

DOCUMENTATION ON THE FIRST TREE COHORT (TREE1)

2000–2016



TREE

Transitionen von der **E**rstausbildung ins **E**rwerbsleben
Transitions de l'**E**cole à l'**E**mploi
Transitions from **E**ducation to **E**mployment

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INTRODUCTION

The present document provides a detailed profile of the first cohort of the Swiss TREE panel study (Transitions from Education to Employment). TREE is a multi-cohort survey which follows two large samples (>6,000 respondents) on their pathways through post-compulsory education and employment well into young adulthood. The document describes the design, theoretical foundations, survey instruments and data structure of the first cohort, TREE1, which was launched in the year 2000 on the basis of the Swiss PISA sample. Today, this sample has reached an average age exceeding 30, and the data collected so far cover an observation period of approximately fifteen years. A second cohort (TREE2) has been launched in 2016. TREE is mainly funded by the Swiss National Science Foundation (SNF) and is part of Switzerland's nationally relevant social science data infrastructure. The TREE data are among the country's most widely used social scientific data sets. They are available to the scientific community free of charge.

On the one hand, this document aims at providing generally interested readers with in-depth information on the TREE study's profile. On the other hand, it should be of particular interest to researchers who intend to use TREE data for scientific analysis. It seeks to provide orientation as well as to serve as a guide to the structure of the primary data and its technical documentation. A diagram illustrating the structure of TREE data is given in the section *Structure of TREE1 Data and Documentation* (p. 16) to assist users in navigating their way through the complex makeup of the database(s).

The documentation refers to data that has been collected, processed and prepared for further use as of June 2016. Of course, in an ongoing panel study, the collection, processing and preparation of data are by definition always *work in progress* and of a preliminary nature. TREE has been and will continue to be committed to providing users with the most current data, information and documentations. The goal is to facilitate access to the rich pool of data for best possible use and sophisticated academic analyses.

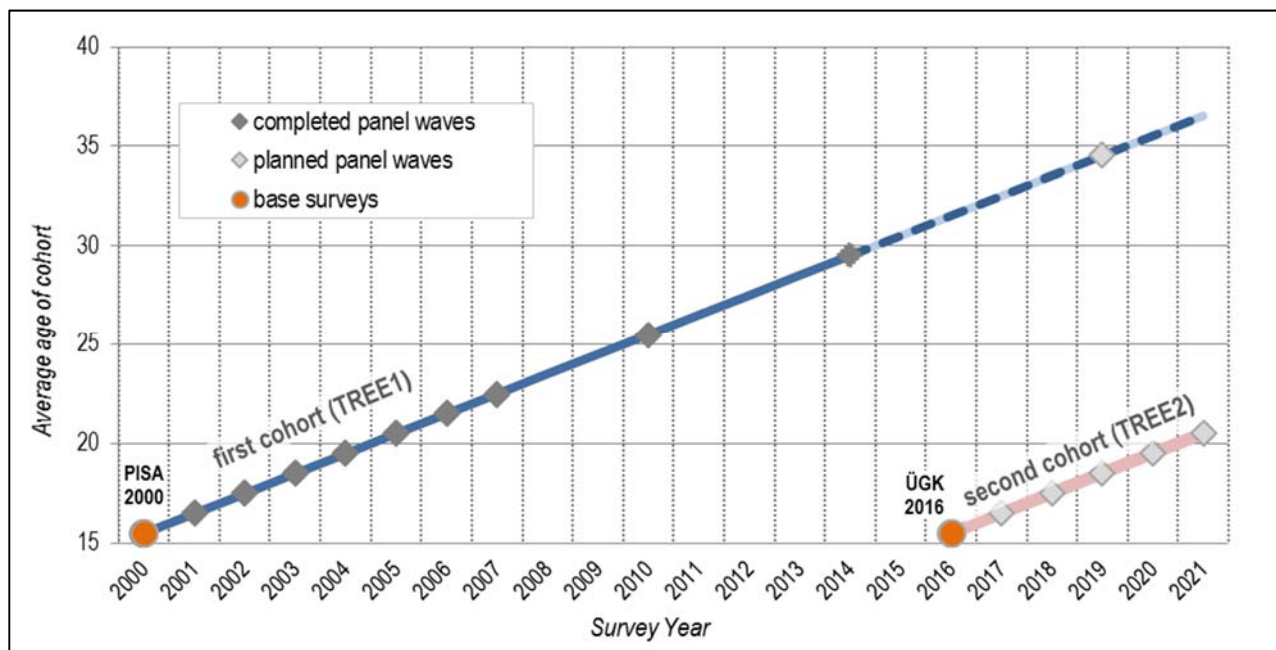
Bern, June 2016

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PROJECT OVERVIEW AND CONTEXT

TREE is a prospective longitudinal multi-cohort panel survey, representative at the national level and at the level of the country's three main language regions (German-, French- and Italian-speaking Switzerland). The study comprehensively surveys the post-compulsory educational pathways of the panel participants on their way to adulthood and working life. Two cohorts of school leavers are followed longitudinally followed over a period of sixteen years (see Figure 1).

Figure 1: TREE multi-cohort design



TREE1 is based on a sample of approximately 6,000 youths who participated in the PISA survey (Programme for International Student Assessment) in 2000 and left compulsory school the same year. The sample has been followed up throughout a total of nine surveys from 2001 to 2014. Another, tenth follow-up survey is planned for 2019, by which time the sample will have reached an average age of approximately 35.¹

TREE2 is based on a sample of roughly the same size as TREE1. The TREE2 sample was drawn from a national mathematics testing scheme carried out among 24,000 ninth graders in 2016.² As in the case of TREE1, the TREE2 sample will be surveyed in annual intervals up until the age of approx. 23.³

This document focuses on the detailed description of the first cohort TREE1.

In the first phase up to 2003, education and employment transition patterns at the interface of compulsory school to upper secondary education (also referred to as the *first threshold* in the German context) were at the centre of attention. During this first stage, the main focus was on reasons for, typical trajectories as well as consequences of irregular or critical educational careers, particularly with regard to premature dropout (young people who fail to graduate from a post-compulsory education or training programme).

¹ Conditional upon funding, which has been requested from the Swiss National Science Foundation.

² ÜGK = Überprüfung des Erreichens der Grundkompetenzen;
COFO = Evaluation de l'atteinte des compétences fondamentales.
For details, see www.edk.ch.

³ Conditional upon funding, which has been requested from the Swiss National Science Foundation.

Figure 2: TREE1 project design

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Ø age of sample	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Transition progress of sample	End of compulsory school	Transitions from lower sec. to upper sec.			Transitions from upper sec. to tertiary level or labour market			Transitions from tertiary level to labour market or consolidation of labour market entry									
Surveys	PISA 2000	TREE panel 1	TREE panel 2	TREE panel 3	TREE panel 4	TREE panel 5	TREE panel 6	TREE panel 7			TREE panel 8				TREE panel 9		
Project organisation		TREE phase 1			TREE phase 2			TREE phase 3				TREE phase 4					
Sample size and response rates	valid sample	6'343	5'944	5'605	5'344	5'048	4'852	4'665			4'571				4'404		
	response absolute	5'532	5'210	4'880	4'680	4'507	4'138	3'953			3'424				3'143		
	% response/panel	87%	88%	87%	88%	89%	85%	85%			75%				71%		
	% response total	87%	82%	77%	74%	71%	65%	62%			54%				50%		

In the second stage of TREE (four additional annual follow-up surveys between 2004 and 2007), the study centred on what is referred to in German as the *second threshold*, that is, the transition from upper secondary level education (be it vocational or general) to working life or tertiary education.

In a third phase (2008–2012), another, eighth survey was carried out in 2010. By then, the cohort under study had been out of compulsory school for ten years. Phase 4 included a ninth follow-up survey in 2014, carried out at an average sample age of approximately 30.

Research objectives

TREE1 was launched on the basis of a recommendation the OECD made for Switzerland after its international review of transitions from initial education to working life (TIEW). Looking at the country report for Switzerland (Galley & Meyer 1999), which revealed substantial research gaps on the subject matter, the OECD expert committee in charge noted:

“The opportunity should not be missed to equip Switzerland with a longitudinal survey of transitions at national level [...]. Transition pathways to employment are becoming increasingly complex. To understand young people’s decisions and options, and to take them into account in policy decisions, appropriate analytical instruments are needed.” (OECD 1999: 53).

TREE is the empirical answer to this recommendation.

TREE aims at analysing youth transitions from school to working life in Switzerland. Special attention is paid to the “critical” transitions referred to above, for instance, young people who have failed to enter any post-compulsory education at all or have dropped out prematurely. PISA 2000, providing the basis for TREE, was primarily devoted to the study of reading literacy. The measured literacy scores were supplemented by a wide range of data on students’ social environment and the schools they had been attending at the time of the survey.

Wherever possible, the TREE survey instruments have employed the same analytical categories as PISA 2000. This has enabled TREE to check for relationships between socio-economic and socio-cultural factors, skills and competencies, personality traits, career ambitions as well as features of the school environments at the end of compulsory education and the actual education and employment careers pursued

thereafter. The longitudinal design allows one to determine changes in the relationships among the various factors over time.

The insights gained into the circumstances and mechanisms of transitions from initial education to employment lay the theoretical groundwork for specific measures in the areas of educational, labour market and social policy.

Theoretical and conceptual framework

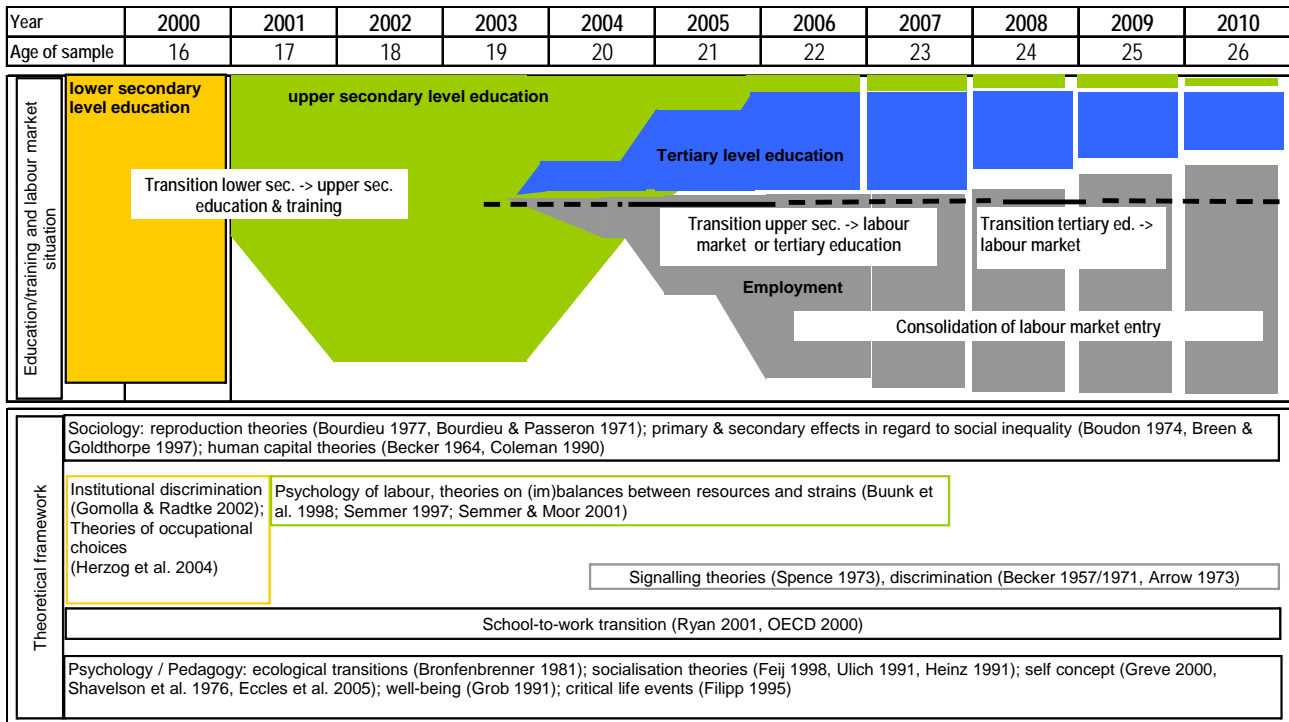
For some time now, school-to-work transitions have been taking place in a less straightforward fashion than had been the case for previous generations of school leavers (Raab 1996, Bowers, Sonnet & Bardone 2000, OECD 2000, Solga & Trappe 2000, Trotsch & László 2000, Schoon & Silbereisen 2009). Nowadays, the first step into vocational education and training (VET) is often characterised by makeshift decisions, delays and detours (Bernath, Wirthensohn & Löhner 1989, Sheldon 1995, Galley & Meyer 1999, Donati 1999, Meyer, Stalder & Matter 2003, Beicht et al. 2008).

Prospective longitudinal transition surveys that take into account all types of transitions from school to adult life are rare even at the international level. Existing surveys are either restricted to specific groups of youths or regions, or they limit themselves to very specific research questions/dimensions (Kristen et al. 2005, Fend et al. 2009, Schoon & Silbereisen 2009). Moreover, it is difficult to compare Switzerland's transition system internationally, as the country's most common form of VET is similarly widespread only in a few countries such as Germany and Austria⁴. For the first time in Switzerland, TREE provides panel survey data which are representative of entire national school leavers' cohorts.

The TREE results so far clearly confirm the trend of delayed and discontinuous transitional pathways that has also been observed internationally. Only slightly more than half of the school leavers cohort of 2000 surveyed by TREE had managed to enter and pass through (certifying) upper secondary education and training without experiencing delays and interruptions of any kind (BFS/TREE 2003, Keller, Hupka & Meyer 2010). Accordingly, the number of youths graduating from upper secondary education has increased at a substantially slower pace than expected. Further TREE analyses show that transitions from upper secondary (VET) education and training to the labour market are strongly graded and marked by considerable discontinuities (Meyer 2005; Stalder, Meyer, & Hupka, 2008, Bergman et al. 2011). Furthermore, transition patterns seem to vary markedly by linguistic region. Among VET graduates, inter-firm mobility is relatively high (>50%), while mobility between occupations remains low (>10%) (Müller & Schweri 2015). Overall, approximately two-thirds of the cohort has completed the transition to the labour market within ten years after leaving compulsory school. One-quarter of the cohort is still enrolled in tertiary education at that point, which demonstrates to what extent school-to-work transitions tend to extend far into young adult age today. The findings also underscore that the TREE results have to be interpreted as "intermediary" despite the fact that the cohort members have been observed over a period of no less than 10 years. Such analyses exemplify the merits of the TREE data based on a survey design that adequately reflects the dynamics of *all* types of transitions, including those not accounted for in official statistics (e.g., youths in intermediate, non-educational activities or work placements, or who are not economically active, or unemployed and not registered as such etc.). Because of its rich data on the context conditions of these dynamic processes (see the section on *Instruments and measures*, p. 15), TREE is not only able to describe the pathways in question but also to provide information on the factors at work in determining a given (critical) event or pathway.

⁴ A two-track VET system is common in these countries where on-the-job training is supplemented by vocational curricula taught at cooperating public schools.

Figure 3: Theoretical frameworks



There is no overarching theoretical model to aptly account for transition processes and their determinants in all their complexity (Feij 1998). If we assume that achievement should be the key factor for status attainment in a meritocratic education system, it would seem plausible that differences in social status are perceived as justified as long as they can be attributed to individual performance. In such a system, schools (i.e., institutions of formal education) play a crucial role inasmuch as they are looked upon to provide and certify skills and competencies (Fend 1981, Titze 2000). Thus, (compulsory) school becomes a “distributor of life chances” (Schelsky 1956), as it signals to the institutions of further education and training (by means of grades, certificates etc.) the skills a given individual has acquired. Within a general framework of life course research (Baltes 1990, Blossfeld & von Maurice 2011, Fend et al. 2009), TREE employs an extended strains and resources approach to account for education and employment careers in terms of the complex interaction of factors at the individual, organisational/institutional and societal level (see, for instance, Vondracek, 1990). This makes TREE attractive to researchers from a wide range of academic fields (sociology, psychology, educational sciences, economics etc.).

The concepts and scales that have been applied so far in the TREE surveys refer to sociological theories of status reproduction (Bourdieu 1977, 1982, Büchner 2003; for an overview of the current state of research, see Maaz, Hausen, McElvany et al. 2006). These theories model the effects of social origin on educational decisions at each interface of the education system. Moreover, TREE employs the distinction introduced by Boudon between primary and secondary effects of social inequality (Boudon 1974, Blossfeld & Shavit 1993, Breen & Goldthorpe 1997, Baumert & Schümer 2002, Ramseier & Brühwiler 2003). According to this concept, every curricular decision along an educational pathway tends to reinforce existing social inequalities.

From the fields of psychology and educational sciences, TREE draws on developmental theories that deal with educational and occupational socialisation (Heinz 1984, Ulich 1991) as well as with the ways youths cope with, in Bronfenbrenner (1979) words, “ecological transitions”. Other concepts used to explain educational pathways derive from theories of self-concept (Greve 2000, Eccles, Vida & Barber 2004), stress (Semmer 1997), well-being (Hascher 2004, Fischer 2006) and critical life events (Filipp 1995).

With regard to the transition from lower to upper secondary education, TREE also leans on theories of occupational choice (Herzog, Neuenschwander & Wannack 2004). The analysis of upper secondary education (VET) pathways draws on theories from work psychology (Buunk, de Jonge, Ybema et al. 1998, Semmer & Dauwalder 1999, Semmer & Udris 2004). These theories are also employed for the analysis of post-compulsory certification, for the purpose of which we have added further dimensions. When it comes to analysing labour market entry, TREE relies on concepts and instruments used by classical human capital theory (Becker 1964), signal(ling) theory (Spence 1973), the theory of discrimination (Becker 1957/1971, Arrow 1994) as well as school-to-work transition models based on labour market economics (OECD 2000, Ryan 2001).

SURVEY DESIGN AND SAMPLE

As mentioned above, TREE1 is based on the sample of youths who participated in the Swiss PISA survey of 2000 (see also Sacchi 2011). The sample includes all participants who

- had attended a regular public school at the lower secondary level at the time of the PISA survey⁵;
- and finished compulsory education by the end of the 1999/2000 school year.

The sample is representative of Switzerland as a whole, the Swiss language regions (German, French, and Italian-speaking Switzerland) and selected cantons (Bern, Geneva, Ticino, St. Gall).

ADDRESS SURVEY 2000

PISA participants in Switzerland were guaranteed anonymity. For TREE they were asked to give their express consent to participate in follow-up surveys and to volunteer a contact address. For this purpose, an address and information sheet was added as a supplement to the PISA documents.

TREE1 SURVEYS 2001–2004

The first four TREE1 panel waves mostly used standardised written questionnaires.⁶ Youths who failed to return the questionnaire in time were again contacted and asked to complete the questionnaire, first by mail and then by phone (see survey flow chart in Figure 4). Respondents unable or unwilling to complete the questionnaire were asked to answer the questions by phone. The detailed questionnaire used for the telephone interview was largely identical to the one used in the written survey; a short version contained only the key questions referring to the education and employment situation.

TREE1 SURVEYS 2005–2014

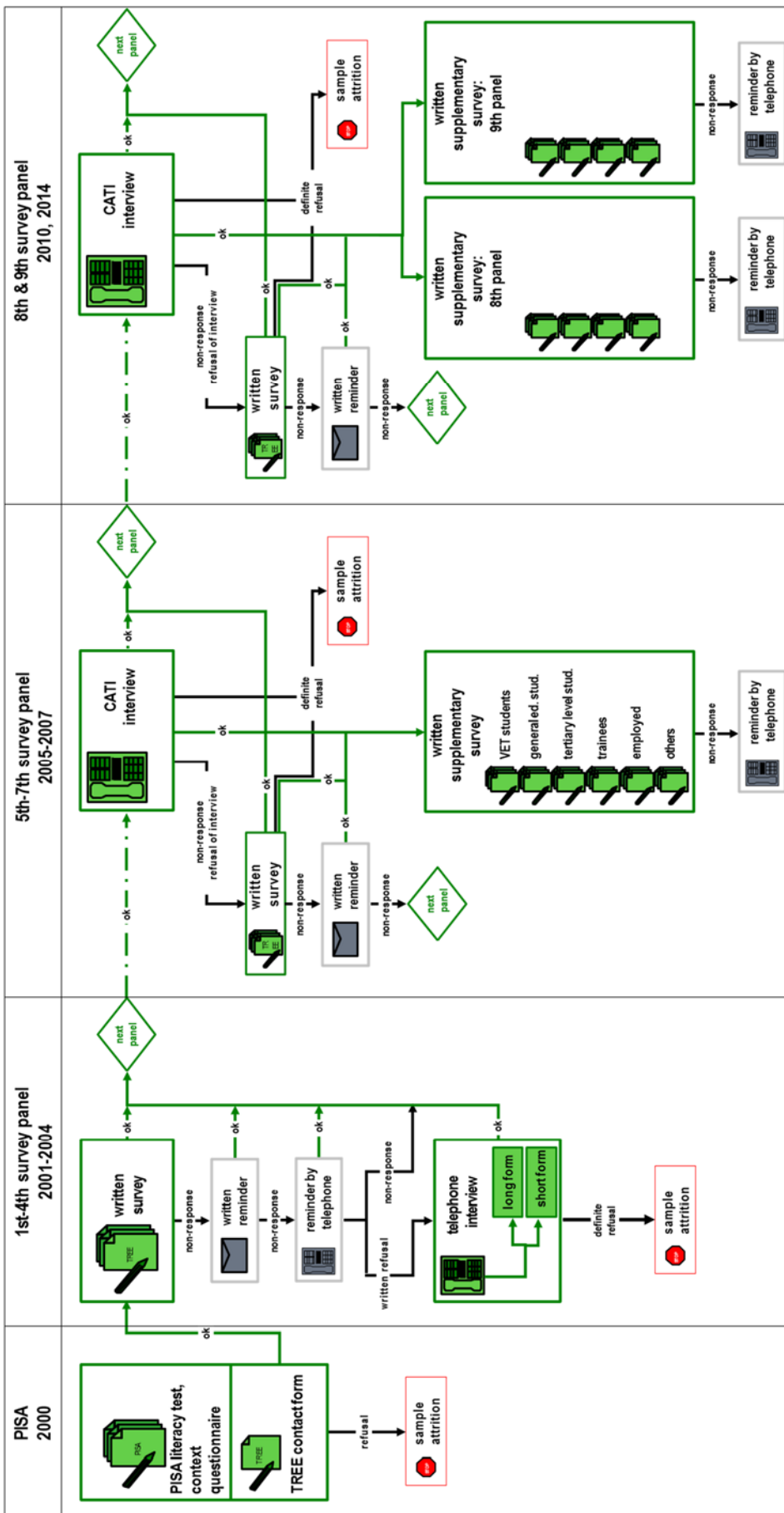
The panel waves 5–9 relied on a combination of computer-assisted telephone interviewing (CATI) and individualised written questionnaires tailored to specific situations. In 2005, the survey design was changed to accommodate the growing diversity of individual education and employment careers, which had increasingly rendered the uniform written questionnaire inadequate (questionnaire too lengthy, filtering process too complex). The CATI interview was used to collect key data on education and employment. In acquiring information on the respondents' education and employment situation, the telephone interview also served as a filter mechanism to determine which supplementary questionnaire they would be sent. Youths that could not be reached or who refused to answer questions by phone were sent a written questionnaire containing the same questions.⁷ At each stage of the survey, delayed responses were followed up by at least one reminder.

⁵ Unlike in French- and German-speaking Switzerland, in Italian-speaking Switzerland school leavers from private schools were also included in the sample.

⁶ Computer-assisted telephone interviewing (CATI) would have been the method of choice. However, due to insufficient funding in the early stage of the project, TREE was forced to switch to standardised written questionnaires as the less costly means of surveying.

⁷ In 2005 and 2006, the written questionnaire followed the same two-step procedure as the CATI mode. In the panel waves 2007, 2010 and 2014, things were somewhat simplified: the respondents received a standard questionnaire which was not differentiated by education and employment situation.

Figure 4: TREE1 survey design, 2000–2014



WAVE-SPECIFIC SAMPLING AND SAMPLE ATTRITION

For part of the initial PISA sample, it was not clear at the outset whether the criteria for inclusion in TREE1 would be satisfied. In approximately 700 cases, the respondents were later excluded from the TREE1 sample even though they had participated in the TREE panel surveys.

The following criteria for inclusion in the TREE1 sample were defined:

- The respondent had not explicitly and definitely refused to participate in the TREE panel (or the future follow-ups).
- Contacting the respondent was possible.

SURVEY IMPLEMENTATION

The TREE1 panel waves were invariably carried out toward the end of the Swiss school year, i.e., between February and June. TREE conducted the first four panel waves 2001–2004 without any outside assistance in training and supervising the survey administrators and interviewers who were put in charge of survey logistics and were responsible for conducting the telephone interviews. For the subsequent five panel waves (2005–2007, 2010 and 2014), survey institutes were commissioned to develop the software for the telephone survey instrument designed by TREE and carry out the computer-assisted telephone interviewing (CATI).⁸ The interviewers were recruited by the institutes and jointly trained in close cooperation with TREE.

SAMPLE MAINTENANCE

For longitudinal panel studies such as TREE, taking great care in maintaining the sample is a crucial requirement. TREE has adopted various measures to prevent sample attrition. Alternative response channels were provided (written questionnaire, telephone interview, short and extended version) to lower the barrier to participation, thus also facilitating participation of youths uncomfortable with extended reading and writing activities. In five of the nine waves, ballpoint pens were included with the questionnaires (as a small gesture of thanks and for the practical purpose of completing them). Hotlines were installed for all three survey languages, which respondents could contact anytime during the interview period. Intensive follow-up activities played a significant role in individually encouraging non-responding youths to participate in the survey.

Regular updates of the TREE1 address database and extensive address research prior to the surveys were to ensure that respondents could be contacted. A few weeks before each survey, the members of our sample received a newsletter tailored to the young target group informing them about new results, publications and news related to the project. In addition, all publications and project information were made publicly available on the TREE website (www.tree.unibe.ch). Moreover, TREE has provided respondents with additional information on project results and other aspects of the project upon request. Quite a few have made use of the possibility to obtain such information. And finally, TREE has regularly made an effort to communicate to the interviewees that their participation is not only of great importance but indeed indispensable to the project. With this in mind, TREE always has made a point of immediately responding to suggestions, criticism and questions voiced by the respondents and to take their feedback seriously by adjusting the surveys and reporting accordingly.

⁸ Survey waves 5–7 (2005–2007) were carried out by LINK Institut in Lucerne, while M.I.S. Trend in Lausanne was responsible for wave 8 in 2010 and wave 9 in 2014.

Response rates

Across all seven panel waves from 2001 to 2007, TREE has achieved wave-specific response rates of 85–89% (Fig. 5). These rates are remarkably high considering the heterogeneous sample structure and sophisticated survey design. In waves 8 and 9, the response rate was considerably lower than throughout the first seven waves (75% and 71% respectively). Given the slowdown of the survey rhythm from one to three to four years, however, the 2010 and 2014 retention rates can still be considered satisfactory. The cumulated response has not decreased dramatically between 2010 and 2014 (from 54% to 50%). After nine follow-up surveys, the gross sample size is still at approx. 4,100. Thus, TREE should be able to contact the equivalent of 65% of the initial 2001 TREE1 sample when launching the next survey wave.

Figure 5: TREE1 response rates, 2000–2014

Survey year	2000	2001	2002	2003	2004	2005	2006	2007	2010	2014
Gross sample	* 11,710	6,343	5,944	5,609	5,345	5,060	4,852	4,659	4,571	4,402
Responses (N)	** 6,343	5,528	5,206	4,877	4,679	4,506	4,133	3,979	3,423	3,142
Return rate										
% of wave	54%	87%	88%	87%	88%	89%	85%	85%	75%	71%
% of 2001 survey			82%	77%	74%	71%	65%	63%	54%	50%

* Sample base

** address survey: willingness to participate in the TREE panel survey

The rather low willingness to participate in TREE observed at the time of the PISA survey (TREE address survey) resulted from the regionally varying integration of the TREE module into the PISA survey administration. Thus, while in Italian-speaking Switzerland 81% of the PISA sample participated in TREE, the return rates were much lower in other cantons at that time (e.g., 32% in Zurich; Sacchi 2011).

Figure 6: Response rates from 2001 to 2014 by type of response

Survey year	2001	2002	2003	2004	2005	2006	2007	2010	2014
Written questionnaire	80%	80%	71%	71%					
Telephone questionnaire, long	6%	4%	3%	5%					
Telephone questionnaire, short	2%	3%	13%	12%					
CATI/ basic questionnaire <u>and</u> supplementary questionnaire *					71%	69%	68%	60%	59%
CATI/ basic questionnaire only *					19%	16%	17%	15%	12%
No response, single wave refusal (remaining in the sample)	7%	8%	10%	8%	9%	13%	13%	23%	23%
No response (sample attrition)	6%	5%	3%	4%	2%	2%	2%	2%	5%
Total N (=100%; gross sample)	6,343	5,944	5,609	5,345	5,060	4,852	4,659	4,571	4,402

* 2007/2010/2014 panel survey: basic and supplementary questionnaire were merged into one questionnaire.

In the first two years, 80% of the respondents completed the written questionnaire (Fig. 5). The proportion of returned questionnaires dropped to roughly 70% during the third and fourth panel survey while participation by way of short telephone interviews rose sharply. After changes in the survey design, the share of the sample that responded to the full survey (CATI or basic plus supplementary questionnaire) remained at 70%. Between one-fifth and one-sixth participated by phone only.

The high overall return rate has confirmed the importance TREE has given to sample maintenance. Yet a critical note is in order here. All efforts notwithstanding, there were notable differences in levels of participation between different groups of respondents. The return rate among the well-educated, women and Swiss natives was substantially higher compared to respondents with low reading proficiency, men or respondents of immigrant background. Panel weights were calculated to compensate for sample bias, which is a common problem in panel surveys, and to maintain the representative nature of the sample over the entire observation period (Sacchi, 2011).⁹

⁹ Response rates in Figure 5 may differ slightly from those reported in the documentation of the TREE weighting (Sacchi 2011). This is due to "neutral" instances of panel dropout such as deceased panel members who, as opposed to Sacchi 2011, are still present in the denominator of the rate.

Sacchi's documentation on the longitudinal weights (2011) does not yet include the panel weights applied to the ninth TREE1 panel wave (2014). An update of said documentation will be published at a later date.

INSTRUMENTS AND MEASURES

The main purpose of the TREE surveys is to obtain data on young people's education and employment careers, including factors that affect both and are affected by them. Figure 7 gives a rough overview of concepts employed by TREE and the sources they are derived from. A separate document titled *Concepts & Scales* (TREE 2016) specifies in detail the concepts used in the seven panel waves and which group of respondents received which set of questions. Codebooks for the data collected in each of the seven TREE panel waves provide detailed information on each item. A complete list of all relevant documents can be found in the section *Structure of TREE1 Data and Documentation* (p. 16).

Figure 7: Concepts and scales, 2001–2014

Concept	Source
Description of education and employment situation and pathways	TREE, based on Swiss Federal Statistical Office data
Strains and resources in education and work (e.g., cooperation, illegitimate tasks, versatility)	TREE, based on Prümper, Hartmannsgruber & Frese (1995); Semmer, Zapf & Dunckel (1999); Rosenstiel et al. (1982), Semmer et al. (2010), Jacobshagen (2006), Dunckel (1999)
Social relations/network & social support (private, at school and in VET training firms)	TREE, based on Frese (Frese 1983, 1999); Schulz & Schwarzer (2003), Szydlik (2008)
Equal opportunity in schools and companies providing VET	TREE
Competence of trainers, teachers and supervisors	TREE, based on Neuenschwander (1998); Neuenschwander, Herzog & Holder (2001)
Job search and application strategies	TREE, based on Swiss Labour Force Survey SLFS (BFS 2004)
Personal traits, aspirations and plans (in regard to education; for instance, persistence, self-efficacy, coping ability, ambition, value orientation)	TREE, based on Schwarzer (1999); Schwarzer & Jerusalem (2000); Grob & Maag Merki (2001); Endler & Parker (1990); short version according to Kälin (1995); Moser, Ramseier, Keller & Huber (1997); Moser (1997); Schulz & Schwarzer (2003); Watermann (2000) adjusted; TREE (aspirations and plans)
Critical life events (in regard to education, work and private life)	TREE, based on Neuenschwander (1998), Neuenschwander, Herzog & Holder (2001)
Satisfaction with education, employment, key areas of life and professional career	TREE, based on Baillod (1992), Bruggemann, Groskurth & Ulich (1975); Neuenschwander (1998), Neuenschwander, Herzog & Holder (2001), Greenhaus et al. (1990), Wolff & Moser (2009)
Commitment (occupational and organisational)	Meyer, Allen & Smith (1993), Schmidt et al. (1998)
Well-being	Grob, Lüthi, Kaiser, Flammer, Mackinnon & Wearing (1991); Rosenberg (1979); Krohne, Egloff, Kohlmann & Tausch (1996);
Health (behaviour)	Grob & Maag Merki (2001), Renner & Schwarzer (2005)
Fluctuation/dropout tendency (education/training and job)	TREE, based on Baillod (1992)
Achievement and academic success	TREE
Financial situation	TREE, based on Swiss Labour Force Survey SLFS (FSO 2004)
Family situation/status	TREE

STRUCTURE OF THE TREE1 DATA AND DOCUMENTATION

This documentation refers to TREE1 data obtained and edited as of June 2016. A plausibility check has been performed on most of the variables contained in the datasets. Unchecked data are indicated in the respective codebooks. For reasons of data protection, sensitive personal data (for instance, information identifying the company providing training, the school attended, or place of residence) have been omitted from the datasets to guard against disclosure of individual respondents.

Primary data are available in SPSS format. As of 2017, they will be equally available in STATA format. Interested users encountering data format problems may contact the TREE project administration or the FORS Data archive in Lausanne for assistance (see Contacts, p. 19).

Figure 8: Overview of primary data and documentations

<i>Dataset</i>	<i>Documentation</i>
PISA 2000	
PISA-TREE_2000_Version_20xx.sav	<ul style="list-style-type: none"> - PISA_2000_manual_original-variables.pdf - PISA_2000_Codebook_complementary_20xx.pdf - PISA_2000_Technical_Report_original-variables.pdf - PISA 2000 school & student questionnaires in German, French, Italian and English - Warning re PISA 2000 variables on parental education (PISA_2000_Bergman_etal_2010_Problems_educ_attainment_parents.pdf)
TREE1 wave-specific datasets 2001–2014	
<i>Generalised naming of data files:</i> TREE_data_wave-x-20yy_version_20zz.sav	<i>Generalised naming of codebook files:</i> TREE_codebook_wave-x-20yy_version_20zz.pdf
<i>Example (ninth panel wave 2014):</i> TREE_data_wave-9-2014_version_2016_german.sav TREE_data_wave-9-2014_version_2016_french.sav	<i>Example (ninth panel wave 2014):</i> TREE_codebook_wave-9-2014_version_2016.pdf
TREE1 datasets covering several waves	
TREE_data_certificates_2001-2014_version_20xx.sav	TREE_codebook_certificates_2001-2014_version_20xx.pdf
TREE_data_weights_wave1-9_version_20xx.sav	<ul style="list-style-type: none"> - TREE_codebook_weights_wave1-9_version_20xx.pdf - Sacchi_2011_TREE_longitudinal_weights_English.pdf
TREE_job_episodes_2003-2014_version_20xx.sav	TREE_codebook_job_episodes_2003-2014_version_20xx.pdf

All primary datasets contain the complete data for the 6,343 cases constituting the valid TREE sample. They are sorted by identification number "ID" (this variable is contained in all data sets) in ascending order. The identification number can be used to match two or more datasets.

For a better understanding of the data structure, the documentation contains the original questionnaires on which the data collection was based in addition to the primary data, codebooks and labels.

PISA DATASET

The dataset *PISA-TREE_2000_Version_xxxx.sav* contains all variables assessed in PISA 2000 for the entire TREE sample. The datasets are named according to variables in the following manner:

- Variables beginning with "st.." refer to data collected using the student questionnaire.
- Variables beginning with "sc.." refer to data collected using the school questionnaire.
- The third and fourth character of the variable name are digits indicating the number of the question in the questionnaire; the sixth and seventh character represent the item number of the question.
- Variables containing the letter "n" are "national" variables that were assessed in Switzerland only (see below).

Names of variables that do not follow these rules of nomenclature indicate special constructs and scales (see below). The following documentations are provided for the PISA dataset:

- *PISA_2000_manual_original-variables.pdf* contains the international description of the PISA variables in English.
- *PISA_2000_Technical_Report_original-variables* contains, inter alia, the description of the constructs and scales derived from the original variables (Adams & Wu 2002, chapter 17).
- The PISA 2000 school and student questionnaires for Switzerland are available in the three national languages German, French and Italian.¹⁰ They also provide information on the so-called "national" PISA variables, that is, variables specifically defined for Switzerland that were not standardly assessed internationally. Those variables are distinguished by the letter "n" in the place of the fifth character of the variable name (for instance, st17n01 as the national code for the language spoken at home).
- All international documentations, including the codebooks for the datasets, are available at the website <https://www.oecd.org/pisa/pisaproducts/database-pisa2000.htm>.

The codebook *PISA_2000_Data_complementary-variables.pdf* documents PISA variables that

- a) have been modified by TREE with regard to the "original" PISA 2000 variables and/or
- b) have been insufficiently documented by the Swiss PISA 2000 project management.

WAVE-SPECIFIC TREE1 DATASETS

The wave-specific datasets containing the primary data from the nine TREE panel surveys 2001–2014 are named *TREE_data_wave-x-20yy_version_20zz.sav*. They are described in codebooks named *TREE_codebook_wave-x-20yy_version_20zz.pdf*.

¹⁰ An international English version is also provided. However, this version does not account for national items.

TREE1 DATASETS COVERING SEVERAL WAVES

TREE_data_certificates_2001-2014_version_20xx.sav contains information on the certification status at the time of the latest valid survey participation (see the codebook *TREE_codebook_certificates_2001-2014_version_20xx* for details).

The dataset *TREE_data_weights_wave1-9_version_xxxx.sav* comprises the weighting variables, some auxiliary variables for variance estimation and, for documentation purposes, all the variables that went into the calculation of weights. The weighting models are described at length in *Sacchi_2011_TREE_longitudinal_weights_English.pdf*. Additional important information is provided in the respective codebook *TREE_codebook_weights_wave1-9_version_xxxx.pdf*.

The 2016 data release publishes, for the first time, systematic episodic information on all periods of employment that the TREE1 respondents have passed through between 2003¹¹ and 2014 (*TREE_job_episodes_2003-2014_version_20xx.sav*).

See the respective codebook for the structure and cleaning standards of employment episodes data (*TREE_codebook_job_episodes_2003-2014_version_20xx.pdf*).

¹¹ For the period 2000–2003, systematic, reliable episodic information on periods of employment is not available. Employment in this early phase is usually restricted to occasional jobs pursued parallel to full-time education at the upper secondary level.

RECOMMENDATION FOR DATA SOURCE CITATION

Academic publications based on TREE data are kindly requested to quote the data source as follows:

"The Swiss panel study TREE (Transitions from Education to Employment) is a social science data infrastructure mainly funded by the Swiss National Science Foundation (SNF) and located at the University of Bern."

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WHERE TO GET THE TREE DATA

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¹² Swiss Centre of Expertise in the Social Sciences.

PROJECT STRUCTURE, ORGANISATION AND FUNDING

The Swiss National Science Foundation (SNF) has adopted TREE as one of its major social science data infrastructure projects. As of 2014, the project has been located at the institutes of sociology and educational science at the University of Bern.

Overall responsibility for TREE at the University of Bern lies with Prof Dr Ben Jann, who is the principal investigator (PI) vis-à-vis the SNF. He is supported by co-investigators Prof Dr Rolf Becker and Prof Dr Christian Imdorf. Thomas Meyer, educational sociologist and project initiator, co-directs the project at the operative level, along with educational scientist Dr Sandra Hupka-Brunner. For a complete list of academic personnel involved in TREE, see the section "TREE collaborators" (p. 20).

An internationally composed academic advisory board provides assistance in matters relating to methodology and strategies of research and analysis (for details, see http://www.tree.unibe.ch/the_project/advisory_board/index_eng.html).

From 2000 to 2007, TREE has been led by an inter-cantonal consortium consisting of the cantons of Bern, Geneva and Ticino. During this period, various partners participated in funding TREE, including the members of the consortium, the Swiss National Science Foundation, the Swiss Federal Statistical Office (FSO) and the Federal Office for Professional Education and Technology (OPET¹³). From 2008 to 2014, the project was located at the University of Basel (Institute of Sociology, Prof Dr Max Bergman).

¹³ In 2012, this Office was integrated into the State Secretariat for Education, Research and Innovation (SERI).

TREE COLLABORATORS

<i>Name</i>	<i>Function</i>	<i>With TREE since</i>
Gomensoro, Andrés	Senior researcher	2016
Hupka, Sandra, Dr	Operative co-head of the project, senior researcher	2003
Koomen, Maarten	Data management	2012
Meyer, Thomas	Operative co-head of the project, senior researcher	1999
Müller, Barbara, Dr	Head of survey management	2013
Oesch, Dominique	Senior researcher	2016
von Rotz, Christina	Head of data management	2008
Sacchi, Stefan, Dr	Senior Researcher	2003

Former academic collaborators of the project (in alphabetical order):

Jacques Amos (2000-2008), Kathrin Bertschy (2007), Edi Böni (2003–2008), Myriam Dellenbach (2003–2004), Mario Donati (1999–2004), Anita Keller (2008-2012), Renaud Lieberherr (2000–2002), Monika Matter (2002), Pau Orioni (2005–2007), Francesca Pedrazzini-Pesce (2003–2007), Melania Rudin (2009–2012), Katja Scharenberg (2013–2015), Ruth Silver (2003–2008), Barbara E. Stalder (1999–2012), Feliciana Tocchetto (2002–2003).

REFERENCES

- Adams, R., & Wu, M. (2002). *PISA 2000 Technical Report*. Paris: OECD Publications.
- Arrow, K. J. (1994). The theory of discrimination. In D. B. Grusky (Ed.), *Social Stratification*, Boulder: Westview Press, 604-606.
- Baillod, J. (1992). *Fluktuation bei Computerfachleuten. Eine Längsschnittuntersuchung über die Beziehungen zwischen Arbeitssituation und Berufsverläufen*. Bern: Peter Lang.
- Baltes, P. (1990). Entwicklungspsychologie der Lebensspanne: Theoretische Leitsätze. *Psychologische Rundschau* 41, 1-24.
- Baumert, J., & Schümer, G. (2002). Familiäre Lebensverhältnisse, Bildungsbeteiligung und Kompetenzerwerb im nationalen Vergleich. In J. Baumert, C. Artelt, E. Klieme et al. (Eds.), *PISA 2000 - Die Länder der Bundesrepublik Deutschland im Vergleich*, Opladen: Leske + Budrich, 159-202.
- Becker, G. S. (1964). *Human capital: A Theoretical and Empirical Analysis with Special Reference to Education*. New York/London, Columbia University Press.
- Becker, G. S. (1957/1971). *The Economics of Discrimination*. Chicago: University of Chicago Press.
- Beicht, U., Friedrich, M., & Ulrich, J. G. (Eds.) (2008). *Ausbildungschancen und Verbleib von Schulabsolventen*. Bonn: Bundesinstitut für Berufsbildung.
- Bergman, M., Hupka-Brunner, S., Keller, A., Meyer, T., & Stalder, B. E. (Eds.) (2011). *Youth Transitions in Switzerland: Results from the TREE Panel Study*. Zurich: Seismo.
- Bernath, W., Wirthensohn, M., & Löhner, E. (1989). *Jugendliche auf ihrem Weg ins Berufsleben*. Bern: Haupt Verlag.
- Blossfeld, H.-P., & Shavit, Y. (1993). Persisting barriers. Changes in educational opportunities in thirteen countries. In Y. Shavit & H.-P. Blossfeld (Eds.), *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*, San Francisco: Westview-Press, 1-23.
- Blossfeld, H.-P., & von Maurice, J. (2011). Education as a life long process. *Zeitschrift für Erziehungswissenschaft* 14(2), 19-32. doi: 10.1007/s11618-011-0178-3.
- Boudon, R. (1974). *Education, Opportunity, and Social Inequality: Changing Prospects in Western Society*. New York: John Wiley.
- Bourdieu, P., & Passeron, J.-C. (1990). *Reproduction in Education, Society and Culture*. London: Sage.
- Bourdieu, P. (1977). Cultural reproduction and social reproduction. In J. Karabel (Ed.), *Power and Ideology in Education*, New York: Oxford University Press, 487-511.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgment of Taste*. Cambridge MA: Harvard University Press.
- Bowers, N., Sonnet, A., & Bardone, L. (2000). *Background Report - Giving Young People a Good Start: The Experience for OECD Countries*. Paris: OECD.
- Breen, R., & Goldthorpe, J. H. (1997). Explaining educational differentials: Towards a formal rational action theory. *Rationality and Society* 9(3), 275-305.
- Büchner, P. (2003). Stichwort: Bildung und soziale Ungleichheit. *Zeitschrift für Erziehungswissenschaft* 6(1), 5-24.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Bruggemann, A., Groskurth, A., & Ulich, E. (1975). *Arbeitszufriedenheit*. Bern: Hans-Huber Verlag.
- Buunk, B. P., de Jonge, J., Ybema, J. F., & de Wolff, C. J. (1998). Psychosocial aspects of occupational stress. In P. J. D. Drenth, H. Thierry & C. J. de Wolff (Eds.), *Handbook of Work and Organizational Psychology. Volume 2: Work Psychology* (2nd ed.), Hove: Psychology Press, 145-182.
- Coleman, J. (1988). Social capital in the generation of human capital. *American Journal of Sociology* 94(suppl.), 95-120.

- Donati, M. (1999). *“Volevi veramente diventare quello che sei?” La formazione dei giovani dopo la scuola media. Carriere scolastiche e professionali attraverso l'analisi di 1400 biografie formative. Studio longitudinale.* Bellinzona: Ufficio studi e ricerche.
- Dunckel, H. (1999). *Handbuch psychologischer Arbeitsanalyseverfahren.* Zurich: vdf Hochschulverlag.
- Eccles, J. S.; Vida, M. N., & Barber, B. (2004). The relation of early adolescents' college plans and both academic ability and task-value beliefs to subsequent college enrollment. *Journal of Early Adolescence* 24(1), 63-77.
- Eccles, J. S. (2005). Subjective task value and the Eccles et al. model of achievement-related choices. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of Competence and Motivation*, New York, London: The Guilford Press, 105-121.
- Endler, N. S., & Parker, J. D. A. (1990). *Coping Inventory for Stressful Situations (CISS).* Toronto: Multi Health Systems, Inc.
- Feij, J. A. (1998). Work socialization of young people. In P. J. D. Drenth, H. Thierry & C. J. de Wolff (Eds.), *Handbook of Work and Organizational Psychology. Volume 3: Personnel Psychology* (2nd ed.), Hove: Psychology Press, 207-256.
- Fend, H. (1981). *Theorie der Schule.* Munich, Vienna, Baltimore: Urban & Schwarzenberg.
- Fend, H., Berger, F., & Grob, U. (Eds.) (2009). *Lebensverläufe, Lebensbewältigung, Lebensglück. Ergebnisse der Life-Studie.* Wiesbaden: VS Verlag für Sozialwissenschaften.
- Filipp, S.-H. (Ed.) (1995). *Kritische Lebensereignisse* (3. Auflage). Weinheim: Psychologie Verlags Union.
- Fischer, L. (Ed.) (2006). *Arbeitszufriedenheit. Konzepte und empirische Befunde* (2nd ed.). Göttingen: Hogrefe.
- Frese, M. (1983). Soziale Unterstützung. In D. Zapf, E. Bamberg, H. Dunckel, M. Frese, S. Greif, G. Mohr, D. Rueckert & N. Semmer (Eds.), *Dokumentation der Skalen des Forschungsprojekts “Psychischer Stress am Arbeitsplatz - Hemmende und fördernde Bedingungen für humanere Arbeitsplätze”,* Unveröffentlichter Forschungsbericht. Osnabrück: Universität, Fachbereich Psychologie.
- Frese, M. (1999). Social support as a moderator of the relationship between work stressors and psychological dysfunctioning: A longitudinal study with objective measures. *Journal of Occupational Health Psychology* 4(3), 179-192.
- FSO/TREE (2003). *Wege in die nachobligatorische Ausbildung. Die ersten zwei Jahre nach Austritt aus der obligatorischen Schule. Zwischenergebnisse des Jugendlängsschnitts TREE.* Reihe “Bildungsmonitoring Schweiz”. Neuchâtel: Swiss Federal Statistical Office.
- FSO (Eds.) (2004). *Die Schweizerische Arbeitskräfteerhebung (SAKE) Konzepte - Methodische Grundlagen - Praktische Ausführung.* Neuchâtel: Swiss Federal Statistical Office.
- Galley, F., & Meyer, T. (1999). *Thematic Review of the Transition from Initial Education to Working Life.* Switzerland, Country Note OECD. Bern: The Ministers for the Economy and the Interior of Switzerland and the Swiss Conference of Cantonal Directors of Education.
- Gomolla, M., & Radtke, F.-O. (2002). *Institutionelle Diskriminierung. Die Herstellung ethnischer Differenz in der Schule.* Opladen: Leske + Budrich.
- Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experience, job performance evaluations, and career outcomes. *Academy of Management Journal* 33(1), 64-86.
- Greve, W. (2000). *Psychologie des Selbst.* Weinheim: Psychologie Verlags Union.
- Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management* 26(3), 463-488.
- Grob, A., Lüthi, R., Kaiser, F. G., Flammer, A., Mackinnon, A., & Wearing, A. J. (1991). Berner Fragebogen zum Wohlbefinden Jugendlicher (BFW). *Diagnostica* 37(1), 66-75.
- Grob, U., & Maag Merki, K. (2001). *Überfachliche Kompetenzen. Theoretische Grundlegung und empirische Erprobung eines Indikatorensystems.* Bern: Lang.

- Gümüs, A., Gömleksiz, M., Glöckner-Rist, A., & Balke, D. (2006). Itembatterie für kulturvergleichende Untersuchungen zur Anomie. In A. Glöckner-Rist (Ed.), *ZUMA-Informationssystem. Elektronisches Handbuch sozialwissenschaftlicher Erhebungsinstrumente. Version 10.00*. Mannheim: Zentrum für Umfragen, Methoden und Analysen.
- Hascher, T. (2003). *Wohlbefinden in der Schule*. Münster: Waxman.
- Heinz, W. R. (1984). *Der Übergang von der Schule in den Beruf als Selbstsozialisation*. Bremen: Universität.
- Heinz, W. R. (1991). Berufliche und betriebliche Sozialisation. In K. Hurrelmann & D. Ulich (Eds.), *Neues Handbuch der Sozialisationsforschung* (4th ed.), Weinheim: Beltz, 397-415.
- Herzog, W., Neuenschwander, M. P., & Wannack, E. (2004). *Berufswahlprozess bei Jugendlichen*. Bern: Universität Bern, Institut für Pädagogik und Schulpädagogik, Abteilung Pädagogische Psychologie.
- Jacobshagen, N. (2006). *Illegitimate Tasks, Illegitimate Stressors: Testing a New Stressor-Strain Concept*. Doctoral thesis. Bern, University of Bern.
- Kälin, W. (1995). *Deutsche 12-Item Kurzform des "Coping Inventory for Stressful Situations" (CISS) von N. S. Endler & J. D. A. Parker*. Basierend auf der Übersetzung von N. Semmer, F. Tschan & V. Schade (unveröffentlichter Fragebogen). Bern: Universität, Institut für Psychologie.
- Keller, A., Hupka-Brunner, S., & Meyer, T. (2010). *Post-compulsory Education Pathways in Switzerland: The First Seven Years. Results of the Swiss Youth Panel Survey TREE, Update 2010*. Basel: TREE.
- Kristen, C., Römmer, A., Müller, W., & Kalter, F. (2005). *Längsschnittstudien für die Bildungsberichterstattung - Beispiele aus Europa und Nordamerika*. Berlin: Bundesministerium für Bildung und Forschung (BMBF).
- Krohne, H. W., Egloff, B., Kohlmann, C.-W., & Tausch, A. (1996). Untersuchungen mit einer deutschen Version der "Positive and Negative Affect Schedule" (PANAS). *Diagnostica* 42(2), 139-156.
- Maaz, K., Hausen, C., McElvany, N., & Baumert, J. (2006). Stichwort: Übergänge im Bildungssystem. *Zeitschrift für Erziehungswissenschaft* 9(3), 299-327.
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology* 78, 538-551.
- Meyer, T. (2005). *School-to-Work Transition in Switzerland. Results as of 2004 from the TREE Panel Survey*. Bern, TREE.
- Moser, U. (1997). *Messinstrumente zu Unterricht und Leistungsbereitschaft in TIMSS+*. Projektdokumentation. Bern: Amt für Bildungsforschung der Erziehungsdirektion.
- Moser, U., Ramseier, E., Keller, C., & Huber, M. (1997). *Schule auf dem Prüfstand. Eine Evaluation der Sekundarstufe I auf der Grundlage der "Third International Mathematics and Science Study"*. Chur: Rüegger.
- Mueller, B., & Schweri, J. (2015). How specific is apprenticeship training? Evidence from inter-firm and occupational mobility after graduation. *Oxford Economic Papers*. DOI: 10.1093/oep/gpv040. URL: <http://oep.oxfordjournals.org/content/early/2015/06/27/oep.gpv040.full.pdf+html>.
- Neuenschwander, M. P. (1998). *Schule und Identität im Jugendalter I. Kurzdokumentation der Skalen und Stichproben* (Forschungsbericht Nr. 18). Bern: Universität Bern, Abteilung Pädagogische Psychologie.
- Neuenschwander, M. P., Herzog, W., & Holder, M. (2001). *Schulkontext und Identitätsentwicklung im Jugendalter*. Schlussbericht z.Hd. des Schweizerischen Nationalfonds, Projekt Nr. 11-52730.97. (Forschungsbericht Nr. 22). Universität Bern: Institut für Pädagogik, Abteilung Pädagogische Psychologie.
- OECD (1999). *Thematic Review of The Transition From Initial Education to Working Life. Switzerland. Country Note*. Paris: OECD.
- OECD (Ed.), (2000). *From Initial Education to Working Life. Making Transitions Work*. Paris: OECD.
- Podsakoff, N. P., LePine, J. A., & LePine, M. A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: A meta-analysis. *Journal of Applied Psychology* 92(2), 438-454.

- Prümper, J., Hartmannsgruber, K., & Frese, M. (1995). KFZA. Kurz-Fragebogen zur Arbeitsanalyse. *Zeitschrift für Arbeits- und Organisationspsychologie* 39(3), 125-131.
- Raab, E. (1996). *Jugend sucht Arbeit. Eine Längsschnittuntersuchung zum Berufseinstieg Jugendlicher*. Munich: DJI Verlag Deutsches Jugendinstitut.
- Raffe, D. (2008). The concept of transition system. *Journal of Education and Work* 21(4), 277-296.
- Ramseier, E., & Brühwiler, C. (2003). Herkunft, Leistung und Bildungschancen im gegliederten Bildungssystem: Vertiefte PISA-Analyse unter Einbezug der kognitiven Grundfähigkeiten. *Schweizerische Zeitschrift für Bildungswissenschaften* 25(1), 23-58.
- Renner, B., & Schwarzer, R. (2005). *Risk and Health Behaviors. Documentation of the Scales of the Research Project: Risk Appraisal Consequences in Korea (RACK)*. (Second ed.). Bremen: International University Bremen & Freie Universität Berlin.
(Retrieved on 18/03/2013 from <http://www.gesundheitsrisiko.de/docs/RACKEnglish.pdf>)
- Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.
- Rosenstiel, L. v., Falkenberg, T., Hehn, W., Henschel, E., & Warns, I. (1982). *Betriebsklima heute*. Munich: Bayerisches Staatsministerium für Arbeit und Sozialordnung.
- Ryan, P. (2001). The school-to-work transition: A cross-national perspective. *Journal of Economic Literature* 39(1), 34-92.
- Sacchi, S. (2011). *Construction of TREE Panel Weights. Documentation for the Panel Waves from 2000 to 2010*. Basel/Zurich: TREE & cue sozialforschung.
- Schelsky, H. (1956). Soziologische Bemerkungen zur Rolle der Schule in unserer Gesellschaftsverfassung. In H. Schelsky (Ed.), *Schule und Erziehung in der industriellen Gesellschaft* (5th ed.), Würzburg: Werkbund-Verlag, 9-50.
- Schmidt, K.-H., Hollmann, S., & Sodenkamp, D. (1998). Psychometrische Eigenschaften und Validität einer deutschen Fassung des "Commitment"-Fragebogens von Allen und Meyer (1990). *Zeitschrift für Differentielle und Diagnostische Psychologie* 19, 93-106.
- Schoon, I., & Silbereisen, R.K. (Eds.) (2009). *Transitions from School to Work. Globalization, Individualization, and Patterns of Diversity*. Cambridge et al.: Cambridge University Press.
- Schulz, U., & Schwarzer, R. (2003). Soziale Unterstützung bei der Krankheitsbewältigung: Die Berliner Social Support Skalen (BSSS). *Diagnostica* 29(2), 73-82.
- Schwarzer, R. (2000). *General Perceived Self-Efficacy in 14 Cultures*. Retrieved on 18/03/2013 from <http://userpage.fu-berlin.de/~health/world14.htm>.
- Schwarzer, R., & Jerusalem, M. (Eds.) (1999). *Skalen zur Erfassung von Lehrer- und Schülermerkmalen. Dokumentation der psychometrischen Verfahren im Rahmen der Wissenschaftlichen Begleitung des Modellversuchs Selbstwirksame Schulen*. Berlin: Freie Universität Berlin und Humboldt-Universität zu Berlin.
- Semmer, N. (1997). Stress. In H. Luczak & W. Volper (Eds.), *Handbuch Arbeitswissenschaft*. Stuttgart: Schäfer-Pöschel Verlag, 332-340.
- Semmer, N. K., & Mohr, G. (2001). Arbeit und Gesundheit: Konzepte und Ergebnisse der arbeitspsychologischen Stressforschung. *Psychologische Rundschau* 52(3), 150-158.
- Semmer, N. K., Tschan, F., Meier, L. L., Faccin, S., & Jacobshagen, N. (2010). Illegitimate tasks and counterproductive work behavior. *Applied Psychology: An International Review* 59(1), 70-96.
- Semmer, N., & Udris, I. (2004). Bedeutung und Wirkung von Arbeit. In H. Schuler (Ed.), *Lehrbuch Organisationspsychologie* (3., vollständig überarbeitete und erweiterte Auflage), Bern: Huber, 157-195.
- Semmer, N., Zapf, D., & Dunckel, H. (1999). Instrument zur Stressbezogenen Tätigkeitsanalyse (ISTA). In H. Dunckel (Ed.), *Handbuch psychologischer Arbeitsanalyseverfahren*, Zurich: vdf Hochschulverlag an der ETH, 179-205.
- Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research* 46(3), 407-441.

- Sheldon, G. (1995). *Die berufliche Flexibilität im Spiegel der Zeit*. Bern: Swiss Federal Statistical Office.
- Solga, H., & Trappe, H. (2000). Die duale Ausbildung: Ambivalenzen veränderter Übergangsbioographien. *Zeitschrift für Berufs- und Wirtschaftspädagogik* 96(2), 244-260.
- Spence, M. (1973). Job market signalling. *Quarterly Journal of Economics* 87, 355-379.
- Stalder, B. E., Meyer, T., & Hupka-Brunner, S. (2008). Leistungsschwach - Bildungsarm? Ergebnisse der TREE-Studie zu den PISA-Kompetenzen als Prädiktoren für Bildungschancen in der Sekundarstufe II (Are low achievers necessarily dropouts? PISA scores as predictors of upper secondary graduation. Findings from the Swiss PISA follow-up TREE). *Die Deutsche Schule* 100(4), 436-448.
- Szydlik, M. (2008). Intergenerational Solidarity and Conflict. *Journal of Comparative Family Studies* 39(1), 97-114.
- Titze, H. (2000). Zensuren der modernen Gesellschaft. Zur Selbstbeurteilung und Fremdbeurteilung schulischer Leistungsdifferenzen. *Die Deutsche Schule* 6, 49-62.
- TREE (2016). *Concepts and Scales. TREE1 Survey Waves 1 to 9, 2001–2014*. Bern: TREE.
- Troltsch, K., & László, A. (2000). Veränderungen der Ausbildungschancen an der ersten Schwelle seit Ende der achtziger Jahre. In Bundesinstitut für Berufsbildung (Ed.), *Ausbildungschancen Jugendlicher ausländischer Herkunft. Ergebnisse, Veröffentlichungen und Materialien aus dem BIBB. Stand: Mai 2000*. Bonn, 49-52.
- Ulich, K. (1991). Schulische Sozialisation. In K. Hurrelmann & D. Ulich (Eds.), *Neues Handbuch der Sozialisationsforschung* (4th ed.), Weinheim: Beltz, 378-396.
- Vondracek, F. W. (1990). A developmental-contextual approach to career development research. In R. A. Young & W. A. Borgen (Eds.), *Methodological Approaches to the Study of Career*, New York: Praeger, 37-56.
- Watermann, R. (2000). *Berufliche Wertorientierungen im Wandel. Eine Kohortenanalyse zur Dynamik arbeitsbezogener Einstellungen anhand von ALLBUS-Umfragedaten*. Münster: Institut für sozialwissenschaftliche Forschung e.V.
- Wolff, H.-G., & Moser, K. (2009). Effects of networking on career success: A longitudinal study. *Journal of Applied Psychology* 94(1), 196-206.