

Transitionen von der Erstausbildung ins Erwerbsleben Transitions de l'Ecole à l'Emploi Transitions from Education to Employment





# **TREE PROJECT DOCUMENTATION 2000-2012**

TREE, Basel 2013

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# CONTENTS

ntroduction	4
Project Overview and Context	5
Project objectives	6
Theoretical and conceptual framework	6
Survey Design and Sample Response rates	<b>9</b> . 11
Instruments and Measures	. 13
Structure of TREE Data and Documentation	. 14
Recommendation for Data Source Citation	. 17
Contacts	. 17
Project structure, organisation and funding	. 18
TREE Collaborators	. 19
References	. 20

## INTRODUCTION

The present document describes the framework of the TREE project (Transitions from Education to Employment) and provides a technical documentation in summary fashion. It is intended for those interested in the theoretical and conceptual details of the TREE youth panel survey as well as specific methodological and technical aspects of the survey design. We would like to call to mind that TREE is designed as a social science infrastructure project providing an open platform to make data available to the scientific community.

With this in mind, the following document should be of particular interest to researchers with intentions of using 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 chapter *Structure of TREE Data and Documentation* (p. 14) to assist users in navigating their way through the complex makeup of the database(s).

The documentation refers to data as it has been collected, processed and prepared for further use as of February 2013. Of course, in an ongoing panel study, collection, processing and preparation of data by definition are always *work in progress* and of 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.

Basel, March 2013

Prof. Dr. Max Bergman Dr. Sandra Hupka-Brunner Thomas Meyer

# PROJECT OVERVIEW AND CONTEXT

TREE is the first and so far only longitudinal study in Switzerland to comprehensively survey the postcompulsory educational pathways of young people and their entry into the labour market. TREE 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 in yearly surveys from 2001 to 2007. An eighth follow-up survey has been carried out in 2010. The sample is representative both nationally and for the Swiss language regions. Apart from the Canadian *Youth in Transition Survey*, TREE is the only other panel survey worldwide based on the PISA 2000 sample.

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 *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).

year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ø age of sample	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<i>Transition progress of sample</i>	End of compulso ry school	Trans	itions fr . to upp	om lowe er sec.	er	Trar	sitions	from up	per sec.	to tertiary ransition or con	y level or s from te solidatior	labour m rtiary lev of labou	narket el to labo ur marke	our marke t entry	et	
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 & funding		TRE	EE pha	ase 1		TRE	E pha	ise 2		TREE	phase	3		TREE	phase	4



Bold: completed; *italic: planned* 

In the second stage of TREE (four more annual follow-up survey panels 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 tracks.

In a third, ongoing phase (2008-2012), another survey was carried out in 2010. By then, the cohort under study had been out of compulsory school for ten years. In-depth analysis of the survey data from the panel waves from 2001 to 2010 is another key objective in this phase. Un upcoming fourth phase shall include yet another, ninth survey wave in 2014, by which time the sample shall be thirty years old on average.

## **Project objectives**

TREE 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 transition 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 engaged in 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 and have complemented them by introducing some additional ones. This enabled TREE to check for relationships between socio-economic and socio-cultural factors, 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 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 academic groundwork for specific education, labour market, and social policy measures.

## Theoretical and conceptual framework

For some time, school-to-work transition has been taking place in a less straightforward fashion as had been the case for previous generations of school leavers (Raab 1996, Bowers, Sonnet & Bardone 2000, OECD 2000, Solga & Trappe 2000, Troltsch & 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 & Löhrer 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 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 few countries such as Germany and Austria<sup>1</sup>. TREE for the first time in Switzerland has carried out a panel survey that is representative for an entire national school leavers cohort.

TREE results so far clearly confirm the trend also observed internationally of delayed and discontinuous transitional pathways. Only slightly more than half of the school leavers cohort of 2000 surveyed by TREE

<sup>&</sup>lt;sup>1</sup> 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.

had managed to enter and pass through (certifying) upper secondary education and training without experiencing any delays and interruptions (BFS/TREE 2003, Keller, Hupka & Meyer 2010). Accordingly, the number of youths graduating from upper secondary level 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 also marked by considerable discontinuities (Meyer 2005; Stalder, Meyer, & Hupka, 2008, Bergman et al. 2011). 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 (i.e. youths in intermediate, non-education activities or work placements, or who are not economically active, or unemployed and not registered as such, etc.). Owing to rich data on the context conditions of these dynamic processes (see the section "Instruments and measures", p.14), TREE data 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.



### Figure 2: Theoretical frameworks

There is no overarching theoretical model to aptly account for transition processes and their determinants in all their complexity (Feij 1998). Assuming that in a meritocratic education system achievement should be the key factor for status attainment, it can be held 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 an eminent 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. Based on this, 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 applied in the TREE surveys so far refer to sociological theories of status reproduction, on one hand (Bourdieu 1977, 1982, Büchner 2003; for an overview on 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. On the other hand, there is the distinction introduced by Boudon between primary and secondary 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.

In 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).

In regard to the transition from lower to upper secondary education, TREE also leans on theories of occupational choice (Herzog, Neuenschwander & Wannack 2004). Analysis of upper secondary level 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), 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, TREE is based on the sample of youths who participated in the Swiss PISA survey of 2000 (see also Sacchi 2008). The TREE sample includes all participants who

- had attended a regular public school at the lower secondary level at the time of the PISA survey<sup>2</sup>;
- and had finished compulsory education at the end of the 1999/2000 school year.

The TREE sample is representative for Switzerland as a whole, the Swiss language regions (German, French, and Italian-speaking Switzerland) and for selected cantons (Berne, Geneva, Ticino, St. Gallen).

### 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.

### *TREE SURVEYS 2001-2004*

The first four TREE panel waves mostly used standardised written questionnaires.<sup>3</sup> 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 3). 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.

### *TREE SURVEYS 2005-2010*

The TREE panel waves 5-8 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 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 refused to answer questions by phone were sent a written questionnaire containing the same questions. In this case, too, the answers to the (basic) questionnaire were used to determine which supplementary questionnaire attuned to the individual education or employment situation would be sent to respondents.<sup>4</sup> At each stage of the survey, delayed responses were followed-up by at least one reminder.

<sup>&</sup>lt;sup>2</sup> In Italian-speaking Switzerland, unlike in French and German-speaking Switzerland, school leavers from private schools were also included in the sample.

<sup>&</sup>lt;sup>3</sup> 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 standardized written questionnaires as the less costly means of surveying.

<sup>&</sup>lt;sup>4</sup> In the panel waves 2007 and 2010, we refrained from using the individualised, two-step procedure in case of the written interview because of the considerable time and logistics involved. Instead, the respondents received a standard questionnaire not differentiated by education and employment situation containing the complete set of TREE questions.

### 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 TREE would be satisfied. In approximately 700 cases, respondents were later excluded from the TREE sample even though they had participated in the TREE panel surveys.

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

- The respondent had not stated express refusal to participate in the TREE panel (or the future followups).
- Contacting of the respondent was possible.
- The respondent had not left Switzerland for good.



### Figure 3: Survey design, 2000-2010

### SURVEY IMPLEMENTATION

The TREE surveys took place on a yearly basis between February and June. TREE conducted the first four panel waves 2001-2004 without any outside assistance, mainly from project headquarters (at the time) in Berne. TREE trained and supervised survey administrators and interviewers, who were put in charge of distributing, keeping track of, and following up on questionnaires, and were responsible for conducting telephone interviews and for address management. For the subsequent four panel waves (2005-2007 and 2010) 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).<sup>5</sup> The interviewers were recruited by the institutes and, in close cooperation with TREE, jointly trained.

<sup>&</sup>lt;sup>5</sup> The 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.

### 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 for participation, thus also facilitating participation of youths uncomfortable with extended reading and writing activities. In three of the seven 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 TREE 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 is made publicly available on the TREE website (www.tree.unibas.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.

### **Response rates**

Across all seven panel waves from 2001 to 2007, TREE has achieved wave-specific response rates of 85-89% (Fig. 4)<sup>6</sup>. These rates are remarkably high considering the heterogeneous sample structure and so-phisticated survey design. In wave 8, response was considerably lower than throughout the first seven waves (75%). When taking into account, however, that there was a lag of three years between waves 7 and 8 (instead of just one year in the previouss surveys), this retention rate can also be considered as satisfactory. After eight follow-up surveys, gross sample size still exceeds 4,500. Thus, TREE shall be able to contact the equivalent of 70% of the 2001 initial TREE sample when it comes to launching the next survey wave.

Survey year	2000	2001	2002	2003	2004	2005	2006	2007	2010
Gross sample	* 11,710	6,343	5,944	5,609	5,345	5,060	4,852	4,659	4,571
Responses (N)	** 6,343	5,528	5,206	4,877	4,679	4,506	4,133	3,979	3,424
Return rate		Ī							
% of wave	54%	87%	88%	87%	88%	89%	85%	85%	75%
% of 2001 survey			82%	77%	74%	71%	65%	63%	54%

### Figure 4: TREE return rates, 2000-2010

\* Sample base \*\* Address survey: willingness to participate in TREE panel survey

<sup>&</sup>lt;sup>6</sup> Completion of final data cleansing in summer 2008 may have resulted in slight changes compared to figures published earlier.

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, return rates were much lower in other cantons at that time (e.g. 32% in Zurich; Sacchi 2008).

Survey year	2001	2002	2003	2004	2005	2006	2007	2010
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%
CATI/ basic questionnaire only					19%	16%	17%	15%
No response, refusal to partici- pate in a single wave	7%	8%	10%	8%	9%	13%	13%	23%
Final refusal, left Switzerland, invalid address etc.	6%	5%	3%	4%	2%	2%	2%	2%
Total N (=100%; gross sample)	6,343	5,944	5,609	5,345	5,060	4,852	4,659	4,571

Figure 5: Return rate from 2001 to 2010 by type of response

\* 2007 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 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 with migration 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, 2008).

## 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 them and are affected by them. Figure 6 gives a rough overview of concepts employed by TREE and the sources they are derived from. A separate document titled *Concepts & Scales* (TREE 2013) 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 chapter Structure of TREE Data and Documentation, p. 14.

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, persisten- cy, 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, cen- tral life domains and professional career	TREE, based on Baillod (1992), Bruggemann, Groskurth & Ulich (1975); Neuenschwander (1998), Neuenschwander, Her- zog & 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 (educa- tion/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

### Figure 6: Concepts and scales, 2001-2010

# STRUCTURE OF TREE DATA AND DOCUMENTATION

This documentation refers to TREE data obtained and edited as of December 2011. 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) has been omitted from the datasets to guard against disclosure of individual respondents.

Primary data and datasets containing variable and value labels are available in SPSS format. Interested users not equipped for processing this format may contact the TREE project administration or the FORS Data archive in Lausanne for assistance (see Contacts p. 17).

Dataset	Documentation
PISA 2000	
PISA-TREE_2000_Version_xxxx.sav	<ul> <li>PISA_2000_manual_original-variables.pdf</li> <li>PISA_2000_Codebook_complementary_2010.pdf</li> <li>PISA_2000_Technical_Report_original-variables</li> <li>PISA_2000_Questionnaire_School_English.pdf</li> </ul>
	<ul> <li>PISA_2000_Questionnaire_Student_English.pdf</li> </ul>
	- http://pisa2000.acer.edu.au/downloads.php
TREE 2001-2010	
TREE_data_wave-1-2001_version_xxxx.sav	TREE_codebook_wave-1-2001_version_xxxx_en.pdf
TREE_data_wave-2-2002_version_xxxx.sav	TREE_codebook_wave-2-2002_version_xxxx_en.pdf
TREE_data_wave-3-2003_version_xxxx.sav	TREE_codebook_wave-3-2003_version_xxxx_en.pdf
TREE_data_wave-4-2004_version_xxxx.sav	TREE_codebook_wave-4-2004_version_xxxx_en.pdf
TREE_data_wave-5-2005_version_xxxx.sav	TREE_codebook_wave-5-2005_version_xxxx_en.pdf
TREE_data_wave-6-2006_version_xxxx.sav	TREE_codebook_wave-6-2006_version_xxxx_en.pdf
TREE_data_wave-7-2007_version_xxxx.sav	TREE_codebook_wave-7-2007_version_xxxx_en.pdf
TREE_data_wave-8-2010_version_xxxx.sav	TREE_codebook_wave-8-2010_version_xxxx_en.pdf
TREE datasets covering several waves	
TREE_data_certificates_2001-2010_version_xxxx.sav	TREE_codebook_certificates_2001-2010_version_xxxx.pdf
TREE_data_weights_wave1-8_version_xxxx.sav	<ul> <li>TREE_codebook_weights_wave1-8_version_xxxx.pdf</li> <li>Sacchi_2008_TREE_longitudinal_weights_English.pdf</li> </ul>

Figure 7: Overview of primary data and documentations

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 also contains - beyond primary data, codebooks and labels - the original questionnaires on which data collection was based.

### 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).
- *PISA\_2000\_Questionnaire\_School\_English.pdf* and *PISA\_2000\_Questionnaire\_Student\_English.pdf* contain the German school and student questionnaires for the Swiss PISA 2000 survey. They provide information on the so-called "national" PISA variables, that is variables specifically defined for Switzer-land 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, st17*n*01 as the national code for the language spoken at home.
- All international documentations, including the codebooks for the datasets, are available at the website <a href="http://pisa2000.acer.edu.au/downloads.php">http://pisa2000.acer.edu.au/downloads.php</a>

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 TREE DATASETS

The wave-specific datasets containing the primary data from the seven TREE panel surveys 2001-2010 are named *TREE\_data\_wave-x-20xx\_version\_xxxx.sav*. They are described in codebooks named *TREE\_codebook\_wave-x-20xx\_version\_xxxx\_en.pdf*.

### TREE DATASETS COVERING SEVERAL WAVES

*TREE\_data\_certificates\_2001-2010\_version\_xxxx.sav* contains information on certification status at the time of the latest valid survey participation (see the codebook *TREE\_codebook\_certificates\_2001-2010\_version\_xxxx* for details).

The dataset *TREE\_data\_weights\_wave1-8\_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\_2008\_TREE\_longitudinal\_weights\_English.pdf.* Additional important information is provided in the respective codebook *TREE\_codebook\_weights\_wave1-8\_version\_xxxx.pdf.* 

Provision of data does not end with this publication. We will continue to prepare TREE data collected but not yet released and make it available for public use. For more information on progress of this endeavour, please contact the TREE project management.

## **RECOMMENDATION FOR DATA SOURCE CITATION**

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

The Swiss youth panel study TREE (Transitions from Education to Employment; www.tree.unibas.ch) runs since 2000 and has since been funded by the Swiss National Science Foundation, the University of Basel, the Swiss Federal Office of Statistics, the Federal Office of Professional Education and Technology, and the cantons of Berne, Geneva and Ticino.

## CONTACTS

TREE (Transitions from Education to Employment) Seminar für Soziologie der Universität Basel Petersgraben 27

4051 Basel/Switzerland

Phone: ++41 (0)61 267 28 28 Mail: <u>tree@unibas.ch</u> Web: <u>www.tree.unibas.ch</u>

FORS Data Archive c/o Université de Lausanne Bâtiment Géopolis CH-1015 Lausanne/Suisse

Phone: ++41 (0)21 692 37 14 Web: http://www2.unil.ch/daris/?lang=en

## PROJECT STRUCTURE, ORGANISATION AND FUNDING

As of 2008, TREE is located at the Institute of Sociology at the University of Basel in spring 2008. The Swiss National Science Foundation has adopted TREE as one of its major social science infrastructure projects. The University of Basel and other project partners also make significant financial commitments to the project.

Overall responsibility for TREE at the University of Basel lies with Prof. Dr. Max Bergman at the Institute of Sociology. He co-directs the project along with Thomas Meyer, education sociologist and project initiator, and educational scientist Dr. Sandra Hupka-Brunner. For a complete list of academic personnel involved in TREE, see the section "TREE collaborators" (p. 18).

An internationally composed academic advisory board provides assistance in matters relating to methodology and strategies of research and analysis

(for details, see TREE website http://tree.unibas.ch/en/the-project/tree-advisory-board/\_).

From 2000 to 2007 TREE has been led by a consortium consisting of the departments of education of the cantons Berne, 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 (OPET).

# TREE COLLABORATORS

Name	Function	with TREE since
Bergman, Max, Prof. Dr.	Co-head of project, overall responsibility	2008
Hupka, Sandra, Dr.	Co-head of project, senior researcher	2003
Koomen, Maarten	Data management	2012
Meyer, Thomas	Co-head of project, senior researcher	1999
Müller, Barbara	Survey management	2013
von Rotz, Christina	Data management (head)	2008
Sacchi, Stefan, Dr.	Senior researcher	2003
Scharenberg, Katja, Dr.	Senior researcher	2013

Former scientific 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 Origoni (2005-2007), Francesca Pedrazzini-Pesce (2003-2007), Melania Rudin (2009-2012, Ruth Silver (2003-2008), Barbara E. Stalder (1999-2012), Feliciana Tocchetto (2002-2003).

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