

Cohort Component Method of Deriving Replacement Demand

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-
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		To at time t		
From at time t-n	Occupation O	Other Occupations	Unemployment	Outside Labour Force
Occupation O	A	B	C	D
Other Occupations (new entrants)	E			
Other Occupations (re- entrants)	F			
Unemployment (new entrants)	G			
Unemployment (re-entrants)	H			
Outside the Labour Force (new entrants)	I			
Outside the Labour Force (re- entrants)	J			

Replacement Demand

- **Gross Outflows = Gross Replacement**
- **Net Replacement = Gross Outflows less Re-Entrants**
- **Cohort Component Method calculates Net Replacement as the difference between employment (in an age cohort) in two periods where there is a decline in employment in that age cohort.**

1	2	3	4	5	6	7	8	9	10	11
							Col 7 – Col 5	30% of Col 8	Col 7 – Col 9	Col 10- Col 5
1989 Age	1989 Emplo y. Stock	1997 Age	1997 Emplo y. Stock	Net flows	Net Replac e Ment	Gros s in flow	Gros s Out-flow	Returnee s 30% of Gross Out	New Entrant s	Net Outflow
5-9	0	13-17	1752	1752		1752	0		1752	0
10-14	0	18-22	14891	14891		14891	0		14891	0
15-19	8038	23-27	16259	8221		9000	779	234	8766	545
20-24	15192	28-32	15621	429		1000	571	171	829	400
25-29	12244	33-37	15596	3352		4000	648	194	3806	454
30-34	12506	38-42	14452	1946		3000	1054	316	2684	738
35-39	10780	43-47	12944	2164		3000	836	251	2749	585
40-44	11819	48-52	10659	-1160	-1160	1000	2160	648	352	1512
45-49	8014	53-57	5795	-2219	-2219	1200	3419	1026	174	2393
50-54	5815	58-62	4269	-1546	-1546	900	2446	734	166	1712
55-59	4424	63-68	1630	-2794	-2794	100	2894		100	2894
60-64	2338	68-72	186	-2152	-2152	0	2152		0	2152
65-69	406	73-77	101	-305	-305	0	305		0	305
70+	261	78+	25	-236	-236	0	236		0	236
Total	91837		114180	22343	-10412	39843	17500	3574	36269	13926

Occupational Group		Labour Force Attrition Rate	Cohort Component Rate	Difference in Rates
Labourers		4.5	2.2	2.3
Sales		4.4	1.7	2.7
Personal Services		3.9	0.9	3.0
Clerical		3.5	1.7	1.8
Agriculture		3.1	2.8	0.3
Professionals		2.8	1.0	1.8
Other Skilled		2.7	1.4	1.3
Associate Professionals		2.6	0.6	2.0
Skilled Maintenance		2.1	1.4	0.7
Proprietors in Services		1.7	2.4	-0.7
Production Operatives		1.5	1.7	-0.2
Security		1.2	1.5	-0.3
Transport/Communications		-1.2	1.3	-2.5
Managers		-1.5	1.7	-3.2
Total		3	1.7	1.3

Alternatives?

- Use Labour Force Survey question on previous status
- Modify the results of the Cohort Component Methodology by adding data on inflows of older persons or outflows of younger ones:
 - Foreign nationality stocks between two periods
 - Change in inactive and unemployed stocks (where decline)
 - Longitudinal data of flows out of employment?