

Injury & Disability Schemes Seminar



Insights and Outcomes

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**Actuaries
Institute**



Made to measure: Wellbeing frameworks, linked data and person-centred outcomes

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Today's presentation



1. Introduction and context of wellbeing frameworks
2. Example of cross-sectoral modelling

What is a wellbeing framework?



A collection of measures to give a relatively broad picture of the welfare of a particular group of people.

- **Broad:** Trying to build a more holistic picture of a group of people
- **Welfare:** Want to be able to measure 'progress' or at least relative advantage/disadvantage.
- **Group:** Often applied to a population, but the ability to drill down is often useful

Why wellbeing frameworks?

- In part a reaction to overly narrow KPIs
- Brings consistency across different types of programs and schemes
- Recognising complex barriers faced by vulnerable people.

Why wellbeing frameworks? (2)



Example 1: NSW Human services outcomes framework



<https://www.facs.nsw.gov.au/resources/human-services-outcomes-framework>

Why wellbeing frameworks? (3)



Example 2: The NDIS

Domains for >15 participants

Choice & control	Daily living	Relationships	Home
Health & wellbeing	Lifelong learning	Work	Social, community & civic participation

<https://www.ndis.gov.au/about-us/data-and-insights/reports-and-analyses>

Lots of commonality in domains...



Domain	OECD	NSW	Aust. ABS	NDIS	Stats NZ	NZ MSD Social report	NZ Treasury	UK	Canada	USA Gallop-Sharecare
Health	Health status	Health	Health	Health & wellbeing	Health	Health	Human status	Health	Healthy populations	Health
Education	Education & skills	Education & skills	Education & training	Lifelong learning		Knowledge & skills	Education & skills	Education & skills	Education	
Workplace skills	Education & skills	Education & skills	Education & training	Lifelong learning		Knowledge & skills	Education & skills	Education & skills		
Jobs & Income	Jobs & earnings	Economic	Work	Work	Financial well-being	Paid work	Jobs & earnings	What we do	Living standards	Financial security
Wealth	Income & Wealth	Economic	Economic resources			Economic standard of living	Income & Wealth	Personal finance	Living standards	Financial security
Housing	Housing	Home	Housing	Home <i>Daily living</i>	Housing	Economic standard of life	Housing	Where we live	Living standards	
Work-life balance	Work-life balance						Work-life balance	What we do	Time use	
Crime	Personal security	Safety	Crime and Justice	Social, comm. & civic participation	Safety and security	Safety	Personal security	Where we live	Community vitality	
Personal connections	Social connections	Social & community	Family & community	Relationships	Social contact and loneliness	Social connectedness	Social connections	Our relationships	Community vitality	Social relationships
Community	Civic engagement	Social & community	Culture & Leisure	Social, comm. & civic participation	Generalised trust, culture & identity	Cultural identity Leisure & recreation	Cultural Identity	What we do	Leisure & Culture	Relationship to community
Empowerment & governance	Civic engagement	Empowerment		Choice and control		Civil and political rights	Civic engagement	Governance	Democratic engagement	
Environment	Environment quality						Environment quality	Environment	Environment	
Self-rated well-being	Subjective well-being			Health & wellbeing	Overall satisfaction	Overall satisfaction	Subjective well-being	Personal well-being		Sense of purpose

Defining outcomes



Within a domain, can define zero, one or multiple outcomes that represent progress.

Big distinction between survey-based measures and those using administrative data.

There are many possible choices. For example in NSW:

- An indicator library of a couple hundred outcomes was collated by Finance¹
- Reviews done identifying which are 'high usability' – for instance a reduced list of 16 found by the Sax Institute².

¹ <https://www.innovation.nsw.gov.au/sites/default/files/Human-Services-Outcomes-Framework-indicator-library-170616.pdf>

² <https://www.saxinstitute.org.au/publications/wellbeing-indicators-across-the-life-cycle/>

Defining outcomes – example



Economic	• Household income • Employment • Unemployment • Financial Hardship
Home	• Overcrowding • Housing affordability • Homelessness
Health	• Life expectancy • Self-reported health • Disability • Smoking • Mental Health

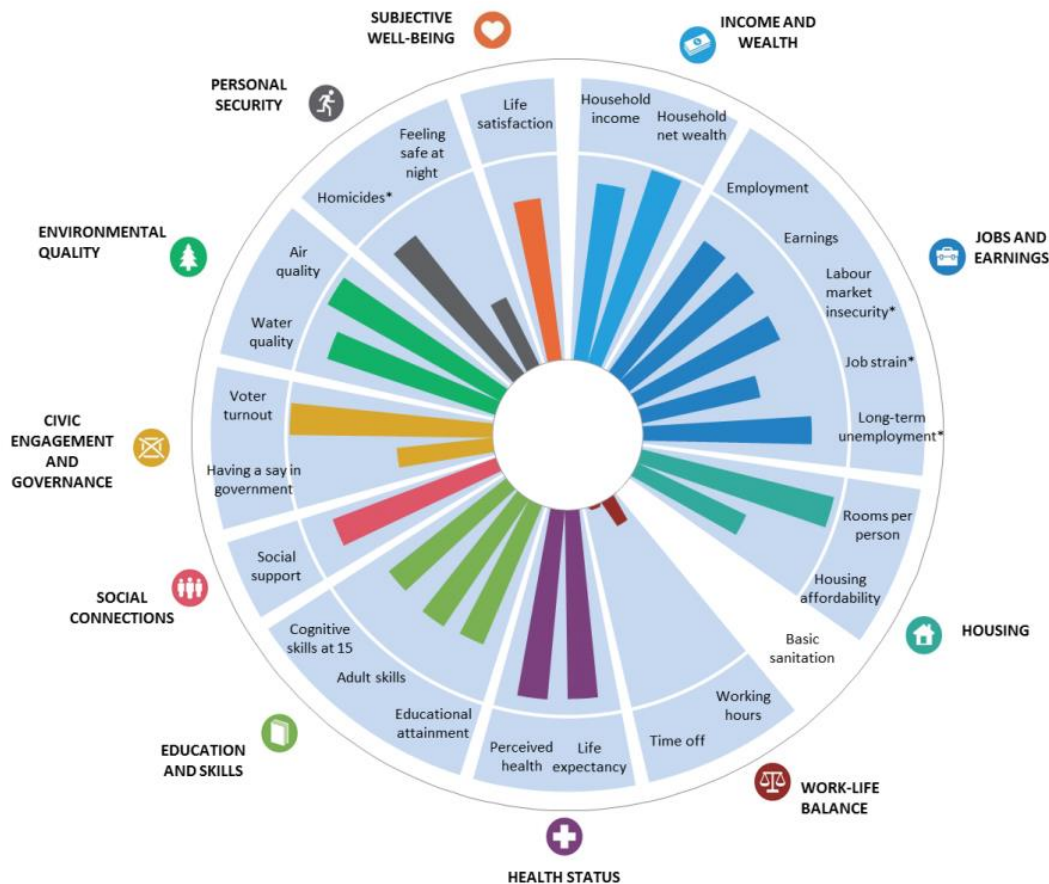
Education and Skills	• Educational attainment • Cognitive skills
Social and Community	• Social network/support • Volunteering
Empowerment	• n/a
Safety	• n/a

Defining outcomes – example



Another example, from
the OECD 'How's life'
project

<http://www.oecd.org/australia/Better-Life-Initiative-country-note-Australia.pdf>



Population vs operational outcomes



- Population indicators are ‘general purpose’ as opposed to targeting the operations of a scheme or program. For many ‘non-core’ domains on a scheme
- For example, for a welfare system:
 - Employment and income/standard of living are key domains
 - Health is not a core domain, but a very high percentage of the population have health conditions that will be relevant and contributed to (e.g. employment outcomes for those with various types of disability)
 - Education is not a core domain, but a strong interaction between education and employment may mean co-funding education interventions
 - People’s experience of being on welfare will affect their subjective wellbeing.

Correlations

- Domains are correlated and some will always be more correlated than others
- Means that different domain will likely contribute to overall wellbeing.

Relationship between domains for **Low** wellbeing in Total population subgroup

Survey Year: Combined years
Unit: Percentage point difference



<https://lsfdashboard.treasury.govt.nz/wellbeing/>

Challenges



- Broad range of experts and opinions
- Potential for rabbit holes seeking the ‘best’
- The risk of lack of focus
- Effective presentation of a framework

Opportunities

- Developing and reporting on broader frameworks
- Understanding the interactions between domains, and how improvements in one generate broader benefits
- Identifying the ‘pivot’ areas that can make the most difference
- The measurement and targeting of interventions for small groups of people

Example of cross-sectoral modelling



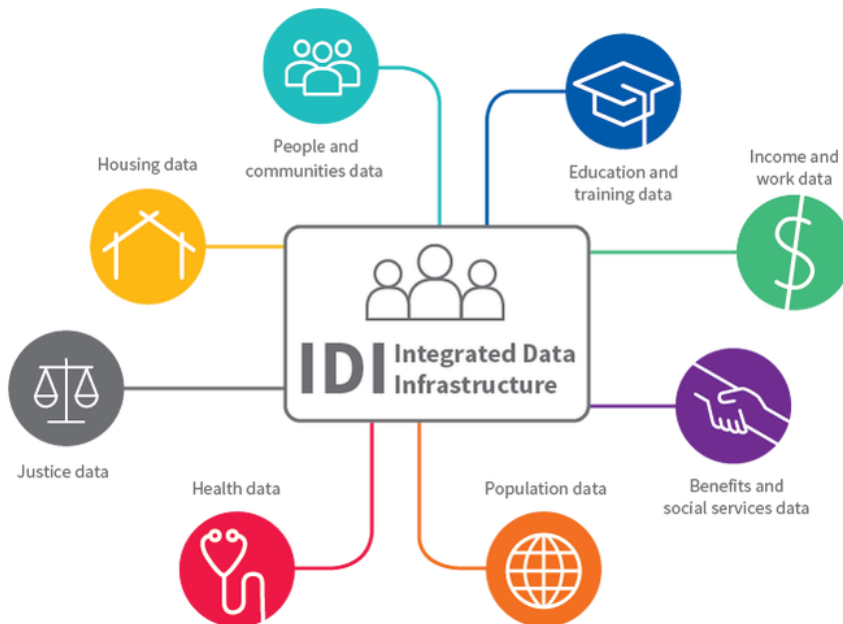
- In 2016 the NZ Social Policy Evaluation and Research Unit commissioned work to explore what happened to people when they moved off welfare benefits
- Three research questions:
 - Why did people leave benefits?
 - Where do people go when they exit benefits?
 - Are people better off when they exit benefits?

Off-benefit transitions:
Where do people go?

Off benefit transitions



- To be explored using cross-sectoral linked data in the Stats NZ Integrated Data Infrastructure
- Talking about the welfare system but analogies can be drawn to an injury scheme or program.



<https://www.stats.govt.nz/integrated-data/integrated-data-infrastructure/>

The analysis



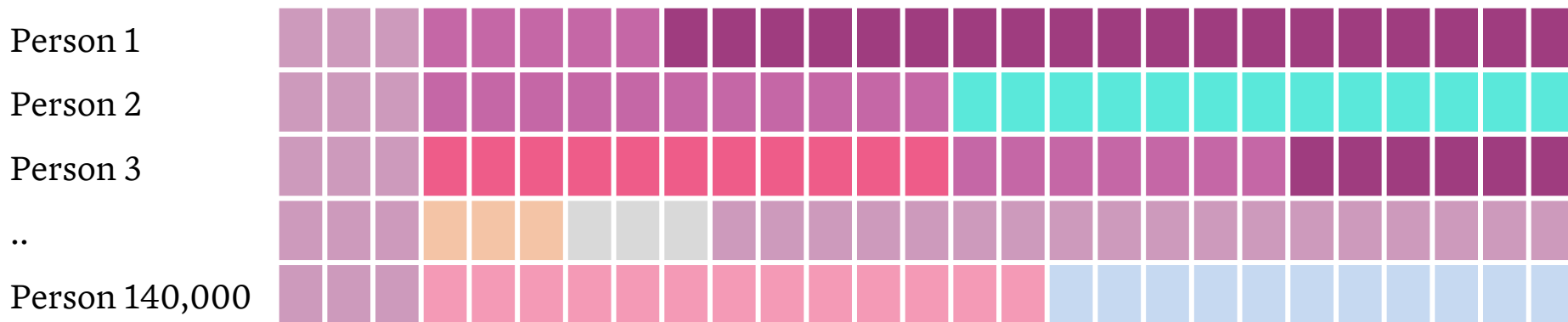
- Cohort of 140,000 people who had exited benefits
- For each person we could assign various 'activities' based on their service usage in a given month.

Economic	Employed with substantial income
	Employed with low income
	On benefits
Health	Dead
	Retired (over 65)
Education and Skills	FT and PT Tertiary education
	Training courses
Safety	In detention
Overseas	Migrated
Other	Unknown

The analysis continued



- Each individual is observed over the 24 months following exit



Employed with substantial income

FT and PT Tertiary education

Employed with low income

Training courses

On benefits

In detention

Dead

Migrated

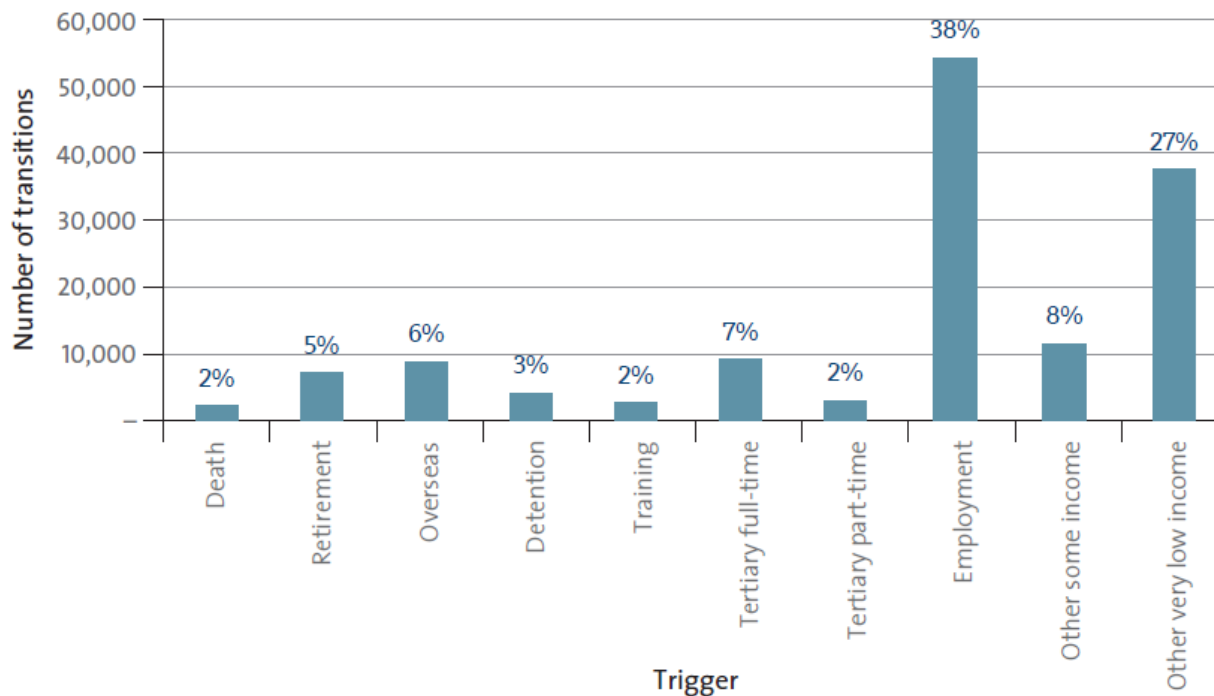
Retired (over 65)

Unknown

Why did people leave benefits?



Figure 3-1 _ Distribution of triggers

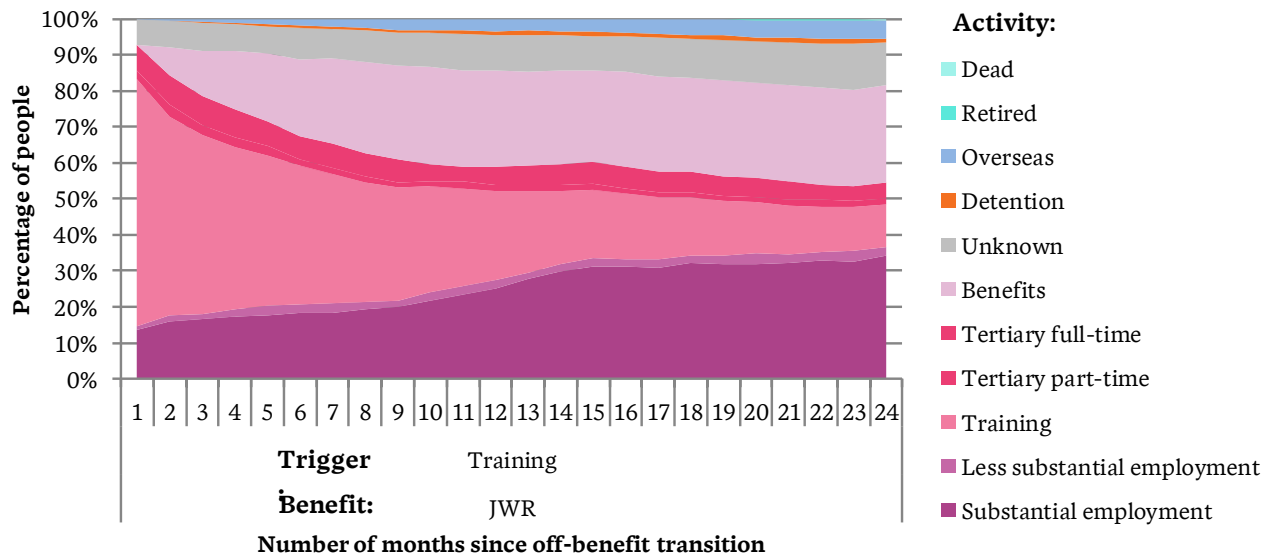


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- This stacked area chart illustrates the distribution of activities for a cohort of people over a 24-month period following an off-benefit transition. The y-axis represents the percentage of people (0% to 100%), and the x-axis represents the number of months since the transition (1 to 24). The activities are stacked from bottom to top: Substantial employment (dark purple), Training (red), Tertiary part-time (pink), Tertiary full-time (light pink), Benefits (light purple), Unknown (grey), Detention (orange), Overseas (light blue), Retired (teal), and Dead (light teal). The chart shows a significant and sustained increase in 'Substantial employment' from approximately 40% at month 1 to over 60% by month 24. Conversely, the 'Unknown' category, which starts at about 25%, decreases steadily to around 18% by month 24. Other categories like 'Benefits' and 'Overseas' remain relatively stable throughout the period.
- | Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
|-----------------------------|
| Dead | 2 |
| Retired | 5 |
| Overseas | 5 |
| Detention | 2 |
| Unknown | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Benefits | 10 |
| Tertiary full-time | 5 |
| Tertiary part-time | 5 |
| Training | 5 |
| Less substantial employment | 5 |
| Substantial employment | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |

Where do people go when they exit benefits? continued



- For example, exits to a training course from Jobseekers benefit



Understanding a specific outcome



- Regression models of particular outcomes of interest, for example, returning to benefits after an exit for employment:
 - Risk increases with the increasing duration of the current spell on benefits
 - The total duration of previous spells is an even stronger risk factor
 - Industry of employment is a significant risk factor

TABLE
6-1

Risk factors
for being back
on Benefits
for those who
left benefit for
Employment

Risk Factor	Values for risk factors and relative risk (%)				
Duration of current spell (months)	3 -8%	5 0%	15 9%	25 18%	35 23%
Additional total duration (months)	0 0%	5 18%	10 40%	30 46%	90 67%
Industry worked in during the first month after transition	H,M,P,R,T,U 0%	A,C 6%	B,F,G,J,K,L -15%	D,I,Q -25%	E,N,O,S -7%
Ethnicity	NZ European, Asian 0%	Maori, Other 25%	Pacific 9%	Unknown -25%	
Region	Auckland, Australia, Central, Nelson, Taranaki, Waikato, Wellington, Other 0%	Canterbury -24%	East Coast, Bay of Plenty, Northland 10%	Southland 9%	
Employment earnings in the first month after transition	\$1,180 0%	\$2,000 -11%	\$3,000 -23%	\$4,000 -34%	\$6,000 -43%
Number of CVF events	0 0%	2 7%	4 39%	6 72%	8 103%
Months employed in the 2 years before transition	0 0%	8 -11%	12 -30%	18 -53%	24 -62%
Overseas trips in the 5 years before transition	0 0%	1 -6%	3 -18%	5 -29%	7 -29%
Benefit before transition	JWR, SP5, SLC 0%	JHD, EMB 23%	SLH 38%		
Age at transition	18 79%	24 35%	35 0%	45 8%	60 67%
Gender	Male 0%	Female 8%			
Industry and ethnicity	A and Asian 61%	A and Pacific 29%	All other combinations 0%		
Industry and region	A and Plenty 27%	C and Southland 52%	All other combinations 0%		
Industry and benefit	A and EMB, JHD -12%	All other combinations 0%			

Are people better off?



Figure 3-2 _ Income distribution for the *Employment* trigger

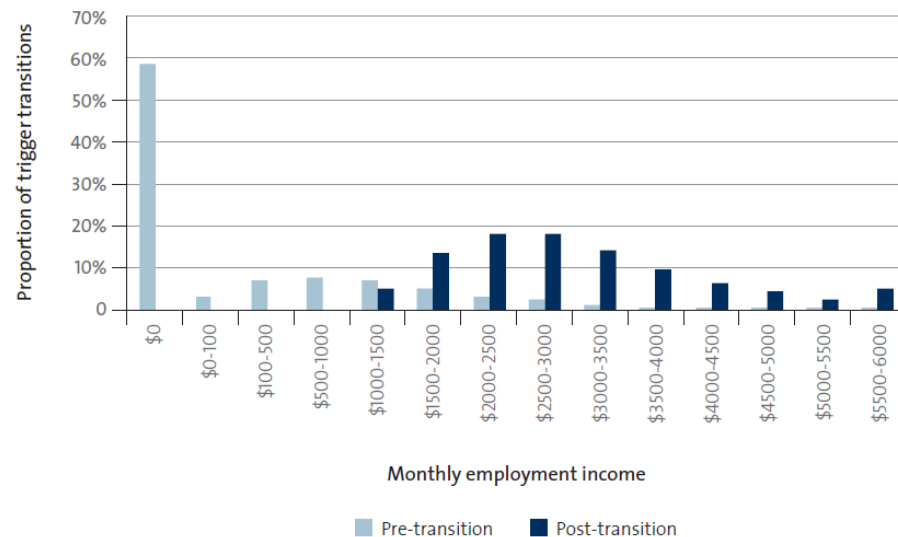


Figure 3-3 _ Income distribution for both *Other* triggers combined



Further reading



Further reading:

- Superu and Taylor Fry paper published with all IDSS 2019 papers on Actuaries Institute website
- In 2018 the NZ Ministry of Social Development updated the analysis for a more recent cohort and did a deeper dive into some topics. This is available online: <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/research/benefit-system/what-happened-to-people-who-left-benefit-system-during-the-year-ended-30-june-2014.html>