

# **Measuring Participation in Education and Labour Market Outcomes in a Longitudinal Perspective**

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## Questions to be addressed

### I What are longitudinal data?

→ **panel data**: multiple observations over time of the same units

→ **event history data**: information about the timing and sequencing of events

(→ time series/trend data: cross-sectional data collected at different points in time)

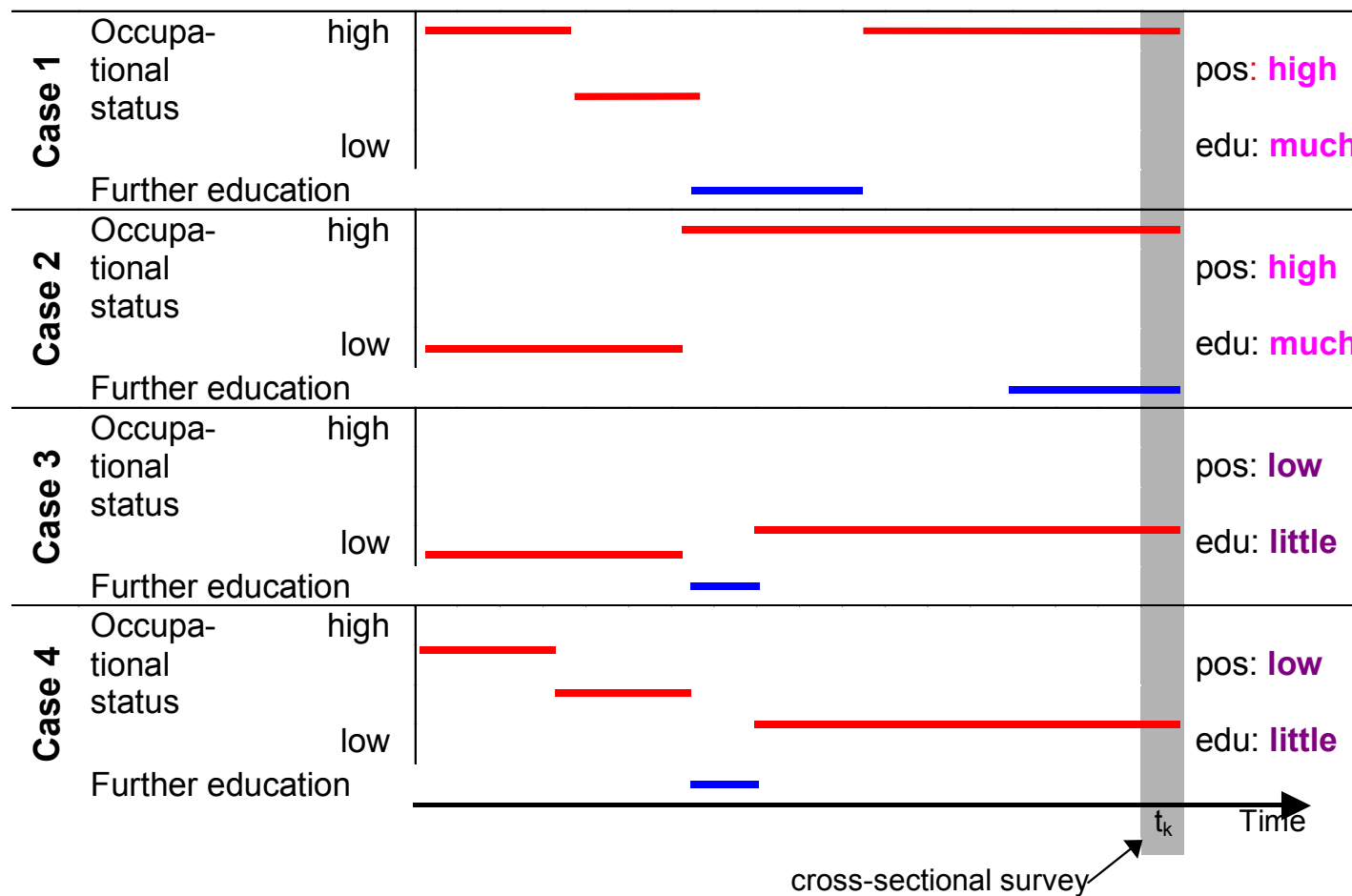
### II Why and when to collect longitudinal data?

### III How to collect longitudinal data, in particular **event history data**?

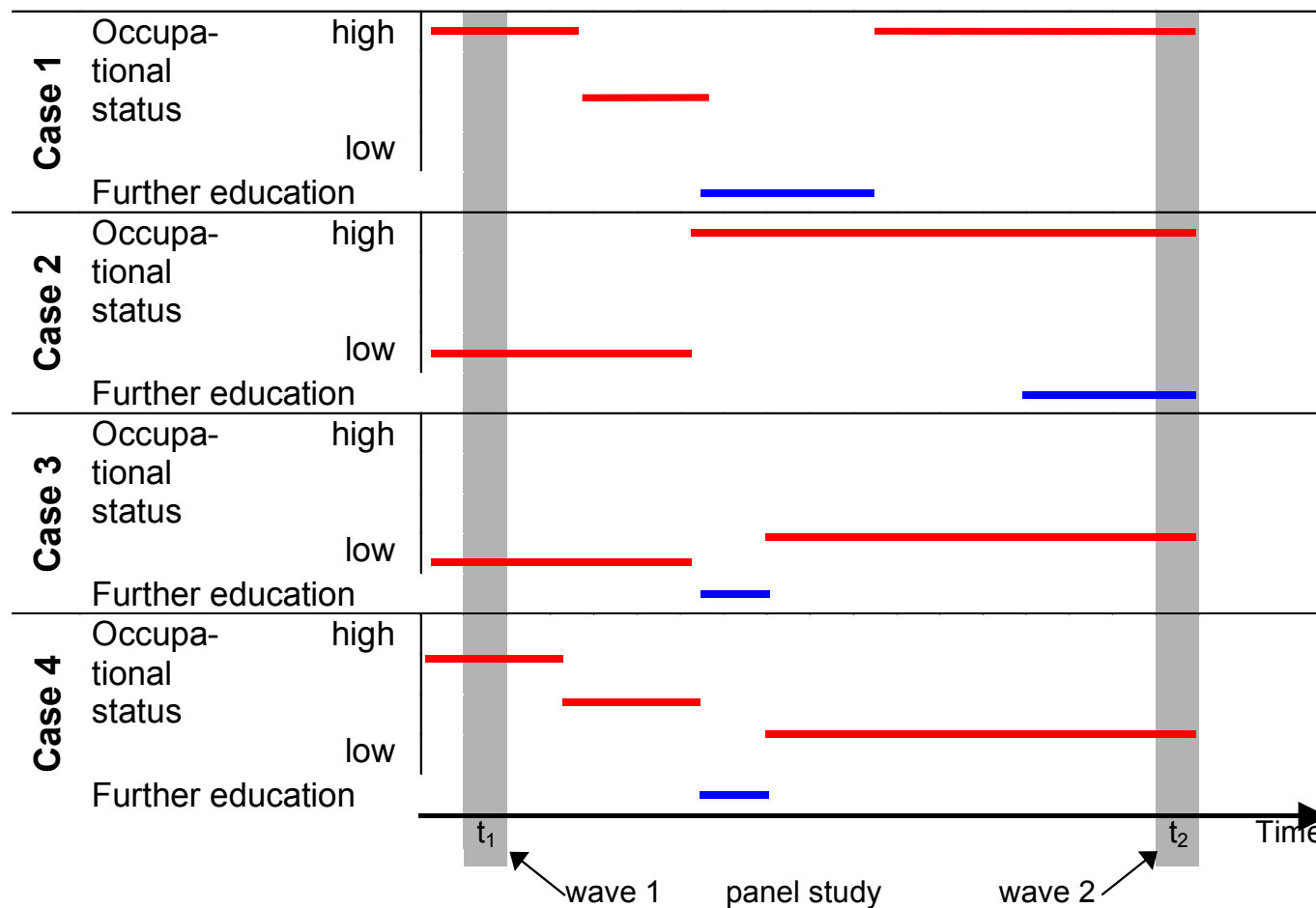
## Criteria

- Practicability: available funds and time, characteristics of the survey populations, range and maximum duration of the questionnaire etc.
- Research purpose: descriptive or explanatory

## Survey design and causal explanations



## Survey design and causal explanations



## Question list method or event history calendar?

- Question list:

asks for retrospective reports in different life domains (work, education, child bearing and rearing) through a set of discrete questions

- Event history calendar:

asks for retrospective reports in different life domains and records them in a calendar-like form which provides the respondents with aids for recall by means of visualisation and relationships between events

## Question list method: example

### 1. module on educational programs since graduation

“Since your graduation have you taken a program towards a diploma, certificate or degree?”

**if yes:** “Now we will collect information about these programs. I would like to begin with the oldest program and end with the most recent one.”

Detailed information about each of the programs taken, e. g. main field of study; **month and year of starting/leaving the program**

### 2. module on employment history

“How many employers have you worked for since graduation?”

**if > 0:** Detailed information about each job, beginning with the first, e. g. name of employer, industrial sector, duties, **start and end date (month, year)**

Canadian “National Graduates Survey – Class of 2000”

## Event history calendar: basic design

Domain/ topic	Time																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				



## Event history calendar: example 1

Please fill out the table below as follows:

- 1) In the large boxes at the top, please fill in the years in which you turned 15, 20, 25, ect., up to your current age.
- 2) Please make an X in the appropriate box for each age. Please indicate when you were attending school, in vocational training, working, etc, for each year of your life since age 15. The most important thing is to make sure that at least one box is marked for each age.

	Year 1955					Year 1960					Year 1965					Year 2000					Year 2005				
	↑					↑					↑					↑					↑				
At the age of ...	15	16	17	18	19	20	21	22	23	24	25	26	...	59	60	61	62	63	64	65					
<b>I was:</b>																									
attending school ....	X	X	X	X	X	X	X	X	X	X															
...																									
employed full-time .												X	X	X											
employed part-time															X	X									
...																									
retired .....																	X	X	X	X					
other .....											X														

German Socio-Economic Panel

## Event history calendar: example 2

	2004												2005																						
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6																	
Family																																			
Married		●																								●									
Childbirth								X																											
Activities																																			
Out of labour force							●																								●				
Employed	●						●																								●				
– weekly work hours	40																		20																
– type of contract (1 = permanent, 2 = fixed term, 3 = self employed)	1																		1																
Residence																																			
	Bonn/Germany																		Munich/Germany																
	●				●	●																								●	●				●
	Boston/USA																																		

## Event history calendar: example 3a

**A) Complete report of activities following graduation (extract)**

Please mark the month you passed your last examination of your first degree study programme (X) and fill in the activities you pursued from graduation up to now by using the code letter listed below.

**Activities (extract)**

<b>E</b> Working as an employee	<b>D</b> Doctoral studies	<b>P</b> Parental leave/family care
<b>SE</b> Working as a self-employed	<b>ST</b> Advanced studies	<b>U</b> Unemployment

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2000									X	U		
2001	E								P			
2002	P			E								

## Event history calendar: example 3b

B) Complete report of employment episodes following graduation (extract)				
Period (month/year)	Type of work- ing contract	Working hours	Occupation- al position	Place of work
Begin: <div>01</div> / <div>01</div> End: <div>08</div> / <div>01</div> <input type="radio"/> Ongoing	<div>2</div> (codes below)	<input checked="" type="radio"/> Full time <input type="radio"/> Part time with <div>  </div> hours per week <input type="radio"/> Undetermined working hours with roughly <div>  </div> hours per week	<div>03</div> (codes below)	Federal state or country (if abroad): <hr/> Town: <div>335</div> (first 3 digits of postal code)
Begin: <div>04</div> / <div>02</div> End: <div>  </div> / <div>  </div> <input checked="" type="radio"/> Ongoing	<div>2</div> (codes below)	<input type="radio"/> Full time <input checked="" type="radio"/> Part time with <div>19</div> hours per week <input type="radio"/> Undetermined working hours with roughly <div>  </div> hours per week	(codes below) <div>03</div>	Federal state or country (if abroad): <hr/> Town: <div>335</div> (first 3 digits of postal code)
<b>Type of contract</b> ↓ ↓		<b>Occupational position</b> ↓ ↓		
1 = Permanent 2 = Temporary etc. 6 = Self-employed 7 = Other		01 = Chief executive    etc. 02 = Academic staff with managerial tasks    09 = Civil servant (senior official) etc.    etc. 06 = Free professional    13 = Untrained worker 07 = Entrepreneur    14 = Contributing family worker		

## Event history calendar: main features

- takes advantage of the ways that autobiographical memories are stored and structured; the structure of autobiographical memory (temporally ordered hierarchical network) permits the retrieval of past events through multiple pathways which are utilized in an event history calendar:
  - ➔ top-down cueing
  - ➔ sequential cueing
  - ➔ parallel cueing
- yields more accurate data on the timing and sequencing of events than a question list
- applicable in (computer-assisted or paper-and-pencil) face-to-face and telephone interviews, mail surveys, and internet surveys
- suitable for surveys among populations who don't employ time records