

Introduction to life course research and sequence analysis

Exploring youth trajectories with the Catalan Youth Survey Dataset

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Longitudinal methods and the life course perspective

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Outline – 1st part

- Origins of the Life Course Perspective
- The Life Course Perspective
- Examples of application of the Life Course perspective

Origins of the Life Course Perspective

Transitions and life course

- The concept of *transition* in the social sciences
 - Linton (1936): Notions of *status* and *role*
 - Clausen (1960s): Studies on socialization and *role allocation*. Role changes are defined as *transitions*
 - Cain (1960s): “ *age structure as a system of statuses* ”
 - Studies on the *life cycle*, from the point of view of social psychology. Changes between different roles throughout the life cycle are defined as *life transitions*.
 - Elder (1974) publishes *Children of the Great Depression*, still without systematizing the Life Course approach

Children of the Great Depression

- In 1931-32 Stolz and Jones (*Institute of Child Welfare* , University of California at Berkeley) begin *The Oakland Growth project Study* .
- In 1960 Clausen succeeded Jones as director of the institute and continued the study.
- In 1962 Elder, at the age of 28, joined the institute
- In 1974 the book was published, combining a psychological and sociological perspective

The Life Course Perspective

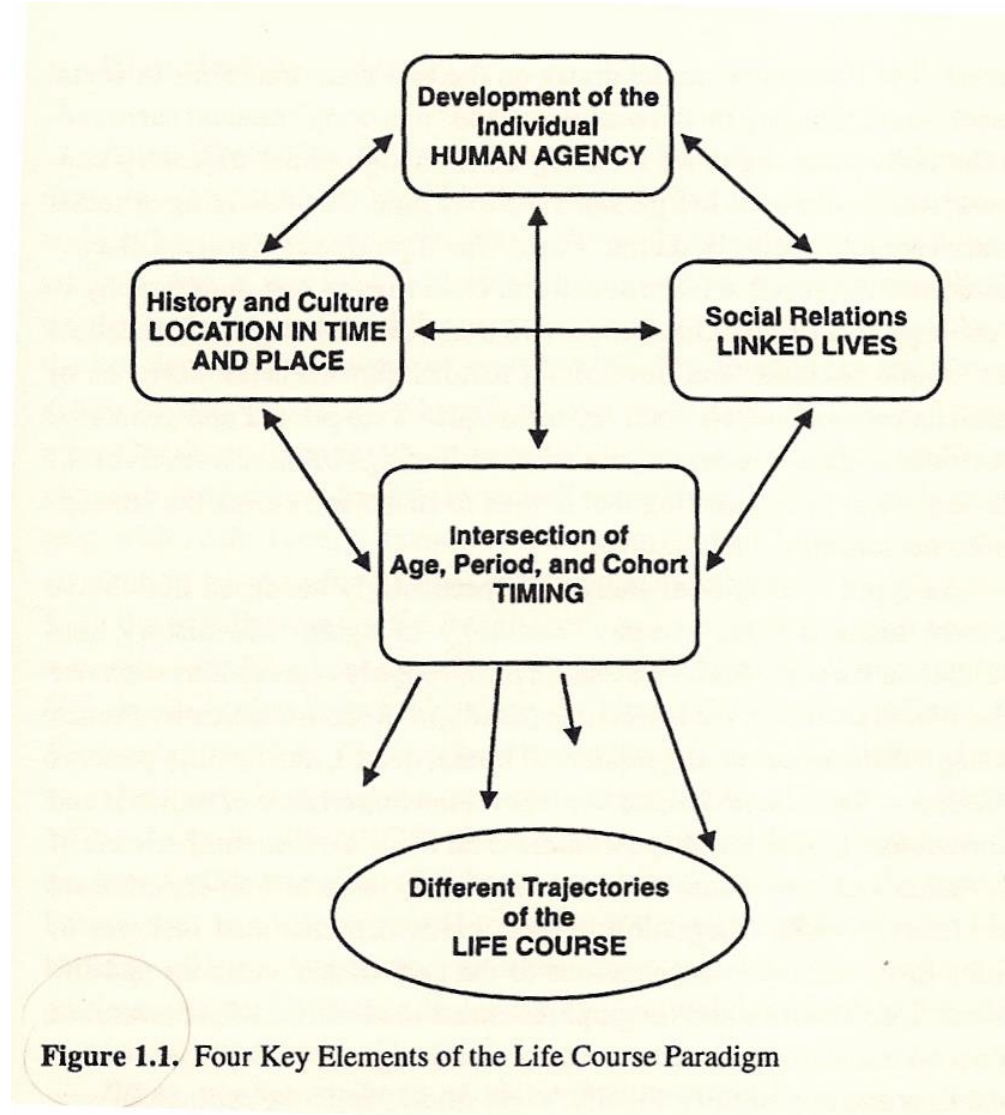
The Life Course Perspective

Life course:

“[The] sequence of events and experiences in a life from birth to death and the chain of situations and personal states that influence and are influenced in turn by this sequence of events”
(Runyan, 1982)

- A person's biography is affected by:
 - Institutional factors (institutional organization of biographies)
 - Structural factors (social class, gender, ethnicity...)
 - Individual decisions
 - Temporary events
 - Shared relationships

Five fundamental principles



Source : Janet Z. Giele and Glen H. Elder, Jr (1998) "Life Course Research. Development of a Field", in Janet Z. Giele and Glen H. Elder (1998) *Methods of Life Course Research. Qualitative and Quantitative Approaches* . Thousand Oaks, California: Sage. Page 11, Figure 1.1.

Other concepts incorporated into the perspective

- Institutionalization of transitions
- Experience and “appraisal” of one's own career
- Agency and interaction with structural factors in the development of trajectories
- Cumulative advantage and disadvantage
- “Matthew Effect”
- Period, age and generation (cohort) effects

Methodological perspective of the Life Course (1)

- Dominance of the quantitative approach, but also use of qualitative information (especially in Europe)
- Quantitative studies: Statistical studies of entire populations, using panel data or retrospective data, sometimes comparing generations or cohorts
- Qualitative studies: Biographical case studies
- Little integration of the two approaches

Methodological perspective of the Life Course (2)

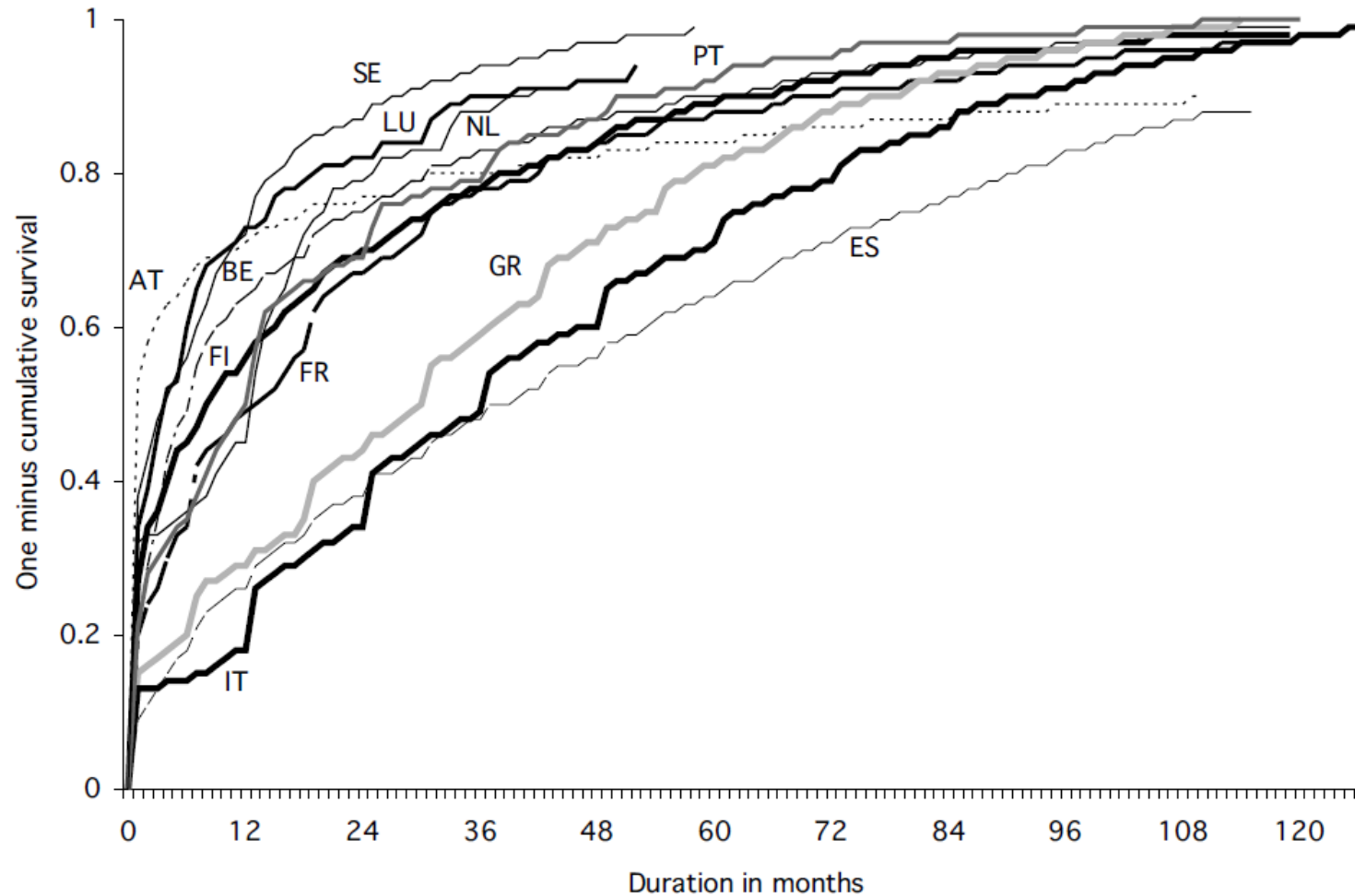
- In any case, in both quantitative and qualitative studies, a clearly longitudinal logic is applied in obtaining data.
 - Stage
 - State
 - **Transition**
 - **Trajectory**
 - **Turning points** (critical life events)
 - Duration

The Life Course perspective has made popular the study of transitions

- Criminology
- Sociology of the family
- Sociology of migrations
- Sociology of youth (sociology of ages)
- Sociology of work
 - Employment and social protection
 - Labor market and gender
 - Training-employment transitions
 - Transitions in the labor market

Measuring transitions

Transitions to first job (1)



Source: Wolbers (2007) "Patterns of Labor Market Entry: A Comparative Perspective on School-to-Work Transitions in 11 European Countries". *Acta Sociologica*, 50(3): 189–210.

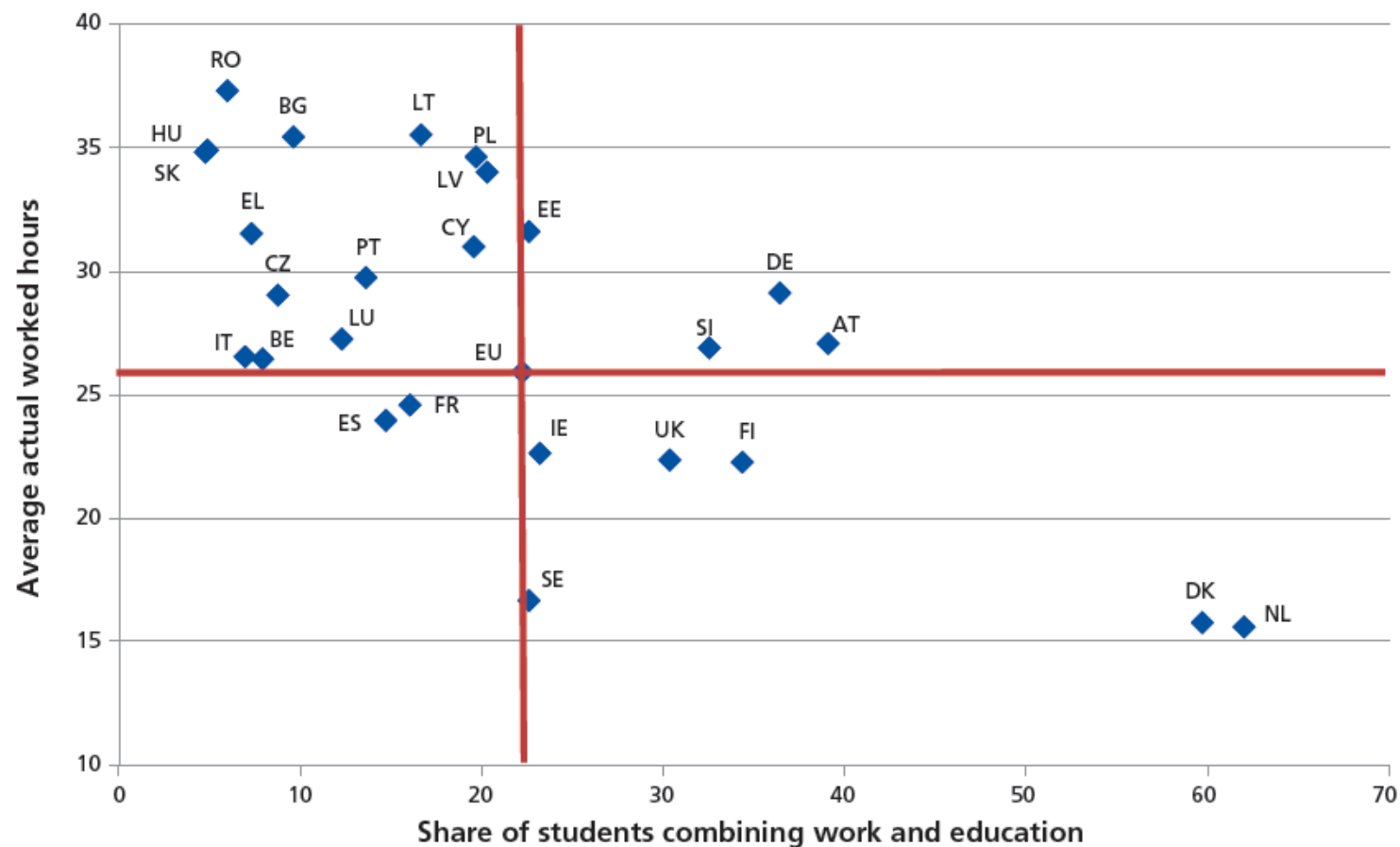
Transitions to first job (2)

Table 6: Type of contract held by school-leavers within one year (%)

Country	Permanent full time	Permanent part time	Permanent non-voluntary part time	Temporary full time	Temporary part time	Temporary non-voluntary part time	Non-voluntary temporary full time	Non-voluntary temporary part time	Non-voluntary temporary non-voluntary part time
AT	73.1	6.1	3.4	12.8	1.4	0.6	2.0	0.4	0.3
BE	57.9	7.0	1.8	5.5	0.5	0.2	20.3	3.6	3.2
BG	92.1	0.0	0.0	4.1	0.0	0.0	3.9	0.0	0.0
CY	72.7	1.2	5.0	3.8	0.6	0.0	14.0	0.0	2.7
CZ	72.9	1.6	0.7	1.0	0.8	0.4	20.7	0.0	2.0
DE	58.0	4.1	3.3	26.3	1.5	0.8	4.1	0.6	1.3
DK	69.1	5.4	6.7	5.0	0.7	0.6	8.0	1.2	3.4
EE	88.8	3.9	0.5	5.9	0.0	0.0	1.0	0.0	0.0
EL	53.0	2.0	11.3	10.3	2.9	1.1	11.7	0.2	7.4
ES	13.8	1.0	1.4	17.5	3.3	4.1	41.7	0.9	16.4
FI	43.5	2.5	11.3	10.2	0.5	1.5	27.6	0.0	3.0
FR	50.4	2.9	3.5	13.1	1.4	1.5	20.8	1.3	5.3
HU	71.2	0.5	1.4	14.5	0.0	0.1	10.8	0.1	1.4
IE	53.2	6.0	11.7	11.1	3.7	3.4	5.4	1.2	4.4
IT	26.2	1.8	7.0	29.4	0.3	3.8	25.4	0.3	5.8
LT	84.5	2.6	6.7	3.9	0.0	0.0	1.9	0.0	0.4
LU	59.1	1.8	3.1	13.8	1.9	1.0	12.6	0.9	5.8
LV	88.8	0.0	1.9	1.8	0.0	0.0	5.3	0.0	2.3
MT	68.3	3.8	7.2	12.2	1.4	0.0	5.8	0.0	1.3
NL	35.9	14.3	6.6	14.1	10.5	2.7	7.9	3.0	5.0
PL	39.8	0.9	0.9	26.3	0.9	0.8	27.7	0.5	2.2
PT	28.8	0.2	0.8	21.7	0.4	0.4	37.4	1.4	8.8
RO	93.0	0.0	0.7	2.2	0.1	0.0	3.8	0.3	0.0
SE	37.5	2.6	4.7	13.2	4.0	3.9	19.8	7.0	7.3
SI	36.0	1.2	0.0	56.0	6.8	0.0	0.0	0.0	0.0
SK	73.8	0.7	0.2	1.5	0.0	0.7	17.2	2.6	3.4
UK	67.5	9.3	8.7	4.0	1.7	0.1	4.9	0.4	3.3
EU27	53.2	4.4	4.3	16.0	1.8	1.2	14.1	1.1	3.9

Transitions to first job (3)

Figure 4: Percentage of student workers and their average actual worked hours

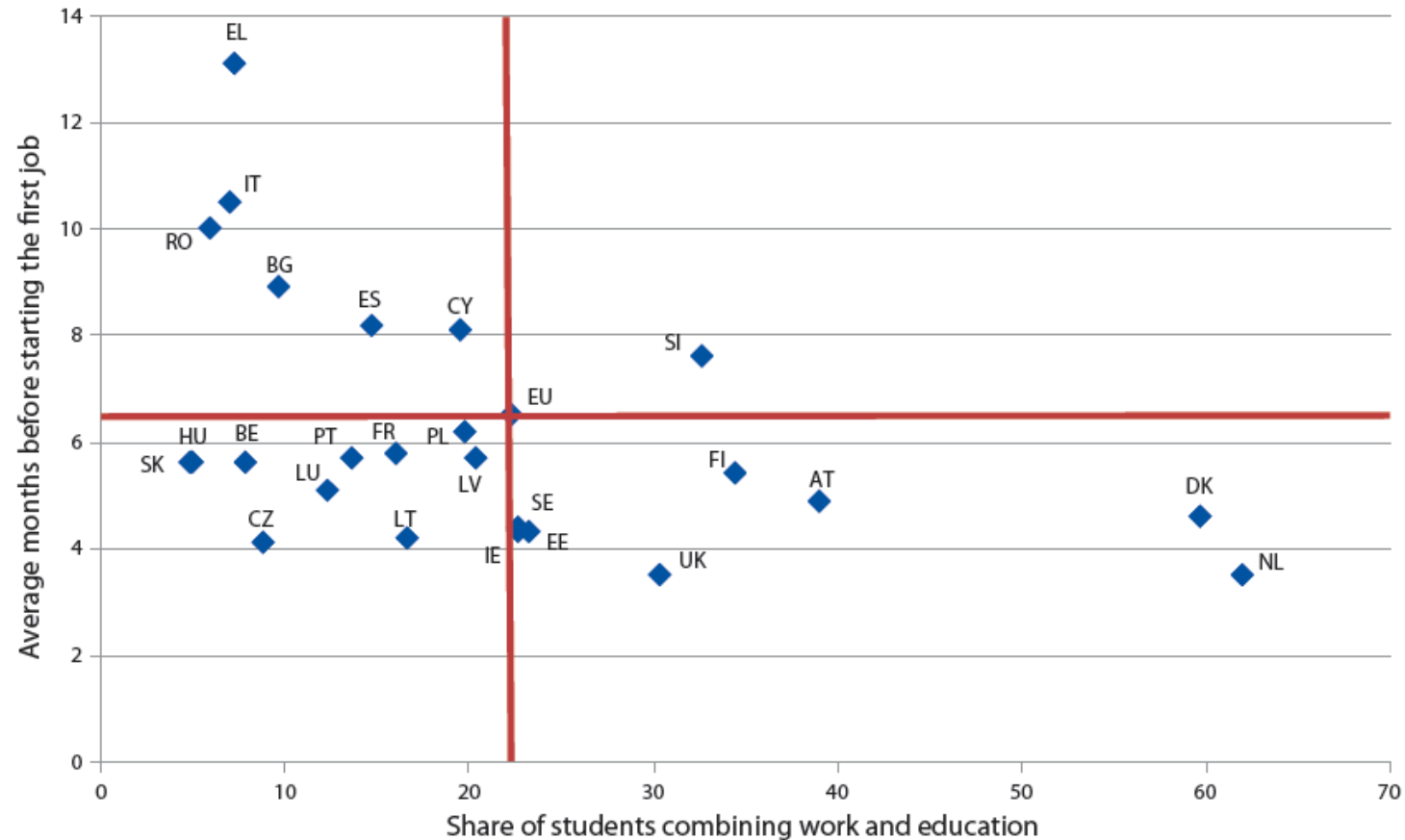


Note: No data available for Malta.

Source: Eurofound calculation based on data from Eurostat 2009 EU-LFS AHM

Transitions to first job (4)

Figure 5: Percentage of students who work versus average time finding a job, 2009

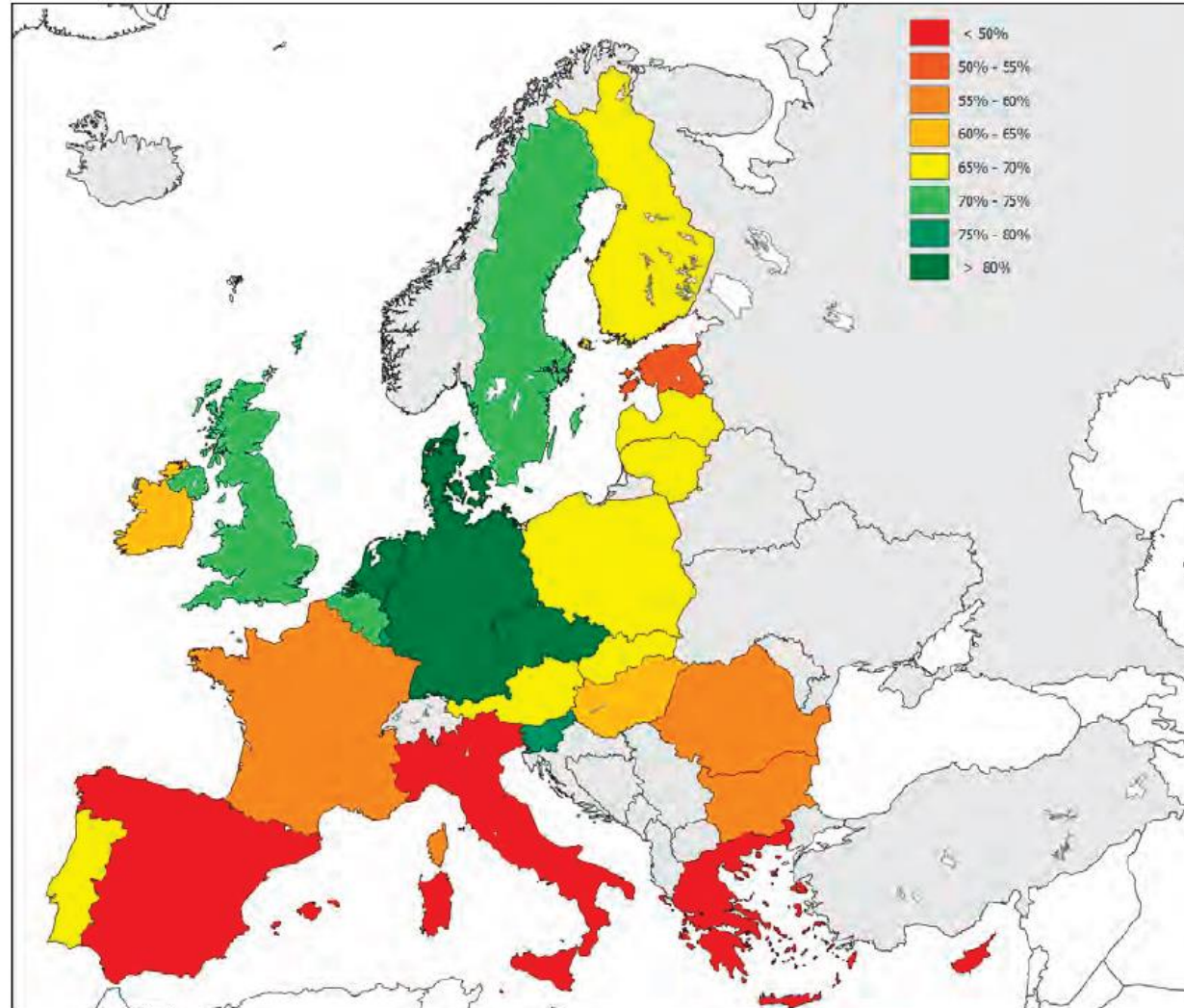


Note: No data available for Malta.

Source: Eurofound calculation based on data from Eurostat 2009 EU-LFS AHM

Transitions to first job (5)

Figure 6: Percentage of school-leavers in employment one year after graduation

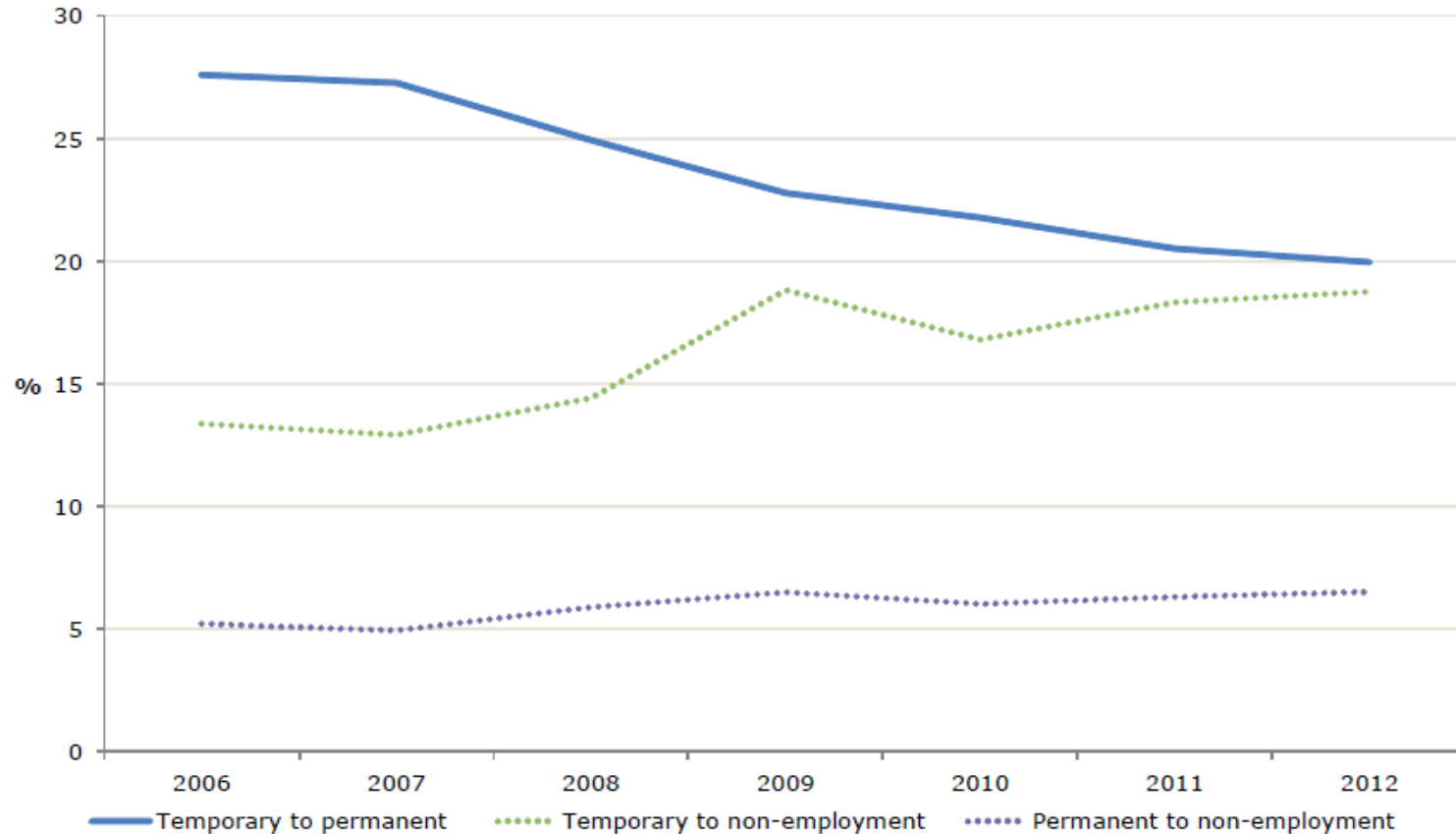


Source: Eurofound calculation based on data from Eurostat 2009 EU-LFS

Eurofound (2014): *Mapping Youth Transitions in Europe*

Transitions once in the labour market (1)

Figure 34: Transition rates from temporary and permanent contracts, EU, 2006–2012

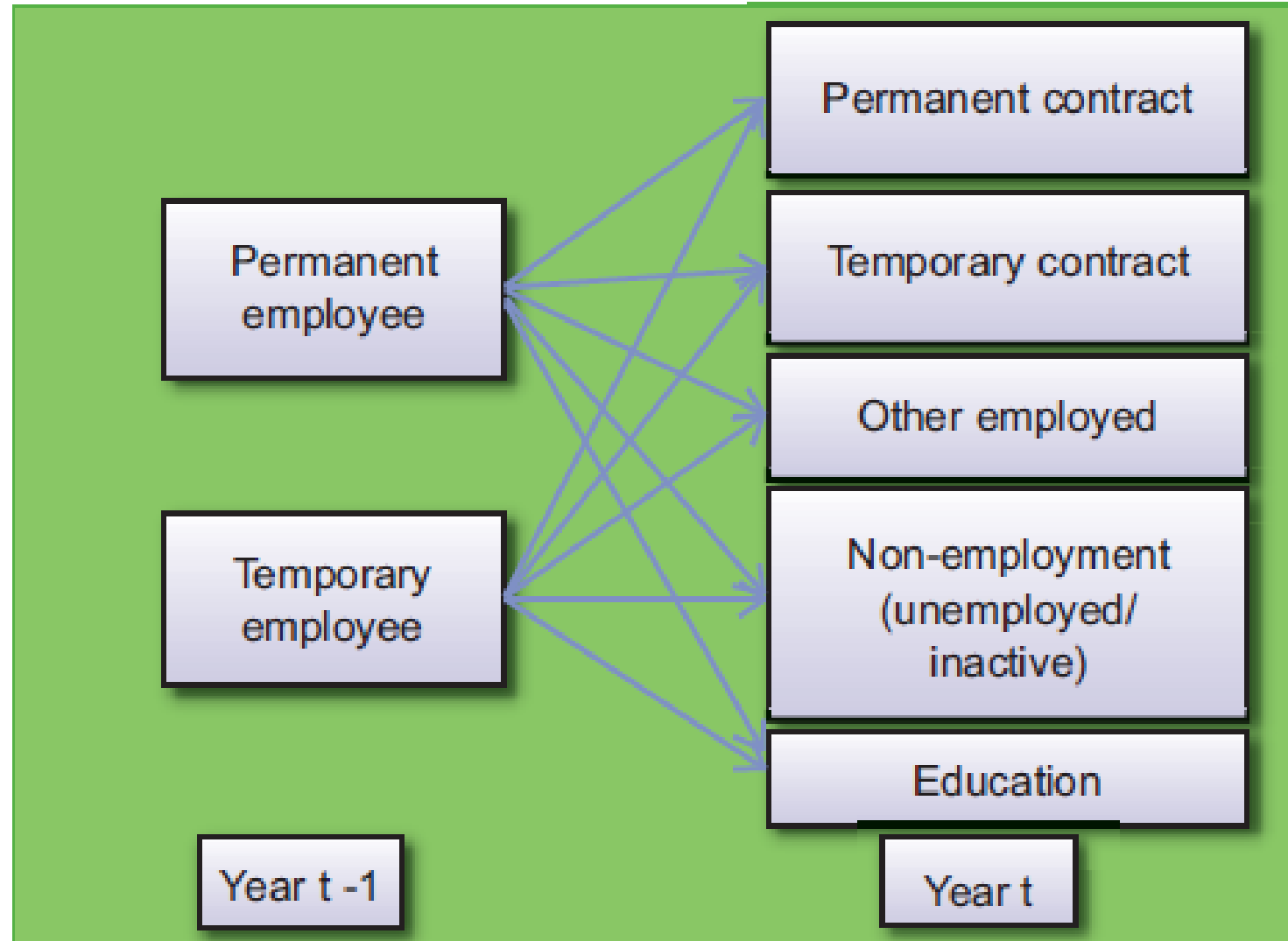


Note: Data refer to one-year transitions (2006 refers to the period 2005–2006; 2007 to 2006–2007 and so on).

Source: EU-SILC

Eurofound (2015): *Recent developments in temporary employment: Employment growth, wages and transitions*

Transitions once in the labour market (2)



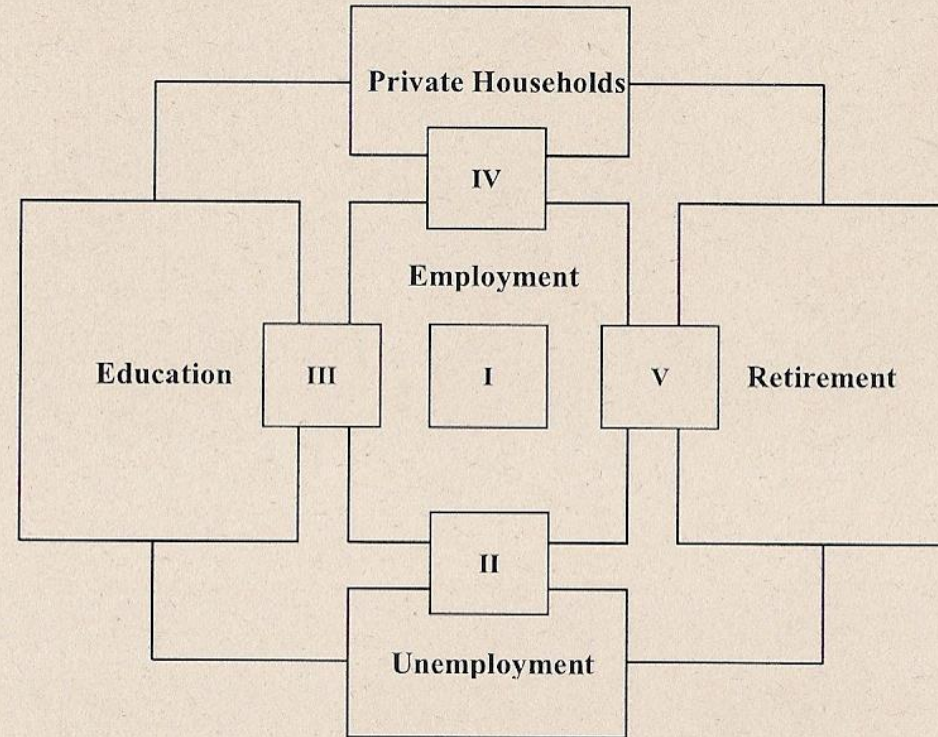
Eurofound (2015): *Recent developments in temporary employment: Employment growth, wages and transitions*

Labour market and social protection

Transitional Labour Markets (TLM)

Source : Schmid , Günther (1998)
Transitional Labor Markets: A New European Strategy. Discussion Paper FS I 98-206. Wissenschaftszentrum Berlin für Sozialforschung .

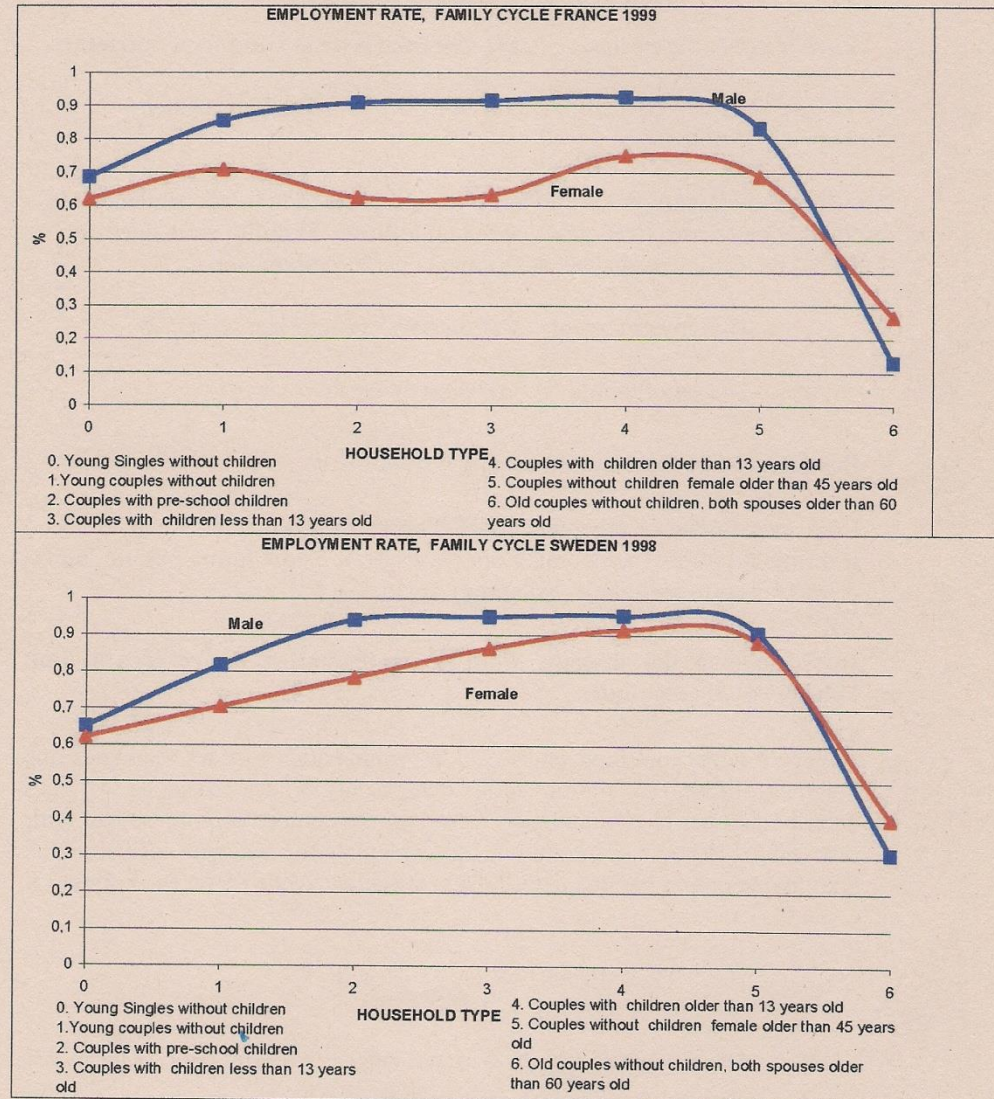
Figure 1: Labour Market Policy as a Strategy of Transitional Labour Markets



- I Transitional arrangements between short-time working and full-time employment or between dependent work and self-employment
- II Transitional arrangements between unemployment and employment
- III Transitional arrangements between education and employment
- IV Transitional arrangements between private domestic activities and employment
- V Transitional arrangements between employment and retirement

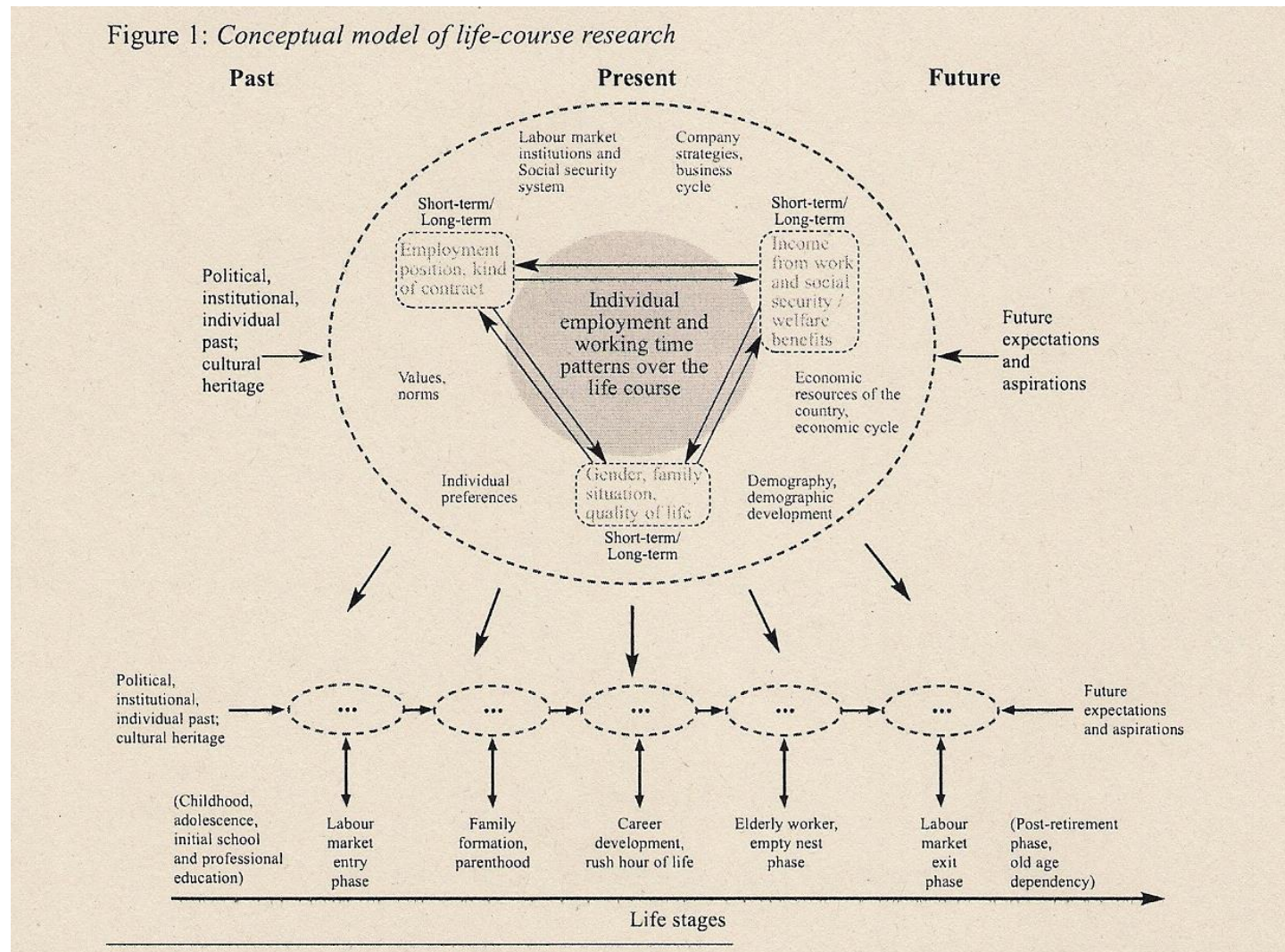
Labor market and gender (1)

Figure 2: Trends in employment rates over the life course, France and Sweden



Source: Anxo, D.; Boulin, J.-Y. (coords.) (2005) *Working time options over the life course: Changing social security structures*. Dublin: European Foundation for the Improvement of Living and Working Conditions.

Labor market and gender (2)



Source: Klammer, U.; Muffels, R.; Wilthagen, T. (2008) *Flexibility and security over the life course: Key findings and policy messages*. Dublin: European Foundation for the Improvement of Living and Working Conditions.

- “So while the life course can be viewed as an event history of a single individual, it can also be viewed at aggregate level (e.g. as something shared by a cohort), as a property of cultures themselves, and as something that can be compared across historical periods or between nation-states” (Settersten & Mayer, 1997: 235)

Transitions from a societal point of view: youth transition regimes

- Multidimensional analysis that combines different types of transitions (Walther)
 - Training-employment transitions
 - Career paths
 - Social protection and employment
- They combine quantitative and qualitative information to classify groups of countries
- The results coincide, broadly speaking, with the classifications of employment/social protection models

Transition regimes (1)

Table 11: Transition Regimes across Europe

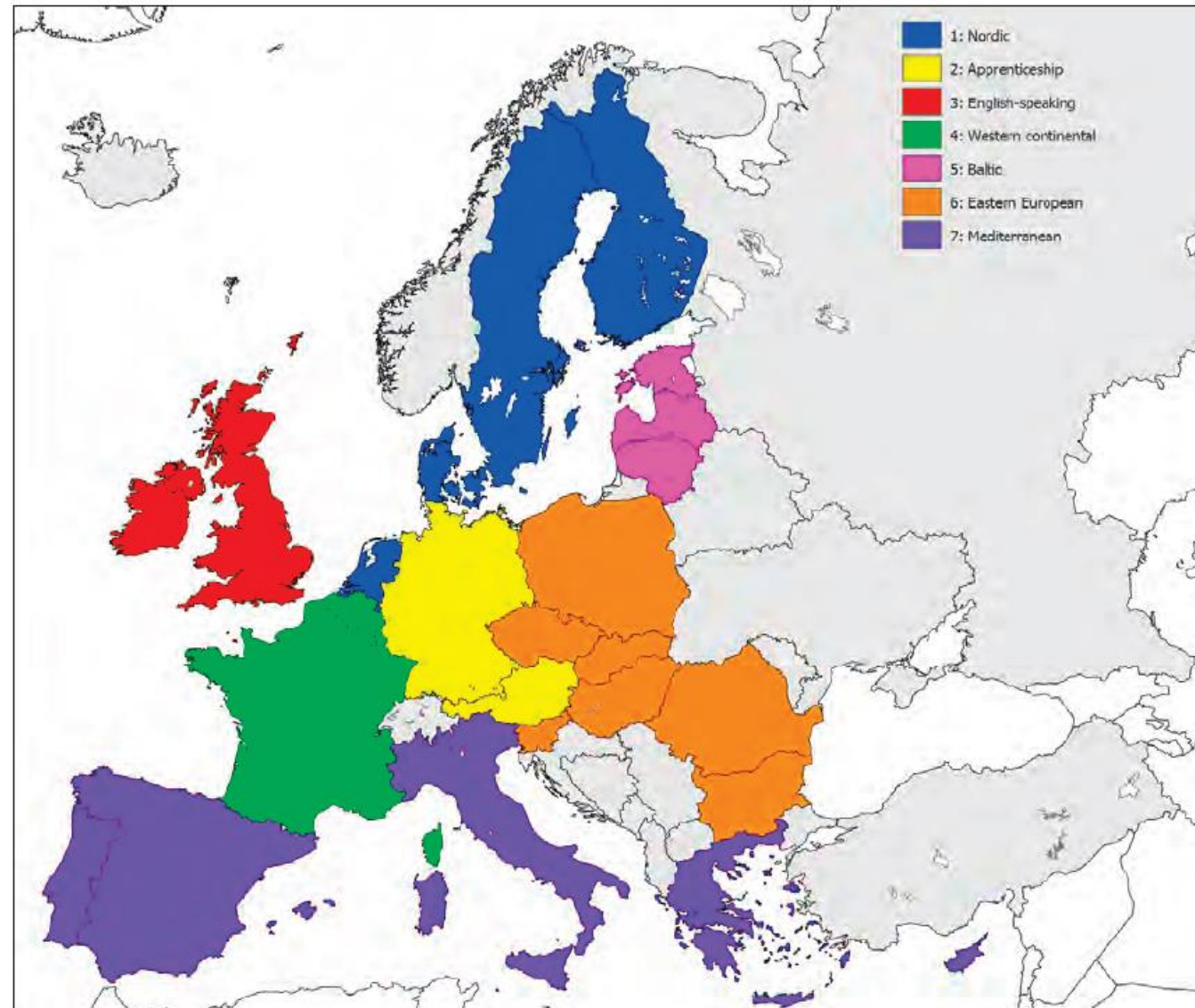
Dimension Regime	Country	School	Training	Social security	Employ- ment Regime	Female Employ- ment	Concept of Youth	Concept of Disadvantage	Focus of Transition Policies	Expenditure* Educ/F&C/ALMP	Policy trend
<i>Universalistic</i>	Finland	Not selective	Flexible standards (mixed)	State	Open Low risks	High	Personal development, Citizenship	Individualized and structure-related	Education Activation	FI: 5,9 / 2,9 / 0,7	Liberal (more labour market orientation)
<i>Employment-centred</i>	Germany France Netherlands	Selective	Standard-ized (dual)	State / family	Closed Risks at the margins	Medium	Adaptation to social positions	Individualized	(Pre-) vocational training	D: 4,5 / 2,8 / 0,5 F: 5,6 / 2,5 / 0,7 NL: 5,3 / 1,6 / 0,7	Liberal (more activation)
<i>Liberal</i>	UK	Principally not selective	Flexible, low standards (mixed)	State / family	Open, High risks	High	Early economic independence	Individualized	Employability	UK: 5,4 / 1,5 / 0,1	Liberal (more education)
<i>Sub-protective</i>	Italy	Not Selective	Low standards and coverage (mainly school)	Family	Closed High risks (Informal work)	Low	Without distinct status	Structure-related	„Some’ status (work, education, training)	IT: 4,3 / 1,2 / 0,4	Liberal (deregulation) and employment-centred (training)
<i>Post-socialist countries</i>											
	Poland Slovenia	Principally not selective	Standards in process of transformation (mixed)	Family state	Closed High risks	Low (except Slovenia)	Mixed	Mixed	Mixed	PL: 4,9 / 0,8 / 0,1 SI: 5,2 / 1,8 / 0,1	PL: Liberal/employment-centred SI: Universal

*Eurostat data on expenditures for education/families & children/active labour market policies in 2007 (Eurostat)

Source: Walther, A. (coord.) (2012) *Governance of educational trajectories in Europe* . Project “Governance of educational trajectories in Europe” (GOETE).

Transition regimes (2)

Figure 7: Different dynamics of youth transitions in Europe, by country cluster



Eurofound (2014):
*Mapping Youth
Transitions in Europe*

Source: Eurofound elaboration

Connections with employment/social protection models

Table 1.1 The location of the 'DYNAMO countries' in existing typologies according to different studies

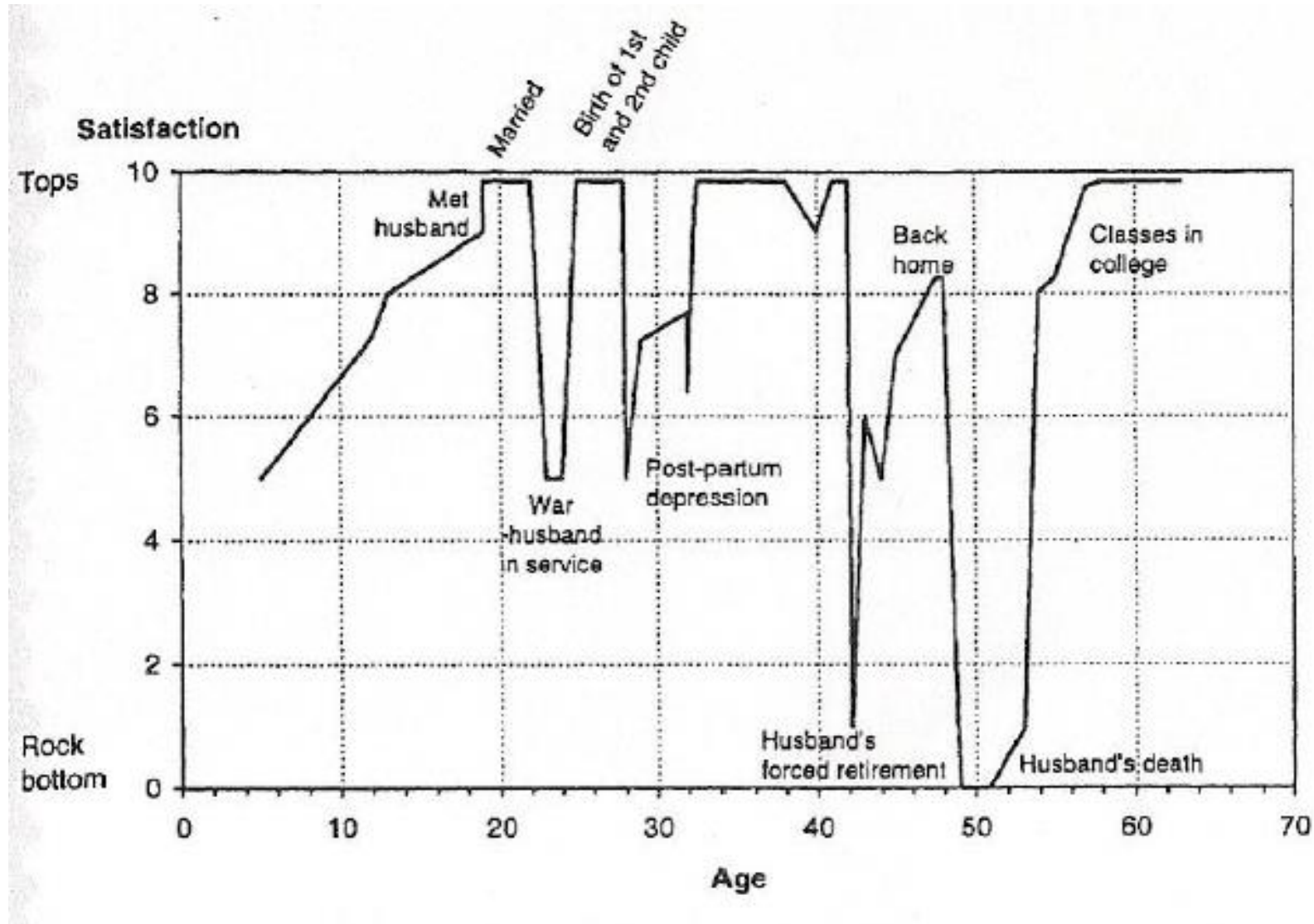
<i>Country</i>	<i>Esping-Andersen</i>	<i>Hall/Soskice</i>	<i>Coates</i>	<i>Amable</i>
<i>Sweden</i>	Social-democratic	Coordinated	Negotiated	Social-democratic
<i>UK</i>	Liberal	Liberal	Market-led	Market-based
<i>France</i>		Mixed	State-led	Continental
<i>Germany</i>	Continental	Coordinated	Negotiated	Continental
<i>Austria</i>				Continental
<i>Hungary</i>		Emerging		
<i>Spain</i>		Mixed		Mediterranean
<i>Italy</i>	Continental (Southern)	Hall: Mixed Thelen: Coordinated		Mediterranean
<i>Greece</i>				Mediterranean

Source: Own compilation based on Esping-Andersen (1990 and 1999), Coates (2000), Hall and Soskice (2001) including Thelen (2001), Amable (2003) and Hancké et al. (2007)

Source: Bosch, Lehndorf, Rubery (2009) *European Employment Models in Flux* . London: Palgrave McMillan

Measuring turning points

Example of life satisfaction chart (1)



Source: Figure 8.1. John A. Clausen (1998) "Life Reviews and Life Stories", in Janet Z. Giele and Glen H. Elder: *Methods of Life Course Research. Qualitative and Quantitative Approaches*. Thousand Oaks, California: Age.

Example of life satisfaction chart (2)

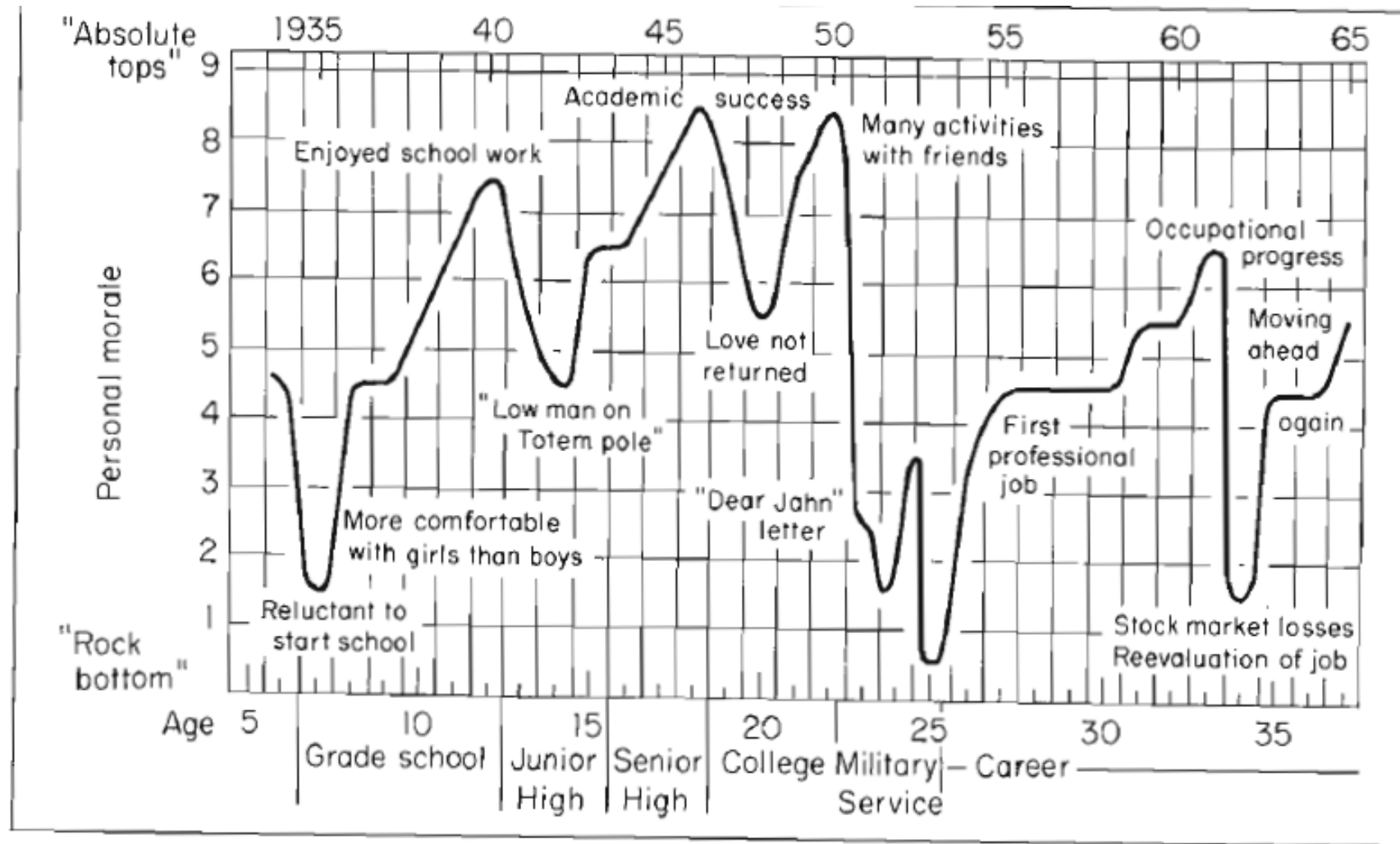
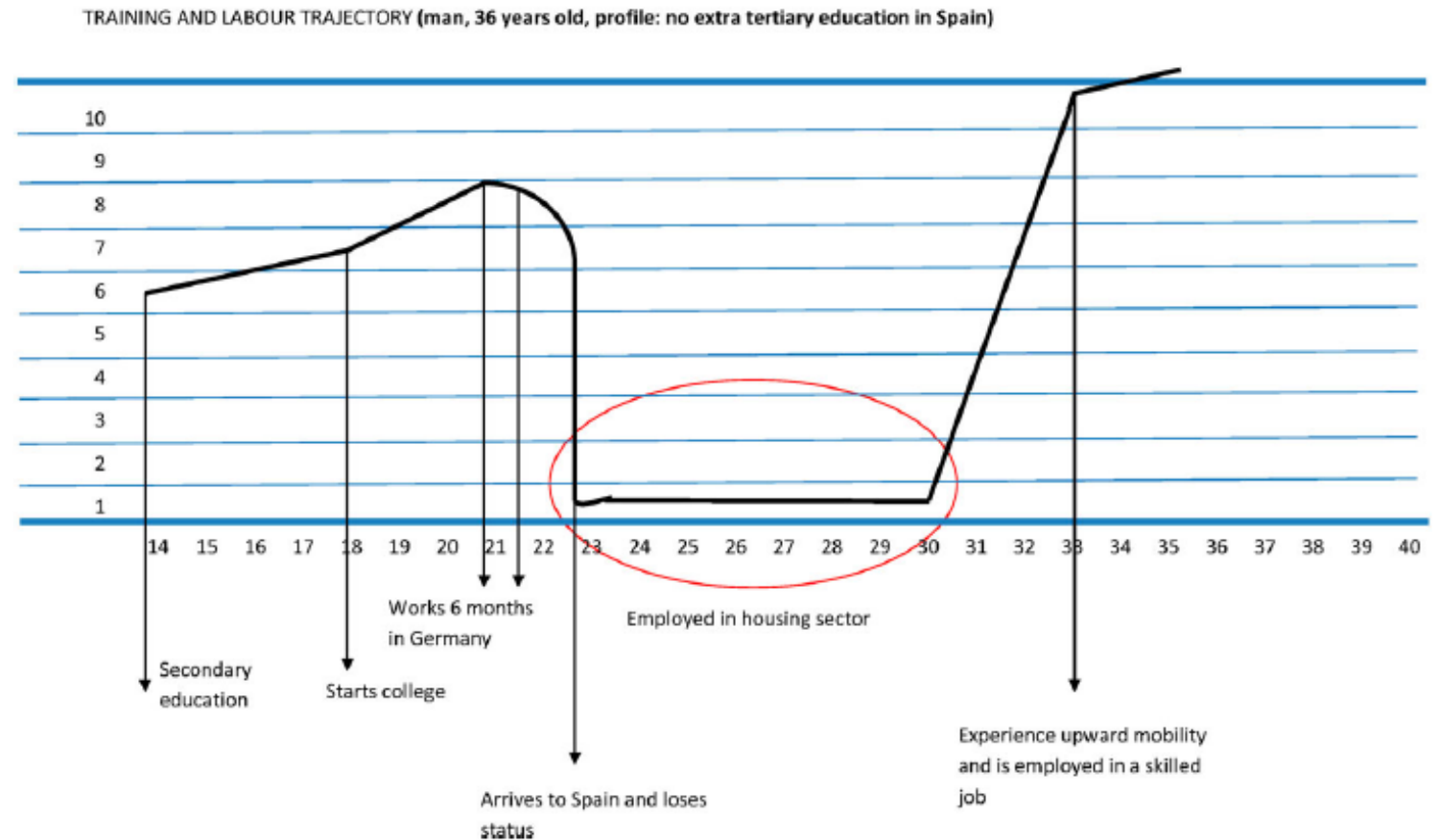
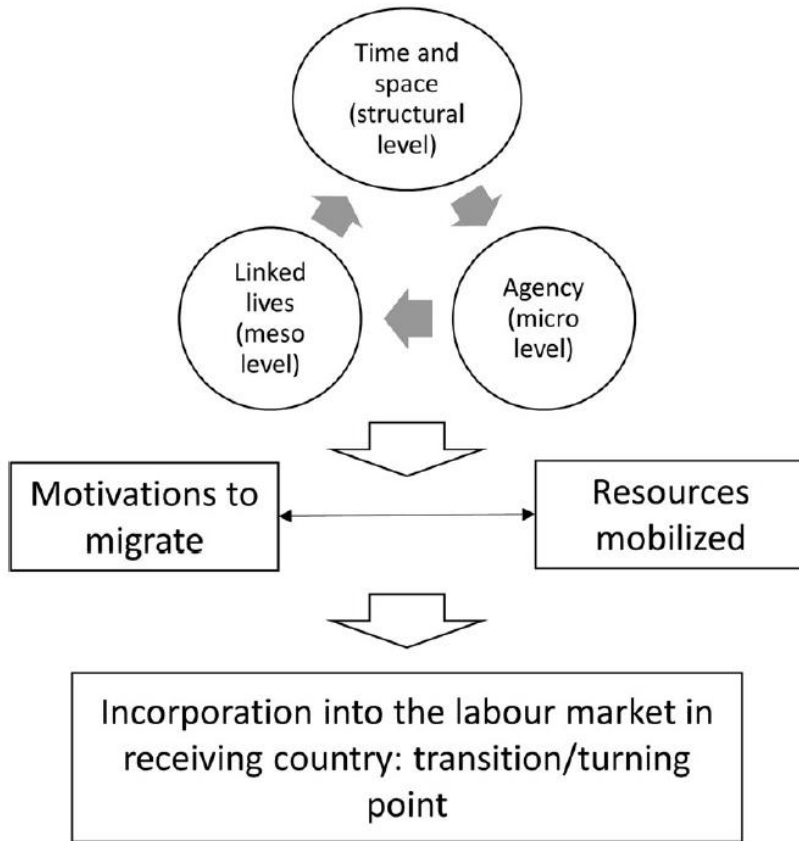


Figure 1. Example of a Life Satisfaction Chart [1, p. 510].

Source: Runyan, W. M. (1980) "The life satisfaction chart: perceptions of the course of subjective experience".
The International Journal of Health Services, 11(1): 45-64.

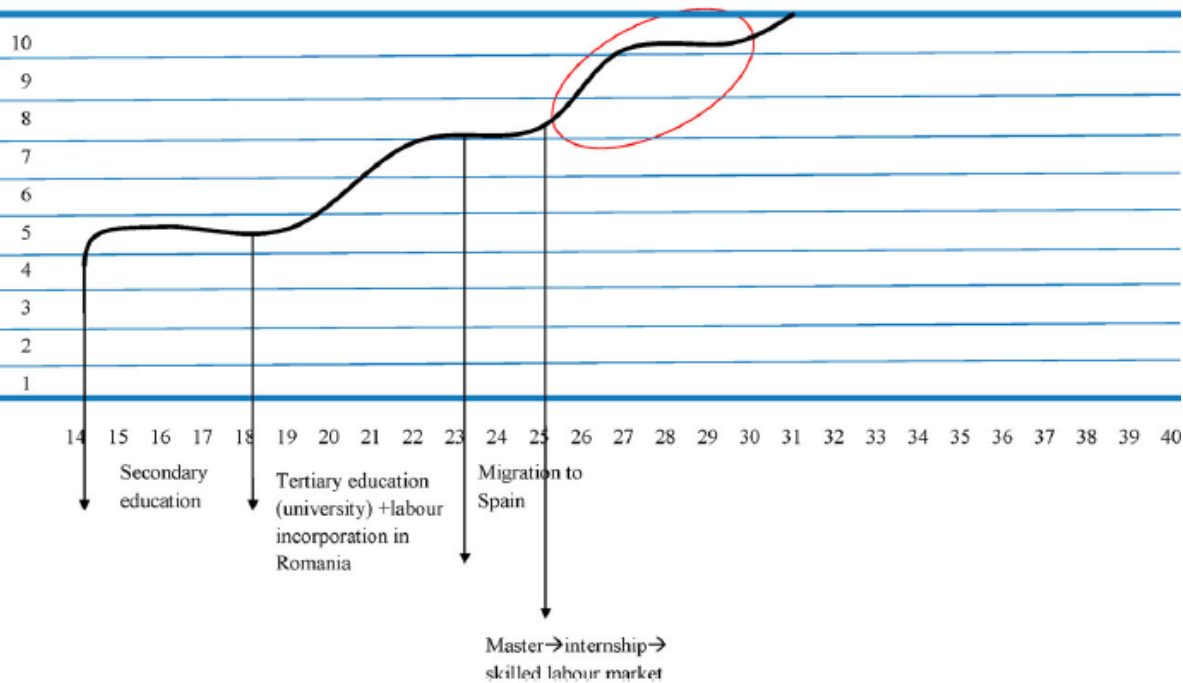
Turning points and transitions in the migratory trajectories of skilled Romanian immigrants in Spain (1)



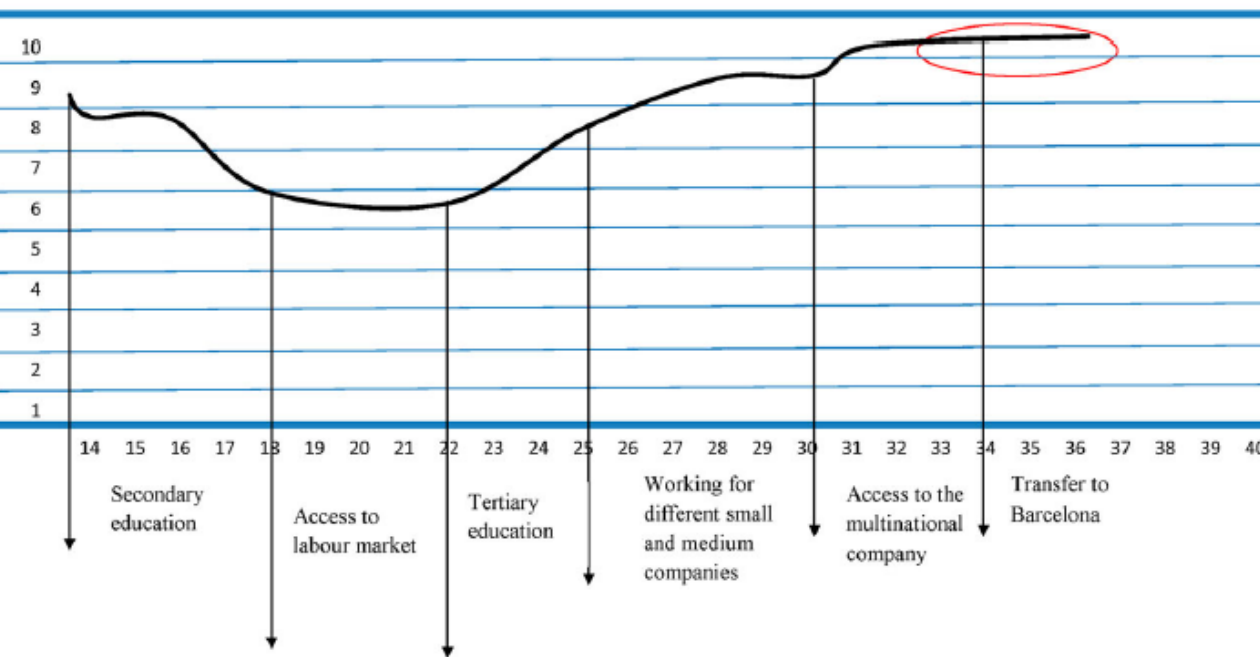
Petroff, A. (2016). Turning points and transitions in the migratory trajectories of skilled Romanian immigrants in Spain. *European Societies*, 18(5): 438–459.

Turning points and transitions in the migratory trajectories of skilled Romanian immigrants in Spain (2)

TRAINING AND LABOUR TRAJECTORY (woman, 31 years old, profile: master/Ph.D. in Spain)

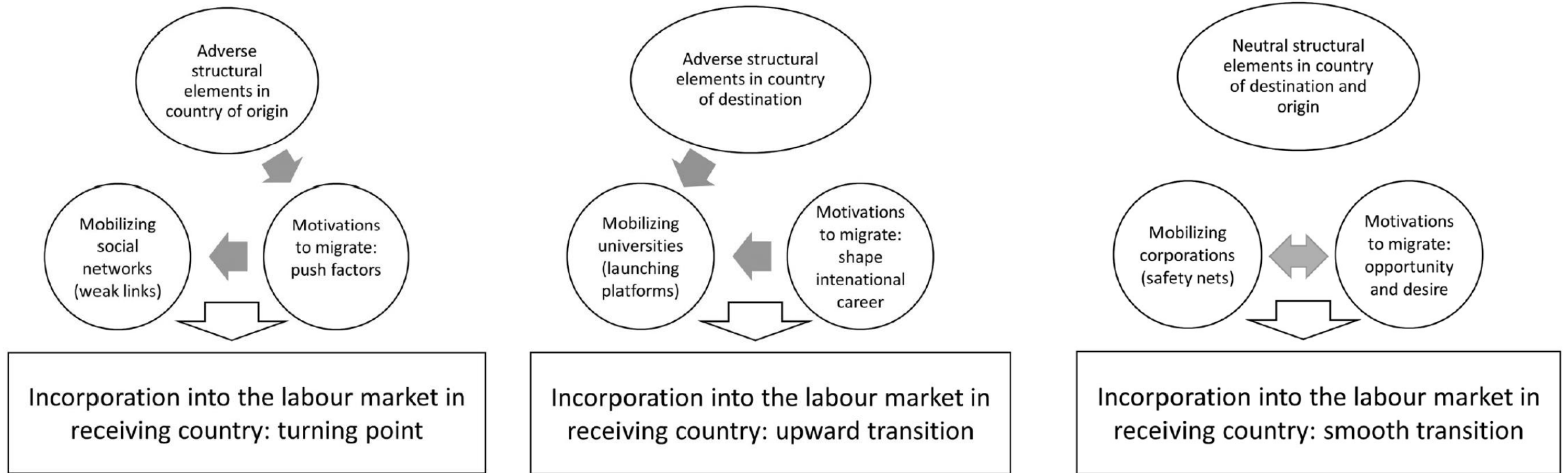


TRAINING AND LABOUR TRAJECTORY (woman, 36 years old, profile: multinational transfer)



Petroff, A. (2016). Turning points and transitions in the migratory trajectories of skilled Romanian immigrants in Spain. *European Societies*, 18(5): 438–459.

Turning points and transitions in the migratory trajectories of skilled Romanian immigrants in Spain (3)



Petroff, A. (2016). Turning points and transitions in the migratory trajectories of skilled Romanian immigrants in Spain. *European Societies*, 18(5): 438–459.

Measuring life trajectories

Use of Administrative Data: Continuous Work History Sample (Spain) (1)

Labor Market trajectories of the immigrant population

Tabla 7.1.2 Distribución población según tipos de trayectorias.
España, 2007

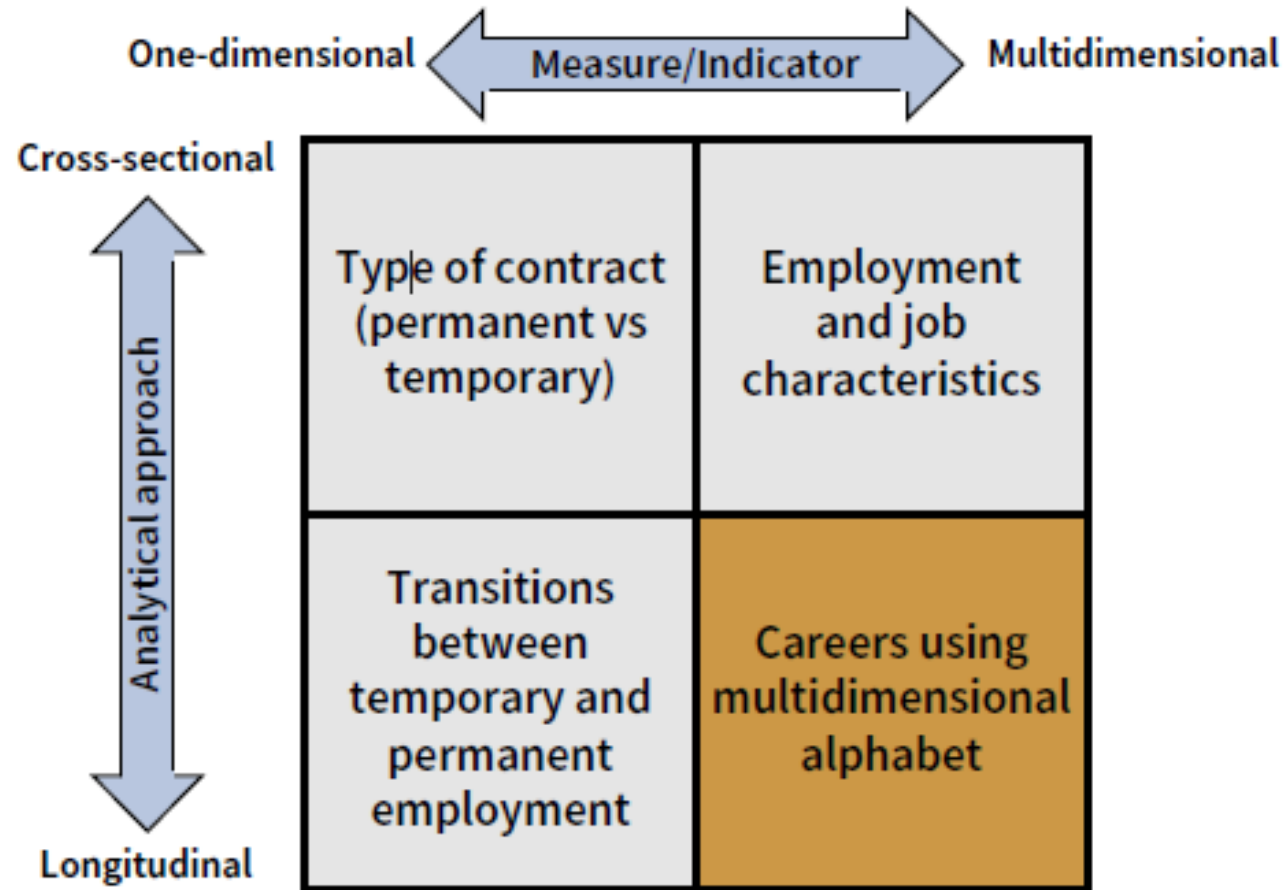
	Tipo 1	Tipo 2	Tipo 3	Tipo 4	Tipo 5	Total
Espanoles	22,3%	29,5%	19,9%	20,7%	7,6%	100,0%
Marroquíes	2,8%	6,3%	22,4%	32,9%	35,6%	100,0%
Peruanos	4,0%	14,6%	18,2%	41,6%	21,6%	100,0%
Ecuatorianos	0,8%	7,7%	24,1%	39,0%	28,3%	100,0%
Rumanos	0,4%	4,3%	23,1%	35,3%	36,9%	100,0%
Resto UE-15	15,0%	23,1%	18,2%	32,4%	11,3%	100,0%

FUENTE: ELABORACIÓN PROPIA CON DATOS DE LA MCVL (2007).

Miguélez, F.; Martín, A.; Alós-Moner, R.; Esteban, F.; López-Roldán, P.; Molina, O.; Moreno, S. (2011)
Trayectorias laborales de los inmigrantes en España. Barcelona: Obra Social La Caixa.

Use of Administrative Data: Continuous Work History Sample (Spain) (2)

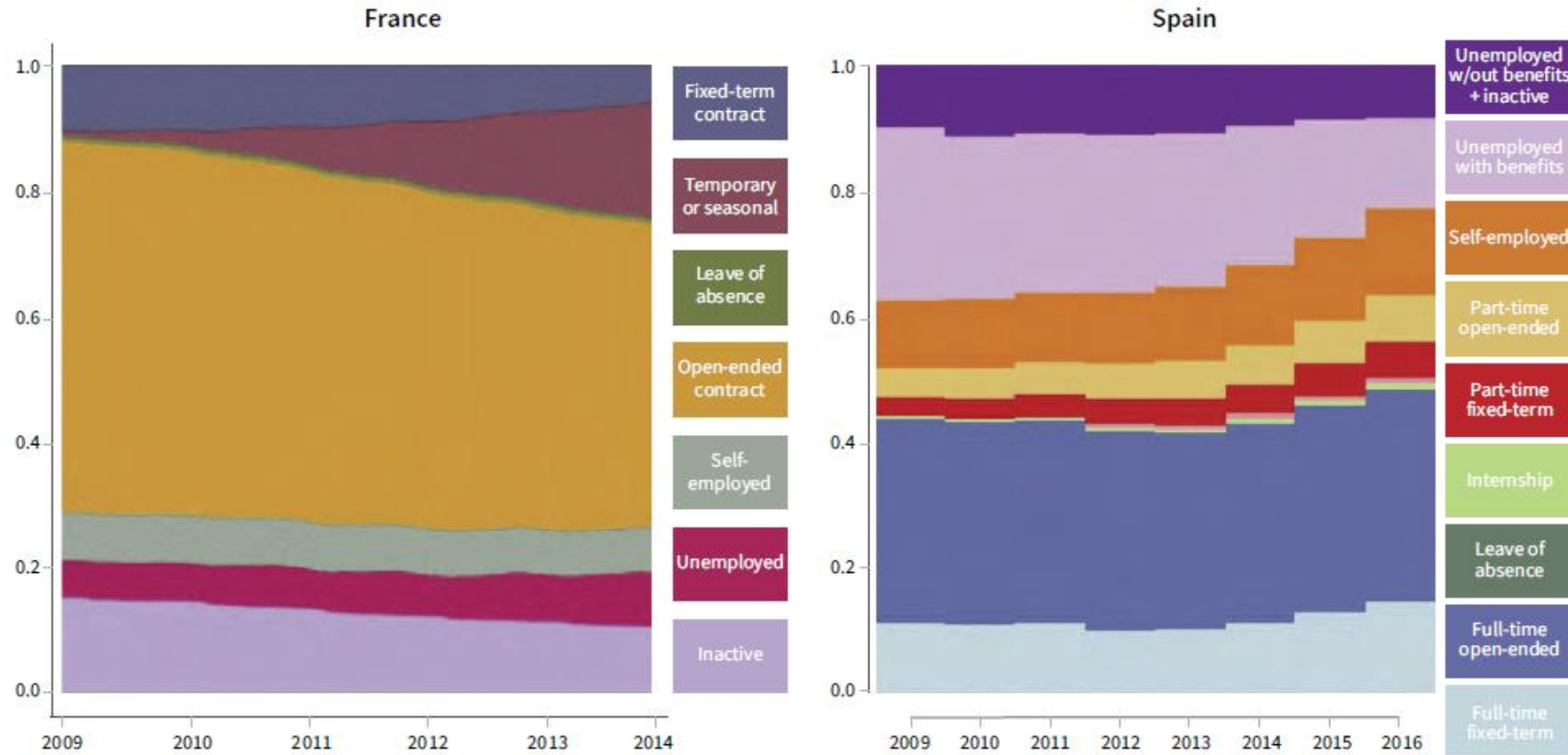
Labour market trajectories and segmentation (1)



Cruz , Irene ; Molina , Oscar ; Verd , Joan Miquel ; Palauskaite , Elma ; Dumčius , Rimantas; Venckutė , Milda ; Patrini , Valentina; Vacas-Soriano , Carlos (2019) *Labor market segmentation: Piloting new empirical and policy analyses* . Brussels: Eurofound. Publications Office of the European Union, Luxembourg.

Use of Administrative Data: Continuous Work History Sample (Spain) (3)

Labour market trajectories and segmentation (2)



Cruz , Irene ; Molina , Oscar ; Verd , Joan Miquel ; Palauskaite , Elma ; Dumčius , Rimantas; Venckutė , Milda ; Patrini , Valentina; Vacas-Soriano , Carlos (2019) *Labor market segmentation: Piloting new empirical and policy analyses* . Brussels: Eurofound. Publications Office of the European Union, Luxembourg.

Use of a Life History Calendar (retrospective data)

FIGURE 1. Life History Calendar.

THE STUDY OF AMERICAN FAMILIES

AGE
YEAR
MONTH
WHERE
WHEN
WHERE

B1 **MARRIAGES**
B2 **MARITAL EVENTS**
B3 **LIVING WITH SPOUSE**
B4 **PARTNER/LOVER**
B5 **LIVING WITH PARTNER**
B6 **CHILDREN**
B7 **FIRST CHILD**
B8 **SECOND CHILD**
B9 **THIRD CHILD**
B10 **FOURTH CHILD**
B11 **PARENTS TOGETHER**
B12 **MOTHER & FATHER**
B13 **MOTHER**
B14 **FATHER**
B15 **SPOUSE/PARTNER PARENT**
B16 **OTHER RELATIVES**
B17 **COMMUNARACKS/CAMP**
B18 **HOUSEMATES**
B19 **BY SELF**
B20 **OTHER**

B21 **FULL-TIME**
B22 **PART-TIME**
B23 **NONE**

B24 **30 OR MORE**
B25 **10-29**
B26 **1-9**
B27 **NONE**

B28 **IN SERVICE**

B29 **PAY ROOM AND BOARD (YELLOW BOOKLET, #1)**

B30 **EDUCATION**
B31 **CAR**
B32 **EMPLOYMENT**
B33 **RENT**
B34 **OTHER**
B35 **LOANS**

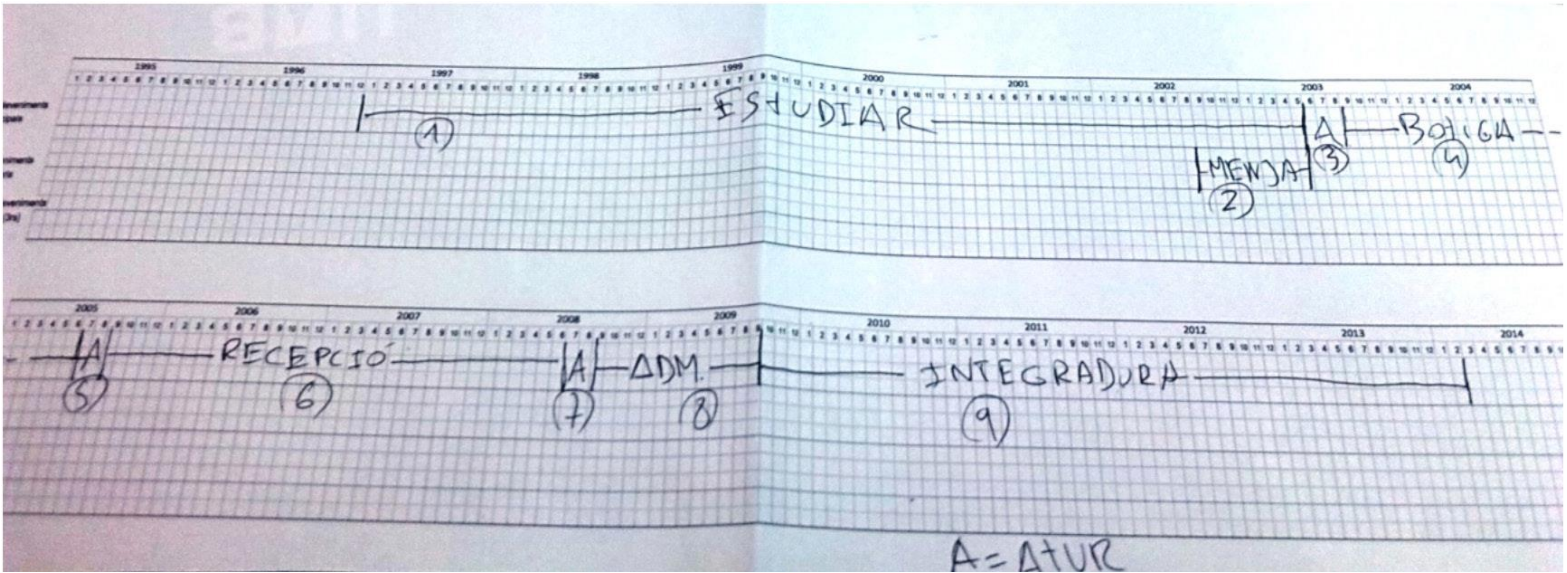
ANY FINANCIAL HELP
NO FINANCIAL HELP

ANNUAL AMOUNT (YELLOW BOOKLET, #2)

TURN TO PAGE 8, SECTION D
TURN TO PAGE 8, SECTION C

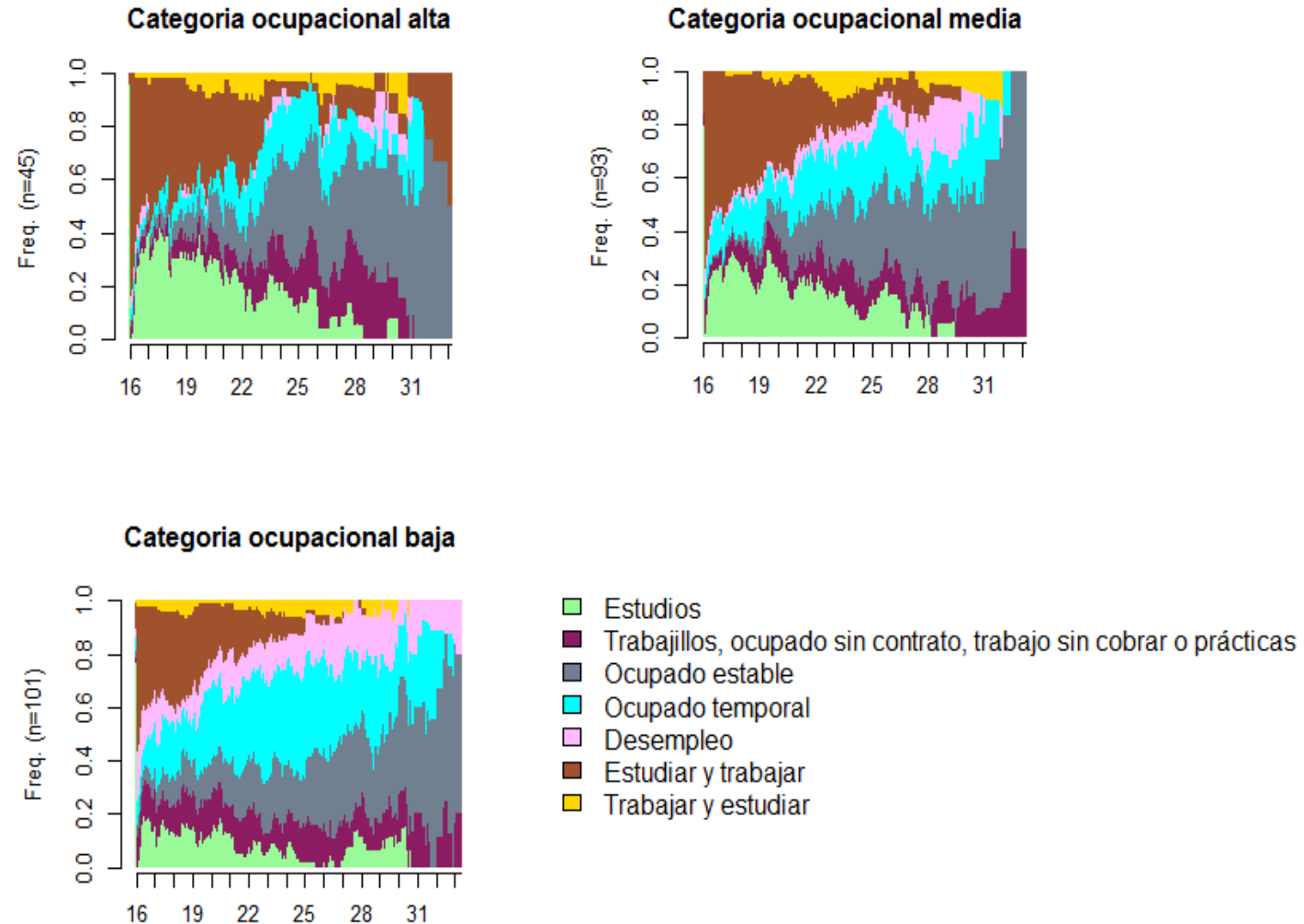
Freedman , Deborah; Thornton , Arland ; Camburn , Donald;
 Alwin , Duane ; Young- DeMarco , Linda (1988). The life History
 Calendar: A Technique for Collecting Retrospective Data.
 Sociological Methodology, 18, 37-68.

Use of hybrid biographical grids (retrospective data)



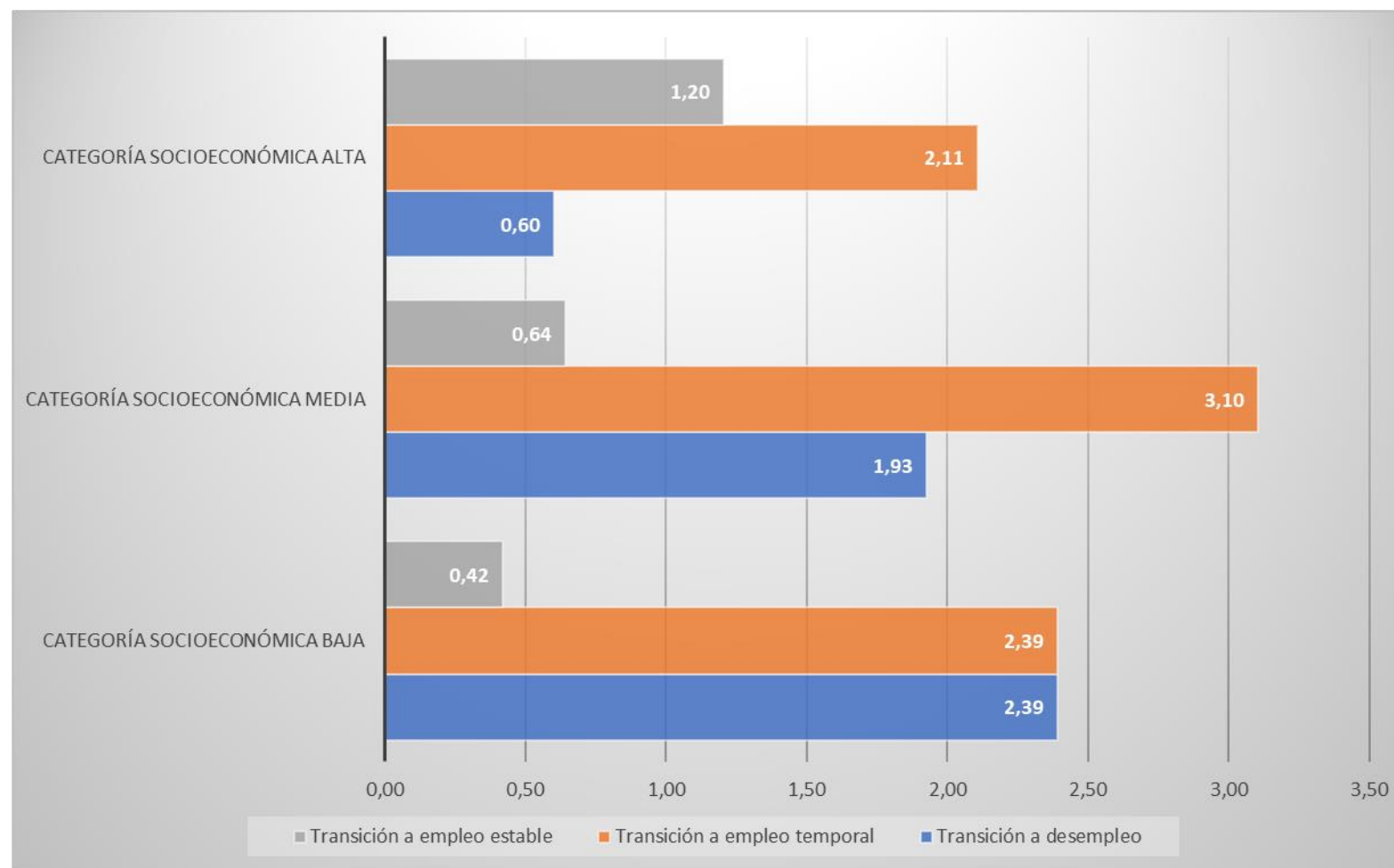
	1998	1999	2000	2001	2003	2004	2005	2006	2007	2008
	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12
Main event										
Secondary event										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12
Main event										
Secondary event										

Work trajectories and irregular employment (1)



Yepes, Lidia (2018) *Trayectorias laborales y redes personales. Un análisis longitudinal en la población joven. Tesis doctoral*. Departamento de Sociología de la Universidad Autònoma de Barcelona. Fecha: 11/10/2018

Work trajectories and irregular employment (2)



Verd, Joan Miquel; Yepes, Lidia (2021) "El empleo irregular en las trayectorias laborales de la población joven. Una aproximación mixta de carácter descriptivo y secuencial". *Cuadernos de Relaciones Laborales*, 39(2), 329-350

The acquisition of social capital in Local Employment Services in young people with unstable employment trajectories

Características sociodemográficas		Trayectoria laboral				
		Formación y temporalidad	Precariedad	Temporalidad contractual	Estabilidad contractual	Total
Sexo	Hombre	43,4	60,6	51,7	51,4	50,7
	Mujer	56,6	39,4	48,3	48,6	49,3
	Total	100	100	100	100	100
Lugar de nacimiento	España	81,1	87,9	79,3	65,7	78,7
	Fuera de España	18,9	12,1	20,7	34,3	21,3
	Total	100	100	100	100	100
Estudios	Estudios bajos	3,8	60,6	55,2	25,7	31,3
	Estudios medios	9,4	6,1	24,1	22,9	14,7
	Estudios superiores	86,8	33,3	20,7	51,4	54,0

Source: Verd, Joan Miquel; Rodríguez-Soler, Joan (2021): *Mentoring and social capital generation policies in precarious youth employment trajectories* . QUIT Working paper series, no. 26.

Qualitative analysis of the data (1)

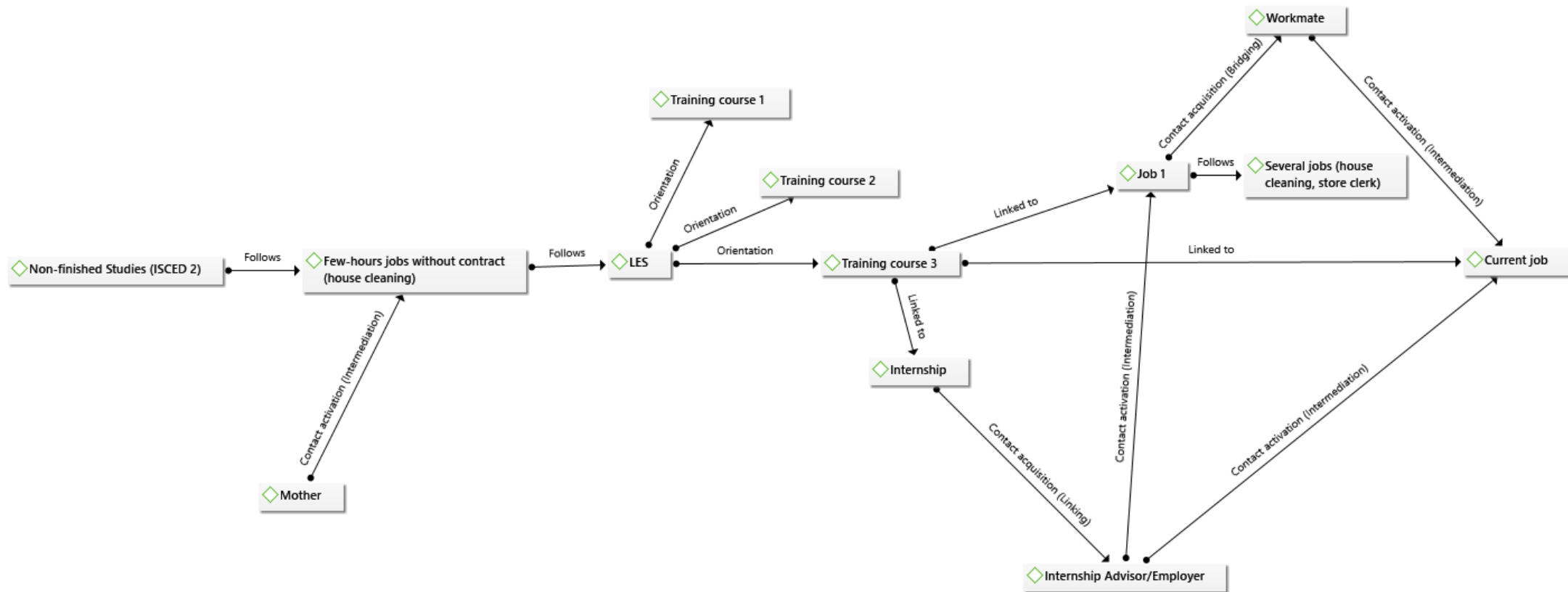
TABLE 1 Interviews with young people according to area, population size of the municipality in which the LES were located and origin.

Area	Population size of municipality	Autochthonous origin	Foreign origin	
Metropolitan area	2001–10,000: SMA	MA_SMA1	WF_SMA	
		MA_SMA2		
	10,001–50,000: MMA	WA_MMA	MF_MMA1	
		MA_MMA1	MF_MMA2	
		MA_MMA2	MF_MMA3	
	More than 50,000: LMA	WA_LMA	WF_LMA	
			MF_LMA	
	Non-metropolitan area	2001–10,000: SnMA	WA_SnMA1	—
			WA_SnMA2	
WA_SnMA3				
10,001–50,000: MnMA		MA_MnMA	WF_MnMA1	
			WF_MnMA2	
			MF_MnMA1	
			MF_MnMA2	
More than 50,000: LnMA		MA_LnMA1	WF_LnMA	
		MA_LnMA2	MF_LnMA	
Total interviews:		24		

Source: Rodríguez-Soler, Joan; Verd, Joan Miquel (2023) "Informal social capital building in local employment services: Its role in the labour market integration of disadvantaged young people". *Social Policy and Administration*, 57 (5): 679-699.

Qualitative analysis of the data (2)

The acquisition of social capital in Local Employment Services in young people with unstable employment trajectories



Source: Rodríguez-Soler, Joan; Verd, Joan Miquel (2023) "Informal social capital building in local employment services: Its role in the labour market integration of disadvantaged young people". *Social Policy and Administration*, 57 (5): 679-699.

Use of the Catalan Youth Survey Dataset (retrospective data) (1)

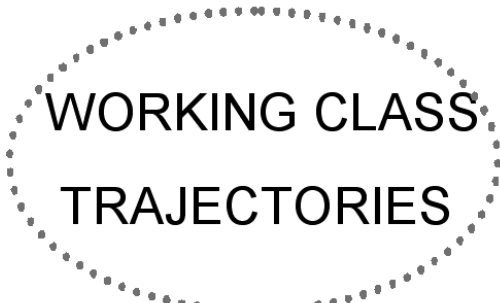
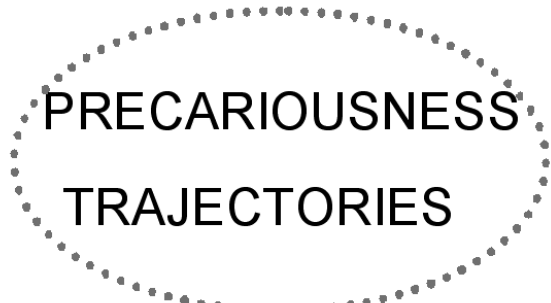
Labour market trajectories of young people

	Temporary employment trajectory	Precarious trajectory
Most characteristic events experienced during the recession (above-average)	Temporary employment	Short odd jobs Unemployment Inactivity
Experience of unemployment during the recession	Short-term unemployment (less than a year)	Long-term unemployment (one year or more)
Socio-demographic characteristics of individuals in the cluster	20–29 years old Parents: Skilled and semi-skilled workers	20–29 years old Education: Compulsory or less Born abroad Parents: Low-skilled workers

Fuente: Verd, Bolívar y Barranco (2019): "Youth unemployment and employment trajectories in Spain during the Great Recession: what are the determinants?". *Journal of Labour Market Research*, 53:4

Use of the Catalan Youth Survey Dataset (retrospective data) (2)

Analysis of youth transitions (1)

 EARLY SUCCESS	C O M P L E X	 SUCCESSIVE APPROACH
EARLY EMANCIPATION		LATE EMANCIPATION
 WORKING CLASS TRAJECTORIES	S I M P L E	 PRECARIOUSNESS TRAJECTORIES

Source: Casal et al. (2006) "Changes in forms of transition in contexts of informational capitalism". *Papers. Revista de Sociologia*, 79: 195-223 .

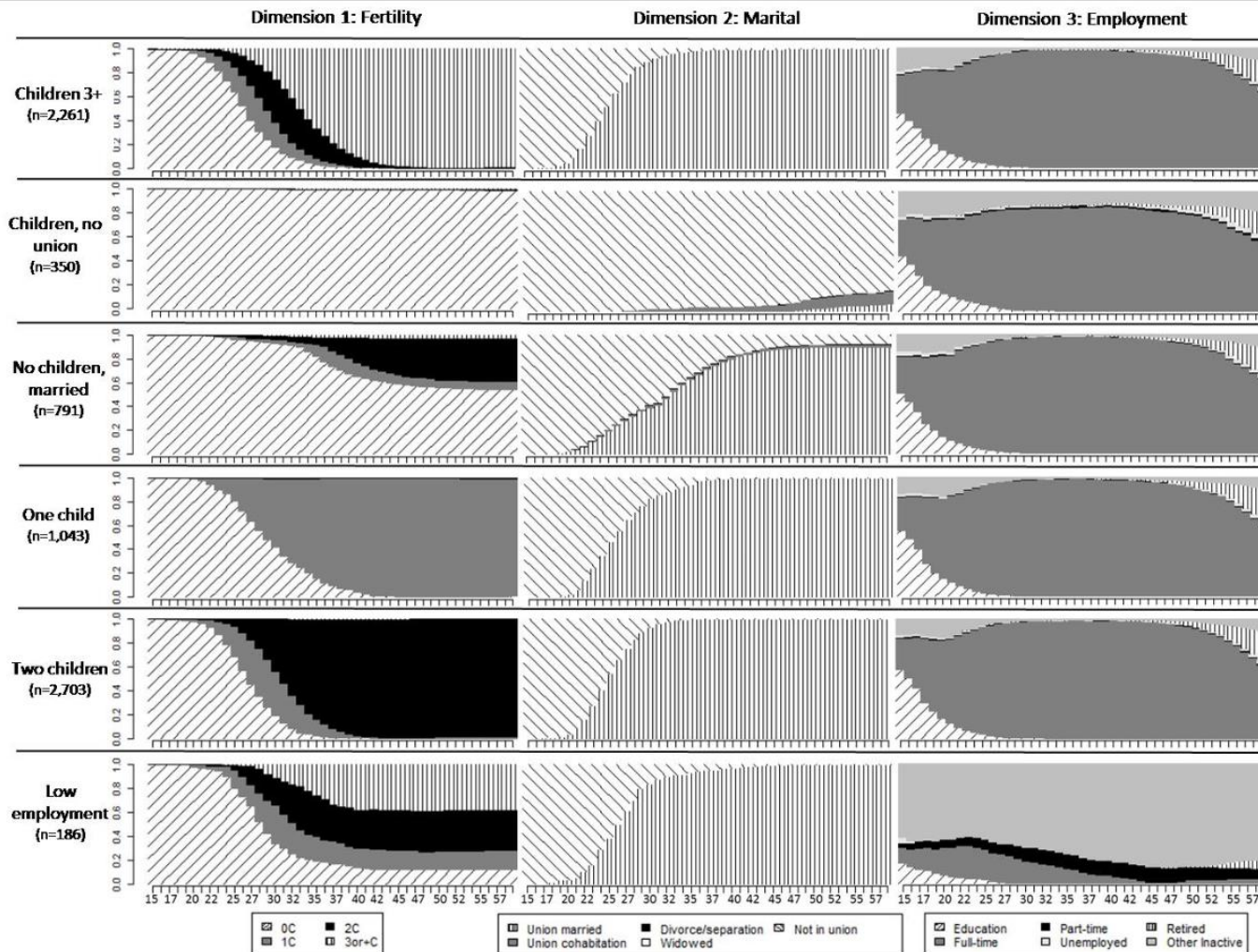
Use of the Catalan Youth Survey Dataset (retrospective data) (3)

Analysis of youth transitions (2)

- Trajectories of early success
 - Long training period, insertion “with expectations” and relatively early emancipation
- Working class trajectories
 - Short training period, job stagnation and early job emancipation
- Successive approach trajectories
 - Long training period, unmet job expectations and late emancipation
- Precariousness Trajectories
 - Sometimes long training period, temporary employment and late emancipation

Use of Panel Data

Is the effect of early-life conditions on health in later life mediated by educational attainment and life-course trajectories



Arpino B, Gumà J, Julià A (2018) “Early- life conditions and health at older ages: The mediating role of educational attainment, family and employment trajectories”. PLoS ONE 13(4): e0195320.
<https://doi.org/10.1371/journal.pone.0195320>

Outline – 2nd part

- Longitudinal data and sequence analysis
 - Longitudinal data, panel data and sequential data. What is the difference?
 - Sequence analysis

Longitudinal data, panel data and sequential data

Longitudinal data and panel data (1)

- What is (repeated) cross-sectional data?
 - In repeated cross-sectional data we obtain long-term information applying the same survey to **different samples** over time.
- What is longitudinal data?
 - We obtain information about the change of some variables referring **the same units** over time. These units can consist of individuals, households, companies, and so on.
- What is panel data?
 - In practical terms, longitudinal data and panel data can be considered the same, the second term refers to the type of survey: we track the same sample at different points in time.

Longitudinal data and panel data (2)

- Sometimes, longitudinal data and sequential data are distinguished
 - Longitudinal data = panel data
 - Sequential data = data about the same subjects relating to multiple time points obtained with retrospective methods
- What are retrospective methods?
 - They collect information about multiple time points produced in one single occasion
 - However, panels often collect retrospective information

And what about time series data?

- When repeated individual cross-sectional data are aggregated at bigger units of analysis (e. g. regions, countries) we obtain what it is usually called **time series data**. These are longitudinal data that can be analyzed like any other ‘individual’ longitudinal data.
- However, in (pooled) time series data the number of units (e.g. countries) is smaller than in ‘standard’ longitudinal data, and the number of observations (e.g. years) is bigger.

What kind of data does the Catalan Youth Survey Dataset provide?

- The Catalan Youth Survey Dataset provides (repeated) cross-sectional data, but in every wave, we obtain a lot of retrospective data (mostly about labour market and educational trajectories)
- Only these (longitudinal or sequential) data are adequate for the analyses typical in the life course analysis tradition (transitions, trajectories, turning points...)
- These are the data (longitudinal or sequential data) that we will use in this course

Separating age, period and cohort effects

- It is hypothesized that a person's characteristics, attitudes and behaviour, change as they get older, but also that cohorts will differ including both the effects of transmission from their parents, and period specific events experienced.
- Understanding social change of requires disentangling this – normally needing long period longitudinal data.
- Examples:
 - are changing social norms with respect to marriage/cohabitation or gender roles a consequence of cohort succession, or all cohorts changing together?
 - is the improvement of employment characteristics a consequence of age, of better economic circumstances or of better educated cohorts?

Quantitative and qualitative changes over time, time-constant and time-dependent causal variables

- Changes in the units of analysis can be qualitative and quantitative
 - Qualitative (change in the state, e.g. from unemployment to employment, from single to married)
 - Quantitative (change in the magnitude of the state/variable, e.g. increase in the salary or in the number of hours you are working). You can convert these changes in qualitative categories.
- Causal variables may be time-constant and time-dependent

Sequence analysis

The origin of sequence analysis (1)

- What is a sequence?

“A sequence is simply an ordered listing of items, which may be events, numbers, or anything else. In some sequence data sets, each item appears once and only once in each sequence; in others each item may appear several times in some sequences and not at all in others” (Abbott and Forrest, 1986: 472)

The origin of sequence analysis (2)

- Sequence analysis began to be used in molecular biology in the 70s and early 80s
- Applied also in the 70s and 80s to speech (or speaker) recognition (computer science)
- Originally, the analysis of sequences was based on *sequence alignment*, which was adapted later as *optimal matching*.

Sequence analysis in the social sciences (1)

- Sequence analysis adapts very well to the holistic approach of life course research

“The goal [of holistic approaches] is to undertake a joint study of events, their duration, and the transitions experienced by individuals over a prolonged period” (Piccarreta and Studer, 2019: 1)
- In this frame, sequence analysis is used to identify patterns in data without any assumption in dht data-generating process (*data mining* approach)

Sequence analysis in the social sciences (2)

- Optimal matching is the typical way to develop sequence analysis in social sciences
- Two steps:
 - An operational concept of the distance between two sequences must be defined
 - An algorithm for finding the route that minimizes that distance has to be applied

Sequence analysis in the social sciences (3)

Think what concepts of the life course approach could be addressed with sequence analysis (optimal matching) and what should be addressed with other methods

Thanks!

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