information on underutilisation.

Infoshare table	Infoshare table ID
Labour force status by sex by regional council S2 ⁽¹⁾	S2
Labour force status by sex by regional council – sampling errors	S2
Underutilisation by sex	SXD
Underutilisation by sex – sampling errors	SXD
Underutilisation by sex by regional council	SXD2
1. We will discontinue the jobless classification in the S2 table and add the underutilisation rate.	

See the Excel table 'Redevelopment effect on Infoshare HLF series' (in the 'Available files' box on [Changes in accessing HLFS labour market statistics](#)) for a guide to which series will remain, which will be discontinued, and the new series that will be available.



References and further reading

References

Eurostat (2016). [Labour Force Survey 2015: 10 million part-time workers in the EU would have preferred to work more](http://ec.europa.eu/eurostat) (PDF, 4 pages, 352kB). Retrieved from <http://ec.europa.eu/eurostat>.

ILO Working Group on Labour Underutilization (2008). [Beyond unemployment: Measurement of other forms of labour underutilization](http://www.ilo.org), Retrieved from www.ilo.org.

International Labour Organization (ILO) (2013). [Resolution concerning statistics of work, employment and labour underutilization](http://www.ilo.org). Retrieved from www.ilo.org.

Statistics New Zealand (2016). [Household Labour Force Survey: Revisions to labour market estimates](http://www.stats.govt.nz). Retrieved from www.stats.govt.nz.

U.S. Bureau of Labor Statistics (2016). [Table A-15. Alternative measures of labor underutilization](http://www.bls.gov). Retrieved from www.bls.gov.

Further reading

International Labour Organization (ILO) (2014). [Report III – Report of the conference – 19th International Conference of Labour Statisticians](http://www.ilo.org). Retrieved from www.ilo.org.

Appendix

We use the following HLFS variables and questions to calculate underutilisation measures.

- DVLFS – labour force status
 - employed
 - unemployed
 - not in the labour force
- DVUnderEmp – underemployment
 - underemployed – actively seeking
 - underemployed – not actively seeking
 - underemployed – seeking not specified
 - not underemployed – employed part time
 - not underemployed – employed full time
 - not specified
- JobToStart – Have you got a job that you will definitely be starting within the next four weeks?
 - yes
 - no
 - don't know
 - refused to answer
- LookForWork – At any time in the last four weeks have you been looking for paid work?
 - yes
 - no
 - don't know
 - refused to answer
- In the last four weeks did you do any of the following to find work: (only asked of those who don't have a job to start but have been looking for work in the last four weeks)
 - DVLook – look at job advertisements?
 - yes
 - no
 - don't know
 - refused to answer
 - DVContactEmp – Contact an employer?
 - yes
 - no
 - don't know
 - refused to answer
 - DVContactEmpAg – Contact an employment agency?
 - yes
 - no
 - don't know
 - refused to answer
 - DVContactWINZ – Contact Work and Income about a job?
 - yes
 - no
 - don't know
 - refused to answer
 - DVContactRel – Contact friends or relatives about a job?
 - yes
 - no
 - don't know
 - refused to answer
 - DVSetUpBus – take steps to set up a business?

- yes
 - no
 - don't know
 - refused to answer
- DVLookOther – Something else to find work?
 - yes
 - no
 - don't know
 - refused to answer
- AvailLastWeek – If a job had been available, could you have started work last week?
 - yes
 - no
 - don't know
 - refused to answer
- Avail4Weeks – If a job was available, could you start work within the next four weeks? (asked of those who said they were not available to have started last week)
 - yes
 - no
 - don't know
 - refused to answer
- WantJob – Although you are not currently looking for work, would you like to have a paid job? (asked of those not in the labour force who don't have a job to start and have not been looking work)
 - yes
 - no
 - don't know
 - refused to answer

How underutilisation is derived

- Underemployed group
 - If DVUnderEmp = 'Underemployed - actively seeking' then status = underemployed
 - If DVUnderEmp = 'Underemployed - not actively seeking' then status = underemployed
 - If DVUnderEmp = 'Underemployed - seeking not specified' then status = underemployed
- Unemployed group
 - If DVLFS = 'Unemployed' then status = unemployed
- Potential labour force groups
 - If DVLFS = 'Not in the labour force' AND
 - if AvailLastWeek = 'Yes' and WantJob = 'Yes' then status = NILF not actively seeking but available (available potential jobseekers)
 - else if LookForWork = 'yes' and AvailLastWeek = 'yes' then status = NILF not actively seeking but available (available potential jobseekers)
 - else if at least one of the DVContactEmp, DVContactEmpAg, DVContactWINZ, DVContactRel, DVSetUpBus, DVLookOther= 'Yes' and qAvail4Weeks = 'yes' then status = NILF actively seeking but not currently available (unavailable jobseekers)
 - else if GotJobToStart = 'Yes' then status = NILF actively seeking but not currently available (unavailable jobseekers)