

# Unemployment Insurance in Welfare States: The Impacts of Soft Duration Constraints and Activation Policies

**Knut Røed and Lars Westlie**

## List of all the variables used in the analysis

The table below presents all the variables used in the statistical model with a short description. A more thorough explanation and motivation of the most important variables are presented in the paper; section 4.1 and in Appendix 1.

Variable	Description																																																				
intrinsic duration (1-160)	<p>The intrinsic duration variable captures the ongoing unemployment duration in addition to previous unemployment history in the four years prior to spell start. This is done in the following way. First we construct ten intervals of ongoing spell duration, in which hazard rates are assumed to be piecewise constant. These are first duration month, second month, third month, months 4-6, months 7-9, months 10-12, months 13-15, months 16-18, months 19-24 and &gt;24 months. The impacts of being in these duration intervals are then allowed to differ according to 16 combinations of previous unemployment experience defined by the number of months with unemployment experience in the last four years (prior to the start of the current spell), and number of months since the last unemployment spell was completed. All in all we then have 16*10=160 dummies which are illustrated in the table below.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="7" style="text-align: center;">An overview of the 160 intrinsic duration dummies</th> </tr> <tr> <th colspan="7" style="text-align: center;">Number of months in unemployment last four years</th> </tr> <tr> <th colspan="2"></th> <th style="text-align: center;">0</th> <th style="text-align: center;">1-6</th> <th style="text-align: center;">7-12</th> <th style="text-align: center;">13-24</th> <th style="text-align: center;">&gt;24</th> </tr> </thead> <tbody> <tr> <td rowspan="5" style="writing-mode: vertical-rl; transform: rotate(180deg);">Number of months since last unemployment spell</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1-10</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="text-align: center;">1-6</td> <td style="text-align: center;">-</td> <td style="text-align: center;">11-20</td> <td style="text-align: center;">21-30</td> <td style="text-align: center;">31-40</td> <td style="text-align: center;">41-50</td> </tr> <tr> <td style="text-align: center;">7-12</td> <td style="text-align: center;">-</td> <td style="text-align: center;">51-60</td> <td style="text-align: center;">61-70</td> <td style="text-align: center;">71-80</td> <td style="text-align: center;">81-90</td> </tr> <tr> <td style="text-align: center;">13-24</td> <td style="text-align: center;">-</td> <td style="text-align: center;">91-100</td> <td style="text-align: center;">101-110</td> <td style="text-align: center;">111-120</td> <td style="text-align: center;">121-130</td> </tr> <tr> <td style="text-align: center;">&gt;24</td> <td style="text-align: center;">-</td> <td style="text-align: center;">131-140</td> <td style="text-align: center;">141-150</td> <td style="text-align: center;">151-160</td> <td style="text-align: center;">-</td> </tr> </tbody> </table>	An overview of the 160 intrinsic duration dummies							Number of months in unemployment last four years									0	1-6	7-12	13-24	>24	Number of months since last unemployment spell	0	1-10	-	-	-	-	1-6	-	11-20	21-30	31-40	41-50	7-12	-	51-60	61-70	71-80	81-90	13-24	-	91-100	101-110	111-120	121-130	>24	-	131-140	141-150	151-160	-
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bc	<p>Business cycle. Here we use a business cycle indicator estimated in Gaure and Røed (2007).</p>																																																				
bc*duration	$= (bc - \overline{bc}) \cdot \min(\text{within spell duration}, 24)$																																																				

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UI-regime (1-41)	A set of 41 dummies, indicating number of months left with UI-benefits and what situation the person faces after the end of the UI period. A complete description of each of these dummies is given the paper, Appendix 1, Table A2. The reference is number 22, 19-33 months left until final benefit exhaustion.
regime_V	A dummy indicating that the person belongs to regime V. This is in addition to the UI-regime dummies.
regime_VI	A dummy indicating that the person belongs to regime VI. This is in addition to the UI-regime dummies.
entitled_18m	A dummy for persons in regime I, indicating that they would belong to regime V if the unemployment spell had started after the 97 reform.
entitled_0m	A dummy for persons in regime I, indicating that they would belong to regime VIII if the unemployment spell had started after the 97 reform.
on UI-sanction	This dummy equals 1 if the person is experiencing a UI-sanction at the moment. Not having a sanction is the reference.
after UI-sanction	This dummy equals 1 if the person has experienced an UI-sanction earlier in the spell and is not subject to a sanction at the moment.
on ALMP (0-9)	A set of 10 dummy variables, indicating the length of ongoing program participation: 1 month, 2 months, ..., 8 months, 9 months or longer. Not participating in ALMP is the reference (number 0).
after ALMP (0-9)	A set of 10 dummy variables, indicating the length of completed program participation: 1 month, 2 months, ..., 8 months, 9 or more months or longer.. No previous ALMP experience is the reference (number 0).
on part-time (0-9)	A set of 10 dummy variables indicating the length of ongoing part-time employment: 1 month, 2 months, ..., 8 months, 9 or more months or longer. Not having part-time employment at the moment is the reference (number 0).
after part-time (0-9)	A set of 10 dummy variables indicating the length of completed part-time employment: 1 month, 2 months, ..., 8 months, 9 or more months or longer. No previous part-time experience is the reference (number 0).
immigrant (1-5)	1: Non immigrant 2: Male immigrant, non-OECD 3: Male immigrant, OECD 4: Female immigrant, non-OECD 5: Female immigrant, OECD Non immigrants are the reference.

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work experience  
(1-39)

A set of 39 dummies, describing previous work experience conditioned on age at spell start. The interval of working years in each cell is based on the 25'th, 50'th and 75'th percentiles. In addition each age group has a separate effect for non-working years and one year only. The table below reports all 39 groups.

Age	The interval of working years in each group/cell						Dummy number
<20	0	>0					1-2
20-24	0	1	>1				3-5
25-29	0	1	2	3-5	>5		6-10
30-34	0	1	2-5	6-9	>9		11-15
35-39	0	1	2	3-8	9-14	>14	16-21
40-44	0	1	2-3	4-11	12-18	>18	22-27
45-49	0	1	2-7	8-14	15-23	>23	28-33
50 +	0	1	2-11	12-18	19-26	>26	34-39

The reference is dummy number 9 (25-29 years and 3-5 years of work-experience)

children  
(1-20)

A set of 20 dummies describing the composition of children in the family. These children dummies are only constructed for women. The children are divided into four different groups depending on age; 0-3, 4-6, 7-12, 13-16. Then we construct 20 dummies depending of number of children in each group. All the combinations are illustrated in the table below. Number 1 is having zero kids. Number 2-5 is only one child. Number 6-9 is at least two children, all in the same age-group. From 10 to 20 we have at least two children in different age-groups.

	Age groups				Age groups			
	0-3	4-6	7-12	13-16	0-3	4-6	7-12	13-16
1					11	X		X
2	X				12	X		X
3		X			13		X	X
4			X		14		X	X
5				X	15			X
6	X				16	X	X	X
7		X			17	X		X
8			X		18	X	X	X
9				X	19		X	X
10	X	X			20	X	X	X

education (1-17) A set of 17 dummies indicating highest previous level of completed education. The reference is number 5. The table below gives a complete description of the different education levels.

Type of previous education	
1	Only compulsory education
2	High school, humanities subjects, one or two years
3	High school, humanities subjects, three years
4	High school, occupational subjects, one or two years
5	High school, occupational subjects, three years
6	Pre-university introductory courses (half year higher education)
7	One year higher education
8	Two years higher education (public sector related)
9	Two years higher education (private sector related)
10	Three and four years higher education (public sector related)
11	Three and four years higher education (private sector related)
12	University, no completed degree
13	Bachelor of Arts
14	Five or more years higher education (public sector related)
15	Five or more years higher education (private sector related)
16	Ph.D.
17	Unknown

male Male dummy

log\_UI-benefit The natural logarithm of UI benefits

log\_income The natural logarithm of previous income.

Single This dummy equals one if the person is not married/ cohabiting. Cohabiting couples need common children in order to be registered.

month (59-154) 96 dummy variables, one for each calendar month. 59 being November 1993 and 154 being October 2001. The reference month is number 80 (august 1996).

county (1-20) 20 dummies indicating which county in Norway the person is living in. The 20'th dummy is for those with unregistered county. Number 3 (Oslo) is the reference.

County		County	
1	Østfold	11	Rogaland
2	Akershus	12	Hordaland
3	Oslo	13	Sogn og Fjordane
4	Hedmark	14	Møre og Romsdal
5	Oppland	15	Sør-Trøndelag
6	Buskerud	16	Nord-Trøndelag
7	Vestfold	17	Nordland
8	Telemark	18	Troms
9	Aust-Agder	19	Finnmark
10	Vest-Agder	20	Unregistered

mu (1-41) The 41 mass points in the heterogeneity distribution ( $v$ )

prob (1-41) The probabilities in the heterogeneity distribution ( $q$ )