

Measuring Human Capital: An Indicator Framework to Identify Policy Needs

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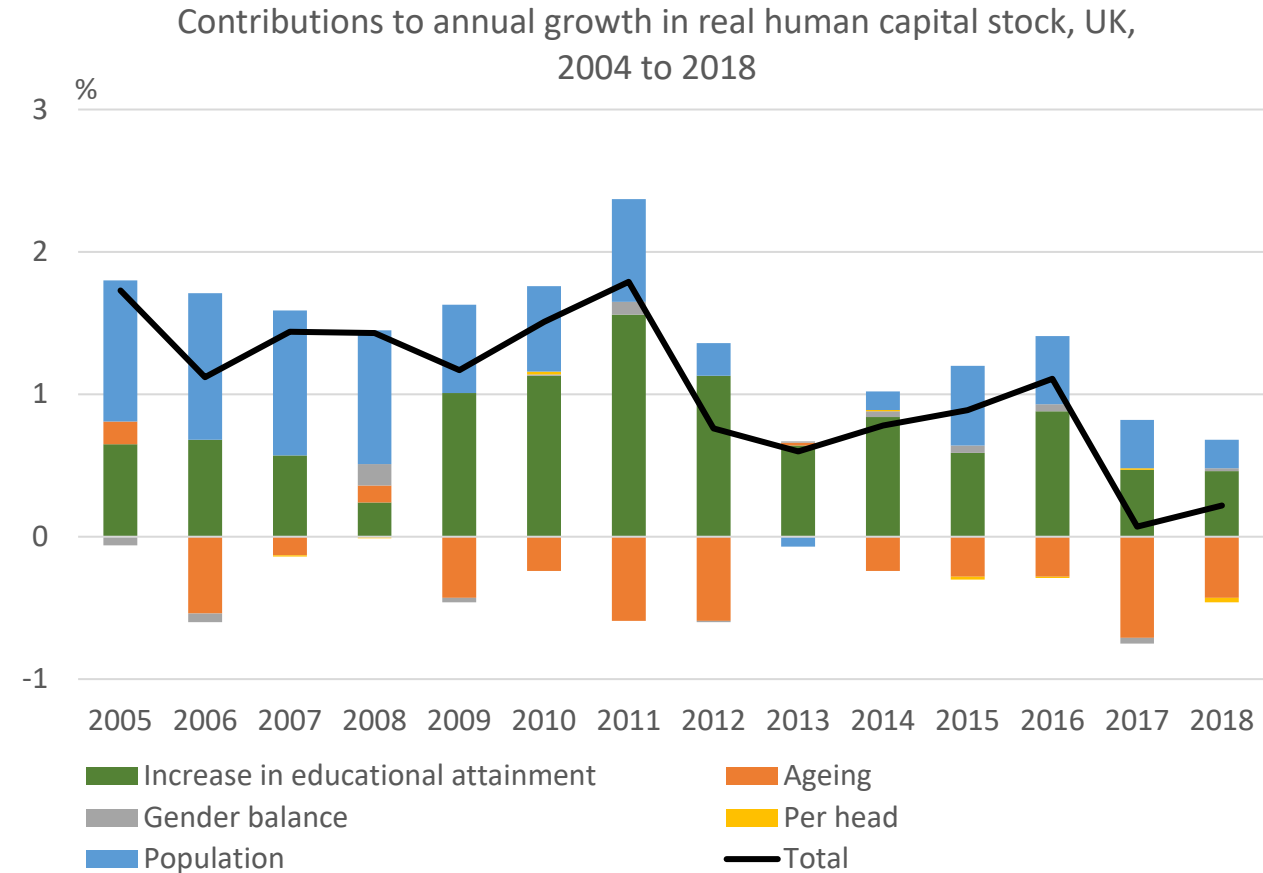
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2. Definitions - a cross-disciplinary approach
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4. Skills and earnings relationships
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Motivation and current data

1. Macroeconomic growth
2. Technological frontiers, automation, nature of work and depreciation
3. Policies and interventions



Definitions

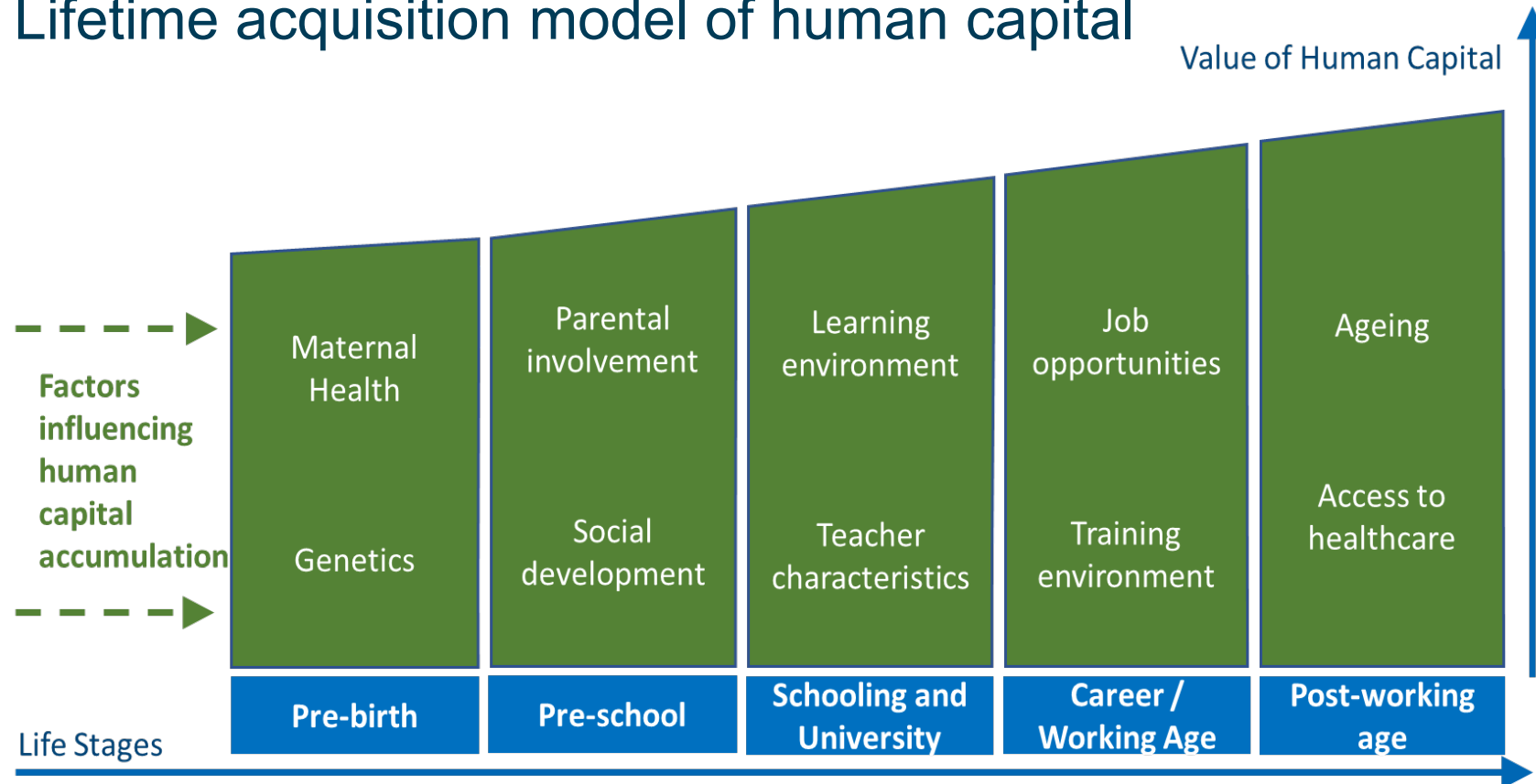
noun /hju:mən kapɪt(ə)l/: Skills, knowledge, competencies, attributes



- - - - -
- 1. 'Innate talent' vs development, maturation, plasticity
- 2. Environmental influences, lifestyle
- 3. Social interaction
- 4. Learning, assessment, automaticity
- 5. Qualifications or skills and knowledge

New measurement framework

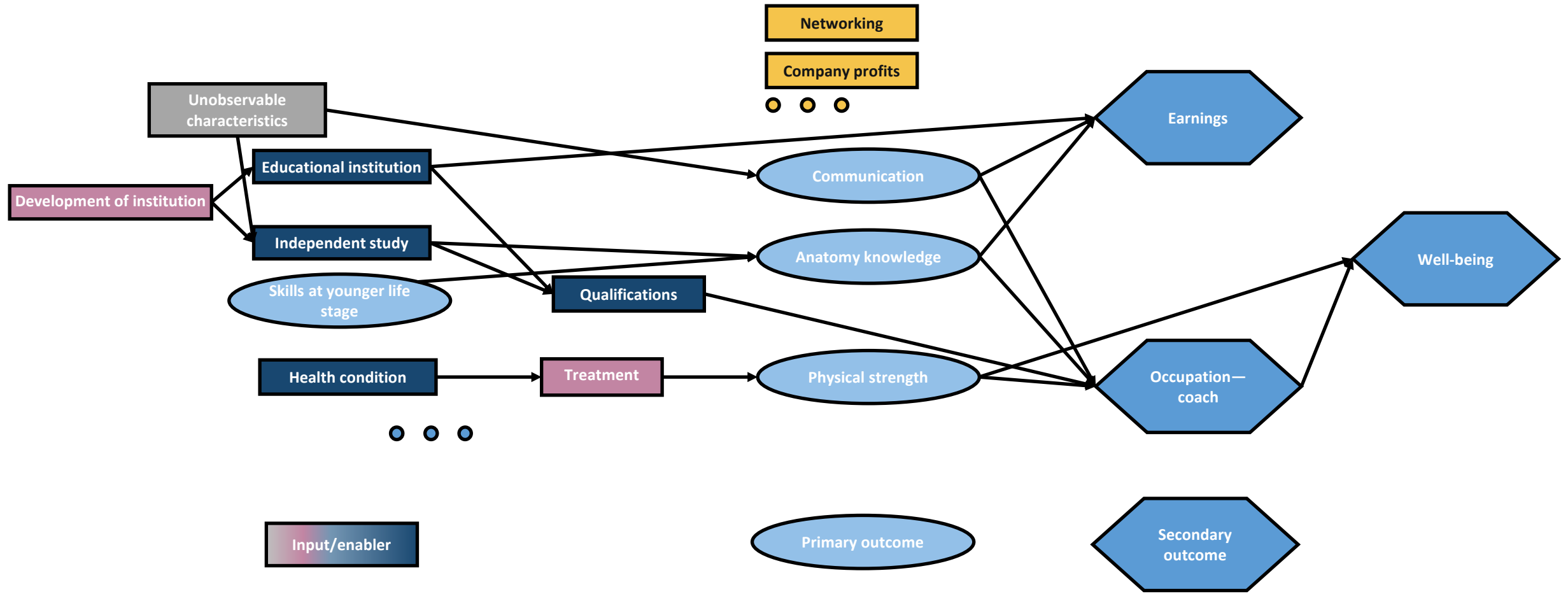
Lifetime acquisition model of human capital



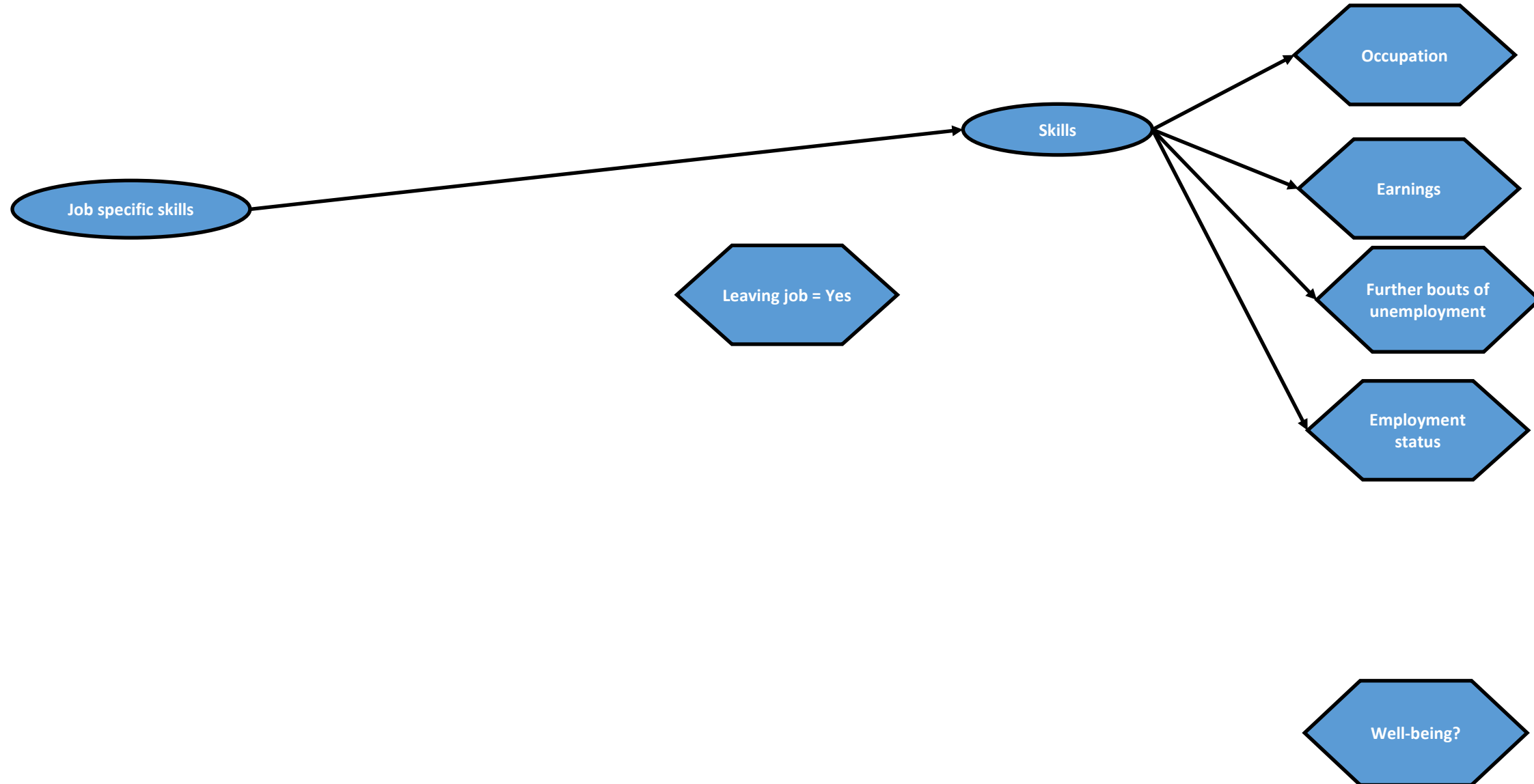
Measurement framework: themes

Theme	Wider mechanisms	
Work	<ul style="list-style-type: none"> • Job or Workplace Specific • Regional Conditions 	<ul style="list-style-type: none"> • Training • Mobility
Education	<ul style="list-style-type: none"> • Educational Environment, including schooling, teachers and peer effects 	<ul style="list-style-type: none"> • Individual Learning
Health	<ul style="list-style-type: none"> • Conditions • Access 	<ul style="list-style-type: none"> • Lifestyle • Ageing
Family and Home	<ul style="list-style-type: none"> • Parental inputs • Social inputs 	<ul style="list-style-type: none"> • Circumstantial • Wider factors
Independent learning	<ul style="list-style-type: none"> • Individual learning 	<ul style="list-style-type: none"> • Social learning
Wider social context	<ul style="list-style-type: none"> • Crime 	<ul style="list-style-type: none"> • Social Networks • Volunteering
Personality Traits	e.g. Resilience, Self-control, Patience,	Motivation, Curiosity etc

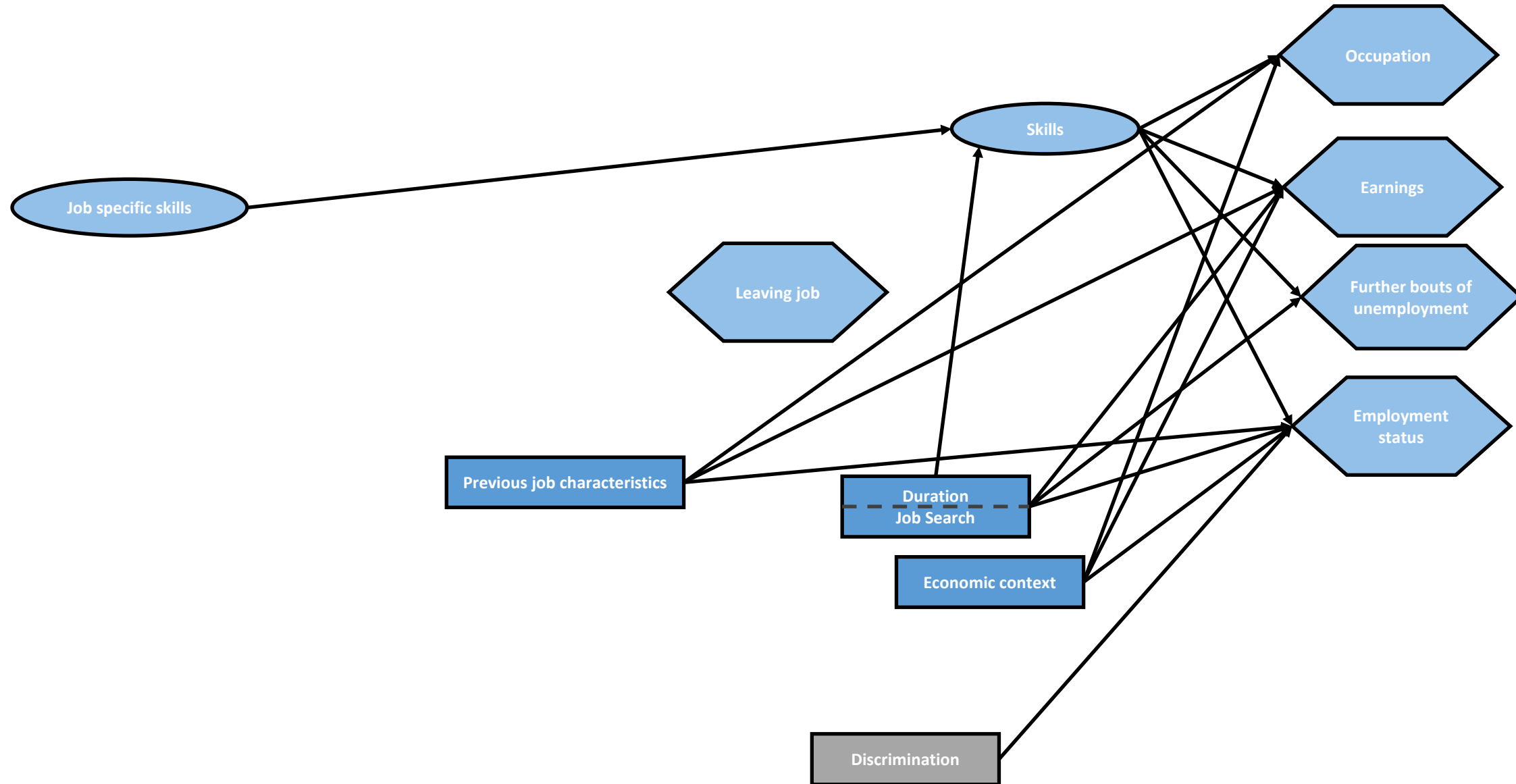
Measurement framework: indicators



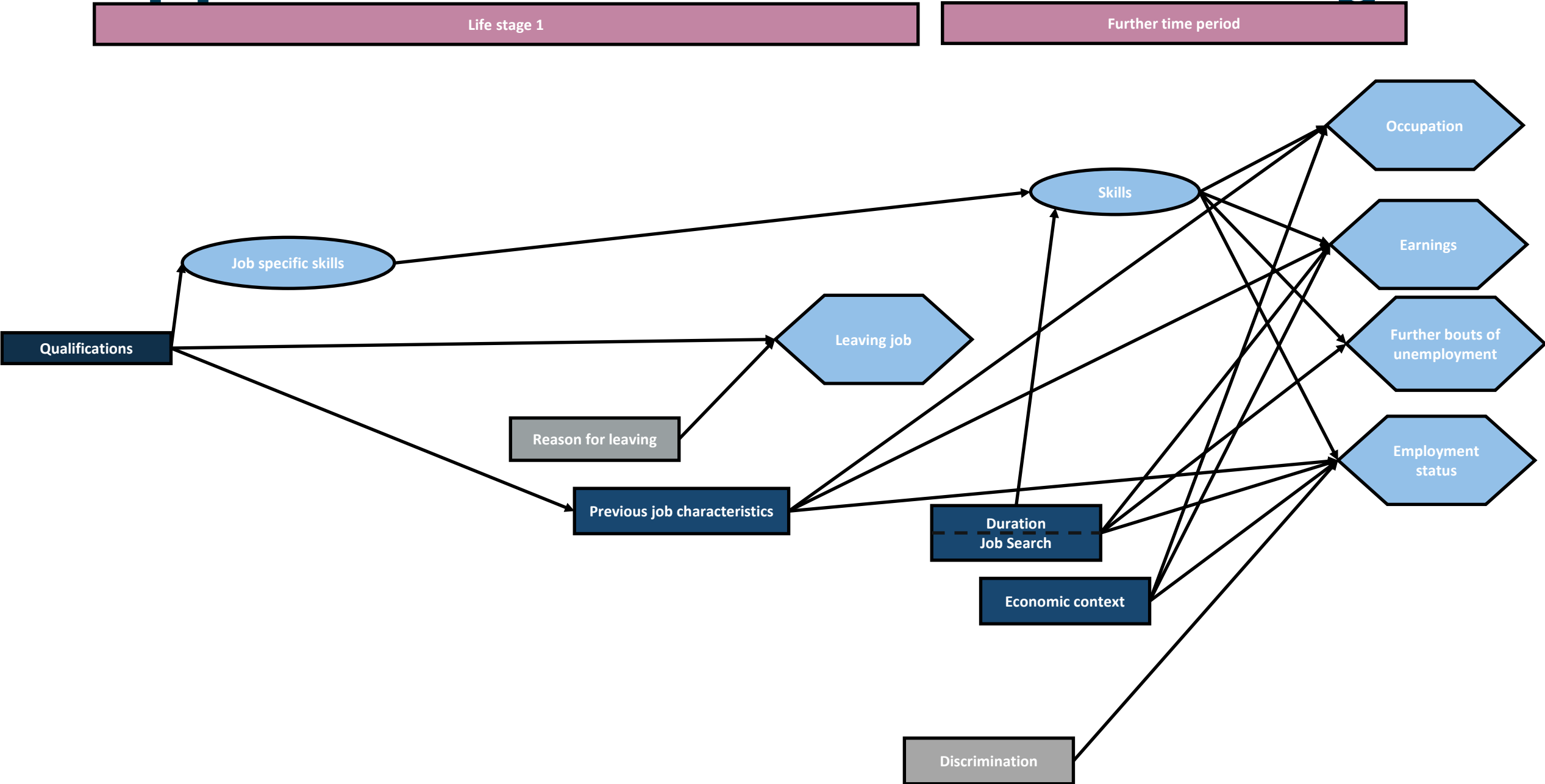
Application of framework: scarring



Application of framework: scarring



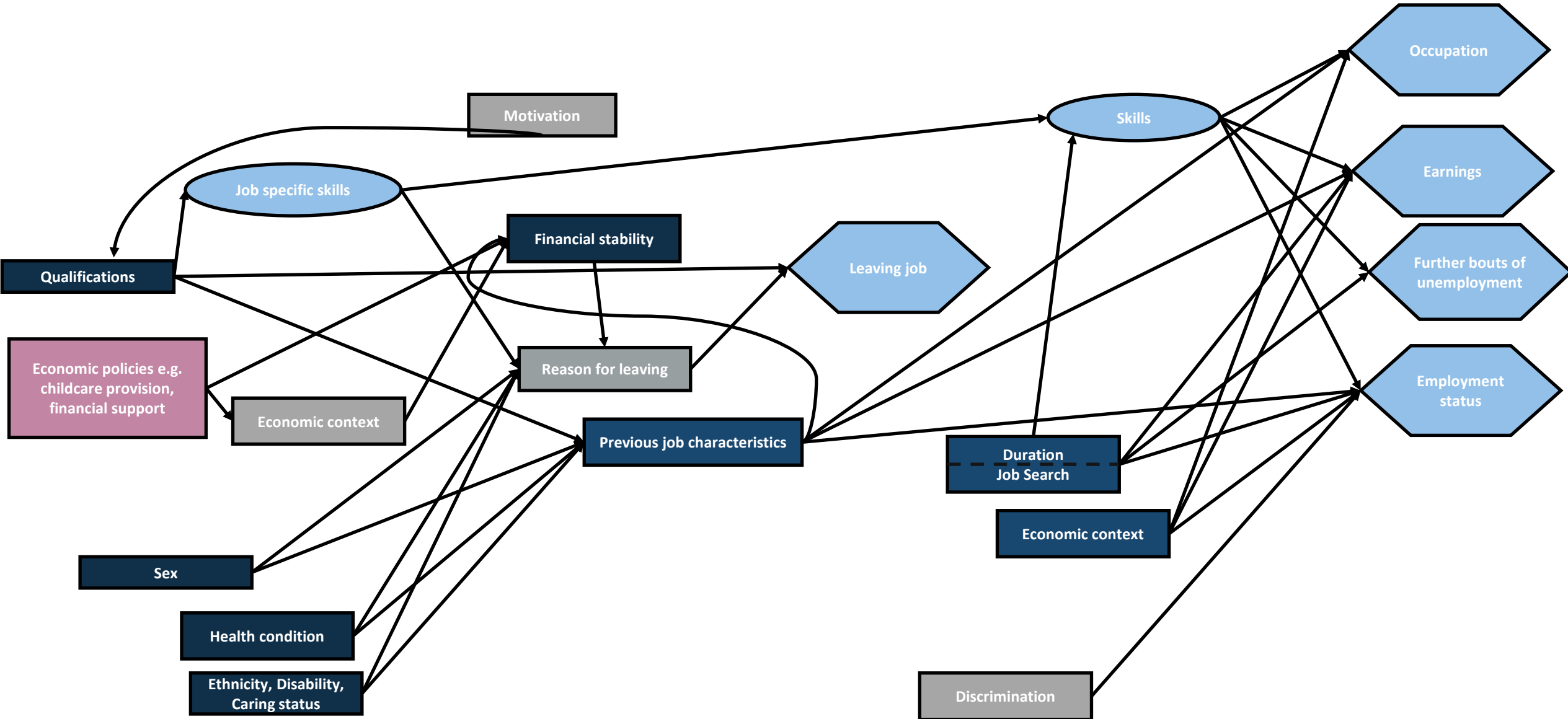
Application of framework: scarring



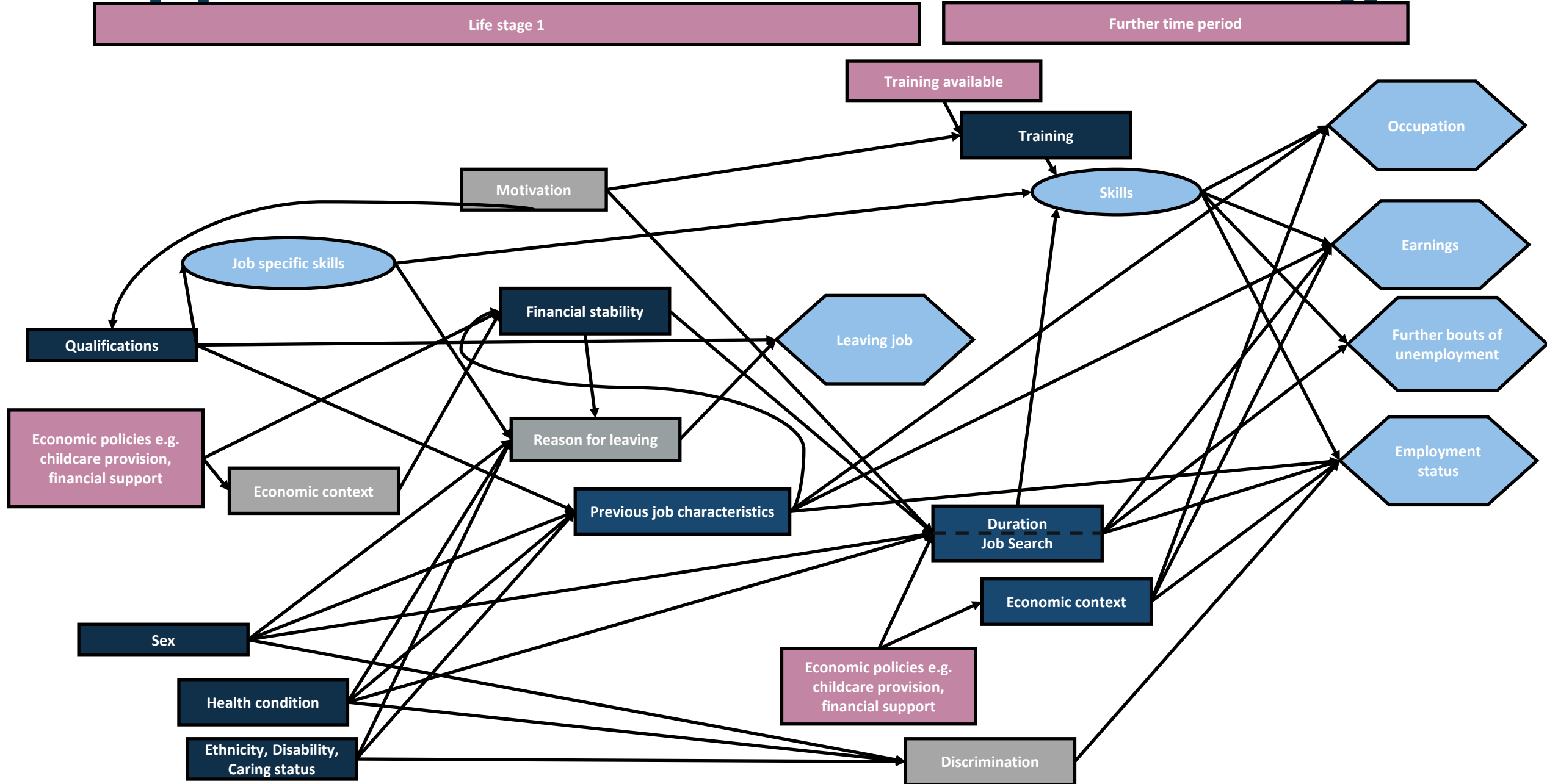
Application of framework: scarring

Life stage 1

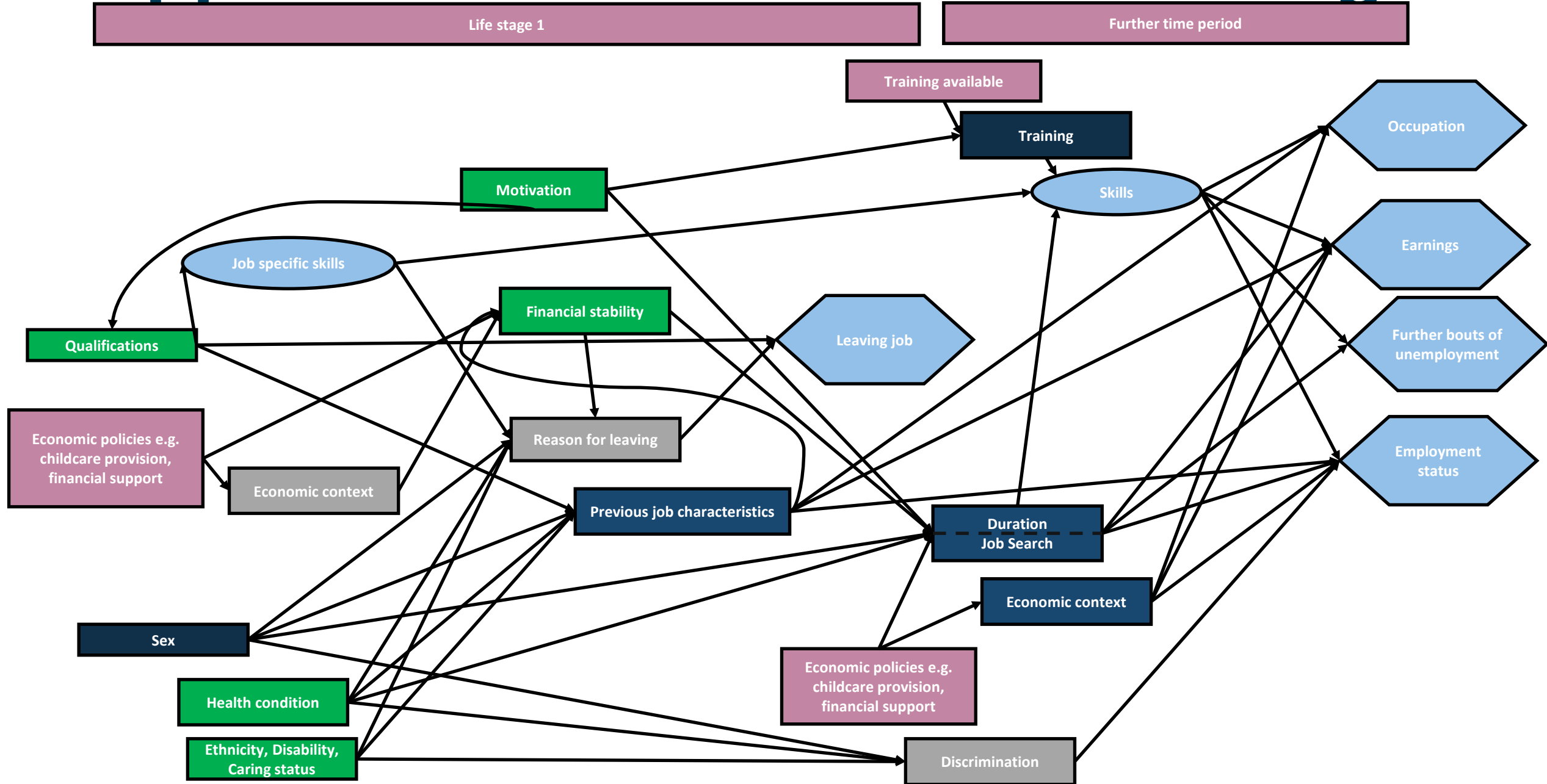
Further time period



Application of framework: scarring

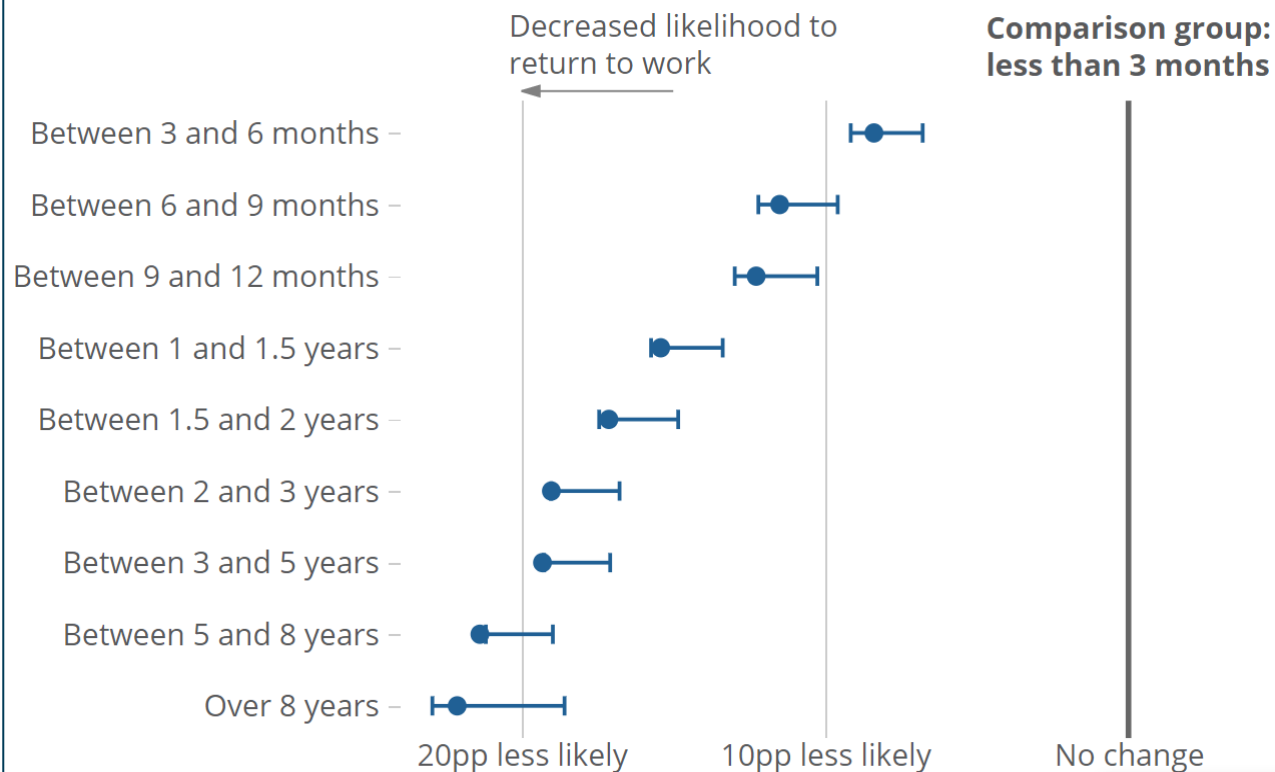


Application of framework: scarring

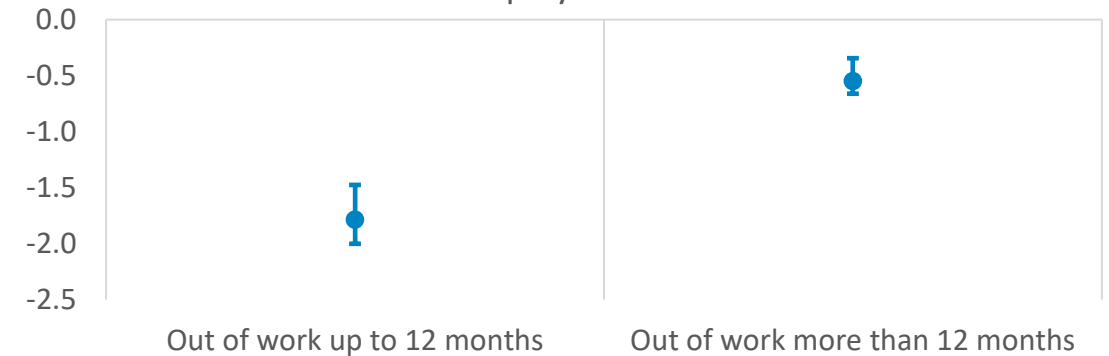


Initial results

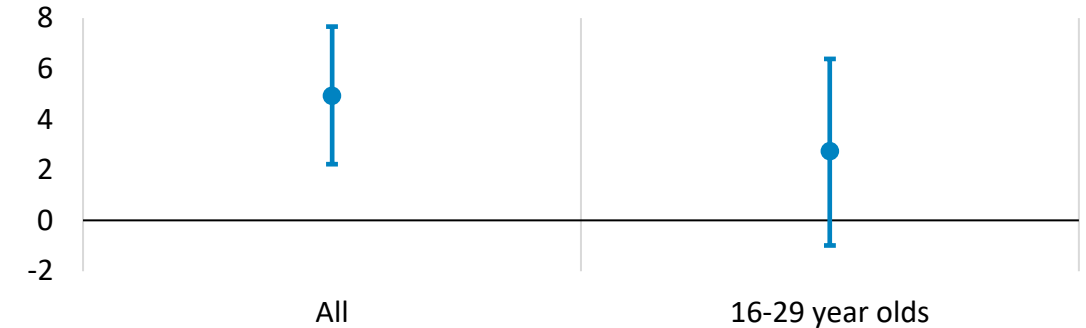
Percentage point difference in likelihood of returning to work in the next quarter, by duration out of work, 2007 - 2020



Average marginal effect from 1pp higher local unemployment rate



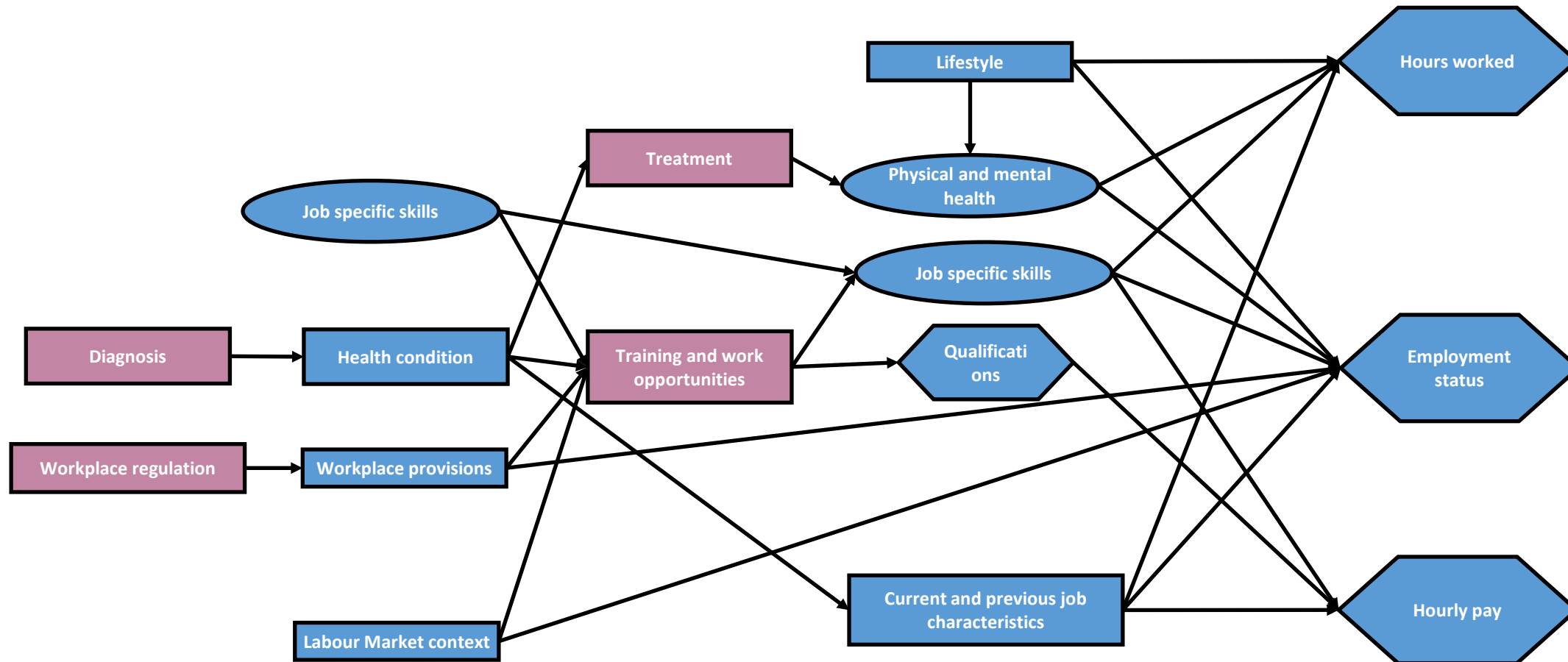
Average marginal effect from training in the past year



Applying framework: next topics

1. Other scarring effects
2. Relationship between developing health conditions and labour market engagement
3. Impact of furlough on people's skills and knowledge
4. Impact of pandemic on children and young people's development

Applying framework: health conditions

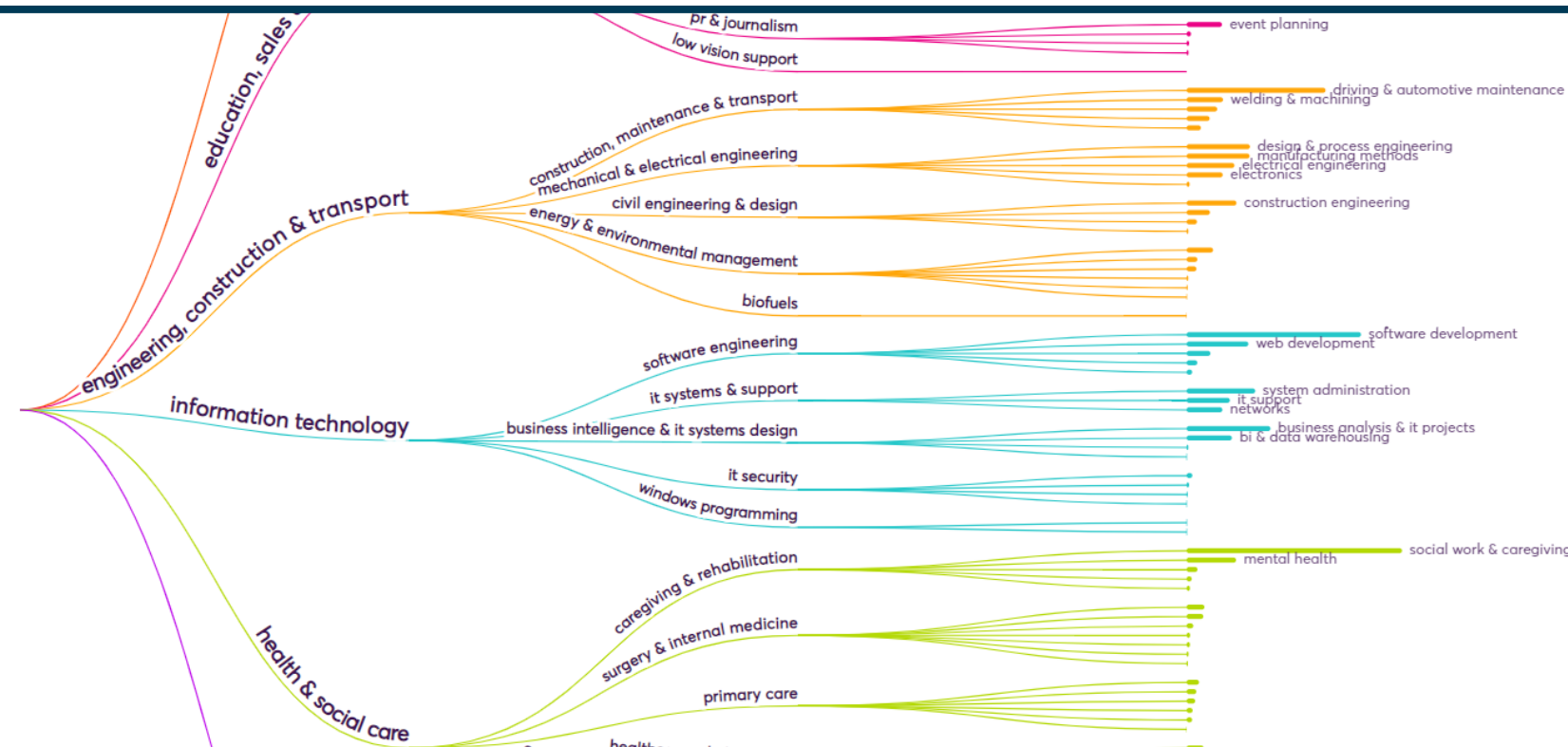


Skills and earnings relationships

1. Online job adverts can capture skills demand e.g. NESTA

1. Can link earnings to skills and other factors

1. Market price of skills
2. Skills demand trends
3. Skills taxonomies



Implications

1. What mechanisms influence human capital acquisition?
 2. What skills and knowledge matter across the lifespan & how to measure them?
 3. Links between skills and earnings
 4. Are there undervalued skills and knowledge – direct skills mismatches?
 5. How to enable data for intervention evaluation
- ‘Evidence gaps → data collection needs’ virtuous cycle + administrative data use
 - Part of wider ONS development workplan, links to other capitals, National Accounts

Questions

Contact: economic.wellbeing@ons.gov.uk

Annex: Scarring results – total population – understanding society

Model Co-variates (Comparison reference group in brackets)		Average Marginal Effect % Point	Statistical Significance
Sex (Male)	Female	3.41	Significant
Age Groupings (30 to 39)	16 to 17	8.42	Not Significant
	18 to 21	2.89	Not Significant
	22 to 24	2.20	Not Significant
	25 to 29	2.77	Not Significant
	40 to 49	1.57	Not Significant
	50 to 59	-1.79	Not Significant
	60 to 69	-2.68	Not Significant
Highest Qualification obtained (GCSE's)	Degree or equivalent	21.33	Significant
	Higher degree	12.27	Significant
	A-level or equivalent	9.16	Significant
	Other qualifications	-2.90	Not Significant
	No qualification	-11.49	Significant
Ethnicity (White)	Black or Black British	-0.77	Not Significant
	Asian or Asian British	-2.86	Not Significant
	Mixed	-4.58	Not Significant
	Chinese or other ethnic group	5.59	Not Significant
Caring Responsibilities (Non-carer)	Carer	-3.85	Significant
Duration out of work (Less than 1 quarter)	Over 1 and up to 2 quarters	-12.17	Significant
	Over 2 and up to 3 quarters	-19.93	Significant
	Over 3 and up to 4 quarters	-16.82	Significant
	Over 4 and up to 6 quarters	-17.69	Significant
	Over 6 and up to 8 quarters	-27.60	Significant
	Over 8 and up to 12 quarters	-29.12	Significant
	Over 12 and up to 20 quarters	-29.00	Significant
	Over 20 and up to 32 quarters	-32.62	Significant
	Over 32 quarters	-36.16	Significant
	Missing	-13.25	Significant
Health conditions (No conditions)	One condition	-3.22	Significant
	Multiple conditions	-4.44	Significant
	Unknown	-1.50	Not Significant
Disability (Non-disabled)	Disabled	-15.89	Significant
	Unknown	9.89	Not Significant

Model Co-variates (Comparison reference group in brackets)		Average Marginal Effect % Point	Statistical Significance
Financial Situation (Finding it alright)	Finding it very difficult	-3.82	Significant
	Finding it quite difficult	-2.55	Not Significant
	Just about getting by	-2.19	Not Significant
	Living comfortably	6.00	Significant
	Unknown	-18.37	Significant
Living with parents at age 16 (Yes)	No	-2.48	Not Significant
	Unknown	2.27	Not Significant
Father's socio-economic status (Inapplicable)	Higher Professional	1.27	Not Significant
	Intermediate	2.90	Not Significant
	Lower management & professional	2.32	Not Significant
	Lower supervisory & technical	1.82	Not Significant
	Routine	0.18	Not Significant
	Semi-routine	1.50	Not Significant
	Small employers & own account	4.58	Not Significant
	Unknown	-4.29	Not Significant
Change in highest qualification since being out of work (No change)	Change	6.14	Not Significant
Region (London)	North East	-6.37	Significant
	North West	-0.51	Not Significant
	Yorkshire and The Humber	-1.46	Not Significant
	East Midlands	8.53	Significant
	West Midlands	4.09	Not Significant
	East of England	5.69	Significant
	South East	5.53	Significant
	South West	3.90	Not Significant
	Wales	4.38	Not Significant
	Scotland	-2.42	Not Significant
	Northern Ireland	-3.28	Not Significant
Any training within the past year (No training)	Trained	4.93	Significant
	Unknown	11.13	Significant
Living in a rural or urban area (Urban)	Rural	6.35	Significant
Local unemployment rate		0.52	Not Significant
Economic status (Inactive)	Unemployed	6.83	Significant