THE LONGER-TERM EMPLOYMENT OUTCOMES OF PEOPLE WHO MOVE FROM A BENEFIT TO WORK

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Abstract

This article reports results from a study that used Linked Employer-Employee Data (LEED) to examine the longer-term employment outcomes of people who moved from a government income support benefit to employment during 2001/02. The study population was observed for two years before and after the benefit-to-work transition. The study described short-term and longer-term employment retention rates and earnings growth patterns, and compared the outcomes of the benefitto-work study population with those of non-beneficiaries who began a job in the same year. It also investigated some of the factors that are associated with more or less "successful" outcomes, including personal characteristics, prior employment experiences, the timing and nature of the benefit-to-work transition, and the characteristics of post-transition employers. Employment retention rates were found to be moderately high in the two-year follow-up period, but at any given time around one-third of those with jobs were earning less than \$1,500 a month, indicating that they probably were not employed full-time or for a full month. Jobs also tended to be short in duration. More than half of the study group returned to a benefit during the follow-up period.

INTRODUCTION

People who move from an income support benefit to work do not always stay employed for long. The international literature indicates that former welfare recipients often struggle to retain employment, cycle between short-term jobs and welfare, and can

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remain in low-paid situations for extended periods.² An important goal of employment policy is to assist people who have had lengthy spells of income support to return to work, remain employed and improve their skills and incomes over time.

This article reports a selection of findings from a study that used Linked Employer– Employee Data (LEED) to examine the longer-term employment outcomes of people who moved from a working-age benefit to employment in 2001/02.³ LEED is a new data source that provides comprehensive national data on taxable income payments from April 1999 to the present. Employee earnings and income received from social welfare benefits are separately identified. Individuals and employers in LEED have unique identifiers that enable longitudinal linking of records. The data can therefore be used to study individuals' transitions between employment states and onto and off benefits, as well as their transitions between employers.⁴

The study had three main objectives. First, it described the benefit-to-work experiences of a large sample of former beneficiaries. We constructed a variety of different measures of both short-term and longer-term outcomes for people who moved from a main benefit to employment during 2001/02, in order to provide a reasonably detailed picture of post-benefit employment outcomes. We aimed to identify what proportions achieved continuity in their employment, had monthly earnings that were above a minimum level consistent with full-time employment, and improved their earnings over time.

Second, the study examined the effects of factors such as demographic characteristics, prior employment experience, mobility between employers, and employer characteristics on individuals' employment and earnings outcomes, using regression methods and a richer set of explanatory variables than has been used in previous research. Building on but extending the work of Hyslop et al. (2004), we identified changes of employer at

² See for example Wehipeihana and Pratt (2002) for a New Zealand example and Johnson (2002) for British and American examples.

³ The complete research paper can be downloaded from the Statistics New Zealand website at www.stats. govt.nz/leed/default.htm

⁴ Access to the data used in this study was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person or firm. The results are based in part on tax data supplied by Inland Revenue to Statistics New Zealand under the Tax Administration Act. These tax data must be used only for statistical purposes, and no individual information is published or disclosed in any other form, or provided back to Inland Revenue for administrative or regulatory purposes. Any discussion of data limitations or weaknesses is in the context of using the Linked Employer–Employee Database (LEED) for statistical purposes, and is not related to the ability of the data to support Inland Revenue's core operational requirements. Careful consideration has been given to the privacy, security and confidentiality issues associated with using tax data in this project. Any person who had access to the unit record data has certified that they have been shown, have read and have understood Section 87 (Privacy and Confidentiality) of the Tax Administration Act. A full discussion can be found in the LEED Project Privacy Impact Assessment paper (Statistics New Zealand 2003).

the time of the benefit-to-work transition and subsequently, and used this information in our models of outcomes. We also incorporated information on the characteristics of post-transition employers, including their industry, number of employees, payroll per employee, expansion or contraction of employment, and employee turnover rate.

Third, the study compared the employment outcomes of people who moved from benefits to employment with the outcomes of non-beneficiaries who began a new job in the same reference year. Studies of the employment experiences of former welfare recipients often have no basis for assessing what level of employment retention or earnings growth can be realistically expected. Taking advantage of the fact that LEED contains data on all employees in New Zealand, we compared the employment outcomes of former beneficiaries with those of two comparison groups: all non-beneficiaries who started a new job in 2001/02, and non-beneficiaries who made a transition from a state of low employment (defined as employment with earnings below \$1,500 a month) or non-employment into work. These comparison groups provide two alternative reference points for evaluating the retention rates, earnings and earnings growth of the benefit-to-work study population.

The research had a number of limitations. At the time it was undertaken, it was not possible to identify different types of benefits in LEED. No information was available on the specific factors that made people eligible for income support. Only limited sociodemographic information was available on beneficiaries. Furthermore, the findings of the study may have been influenced by the timing of the study with respect to the business cycle: 2001/02 was a period of unusually strong employment growth, which may have led to better employment outcomes than would otherwise be observed.

DATA DESCRIPTION AND STUDY DESIGN

Features of LEED and Data Definitions

Due to the way income tax data are collected, LEED is built upon monthly records of individuals' taxable incomes, as received from each employer or from the benefit system. Individuals and employers in LEED have unique identifiers that enable records to be linked longitudinally through time.

The benefit payments that are recorded in LEED are taxable benefits, a category that includes all of the main income-tested working-age benefits such as Unemployment, Sickness, Invalid's, Domestic Purposes, Widow's, Emergency, Independent Youth and Transition to Retirement. Non-taxable allowances such as the Accommodation Supplement and Disability Allowance are *not* recorded. Therefore, when we refer to movement from benefits or income support, we are referring solely to transitions from

one of the main, taxable benefits. People in this situation may have continued to receive income support through one of the supplementary allowances that are available to low-income individuals or families in employment.

LEED records the taxable earnings and benefit payments that were received *in a particular calendar month*, which may not coincide perfectly with the employment period or the benefit spell. If a person leaves employment part way through a month but is working again in the following month, no break in employment is recorded in LEED (although a temporary drop in earnings may be apparent). Furthermore, in months when an individual received income from multiple payers, it is not possible to identify whether the jobs occurred sequentially or concurrently.

In this study, we define an individual as being *on benefit* if they received any benefit income during the calendar month. An individual is considered to have exited the benefit system in the first calendar month after their last benefit payment, and to be *off benefit* in any month when they did not receive any benefit income. A person must be without benefit income for at least one complete calendar month to be classified as having left a benefit, in this study.⁵ Similarly, we define an individual as being *in employment* if they received any employment-based earnings (excluding ACC payments). Being "in employment" and being "on benefit" are not mutually exclusive states. Benefit abatement rules allow beneficiaries to retain a certain amount of income from part-time employment, and a reasonably high proportion of beneficiaries do in fact work in part-time jobs.

The Study Population and Comparison Groups

Table 1 defines the study populations and comparison groups that were constructed for the analysis.

The main study population (the "benefit-to-work transition group" or BTW) comprises all people of working age (defined here as 15–59 years) who moved off a main benefit after receiving it for at least three months, remained off for at least one complete calendar month, and were employed in the month after their last benefit payment, during the financial year from 1 April 2001 to 31 March 2002. To exclude those whose contact with the benefit system was fleeting, we require that they were in receipt of benefit payments for at least three months before the transition to employment. This study population is used to estimate what proportion of all benefit-to-work transitions were followed by "successful" outcomes in terms of employment retention, self-sufficiency and earnings growth.

⁵ Note that this approach differs from the official one and does not count all short lived benefit-to-work transitions.

Group	Criteria
Study population	
Benefit-to-work transition group (BTW)	 Received benefit payments for at least three continuous months Benefit income then ceased for at least one calendar month Employed in the first post-benefit month The first post-benefit month was in the year from April 2001 to March 2002 Aged 15–59 years at BTW transition
Benefit-to-work transition group 2 (BTW-2)	• Same as above, but was employed and off benefits for at least the first three months after the reference benefit spell ended
Non-beneficiary comparis	son groups
Non-beneficiary job entrants (NBJE)	 Started a new waged or salaried job in the year from April 2001 to March 2002 Had no benefit income in the previous two years Had not worked for the new employer in the previous 3 months Aged 15–59 years at month of job start
Non-beneficiary job entrants who came from low or no employment (NBJE-2)	 Started a new waged or salaried job in the year from April 2001 to March 2002 Either non-employed or earning less than \$1,500 a month in the three months immediately before starting the new job Had no benefit income in those prior three months Had not worked for the new employer in the previous 3 months Aged 15–59 years at month of job start

Table 1 Definitions of the Study and Comparison Groups

A more restricted study population is used to investigate the factors that are associated with variations in longer-term outcomes, given that a successful transition from a benefit to employment took place. For that analysis, we restrict the study population to people who remained employed and off benefit for *a minimum of three calendar months* after their transition from a benefit to employment. The stricter definition ensures that we focus on people who have unambiguously made a transition from income support to employment. The BTW-2 group represents 78% of the original group.

To provide some benchmarks for evaluating the employment outcomes of the study population, we constructed two non-beneficiary comparison groups. The "non-beneficiary job entrants" group (NBJE) comprises everyone who started a new waged or salaried job in 2001/02, and had received no benefit income in the previous two years. This group is a cross-section of all employees who were starting a new job, excluding former beneficiaries, and was expected to have relatively good employment outcomes. It includes people who moved directly from one job to another, as well as people who were out of the labour force or out of New Zealand before starting their new job.

A second non-beneficiary comparison group comprises non-beneficiary job entrants who came from a situation of non-employment or low employment (defined as earnings of less than \$1,500 a month) in the preceding three months (NBJE-2). This is intended to represent people who, like members of the BTW study population, had been out of full-time employment for at least three months and were now starting a new job. A priori, it is unclear how the employment outcomes of this second non-beneficiary group will compare with those of the BTW transition group.

Note that the comparison groups are *not* matched to the study population in their characteristics or circumstances, and so they do not represent control groups. The purpose of these comparison groups is to illustrate the range of variation that occurs in the employment outcomes of newly-hired employees, so as to better understand the relative outcomes of former beneficiaries.

Period of Observation and Variable Construction

To simplify comparisons across members of the study sample and comparison groups, we standardise reference periods for the calculation of all pre-transition and post-transition variables, using the 24 months on each side of the transition month. The "history" variables are calculated using data for the 24 months leading up to and including the last month of benefit receipt. The "outcome" variables are calculated using the 24 months following the end of the reference benefit spell.

In the case of the non-beneficiary comparison groups, history variables are calculated using the 24 months prior to the first month of the reference job spell. Outcome variables are calculated using 24 months of data beginning with the first month of the new job. Earnings and benefit payments are reported in gross terms and are converted to March 2004 dollar values using the Consumer Price Index.

PROFILE OF THE STUDY POPULATION AND COMPARISON GROUPS AND KEY FEATURES OF TRANSITIONS TO WORK

Summary information on the demographic characteristics and recent benefit receipt and employment histories of the study population and the comparison groups is reported in Table 2. Table 3 gives data on the nature of the transition to work, while Table 4 presents information on the characteristics of employers. These results are not discussed fully here, due to insufficient space. We simply note some of the key findings.

	Study population	Outcome co	omparison groups
	Benefit-to-work transition group (BTW)	Non-beneficiary job entrants (NBJE)	Non-beneficiary job entrants who came from low or no employment (NBJE-2)
Personal attributes			
Female (%)	47.6	50.6	55.0
Mean age (years)	31.6	31.7	29.2
Aged 15–24 (%)	35.1	35.2	45.8
Aged 25–49 (%)	56.7	54.5	46.0
Aged 50–59 (%)	8.2	10.3	8.2
Living in Auckland (%)	23.2	32.2	31.5
Reference benefit spell			
Duration of reference benefit spell in months			
(censored at 24)	11.4		
Months employed during reference benefit spell			
(censored at 24)	4.5		
Average monthly benefit payments during	645		
reference benefit spell* (\$)	645		
Average monthly earnings if employed during reference benefit spell* (\$)	809		
Benefit receipt history – 24 months before tra			10 5
Had some income support (%)	100.0	0.0	10.5
Income support for all 24 months (%)	21.9	0.0	0.0
Months of benefit receipt	14.4	0.0	0.7
Recent employment experience – year before	transition to employ	yment	
Employed at least 10 months of the past 12 (%)	33.9	46.5	16.1
Employed at least 10/12 months with earnings			
≥\$1,500 per month (%)	4.5	30.3	0.0
Employment history – 24 months before trans	ition to employmen	t	
Had some employment experience (%)	92.1	80.2	67.8
Months employed	12.9	13.7	8.2
Months employed and off benefits	6.0	13.7	8.0
Number of employers, if employed	2.8	2.2	2.1
Number of separate job spells, if employed	3.6	3.1	3.0
Average duration of employment relationships,	0.2	12.1	0.0
if employed (months)	8.2	12.1	9.0
Average duration of job spells, if employed (months)	5.9	9.8	6.3
Average earnings during months of	5.5	5.0	0.5
employment* (\$)	1,177	1,963	811
Average earnings during months when			
employed and off benefit* (\$)	1,573	1,963	818
Number of individuals	110,450	581,020	378,170

Table 2 Attributes of the study population and beneficiary comparison groups

* Group median. All income variables are in March 2004 quarter dollar values.

Symbol: ... = not applicable

People in the BTW study group had a similar age profile to the first comparison group of all non-beneficiary job entrants (NBJE). They were substantially older than the second comparison group of non-beneficiary job entrants who came from low employment or non-employment (NBJE-2). The latter group included a high proportion of young people with limited work experience and was not as similar to the BTW group as we had anticipated.

The benefit and employment history data indicate that people in the BTW study group typically had had substantial prior contact with the benefit system, as well as considerable employment experience, in the two years leading to the transition. On average, benefit income was received for 14 months of the past two years. On average, people in the BTW group had been employed for 12.9 months of the past 24. This included employment during nearly half the months of the reference benefit spell. In the past two years, 92% had had some employment.

Compared with all non-beneficiary job entrants (NBJE), the study group of former beneficiaries had somewhat less recent employment experience, and lower average monthly earnings when not on a benefit (\$1,573 compared with \$1,963). However, the employment rates and earnings of the former beneficiaries were far above the employment rates and earnings of the second comparison group of non-beneficiary job entrants who came from low employment or non-employment (NBJE-2).

Only around 58% of the BTW group started work with a new employer at the time of transition. Twelve per cent returned to an employer that they had worked for previously, and a further 31% continued to work for an employer that they were working for during their benefit spell. While some people in the latter group experienced a substantial increase in their level of earnings at the time of leaving a benefit, most did not. For a substantial minority of people in the BTW study population, therefore, the exit from a benefit was not actually accompanied by a material change in their employment circumstances. It may have been triggered by some other change that affected their benefit eligibility, such as the employment of a spouse or partner.

	Study population			Outcome comparison groups		
	BTW	Stayed with a benefit spell employer	Returned to a previous employer	New employer	NBJE	NBJE-2
Percentage of BTW group with different transition types		30.4	11.8	57.9		
Personal attributes						
Female (%)	47.6	59.4	40.5	42.8	50.6	55.0
Mean age (years)	31.6	33.3	33.3	30.3	31.7	29.2
Mean monthly earnings if employed during prior benefit spell* (\$)	809	1070	696	633		
Employment level three month	s prior to the	e transition				
Not employed (%)	47.5	0.0	68.9	68.1	45.9	76.3
Earned less than \$1,500 (%)	38.2	64.5	25.7	26.9	17.3	23.7
Earned \$1,500 or above (%)	14.3	35.5	5.4	5.0	36.8	0.0
Employment level in first comp	lete month a	after the tra	nsition			
Earned less than \$1,500 (%)	36.5	45.0	28.7	33.5	43.3	64.3
Earned \$1,500 or above (%)	63.5	55.0	71.3	66.5	56.7	35.7
Mean monthly earnings in first complete post-transition month* (\$)	1,796	1,620	2,125	1,830	1,808	1,000
Type of transition (using earning	ngs threshold	l of \$1,500 p	er month)			
Below threshold to above (%)	19.7	25.1	16.3	17.6	6.0	6.6
Below threshold before and after (%)	18.4	39.4	9.4	9.3	11.3	17.1
Not employed to above threshold (%)	32.0	0.0	50.7	45.0	18.0	29.1
Not employed to below threshold (%)	15.5	0.0	18.2	23.1	27.9	47.2
Above threshold before and after (%)	11.8	29.9	4.2	3.9	32.7	0.0
Above threshold to below (%)	2.5	5.7	1.2	1.1	4.1	0.0
Number of individuals	110,450	33,530	13,010	63,910	581,020	378,170

Table 3 Type of Transition to Employment

* Group median.

Note: All income variables are in March 2004 quarter dollar values. Employment status is assessed at three months prior to the transition off benefits (study population) or job start (comparison group) and in the first "complete" month following these transitions. We avoid using earnings data for the first month of a new job because it may not be based on a full month of employment. We assess prior employment status at three months prior to the transition / job start because there is typically an overlap between the end of the reference benefit spell and the beginning of the first postbenefit job spell.

Symbol: ... = not applicable

We estimate that as many as 37% of the entire BTW group were employed on a parttime or a part-month basis immediately after their transition off a benefit, based on the fact that they earned less than \$1,500 a month in their first "complete" post-transition month. On the other hand, around one-half do appear to have had a substantial increase in their level of earnings at the time of their transition to work.

	Benefit-to-work transition group (BTW)			All employee	Non-	
	Main on- benefit job	First post- transition job	Final post- transition job	job starts in 2001/02	beneficiary job entrants (NBJE)	
Firm size (no. employees)*	53	57	60	31	38	
Average monthly pay per employee (\$)*	1,708	2,025	2,139	1,788	2,078	
Expansion/contraction rate*	0.02	0.04	0.05	0.07	0.08	
Turnover rate*	0.68	0.63	0.58	0.82	0.68	
Industry (%)						
Agriculture, fishing & forestry	12.2	11.1	10.6	17.7	11.2	
Mining	0.1	0.1	0.1	0.1	0.1	
Manufacturing	12.6	16.5	17.3	10.1	10.4	
Electricity, gas & water	0.1	0.2	0.2	0.2	0.2	
Construction	4.2	5.1	5.4	4.1	4.7	
Wholesale trade	3.2	4.1	4.3	4.3	5.2	
Retail trade	12.9	12.2	12.3	10.7	12.7	
Accommodation, cafes & restaurants	10.3	7.9	7.5	8.4	8.2	
Transport & storage	3.9	3.6	3.9	3.2	3.3	
Communication	1.2	1.1	1.1	1.1	1.0	
Finance & insurance	0.9	1.2	1.3	1.6	2.4	
Property & business services	14.5	12.9	12.5	14.7	15.0	
Government administration	1.5	2.3	2.5	2.0	2.3	
Education	3.5	3.8	3.7	5.5	6.2	
Health & community services	8.7	7.6	7.9	6.5	7.1	
Cultural & recreation services	2.5	2.3	2.2	2.9	2.8	
Personal & other services	2.9	3.1	3.2	2.4	2.6	
Industry missing	5.0	5.0	4.1	4.7	4.7	
Number of individuals	78,880	110,450	89,890	1,454,690	568,390	

Table 4 Median Employer Characteristics

* Group median.

Note: All income variables are in March 2004 quarter dollar values. The final post-transition job is defined as the employer who paid the highest total earnings 19–24 months after the transition. "All employee job starts" are defined at job level and include multiple records for people who started more than one job in the year. "Non-beneficiary job entrants" are defined at person level, with only one record per person.

Employer statistics indicate that the typical first employer after the transition to work had 57 employees, an average per-person monthly pay level of \$2,025, an annual growth rate of 4% and an annual turnover rate of 63%. A comparison of the characteristics of on-benefit, first and main post-transition employers shows an increase in firm size and average employee earnings, indicating that the study population tended to be moving towards larger and higher-paying firms. The jobs taken at the time of the transition to work and subsequently were more likely to be in manufacturing and less likely to be in agriculture or accommodation, cafes and restaurants, than benefit spell jobs. This change in industrial composition is consistent with a move away from part-time towards full-time jobs.

EMPLOYMENT OUTCOMES

The employment outcomes and earnings of the benefit-to-work (BTW) transition group in the two years after leaving a benefit are discussed in this section. First we describe the outcomes of the BTW group using a selection of different descriptive measures. Then we summarise the findings of an analysis that used regression methods to analyse the effects of a variety of factors on benefit-to-work outcomes.

Although the literature on BTW transitions offers some clear views on what types of employment outcomes are desirable, it is far less clear about the level of achievement that can reasonably be expected of former beneficiaries. One way of evaluating the outcomes of former beneficiaries and identifying what (if anything) is distinctive about their employment patterns is to compare their outcomes with those of other new job entrants. We do this in the final part of this section of the paper, using the nonbeneficiary job entrant comparison groups introduced earlier.

Outcomes of the Benefit-to-Work Transition Group

Summary measures of the post-transition outcomes of the BTW study group are reported in the left-hand column of Table 5. The figures shown represent group means or percentages, except in the case of earnings and income variables, in which case the group median is used. The first column gives results for the entire BTW group. The second and third columns of the table report the outcomes of those with the shortest benefit spell durations (3–6 months) and those with the longest (24 months or longer). The measures of employment retention are reported in two metrics: average months and percentages of time. Percentages of time are shown in parentheses under the results they refer to.

	Study population			
	Total benefit- to-work transition group (BTW)	Reference benefit spell duration of 3–6 months	Reference benefit spell duration of 24+ months	
Sustained employment				
Months employed and off benefits during months 1–6 (Percentage of time)	4.9 (80.9)	5.0 <i>(84.0)</i>	4.7 (78.4)	
Months employed and off benefits during months 7–12 (Percentage of time)	3.7 <i>(62.4)</i>	3.9 <i>(</i> 65.1)	3.6 (60.4)	
Months employed and off benefits during months 13–24 (Percentage of time)	7.3 (60.7)	7.8 (65.0)	6.7 (56.1)	
Months employed and off benefits during first two years (Percentage of time)	15.9 <i>(</i> 66 <i>.2)</i>	16.7 <i>(</i> 69.8)	15.1 <i>(62.8)</i>	
Months employed during months 1–6	5.3	5.4	5.3	
Months employed during months 7–12	4.5	4.6	4.5	
Months employed during months 13–24	8.6	8.8	8.4	
Months employed during first two years (Percentage of time)	18.4 (76.6)	18.7 <i>(78.1)</i>	18.3 <i>(76.1)</i>	
Continuously employed and off benefit for months 1–12 (%)	42.1	42.2	43.8	
Continuously employed and off benefit for months 1–24 (%)	28.8	29.2	30.1	
Self-sufficiency in employment				
Months with earnings of \$1,500+ and no benefit income – mths 1–6 (<i>Percentage of time</i>)	3.3 <i>(54.2)</i>	3.3 <i>(55.5)</i>	3.1 <i>(52.0</i>)	
Months with earnings of \$1,500+ and no benefit income – mths 7–12 (<i>Percentage of time</i>)	2.8 (46.0)	2.9 <i>(47.8)</i>	2.6 <i>(43.8)</i>	
Months with earnings of \$1,500+ and no benefit income – mths 13–24 (<i>Percentage of time</i>)	5.7 (47.1)	6.1 <i>(50.7)</i>	5.1 <i>(42.8)</i>	
Months with earnings of \$1,500+ and no benefit income – first 2 yrs (<i>Percentage of time</i>)	11.7 (48.6)	12.3 <i>(51.2)</i>	10.9 <i>(45.3)</i>	
Earnings growth (conditional upon being employed)				
Average monthly earnings in the first half year* (\$)	1,760	1,816	1,685	
Ratio of average monthly earnings in 2nd post-transition 1/2-yr to 1st*	1.011	1.023	1.003	
Ratio of average monthly earnings in 3rd post-transition 1/2-yr to 1st*	1.061	1.080	1.036	
Ratio of average monthly earnings in 4th post-transition 1/2-yr to 1st*	1.085	1.110	1.060	
Sustained job spells				
Duration of first job (months, censored at 24)	12.2	12.1	13.2	
Number of employers	2.7	2.8	2.4	
Number of separate job spells	3.5	3.6	3.1	
Average duration of employment relationships (months)	11.6	11.5	12.4	
Average duration of job spells (months)	9.3	9.1	10.2	
Further benefit receipt				
Benefit income in first 6 months (%)	27.3	28.3	29.3	
Benefit income in first year (%)	43.7	41.6	45.0	
Benefit income in first 2 years (%)	54.4	51.7	55.9	
Number of individuals	110,450	45,940	24,210	

Table 5 Outcomes of the Benefit-to-Work Transition Group

* Group median.

Note: All income variables are in March 2004 quarter dollar values.

Employment retention rates: sustained employment? Our preferred measure of sustained employment is the proportion of months in which the individual was employed and not in receipt of any means-tested benefit income. Under this measure, employment does not have to be continuous.

On average, people in the BTW group spent 4.9 months or 81% of their first six posttransition months employed and off benefits (as shown in the first and second rows of the table). The average proportion of time in which group members were employed and not on benefits dropped to 62% in the second six months and 61% in the second year. Over the entire period, it was 66% (or 15.9 out of 24 months).⁶

Employment retention rates are higher if the criterion of remaining off benefits is not imposed. People in the BTW group were employed for an average of 18.4 months in the follow-up period, or 77% of the time.

As far as we can tell using LEED data (which do not reveal employment gaps of less than one month), 42% were continuously employed and off benefits for the first 12 months after exiting from a benefit, while 29% remained continuously employed and off benefits for the full two years.

Sustained employment with the potential for self-sufficiency. It is important to distinguish between any employment and employment in jobs that were substantive enough to provide a minimum level of weekly income. We set a threshold of \$1,500 per month (in March 2004 dollars) as a notional self-sufficiency criterion. That threshold is similar to the monthly earnings that would be provided by a full-time job paid at the adult minimum wage rate in the final year of the study period (\$8.50 per hour x 40 hours x 4.33 weeks = \$1,473). To obtain a proxy measure of employment with self-sufficiency, we calculate the number of post-transition months in which each individual was employed, not receiving benefit income, and earning at or above this threshold.

On average, the BTW group were in employment with earnings above the threshold for 54% of the first six months, just under half of the second six months and just under half of the second year. These percentages are substantially lower than the percentages of time classified as "sustained employment" without any minimum earnings threshold. The gap indicates that either a considerable number of people were working part-time hours or that part-month employment was common.

⁶ Note that due to the study design and the monthly aggregation of LEED payments data, all members of the BTW group had to be employed and off benefits for at least one complete month (the first post-transition month). Note also that our results are influenced by the calendar-month structure of LEED data. If weekly data on labour market activity were available, short gaps between jobs could be identified and our estimated employment rates would probably be lower.

Earnings growth. Our main measure of earnings growth is the ratio of average monthly earnings in the second, third and fourth half years after the transition, to earnings in the first half year (conditional upon being employed for at least one month of each sequence). Earnings growth is measured in this way to avoid excluding people who may have been temporarily out of work in a particular post-transition month.

The median earnings increase for those who were still employed in months 7–12 (shown in the third section of Table 5) was 1.1%. The median increase for those who were still employed in months 13–18 was 6.1%. Just over four-fifths (82%) of the BTW group had some employment during the final six months of the observation period. The median increase for these people was 8.5%. Note that the earnings growth recorded here could have come from increases in the number of hours worked per week, increases in the regularity of employment (in terms of weeks worked per month), pay rate changes, or all three.

About 71% of the study group had some *off-benefit* employment in the final six months of the post-transition period. The earnings growth rate of this group, counting only earnings during months of off-benefit employment, was 11.7%.

Job retention. Job retention measures are measures of the extent to which people stayed with a single employer and worked continuously for that employer during the post-transition period. There are two dimensions – continuity of the employment relationship and the duration of job spells within that employment relationship. A selection of different measures is shown in the fourth section of Table 5.

The first post-transition job was retained for 12.2 months on average. The average number of employers in the post-transition period was 2.7, while the average number of distinct job spells was 3.5. The average duration of post-transition employment relationships (counting only time falling within the 24-month observation window) was 11.6 months, and the average duration of job spells was 9.3 months. Note that the two-year window of observation used in this analysis cuts short any job that was in progress at 24 months and leads to lower average durations than if the data were not censored in this way.

Further receipt of benefit income. Indicators of whether any further benefit income was received in the post-transition period were calculated. These show that 27% of the BTW group had received some further benefit income by the end of the first six months, 44% had done so by the end of the first year, and 54% had done so by the end of the second year. The rate of return was fastest in the short term but declining as time passed. Those who returned to a benefit received 10.1 months of further benefit income, on average.

Differences in outcomes by duration of the reference benefit spell. Table 5 also presents information on the extent of variation in employment outcomes by the duration of the reference benefit spell (the one immediately prior to the transition to work). Forty-two per cent of the entire BTW group had been continuously on a benefit for just 3–6 months. The outcomes of this "short spell duration" subgroup are shown in the second column, while the outcomes of those with benefit spell durations of 24 months or longer (21.9%) are shown in the third column.

As one would expect, people in the lowest benefit-spell duration group generally had better outcomes than those in the highest duration group. However, the differences are relatively small. For example, the lowest duration group spent 16.7 months of the two-year follow-up period employed and off benefits (or 70% of the time), while the highest duration group spent 15.1 months employed and off benefits (or 63% of the time).

Analysis of Factors Associated with Successful Post-Transition Outcomes

The factors associated with variations in employment outcomes following a transition from benefits to employment were examined using regression methods, drawing on three sets of information: data on the employment and benefit receipt histories of the study population; data on their mobility between employers; and data on the firm-level characteristics of those employers. A brief summary of the findings follows (see Dixon and Crichton 2006 for the analysis).

The results offer evidence that demographic characteristics, recent employment experiences, the timing and circumstances of the benefit-to-work transition, and employer characteristics are all associated to some degree with variations in outcomes. People with shorter benefit spell durations and greater employment experience before and during their benefit spell tended to have higher rates of employment retention and higher earnings, although these effects were relatively small. There were quite substantial variations in employment retention rates according to the month of the job start, which may reflect seasonal variations in the types of jobs that are taken up by former beneficiaries.

People who stayed with a benefit-spell employer or returned to a pre-benefit-spell employer tended to have poorer employment and earnings outcomes than people who changed their employer at the time of the benefit-to-work transition (controlling for other measured personal and employer characteristics). For example, individuals who remained with a benefit-spell employer had 1.6 fewer months of employment with earnings above \$1,500 a month in the two-year post-transition period than those who started work with a new employer (a difference of 12%). Individuals who returned to a pre-benefit employer had 2.0 fewer months of employment with earnings above

\$1,500 (a difference of 15%). The monthly earnings of these two groups in the first six months after the transition to work were 16% and 6% lower, respectively, than those of people who changed their employer.

People who changed their employer during the two years *after* the transition off a benefit also tended to have poorer employment and earnings outcomes than those who stayed with one employer. Their average monthly earnings in the initial post-transition period were approximately 11% lower and their earnings growth over the first two years was approximately 16% lower.

These "employer mobility" effects could be partly due to correlations with unmeasured individual characteristics – for example, people who continued to work for a benefit-spell employer could have had poorer employment outcomes for other reasons such as lower skills or constraints on the hours they could work. The negative coefficients on some of these "employer mobility" variables do become smaller in our fixed effect estimates,⁷ but they do not disappear, leaving open the possibility of some causal effect between changes of employer and employment or earnings outcomes.

Employer characteristics were correlated with the employment and earnings outcomes of the BTW group. The most substantive of these effects came from the employer's average monthly pay. For example, a 10% increase in the average pay per employee of the first post-benefit employer is associated with 12.5 additional days of employment with earnings over the \$1,500 threshold; a 4.1% increase in average monthly earnings; and a 2.1% increase in earnings growth, over the two-year follow-up period. Variations in outcomes according to the employer's industry were also relatively large. The effects of these employer characteristics persist in fixed-effect estimates of individuals' earnings and earnings growth, suggesting they are not simply due to differences in unmeasured time-invariant individual characteristics such as educational level.

One possible interpretation of the results on employer characteristics is that getting a job with a "higher quality" employer is one of the factors contributing to retention and advancement in the labour market. This would be consistent with results from other studies in which more discriminating methods have been used to identify employer effects on earnings and employment retention (such as Andersson et al. 2005). However, there are other possible interpretations. The employer variables could be correlated with job characteristics that are not measured in LEED, such as occupation, biasing our estimates. In addition, our fixed-effect analysis does not rule out any possible effects that may have come from individual characteristics that were not constant during the follow-up period.

⁷ In the fixed-effect regression estimates, the effects of persistent differences between individuals (such as differences in educational level) were removed.

Comparison of the Employment Outcomes of the Study and Comparison Groups

One of the objectives of the study was to identify whether the employment outcomes of former beneficiaries are substantially different from those of non-beneficiary job entrants (NBJE). One motive for comparing the employment outcomes of former beneficiaries and non-beneficiaries, and estimating the size of the "outcomes gap", is to better understand the extent to which former beneficiaries may have special employment assistance needs.

Comparative statistics on the outcomes of non-beneficiary job entrants are presented in Table 6. The outcomes of the BTW study population are shown in the first column. The second column shows the outcomes of the non-beneficiary job entrant comparison group (NBJE), while the third column gives data for non-beneficiary job entrants who came from low employment or out of the labour force (NBJE-2). These groups are defined above in Table 1. As before, the observation period for the BTW group is the 24 months following the end of the reference benefit spell. The observation period for the NBJE groups is 24 months starting with the first month of the reference job.

Overall, the similarities in the employment outcomes of the BTW and first nonbeneficiary comparison group (NBJE) shown in Table 6 are more striking than the differences. Based on the simple comparison of group means and medians, our study population of former beneficiaries remained in employment for almost as long as the NBJE group and were almost as likely to earn over \$1,500 a month. Although the benefit-to-work group had poorer employment retention outcomes on many (although not all) of the measures shown, the differences are relatively small. The two groups had similar numbers of jobs and tenure patterns in the two years following job start. The first job durations of former beneficiaries were relatively short, but this was also the case for non-beneficiary job entrants. The benefit-to-work group worked for an average of 2.7 employers in two years, but this was only slightly higher than the mean number of employers for the NBJE comparison group.

One interpretation of the overall similarity in the employment retention rates of the former beneficiary and non-beneficiary groups is that the outcomes of both groups reflect the existence of a great deal of worker turnover and movement in and out of the labour market. The dynamic nature of the labour market is particularly evident when we focus on new jobs and new hires, as opposed to continuing jobs and people holding continuing jobs. The short-lived nature of many new jobs is worth bearing in mind when forming retention goals or expectations for people who are moving from meanstested benefits to employment.

	Benefit- to-work transition group (study population)	Non- beneficiary job entrants (NBJE)	Non- beneficiary job entrants who came from low or no employment (NBJE-2)
Sustained employment			
Months employed and off benefits during months 1–6 (Percentage of time) Months employed and off benefits during months 7–12 (Percentage of time)	4.9 (80.9) 3.7 (62.4)	5.1 (84.3) 4.4 (73.0)	4.6 (76.3) 3.7 (61.1)
Months employed and off benefits during months 13–24 (<i>Percentage of time</i>) Months employed and off benefits during first two years (<i>Percentage of time</i>)	7.3 (60.7) 15.9 (66.2)	(70.3) (70.3) (74.5)	7.1 (59.6) 15.4 (64.1)
Self-sufficiency in employment			
Months with earnings of \$1,500+ and no benefit income – mths 1–6 (<i>Percentage of time</i>) Months with earnings of \$1,500+ and no benefit income – mths 7–12 (<i>Percentage of time</i>) Months with earnings of \$1,500+ and no benefit income – mths 13–24	3.3 (54.2) 2.8 (46.0) 5.7	3.1 (51.9) 3.0 (50.3) 6.1	1.8 (29.7) 1.8 (29.3) 4.0
(Percentage of time) Months with earnings of \$1,500+ and no benefit income – first 2 yrs (Percentage of time)	(47.1) 11.7 (48.6)	(51.1) 12.3 (51.1)	(33.0) 7.5 (31.3)
Earnings growth, conditional upon being employed Average monthly earnings in the first half year* (\$) Ratio of average monthly earnings in 2nd post-transition half year to 1st* Ratio of average monthly earnings in 3rd post-transition half year to 1st* Ratio of average monthly earnings in 4th post-transition half year to 1st*	1,760 1.011 1.061 1.085	1,804 1.028 1.083 1.116	1,015 1.080 1.198 1.282
Earnings growth, conditional upon being employed and off benefit			
Average monthly earnings in the first half year* (\$) Ratio of average monthly earnings in 2nd post-transition half year to 1st* Ratio of average monthly earnings in 3rd post-transition half year to 1st* Ratio of average monthly earnings in 4th post-transition half year to 1st*	1,827 1.032 1.082 1.117	1,819 1.029 1.084 1.119	1,025 1.081 1.201 1.288
Job retention			
Duration of first job (months, censored at 24) Number of employers Number of separate job spells Average duration of employment relationships (months) Average duration of job spells (months)	12.2 2.7 3.5 11.6 9.3	9.5 2.5 3.4 11.6 9.1	8.0 2.5 3.4 10.6 7.7
Further benefit receipt			
Benefit income in first 6 months (%) Benefit income in first year (%) Benefit income in first two years (%)	27.3 43.7 54.4	3.3 5.9 10.4	6.0 9.8 15.9
Number of individuals	110,450	581,020	378,170

Table 6Outcomes of the Benefit-to-Work and Non-Beneficiary Comparison
Groups

* Group median.

Note: All income variable are in March 2004 quarter dollar values.

Some significant differences *are* evident from the comparison. Former beneficiaries experienced less earnings growth in the two years following their transition (although this is not the case if we only consider earnings in the months when individuals were not also receiving benefit income). Former beneficiaries were much more likely than the non-beneficiary group to receive further benefit income.

A comparison of column 1 with column 3 indicates that the BTW group had higher rates of employment retention and substantially higher monthly earnings than people who were moving from non-employment or low employment situations into new jobs (NBJE-2). The latter group was younger in age composition and had much less recent employment experience, so the fact that it had poorer employment outcomes is not particularly surprising.

Because the study population of former beneficiaries differs from the non-beneficiary comparison groups in its demographic characteristics and recent employment experiences, we would not expect its outcomes to be exactly the same. As part of the study, we also used the information that was available about these group differences to provide a more rigorous comparison of outcomes. We attempted to identify whether there is still an unexplained difference in outcomes associated with moving into work from a benefit, once the effects of measured demographic characteristics, recent employment experience, and other factors are controlled for. An unexplained outcome gap might be interpreted as evidence that former beneficiaries are relatively disadvantaged in the labour market. The results of that analysis were enlightening but not particularly conclusive.

Overall, we are not able to provide a conclusive answer to the question of whether former beneficiaries have significantly poorer employment outcomes than non-beneficiaries. We have simply provided some initial estimates of the size of the gap.

SUMMARY AND DISCUSSION

This study used data from LEED to examine the employment and earnings outcomes of people who made a transition from a working-aged benefit to unsupported employment, during the following two years.

The results indicate that people who made a benefit-to-employment transition tended to remain employed for much of the following two years. People in the benefit-to-work study group were employed and off benefits for 16 months out of 24 on average, or for 66% of the first two years. On average, people in the benefit-to-work study population also experienced moderate earnings growth. Approximately 71% had some off-benefit employment during the final six months of the follow-up period. On average, the

off-benefit earnings of this group were 11.7% higher than at the start of the follow-up period. That earnings growth could have come from increases in hours worked per month, increases in wage rates or a combination of both.

These results can be interpreted positively. Some other aspects of post-transition employment patterns are less positive, however. Part-time and/or part-month employment appears to have been common. At any given time in the two years following the transition off a benefit, around one-third of those with jobs were earning less than \$1,500 per month, indicating that they were probably working on a part-time or part-month basis. Job durations were relatively short. On average, the BTW study group had 2.7 employers and 3.5 job spells in the two years after the transition. More than half received further benefit income.

The analysis of factors associated with "successful" outcomes indicate that demographic characteristics, recent employment experiences, the timing and circumstances of the benefit-to-work transition, and employer characteristics are all associated to some degree with variations in outcomes. The evidence on employer characteristics is particularly interesting. People who initially got jobs in firms where average monthly earnings were relatively high tended to have more sustained employment in the follow-up period, higher earnings, and better earnings growth. There were also some quite significant industry variations in outcomes (controlling for other factors). The evidence suggests that getting a job with a "higher quality" employer may facilitate retention and advancement in the labour market. In our estimates, the effects of employer characteristics persisted in fixed effect specifications, suggesting they were not simply due to differences in unmeasured time-invariant individual characteristics, such as educational level. However, there are some other possible explanations for the associations between employer characteristics and individual outcomes that we did not rule out in the analysis.

The employment patterns of the benefit-to-work transition group were, in many respects, broadly similar to those of non-beneficiary job entrants. Both groups tended to have short job durations, multiple employers in the follow-up period, and relatively low average monthly earnings. Rates of earnings growth were broadly similar. The short-lived nature of many new jobs is worth bearing in mind when the employment outcomes of former beneficiaries are evaluated, and when thinking about the level of assistance that may be required to help beneficiaries remain in work and off benefit.

The employment retention of the benefit-to-work study group is likely to have been assisted by the favourable labour market environment of the time, as 2001–2004 was a period of strong employment growth and low unemployment. This may have helped the former beneficiaries to move from their first post-benefit job to second and subsequent jobs.

Given the favourable labour market environment and the study group's reasonably high rates of employment in the post-transition period, it is somewhat surprising that the proportion that returned to a benefit was also high. Our comparison with nonbeneficiary job entrants suggests that the former beneficiaries did not have substantially greater difficulty remaining in work than the non-beneficiaries, yet they were far more likely to receive benefit income in the follow-up period. This difference points to the likely existence of differences in income needs and/or eligibility for benefit income. It also highlights the importance of employment assistance strategies that help former beneficiaries move into jobs that offer higher wages and/or provide greater long-term security of earnings, if they are to become and remain self-sufficient in the long run.

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