Methodological Report on TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan

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List of abbreviations

AZE	Azerbaijan
BA	Bachelor
BHPS	British Household Panel Survey
CBS	Central Bureau of Statistics (Syria, Damascus)
CRRC	Survey of the Caucasus Research Resource Center
ETF	European Training Foundation
GCPR	Georgian Centre of Population Research (Tbilisi, Georgia)
GDP	Gross Domestic Product
GEO	Georgia
GER	Germany
GIT	General Interviewer Training Techniques
GGS	Generations and Gender Survey
HDI	Human Development Index
ICSR	International Centre for Social Research (Baku, Azerbaijan)
ID	Identification
IDP	Internally Displaced Person from Occupied Territories
ILO	International Labor Office
INTAS	International Association for the Promotion of Cooperation with Scientists from the Independent States of the Former Soviet Union
LIfBi	Leibniz Institute for Educational Trajectories (Bamberg, Germany)
LiK	Life in Kyrgyzstan
MA	Master
MBAO	Mountainous Badakhshan Autonomous Oblast
NEPS	National Education Panel
NGO	Non-Governmental Organization
OSCE	Organization for Security and Co-operation in Europe
PPP	Purchasing Power Parity
PPS	Probability Proportional to Size
PSU	Primary Sampling Units
RRS	Region of the Republic Subordination
RS	Random Start
SCLH	South Caucasus Life History
SI	Sampling Interval
SSU	Secondary Sampling Units
SWTS	School-to-Work Transition Surveys
TEW-CCA	Research project “Opportunities and Barriers at the Transition from Education to Work-A Comparative Youth Study in Azerbaijan, Georgia and Tajikistan“ (funded by VolkswagenStiftung)
TJK	Tajikistan
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization

Foreword

This methodological report introduces the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan. This international and interdisciplinary collaborative survey project targeted at young people aged 18 to 35 who finished or stopped formal education in the period 2006–2015 in Azerbaijan, Georgia and Tajikistan. Nationally representative surveys were reached via carrying out a multistage stratified random sampling in each country. Overall, 6002 standardized face-to-face interviews were successfully conduced: 2002 in Azerbaijan, 2000 in Georgia and 2000 in Tajikistan. This survey project is the great outcome of an intensive and fruitful collaboration of 20 senior and junior researchers, who were employed in the TEW-CCA project, as well as the great support of a large group of competent and well-trained 19 supervisors and 88 interviewers, who were engaged in the fieldwork of the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan. The TEW-CCA research consortium gratefully acknowledges funding for the project "Opportunities and Barriers at the Transition from Education to Work-A Comparative Youth Study in Azerbaijan, Georgia and Tajikistan" (TEW-CCA) from the VolkswagenStiftung for the period 2015–2019; funding initiative "Between Europe and Orient", call "Institutional change and social practice. Research on the political system, the economy and society in Central Asia and the Caucasus".

Chapter I of this report provides an overview of the general methodology of the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan. The implemented common standards and characteristics of the cross-national TEW-CCA survey project are described. Moreover, the household screening questionnaire and the screening criteria for identifying the target group are explained. The major part of the this overview chapter is dedicated to the presentation and detailed theory-driven and evidence based justification and explanation of the general logic and contents of the individual questionnaire. In a final section the general methodology and questionnaire contents of the TEW-CCA Youth Transition Surveys are set into context of previous youth transition surveys in the CCA region.

The following chapters add country-specific explanations of the methodology of the TEW-CCA Youth Transition Surveys in Azerbaijan (Chapter II), Georgia (Chapter III) and Tajikistan (Chapter IV). Detailed information is given on the process of questionnaire adjustments and translation, pretesting, interviewer recruitment and training, sampling procedures, fieldwork management, monitoring and quality control, and response rates. The Appendices of this methodological report contain the household screening and individual questionnaires for each country in English and all the versions of translations to national languages.

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Chapter I – General Methodology of the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan

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1. Introduction

This chapter introduces the general methodology of the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan. This collaborative survey project targeted at young people aged 18 to 35 who finished or stopped formal education in the period 2006–2015 in Azerbaijan, Georgia and Tajikistan. Nationally representative surveys were reached by carrying out multistage stratified random sampling in each country. In terms of geographical coverage, only a few regions within countries had to be excluded from the survey due to political and practical reasons. Overall, 6002 standardized face-to-face interviews were successfully conduced: 2002 in Azerbaijan, 2000 in Georgia and 2000 in Tajikistan.

This chapter starts with an explanation of the common standards and characteristics of the cross-national TEW-CCA survey project (Section 2). The need and benefits of building on institutional experience and a collaborative network of national survey expert are praised. The principles of conducting large-scaled and nationally representative surveys in a cross-country comparative design as well as the fulfilled standards of a cross-country comparative survey are expounded. Moreover, the specific nature of a retrospective life history survey is exemplified. In Section 3 the household screening questionnaire is shortly introduced. Section 4 justifies and explains the three central screening criteria, which all have to be fulfilled such that the respondent qualifies as a target person, defined as 18 to 35yo who finished or stopped formal education in the period 2006–2015.

The major part of this overview chapter is dedicated to the presentation and detailed explanation of the general logic of the individual questionnaire (Section 5). After giving a general overview on the logical structure of the different parts of the questionnaire, the single parts of the questionnaire are outlined. For each section it is exemplified what kind of questions are asked. Drawing on various theories of the transition to adulthood a theory-driven justification is given why specific topics are covered by questions. Next to a theory-based justification examples from the empirical literature are cited in order to illustrate the scientific relevance of the topics and the respective state-of-the-art.

In Section 6 the general methodology and questionnaire contents of the TEW-CCA Youth Transition Surveys are set into context of previous youth transition surveys in the Caucasus and Central Asia (CCA) region. A comparison is made to the Youth Transition Surveys of the European Training Foundation (ETF), the School-to-Work Transition Surveys (SWTS) of the International Labor Office (ILO) and the South Caucasus Life History (SCLH) Survey of the Caucasus Research Resource Center (CRRC) Armenia, Azerbaijan and Georgia that was funded by the International Association for the Promotion of Cooperation with Scientists from the Independent States of the Former Soviet Union (INTAS). Finally, Section 7 shortly introduces the interviewer questionnaire of the TEW-CCA Youth Transition Surveys.

2. Common standards and characteristics of the cross-national TEW-CCA survey project

2.1. Building on institutional experience and a collaborative network of national survey experts

The key success factors of the TEW-CCA Youth Transition Surveys were to build on the experience of renowned survey institutes and on a collaborative network of national survey experts in Azerbaijan, Georgia and Tajikistan.

Regarding the institutional experience the TEW-CCA Youth Transition Surveys were conducted by survey institutes with the appropriate research infrastructure and specialization in conducting large-scaled nationally representative surveys:

- The *International Centre for Social Research (ICSR)* in Baku, Azerbaijan, is a national research institution operating as an independent non-government and non-profit organization. The ICSR, under the auspices of the director Prof. Dr. Rajab Sattarov , is a renowned research institute that was in charge of several large-scaled nationally representative survey projects such as World Values Survey in Azerbaijan and the European Values Study in Azerbaijan.
- The *Georgian Centre of Population Research (GCPR)* in Tbilisi, Georgia, is a national research institution operating as an independent non-government and non-profit organization. The GCPR, under the auspices of the director Dr. Irina Badurashvili, is a renowned research institute that was in charge of several large-scaled nationally representative survey projects such as the Generations and Gender Program in Georgia (N=10,000 respondents 1st wave, N=8,300 respondents 2nd wave).
- The *SHARQ (ORIENS) Research Centre* in Dushanbe, Tajikistan, is a national research institution operating as an independent non-government and non-profit organization. The SHARQ (ORIENS) Research Centre, under the auspices of the director Dr. Saodat Olimova, is a renowned research institute that was in charge of several large-scaled nationally representative survey projects such as: Tajikistan Household Life Standard Survey (2007, 2009, 2011), Survey of Public Opinion (biannually, 2003–2016), Life in Transition Survey III (2015), The Shadow and Informal Economy in Tajikistan (2006, for UNDP; 2015, for OSCE), Youth of Central Asia – Tajikistan (2014–2016, for Friedrich Ebert Stiftung), Governance, Youth Values and Life Styles in Central Asian Countries (2001, for UNESCO).

Regarding the collaborative network of national survey experts the TEW-CCA project united distinguished national experts from Azerbaijan, Georgia and Tajikistan. A multidisciplinary team of experts was formed. Capacities of interdisciplinary research were promoted by unifying experts from demography, economics, history, human geography, political science, psychology, sociology and statistics. This was done because the project requires a wide range of theoretical and methodological insights from these disciplines in order to guarantee the greatest success of the TEW-CCA Youth Transition Surveys. All project partners are renowned experts and they have published widely on project-relevant topics. The national experts are:

- Dr. Tair Faradov, a psychologist, is a Senior Research Fellow at the International Centre for Social Research (ICSR) in Baku (Azerbaijan)
- Prof. Dr. Rajab Sattarov is Associate Professor at the Department of Social Sciences and Psychology, Baku State University (Azerbaijan) and Director of the International Centre for Social Research (ICSR) in Baku (Azerbaijan)
- Dr. Irina Badurashvili, a demographer, is Director of the Georgian Centre of Population Research (GCPR) in Tbilisi (Georgia)
- Prof. Dr. Giorgi Meladze, a geographer and economist, is Associate Professor at the Department of Geography at I. Javakhishvili Tbilisi State University in Tbilisi (Georgia)

- Dr. Mamuka Nadareishvili is Georgian expert in statistics and a Professor at Ilia State University in Tbilisi (Georgia)
- Dr. Saodat Olimova is a sociologist and the director of SHARQ (ORIENS) Research Centre Research Center in Dushanbe (Tajikistan)
- Prof. Dr. Subhon Ashurov, an economist, is Professor for Labor Market and Labor Resource Development at the Technological University of Tajikistan, Dushanbe (Tajikistan)
- Prof. Dr. Muzaffar Olimov has an academic background in history, historiography and political science, is Professor International Relations Department at the Tajik National University and he is co-director of SHARQ (ORIENS) Research Center in Dushanbe (Tajikistan)

The senior national experts were supported by a well-educated and very motivated group of young scholars that were funded as PhD students and research associates by the VolkswagenStiftung in the TEW-CCA project. Moreover, a large group of competent and well-trained 19 supervisors and 88 interviewers were engaged in the fieldwork of the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan.

The TEW-CCA research network is headed by Prof. Dr. Michael Gebel, a sociologist and economist, who is Full Professor of Methods of Empirical Social Research at the University of Bamberg (Germany). He has experience in large-scaled data collection projects in his capacity as the scientific co-director of the National Education Panel (NEPS) Pillar 5 "Returns to Education over the Life Course" at the Leibniz Institute for Educational Trajectories (LIfBi) in Bamberg (Germany). There he is concerned with measuring the monetary and non-monetary returns to education in terms of labor market success, social and political participation, well-being and health at different stages of life. He has gained international survey experience as an international expert for the "Syrian Youth Transition Survey 2009", a large scaled nationally representative of 3847 young Syrians that was conducted by the European Training Foundation (ETF) in cooperation with the Syrian Central Bureau of Statistics (CBS).

Next to intensive and regular communication via emails, phone and video conferences regular workshops were a key factor of success to establish and maintain the intensive and fruitful collaboration across national borders, cultures and disciplines. Workshops were held in Bamberg (29 – 30 October 2014), Baku (27 – 30 November 2015), Dushanbe (30 May – 4 June 2016) and Tbilisi (19 – 22 October 2017). Depending on the progress of the TEW-CCA Youth Transition Surveys the national experts discussed the preparatory steps, progress and first results of the survey project.

2.2. Conducting large-scaled and nationally representative surveys

In order to gain detailed information about youths' transition from education to work the TEW-CCA research network conducted *large-scaled nationally representative* youth transition surveys in Azerbaijan, Georgia, and Tajikistan. The target group of the TEW-CCA Youths Transition Surveys in Azerbaijan, Georgia and Tajikistan was defined as young people aged 18 to 35 who finished or stopped formal education in the period 2006–2015. There were three central screening criteria, which all had to be fulfilled such that the respondents could be in the survey, and which are explained in Section 4 in detail.

The target of conducting a *large scaled survey* was reached via completing 2000 standardized face-to-face interviews of youths in each of the three selected countries. To reach the 2000 successfully completed interviews a much larger number of household contacts was necessary because there weren't eligible respondents in each household. The share of households with eligible respondents was rather small compared to other surveys because of the restrictive definition of the target group (for a justification, see Section 4). The large number of 2000 successfully conducted interviews in each country should provide the necessary statistical power to conduct multivariate statistical

analyses. Subgroup-specific analyses are only possible if such a large number of realized interviews is available. Nevertheless, despite the large number of 2000 successfully conducted interviews in each country there are limitations to subgroup specific analyses. For example, as explained in Section 5.9, there are restrictions to the statistical analyses of ethnic subgroups.

The aim of *nationally representative surveys* was reached via carrying out a multistage stratified random sampling in each country. The country-specific chapters of this methodological report outline the specific sampling techniques chosen in each country in detail. Due to national specificities the survey strategies slightly differ across countries. These differences were allowed in order to find the nation-specific best way of gaining a representative survey via random sampling techniques. In terms of national coverage it was the aim to include the whole national territories in the multi-stage sampling procedure. However, as it will be explained in the country-specific chapter of this methodological report in detail, a few regions within countries had to be excluded from the survey due to political and practical reasons. This applied to territories occupied by other countries and remote mountainous areas. Having a national focus has also important implication for the CCA countries Azerbaijan, Georgia and Tajikistan that are characterized by strong outward migration processes. Conclusions based on the TEW-CCA Youth Transition Surveys can only be made about the current residence population in each nation but not about the whole young generation of a country that partly migrated to other countries and that is residing abroad at the time of the survey. The restriction to the current national residence population was driven by scientific, practical and financial considerations. Specifically, the scientific focus of the TEW-CCA Youth Transition Surveys was on the school-to-work transition in the specific countries and not on explaining migration behavior. There would have been very strong practical and financial limitations of aiming at interviewing young migrant workers at different places around the world. Nevertheless, analyses and conclusions are still possible for return migrants. Section 5.6 explains which information were collected on the migration history of the respondents with migration experiences.

Implementing the principles of random sampling in the multistage sampling procedure as good as possible was the most important guideline in the TEW-CCA survey projects. Representativeness is only reached via *random sampling*. “Proving” representativeness of the survey by comparing the socio-demographic characteristics of the survey sample with national register and census data from statistical offices is strictly seen not possible from a scientific perspective (Schnell et al. 1999). While the congruence of the distribution of observed characteristics such as age or gender can be measured this does not apply to the multitude of other observed characteristics and especially all the unobserved characteristics that were not considered in such a “proof of representativeness”. Moreover, there are also practical limitations of such a comparison in the CCA countries analyzed (as in many other countries) because national register and census individual level data are often not available for scientific purposes or they are outdated because such official data collection projects do not occur regularly.[1]

The most important reason for not comparing the socio-demographic characteristics of the survey sample with national register and census data is the specific definition of the target group in the TEW-CCA Youth Transition Surveys. The target group definition is based on the dynamic process of leaving education and it is, thus, not comparable to cross-sectional (“snapshot”) register and census data of specific youth age groups. Specifically, national register and census data just provide data on age, gender and education level but not the date of leaving education (including education dropouts), which would be needed to form a comparable sample. Hence, it is the specific innovative feature of doing a dynamic life course analysis that does not allow a “proof of representativeness”, which is often provided in technical reports of “snapshot” age-based youth surveys. As a “proof of representativeness” is strictly seen not possible from a scientific perspective as explained above (Schnell et al. 1999), the TEW-CCA survey consortium decided to implement an innovative design

[1] However, the available official information from statistical offices was used to proxy the parameters of multistage stratified random sampling in the three countries.

instead of sticking to a "snapshot" age-based youth survey with all its limitations that are explained in the next subsection.

2.3. Implementing a retrospective life history survey

The aim of the TEW-CCA Youth Transition Surveys was to collect data that are not available in existing surveys (such as labor force surveys) in order to avoid a reproduction of known facts. Instead of taking a standard cross-sectional social-indicator based perspective, this survey project seeks to gain new insights by conduction a youth survey on the school-to-work transition process with *strong dynamic and longitudinal elements*. Specifically, longitudinal data on the dynamic processes of education attainment, labor market entry and the early work history were collected retrospectively. This is an improvement compared to many existing cross-sectional surveys in the CCA region that have a "snapshot" perspective on the situation of (young) people at the time of the interview. Such cross-sectional indicators do not capture several important features of the individual dynamics of school-to-work transitions, which can only be understood in a longitudinal data collection project.

Due to practical and financial restriction the longitudinal design was implemented via *retrospective questions*. Implementing a retrospective longitudinal survey is cheaper than a prospective longitudinal survey (= panel survey) because respondents have to be interviewed only one time. Furthermore, problems of panel attrition do not exist. However, retrospective questions bear the risk of recall bias. In order to minimize problems of recall bias only objective facts about the previous life events and experiences of young people were measured. Asking for subjective assessments of the past would have been much more subject to biased answer behavior because the respondent would have tended to reinterpret their past or simply they would have not been able to recall their past subjective assessments. In addition by focusing on young people the time period of recalling biographical information was kept short, particularly compared to standard life history surveys that also require mid-aged and older people to recall their education background and early labor market career.

A dynamic perspective has already been taken in the definition of the target group of the TEW-CCA Youth Transition Surveys. Traditionally, researchers consider young adulthood as a rather static period between the ages of 15 and 24 and, in recent years, the upper age limit has been increased to 29 or 34 given the strong post-secondary education expansion around the world. However, given the variation in life courses in real life, such static definitions based on age periods suffer from the problem that the same biological age may have different meanings for individuals of different education backgrounds (Hogan & Astone 1986). They also do not account for the fact that youth transitions are dynamic concepts that need to take the time dimension into account. Following the seminal survey work of the European Training Foundation in its school-to-work transition surveys on Ukraine and Serbia (European Training Foundation 2008) and Syria (Gebel 2012) the TEW-CCA Youth Transition Surveys adopted a *dynamic life course definition* in order to capture the transition from education to work for each individual. The target group was defined as young people aged 18 to 35 who finished or stopped formal education in the period 2006–2015 (for details see Section 4). In this way it is guaranteed that only respondents were included, who were in the period of their school-to-work transition, irrespectively of their specific biological age.

The TEW-CCA Youth Transition Surveys goes beyond the retrospective school-to-work transition surveys by collecting information on related life course events of the transition to adulthood as well. As it will be explained in Section 5 in detail, the school-to-work transition process needs be studied in the context of the broader conception of the transition to adulthood as there are interrelations between the school-to-work transition and processes of family formation and migration (Buchmann & Kriesi 2011, Corijn & Klijzing 2001, Gauthier 2007, Gebel & Heyne 2014, Grant & Furstenberg 2007). Retrospective information were gained on family formation processes as well as the history of living arrangements and regional and international migration experiences. Furthermore, detailed

information on the parental background were gathered. This allows researchers to investigate the relationships of various transition events in youth transition to adulthood. Compared to usual school-to-work transition surveys the TEW-CCA Youth Transition Surveys offers new opportunities to analyze how education and labor market careers of young people interrelate to demographic life courses (leaving parental home, marriage, childbirth, regional and international migration).

This life history design of the questionnaire is more demanding than usual survey questionnaires that just ask respondents about the current life situation. Hence, an intensive interviewer training was required to guarantee the success of the TEW-CCA Youth Transition Surveys. In each country-specific chapter of this methodological report the intensive interviewer training efforts and quality control measures are described, which were taken in order to ensure a high quality of the retrospective survey.

2.4. The logic of a cross-country comparative survey

The TEW-CCA Youth Transition Surveys were developed in a *cross-country comparative survey framework*. Surveys in Azerbaijan, Georgia and Tajikistan were conducted in order to gain new insights into the transition from education to work in countries of the Caucasus and Central Asia, two regions for which only limited knowledge and data on young people exist. Georgia, located at the Black Sea, and Azerbaijan, located at the Caspian Sea, are countries in the Caucasus. Tajikistan is a landlocked country in Central Asia sharing a border with China. These three CCA countries are of comparable size and have rather small population sizes (2016: ~9.8 million in Azerbaijan, ~8.7 million in Tajikistan, ~3.7 million in Georgia) (World Bank 2019).

There were also practical and financial reasons for the choice of Azerbaijan, Georgia and Tajikistan. From a practical perspective the TEW-CCA project consortium found reliable and well-established survey institutes and research partners in these three countries. As outlined above (see Section 2.1) building on institutional experience and a collaborative network of national survey experts were key factors for the feasibility and success of the comparative survey project. From a financial perspective the resources provided by VolkswagenStiftung were very generous but they only allowed conducting high quality, large scaled, nationally representative life history surveys in three countries.

Moreover, the cross-country comparative design was chosen because it generates new opportunities of *small-n comparative studies*. Azerbaijan, Georgia and Tajikistan represent an interesting cross-country comparative setting due to similarities (mainly in the institutional setting) and differences (mainly in the economic development and cultural/religious background) of the three countries. Based on the quantitative survey data it can be analyzed from a qualitative perspective how individual life courses, and the school-to-work transition in particular, are shaped by the social context in terms of the institutional, cultural and structural setting (Mayer 2004).

Azerbaijan, Georgia and Tajikistan have in common with many countries in the Caucasus and Central Asia and worldwide that they face the demographic challenge of a young population that needs to successfully make the transition to adulthood and economic self-sufficiency in an environment of increasing uncertainties (Elder et al. 2015, Lloyd 2005). Uncertainties stem from multiple causes. First, there are universal long-term trends causing uncertainties for youths such as globalization (Blossfeld et al. 2008). Second, in the specific context of post-socialist countries, the ongoing economic, institutional and social transformation processes have fundamentally shaped the transition process from education to work (Kogan et al. 2011). The demise of the socialist state and the emergent capitalist order put an end to former guarantees of lifetime employment and basic economic security for young people who are starting their labor market career. In contrast to post-socialist countries in Central and Eastern Europe that were not directly part of the Soviet Union, Azerbaijan, Georgia and Tajikistan experienced a very long and problematic transformation with sharp drops in economic growth during the 1990s. However, in the 2000s growth regained strength, particularly in Azerbaijan, which profited from its oil resources. Third, economic and political shocks

due to wars and revolutions in the South Caucasus and Central Asian region have added additional uncertainties to the life of young people. In times of unfavorable macro-economic conditions there are fewer job vacancies, which makes the transition to work problematic (Gangl 2002, Müller 2005).

All three countries also share the Soviet and socialist legacy. This is reflected, for example, in similarities in the structure of the education systems that were characterized by strong education-occupation linkages, strong vocational orientation and exclusive tertiary education systems in the socialist period (Gerber 2003). In the post-socialist period education-occupation linkages got lost, vocational education came under pressure and vigorous tertiary education expansion and differentiation took place in the post-Soviet countries (Kogan et al. 2011). This trend can be observed in Azerbaijan and Georgia and to a lesser extent in Tajikistan. Another similarity is the legacy of a socialist tradition of supporting female labor force integration and institutional support of it, which can be observed in other post-Soviet and post-Socialist societies as well (Gerber & Mayorova 2006, Kosyakova et al. 2017).

There is clear evidence that youths face great labor market problems in the three countries but there are cross-country differences in the extent and character of labor market problems. Comparable data, provided by World Bank, show that youth (15-24yo) unemployment (modeled ILO estimates) reaches 14.0% in Azerbaijan, 28.4% in Georgia and 19.2% in Tajikistan in 2018 (World Bank 2019), which reveals country differences in the capacity of bringing young people into work. Moreover, disadvantages in terms of job quality are reported for youths in general and young women in particular. Youths have smaller chances of finding a formal sector job and they often end up in jobs in the informal sector, which is of large size in all three countries Azerbaijan, Georgia and Tajikistan (ILO 2014).

Furthermore, there are economic and structural differences between the three countries. Azerbaijan reaches the highest level of economic development measured in GDP per capita, PPP (current international $) with $17,282 in 2016, followed by Georgia $10,024 and Tajikistan $2,985 (World Bank 2019). Differences in human development measured in terms of the Human Development Index (HDI) are less pronounced between Georgia (0.769) and Azerbaijan (0.759), whereas Tajikistan (0.627) registers again the least favorable conditions in 2016 (UNDP 2017). The three countries also differ in their religious backgrounds. While Georgia is dominated by Orthodox Christian tradition, Azerbaijan is mainly Shia Muslim and Tajikistan is mainly Sunni Muslim. All three countries have ethnic minorities: Talysh, Lezgins and Armenians in Azerbaijan, Armenians and Azeris in Georgia and Uzbeks in Tajikistan (for details, see the country-specific chapter of this methodological report). Outward migration is common in Georgia and Azerbaijan (Badurashvili 2009), and in Tajikistan this takes place in the form of seasonal migration for work to Russia (Olimova & Bosc 2003).

Comparing the situation of young people across the three countries provides qualitative insights into the moderating role of the institutional, cultural and structural context. Due to the specific design of the survey of sampling young people who have left the education system during the last ten years, opportunities of comparisons across time are limited.

2.5. Fulfilling the standards of a cross-country comparative survey

In order to gather survey data that can be used for cross-country comparative studies, the high standards of cross-country comparative surveys were applied. The reviews of the existing youth studies and surveys as well as lessons learned were very instrumental to develop a quality profile for TEW-CCA survey. The comparability of the data, its relevancy, accuracy, timeliness and fitness for purpose were determined as the main quality features of the survey (Harkness et al. 2010). These qualities were ensured in three ways.

First, considering the major challenges of cross-country, multilingual and multi-cultural surveys, the development of a source questionnaire, its adjustment and pretesting (target questionnaires) was an

act of intensive collaboration of national teams of experts within the TEW-CCA research network. In order to achieve the comparability of the data across the survey countries, the target questionnaires were considerably standardized. Simultaneously, the specific institutional, cultural and structural settings of each country were reflected and accordingly nation-specific adjustments were made based on the recommendations of the national survey experts (for details, see the country-specific chapters in this methodological report), still having the comparability of the data as a main goal. Thus the country-specific topics in more detail, such as the strong temporal/seasonal labor migration from Tajikistan to other countries, were introduced as additional questions into target questionnaires.

The translation of target questionnaires and choice of languages due to multi-lingual societies of the surveyed countries was another challenging aspect of the cross-country surveys (Mohler et al. 2016). Taking the ethnic composition and language abilities in each country into account, the languages for translation were chosen (for details, see the country-specific chapters in this methodological report). In order to reach linguistic and conceptual equivalence detailed annotation and documentation were used to ensure that the concepts and dimensions being tested are clear and identically defined in each country and translated in each language. The expertise of national institution, which also implemented the surveys on later stages, contributed greatly to achieve the high standards in this regard. The adjustment and translation of target questionnaires was followed by pretesting in each country, in order to check the equivalence of measures across different cultural backgrounds. Based on the pretest results, the final national and general adjustments were made (for details, see the country-specific chapters in this methodological report).

The specific composition of the working team engaged for the pretest of the target questionnaires can be considered as a major innovation in the pretesting phase. The team included staff from the coordinating team (University of Bamberg), senior national experts who also co-developed the source questionnaire and adjusted the target questionnaires, young scholars trained within the survey project as well as supervisors next to interviewers. This composition of the pretest team contributed to getting a more complete picture of the advantages and limitations of the questionnaires and a wide-range of ideas of how to lift off the limitations detected in the questionnaires during the final adjustment phase. The multi-disciplinary pretest team also helped a lot in assessing the fieldwork conditions and giving recommendations for the interviewer training, for improving the technical design of instruments and the coherency in the later stages of the survey implementation process.

The above steps taken during the questionnaire development, adjustment and pretest phase greatly contributed to ensuring the comparability, relevancy and fitness for purpose of the collected data within TEW-CCA survey project (Caspar et al. 2016, Johnson et al. 1997).

Second, after intensive fieldwork preparation, the survey implementation needed to be meticulously planned, conducted and documented in order to ensure the later accuracy of the data. Accordingly, the institutions for survey implementation were chosen based on their expertise and experience. They were involved in all phases of questionnaire development and survey design from the beginning of the project. The national survey institutes took a leading position in the sample design and fieldwork preparation process as well as in the development of fieldwork instruments (household screening, eligibility criteria etc.), which facilitated the training of interviewers and supervisors and fieldwork. The adequate design of the fieldwork instruments contributed to the detailed and efficient documentation of the fieldwork in general, which was crucial to calculate, for example, non-response rates. The intensive supervision of the survey implementation on three levels – the coordination center (University of Bamberg) at the cross-country/macro level, the national team leaders at the national/meso level and the supervisors at the fieldwork/micro level, contributed additionally to the accuracy of the gained data in particular (United Nations Department of Economic and Social Affairs 2005).

Third, the final data preparation process was coordinated by the coordination center (University of Bamberg). The central coordination of the data preparation helped to achieve a better coherency in

coding and preparing the codebooks and metadata. This step was taken in order to make the final survey data user friendly. Furthermore, the fundamental survey instruments for data analysis are published not only in English, but also in national languages, which gives data access and research opportunities to academics from the Central Asian and Caucasus countries. The publication of all survey instruments and metadata including the detailed survey methodology in English facilitates the data analysis for a bride group of future users and contributes to transparency in research (Harkness et al. 2010).

Based on the above arguments, it can be said that the TEW-CCA survey fulfills high standards of comparative survey within multinational, multiregional and multicultural contexts.

3. Household screening questionnaire

There were two questionnaires: one household screening questionnaire and one individual questionnaire. The household screening questionnaire was required to be filled out for each household visit including all unsuccessfully visited households.

Part 1 of the household screening questionnaire ("Overview: Household contact information and summary information about screening and interview") is a very important overview information sheet that needed to be filled out for each household that was successfully or unsuccessfully visited. Information about each contact trial were collected such as the name and ID of the interviewer[2], region and location of the household, date and time of the visit, information on the screening process and eligible persons as well as contact details of the household and target person (if existing) for further contact attempts. The information collected on the household screening was used to calculate the response rate and for monitoring purposes by supervisors. Details on the household screening, contact attempts and an exact calculation of response rates can be found in each country-specific chapter in this report.

Part 2 of the household screening questionnaire ("Introductory text for household contact person and screening question at household level") contains a standardized text that interviewers had to use to introduce themselves if someone opened the door. The screening at the household level was done to learn about the household composition and, most importantly, to identify eligible persons at the household level and to perform a random selection among the eligible household members. Next to the gender of each person in the household the interviewer collected information related to the screening questions such as

- ✓ the age of each household member,
- ✓ whether a household member is currently enrolled in education (only asked about the 18 to 35yo household members),
- ✓ in which year the household member finished or stopped education (only asked about the 18 to 35yo household members who are currently not enrolled in education)

Household members who fulfilled all eligibility criteria were marked and a random selection procedure (either last or next birthday method) was used to select one of the eligible respondents.

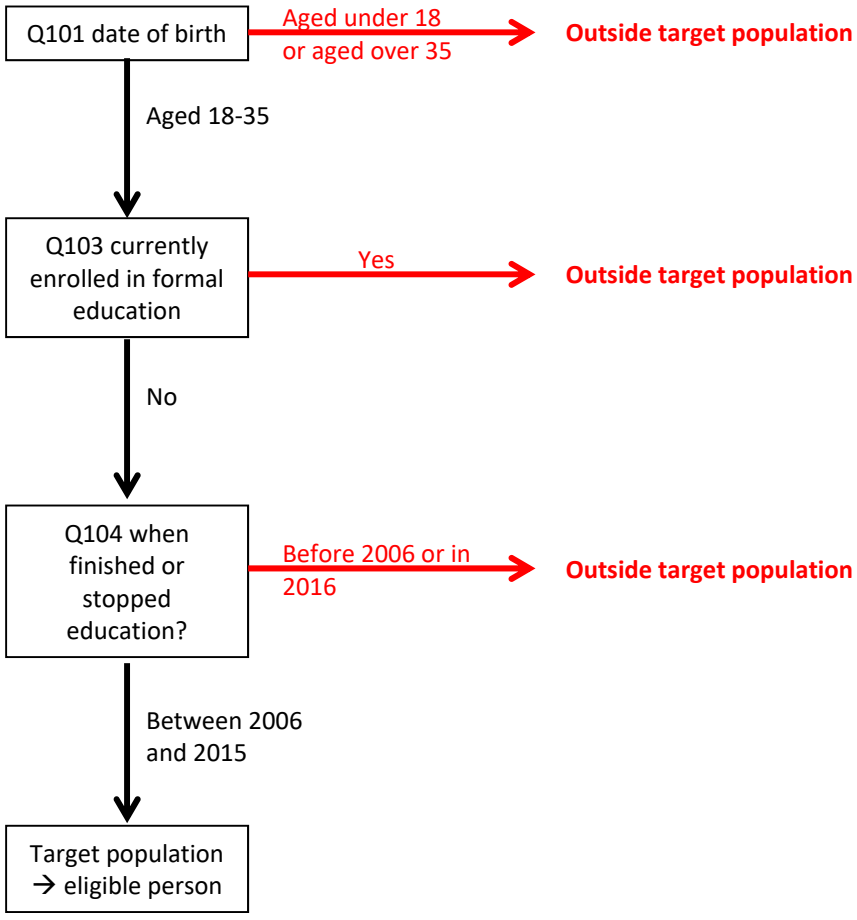
Part 3 of the household screening questionnaire ("Introductory text for target person") provided a standardized text for interviewers to introduce themselves to the selected target person. This text was only used if the contact person of the household was not the selected respondent.

[2] Names of interviewers are of course not reported in the data sets due to data protection regulations. The anonymous interviewer ID is used to merge the socio-demographic characteristics of the interviewer in terms of gender, age, education and work experience.

4. Target group: Eligibility criteria

The target group of the TEW-CCA Youths Transition Survey in Azerbaijan, Georgia and Tajikistan is defined as young people aged 18 to 35 who finished or stopped formal education in the period 2006–2015. There are three central screening criteria, which all had to be fulfilled such that the respondents could be in the survey. Figure 1.1 illustrates the screening questions.

Figure 1.1: Screening questions on eligibility criteria



Source: Own illustration.

Based on Q101 *young people aged 18-35* were selected. People who are older than 35 were excluded because the experience of the recent young generation is the research focus of the TEW-CCA Youth Transition Surveys. Persons who are younger than 18 were not considered because they have not yet collected enough experiences in their life to tell many interesting facts about their labor market entry, early work career and family formation. Moreover, the exclusion of minors circumvents special legal and ethical problems.

Based on Q103 only *young people aged 18 to 35 who are currently not in formal education* were selected. Young people who are still in the formal education system were excluded because the TEW-CCA project wants to understand the processes of transitioning from education to work, the early work career and family formation. Young people who are still in education usually have not yet experienced these processes. If this group was inside the target population completely different questions had to be asked, which would have changed the focus of the research project. The focus is

on young people who finished or stopped education instead because they can already tell about their experiences of looking for a job, finding a job and often about their family formation process. Furthermore, youths from different education background may experience completely different life course situations at the same age. For example, a graduate from lower secondary may have a job at age 18, being married and have a child, whereas many university students just started their university studies at age 18 but they have neither worked nor formed a family yet. Having a focus on those young people aged 18 to 35 who are currently not in formal education guarantees that these young people are all at the same "life course stage" because they are not in the formal education system anymore and all of them experience the process of the early work career.

"Being in education" was defined in terms of formal education. Formal education means enrolment and active participation in formal education. This does not include informal education in terms of self-learning a foreign language at home or attending a computer course in the evening. Formal education programs (see the list provided in Q201) require the young people to be enrolled and actively participate in education in a formal education institution (private or public school/university/training center). Respondents are also classified as being in formal education if the respondent combines formal education with other activities (e.g. work). Pupils/Students on vacation or students who interrupted education due to paternity leave or illness are considered to be in formal education. Students with pending status (i.e. students waiting for being accepted to the next stage of education) are also considered to be enrolled in formal education if they neither work nor look for work at the moment of the survey and plan to continue study in the near future. Additional guidelines are given in the nation-specific questionnaire.

Based on Q104 only *young people aged 18 to 35 who are currently not in formal education and who finished or stopped formal education in the period 2006–2015* were selected. The focus is on the "event of leaving education" because this event is a universal event in the life course of young people.[3] The interviewer guidelines clarify that "finishing education" has to be interpreted as "successful completion/graduation" of the *last* education program the respondent was enrolled into and "stopping education" has to be interpreted as "failing/dropping out" from the *last* education program the respondent was enrolled into. Thus, both persons who successfully completed their last education and those who failed/dropped out were included. This is because it is the aim of the TEW-CCA project to understand the life courses of both groups. Restricting the survey to successful graduates would have resulted in a selective sample that may lead to biased estimates. Moreover, there is a research tradition in sociology that investigates the effects of education dropout on labor market success (Matković & Kogan 2012, Matković & Kogan 2014, Scholten & Tieben 2017).

The date of leaving education refers to the *last* education program the respondent attended. This means that respondents who interrupted their education career should report about the date of leaving their last education period, which is easier to remember. In general, the national experts consulted reported that the incidence of education interruptions is not as high in Azerbaijan, Georgia and Tajikistan. Moreover, due to the retrospective life course design, periods of work located between education spells are captured via questions on regular or casual work activities until the date of finishing education.

As outlined in the interviewer guidelines on the questionnaire the date of finishing education for successful graduates is defined as the date of attending the last course or participating in the last exam, and not to the date of receiving the certificate. This restriction is seen as important as the national experts reported that a substantial part of graduates receives certificates with a delay due to bureaucracy.

[3] Alternative early life course events such as "finding a first job" are too restrictive as many young people (especially women) do not engage in the labour market and as it is very difficult to define the first job. It has also been the aim of having "unsuccessful" unemployed education leaver in the survey who can report about their experiences of having left the education system but having been unsuccessful in finding a first job.

By focusing on people who experienced the event of leaving education *in the period 2006-2015* it is guaranteed that young people are interviewed who experienced their labor market entry during the same time period. Without having this restriction there would be both 35yo low-educated persons, who dropped out from lower secondary education at age 16 (i.e. in the year 1997), and 35yo high-educated persons, who just completed PhD studies at age 34 (i.e. in the year 2015), in the sample. Although having the same age they would have experienced their labor market entry in completely different time periods, which would make the comparison of labor market outcomes difficult. By restricting the time period of leaving education to 2006–2015 it is guaranteed that people left education between one year and 10 years ago. Thus, a representative sample of young people who experienced the event of leaving education not longer than 10 years ago is generated.[4] It was decided to exclude those who left education in 2016 because they have been out of education only for few months, which is too short to get any interesting information. Another advantage of the time period of leaving education to 2006–2015 is that recall bias is minimized with respect to the recording of educational trajectories and initial labor market history. Moreover, the TEW-CCA Youth Transition Surveys generate up-to-date information on youth transitions of cohorts that recently entered the labor market. Hence, it is avoided to collect information on education leaver cohorts whose entry was too long ago, which would not be relevant anymore for real-day politics. Additionally, it is guaranteed that respondents of different education backgrounds entered the labor market at the same time period (window of 10 years) and thus encounter usually the same institutional conditions and quite similar labor market conditions (with the exception of economic fluctuations) (European Training Foundation 2008). Furthermore, there would be an overrepresentation of low-educated people and underrepresentation of high-educated people without introducing the restriction of leaving education during the last 10 years. This is because most of the low educated persons left education at young ages (often before 18), thus having higher chances to be chosen among the 18–35yo who left education, whereas most of the high educated persons leaving education at later ages (often around 23–26), thus having much lower chances of being chosen among the 18–35yo who left education. A limitation of the restriction to respondents who left education during the last ten years is that the survey is focused on young people from similar birth cohorts, which does not allow cohort comparisons.[5]

Next to the individual screening criteria further restrictions of the target group were introduced via the guidelines of the household screening. By focusing the household selection on private households residents in certain types of non-private institutions such as hospitals, jails and military bases were excluded. By focusing on residents in private households in the national boundaries of the countries young people who migrated abroad and who were not present in the survey country during the survey period were excluded. This has important implications for the conclusions on the CCA countries Azerbaijan, Georgia and Tajikistan that are characterized by strong outward migration processes. Conclusions based on the TEW-CCA Youth Transition Surveys can only be made about the current residence population but not about the part of the young generation that migrated to other countries and that is not present in the survey country during the survey period. However, the scientific focus of the TEW-CCA Youth Transition Surveys is on the school-to-work transition in the specific countries and not on explaining migration behavior. There would have also been very strong practical and financial limitations of aiming at interviewing young migrant workers at different places around the world. Nevertheless, analyses and conclusions are still possible for return migrants.

[4] Due to the sample design it is expected that there should be an equal distribution of respondents across different years of finishing/stopping education: 10% of respondents finished/stopped education 1 year ago, 10% of respondents finished/stopped education 2 years ago, 10% of respondents finished/stopped education 3 years ago, …, 10% of respondents finished/stopped education 10 years ago. The actual percentages may deviate randomly.

[5] The latter is only possible in life history studies that include many different birth cohorts such as the Generations and Gender Surveys (GGS) or the Life in Kyrgyzstan (LiK) survey. However, such retrospective life history surveys have the problem of recall bias for older generations.

Section 5.6 explains which information were collected on the migration history of the respondents with migration experiences.

5. General overview of the individual questionnaire

Table 1.1 provides an overview of the different parts of the questionnaire. Each respondent had to answer each part of the questionnaire in this order, i.e. starting with Part I, then Part II, … until reaching Part IX. The ordering of the questionnaire mirrors the dynamic process of leaving education and entering working life. Retrospective questions were used to understand processes that took place in the respondents' biography. In contrast, cross-sectional data offer only a snapshot of the transition process and do not allow analyzing the individual dynamic process of searching for the first job as well as the early career dynamics. The dynamic character of the survey was complemented with very detailed retrospective data on individual education, socio-demographic and family background.

Table 1–1: Overview on parts of the individual questionnaire

Part I	Screening questions to define a target group, i.e. individuals aged 18-35, who finished or stopped formal education in 2006-2015
Part II	Situation before finishing or stopping formal education
Part III	Search for work after finishing or stopping formal education
Part IV	Situation after finishing or stopping formal education + Current economic activity
Part V	Family formation
Part VI	Living arrangements and residence changes
Part VII	Attitudes
Part VIII	Satisfaction and health
Part IX	Socio-demographic characteristics of the respondent

Source: Own illustration.

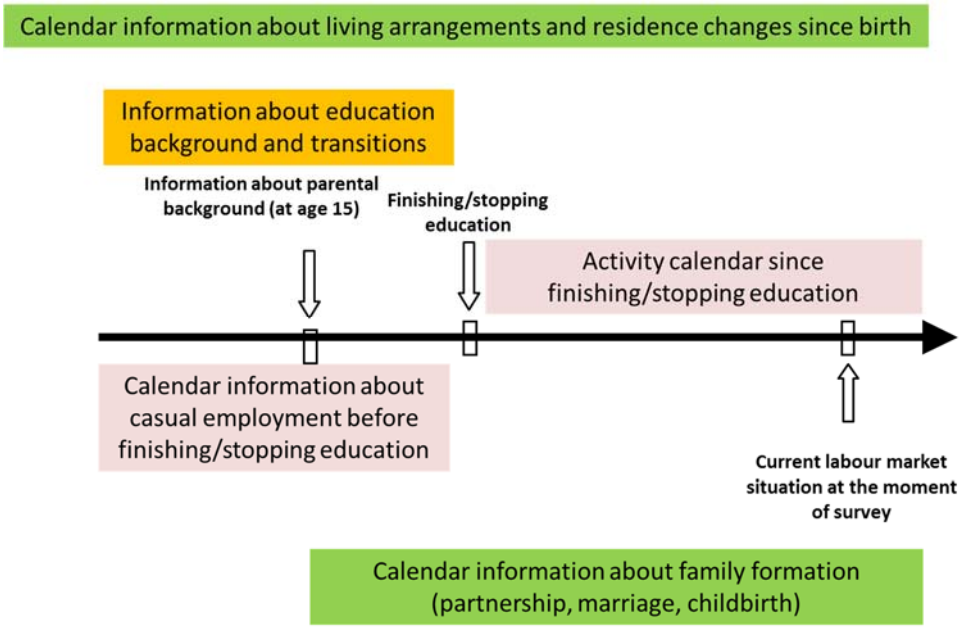
From a methodological point of view retrospective life history data have two key advantages. First, life course dynamics in terms of the timing of events and sequences can be studied. Second, the retrospective nature of the data eases causal inference as a time order is established.[6] A specific methodological drawback is the occurrence of recall errors if respondents do not remember the details of their life course. This problem was addressed by restricting the survey to respondents aged 18 to 35. In contrast to other retrospective life course surveys (such as the Generations and Gender Survey Program) that also collect data from the senior population it should be easier for the young people in the TEW-CCA Youth Transition Surveys to remember their education, work and family trajectories as well as their social origin.

The components of the questionnaire collect retrospective information on important youth transitions follow a standard sequence of youth transitions. Next to information on important events (such as education attainment, the current economic situation, etc.) biographical calendar

[6] However, anticipation effects may occur, i.e. the life course decisions are influenced by the anticipation of later life course events. This is a general problem that is not specific to retrospective life history data. It also occurs in prospective longitudinal data (=panel data) collection projects.

information (such as a work activity calendar or calendar of residence changes and calendar of family formation events etc.) were collected. Figures 1.2 illustrates the main components of the questionnaire following the standard life trajectory of young people.

Figure 1.2: Main components of individual questionnaire in a life course perspective



Source: Own illustration.

In the following more detailed information is provided for the rationale behind each part of the individual questionnaire.

5.1. Part I: Screening questions to define a target group

The survey questionnaire starts with a careful screening part in order to identify persons of the target group, i.e. individuals aged 18–35 who finished or stopped formal education in the period from 1 January 2006 till 31 December 2015. This part of the individual questionnaire repeats the screening questions that were already asked for all household members in the household screening questionnaire. This double screening is very important. The first screening in the household screening questionnaire can be done by any household member. The additional second screening in the individual questionnaire is very important for confirmatory purposes. Interviewers have to ask the selected respondent whether the selected respondent from household screening is really eligible. As household screening and individual questionnaire screening are often done by different persons the double screening guarantees that the selected respondent is really eligible.

5.2. Part II: Situation before finishing or stopping formal education

In Part II important information about the educational career and the work experiences the respondents gained *before* finishing or stopping formal education are collected. Based on this information very important insights about the role of education for later life chances (work, family formation, health/well-being) as well as about the role of previous work experiences before finishing/stopping education can be gained.

Part II collects detailed information on the education attainment of the respondent because education is seen as key factor influencing the individual labor market success. From a theoretical perspective various mechanisms have been identified as being crucial for understanding the labor market effects of education (van de Werfhorst 2011): the skills approach in the tradition of human capital theory (Becker 1993[1964]), the signaling and screening approaches (Spence 1973), as well as the social closure approach and structuralist explanations (Collins 1979, Doeringer & Piore 1971). Next to the labor market returns to education educations is also seen as beneficial for other life course outcomes such as civic engagement, well-being and health, etc. (Bela et al. 2018, Gebel & Heineck 2019, Hout 2012).

From a survey perspective a central question is how to measure education when estimating returns to education. Following human capital theory and assuming that education enhances productivity in a monotonic way, years of education is seen an appropriate indicator and usually used in Mincer-type earnings regressions (Mincer 1974). Shortcomings of this approach are that the linearity assumption that each additional increment in education yields a constant earnings premium is often not met. In addition, it is a challenge to calculate the exact time spent in education given part-time education as well as skipped and repeated classes (Gebel & Heineck 2019). Furthermore, the same amount of time spent in different levels and kinds educational programs may result in different levels and kinds of skill accumulation. Against this background, sociological studies mainly rely on differentiated measures of educational degrees. Taking the respective institutional structure of the national education systems into account, categorical variables of education were defined in international comparative studies on returns to education at labor market entry (Kogan et al. 2011, Shavit & Müller 1998). In addition to the horizontal differentiation across different levels of education, a specific focus is on the vertical differentiation in terms of various forms of vocational education (Kogan et al. 2011, Shavit & Müller 1998) as well as the field of studies (Noelke et al. 2012, Reimer et al. 2008, van de Werfhorst 2002).

In Part II Q201 is the key filtering question on education attainment. It is asked what the highest level of education or training was the respondent was enrolled into when finishing or stopping formal education (either with or without gaining of a certificate). Thus, it does not matter whether the respondent successfully completed the last education program or not (i.e. dropped out/failed). It also does not matter whether the respondent has already gained and received any certificate, i.e. is still waiting for the certificate. The time point refers to the date of leaving education asked in Q104. Q201 is a question just about the highest level of education or training and does not collect information about the education biography.

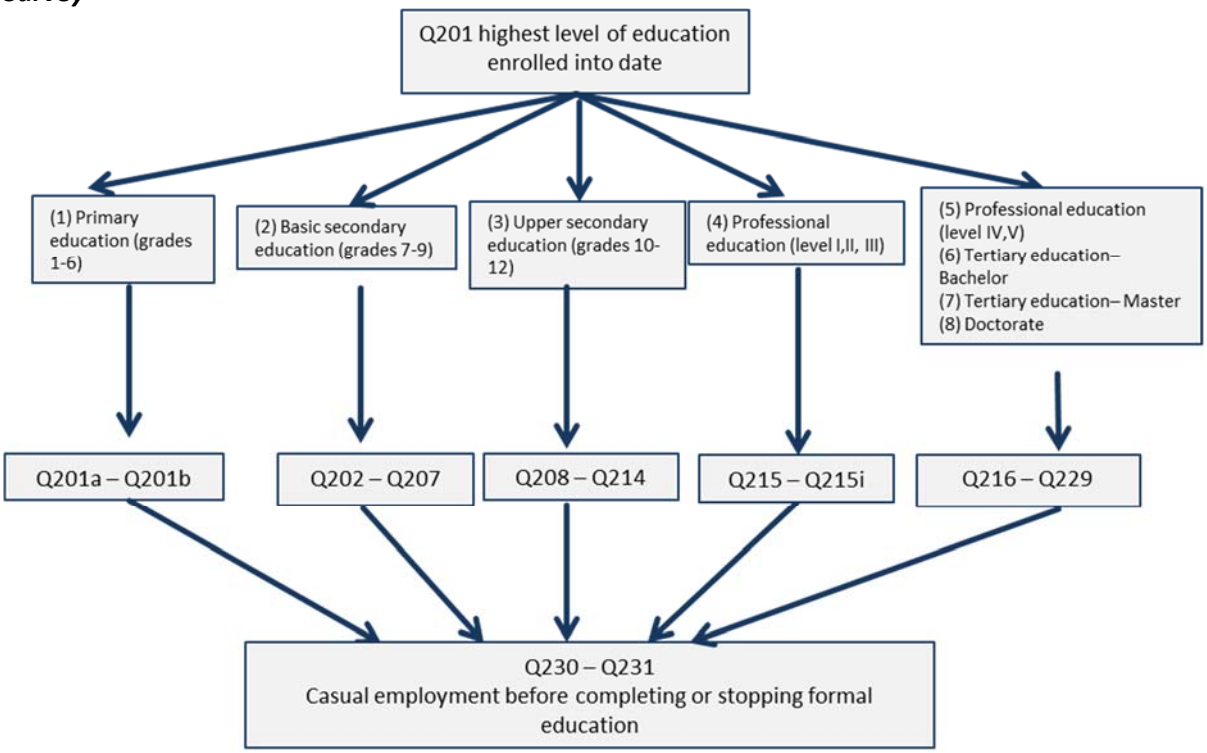
The answer categories provided in Q201 were developed in intensive consultations with national experts with regard to the institutional structure of the education and training system as well as based on pretesting in each country. The detailed consultations guarantee that the different education categories are clearly defined for the retrospective period of investigation and that every respondent is able to choose exactly one category. Due to national specificities of the institutional structure of the education and training system the answer categories of Q201 differ between the individual questionnaires for Azerbaijan, Georgia and Tajikistan. The chosen answer categories both reflect vertical dimensions of education stratification by distinguishing primary, secondary and post-secondary education as well as partly the horizontal dimensions by listing vocational education and training programs.

Based on the filtering question Q201 every respondent is asked specific details about his education background. Figure 1.3 illustrated the main filtering question Q201 and the structure of the questions in Part II of the individual questionnaire in the case of Georgia.

As education dropouts are a central research interest in school-to-work transition analyses (Matković & Kogan 2012, Matković & Kogan 2014, Scholten & Tieben 2017) detailed information on the incidence, timing (which grade/after how many years) and reasons of dropouts were collected for the highest education level attained.

Information about the overall grade of the certificate obtained was collected taking the specific grading system in each country but also the specificities of each level of education into account. In previous empirical studies the role of grades for the success in the school-to-work transition was examined (Bernardi 2003, Kogan & Gebel 2011, Matković 2011, Vuolo et al. 2014). In the case of Azerbaijan and Tajikistan information on the performance in the national exam that grantees access to post-secondary education was acquired from respondents who attended post-secondary education.[7] This information may act as an important control variable of pre-existing ability differences when comparing the returns to education of different post-secondary degrees.

Figure 1–3: Illustration of main filtering question Q201 in the Georgian TEW-CCA Youth Transition Survey



Source: Own illustration.

Information on institutional characteristics of the education program and education and training provider were gathered. Respondents who attended vocational/professional education should report on the way the vocational/professional education was organized. Previous research has highlighted the important role of links between employers and the education system that may reduce the information problems in the two-sided matching process at the transition from education to work (Shavit & Müller 1998). Links can be established when employers provide on-the-job training to students who are simultaneously enrolled in publicly financed education programs. This dual system education combines theoretical learning in schools with practical work experience in apprenticeships with firms (Shavit & Müller 1998). In contrast, in school-based vocational programs the vocational

[7] Information on the participation and performance in the national exam was not asked from respondents who did not attend post-secondary education. Thus, the TEW-CCA Youth Transition Survey is not appropriate to make an analysis on the performance in national exams as those who did not continue to post-secondary education (mainly those with low scores) have missing values on the national exam test score question. The reason for not asking this information was that the key objective of the TEW-CCA Youth Transition Survey is to study the effects of education on school-to-work transition and related transitions. Individual trajectories and performance within the education system were not the key focus of the survey project.

training is usually more general in its nature and the training components only take place in schools or training centers that are not related to firms. In apprenticeships, students obtain specific skills that are more likely to be up-to-date, in terms of production technologies, because these skills are acquired at the workplace (Gebel & Noelke 2011). Workplace-based training also creates an opportunity for employers to observe the productivity of students on the job. This screening process reduces information problems in subsequent hiring decisions (Breen 2005). In general, links between employers and the education system should facilitate the school-to-work transition (Kogan et al. 2011, Kogan & Unt 2008, Noelke & Horn 2014, Shavit & Müller 1998, Wolbers 2007b).

Respondents who attended post-secondary education were asked about their field of study. The field of study has been shown to be an important institutional dimension of horizontal differentiation in the post-secondary education system (Klein 2011, Noelke et al. 2012, Reimer et al. 2008, van de Werfhorst 2002). From a theoretical perspective it can be argued that fields of study differ in the way they are aligned to labor demand and the extent of organizational linkages between classrooms and workplaces (Noelke et al. 2012). It is expected that more specialized programs ease the transition from education to work. Professional associations support the occupational specificity of study programs by establishing organizational links between higher education and employers. In addition, mandatory on-the-job training (for example, in medicine and law) and internships reinforce the occupational orientation of the curriculum (Noelke et al. 2012).

Questions were also asked about whether the education institution attended was private or public and, at post-secondary level, what the source of funding of the study place was (state-budgeted versus tuition payed by the respondent or his or her family). These questions on the privatization and marketization of education address an important additional line of differentiation in the education system. Drawing on the literature on the labor market consequences of attaining prestigious, tuition-based, and private higher education institutions (Gerber & Cheung 2008, Shwed & Shavit 2006) Gebel and Baranowska-Rataj (2012) argue that the expansion of tuition-based and private study programs introduce a further institutional differentiation and new lines of inequality within the group of higher education graduates in post-socialist countries. It is expected that privatization eases labor market integration of tertiary graduates because private study programs often offer more labor market-oriented courses, maintain ties with firms, and are more flexible to adapt their curricula and their direction of specialization according to labor demand.[8] The distinction between state-financed and tuition-paying students is an important indicator of the study arrangement and financial burdens of the study and is expected to affect the labor market chances as well (Gebel & Baranowska-Rataj 2012). It also reflects ability differences as state-financed programs are usually reserved for (and also preferred by) the best applicants according to admission test rankings, grades from selected subjects in secondary school, or average matriculation grades, whereas applicants in the "second row", are placed into tuition-based study arrangements (Gebel & Baranowska-Rataj 2012, Gerber & Schaefer 2004, Simonová & Antonowitz 2006, Zhiliaev 2005).[9] In the questionnaire information was also acquired about studying full-time or part-time or by correspondence. Effects on the labor market performance are expected as part-time students often attend special evening and weekend courses and, thus, have less time to follow skill instructions due to the double burden of work and studies (Gebel & Baranowska-Rataj 2012). This also applies to persons studying by correspondence.

Due to the focus on the school-to-work transition capturing the details of the education trajectories of the persons was not a key topic of the TEW-CCA Youth Transition Surveys. Nevertheless, information was gathered on the kind of educational level attended before from respondents who

[8] However, there might be heterogeneity in terms of quality differences within the private higher education sector that could not be captured in the survey due to a problem of number of cases when making such a detailed subgroup analysis on the group of persons who attended private education institutions.

[9] However, these selection mechanisms might be set off by special regulations granting socially or regionally disadvantaged persons access to state-financed programs, corruption as well the financial incentives of entitlements to scholarships in state-financed programs (Gebel & Baranowska-Rataj 2012).

attended vocational/professional education and from respondents who attended post-secondary education. Furthermore, respondents who attended post-secondary education were required to report any additional vocational/professional or tertiary education (BA, MA, aspirantura, doctorate) that they followed before or after reaching the highest level of education. This information was requested because post-secondary education careers are sometimes not in a straight line. Examples are that people change their field of studies, make several degrees, decide to do secondary professional education after tertiary education (BA, MA, aspirantura, doctorate), or do secondary professional education first and then tertiary education (BA, MA, aspirantura, doctorate). Previous research has highlighted that this phenomenon takes place and influence the later labor market chances (Edeling & Pilz 2017).

After collecting the program-specific information on the highest education program attended all respondents are directed to Q230. Every respondent has to answer Q230 and Q231 about "Casual employment before completing or stopping formal education". Collecting information on working in parallel to education or in periods of interrupting education is seen as important because increasing shares of young people continue their educational career beyond compulsory schooling entering an age when they are available for work next to their studies (Roksa & Velez 2010, Wolbers 2003). One motive is that work experience could represent an advantage in the job-seeking process during the school-to-work transition (Passaretta & Triventi 2015). In the context of the CCA countries working while in school is expected to be also driven by economic needs of the family of origin due to the economic development of the countries considered. Moreover, in CCA countries students may need to work to finance the prolonged education attainment, particularly as the share of tuition-based private and public study places has been increasing in the process of marketization and privatization of higher education institutions (Baranowska 2011, Robert & Saar 2012).

Respondents have to list all the work experiences *before* the event of finishing/stopping formal education. As not everybody has such work experiences there is a filtering question Q230. The work to be reported is defined in the interviewer guideline on the questionnaire as any kind of paid/unpaid registered/unregistered work in family businesses, private businesses or in public sector or work as an own account worker/self-employed/employer.[10] Vocational training received in formal vocational education as well as housework which was done outside family businesses are not counted as work episodes to be reported. Work activities are entered into a table that follows the basic principles of reporting retrospective events. Seven mutually exclusive kinds of work activities prior to leaving education are distinguished. The specificities of the CCA region were taken into account by distinguishing formal/registered from informal/unregistered employment forms as well as different kinds of work as a family helper and own-account/self-employed worker. On advice of the national experts categories of informal apprenticeship (that is not organized in a formal vocational program) and internship/trainee were added. The latter work activities are expected to happen in parallel to education participation or in interruptions from education. As the work periods are prior to leaving education and thus longer time ago just the beginning and end years of activities were asked. In two additional columns of the table the periods of work (distinguishing permanent work all over the year, seasonal work, work during school holidays and irregular intervals of work) as well the reasons for working are documented.

Regarding the role of work experiences before finishing/stopping education there is a debate in the literature whether "working while in school" is bad as it distracts students from being a good student or good as young people acquire work experience, skills and social contacts as well as getting familiar with cultural codes, behavioral patterns and habits in the world of work that may help with the integration in the labor market after leaving education (Jacob et al. 2018, Weiss et al. 2014). It may also act as a signal of unobserved characteristics that are valued by employers (Nunley et al. 2016).

[10] A "registered/formal employee" means that income taxes are paid either by the employer or employee. "Unregistered/informal employee" means that income of the employee is not taxed. For all types of work it does not matter if someone earns monetary or non-monetary income.

5.3. Part III: Search for work after finishing or stopping formal education

Across the world, youths experience more often periods of unemployment or inactivity (being a NEET - Not in Education, Employment or Training) than prime-aged workers (Breen 2005, Elder et al. 2015, O'Higgins 2001, 2003). Part III of the questionnaire addresses the important issue of job search behavior in the period after leaving education. Respondents are asked whether they have been actively seeking for work in the period after finishing or stopping formal education. Actively seeking means applying for specific works, replying to work offers, answering advertisements, appearing for an interview, sending CV, going directly to companies' offices. Combining this information with the information gained from the activity calendar in Part IV allows identifying the group of inactive persons, i.e. young people who have never had a job and have not been looking for a job after leaving education. It is expected that this pattern of "school-to-home transition" is observed among women and particularly in the Muslim societies of Azerbaijan and Tajikistan (Gebel & Heyne 2014). Previous international comparative research has underlined that Muslim women, on average, have the strongest agreement with traditional gender-role statements, are least likelihood to participate in the labor market (Heyne 2017). Next to the individual religious denomination it has been shown that women living in Muslim societies have the lowest probability of participating in the labor market. Within the Christian world labor force participation rates are also lower for predominant Orthodox countries. There might be also individual hurdles to the labor market such as mobility restrictions, health issues, or discouragement due to lacking qualification, lacking experience or anticipated discrimination based on age or gender. As the observation period is sometimes short a period without job search might be just due to waiting processes. Furthermore, active job search after leaving education may simply not take place as the respondent could continue the same work as he/she had during his/her studies. To test these explanatory factors at the micro-level respondents who did not search for a job were asked about the various reasons.

Among respondents who were actively looking for a job the job search behavior of young people at their transition from education to work was asked. There is an ongoing scientific debate about the role of social networks versus skills/education for labor market success (Kogan 2011, Kogan et al. 2013). It is argued that job seekers learn about job opportunities from personal contacts and information flows improve the matching quality between the job and the applicant (Lin 1999). A trade-off is, however, predicted assuming that young people searching via networks have higher reservation wages, searching more selective and, thus, longer for jobs (Mouw 2003). While job search is expected to be shorter, the matching quality should be high due to the selective search. A different trade-off is expected if young people searching via social networks are diverted to less attractive jobs that are easily and quickly available (Bentolila et al. 2010). Finally, a no-win scenario is based on the assumption that searching via social networks does not generate any advantages or even disadvantages in the labor market. Such an economically irrational behavior can be justified by the existence of strict social norms or traditional loyalties towards one's social groups or the existence of non-monetary benefits of searching via social networks (Kogan et al. 2013).

To address this research question it is necessary to collect information on the kind of job search activities conducted. Two answer categories were offered that capture social networks: searching via contacts (relatives, acquaintances, friends) and searching via labor migrant networks. Institutionalized job search activities were captured via contacting a state employment agency or a private employment agency. Other forms were whether the respondent inserted or consulted a job advertisement in online portals, newspapers or journals or answered one, made an unsolicited application (applying for work directly to the company/enterprise/NGO or cooperatives although they did not advertise a job), or took a test/participated in a competition for recruitment to the public sector. Mixtures of answer categories were allowed. The great advantage compared to previous school-to-work transition surveys is that the applied job search methods were asked for

everybody who was actively engaged in job search activities after leaving education.[11] This allows an analysis of the effects of different job search activities on labor market success in the TEW-CCA Youth Transition Surveys.

5.4. Part IV: Situation after finishing or stopping formal education

In Part IV monthly calendar information of economic activities was collected since the date of finishing/stopping education. This is a great improvement compared to standard cross-sectional surveys on youth, which just ask detailed questions about the situation of youth with respect to the date of the interview. In contrast, based on the activity calendar the individual-level dynamics in economic activities of the respondent are captured since finishing/stopping education.

The activity calendar covers a minimum period of one year up to a maximum period of 10 years depending on the year the respondent was leaving education. The actual length of the calendar varies randomly due to the criteria of selecting respondents. Each activity since finishing/stopping education is reported in one row of the activity calendar. In the first column the kind of activity is reported and in the following four columns the beginning month and year and the end month and year of the respective activity are entered. Activities had to be reported in chronological order in the activity calendar, starting with the date of finishing/stopping education. In case of activities that started before finishing/stopping education and that lasted until the period after finishing/stopping education it was requested to report such activities but to use the date of finishing/stopping education as the starting date. This allows determining the way a job was found that was already entered before leaving education. According to the interviewer guidelines in the questionnaire only main activities, meaning activities that lasted more than a month, should be considered. In case of having experienced multiple activity statuses simultaneously, it was requested to indicate each of them in a separate row.

The decision to collect monthly calendar information was based on the fact that there is only a short reporting period of one up to 10 years that recently happened and that should be more easily remembered than collecting life history information from older people. Another methodological consideration was that measurement in years is not detailed enough when investigating the dynamics of school-to-work transition (e.g. the length of unemployment after finishing/stopping education).

Regarding the work activities the same seven categories were distinguished and definitions applied following Card 1 as in the case of the overview table on the work activities before leaving education. Thus, any kind of paid/unpaid registered/unregistered work[12] in family businesses, private businesses or in public sector or work as an own account worker/self-employed/employer was reported, whereas vocational training received in formal vocational education as well as housework, which was done outside family businesses, are not counted as work episodes to be reported. The specificities of the CCA region were taken into account by distinguishing formal/registered from informal/unregistered employment forms as well as different kinds of work as a family helper and own-account/self-employed worker. On advice of the national experts, categories of informal apprenticeship (that is not organized in a formal vocational program) and internship/trainee were added.

[11] Usually, this information is only asked for those who are still searching for a job at the time of the interview, while successful job seekers are only asked about the way they found their job. However, this leads to a bias because the successful job seekers only report their successful job search methods and not all the other non-successfully applied methods (Kogan 2011, Kogan et al. 2013).

[12] A "registered/formal employee" means that income taxes are paid either by the employer or employee. "Unregistered/informal employee" means that income of the employee is not taxed. For all types of work it does not matter if someone earns monetary or non-monetary income.

In many other surveys, activity calendars are restricted to reporting spells of work activities. If there are gaps it remains unclear what persons did else. Particularly, the important distinction between unemployment and inactivity is missing. This is problematic as periods of unemployment are of key interest in school-to-work transition research as the process of entering the labor market and the early career are often characterized by periods of unemployment. It is also important to gather information on the timing and duration of unemployment experiences in order to analyze the effects of unemployment experiences on the further work career, related life course transitions (e.g. leaving parental home, marriage, childbirth) and well-being and health. Similarly, it is crucial for the analysis of labor market inactivity to capture the dynamics of inactivity and distinguishing the reasons for it (e.g. care tasks, health issues). To overcome the limitations of some of the previous surveys respondents of the TEW-CCA Youth Transition Surveys were also requested to mention other activities such as being unemployed (available for work and looking for a job), engaging in home duties (such as child care and care for other family members), doing military service or being unable to work due to permanent disability or illness.

Having both work and non-work activities in a monthly calendar form offers many opportunities of dynamic life course analysis. Event history analysis can be used to study the time elapsed between leaving education and finding a first job (Blossfeld et al. 2008, Kogan et al. 2011, Noelke et al. 2012, Scherer 2005, Wolbers 2007b). Event history analysis can also be applied to study the entry and exit dynamics from specific activity statuses such as unemployment or work episodes (Russell & O'Connell 2001). Sequence analyze can be used to investigate the serial succession of statuses instead of focusing just on specific transitions (Brzinsky-Fay 2007, Scherer 2001). Similarities of sequences can be calculated using optimal matching procedures.

In case of reported work activities, there are additional questions about the kind of work. This is important because, for example, just knowing that someone got a job as a formal employee is not sufficient. Therefore, additional information are gathered about the type of contract, social security coverage, exact kind of occupation, sector of employment, industry, location of each work activity and the method of finding the job. These additional questions on the job characteristics refer to the *situation at the beginning of the respective economic activity*. Due to space restriction of the table cards were used with the respective answer categories. Cards were read and shown to the respondents such that the respondent can select the appropriate category. The information asked about the work differs according to the kind of work activity distinguishing (i) work as an employee/informal apprentice/intern/trainee, (ii) work as an employee or helper in the family business and (iii) own account/self-employed/employer. Filtering is applied in the table in order to ask the appropriate questions depending on the work activity reported.

Regarding the type of contract the crucial distinction between work contracts of unlimited duration versus work contracts of limited duration (temporary contracts) versus seasonal work contracts is made. There is a strong research tradition investigating the role of temporary work, its determinants, characteristics and consequences at labor market entry (Baranowska & Gebel 2008, 2010, Baranowska et al. 2011, Barbieri & Scherer 2009, Blossfeld et al. 2008, Gebel 2009, 2010, McGinnity et al. 2005, Scherer 2004). In the context of the CCA region it is, however, even more important to distinguish the case of a written work contract from having no written work contract (just a verbal agreement). The case of having no written work contract is often seen as a defining characteristic of informal work arrangements next to or in addition to the distinction between registered and unregistered work. Another defining characteristic is sometimes the coverage with social security. Hence, information on social security coverage was also gathered for each employment spell in the activity calendar. As social security systems differ between Azerbaijan, Georgia and Tajikistan country-specific versions of this question were developed in cooperation with the national survey experts taking the specific national institutional structure of the social security system into account. This rich information on different defining aspects of informal work in the activity calendar of the TEW-CCA Youth Transition Survey will offer opportunities to make new contributions to the new

research tradition highlighting the role of informal work in the school-to-work transition in developing countries (Heyne & Gebel 2016, Kogan 2011).

Questions about the occupation, sector of employment and industry were asked for each work activity in order to measure the structural characteristics of the jobs attained in the early career. The very detailed three-digit occupational classification can be used to characterize the occupational level and transformation scales for occupational status might be applied (Ganzeboom et al. 1992). The fine-graded occupational classification also allows to address the phenomenon of education mismatches. Many studies on the transition from education to work have investigated the determinants and consequences of vertical and horizontal education mismatches (Baert et al. 2013, Barone & Ortiz 2011, Verhaest & Omey 2010).[13] The vertical assessment of mismatches compares the education level of a person with the job requirement level, whereas the horizontal assessment is based on whether or not the field of education acquired corresponds to the type of occupational activity (Büchel 2001). Different methods of measurement are used in the literature (Büchel 2001, Sloane 2004). The TEW-CCA Youth Transition Surveys allow to apply an objective approach in which the researchers has to assign a minimum qualification level or a typical education field to each occupation according to objective criteria. Furthermore, a statistical approach ("realized-matches approach") can be taken by comparing the individual education of a respondent in a specific occupation with the average education level or typical education field of employees in this occupation. In the pretest version of the questionnaire there were also questions on the subjective assessment of education mismatch, similarly to the ones that was applied in the ETF school-to-work transition survey in Ukraine. However, problems occurred in pretesting with these questions and they were removed by request and recommendation of the national survey experts.

Information on the occupational position is also central when taking a social closure perspective on returns to education that postulates that educational degrees act as means of social closure (Bills 2003, Collins 1979, Gebel & Heineck 2019, van de Werfhorst 2011). Following this perspective it is argued that access to occupations is regulated via formal qualification requirements and that after entering an occupation, the individual level of productivity is no longer relevant for the wage generation process (Weeden 2002). The social and legal barriers of access around occupations (e.g. institutionalized closure of occupations by professional organizations) increase the rewards of the persons occupying the occupational positions. Moreover, in line with structuralist explanations, occupations also play a key role in the process of rewarding educational degrees (Barone & van de Werfhorst 2011, Carbonaro 2007). According to segmented/dual labor market theories (Doeringer & Piore 1971) job attributes determine the rewards in the labor market, whereas education is only valuable in gaining access to the privileged job positions. In addition to the conceptualization via occupational positions, differences between labor market segments, industries or sectors are also often highlighted in structuralist explanations. For this reason information on sector and industry were collected for each employment spell as well. In the context of the developing countries of the CCA region the differentiation between the public and the private sector is also seen as a key aspect of characterizing the quality of employment of the jobs in the early career (Gebel & Heyne 2014, Heyne & Gebel 2016).

The location of the work activity was asked in order to detect patterns of labor migration that are very relevant in the CCA countries, particularly in Tajikistan (Olimova & Bosc 2003). The method of finding a job was asked for each job in order to see which job search methods applied during the period after leaving education turned out to be successful (Kogan et al. 2013). As explained above it

[13] In general, an activity is considered skill-inadequate if the competences, abilities and skills acquired in the training system do not meet the requirements of the occupation (so-called "skill mismatch") Büchel (2001). Since measurements of competences, abilities and skills are rarely available in data sets, the majority of empirical research to date has focused on the phenomenon of "education mismatch" with the formal education level and/or field as a proxy measure for the acquired competences, abilities and skills (for a comparison of the two approaches see Allen and van der Velden (2001)).

is not sufficient to ask only about such successful job searches but also the job search methods originally applied by all the respondents that went on job hunt as otherwise there would occur the problem of selection based on successful outcomes, which induces a selection bias (Elwert & Winship 2014).

In Part IV there is a similar table for reporting *about the current economic activity*. It has the same structure as the activity calendar, i.e. the same questions are raised. However, in this table just the current economic activity is reported. Most respondent will only report one current activity. In case of multiple activities at the time of the interview (="parallel activities") respondents are allowed to report a second parallel activity in the second row but further current parallel activities were ignored for reasons of simplification. All questions about working conditions in the current economic activity refer to the date of the interview. This allows to measure potential changes in working conditions even if the respondents did not change his activity, e.g. only experiencing a promotion within the same firm. This offers plenty of opportunities to study the early career dynamics.

Specifically, based on all the calendar information collected on the first job and following jobs as well as unemployment experiences the data can be used to make important scientific contributions on the literature on career consequences of "bad labor market entries" (Gebel 2015). This is important as many young people experience episodes of unemployment and precarious employment such as informal employment, temporary jobs and skill-inadequate jobs during their school-to-work transition period. Since the school-to-work transition is a central stage in the individual life course, the question arises how an initial period of non-employment and precarious employment affect the work careers. With the data collected one can study the short-term career effects of experiencing unemployment (Scherer 2004), informal employment, temporary employment (Baranowska et al. 2011, Gebel 2010, McGinnity et al. 2005) or overqualification (Scherer 2004). Thus, it will be possible to test two opposing scenarios (Gebel 2010, 2015, Scherer 2004). According to the entrapment hypothesis "bad jobs" are located in the secondary labor market offering only limited chances of skill acquisition, which hinders upward mobility. Furthermore, a worker who begins his or her professional life in a "bad jobs" is viewed as a bad hire by future employers, inducing a stigmatizing signal. In contrast, the integration perspective emphasizes that initial disadvantages of "bad starts" compared to starts in (good) standard employment relationship diminish over time because youth in bad starting conditions are able to catch up via acquiring work experience and skills and getting access to training and networks that pave the way to the good jobs. For example, according to the screening argument, employers convert temporary entry jobs into permanent jobs if the young employee fulfils the employer's expectations. Thus, in this regard, temporary jobs can be seen as "entry ports" or "stepping-stones" into insider positions. Similarly, with respect to skill-inadequate employment, Sicherman's (1991) career theory claims that starting the career as on overqualified worker is associated with better promotion chances across firm-internal career ladders into skill-adequate positions. The integration in form of the stepping-stone hypothesis is especially relevant when bad entry jobs are compared to the alternative of unemployment ("downward comparison") instead of making the "upward comparison" to (good) standard jobs (Gebel 2013).

5.5. Part V: Family formation

Processes of family formation such as marriage and parenthood are central events in the transition to adulthood next to the transition from education to work. Life course research has shown that family formation and school-to-work transition are strongly interrelated.

Finding a stable job is often seen as a central precondition for making successful transitions in terms of marriage and parenthood on the way to become an adult. Education expansion and increasing labor market insecurities (such as youth unemployment, temporary and informal work) are seen as factors contributing to the delay of family formation worldwide (Lloyd 2005). Regarding education one distinguishes the participation from the attainment effect. According to the participation effect

young people who are still attending school postpone marriage because the role of being a student is incompatible with the roles of wife/husband and mother/father (Blossfeld & Huinink 1991, Hoem 1986). According to the attainment effect higher levels of education should lead to a delay in marriage because young people invest in education in order to first follow a labor market career. Particularly for highly educated women, the event of marriage and the related roles of homemaker and caregiver may induce opportunity costs because young women cannot amortize their education investments in the labor market (Becker 1991, Corijn & Klijzing 2001). Regarding labor market insecurities sex-specific effects are predicted in the literature (Gebel & Giesecke 2009, Gebel & Heyne 2016, Kreyenfeld 2009, Kurz et al. 2005, Schmitt 2012). According to the patriarchal model it is the duty of men to cover most of the direct and long-term marriage costs. Men need to provide sufficient economic resources and security, which is mainly determined by the individual labor market position. Thus, having a job after leaving education should be of great relevance for men. Jobs in the informal sector and temporary jobs bear higher uncertainty and precariousness which delays marriage (Oppenheimer 1988), whereas, the higher security and often privileged public sector jobs may reduce uncertainty and should promote married chances. The lowest transition rates are expected among unemployed or inactive men who have the lowest economic resources and security. A different situation can be expected for women, especially women in Muslim societies, who often experience a school-to-home transition instead of a school-to-work transition (Gebel & Heyne 2014). According to ideas of sex-specific role specification, such kind of labor market inactivity of young women should be more compatible with the role of being a housewife (Becker 1991) and attractive marriage partners in patriarchal Muslim societies with their enduring norms of gender complementarity (Moghadam 2004). For those young women who are engaged in the labor market, insecure and informal labor market positions should have a weaker impact than for men because marriage is an “alternative career” in the case of labor market uncertainties (Kreyenfeld 2009).

Vice versa, processes of family formation are expected to affect the education and work careers of men and women. Early marriage and parenthood pave the way for young women to enter the roles of caregivers and house workers and represent barriers in the education and labor market career. This applies especially to primarily patriarchal Muslim societies (Gebel & Heyne 2014, Moghadam 2003, Spierings et al. 2010). Early marriage and parenthood increase the demand for housework and induce role conflicts with being a student or active in the labor market. Specifically, children add to the family demand for care and housework and they raise the opportunity costs of participating in the labor market due to costs of childcare. Higher rates of early school leaving, education dropouts and school-to-home transitions are expected among women who experience early marriage and motherhood. In contrast, following principles of sex-specific role specialization in the traditional division of labor early marriage and fatherhood require young men to earn money in the labor market for their family. While this may force young men to leave the education system to enter the labor market being a husband and a father should increase the labor market attachment and career orientation of young men. The specialization in market work allows men to accumulate more market specific skills that should support their career development. These processes can be supported by paternalism of employers.

In order to disentangle the complex interrelations of education attainment, school-to-work transition, the early career and family formation the exact timing of events of family formation were asked. The martial status history records the events of marriage, separation, divorce and widowhood. Taking the important role of religion in all three societies into account the events of religious and legal marriage and divorce were distinguished. In a separate table the date of birth of all biological children were asked. The exact year and month of the events were asked as such central life course events should be easy to remember for the young respondents. Knowing the exact timing of family formation events allows the researcher to measure the incidence and timing of such events in the individual life course. Combining the marital status history and parenthood history with the economic activity calendar and the information on the education career offers opportunities to measure the chronology and sequencing of school-to-work transition and family formation. The life

history data can be used to run event history analysis and sequence analyses. Investigating the chronological order eases analyses about the causal time order and causal relationships of education, work and family events.[14]

A few questions are asked about the initiation of first marriage such as how the person met her first husband or his first wife. The question on the final decision on marriage will give insights in the role of parents and the family in the family formation process. It can also be used as a measure of traditionalism as it reveals the independence of young men and women to decide on their partner. Similarly, the question on the age gap between the groom and the bride can reveal traditional patterns and it offers insights into marriage habits.

5.6. Part VI: Living arrangements and residence changes

Part VI of the questionnaire starts with asking questions about living arrangements during childhood and the process of leaving parental home. From a theoretical perspective, question Q601 about the living arrangement during childhood can be seen as a question on the family of origin and, thus, part of the questions on the socio-demographic background of the respondent in Part IX. From a practical perspective Q601 was assigned to Part VI because it fits from a chronological order and thematically to the questions on leaving parental home and the history of residence changes.

The question on the date of leaving parental home was introduced because leaving the parental home is seen as an important step in the complex transition to adulthood (Aassve et al. 2002, Baranowska-Rataj et al. 2016, Corijn & Klijzing 2001, Gebel 2017, Shanahan 2000). It is an objective indicator or, so called "transition marker", of young people becoming independent from their parents. It also often implies that young people gain greater autonomy (Baranowska-Rataj et al. 2016). However, the objective indicator of leaving the parental home should only be seen as a proxy for these underlying subjective dimensions and similar aspects that are often not measured in available data sets. Specifically, there is not a perfect overlap with the event of becoming independent of one's parents (Manzoni 2016). This is because young people may be rather independent of their parents although they still share a flat. In a similar way, young people may have their own household but the parents still strongly support their child. The standard objective indicator of the date of leaving education is used in order to maintain comparability to the majority of empirical studies on leaving parental home. A time restriction is introduced requiring that the young people lived separately for one year or more to avoid reporting of short insignificant spells. Periods of military service or long-term hospital stays were excluded because young people only move from the parental home to institutionalized living arrangements, which does not represent the move to residential independence researchers are interested in when studying the transition to adulthood. The interviewer guideline specifies that "parental home" is broadly defined as living arrangements with the legal guardian(s), such as the biological, adoptive, or step parent(s) the respondent spent most of his or her childhood (up to age 15). Adoptive and step parent were also included because, from a theoretical perspective, the biological relationship is not of interest when investigating the process of gaining residential independence. "Living separately" is defined as living in separate accommodation, i.e. with a separate entrance, living either alone or with other person(s) (friend(s), partner, spouse, own children, parents-in-law, etc. but not with any biological, adoptive and/or stepparents). This definition was chosen to account for multi-story dwellings, which are shared by separate persons and families that form distinct households. Thus, staying at home requires that the person continues sharing the household with his or her legal guardian(s).

Leaving the parental home and starting living independently requires resources (Ermisch 1999). While parents often substantially contribute to their offspring's establishment of an own household

[14] However, anticipation effects may occur, which makes an analysis of the causal order more complex. This problem occurs both in retrospective and prospective panel surveys.

it can be expected that the socio-economic situation of the young person matters, too (Gebel 2017). Regarding these resources both the direct availability and security are relevant. Having resources at the moment is not sufficient because there also needs to be trust into having the necessary resources in the future. Thus, in order to cover the direct and long-term costs of having an own household, young people need sufficient economic resources and security in a long-term perspective. It can be expected that particularly the individual economic activity status determines the current and future socio-economic conditions and, thus, the capability of young people to bear the direct and long-term costs of establishing an own household. Young people who are still in education usually do not have the necessary resources to leave parental home, which should lead to a high degree of residential dependence (Nilsson & Strandh 1999). In addition, if the student is still quite young there are legal restriction and it is often against the cultural norms to leave the parental home. However, the situation can be different for persons attending post-secondary education (Nilsson & Strandh 1999). They may have to move to a(nother) city, where the education institution is located and where special residences for students are provided.

Having a job after leaving education and, thus, gaining income should be of great relevance for gaining the necessary resources to leave the parental home and establish an own living arrangement. However, if economic uncertainties exist with regard to the individual future because a person occupies insecure labor market positions this may lead to the postponement of living independently (Gebel 2017, Wolbers 2007a). First, having a disadvantaged and insecure job position, e.g. in terms of informal employment or a temporary work contract, is associated with wage discounts and wage scars (Gebel 2010). Second, although an informal or temporary job provides income there is an increased risk of loosening this job again. This creates a higher degree of expected income volatility that diminishes the probability of living separately from one's parents (Fernandes et al. 2008). This can be buffered if youth are still living with their parents, whereas the poverty risks of job loss are much higher for those who decide to establish one's own household (Aassve et al. 2002). Third, temporary jobs may make youth less willing to establish long-term commitments, being it having an own household or getting married (Mills & Blossfeld 2003, Oppenheimer 1988). The worst negative effects of labor market disadvantages should stem from unemployment (Wolbers 2007a). This is because the unavailability or loss of resources is much higher for unemployed workers because they gain no income or only very restricted amounts based on marginal part-time jobs. Moreover, all the aspects of insecurity about the future affect unemployed workers in the same way or even stronger as for persons in informal or temporary work relationships. In contrast, the success of entering a formal employment relationship and a secure job with a permanent contract may reduce uncertainty and should promote the chances of leaving the parental home.

Similarly to the arguments on marriage and childbirth, sex-specific effects can be expected if the event of leaving home is coupled with family formation. In a traditional gender arrangement the labor market position should matter more for men than for women because men bear the responsibility for providing the economic basis for young couples. Men are expected to have a job and a secure position in order to leave the parental home and establish their own household if they have a partner. For young women the experience of labor market exclusion and disadvantaged labor market positions may also act as a reason to focus on the alternative role of housework and childcare, which is connected to marriage and the respective act of leaving parental home and moving with the husband together.

Combining the information on the date of leaving parental home with the economic activity calendar and the information on the education career offers opportunities to measure the chronology and sequencing of school-to-work transition and leaving parental home. The life history data can be used to run event history analysis and investigating the chronological order that eases analyses about the causal relationships of education, work and the event of leaving parental home. Combining the information on leaving parental home with the marriage and childbirth history allows the researchers to analyze the interrelations of leaving parental home and family formation.

In Part VI of the questionnaire information on the place of residence at birth and all the following residential changes are collected. Dates are only collected on a yearly base because it would be too difficult for the respondents to remember the exact months of residential changes during their childhood. Short spells of less than one year are disregarded in order to focus on significant changes in the place of residence and to avoid very long lists of residential changes due to season labor migration. This simplification is important in the context of the countries of the Caucasus and Central Asia, particularly in Tajikistan, where seasonal labor migration is widespread (Olimova & Bosc 2003). For each residential stay the start and end year, the region and the kind of area are reported. The kind of area distinguishes the urban from rural areas. By collecting detailed retrospective information about residence changes of the respondent it is exactly known where the respondent was living during childhood and youth. Thus, this information can be incorporated as a time-varying variable into event history analyses of the transition to adulthood.

Previous research has shown that regional factors are important contextual factors for education attainment, the transition from education to work as well as processes of family formation (Hank 2002, Ilieva-Trichkova et al. 2015). The exact information about the residence changes allows researchers to make detailed analyses on how the regional background affects young people's chances in the education system and the labor market. Multilevel analyses can be applied by merging contextual information on the regions to the individual level data (Snijders & Bosker 1999). According to the life course paradigm the institutional, cultural and structural social context influences the individual life courses (Mayer 2004). Next to the variation across countries regional disparities induce variation in the social contexts in which individual life courses are embedded. Previous research has also shown that rural versus urban residence affects the education and labor market chances of young people (Gebel & Heyne 2014, Kogan et al. 2011). The rural-urban divide is often used as a proxy variable for different socialization backgrounds with rural areas standing more for traditional environments. It may also reflect differences in the institutional and structural context with the usual assumption that there is less institutional support in rural areas and the economic conditions are more problematic than in urban areas. Specifically, labor market opportunities should differ between rural and urban areas due to different employment structures in cities versus the countryside. For example, agricultural employment is mainly located in rural areas whereas industries and services focus on urban areas. Furthermore, it is often argued that the supply of educational institutions and opportunities is better in urban areas. Having the time-varying information on regions and urban-rural residence at hand researchers can analyze how the opportunities and barriers vary across regions as well as between rural and urban areas. It is also possible to investigate regional migration processes as well as international migration experiences (for those who returned to their home country) as dependent variables. Sectoral change in terms of a downsizing of the agricultural sector and growing service sector, different education and job opportunities between rural and urban regions and the related process of urbanization are expected to attract more and more young people to the cities.

If one or more of the long-term residential stays (of more than one year duration) reported in Q603 was abroad, additional questions were asked about the motives of young people to go abroad and to return. In this respect one can investigate how the success or failure of young people in the education system and the labor market affects migration processes. However, as the TEW-CCA Youth Transition Surveys are restricted to young people residing in Azerbaijan, Georgia and Tajikistan at the time of the survey, the data set is not suited to study the determinants of actual international migration processes in general because the group of migrants, who are still abroad, is not included in the survey (Stoilova & Dimitrova 2017). Emigration intensions were also not asked such that it is not possible as, for example, in the study of Stoilova and Dimitrova (2017) to investigate the influence of education and school-to-work transition experiences on emigration intentions. This is because the TEW-CCA Youth Transition Surveys were not designed as migration surveys. It is only possible to study the migration patterns and reasons for migration and return migration for the young

respondents residing in Azerbaijan, Georgia and Tajikistan at the time of the survey who have already international migration experiences.

5.7. Part VII: Attitudes

The first section of Part VII of the questionnaire refers to the topic of religion. Religion can be seen as an important element of culture and as relevant for people's actions and their living conditions (Heyne 2017). Previous research has shown that religion and cultural attitudes are important determinants of the chances of young women in the education system, in the labor market and that religion and cultural attitudes affect the family formation processes (marriage and childbirth) (Guetto et al. 2015, Heyne 2017, Spierings 2015). Collecting this information will help us to better understand the role of religion and culture in society. Moreover, religion can act as an important control variables in analyses on education and labor market attainment because it is often a confounder similar to the parental and ethnic background variables.

The first question is about religious denomination. The answer categories were oriented at the most important religious denomination of the specific country. Accounting for the relevance of atheism in post-socialist countries the category of having no religion was introduced as well. The religious denomination is a proxy for the religious orientation of a person but it does not necessarily reflect a strong role of religion in the life of the respondent. This is because the practice of religion and relevance of religion for daily life can be rather different for two persons of the same religious denomination. The advantage of religious denomination as an individual measure of religion is that it is less affected by endogeneity problems than the following subjective measures of religiosity and religious preferences and practices (Heyne 2017). Endogeneity problems only occur because of persons converting to a different faith in reaction to education attainment and experiences in the labor market, which is a less realistic reaction than changing attitudes, preferences and practices.

Next to the objective fact of the religious denomination a subjective question is asked about importance of religion in the personal life. In addition, respondents should rate the importance of specific religious practices such as whether an infant should be registered in the appropriate religious ceremony, whether it is important for people who marry in registry offices to have a religious wedding, too and whether it is important for a funeral to include a religious ceremony. The questionnaire for Tajikistan also incorporates two questions on religious veiling in terms of wearing the hijab. Female and male respondents should state whether they are for the hijab and female respondents were asked in addition whether they wear a hijab. In contrast to the religious denomination these questions capture the attitudes, preferences and lived practices with respect to religion. Having such a broad set of questions at hand the researchers can take a more differentiated view on the role of religion on youth life courses. However, these subjective questions can be seen as much more sensitive to young people's experiences in the education system, the labor market and the family. Thus, these measures are less stable and stronger affected by endogeneity problems than the religious denomination (Heyne 2017).

The second section of Part VII of the questionnaire refers to the topic of gender attitudes. Both young men and women have to answer the questions. A item battery of statements is used in order to capture gender attitudes in different domains. Respondents can reveal their agreement, indifference or disagreement with the statements on a five-point answer scale. For empirical analysis either domain-specific single item on gender-role attitudes can be used or a composite index can be created. The first two items ((a) "Girls should only go to school to make them good mothers and wives." and (b) "A university education is more important for a boy than for a girl.") refer to the education domain. They relate to the benefits of education and gender-specific relevance. Item (a) refers to the goal of education to prepare girls for their role as mothers and wives, which is seen as the main goal of girls' education in a traditional perspective. The third item (c) "Women and girls

need their male guardian's (e.g. father, brother or husband) permission to work outside home." addresses both the issues of female work and need of male guardianship. Items (d) "Men make better political leaders than women do." and (e) "Men make better business executives than women do." ask for an assessment of women's leadership abilities and role in the politics and the economy. The last two items (f) "A husband's career should be more important to the wife than her own career." and (g) "A woman who has a full-time job cannot be a good mother." concern the reconciliation of work and family life and gender-specific role assumptions in this regard. The chosen statements were oriented at existing and well-established gender attitudes items such as in the World Value Surveys. A second item battery refers to the division of labor between sexes in the household. Respondents should state who should (a) "cook", (b) "earn money", (c) "clean the house", and (d) "take care of the children". The answer categories distinguish the main responsibility of the man or the woman or both of them.

There are methodological challenges when using these gender attitudes in empirical analyses. A reciprocal nature of women's actual behavior and gender norms and attitudes has been proven in many empirical studies. There is both attitude-based selection of behaviors but also processes of attitude adaptation to live behavior and experiences made (Berrington et al. 2008, Kan 2007, Steiber & Haas 2009). Thus, when using the gender attitudes as an explanatory variable in analyses of education and labor market attainment and family formation processes the effects must be interpreted carefully because of the potential endogeneity of attitudes with respect to individual life course experiences. As both labor market status and gender attitudes are measured at the time of survey among our sample of school leavers, there might be a bi-directional causality between activity and attitudes (Gebel & Heyne 2014). Similarly, when studying gender attitudes as an outcome variable and using variables affected by life course decisions as explanatory variables such as education, labor market and marital status of a person one must keep in mind that these variables are endogenous to the outcome variable. Unfortunately, the retrospective life course design did not allow to solve this problem of bidirectional causality.[15] Another methodological limitation is that the gender attitudes measures are not perfect measures of preferences. Preferences and attitudes do not necessarily correspond to each other (Hakim 2000). For example, it is possible that women approve female labor force participation in general but, in relation to themselves, have a preference not to participate in the labor market. Hence, the questions in the TEW-CCA Youth Transition Surveys should be primarily seen as questions on gender attitudes only.

5.8. Part VIII: Satisfaction and health

Three basic questions about the health status and life satisfaction of young people were asked. Satisfaction and health are not the primary focus of the TEW-CCA Youth Transition Surveys. However, the three questions should provide at least some basic information about life satisfaction and health.

Specifically, self-reported measures of health status (5-point scale of "How would you describe your current health?") and life satisfaction (10-point scale of "How satisfied are you with your life, all things considered?") were incorporated into the questionnaire. Thus, the questions on well-being and health are based on self-reports and they have a global perspective on the situation of the young person.

[15] Prospective longitudinal data collection projects are better suited to address this problem because attitudes can be measured before life course transitions happen as well as afterwards. Having attitudes measured at different time points eases the causal inference. In a retrospective design it is not suited to ask attitude questions retrospectively. In this respect, one could only use retrospective questions on objective facts (such as the parental background) as proxies for attitudes. Previous research has shown that gender attitudes are transmitted from parents to children (Farré & Vella 2013) and formed through socialization processes (Glass et al. 1986).

Self-rated health measures are seen as valid and reliable measure of overall health. Studies have shown that respondents take a wide range of aspects of physical as well as mental health into account when forming an assessment of their own health (Garbarski 2016). It has also been revealed that self-rated health is an independent predictor of mortality even after adjusting for a number of specific health measures and other covariates known to be relevant (Idler & Benyamini 1997). As young adults in general have good health, it is important to complement global measures of self-rated health with those on well-being to make sure that the psychological consequences of labor market disadvantages are appropriately reflected (Athanasiades et al. 2016). Hence, a subjective overall life satisfaction measure is included that captures the cognitive component of individuals' subjective well-being, i.e. people's judgments about their life as a whole (Boarini et al. 2013). Furthermore, Headey et al. (1993) suggest that life satisfaction also represents an important dimension of mental health. Previous social indicators research has shown that global life satisfaction scales are valid, reliable, and sensitive to change such that they are well-suited as a key measure (Diener et al. 2013).

There are various theoretical mechanism how the education and labor market career affect well-being and health (Bela et al. 2018, Gebel & Heineck 2019, Voßemer & Eunicke 2015). Regarding education it can be expected that higher education has a positive effect on health via health-related behavior (Grossman 2006), such as smoking, drinking, and physical activity or health checkups (Brunello et al. 2016, Clouston et al. 2015). Attending higher education should endow young people with higher cognitive skills, which improve the ability to gather and process information on health-beneficial behavior and make adequate investments in the own health (Bela et al. 2018). Furthermore, higher education increases the probability of earning higher income that can be used for investments in personal health (Grossman 2006). Higher education can also protect from health damaging factors due to placements into higher quality jobs with better working conditions. Similarly, it can be hypothesized that education increases well-being by providing access to better labor market positions, such as income, employment status, job position, and working conditions, as well as by improving the social inclusion (Bela et al. 2018). Education can also affect well-being by better health behavior and health. It has been shown that health conditions influence the subjective well-being of a person (Ormel et al. 1999).

Regarding the transition from education to work ambiguous effects are expected with respect to subjective well-being. On the one hand, school leavers are freed from the coercions of education and they can develop in the world of work. Being enrolled in education may reduce subjective well-being due to pressure to perform, the feeling of subordination and coercion as well as experiences of failure. At work youth can unfold their talents, earn money and become autonomous from parental home, which should increase their well-being. On the other hand, entering the labor market may not run as smooth. Experiences of initial unemployment and temporary employment may have detrimental effects on subjective well-being as empirical studies point to the negative effects of unemployment, temporary employment, and job insecurity on well-being and health (Voßemer & Eunicke 2015). Various theoretical explanations have been suggested in this respect such as the loss of economic as well as psychosocial rewards in case of unemployment and temporary employment (Fryer 1986, Jahoda 1982, Nordenmark & Strandh 1999).

The questions on self-rated health and subjective well-being were complemented by a question on whether the respondent has any disabilities. While the self-reported measures of health and well-being are potentially endogenous as they might be influenced by the education and work career disabilities are often inborn. Although disabilities may also be a consequence of injuries happening at the work place the endogeneity problem should be less severe. Thus, this variable is a potential control variable when studying education and labor market attainment, whereas the self-rated health and subjective well-being should be better used as outcome variables only.

5.9. Part IX: Socio-demographic characteristics of the respondent

Part IX collects detailed information on the parental background of the respondent. This is because previous research has shown that the parental background strongly affects the chances of young people in the education system (Erikson & Jonsson 1996, Gebel & Heyne 2014, Kogan et al. 2011, Pfeffer 2008, Stocké 2007), in the labor market (Erikson & Jonsson 1998, Gebel & Heyne 2014, Jacob et al. 2015, Kogan et al. 2011, Tolsma & Wolbers 2014, Triventi 2013) but also their own family formation (Gebel & Heyne 2016). Thus, for researchers these variables are often independent variables of key interest. Having detailed information about the family background is essential to investigate inequalities in education and labor market chances of young people. It provides important information about the intergenerational transmission of chances and inequality.

From a statistical point of view, information about the parental background is also essential in multivariate analyses as a set of control variables. This information is needed to account for confounding bias that is an obstacle for observational studies (Elwert & Winship 2014, Morgan & Winship 2015). Confounding bias is prevalent if there are unblocked backdoor path between the causal variable of interest and the outcome variable. For example, when estimating the causal effect of education on labor market success (e.g. in terms of occupational status) there is confounding bias in a bivariate analysis because parental background (e.g. in terms of parental education, occupation and wealth) both affect the education attainment of the respondent and the labor market success of the respondent directly (net of the mechanism via education attainment). Controlling for parental background variables such as parental education, occupation and wealth will block this backdoor path and eliminate confounding bias if selection occurs based on observed characteristics. Even if there is also selection on unobserved variables (e.g. ability and psychological traits, either innate or acquired during early childhood before entering education) the confounding bias is reduced because at least the problem of selection on observables is solved. Furthermore, the observed parental background characteristics can often been seen as proxy variables for the unobserved characteristics.

In general, the parental background is time-varying because parental life course are subject to change. Particularly, the occupational position and wealth of parents is changing during the retrospective observation window of the respondents (ranging from childhood/youth to the interview date). This also applies to the education background of the parents but to a smaller extent because the education attainment process of the parents is usually completed when their offspring enter primary education. Therefore, most questions on the parental background refer to the parental situation at the age of 15 of the respondents. This is a proxy measure for the situation at the parental home during the childhood and youth. The decision on age 15 was done for several reasons. First, it is the common reference age in other surveys. Second, it is easier for the respondents to remember the situation at age 15 because it is not yet such a long ago. Third, the information collected should also be more reliable than information collected on previous ages. At age 15 the respondents are usually capable to understand what kind of job the parents are doing and what their education level is, whereas this is often a challenge for younger children. Fourth, using the reference time point of 15 establishes a clear time order of the control variables, causal variable of interest and outcome variable, which eases causal inference. It is essential to know the situation at parental home at a time point before important events of finishing/stopping education and the labor market entry and the family formation by the respondent takes place.[16]

From a theoretical perspective, decisions on the education and labor market career of young people are heavily influenced or even made by their parents (Gebel & Heyne 2014). Besides the parental influence on decision-making, young women's life courses are closely linked to the life courses of

[16] If the information on parental background referred to the time of the interview instead, the information collected would sometimes not reflect the exact conditions of the childhood of the respondent. For example, parents may already be in retirement at the time of the interview of the respondent. Obtaining the information that the parents of the respondent are currently retired does not reflect the real occupational position of the parents during the childhood of respondent, which researchers need as a control variable.

their parents through intergenerational transmission of values and resources. Focusing on the intergenerational transmission of resources, it is important to measure the parental background in a multidimensional perspective. One can distinguish the economic, social, and cultural capital of parents.

Parents' economic capital particularly enables young people to finance longer and higher educational attainment (Becker 1993[1964]). A strong familial economic basis means that youth do not have to work from an early age to contribute to household income or undertake care duties and housework. Parents who are well off can also provide a better learning environment and support to their children such as better learning equipment of study material, affording transportation costs to better schools, tuition fees and high quality private tutoring (Duncan et al. 1998, Erikson & Jonsson 1996). Regarding the school-to-work transition young people from well-off families can afford a long waiting process for better quality jobs, whereas young people from poor backgrounds have to accept any job they can get, even if it is of low quality because they cannot afford waiting (Gebel & Heyne 2014).

Highly educated parents possess greater cultural capital that provide information advantages and support for young people to pursue a successful academic and work career (Bourdieu & Passeron 1977, Erikson & Jonsson 1996). It is an advantage to have parents being familiar with the education system and the requirements of schooling as well as the behavioral and cultural request at workplaces in high quality labor market segments.

Social capital such as parents' social ties in the labor market helps young people to find jobs and get access to privileged job positions (Granovetter, 1974). To gain access to privileged job segments, it seems to be important to have ties to specific people, particularly having parents who work in the respective sector. Having parents working in the respective sector may pave the way towards this sector via the provision of social contacts and insider information such as providing valuable information and references for job interviews. The intergenerational transmission should be especially relevant for jobs in the family business (Gebel & Heyne 2014).

Various questions on the family background are introduced to measure this economic, social, and cultural capital of parents. Parents were defined as the legal guardian such as the biological, adoptive or step parents the respondent spent most of his or her childhood years up to age 15. Respondent were requested to answer the questions also if the parent did not live with them in one household. The basic assumption is that resources can also be transferred if the parent is not living in the same household.[17] Information was collected on both parents because previous research has shown that both the father and the mother are of relevance for the education and labor market attainment of young people. This also offers opportunities of detailed analyses of the intergenerational transmission of advantages and disadvantages along the gender-lines of parents and children.

Respondents are asked to describe the overall financial situation of the family when he or she was 15 years old. This is a subjective assessment and, therefore, only five general answer categories were distinguished. Due to the strong economic change in the CCA countries and the problem of recall bias no detailed information on the financial situation were requested. Moreover, questions are asked about the employment situation of the parents, which reflect the economic activities the respondent can choose in their own activity calendar. Using the same categories should make it easier for the respondent to answer the questions. Moreover, it eases the measurement of intergenerational mobility in the labor market. For parents, who were employed, information on the occupation was collected. For self-employed parents different categories of self-employment were distinguished. Finally, questions are posed with regard to the highest education degree of the father and mother. The education classification is oriented at the categories that are used for classifying the education of the respondents. However, adjustments were made if the education system was different at the time the parents of the respondent attended education.

[17] The issue of family composition is still addressed with a separate question on living arrangements in Part VI.

Information on the number and age composition of siblings is asked complementary to the questions on parental education, occupation and wealth. Siblings matter in the competition for parental resources that are relevant for education and labor market success (Sieben et al. 2001). The more siblings a young person has the less resources are available for him or her. It can also be expected that the gender and the birth order matter in this respect (Härkönen 2014). The number of siblings also influences the demand of the family of origin for support in the housework and in care activities. Specifically, in larger families and in the case of a relatively higher share of brothers, there is more demand for girls to do housework and care (Gebel & Heyne 2014). The number of siblings is also seen as the proxy for the degree of traditionalism in the family of origin. Traditional parents have more children on average.

In all three countries one question was posed on the ethnicity. The answer categories were adjusted taking the nation-specific ethnic composition into account. Collecting information on ethnicity is important for two reasons. First, ethnicity acts as an important control variable in analyses on education and labor market attainment because it is often a confounder similar to the parental background variables. Second, there is a research tradition that investigates the chances of ethnic minorities and migrants in the education system (Heath & Brinbaum 2014) and in the school-to-work transition process (Kalter & Kogan 2006, Lindemann & Kogan 2013, Stoilova & Haralampiev 2008) and family formation (Gebel & Heyne 2016, Torabi & Baschieri 2010). Thus, having the information on ethnicity gives researchers the opportunity to analyze these issues in the context of the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan. However, due the size of the survey analyses distinguishing different ethnic groups will be often not feasible due to small number of cases. It is recommended to focus on the binary contrast of ethnic majority versus ethnic minorities or, if possible, to distinguish the main minority groups and merge the remaining small groups.

In Tajikistan, respondents were requested to report whether their parents worked abroad during the childhood of the respondent. The respective answer categories distinguish different length of duration of stays abroad. This question was inserted in request of the national experts from Tajikistan. There is a research tradition that analyses the effects of labor migration of parents on the life outcomes of their offspring, specifically their education and labor market chances, are of interest for research on Tajikistan (Gatskova et al. 2017, Jaupart 2018, Olimova & Bosc 2003).

In Azerbaijan, there is an additional question on whether parents were internally displaced people (IDP). This question was inserted in request of the national experts from Azerbaijan who highlighted that the topic of IDP is of interest for research on Azerbaijan.

The question on the gender of the respondent is already asked at the beginning of the survey in Part I. This basic socio-demographic information is very important to conduct gender-specific analyses of the school-to-work transition and transition to adulthood in general, which has been shown to be of great relevance (Bieri et al. 2016, Gebel & Heyne 2014, Heiniger & Imdorf 2018, Iannelli & Smyth 2008, Smyth 2005, Smyth & Steinmetz 2008).

6. Comparison to previous youth transition surveys in the CCA region

In this section the general methodology and questionnaire contents of the TEW-CCA Youth Transition Surveys are set into context of previous youth transition surveys in the CCA region. The development of the TEW-CCA Youth Transition Surveys sample selection process, definition of target group and questionnaire design was oriented at previous school-to-work and youth transition surveys in post-socialist societies that implemented retrospective life history survey elements. The existence of such high quality and well-established previous survey projects was very much scientifically appreciated as a starting point by the TEW-CCA consortium. In intensive discussions within the network of survey experts of the TEW-CCA project it was decided which elements of previous surveys were in general suitable to be used and which small or major adaptions to the nation-specific context and scientific

objectives of the TEW-CCA Youth Transition Surveys were needed. In several cases the problems of shortcomings of previous transition surveys were used as a starting point to develop new survey elements that were missing.

Specifically, a comparison is made to the

- Youth Transition Surveys of the European Training Foundation (ETF),
- School-to-Work Transition Surveys (SWTS) of the International Labor Office (ILO)
- South Caucasus Life History (SCLH) Survey of the Caucasus Research Resource Center (CRRC) Armenia, Azerbaijan and Georgia that was funded by the International Association for the Promotion of Cooperation with Scientists from the Independent States of the Former Soviet Union (INTAS).

The selection criterion was that the survey was focused on youth and had a (retrospective) longitudinal life history design and aimed at a nationally representative sample. Thus, the missing focus on young people is the reason why other high quality and well-known longitudinal life history surveys such as the Generations and Gender Survey (GGS) (Gauthier et al. 2018) or the Life in Kyrgyzstan (LiK) Survey (Brück et al. 2014) are not considered here.

6.1. Youth Transition Surveys of the European Training Foundation (ETF)

The Youth Transition Surveys of the European Training Foundation (ETF) that were conducted in Serbia and Ukraine (European Training Foundation 2008) as well as in Syria (Gebel 2012) were the key inspiration of the TEW-CCA Youth Transition Surveys. The basic idea of applying a dynamic transition concept for the definition of the target groups stems from the ETF Youth Transition Surveys. In the original ETF version the target group was defined as individuals aged 15–34 who had left education for the first time within the five years preceding the survey. Several adaptions were made such as extending the time period to ten years and slightly increasing the upper age limit to 35 in order to capture a longer period of the early labor market career. Instead of focusing on the first time of leaving education the last time of leaving education is studied in the TEW-CCA Youth Transition Surveys. As the issue of education returners is less prevalent in the CCA countries there is often just one event of leaving education. The moment of last time leaving education should be more easy to remember. In any case, due to the detailed education and work biography collected in the TEW-CCA Youth Transition Surveys the education and work careers of education returners are captured well.

The ETF design has also inspired the TEW-CCA survey consortium to apply an ordering of the questionnaire that mirrors the dynamic process of leaving education and entering working life (European Training Foundation 2008). Retrospective questions were designed to provide an deeper understanding of processes taking place in the respondents' biography. In contrast, cross-sectional data would have only offered a snapshot of the transition process and would not have allowed for an analysis of the individual dynamic process of searching for a first job and early career dynamics. The dynamic character of the survey was complemented in the TEW-CCA survey with extending the dynamic perspective on the school-to-work transition to other transition events as well by collecting detailed calendar data on marriage, parenthood, living arrangements and residential moves (see below).

The ETF design focuses on important “benchmark jobs” such as casual employment during education, any significant employment that started before leaving education, the first ever job after leaving education, the first significant job after leaving education and the current job at the date of the interview (European Training Foundation 2008). It was decided not to entirely replicate this design of “benchmark jobs” because the survey experts agreed that it is very hard for respondents to

define their “first” employment after leaving education or to differentiate between “any first job” and “first significant employment”. Instead, the TEW-CCA Youth Transition Surveys implemented a detailed calendar of activities since the date of leaving education that also incorporates the characteristics of the jobs for each employment spell. This avoids the problem that respondents have to decide on their own which is the first job and which is a significant job. The idea of an economic activity calendar was already present in the ETF questionnaire but it did not contain any information on job characteristics. Adding the job characteristics to the activity calendar (see Part IV of the TEW-CCA questionnaire) has the advantage that more detailed analyses of employment careers are possible. The TEW-CCA activity calendars allow the important distinction between registered and unregistered work, it addresses the issue of work in family business, and it collects information on the occupation, sector, industry, contract status, and social security coverage. Another major methodological problem of the ETF questionnaire was that respondents who still have their first job are only asked about their current job conditions. Hence, the important information about the initial work conditions is missing. This problem is avoided in the TEW-CCA questionnaire because the TEW-CCA activity calendar differentiates between the job conditions at the beginning of the employment career and the current job conditions, irrespectively of whether the respondent changed employer or not.

Regarding the work career before leaving education the TEW-CCA questionnaire introduced a detailed yearly work activity calendar, whereas the ETF questionnaire just asks about casual jobs before leaving education without asking about the age periods of work. With respect to the job search processes more detailed information on applied job search methods and methods of finding each job that was held during the early career were collected in the TEW-CCA survey project. One specific innovation is that in the TEW-CCA survey all respondents are asked about their job search methods. In contrast, in the ETF survey, this information is only asked for those who are still searching for a job at the time of the interviews, while successful job seekers are only asked about the way they found their job. Researchers using the ETF surveys for empirical analyses on job search critically discussed that this limitation leads to a bias because the successful job seekers only report their successful job search methods and not all the other non-successfully applied methods (Kogan 2011, Kogan et al. 2013). The TEW-CCA survey is not affected by this limitation and, thus, should offer new opportunities of research on job search processes during the school-to-work transition period.

The most important innovation of the TEW-CCA questionnaire compared to the ETF questionnaire is that the framework of a school-to-work transition survey has been extended to other youth transition events as well. Whereas the ETF questionnaire just collects very crude information about marriage and childbirth, the TEW-CCA questionnaire contains detailed calendars and questions on family formation (see Part V of the TEW-CCA questionnaire) as well as on living arrangements and residential changes (see Part VI of the TEW-CCA questionnaire). This allows more detailed analyses on leaving education, marriage, parenthood and regional and international migration processes based on the TEW-CCA survey data.

Another innovation of the TEW-CCA questionnaire compared to the ETF questionnaire is that questions on attitudes are introduced. Although limited to the time of interview the detailed information on religion and gender attitudes allow additional analyses that could not be performed with the ETF survey data that are strictly focused on the issues of education and work.

A limitation of the TEW-CCA questionnaire compared to the ETF questionnaire is that the latter offers more questions on education mismatch in terms of a subjective assessment by the respondent. As explained in Section 5.4 the TEW-CCA Youth Transition Surveys only allow to apply an objective approach and a statistical approach (“realized-matches approach”) with regard to education mismatch. Based on the pretest results and recommendations of the national experts the questions on the subjective assessment of education mismatches were removed from the TEW-CCA questionnaire. In addition, it must be appreciated that the ETF questionnaire contains more detailed questions on further training activities and processes of returning to education because this was a

major topic of the ETF survey. Due to time restriction it was decided not to incorporate these elements into the TEW-CCA questionnaire. Moreover, the national experts argued that further training and returning to education is not yet of great relevance in Azerbaijan, Georgia and Tajikistan.

6.2. School-to-Work Transition Surveys of the International Labor Office (ILO)

The data collection project on school-to-work transitions of the ILO started with surveys in ten countries between 2004 and 2006 and strongly expanded with support of the MasterCard Foundation in the Work4Youth project in the period 2011 to 2016. All in all, 53 school-to-work transition surveys with around 186,000 respondents were completed across 34 developing countries by national statistical offices, including the Eastern European and Central Asian countries Armenia, Kyrgyzstan, Macedonia, Montenegro, Moldova, Serbia, Russia, and Ukraine.

The School-to-Work Transition Surveys (SWTS) of the ILO fulfill the criteria that they are focused on the school-to-work transition of young people and that they gather longitudinal information on transitions via retrospective questions (Elder 2009). ILO chose a purely age-based sample definition of persons aged 15 to 29. While this definition has practical advantages in the sample implementation, there are several shortcomings compared to the dynamic transition concept based sample definition of the ETF and TEW-CCA surveys (for details, see Section 5.1):

- Whereas the age restriction was very strict in the first ILO SWTS (15 to 24 years) the extension of the upper age limit to 29 years only partially address the phenomenon of extended transition processes due to higher education expansion. Strictly relying on an age-based definition of youth leads to an underrepresentation of the early labor market careers of highly educated graduates.
- Without introducing the restriction that people have left education a large proportion of the respondents of the ILO SWTS are still in education and cannot report any labor market experiences, yet. While this design offers additional insights into the social situation of pupils and students it requires two questionnaire parts, one on those who are still in education and one on those who have labor market experiences. Trying to cover two different kinds of survey populations makes it harder to develop a questionnaire that is appropriate for both groups. Moreover, as a consequence the size of the subsamples of people with labor market experiences is much lower than the initial sample size. Furthermore, excluding the people who are still in education in labor market transition analyses fortifies the problem of an overrepresentation of low and medium educated school leavers.
- Without introducing the restriction that people should have left the education system in a specific period the ILO SWTS samples are very heterogeneous with respect to the date of labor market entry. Specifically, low educated persons may have experienced their labor market entry already 15 years ago (e.g. a 29yo who entered first job at age 14), whereas most high educated people entered the labor market just in the few years prior to the survey.

Although it is possible for researchers to impose “ex-post” the ETF or TEW-CCA sample definitions when using the ILO SWTS data, the final sample sizes of the target group of interest would be much smaller than in the ETF or TEW-CCA surveys.

Regarding the questionnaire contents the TEW-CCA survey project got positively inspired by the calendar of economic activities that generated retrospective data on the full extent of activities of the youth over his/her productive lifetime to date (Elder 2009). Besides distinguishing main activities such as dependent employment, self-employment unemployment, education, and home duties (including childcare) like the ETF activity calendar, the ILO activity calendar also incorporated the important category of family helper and job characteristics for each employment spell. However, the job characteristics were very focused on the work contract status with questions on whether the respondent had an oral or a written contract, a permanent or temporary contract and the duration of the latter. In addition, retrospective questions on the subjective job satisfaction were asked. The

latter is quite problematic because recall bias affects particularly subjective assessments. In general recall problems are more severe because there are some respondents who had reported activities up to 15 years ago. Using the ILO calendar with job characteristics as a starting point the TEW-CCA activity calendar was developed and included more job characteristics such as social security coverage, occupation, industry and sector.

Although the ILO SWTS incorporated several retrospective elements this design was not consequently implemented. For example, questions on the parental background refer to the time of the interview. As explained in Section 5.9 there are several reasons why it is better to ask the parental background questions with reference to the childhood period. This problem has been overcome in the TEW-CCA Youth Transition Surveys with asking questions about the past parental situation when the respondent was 15 years old.

Another limitation of the ILO SWTS, as in the case of the ETF surveys, is that questions on the demographic transitions were very rudimental. Whereas the age of first marriage is asked, the age of the children or the years of childbirths are not asked. This makes it impossible to establish a time order of the labor market transitions and demographic transitions, which is a serious problem for causal inferences. Regarding the residential mobility, only questions about the original place of residence and current place of residence were asked. In case of residence changes it is unclear at which date these changes happened. Moreover, in case of several residence changes information is lacking on the residence changes that happened in between. As in case of the demographic transition events, this lacking information makes it hard and sometimes impossible to establish a clear time order of residential moves in relation to labor market and demographic transition events.

Regarding the highest education level completed the ILO SWTS does not provide information on education dropouts because only the highest successfully completed level of education is asked. In contrast, the TEW-CCA Youth Transition Surveys allow detailed analyses on the determinants and labor market consequences of incomplete education program experiences (see Section 5.2).

The ILO SWTS are characterized by a coexistence of a small set of retrospective questions and an economic activity calendar on the one hand and detailed questions on the current situation of young people on the other hand. Very detailed questions are asked for different subgroups of youth, which are differentiated according to their current labor market status: youth who are still in school, employed or self-employed, unemployed or outside of the labor force for reasons other than full-time study (Elder 2009). While this information offers opportunities for cross-sectional data analyses there are two methodological limitations. First, related to the sample definition, gathering a lot of information about the current situation (e.g. occupation status, income etc. of employed people) leads to inadequate comparisons of different education groups from a life course perspective. For example, the job characteristics are measured for the low and medium educated persons on average at a later career stage than for the high educated persons. Second, characterizing the different groups of youths with a set of specific questions bears the problem of selection based on outcomes. Asking detailed questions about the job search experiences and activities of the currently unemployed people ignores the fact that other persons who are currently employed may also have experienced job search experiences and activities. Furthermore, the variables based on questions for the specific subgroups cannot be used to analyze the effect of the variable on the probability of being in this specific subgroup. This is only possible for the set of questions that is asked for more than one subgroup. However, questions often vary by subgroups such that the questions cannot be used to predict the probability of being in a specific subgroup.

6.3. South Caucasus Life History (SCLH) Survey

A third very important survey project on life histories of youths that inspired the TEW-CCA Youth Transition Surveys was the South Caucasus Life History (SCLH) Survey. This survey was conducted in the year 2007 by the Caucasus Research Resource Center (CRRC) Armenia, Azerbaijan and Georgia

and was funded by INTAS (Pollock 2010, Roberts & Pollock 2009, Roberts et al. 2008, Roberts et al. 2009, Tholen et al. 2010). Overall about 1200 young people born between 1970 and 1976, that is, about 400 respondents in each of the three countries Armenia, Azerbaijan, Georgia, were interviewed.

In contrast to the ILO SWTS, the ETF Youth Transition Surveys as well as our TEW-CCA Youth Transition Surveys, the SCLH Survey did not have a nation-wide coverage because it was restricted to the three capital cities (Yerevan, Baku, Tbilisi) and one non-capital region in each country (Armenia: Kotayk region, Azerbaijan: Aran-Mugan region, Georgia: Shida Kartli region). The SCLH Survey is also just a medium-scaled survey compared to the other large-scaled survey. The basic idea of the SCLH Survey was to gather life histories of the first generation who attained full age in the period of independence of the South Caucasus after the breakdown of the socialist Soviet Union.

Another major difference is that due to the sample design the interviewees were 31 to 37 years old at the time of the interview. This is a purely age-based definition of drawing a sample of respondents for a life history survey and, thus, similar to the ILO SWTS. However, in contrast to the ILO SWTS the respondents were much older at the time of the survey such that longer life histories could be gathered and almost all respondents have already left the education system and many respondents have already formed families. While this purely age-based definition has practical advantages in the sample implementation, there are shortcomings compared to the dynamic transition concept based sample definition of the ETF Youth Transition Surveys and the TEW-CCA Youth Transition Surveys (for details, see Section 5.1). For example, given the relatively higher age of the respondents problems of recall bias should be more pronounced in the SCLH Survey. Furthermore, without introducing the restriction that people should have left the education system in a specific period the SCLH Survey samples are very heterogeneous with respect to the date of labor market entry. Specifically, low educated persons may have experienced their labor market entry already 15 years ago (e.g. a 29yo who entered first job at age 14) whereas most high educated people entered the labor market just in the few years prior to the survey. Hence, respondents with different education levels report different length of labor market careers because the level of education of a respondent is strongly related to the age of leaving education of the respondents. While it is possible for researchers to “ex-post” implement the ETF or TEW-CCA sample definitions based on the ILO SWTS data the final sample sizes are much smaller than in the ETF or TEW-CCA surveys.

Regarding the SCLH Survey questionnaire contents the TEW-CCA survey project got positively inspired by the retrospective life history calendars on education, economic activity status, jobs, family formation, housing and place of residence, and leisure time. The life history table instruments used in the SCLH Survey were oriented at the renowned British Household Panel Survey (BHPS) but they were adapted to the specific setting of the South Caucasus. The TEW-CCA consortium decided against a detailed monthly life history table on education because it was expected to be too difficult for respondents to remember the exact monthly time line of education biographies so many years ago. Instead, detailed questions about the highest education level attained and general questions about the major prior pathway through the education system were asked. Whereas the SCLH Survey had two separate calendars on economic activity status and jobs the TEW-CCA consortium decided to integrate both aspects into one calendar because it is assumed that respondents can more easily remember the temporal sequences of jobs and activities jointly. It also avoids “double” reporting of spells of employment and the respective job spells. Another difference is that more detailed information on the job history (such as registration and contract status, occupation, sector of employment and industry) were gained in the TEW-CCA Youth Transition Surveys because the shorter recall period makes it possible to remember the details more easily and less jobs need be reported on average. The TEW-CCA consortium agreed to take over the general idea to have retrospective life history calendars on family formation and place of residence because these elements are usually missing in standard school-to-work transition surveys. It was agreed that extending the focus to these aspects of the transition to adulthood as it was done in the SCLH Survey

provides new additional insights because it will be possible to investigate the timing and reciprocal relationships of events of school-to-work transition, residential changes and family formation.

In terms of parental education and occupation background the SCLH Survey uses the appropriate retrospective view on the situation in the parental home when the respondent grew up. In the TEW-CCA Youth Transition Surveys this approach is followed as well but with the focus on the situation when the respondent was 15yo and more detailed information on the parental background at that time were collected (see Section 5.9).

7. Interviewer questionnaire

A short interviewer questionnaire was part of the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan. Basic information on interviewer characteristics and on specific interview conditions were gathered. Interviewers were asked about their gender, age, their highest education level successfully completed as well as previous interview experiences. Regarding interview experiences the number of years of work experience in quantitative surveys was asked. The individual characteristics of the interviewers were only collected to provide an overview of the pool of interviewers in each country. The following country-specific chapters of the methodological report describe the results of descriptive analyses of interviewer characteristics at the aggregate level. The age, gender, education and work experience profile is reported in detail for each country. Comparing the results across country-specific chapters allows to see similarities and differences in the national pool of interviewers. As described above, it was not the aim to prescribe the characteristics of the interviewers such that there are interviewers with similar characteristics in each country. Instead, it was the strategy to rely on the country-specific experience of the survey institutes in each country that guaranteed the interviewer profiles that is best suited to conduct the TEW-CCA Youth Transition Survey in the respective country. Therefore, cross-country differences in interviewer profiles occur.

In addition, there were questions on the conditions of the interview for each interview an interviewer conducted. This information complements the information from the household screening questionnaire on the name and ID of the interviewer[18], region and location of the household, date and time of the visit, information on the screening process and eligible persons as well as contact details of the household and target person (if existing) for further contact attempts. Specifically, the overall duration of the interview was measured. This information has been used in the country-specific chapters of the methodological report to describe the average duration of the interviews. In case of only partly completed interviews the interviewers had to report the reasons for stopping the interview. Multiple answers were allowed in this respect and interviewers should clarify the reasons with the interviewee before answering this question. Another question was posed on the presence of other persons at the interviews. Interviewers were requested to mention only those person who were present for more than 10 minutes and who could potentially listen to the interview. The time restriction was imposed to avoid reporting very short presences of persons, e.g. passing by the interview situation. Again, multiple answers were allowed for the case of presence of different third persons. Although there was a general advice to perform the interview in a personal 1-to-1 situation, i.e. just in presence of the interviewer and interviewee, interviews were also allowed in the presence of other persons. Given the fact that many respondents live with their families, which are sometimes of large size in a small house, it was sometimes not possible for practical reasons to find a place for a personal 1-to-1 situation. Moreover, in traditional environments third persons such as the husband or parents or other male household members may

[18] Names of interviewers are not reported in the data sets. The anonymous interviewer ID is used that allows to merge the socio-demographic characteristics of the interviewer in terms of gender, age, education and work experience.

insist on being presented when a young women is interviewed. Although this bears the risk of influences by third persons on the answers of the respondent it was decided to perform such interviews as well in order to represent also young women living in traditional environments in the surveys. In general, the risks of third-party influence is low in the TEW-CCA Youth Transition Surveys in Azerbaijan, Georgia and Tajikistan given the large share of questions on objective facts. If there are any influences, they are mainly expected in the section on attitudes. In empirical analyses the presence of third-persons can be statistically controlled for. A final questions was posed whether there were any other circumstances or incidences that affected the interview. This complementary question was introduced in order to account for all influences that were not in form of third persons.

8. References

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Chapter II – Methodology of the TEW-CCA Youth Transition Survey in Azerbaijan

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1. Questionnaire adjustments and translation

1.1. Questionnaire adjustments

The questionnaire development and adjustment was an act of intensive collaboration within the TEW-CCA research network. The national teams of experts from Azerbaijan (AZE), Georgia (GEO) and Tajikistan (TJK) as well as the coordinator team from Germany (GER) jointly developed and adjusted both the source and target questionnaires. The coordinator team GER started with distributing a first version of the source questionnaire of the TEW-CCA Youth Transition Surveys among all TEW-CCA members in mid-November 2016. The language of the source questionnaire was English. This source questionnaire was developed by the coordinator team GER based on the review of questionnaires of previous youth surveys in transition countries and based on in-depth consultations with the survey experts from the national country teams (see Chapter 1 of this working paper for the general rationale of the survey and questionnaires).

The first version of the source questionnaire was intensively discussed by all TEW-CCA country teams at the Baku Workshop from 28 to 30 November 2015. Suggestions for improvement were collected. Based on the discussion and further questionnaire reviews the coordinator team GER developed the second version of the source questionnaire. This updated version was sent to all TEW-CCA national teams at the beginning of February 2016.

The Azeri team reviewed the second version of the source questionnaire in an intensive work period and made national specific adjustments. During this intensive work period all national teams AZE, GER, GEO and TJK were in active communication to clarify unclear issues. As a result the Azeri team developed a nation-specific draft questionnaire (target questionnaire) for Azerbaijan at the beginning of March 2016. In close consultation with the coordinator team GER the Azeri team made several rounds of revisions of the nation-specific draft questionnaire for Azerbaijan in an intensive work period. Via the German coordinator it was guaranteed that adjustments were harmonized across countries if it was reasonable. This revision period was finished end of March 2016 and the Azeri team delivered the target questionnaire for Azerbaijan for the purpose of pretesting.

1.2. Translation of questionnaire

At the beginning of April 2016 the English version of the pretest questionnaire for Azerbaijan was translated into the national languages – Azeri and Russian – according to the international standards given in the guidelines of the cross-country surveys. The choice of these two languages was based on the fact that, according to latest population census (2009), 91.6% of the population in Azerbaijan are

Azerbaijanians (The State Statistical Committee of the Republic of Azerbaijan 2018). Major ethnic minorities are Lezgis, Russian, Talyshs, etc. However, almost all of them also fluently speak Azerbaijanian or/and Russian. Specifically, 98.6% out of the total population of Azerbaijan fluently speak in Azerbaijanian and 7.6% fluently speak in Russian according to latest population census in 2009 (The State Statistical Committee of the Republic of Azerbaijan 2018). Accordingly, having the target questionnaire in two languages, Azerbaijanian and Russian, the survey complies with the standards of the multilingual surveys and covers the entire population.

The Azeri and Russian language final versions of the questionnaire for Azerbaijan were provided in mid of April 2016. These final versions of the target questionnaire were used for pretesting, which was conducted in May 2016.

2. Pretesting

The head of the Azeri team Prof. Dr. Rajab Sattarov (International Centre for Social Research (ICSR) and Baku State University) with support of his staff members provided specific training to the professional interviewers that were engaged in the pretest. The professional interviewers were intensively trained on the questionnaire's meaning and routing and interview situation.

The pretesting period was divided into two intervals lasting from 1 to 6 May 2016 and from 10 to 15 August 2016. In the first pretest period, 13 interviews were conducted and in the second pretest period seven interviews were conducted. The pretests were conducted by three professional interviewers (two female and one male interviewer), who had already experiences in the previous fieldworks of the ICSR. Eliza Mandieva attended as a representative of the German coordination team some of the interviews as an observer. Her main task was to conduct an integrated behavior coding as in other survey countries, especially on the standardized parts of the questionnaire. As it was mentioned in Chapter 1 of this methodological report, having such multilingual and interdisciplinary working team for pretesting was gainful not only for pretesting but also for later stages of the project implementation, e.g. fieldwork design and reporting on cross-country survey methods. The main objectives of the pretesting were

- ✓ general reflection of fieldwork conditions given in the survey country,
- ✓ identification of technical errors given within survey instruments,
- ✓ reflection on wording and formulation of questions via behavior coding,
- ✓ analysis of the additional fieldwork instruments such as answer cards and its explanatory potential,
- ✓ checks for adequacy, completeness and diversity of the answer options for close-end questions,
- ✓ general assessment of the interview dynamics and approximate interview timing,
- ✓ monitoring of the respondent's mood and behavior during the interview,
- ✓ evaluation of the interviewer's skills and behavior in order to determine the intensity of the interviewer training for the fieldwork.

Respondents for the pretest were chosen based on a non-probability convenience sampling. The four selection criteria or respondents were developed for pretesting purpose. They are (1) rural vs. urban areas, (2) gender, (3) the level of education of the respondents and (4) the timing of leaving education. The interviewers were instructed to select respondents such that there is some variation in the four selection criteria. Table 2.1 provides a summary of characteristics of respondents of the pretesting in Azerbaijan.

In terms of regional coverage 70% of pretest interviews were conducted in Baku, the capital of Azerbaijan. Two interviews were performed in other cities: one interview in Sumgait, which is a large city, which is about 50km apart from Baku, and one interview in Salyan, which is a small city, which is about 150km apart from Baku. Two interviews were conducted in rural settlements in Salyan region and two interviews were made in rural settlements in Masalli region.

Men were slightly overrepresented in the pretest. Young people with different labor market experiences were sampled. 75% of respondents successfully completed or dropped out from formal education in the period 2006–2010. As they had more experiences they could tell about longer periods of economic activities and other transition events after leaving education. The remaining 25% of respondents successfully completed or dropped out from formal education in the period 2011–2015. Respondents were also chosen to differ in their highest level of education enrolled into when finishing or dropping-out of education. This definition implies that persons dropping out of education were assigned to the level they dropped out from. Following this definition, 40% of the respondents were from the undergraduate (Bachelor) level and 5% were from the graduate (Master) level. 5% attended an initial professional education and 10% attended secondary professional education. The remaining respondents were from upper secondary education. Thus, the pretest sample covers the main education level and tracks that exist in the Azeri education system. The average duration of one interview was 34 minutes. The shortest interview lasted for 21 minutes; the longest lasted for 59 minutes.

Table 2.1: Characteristics of respondents of TEW-CCA Youth Transition Survey pretest in Azerbaijan

	Absolute number	**Percentage**
Region		
Baku - capital city	14	70%
Sumgait (large city)	1	5%
Salyan (small city)	1	5%
Salyan region (rural area)	2	10%
Masalli region (rural area)	2	10%
Gender		
Male	11	55%
Female	9	45%
Time-period of finishing/drop-out of formal education		
2006-2010	15	75%
2011-2015	5	25%
Highest level of education enrolled into when finishing or dropping-out of education		
Upper secondary education	8	40%
Initial professional education	1	5%
Secondary professional education	2	10%
Undergraduate education – Bachelor	8	40%
Graduate education – Master	1	5%

Source: TEW-CCA Youth Transition Survey pretest in Azerbaijan (2016); own calculations.

Despite the extensive work on the target questionnaire development and adjustment, the pretesting gave further valuable information for improving of the questionnaire. The Azeri team summarized the detailed results and experiences from the first 13 pretest interviews in a report. In this report recommendations were given for further improvements of the questionnaire. This report was shared

among all three country teams by the German coordinator in preparation of the second project workshop at the end of May 2016. At the second project workshop in Dushanbe (30 May – 5 June 2016) the Azeri country team presented the pretest results and it was followed by in-depth discussions by all TEW-CCA team members. Pretest results were shared and discussed among all country teams in order to decide upon harmonized versus country-specific questionnaire adaptations. Based on the results of the discussions the Azeri team updated the survey questionnaire in English, Azeri and Russian language.

In sum, a few changes were necessary in reaction to the pretest results. For example, the introductory text for survey was adjusted in order to minimize the risks of refusals. Moreover, concrete suggestions for improving the household screening questionnaire were made by the Azeri team. Small adaptations were made to some of the answer categories such as providing additional categories or adapting the answer categories in the case of close-ended questions. Furthermore, a few initially planned questions on subjective education and skill mismatch turned out to be too ambiguous and not adoptable to the specific Azeri context. Accordingly, these questions were taken out from the questionnaire. Due to several adjustments of the Azeri target questionnaire, the national team conducted an additional round of pretesting in August 2016 using the adjusted questionnaire. The second round of pretests proved the fully adequacy of the target questionnaire for Azeri country context. Hence, no further adjustments were needed.

The final versions of the survey questionnaire for Azerbaijan in English, Azeri and Russian language was completed after the summer break at the beginning of September 2016. This was right in time of the start of the interviewer training and fieldwork period.

3. Interviewer recruitment and training

3.1. Interviewer recruitment

The interviewers and supervisors were recruited from the capital Baku because in other regions of Azerbaijan there is a big shortage of highly qualified and experienced interviewers and supervisors, who have gained experience in a large number of surveys of various research institutions. In addition, the experience of previous ICSR's surveys shows that local, particularly rural, residents usually rarely refuse to give interviews to interviewers who come from afar, than to interviewers from the same area. This is because the local population perceive the interviewers from other regions as guests who have done a long trip in order to get an interview.

As in previous nationally representative surveys conducted by the ICSR experienced interviewers and supervisors were hired from an existing pool of candidates. As the network of interviewers and supervisors is rather large, ICSR was able to choose the best qualified persons for the specific tasks to perform. All these fieldworkers participated in many previous surveys, conducted by ICSR and by other research institutions. This choice of experienced interviewers and supervisors has the advantage that these fieldworkers are experienced because they are regularly dealing with sociological surveys and systematically trained by professionals. Having participated in many surveys conducted by different organizations they have a rich experience and professional approach to work. The main criteria for selection of interviewers were their professionalism, responsibility and communication skills. Persons with strong organizational and management skills were chosen as supervisors. They particularly demonstrated their skills working as supervisors in previous surveys of ICSR.

A total of 17 interviewers and four supervisors were hired by ICSR. Individual short-term contracts between ICSR and the experienced interviewers and supervisors were concluded. Interviewers and supervisors were allocated in advance to the regions and selected PSUs in such a way that each of them has approximately the same amount of work in close (Baku and Absheron) and remote areas (other regions). Only one interviewer who was involved in the survey at a later stage worked only in

the remote area. When distributing field workers across different regions, their previous work experience in different regions was taken into account, so that they conduct field work in the areas most familiar to them. Specifically, this concerned supervisors who were responsible for organizational and logistical issues.

The great majority (81%) of fieldworkers were women aged 35 to 55. Almost all interviewers and supervisors had a higher education degree (90%). The great majority (86%) of fieldworkers had more than 10 years of work experience in quantitative surveys, while only 14% of fieldworkers had between five and 10 years of work experience. All fieldworkers live in Baku.

3.2. Supervisor and interviewer training

Interviewer and supervisor training took place for a period of five days from 12 to 16 October 2017 at the ICSR in Baku. Overall, all 18 interviewer and four supervisors took part in intensive training sessions. Two interviewers were trained in addition to have two reserve interviewers for emergency cases or to substitute other interviewers.

The recruited interviewers and supervisors were trained by Dr. Tair Faradov and Prof. Dr. Rajab Sattarov (both from ICSR) on how to administer the questionnaire and the sampling procedure. Next to detailed instruction on the sampling procedure, such as implementing the random-route technique to find households, explanation of the survey purpose, motivation of interviewees for survey and selection of respondents the interviewers and supervisors got specific and intensive training on questionnaire administration, as the complexity of TEW-CCA Youth Transition Survey questionnaire was higher due to the retrospective elements of the questionnaire. Furthermore, the personal attributes of the interviewers were discussed in detail in order to minimize the interviewer effect such as: neutrality of interviewers (to be totally neutral, non-judgmental during interview), objectivity (minimizing bias, e.g. by exactly reading each question and no adding or omitting), avoiding bias in question, interpreting the survey questions and explanatory material in the same way, exact recording of responses, etc.

After the joint training for interviewers and supervisors special instruction sessions for supervisors were carried out on issues of the organization and the control over work of interviewers during the fieldwork. Supervisors were instructed on how to deal with logistics issues (transportation to and within regions, accommodation, and communication) and the territorial distribution of their subordinate interviewers in order to make the most efficient use of financial resources and time. They also received instruction on the visual and logical control of the completed individual questionnaires and household screening questionnaires, and what they should do if they discovered voids and inconsistencies. Supervisors were explained the requirements for the number and content of control calls to respondents by phone, the main signs of possible falsification and the actions to be taken in case of detection of signs of falsification and confirmation of suspicions of falsification.

The training session was organized as follows:

- Explanation of the objectives and tasks of the survey, its distinctive features as compared with previous surveys (in particular, focus on retrospective questions instead of “snapshot” perspective of the current situation), description of characteristics of the target population and screening criteria (length: half a day)
- Question-by-question training by reading the whole questionnaire and explaining all specific details, such as question filtering, using show cards or reading the answers, etc. (length: one and a half day)
- Detailed explanation of the content and structure of quite complicated show cards 0, 3, and 4; instruction on correct coding of field of study, occupation, and sector of industry. It was agreed that in difficult/uncertain case interviewer has to record respondent’s answer by words and

discuss this case with supervisor or fieldwork coordinator after the end of interview (length: half a day)

- Detailed instruction on random walk selection of households within PSU, selection of eligible respondent within household, refusals, revisiting, and filling the household screening questionnaire (length: half a day)
- Practical work in conditions close to the field: Divided into four groups of four to five persons each, the interviewer learned under the guidance of their supervisors how to do the random walk selection of households on pre-determined routes. They practically trained the random walk procedures in Baku and had to fulfill the tasks of finding and conducting interviews of two eligible respondents (length: one day)
- Discussion with interviewers and supervisors of uncertainties, difficulties and problems encountered in the field; trainer's further clarification on these matters; organizational issues of upcoming fieldwork (length: one day)

A manual with detailed instructions concerning the correct completion of the individual questionnaire and household screening questionnaire was prepared for the field personnel. It also contained the instructions on the sampling methodology and procedures. All interviewers received a copy of this manual to take in the field.

4. Sampling procedure

4.1. Target population and sample size

The target population is defined as the population of Azerbaijan aged 18 to 35, who left the education system during the period from 2006 to 2015. The survey population is defined as the individuals of the target population who have an ex-ante positive probability of being selected. In this respect, the following groups excluded:

- the population of Azerbaijan who is living in occupied Nagorno-Karabakh and surrounding territories,
- the region of Nakhchivan because of limited access for survey fieldwork due to the conflict with Armenia,
- residents of non-private institutions such as hospitals, jails and military bases, and
- persons who migrated abroad and who were not present in Azerbaijan during the survey period.

Based on the definition of the survey population a sample was drawn based on a multistage area probability sampling procedure (see Chapter 4.2). The sample size, i.e. the number of completed interviews, is 2002.

4.2. Multistage cluster sampling with stratification

Lists of election districts and voters as the basis for the sampling frame development

The full lists of election districts and voters published on the official website of the Central Election Commission of Azerbaijan were used for the sampling frame development in Azerbaijan. These lists are the most reliable and convenient database for the calculations and sampling in Azerbaijan for the following reasons:

- ✓ They are updated every 6 months.
- ✓ They are easily accessible and can easily be downloaded.

- ✓ On the basis of these lists one can quite accurately determine the individual level distribution of the population of age 18 and older by geographical regions and types of settlements in each region.[19] This information is needed to calculate the quantitative distribution of PSUs by regions and types of settlements in proportion to the number of their population over 18 years (see below).
- ✓ Since the Central Election Commission's database contains separate lists of election districts for Internally Displaced Persons from occupied territories (IDPs) and IDPs voters, it allows defining the total number of IDPs aged 18 and over. This information is needed to calculate the quantitative distribution of PSUs for IDPs as well. In Azerbaijan there are no other available databases that would allow for an exact definition of PSUs for IDPs.

In Azerbaijan there is a large flow of labor migrants, particularly among young people, from rural areas to Baku and other cities, as well as from other cities to Baku. At the same time, these migrants continue to be registered as voters at the place of their official registration, where they came from. For that reason, if potential individual respondents had been directly selected from the lists of voter's names, a selective part of the survey target population, the mobile young generation who are labor migrants in other cities or Baku would have been significantly underrepresented in the sample. Thus, in order to avoid the under-representation of this group of mobile young people in the survey, the random selection from the database of the Central Election Commission was only done with respect to election districts (PSUs), but not with respect to individual respondents.

Stratification

Stratification was applied in the development of the sampling frame via the division into strata. Two parameters were used to define the strata: 1) region and 2) settlement type (rural areas vs. different types of urban areas). Azerbaijan is divided into eight geographical regions: Baku city, Absheron, Ganja-Gazakh, Sheki-Zagatala, Lankaran, Guba-Khachmaz, Aran and Daglik Shirvan. Moreover, the group of IDPs from occupied areas is defined as a separate regional group. Settlement types distinguish rural areas, urban areas with less than 100,000 inhabitants, urban areas with 100,000 to 1,000,000 inhabitants and urban areas with more than 1,000,000 inhabitants. The latter settlement type only occurs in the region of Baku city, for which no other settlement type occurred. All other regions had two to three different types of settlements. For the group of IDPs from the occupied territories is was not possible to apply the urban-rural distinction. In this way the total target population is divided into 19 strata.

Table 2.2 lists all strata that are defined based on the cross-classification of region (first column of Table 2.2) and settlement type (first row of Table 2.2). The cell entries in Table 2.2 provide the absolute number of voters aged 18 or above in each stratum according to the most recent available election lists from May 2016 before the start of the TEW-CCA Youth Transition Survey in Azerbaijan in autumn 2016. Table 2.3 shows the percentage distribution of voters by regions and types of settlements. All figures in this table are calculated as a percentage from the total number of voters, that is, from 4,681,590.

[19] The election lists just contain information on the individuals but not on the households. Hence, only the number of individual voters per election district can be determined but not the number of households (and their composition) per election district. Although the lists contain information on the age of the voters, the presentation in alphabetical order by surnames and names did not allow a feasible calculation of the size of the age group of 18 to 35yo. Thus, the population of people aged 18 or over was used as an approximation.

Table 2.2. Distribution of voters by regions and types of settlements (absolute number of voters)

Region	Type of settlement					
	rural	**urban <100,000**	**urban 100,000-1,000,000**	**urban >1,000,000**	**IDPs***	**Total**
Baku city				1,224,272		1,224,272
Absheron	15,920	63,678	159,576			239,174
Ganja-Gazakh	366,221	132,650	145,494			644,365
Sheki-Zagatala	270,752	106,452				377,204
Lankaran	317,479	118,499				435,978
Guba-Khachmaz	184,310	92,602				276,912
Aran	640,147	333,232	49,366			1,022,745
Daglik Shirvan	92,742	48,297				141,039
IDPs from occupied areas*					319,901	319,901
Total	1,887,571	895,410	354,436	1,224,272	319,901	4,681,590

Source: Central Election Commission of Azerbaijan (2016); own calculations.
*Remark: * Data on the distribution of IDPs voters by regions and types of settlements are not available.*

Table 2.3. Percentage distribution of voters by regions and types of settlements (% of voters)

Region	Type of settlement					
	rural	**urban <100,000**	**urban 100,000-1,000,000**	**urban >1,000,000**	**IDPs***	**Total**
Baku city				26.2		26.2
Absheron	0.3	1.4	3.4			5.1
Ganja-Gazakh	7.8	2.8	3.1			13.7
Sheki-Zagatala	5.8	2.3				8.1
Lankaran	6.8	2.5				9.3
Guba-Khachmaz	3.9	2.0				5.9
Aran	13.7	7.1	1.1			21.9
Daglik Shirvan	2.0	1.0				3.0
IDPs from occupied areas*					6.8	6.8
Total	40.3	19.1	7.6	26.2	6.8	100.0

Source: Central Election Commission of Azerbaijan (2016); own calculations.

Determining the number of PSUs to be selected from each strata

In each stratum each election district represents the survey's primary sampling units (PSU) of the TEW-CCA Youth Transition Survey in Azerbaijan. Each election district contains 940 voters on average. Numbers of voters differ by election districts, but in most election districts number of voters range between 800 and 1200. It was agreed in advance that in each PSU 14 interviews in total should be performed. Thus, aiming at a sample of size of 2002 interviews in Azerbaijan, in total 2002/14=143 PSUs were selected for the TEW-CCA Youth Transition Survey in Azerbaijan.

The number of PSUs to be selected within each stratum was determined proportionally to the size of regions and types of settlements within regions. This was done in the following steps: Table 2.4

shows the distribution of PSUs by strata in absolute numbers of PSUs. These numbers are calculated by multiplying the percentage distribution of voters by strata (see Table 2.3) by the total number of 143 to be selected for the survey and rounding the results.

Random selection of PSUs within each strata

The appropriate number of PSUs as determined in Table 2.4 were randomly selected from the respective stratum. For each of the 19 strata, PSUs were selected from the full lists of election districts within these strata. Firstly, these 19 lists were prepared using the database of the Central Election Commission of Azerbaijan. Then random selection of PSUs for each stratum was done (applying appropriate interval for each stratum calculated as a total number of election districts within given stratum divided to predefined number of PSUs for this stratum).

Since data on the distribution of IDPs voters by regions and types of settlements are not available, 10 PSUs were randomly selected from the full list of election districts for IDPs voters without prior stratification.

Table 2.4. Distribution of PSUs by regions and types of settlements (absolute numbers of PSUs, rounded numbers)

	Type of settlement					
Region	**rural**	**urban <100,000**	**urban 100,000-1,000,000**	**urban >1,000,000**	**IDPs***	**Total**
Baku city				37		37
Absheron	0	2	5			7
Ganja-Gazakh	11	4	4			19
Sheki-Zagatala	8	3				11
Lankaran	10	4				14
Guba-Khachmaz	6	3				9
Aran	20	10	2			32
Daglik Shirvan	3	1				4
IDPs from occupied areas*					10	10
Total	58	27	11	37	10	143

Source: Central Election Commission of Azerbaijan (2016); own calculations.

Selection of households

After randomly choosing the 143 PSUs from the strata as describe above, households were selected by the method of "random walking" within each election district. In urban area randomly selected addresses within selected election district were defined as the starting point for random walking. In rural area, where households do not have addresses, the household of a person randomly selected from the voters list was used as the starting point. The contact sheet, which is the first page of the household screening questionnaire, had to be filled by each interviewer. On the contact sheets the outcomes of contact attempts were recorded for each household both in the case of unsuccessful visits and in the case of visits with successfully conducted interviews. In case of an unsuccessful first contact in terms of closed door or nobody could provide the information on the household

composition an interviewer had to return to the designated address two times. If household member(s) refused to provide information on the household composition, interviewer moved to the next household in accordance with route walk guidelines. In case of a successful identification of a target person in a household (for details, see below), the interviewer applied a step on their way of random routing. Interviewer continued visits of households in the PSU until the predefined number of 14 interviews were achieved in the PSU.

Selection of individual respondents within a household

Within each selected household a screening of the household composition was conducted via filtering questions in order to find out whether there is or whether there is not a target person (18 to 35yo, who have left the education system in 2006–2015) in the selected household. If there is no target person in the household the interviewer continues his/her way to the next household according to the random route guidelines. If there is one target person this target person shall be chosen. If there are several target persons in the household, then one target person will be chosen among them by the last-birthdate method. If the chosen target person was at home and willing to participate in the survey, the interviewer conducted the interview based on the individual questionnaire.

If the chosen target respondent was not at home or was not able to make an interview at this time, the interviewer made an appointment to return to conduct the interview. At least two additional visits were made before the respondent was considered as lost for follow-up. No replacements within the same household were allowed for interviews that could not be completed.

5. Fieldwork management, monitoring and quality control

The fieldwork was implemented by 17 interviewers and four supervisors. The fieldwork was managed, coordinated and controlled by the fieldwork coordinator Prof. Dr. Rajab Sattarov. Four fieldwork teams each consisting of four interviewers and one supervisor were organized and worked in accordance with time schedule defined prior to fieldwork start. Prior to the fieldwork a schedule of the fieldwork was designed. Table 2.5 shows the exact days when the fieldwork was conducted in each region.

Table 2.5. Duration of fieldwork by regions

Region	Start day	End day
Baku city	18/10/2016	01/12/2016
Absheron	19/10/2016	01/12/2016
Ganja-Gazakh	02/11/2016	10/01/2017
Sheki-Zagatala	22/11/2016	23/12/2016
Lankaran	05/11/2016	05/12/2016
Guba-Khachmaz	04/11/2016	21/11/2016
Aran	19/10/2016	22/01/2017
Daglik Shirvan	01/11/2016	21/12/2016
IDPs from occupied areas	19/10/2016	04/11/2016

Source: Own illustration.

In each PSU (election district) interviewers had to find the starting point for random walking. Then, they moved along the route as described in the sampling procedure in accordance with

predetermined intervals between the houses and flats. The contact sheets were filled up for each household visited in order to document which interviewer visited at which date and time which household in which district of the respective PSU. As can be seen in the contact sheets (see "Household Screening Questionnaire") detailed information about the contact attempts and success were collected each time. Reasons for unsuccessful contact attempts and refusals were documented in detail. In case of successful household contacts the interviewers conducted screening questions on each household member to identify potential respondents. Among eligible persons the one was chosen who had last birthday. If this selected target person was not present or did not have time at that moment to answer the individual questionnaire, the interviewer returned on another occasion to do the interview with the target person. The information from contact sheets were used for monitoring and quality control as well as to make exact calculation of response rates.

Interviewers handed over all filled household screening questionnaires and all completed individual questionnaires to the supervisors in regular intervals. The work of interviewers was permanently controlled by supervisors. Control included the following activities:

- ✓ The supervisors carried out a visual inspection and logical control of all completed questionnaires (voids, logical inconsistencies, failure skips, etc.).
- ✓ Supervisors checked whether the interviewers followed the instructions of the random walk selection of households. Each supervisor did this check for 4–6 household contact attempts in each of the PSUs where supervised interviewers worked.
- ✓ Supervisors also checked 4–5 cancelled contacts and unproductive visits of each interviewer in the form of personal visits to the corresponding households.
- ✓ In addition, each supervisor checked by phone 20% of the completed questionnaires of each interviewer. The supervisor had to ask the respondent one to two questions from each section of the questionnaire in order to verify the responses that were given on the questionnaire. If the household screening table shows that there was more than one eligible person for the survey in the household, the supervisor had to find out whether the birthday of the respondent was really the last one among the eligible persons of the household.

Supervisors dealt with detected failures in the quality check in the following way:

- In case of unintentional errors in filling out the questionnaires, selection of households or respondents, interviewers had to correct them through phone calls, visits to the respondents or additional interviews with other respondents, selected in line with the sampling methodology and procedures. Only few corrections were needed. Overall, the number of corrections made was 56 through phone calls, 12 through additional visits and seven through additional interviews with a new respondent selected in line with the sampling methodology and procedures.
- In case of intentional falsification of interviews, the supervisor had to carry out a full telephone control of the questionnaires of this interviewer. The following cases were treated as potential signs of falsification:

  a) The contacted household claims that nobody in the household conducted an interview.

  b) Inconsistency of responses received on quality check via phone with responses reported by the interviewer in the questionnaire and the cover sheet.

  c) The inability to reach respondent by phone numbers and the lack of phone numbers in more than 10% of the questionnaires.

If doubts remained after the full control by phone, the supervisor checked the questionnaires of this interviewer in a personal visit of the respective respondent. If the falsification was confirmed, the interviewer was detached from the survey and all future surveys of the ICSR. However, no case of intentional falsification was detected. This can be explained by the large experience of the selected interviewers being well aware on such selection procedures from previous survey work. Moreover,

interviewers were aware of the strict quality control mechanisms and fines in case of non-compliance such that the incentives of manipulation were low and risk of detection very high. Moreover, the remuneration of fieldworkers was done only upon approval of quality of fieldworks and after correction of all problems if found.

The fieldwork coordinator Prof. Dr. Rajab Sattarov managed and coordinated the field work. He was responsible for the overall control of the field work process and quality. The fieldwork coordinator additionally visited fieldwork places four times throughout the survey. The main purpose of these visits was to control and evaluate the work of supervisors ("control over control"). During these visits, the fieldwork coordinator was convinced that each of the four supervisors correctly and in the required volume fulfilled the above mentioned duties on control over the work of their interviewers.

During and after the fieldwork data were prepared in form of an electronic data set in preparation of quantitative data analysis. Several steps of careful data checking and editing were carried out to produce an accurate and user-friendly electronic database. In particular, 20% out of the total number of cases entered by each of the two data entry operators were additionally checked through comparing the entered data with the corresponding information in the paper questionnaires. In this way only three errors in data entering were found, which underlines the excellent quality of data entry.

6. Response rate

The upper part of Table 2.6 provides information on the outcomes of contact trials, the response and non-response behavior at the household level. Overall 6591 (sum of 1H, 2H, and 4H) households were approached according to the random route procedure in Azerbaijan.[20] In the case of 120 households nobody opened the door during the three possible visits. In general, the low rate of closed doors in the TEW-CCA Youth Transition Survey in Azerbaijan is in line with previous survey experiences in Azerbaijan. It can be related to a relatively high proportion of large households and presence of household members at home as well as the efforts of the interviewers to make return visits. Moreover, the Azerbaijanian society is open towards guests who visit the household. 607 households refused to do the household screening interview part such that the interviewers could not continue with these households. However, in the majority of the household contacts the household contact person was willing and able to answer the household screening questionnaire. Based on this information the household level response rate was calculated as 1H/(1H+2H+3H), which corresponds got 89.0%.

The lower part of Table 2.6 provides information on the outcomes of contact trials, the response and non-response behavior at the individual level. Among the 5864 successfully screened households it turned out that in 3641 households there was no eligible respondent (i.e. a person aged 18 to 35 who left education in the period 2006 to 2015). In the remaining 2223 household there was at least one eligible person. As described above if there were several eligible persons the last birthday method was applied in order to determine the one eligible person for the individual interview. In 221 cases the chosen eligible person was not interviewed because of absence during all three visits (1 case), being unable to do the interview (38 cases) or refusal (182 cases). 2002 interviews were successfully conducted. This gives an individual level response rate of 90.1% (calculated as 4I/2I).

The overall response rate is determined by multiplying the household level response rate and the individual level response rate. The multiplication yields an overall response rate of 80.1% for the TEW-CCA Youth Transition Survey in Azerbaijan.

[20] The number of dwellings that were identified as being vacant or not being a private household was not reported by the interviewer. However, these dwellings would not be considered in the calculation of the response rate anyway.

Table 2.6. Calculation of the response rate in the TEW-CCA Youth Transition Survey in Azerbaijan

Household level response rate		
1H	Completed household screenings	5864
2H	No one at home	120
3H	Refusal at HH level	607
	Household level response rate	**89.0%**
Individual level response rate		
1I	Screened HH without eligible persons	3641
2I	Screened HH with eligible persons	2223
3I	Number of chosen eligible persons not interviewed, because	221
	… they were not at home during all visits	1
	… they were not able to do the interview	38
	… they refused to answer	182
4I	Number of eligible persons interviewed	2002
	Individual level response rate	**90.1%**
	Overall response rate	**80.1%**

Source: TEW-CCA Youth Transition Survey in Azerbaijan, own calculation.

7. References

Central Election Commission of Azerbaijan (2016). Central Election Commission's database, May 2016. Retrieved from www.inforcenter.gov.az

The State Statistical Committee of the Republic of Azerbaijan (2018). Demography and Social Statistics – Population by ethnic groups, by native language and freely command of languages. Retrieved on 6 August 2018 from https://www.stat.gov.az/source/demoqraphy/?lang=en

8. Appendices of Chapter II

The following supplementary material for the TEW-CCA Youth Transition Survey in Azerbaijan can be downloaded from http://www.tew-cca.de/academic-publications/working-papers/:

Appendix II-1: Azerbaijan: Household Screening and Individual Questionnaire in English

Rajab Sattarov, Tair Faradov, Vladimir Rodin, Michael Gebel and Eliza Mandieva

Appendix II-2: Azerbaijan: Household Screening and Individual Questionnaire in Azeri

Rajab Sattarov, Tair Faradov and Vladimir Rodin

Appendix II-3: Azerbaijan: Individual Questionnaire in Russian

Rajab Sattarov, Tair Faradov and Vladimir Rodin

Chapter III – Methodology of the TEW-CCA Youth Transition Survey in Georgia

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1. Questionnaire adjustments and translation

1.1. Questionnaire adjustments

The questionnaire development and adjustment was an act of intensive collaboration within the TEW-CCA research network. The national teams of experts from Azerbaijan (AZE), Georgia (GEO) and Tajikistan (TJK) as well as the coordinator team from Germany (GER) jointly developed and adjusted both the source and target questionnaires. The coordinator team GER started with distributing a first version of the source questionnaire of the TEW-CCA Youth Transition Surveys among all TEW-CCA members in mid-November 2016. The language of the source questionnaire was English due to multilingual composition of the survey project team. This source questionnaire was developed by the coordinator team GER based on the review of questionnaires of previous youth surveys in transition countries and based on in-depth consultations with the survey experts from the national country teams (see Chapter 1 of this working paper for the general rationale of the survey and questionnaires).

The first version of the source questionnaire was intensively discussed by all TEW-CCA country teams at the Baku Workshop from 28 to 30 November 2015. Suggestions for improvement were collected. Based on the discussion and further questionnaire reviews the coordinator team GER developed the second version of the source questionnaire. The second version was sent to all TEW-CCA members at the beginning of February 2016.

The Georgian team reviewed the second version of the source questionnaire in an intensive work period and made national specific adjustments. During this intensive work period all national teams AZE, GER, GEO and TJK were in active communication to clarify unclear issues. As a result the Georgian team developed a nation-specific draft questionnaire (target questionnaire) for Georgia at the beginning of March 2016. In close consultation with the coordinator team GER the Georgian team made several rounds of revisions of the nation-specific draft questionnaire for Georgia in an intensive work period. Via the coordinator team GER it was guaranteed that adjustments were harmonized across countries if it was reasonable. This revision period was finished at the end of March 2016 and the Georgian team delivered the English version of the target questionnaire for Georgia for the purpose of pretesting.

1.2. Translation of questionnaire

At the beginning of April 2016 the English version of the target questionnaire for Georgia was translated into Georgian language considering the translation practices and standards given in the literature of cross-country quantitative surveys. Additionally, the Georgian team has got the standardized part of the questionnaire in Azeri from Azerbaijan and completed this with the translation of the country-specific part into Azeri. In order to harmonize the Azeri language questionnaires both teams worked together especially in the review of the translations and adjudication processes. The target questionnaire in Georgian and Azeri languages for Georgia were provided in mid of April 2016. In the case of Georgia the questionnaire was also translated into Russian afterwards.

The choice of target languages was based on the review of the population statistics and ethnic composition of Georgia. According to data from the National Statistics Office, the Azeri ethnic group represents the main ethnic minority group in Georgia with a population share of 6.3% according to last census results from 2014 (National Statistics Office of Georgia 2018). The Azeri language version was necessary because only 19% of Azeris living in Georgia are fluent in Georgian language. The situation is different for the second largest ethnic minority of Armenians which accounted for 4.5% of the Georgian population in 2014, of whom 40% speak Georgian fluently (National Statistics Office of Georgia 2018). Moreover, the ethnic minority of Armenians usually speaks Russian. Thus, another language version of the questionnaire was prepared in Russian. The Russian language questionnaire also covers the Russian minority in Georgia (0.7%). 62% of the other small ethnic minority groups representing overall 1.6% of the population in Georgia in 2014 report to be fluent in Georgian (National Statistics Office of Georgia 2018). The rest of this group is mainly covered by the Russian language version of the questionnaire because among these ethnic minority groups the Russian language is still an important communication' language.[21]

2. Pretesting

The head of the Georgian team Dr. Irina Badurashvili, Director of the Georgian Centre of Population Research (GCPR), with support of her staff members provided specific training to the professional interviewers that were engaged in the pretest. Next to intensive teaching on the questionnaire's meaning and routing and interview situation the professional interviewers were required to conduct at least three interviews after the training session for training purposes and to get back to the GCPR with questions and comments. In addition, in terms of an informal pretesting, the Georgian team conducted eight test interviews in the period from 17 April to 4 May 2017. Based on these experiences and after consultations with the German coordinator some small corrections were done if necessary in the final national versions of the pretest questionnaire.

The pretesting period lasted from 9 May to 18 May 2016. The pretests were conducted by three professional interviewers (two female and one male interviewer), which had already experiences in the previous fieldworks of the GCPR and were appointed as supervisors during the fieldwork in this survey research project. Twelve interviews were conducted with the presence of the head of the Georgian team Dr. Irina Badurashvili and/or other team members Nino Kobakhidze and Rusudan Nadiradze. Eliza Mandieva also attended as a representative of the German coordination team some of the interviews as an observer. Her main task was to conduct an integrated behavior coding as in other survey countries, especially on the standardized parts of the questionnaire. As it was mentioned in Chapter 1 of this methodological report, having such multilingual and interdisciplinary working team for pretesting was gainful not only for pretesting but also for later stages of the project

[21] Unfortunately, exact figures cannot be provided because the population census data do not provide information on people speaking Russian, aside of those who consider it as their mother tongue.

implementation, e.g. fieldwork design and reporting on cross-country survey methods. The remaining eight interviews were conducted by interviewers without the presence of team members in terms of reactivity tests. The main objectives of the pretesting were

- ✓ general reflection of fieldwork conditions given in the survey country,
- ✓ identification of technical errors given within survey instruments,
- ✓ reflection on wording and formulation of questions via behavior coding,
- ✓ analysis of the additional fieldwork instruments such as answer cards and its explanatory potential,
- ✓ checks for adequacy, completeness and diversity of the answer options for close-end questions,
- ✓ general assessment of the interview dynamics and approximate interview timing,
- ✓ monitoring of the respondent's mood and behavior during the interview,
- ✓ evaluation of the interviewer's skills and behavior in order to determine the intensity of the interviewer training for the fieldwork.

Respondents for the pretest were chosen based on a non-probability convenience sampling. The four selection criteria of respondents were developed for pretesting purpose. They are (1) rural vs. urban areas, (2) gender, (3) the level of education of the respondents and (4) the timing of leaving education. Interviewers were asked to select respondents such that there is some variation in the four selection criteria. Table 3.1 provides a summary of characteristics of respondents of TEW-CCA survey pretests in Georgia. In terms of regional coverage about half of pretest interviews were conducted in Tbilisi, the capital of Georgia. Another six interviews were done in the Mtskheta-Mtianeti region, which represents both urban areas and rural areas near to Tbilisi. Four interviews were conducted in the Kakheti region, which also consists of urban and rural areas.

Table 3.1: Characteristics of respondents of TEW-CCA Youth Transition Survey pretest in Georgia

	Absolute number	**Percentage**
Region		
Tbilisi- capital city	10	50%
Mtskheta-Mtianeti region (urban and rural area surrounding Tbilisi)	6	30%
Kakheti region (urban and rural area)	4	20%
Gender		
Male	13	65%
Female	7	35%
Time-period of finishing/drop-out of formal education		
2006-2010	12	60%
2011-2015	8	40%
Highest level of education enrolled into when finishing or dropping-out of education		
Basic secondary education	1	5%
Upper secondary education	3	15%
Professional/Technical education	4	20%
Undergraduate education – Bachelor	10	50%
Graduate education– Master	2	10%

Source: TEW-CCA Youth Transition Survey pretest in Georgia (2016); own calculations.

Men were slightly overrepresented in the pretest. Young people with different labor market experiences were sampled. 60% of respondents successfully completed or dropped out from formal education in the period 2006–2010. As they had more experiences they could tell about longer periods of economic activities and other transition events after leaving education. The remaining 40% of respondents successfully completed or dropped out from formal education in the period 2011–2015. Respondents were also chosen to differ in their highest level of education enrolled into when finishing or dropping-out of education. This definition implies that persons dropping out of education were assigned to the level they dropped out from. Following this definition, half of the respondents were from the undergraduate (Bachelor) level and 10% were from the graduate (Master) level. 20% had professional or technical education and the remaining respondents were from basic secondary or upper secondary education. Thus, the pretest sample covers the main education level and tracks that exist in the Georgian education system. The length of interviews varied depending on education level and number of previous economic activities to report on. The length of interviews was between 15 and 45 min.

Despite the extensive work on the target questionnaire development and adjustment the pretesting gave further valuable information for improving the questionnaire. The Georgian team summarized the detailed results and experiences from the 20 pretest interviews in a report. In this report recommendations were given for further adjustments of the questionnaire. This report was shared among all three country teams by the German coordinator in preparation of the second project workshop at the end of May 2016. At the second project workshop in Dushanbe (30 May – 5 June 2016) the Georgian country team presented the pretest results and it was followed by in-depth discussions by all TEW-CCA team members. Pretest results were shared and discussed among all country teams in order to decide upon harmonized versus country-specific questionnaire adaptations. Based on the results of the discussions the Georgian team updated the target questionnaire in English, Georgian, Russian and Azeri language.

In sum, only small adjustments were necessary based on the pretest results. For example, improvements were made in phrasing the right introductory words to the survey in order to minimize the risks of refusals. Small adaptations were made to some of the answer categories such as providing additional categories or adapting the answer categories (e.g. taking the changes in the Georgian grading system duet to latest reforms into account). Improvements were also made for the interviewer instructions on using appropriately answer cards in case of large classification schemes of some answer categories.

The final versions of the target questionnaire for Georgia in English, Georgian, Russian and Azeri language was completed after the summer break at the beginning of September 2016. This was right in time of the start of the interviewer training and fieldwork period.

3. Interviewer recruitment and training

3.1. Interviewer recruitment

In Georgia the interviewers and supervisors were recruited from all regions in order to cover all eleven Georgian administrative regions in the nationally representative TEW-CCA Youth Transition Survey. This choice of local interviewers and supervisors had the advantage that their geographical locality provided a great opportunity to organize fieldworks around whole country with fewer financial resources than in case of traveling of interviewers from capital city to regions. Moreover, previous surveys' experiences in Georgia showed that the local interviewers have better outcomes in terms of reaching of potential respondents and agreement for interview. Being more familiar with residential areas and usually living in close surrounding to surveyed territorial units they could easier

visit household in any time of day during fieldworks' period in order to find potential respondent and perform an interview.

As in previous nationally representative surveys conducted by the GCPR interviewer and supervisors were mainly hired from the network of fieldworkers of the national system of Integrated Household Survey of the Georgian statistical office (Geostat), who are local experts residing in different Georgian regions. Most of the local survey institutions and international agencies organizing the quantitative surveys around whole Georgia apply same approach. So, the best interviewers in this network are engaged in many surveys. In this respect, the GCPR was able to recruit from its pool of experienced interviewers and supervisors who have already gained experiences in previous large scaled surveys in Georgia such as the Generations and Gender Survey (GGS). As the network of interviewers and supervisors is rather large, GCPR was able to choose the best qualified persons for the specific tasks to perform. This choice of experienced interviewers and supervisors has the advantage that these fieldworkers are experienced because they are regularly dealing with sociological surveys and systematically trained by professionals. Having participated in many surveys conducted by different organizations they have a rich experience and professional approach to work.

Overall, 51 interviewers and 10 supervisors were hired by GCPR. The number of interviewers involved to the survey was oriented at the geographical distribution of chosen PSUs and the targeted number of 2000 successfully completed interviews. A proportionally larger number of interviewers were needed in rural areas. This is because according to the sample design (see Section 4) in each PSU only 10 persons have to be interviewed. In case of a rural area this means that only 10 interviews will be performed in a whole village representing a PSU. Selected villages might be located quite far from each other. Taking into account that public transportation is less available in rural areas of Georgia and interviewers have to manage their traveling according to available resources some interviewers in rural areas performed a relatively small number of interviews. The principles of interviewers' selection in the region altogether with other important characteristics were also based on geographical proximity of areas to be visited by the interviewer. Applying this strategy the GCPR minimized the risk of false interviews in terms of interviewers living very far away who might wrongly try to avoid the costs of repeated household visits if the selected target person was not at home during the first visit.

Most of the selected interviewers (74.5%) are in their middle age (35-50 years old) but there is also a substantial share of young interviewers (17.6%) aged 18-35 years. Overall the majority of interviewers are females: 48 from 51 persons in total. However, an exact gender balance is reached among regional supervisors with 5 men and 5 women. The educational level of interviewers is quite high: 80% of interviewers have completed a tertiary educational level; the major part of them (71.4%) holds a master degree. The interviewers are highly experienced: 82% of them have more than 10 years of experience of working as interviewer and participated in more than 10 survey projects; 23.5% of all interviewers have been working as an interviewer for 15 years or more.

3.2. Supervisor and interviewer training

Overall 53 interviewers and 10 supervisors took part in intensive training sessions.[22] Training sessions took place in Tbilisi at the GCPR and in all Georgian regions. Two stages of training were provided by the project's team in the GCPR office in Tbilisi: the first stage of training targeted at supervisors and the second stage of training targeted at the training of interviewers conducting fieldworks in Tbilisi and the surrounding areas.

The first round of training was organized for regional supervisors in the following way. It had the character of a "training of trainers". It included three full days of in-person training sessions with the purpose to prepare supervisors for acting as trainers of local interviewers in their respective regions.

[22] Two female interviewers did not continue working because of health problems or quitting the job.

The training of the regional supervisors took place at the GCPR in Tbilisi on 3– 5 September 2016. The regional supervisors received general training on the study design and specific training on the questionnaire logic and handling as well as the sample design. During this in-person training at the GCPR office the supervisors at first got to know the goals of the TEW-CCA project and the main themes of the survey with regard to the study concept of youths' transition from education and work. Afterwards, the study of the questionnaire followed. In order to get familiar with the questionnaire and other survey instruments general interviewer training techniques (GIT) were applied. The GCPR trainers went with the supervisors through the entire questionnaire giving special attention to filtering guidelines and the use of card of answers. Supervisors were also asked to read questions applying the standardized question-asking techniques, e.g. they red questions loud and in the exact order and emphasizing words which might be crucial to understand the questions by respondents. The GCPR trainers discussed with the supervisors the probing techniques allowed in the Georgian cultural context. The supervisors were also instructed about clarification rules if the respondents ask for clarification during the fieldwork.

Furthermore, within the specific training sessions, the logic and the special character of the retrospective life histories in the survey were explained. A detailed explanation was provided on potential problems that may occur with the survey instrument. The training was based on the profound survey experiences of the GCPR staff, the experiences from the pretesting in Georgia as well as the general methodological guidelines provided by the German coordinator. To get a better understanding of the questionnaire practical work in terms of role-play was incorporated into the training sessions. Homework was assigned after training on each part of the questionnaire. This helped training participants to become more familiar with the survey questionnaire. Additionally, the survey specific role and tasks of supervisors during the fieldwork were discussed next to general interviewing and study specific training. Its purpose was to make the supervisors familiar with their responsibilities related to the management of the fieldwork in the regions such as the proper selection and training of interviewers, providing efficient assistance during practical implementation of the sampling procedures, ensuring the quality of the whole survey documentation to be submitted personally to GCPR's office. Particular attention was paid to the specificities of important survey instruments, the household screening questionnaire (specifically the cover sheet), and documenting the results of contacting the households and selecting a target person. Regional supervisors received the list of the selected PSUs in their region in advance such that they could bring up possible challenges that by their opinion might take place during household visits in specific PSUs. This was jointly reviewed and based on different scenarios the best solutions were chosen to overcome the possible difficulties.

During the same training the GCPR staff also provided general information on the sampling methods used for selecting households (random-route technique) and the respondent (next-birthday method) as the last stages of the multistage random sampling procedure. The supervisors were instructed also how to deal with refusals, revisits and document in general unusual cases during the fieldwork. The sampling specialist Prof. Dr. Mamuka Nadareishvili from Ilia State University explained the supervisors the details of the overall sampling procedure that was applied. He also had an exchange with supervisors about challenges that may occur during the random walking and household visits and how to manage such issues during the survey implementation.

In the second round of training the regional supervisors took the role of trainers themselves. Each regional supervisor trained his/her local interviewers in the respective region. The structure of the training workshops was identical to the training of supervisors conducted by GCPR's staff in Tbilisi. During the training of local interviewers the regional supervisors used the same guidelines and followed the same training procedures that were applied at the supervisor training sessions at GCPR office. These training sessions acted as some form of pre-training. They were accomplished in a third round of training by visits and additional training of interviewers by GCPR staff. The following additional training sessions by GCPR staff to Georgian regions took place at the following dates:

- September 12–14: Visit of Gori for training of interviewers of Shida-Kartli region: 8 participants: regional supervisor , 5 interviewers, 2 representatives from GCPR staff as trainers
- September 17–19: Visit of Rustavi for training of interviewers of Kvemo Kartli region: 8 participants: regional supervisor, 5 interviewers, 2 representative from GCPR staff as trainers
- September 20–22: Visit of Dusheti for training of interviewers of Mtskheta-Mtianeti region: 6 participants, regional supervisor, 4 interviewers, 1 representative from GCPR staff as trainers
- September 23–25: Visit of Batumi for training of interviewers of Ajara and Guria regions: 10 participants, regional supervisor, 8 interviewers, 1 representative from GCPR staff as trainers
- September 28–30: Visit of Kutaisi for training of interviewers of Imereti region: 8 participants, regional supervisor, 6 interviewers, 1 representative from GCPR staff as trainers
- September 29 – October 1: Visit of Telavi for training of interviewers of Kakheti region: 6 participants, regional supervisor, 4 interviewers, 1 representative from GCPR staff as trainers
- October 1–3: Visit of Senaki for training of interviewers of Samegrelo region: 5 participants, regional supervisor, 3 interviewers, 1 representative from GCPR staff as trainers
- October 3–4: Visit of Akhaltsikhe for training of interviewers of Samtskhe-Javakheti region: 5 participants: regional supervisor, 3 interviewers, 1 representative from GCPR staff as trainers

This additional training was organized as a mixture of group sessions and an examination of each individual interviewer. It had two purposes. First, to organize additional training sessions focused on specific problems that had occurred in the pre-training. And second, to examine the readiness of interviewers for fieldwork and making the final selection of interviewers under the suspicion of the GCPR staff. In this way the GCPR staff monitored if the training was correctly undertaken by the supervisors and whether interviewers were well prepared for the fieldwork. The quality checks showed that the supervisors did a very good pre-training. Remaining problems were easily addressed during additional training sessions organized by the GCPR staff.

The training of the interviewers for Tbilisi area and surroundings was conducted separately and directly by the GCPR staff and not via a pre-training by supervisors. Some of the interviewers from rural areas and other regions of Georgia, who preferred training directly by Dr. Irina Badurashvili, were also included into this group. Three training sessions took place at the GCPR office in Tbilisi on 6–8 September, 9–11 September and 15–17 September. Overall, 16 interviewers and three GCPR staff members participated in these three training sessions.

4. Sampling procedure

4.1. Target population and sample size

The target population is defined as the population of Georgia aged 18 to 35, who left the education system during the period 2006 to 2015. The survey population is defined as the individuals of the target population who have an ex-ante positive probability of being selected. In this respect, the following groups excluded:

- Areas that are not controlled by Georgian authorities since 1990s (Abkhazia and former South-Ossetia autonomies) as well as some surrounding territories currently occupied by Russian troops.[23] The total population in these excluded areas is about 5%.
- Moreover, some remote villages in mountainous areas, where less than 10 persons were living, were excluded. Significant part of the Georgian territory comprises mountains. In mountain areas

[23] Population census of 2014 was not conducted at this territory.

of Georgia there are plenty of almost empty villages (with less than 10 dwellers). These villages are very hard to reach and it requires a lot of time and financial recourses to arrange interviews there. Such villages were excluded from the sampling frames. According to the 2014 census the total number of households residing in these villages makes up only 0.4% of all Georgian households and the number of population living there makes up less than 0.3% of the total country's population (National Statistics Office of Georgia 2018). Moreover, these villages are resided mostly by elderly people, so the share of the targeted population excluded from the sample frames is even lower than 0.3%.

- Residents of non-private institutions such as hospitals, jails and military bases.
- Persons who migrated abroad and who were not present in Georgia during the survey period.

Based on the definition of the survey population a sample was drawn based on a multistage cluster sampling procedure using stratification (see the following Chapter 4.2). The sample size, i.e. the number of completed interviews, is 2000.

4.2. Multistage cluster sampling using stratification

The Census 2014 as the basis of the sampling frame

Census units represent the most optimal territorial units for developing the sampling frame of the TEW-CCA Youth Transition Survey in Georgia. The last population census in Georgia was held in November of 2014. It represents the most reliable source of information on the size of the Georgian population and its socio-demographic structure. The individual data-base of residents collected by the Georgian statistical office (Geostat) in the census is confidential according to the Georgian law. Geostat can only provide aggregated statistical information to researchers. The lowest level of aggregation is the level of census units. During the population census of 2014 the whole territory of Georgia controlled by the Georgian government was divided into 9500 census units. Each census unit contained 110 households on average, comprising 405 residents on average.

For the sampling frame of the TEW-CCA Youth Transition Survey in Georgia, the number of households and population structure (with respect to sex and age) as well as the maps of the territories that were covered by the survey were requested from Geostat. Specifically, the GCPR team requested a list of the number of households with at least one person aged 18–35 by census units from Geostat. According to the 2014 census' data approximately 56% of Georgian households include at least one person of the target age (18–35yo). The other selection criteria of respondents of having left education in the period 2006 to 2015 could not be considered because the census data do not contain information on the date of leaving education.[24]

In urban areas[25] the clusters for sampling were formed based on census units. In urban census units the number of households with persons aged 18–35 fluctuates from 1 to 245. For the TEW-CCA Youth Transition Survey in Georgia, every urban census unit containing more than 30 households with persons aged 18-35 is defined as an urban cluster. Urban census units with less than 30

[24] In general, across the world, census data do not provide this information. If at all, the date of acquiring the highest education degree is measured but this information is biased with regard to the TEW-CCA Youth Transition Survey definition of leaving education in case of dropouts from education and non-linear education careers.

[25] An urban area is defined as a large settlement resided by no less than 5000 inhabitants and being a center of economic and economic-cultural activities. A settlement with the population less than 5000 can also be defined as an urban area if it is the center of a self-governing administrative unit with prospects of economic development and population growth.

households with persons aged 18–35 were merged with (a) neighboring urban census unit(s) to reach a number of more than 30 households in order to define an urban cluster.[26]

For the TEW-CCA Youth Transition Survey in Georgia, a rural area, i.e. a village, was defined as a rural cluster. Sometimes the village coincides with the census. If the village is large, it can consist of several census units, whereas one census unit can include several small villages. The size of the rural clusters (in terms of the number of households with persons aged 18–35) varies between 16 and 1439. A rural areas, i.e. a village, with less than 30 households with persons aged 18–35 were merged with (a) neighboring village(s) to reach a number of more than 30 households in order to define an urban cluster.

Stratification

Stratification was applied in the sampling procedure. At the initial stage population was divided into strata. Two parameters were used to define the strata: 1) region and 2) settlement type (urban area, rural area). Georgia is divided into 11 administrative regions: Tbilisi; Shida Kartli;Kvemo Kartli; Kakheti; Samtskhe-Javakheti; Mtskheta-Mtianeti; Ajara; Guria; Samegrelo and Zemo Svaneti; Imereti; Racha-Lechkhumi and Kvemo Svaneti. In each region urban areas and rural areas were distinguished. The only exception was Tbilisi that was only defined as an urban area.

Table 3.1 lists all strata that are defined based on the cross-classification of region (first column of Table 3.1) and settlement type (second column of Table 3.1). Each stratum is given a strata number *s* which is mentioned in the third column. The strata number is designed in the following way: the last figure is related to type of settlement: 1- urban, 2-rural area. And the first figure(s) (ranging from 1 to 11) correspond to an administrative region of Georgia. The third column of Table 3.1 provides the number of households with persons aged 18 to 35 in each stratum according to the results of the 2014 census. The fourth column of Table 3.1 lists the number of the 18-35 year-old population in each stratum according the 2014 census.

Determining the number of PSUs to be selected from each strata

Regional and urban clusters as defined above represent the primary sampling units (PSU) of the TEW-CCA Youth Transition Survey in Georgia. It was decided in advance that in each PSU 10 interviews should be performed. Thus, aiming at a sample of size of 2000 interviews in Georgia, in total 2000/10=200 PSUs should be selected for the survey.

The number of PSUs to be selected in each stratum was determined proportionally to the number of individuals aged 18-35 years within the respective stratum. In particular, the number of PSUs (k_s) to be sampled from the stratum*s* is calculated as follows:

$$k_s = \frac{N_{I,s}}{N_I} \cdot 200$$

where $N_{I,s}$ is the number of individuals aged 18-35 within the respective stratum s and N_I is the number of individuals aged 18-35 in the whole country (N_I=942,268). The calculated number of PSUs k_s to be sampled from the stratum*s* is given in the sixth column of Table 3.2.

[26] Just 102 (2.2%) of all urban census units (representing just 0.5% of the total number of households with persons aged 18-35) had less than 30 of such households reside.

Table 3.2. List of strata, populations sizes of 18-35yo and number of sampled clusters per stratum

Region	Settlement type	Stratum numbers	Number of households with persons aged 18–35 ($N_{H,s}$)	Number of individuals aged 18–35 ($N_{I,s}$)	Number of sampled clusters(k_s)
Tbilisi	Urban	11	200926	319541	68
Shida Kartli	Urban	21	15280	23686	5
Shida Kartli	Rural	22	24574	38624	8
Kvemo Kartli	Urban	31	30728	49413	10
Kvemo Kartli	Rural	32	39211	66870	14
Kakheti	Urban	41	10591	16100	3
Kakheti	Rural	42	34365	54449	12
Samtskhe-Javakheti	Urban	51	7842	12289	3
Samtskhe-Javakheti	Rural	52	17088	28532	6
Mtskheta-Mtianeti	Urban	61	2772	4426	1
Mtskheta-Mtianeti	Rural	62	10987	17539	4
Ajara	Urban	71	29832	49374	10
Ajara	Rural	72	25548	44721	9
Guria	Urban	81	2935	4342	1
Guria	Rural	82	12287	18960	4
Samegrelo and Zemo Svaneti	Urban	91	18489	28275	6
Samegrelo and Zemo Svaneti	Rural	92	27527	42571	9
Imereti	Urban	101	40303	61468	13
Imereti	Rural	102	36865	56516	12
Racha-Lechkhumi and Kvemo Svaneti	Urban	111	783	1106	1
Racha-Lechkhumi and Kvemo Svaneti	Rural	112	2500	3466	1
Total			591433	942268	200

Source: Population census in Georgia (National Statistics Office of Georgia 2018); own calculation and illustration.

Selection of PSUs within each strata based on PPS design

The appropriate number k_s of PSUs were selected from the respective stratums using the Probability Proportional to Size (PPS) method. The PPS method guarantees that each household with persons aged 18 to 35 had the same overall selection probability into the survey irrespectively of being located in a small or a large PSU in one stratum.

Applying the PPS method the bigger PSUs needed to have a higher probability to be selected than the smaller PSUs (with size of a PSU being measured by the number of persons aged 18 to 35 in a PSU). The following steps of PPS were applied to each stratum:

(1) PSUs were ordered according to the number of census unit in census 2014

(2) The sampling interval/selection step was calculated as $B_s=N_{I,S}/k_s$, where $N_{I,S}$ is the number of persons aged 18 to 35 within the respective stratum s and k_s is the number of PSUs to be sampled from the stratum s.

(3) A random number RS between 1 and B_s was selected as the random start (RS)

(4) The p-th PSU was selected only in case if

$$int\left(\left(\sum_{p=1}^{P} N_{I,p} - RS\right)\Big/ B_s\right) > int\left(\left(\sum_{p=1}^{P-1} N_{I,p} - RS\right)\Big/ B_s\right)$$

where $\sum_{p=1}^{P} N_{I,p}$is the cumulative number of persons aged 18 to 35 in the first p=1,…,P PSUs, and $\sum_{p=1}^{(P-1)} N_{I,p}$is the cumulative number of persons aged 18 to 35 in the first p=1,…,(P-1) PSU, and int (.) is the integer function that refers the complete part of a number.

Selection of households

After randomly choosing the 200 PSUs from the strata as described above, the maps of selected PSUs (census units) were requested from Geostat. Streets and borders of the selected PSUs (census units) were marked on the maps. Interviewers were handed over the map of the PSU, on which the starting point was defined and marked by regional supervisor in consultation with GCPR. The interviewers also received detailed instructions on how to sample the households. The household visits were performed by the method of "random walking". The contact sheet had to be filled by each interviewer. The outcomes of contact attempts with each household (chosen according to the random walking guidelines) were recorded on the contact sheets. In case of an unsuccessful first contact (door closed, nobody could provide or refused to provide any information on the household composition) the interviewer moved to the next household according to the random walking guidelines in order to find a potential respondent. In case of a successful identification of a target person in a household (for details, see below), the interviewer applied a step on their way of random routing. Interviewer continued visits of households in the PSU until the predefined number of 10 interviews were achieved in the PSU.

Selection of individual respondents within a household

Within each selected household a screening of the household composition was conducted via filtering questions in order to find out whether there is a target person in the household. If there was no target person in the household, the interviewer continues her way to the next household according to the random route guidelines. If there was exactly one target person, this target person was chosen. If there were several target persons in the household, one target person was chosen among the target persons applying the next-birthdate method. If the chosen target person was at home and willing to participate in the survey, the interviewer conducted the interview based on the individual questionnaire. If the chosen target respondent was not at home or was not able to make an interview at this time the interviewer had to conduct the interview later on performing up to three visits in different times.

5. Fieldwork management, monitoring and quality control

The fieldwork was implemented by 51 interviewers and 10 supervisors[27]. The fieldwork was managed, coordinated and controlled by the fieldwork coordinator and director of the GCPR Dr. Irina Badurashvili. She was supported by GCPR staff members.

The fieldwork started on 9 October 2016 and it lasted for about two months. Most of regions completed the fieldwork at the beginning of December with exception of Kvemo Kartli region where

[27] The region Guria (with 50 interviews in total) was supervised by the person in charge for Ajara region. Zemo Svaneti and Racha-Lechkhumi regions (with 20 interviews in total) were merged with Imereti region. The region Tbilisi, where more than third of all interviews had to be conducted, was supervised by two persons.

the fieldwork started a bit later (from 1 November 2016) and finished on 23 December 2016. This postponement was necessary because the second round of the Georgian parliament election took place on 30 October 2016 and some interviewers were engaged in other survey work related to the election. For the same reason fieldwork in some PSUs in Kakheti and Imereti regions also started later. The fieldwork in Racha-Lechkhumi and Zemo Svaneti region started later due to the fact that this region (with just 20 interviews to be conducted) was managed by the supervisor of the neighboring Imereti region who decided to focus on the management of the fieldwork in Imereti first because this mountainous area served a particular attention. The longest duration of the fieldwork was registered for Tbilisi lasting until the end of December due to specific challenges in terms of incomplete geographical maps, higher rates of refusals and return visits requiring the permanent consultations between supervisor, GCPR staff and Geostat.

According to the sampling design interviewers had to find first a household according to the described scheme for random walking inside a territorial unit (PSU). The contact sheets were filled up for each visit to document which interviewer visited at which date and time which household in which district of the respective region. In addition, a list of all visited addresses, including information of successful household contacts, was prepared by each interviewer as a supplement of the filled cover sheets. As it can be seen in the contact sheets detailed information about the contact attempts and success were collected each time. Reasons for unsuccessful contact attempts and refusals were documented in detail. In case of successful household contacts the interviewers conducted the screening questions on each household member to identify potential respondents. Among the eligible persons the one was chosen who had an upcoming birthday closest to the date of interview. If this selected target person was not present or did not have time at that moment to answer the individual questionnaire the interviewer returned on another occasion to complete the interview with the target person.

As a first step of quality control in the important initial period of the survey the GCPR staff checked the first five questionnaires that were filled by each interviewer and provided via the supervisors. This practice helped to detect initial mistakes and in such cases actions were taken to guarantee equal quality across interviewers, which improved the general a quality of work during the survey.

During the whole survey period interviewers handed over all filled contact sheets, the additional list of visited addresses and all completed individual questionnaires to the supervisors in regular intervals. Each supervisor visually checked each of the contact sheets and questionnaires to detect systematic and logical errors in the questionnaire filling.

Regional supervisors submitted the filled contact sheets (“Household Screening” questionnaire), the additional list of visited addresses and the filled questionnaires to the GCPR office for control and data-entry. Similarly to the supervisors the staff at GCPR Office in Tbilisi visually checked again all the completed questionnaires and a whole survey documentation for this region. Data entry took place in parallel to the fieldwork period. This was an additional control mechanism to identify any inconsistencies in the interviewee responses before the survey is completed. Inconsistencies were communicated immediately to supervisors and interviewers and it is agreed upon remedial actions.

Moreover, the GCPR team performed in-depth quality control of randomly chosen 20% of questionnaires filled by each interviewer, which resulted in in-depth quality checks of 400 questionnaires in total. In case of irregularities found in the randomly chosen questionnaires, all questionnaires filled by the respective interviewer underwent thorough quality checks. These checks took place via household visits by the GCPR staff or via telephone from the GCPR office. The latter approach was more effective especially in case of big cities, as many respondents could not be found at home during household visits. During the quality control work the following aspects were controlled:

- ✓ Step size selection

- ✓ Properness of selection of a respondent within a household: check whether the right person was chosen
- ✓ Guarantee of face-to-face interview and exclusion of proxy interviews: check whether the interview was performed face-to-face with the respondent and not by collecting of information via other modes of survey or via third persons
- ✓ Age and year of leaving education of the respondent. Sometimes details of educational career of the respondents were also checked.

As there was a complete list of all households visited by each interviewer it was easy to control the appropriate implementation of the selection of households via the random walk method.[28] In this respect, no irregularities were detected. This can be explained by the huge experience of the selected interviewers being familiar with such selection procedures from previous survey work. Moreover, interviewers were aware of the strict quality control mechanisms and fines in case of non-compliance such that the incentives of manipulation were low and risk of detection were very high. Furthermore, the remuneration of fieldworkers was done only upon approval of quality of fieldworks and after correction of all irregularities if there were any.

As a result of these activities quality of collected data was ensured as interviews that were suspected as "false" were cancelled and the filled questionnaires with irregularities were checked and corrected in case of necessity. Those questionnaires that as a result of monitoring appeared to be filled on persons that were not eligible respondents, e.g. due to inappropriateness of age or date of leaving of education, were replaced by new interviews of new respondents. In total only 32 questionnaires required correction (or 1.6% of all filled questionnaires); among them, there were 24 "false" questionnaires (filled on wrong respondents), which were finally replaced.

Four main reasons of falsification were identified during the fieldwork: (1) a deviation with regard to the selection criteria of leaving education during the period 2006–2016 (mainly only small deviations of one year)[29]; (2) respondent became 36 shortly before the date of the interview or the respondent did not reach yet age of 18 at the date of the interview; (3) the questionnaire was filled by another person than the chosen respondent (because of absence of potential respondent, usually men who were not at home and other family members performing proxy-interviews)[30] (4) the respondent was still engaged in education at the time of interview. Among the above mentioned 32 questionnaires eight questionnaires could be corrected by performing an interview with the respective respondent a second time. The small number of false interviews as well as the efforts to make corrections clearly document the high quality of the TEW-CCA Youth Transition Survey Georgia under the head of the GCPR and highlight the effectiveness of quality control, monitoring and management of the whole survey process.

[28] In some cases supervisors/interviewers accompanied monitors for avoiding misunderstanding and errors in the quality control process itself, especially in rural areas where title of streets do not exist and many people have the same family name.

[29] In reaction GCPR staff performed additional quality checks: During visual control of filled questionnaires in the GCPR office it was checked whether the age and the level of education of the respondent is in line with the date of leaving education taking the country-specific knowledge on typical duration of education programs into account.

[30] In reaction GCPR staff performed additional quality checks: All PSUs were checked where the share of female respondent seemed to be very high. In this case all households were called where eligible persons of both sex existed but a female respondent was interviewed.

6. Response rate

The upper part of Table 3.3 provides information on the outcomes of contact trials, the response and non-response behavior at household level. Overall 13,961 (sum of 1H, 2H, 3H and 4H) dwellings were approached according to the random route procedure in Georgia. 2126 dwellings were identified as being vacant or not being a private household, which were not considered in the calculation of the response rate. Thus, overall 11,835 households (sum of 1H, 2H and 3H) were approached in Georgia.

Table 3.3. Calculation of the response rate in the TEW-CCA Youth Transition Survey in Georgia

Household level		
1H	Completed household screenings	6218
2H	No one at home	3110
3H	Refusal at HH level	2507
4H	Vacant dwelling/no private HH	2126
	Household level response rate	**52.5%**
Individual level		
1I	Screened HH without eligible persons	3893
2I	Screened HH with eligible persons	2325
3I	Number of chosen eligible persons not interviewed, because	325
	… they were not at home during all visits	126
	… they were not able to do the interview	64
	… they refused to answer	135
4I	Number of eligible persons interviewed	2000
	Individual level response rate	**86.0%**
	Overall response rate	**45.2%**

Source: TEW-CCA Youth Transition Survey in Georgia, own calculation.

In the case of 3,110 households nobody opened the door.[31] 2507 households refused to do the household screening interview part such that the interviewers could not continue with these households. However, in the majority of the household contacts the household contact person was willing and able to answer the household screening questionnaire. Based on this information the household level response rate was calculated as 1H/(1H+2H+3H), which corresponds to 52.5%.

The lower part of Table 3.3 provides information on the outcomes of contact trials, the response and non-response behavior at the individual level. Among the 6218 successfully screened households it turned out that in 3893 households there was no eligible respondent (i.e. a person aged 18 to 35 who left education in the period 2006 to 2015). In the remaining 2325 household there was at least one eligible person. As described above if there were several eligible persons the next birthday method was applied in order to determine the one eligible person for the individual interview. In 325 cases the chosen eligible person was not interviewed because of absence during all visits (126 cases),

[31] According to the sampling procedure applied in Georgia, the interviewers moved on to the next household in this case. The only exception was that interviewers stopped and returned to this household for a second visit if there was sincere hope (e.g. information provided by neighbors) to be successful when returning.

being unable to do the interview (64 cases) or refusal (135 cases). 2000 interviews were successfully conducted. This gives an individual level response rate of 86.0% (calculated as 4I/2I).

The overall response rate is determined by multiplying the household level response rate and the individual level response rate. The multiplication yields an overall response rate of 45.2% for the TEW-CCA Youth Transition Survey in Georgia.

7. References

National Statistics Office of Georgia (2018). Results of the Population Census of Georgia 2014. Retrieved 5 August 2018 from http://census.ge/ge/results/census1/demo

8. Appendices of Chapter III

The following supplementary material for the TEW-CCA Youth Transition Survey in Georgia can be downloaded from http://www.tew-cca.de/academic-publications/working-papers/:

Appendix III-1: Georgia: Household Screening and Individual Questionnaire in English

Irina Badurashvili, Nino Kobakhidze, Rusudan Nadiradze, Michael Gebel and Eliza Mandieva

Appendix III-2: Georgia: Household Screening and Individual Questionnaire in Georgian

Irina Badurashvili, Nino Kobakhidze and Rusudan Nadiradze

Appendix III-3: Georgia: Individual Questionnaire in Russian

Irina Badurashvili and Nino Kobakhidze

Appendix III-4: Georgia: Individual Questionnaire in Azeri

Irina Badurashvili, Nino Kobakhidze and Rajab Sattarov

Chapter IV – Methodology of the TEW-CCA Youth Transition Survey in Tajikistan

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1. Questionnaire adjustments and translation

1.1. Questionnaire adjustments

The questionnaire development and adjustment was an act of intensive collaboration within the TEW-CCA research network. The national teams of experts from Azerbaijan (AZE), Georgia (GEO) and Tajikistan (TJK) as well as the coordinator team from Germany (GER) jointly developed and adjusted both the source and target questionnaires. The coordinator team GER started with distributing a first version of the source questionnaire of the TEW-CCA Youth Transition Surveys among all TEW-CCA members in mid-November 2016. The language of this questionnaire was English. The source questionnaire was developed by the coordinator team GER based on the review of questionnaires of previous youth surveys in transition countries and based on in-depth consultations with the survey experts from the national country teams (see Chapter 1 of this working paper for the general rationale of the survey and questionnaires).

The first version of the draft questionnaire was intensively discussed by all TEW-CCA country teams at the Baku Workshop from 28 to 30 November 2015. Suggestions for improvement were collected. Based on the discussion and further questionnaire reviews the coordinator team GER developed the second version of the source questionnaire. The second version was sent to all TEW-CCA national teams at the beginning of February 2016.

The Tajik team reviewed the second version of the source questionnaire in an intensive work period and made national specific adjustments. During this intensive work period, all national teams AZE, GER, GEO and TJK were in active communication to clarify unclear issues. As a result, the Tajik team developed a nation-specific draft questionnaire (target questionnaire) for Tajikistan at the beginning of March 2016. In close consultation with the coordinator team GER, the Tajik team made several rounds of revisions of the nation-specific draft questionnaire for Tajikistan in an intensive work period. Via the coordinator team GER, it was guaranteed that adjustments were harmonized across countries if it was reasonable. This revision period was finished end of March 2016 and the Tajik team delivered the target questionnaire for Tajikistan for the purpose of pretesting.

1.2. Translation of questionnaire

At the beginning of April 2016, the English version of the pretest questionnaire for Tajikistan was translated into the national languages considering the translation practices and standards given in the literature of cross-country quantitative surveys. In the case of Tajikistan the questionnaire was translated into Tajik and Russian. These two are common languages spoken in the country, which

also reflects the population structure of the country. For instance, according to the last population census results, Tajiks represent the great majority (84.3%) of the population of Tajikistan (see Table 4.1) (State Statistical Agency of Tajikistan 2012). Users of various Pamir languages understand Tajik as well, since they use Tajik as a written language. The knowledge of Tajik is also spread among Uzbek speakers, which represent the largest ethnic minority group in Tajikistan (12.2%) (State Statistical Agency of Tajikistan 2012). Almost half of Uzbeks (including Turkic speaking groups such as Lakai and Kongrat) fluently speak Tajik. The rest of Uzbeks speak Tajik in various degrees of proficiency, which is in most of the cases sufficient to respond to the questions. For this reason it was decided to implement interviews in Tajik. In case a respondent could not respond in Tajik, the interview was implemented in Russian language, since Russian still retains the status of lingua franca. In particular, according to the 2010 National Census, more than a third of the population fluently speaks Russian (State Statistical Agency of Tajikistan 2012). Hence, since only few people speak other languages and many persons of these ethnic minorities speak either Russian or Tajik or both in addition, it was decided to limit the translations to Russian and Tajik languages. The Tajik and Russian language version of the target questionnaire for Tajikistan were provided in mid of April 2016.

Table 4.1: Ethnic composition of population of Tajikistan

Region	Absolute number	Percentage
Tajiks	6,373,834	84.3%
Uzbeks	926,344	12.2%
Lakai	65,555	0.9%
Kyrgyz	60,715	0.8%
Kongrats	38,078	0.5%
Russians	34,838	0.5%

Source: State Statistical Agency of Tajikistan (2012)

2. Pretesting

The head of the Tajik field survey team, Prof. Dr. Muzaffar Olimov, Co-Director of the SHARQ (ORIENS) Research Center in Dushanbe with support of his staff members provided specific training to the professional interviewers that were engaged in the pretesting. The professional interviewers were intensively trained on the questionnaire's meaning and routing and interview situation.

The pretesting period was divided into two periods lasting from 25 to 29 April 2016 and from 14 to 17 May 2016 but the same target questionnaire was applied in both periods. The pretests were conducted by four professional interviewers (three women and one man), which had already experiences in the previous fieldworks of the SHARQ (ORIENS) Research Center. Eliza Mandieva attended as a representative of the German coordination team some of the interviews as an observer. Her main task was to conduct an integrated behavior coding as in other survey countries, especially on the standardized parts of the questionnaire. As it was mentioned in Chapter 1 of this methodological report, having such multilingual and interdisciplinary working team for pretesting was gainful not only for pretesting but also for later stages of the project implementation, e.g. fieldwork design and reporting on cross-country survey methods. The main objectives of the pretesting were

- ✓ general reflection of fieldwork conditions given in the survey country,
- ✓ identification of technical errors given within survey instruments,
- ✓ reflection on wording and formulation of questions via behavior coding,
- ✓ analysis of the additional fieldwork instruments such as answer cards and its explanatory potential,

- ✓ checks for adequacy, completeness and diversity of the answer options for close-end questions,
- ✓ general assessment of the interview dynamics and approximate interview timing,
- ✓ monitoring of the respondent's mood and behavior during the interview,
- ✓ evaluation of the interviewer's skills and behavior in order to determine the intensity of the interviewer training for the fieldwork.

Respondents for the pretest were chosen based on a non-probability convenience sampling. The four selection criteria or respondents were developed for pretesting purpose. They are (1) rural vs. urban areas, (2) gender, (3) the level of education of the respondents and (4) the timing of leaving education. Interviewers were asked to select respondents such that there is some variation in the four selection criteria. Table 4.2 provides a summary of characteristics of respondents of TEW-CCA survey pretests in Tajikistan.

Table 4.2: Characteristics of respondents of TEW-CCA Youth Transition Survey pretest in Tajikistan

	Absolute number	**Percentage**
Region		
Dushanbe - capital city	9	45%
Vahdat region (rural area)	11	55%
Gender		
Male	9	45%
Female	11	55%
Time-period of finishing/drop-out of formal education		
2006-2010	10	50%
2011-2015	10	50%
Highest level of education enrolled into when finishing or dropping-out of education		
General primary education (Grades 1-4)	2	10%
General basic education (Grades 5-9)	2	10%
General secondary education (Grades 10-11)	4	20%
Initial or secondary professional education	2	10%
Undergraduate education – Bachelor or Specialist	6	30%
Graduate education-Master	3	15%
Postgraduate education-Aspirantura or Doctorate	1	5%

Source: TEW-CCA Youth Transition Survey pretest in Tajikistan (2016); own calculations.

In terms of regional coverage 45% of pretest interviews were conducted in Dushanbe, the capital of Tajikistan. 55% of interviews were conducted in the Vahdat region, which is a rural area. Women were slightly overrepresented in the pretest. Young people with different labor market experiences were sampled. Half of the respondents successfully completed or dropped out from formal education in the period 2006–2010. As they had more experiences they could tell about longer periods of economic activities and other transition events after leaving education. The other half of the respondents successfully completed or dropped out from formal education in the period 2011–2015. Respondents were also chosen to differ in their highest level of education enrolled into when finishing or dropping-out of education. This definition implies that persons dropping out of education were assigned to the level they dropped out from. Following this definition, 30% of the respondents were from the undergraduate (Bachelor or Specialist) level and 15% were from the graduate (Master) level and 5% were from the postgraduate level (Aspirantura or Doctorate). 10% attended

initial or secondary professional education. 20% of respondents were from general secondary education (Grades 10–11). The remaining respondents were from lower education tracks: 10% from general basic education (Grades 5–9) and 10% from general primary education (Grades 1-4). Thus, the pretest sample covers the main education level and tracks in Tajikistan. The average duration of one interview was about 30 minutes. Compared to other survey countries the interviewing time in rural areas was shorter than in urban areas due to low mobility of youth and their engagement in homework.

Despite the extensive work on the target questionnaire preparation the pretesting gave valuable information for improving the questionnaire. The Tajik team summarized the detailed results and experiences from the first 13 pretest interviews in a report. In this report recommendations were given for further improvements of the questionnaire. This report was shared among all three country teams by the German coordinator in preparation of the second project workshop end of May 2016. At the second project workshop in Dushanbe (30 May – 5 June 2016) the Tajik country team presented the pretest results and this was followed by in-depth discussions by all TEW-CCA team members. Pretest results were shared and discussed among all country teams in order to decide upon harmonized versus country-specific questionnaire adaptations. Based on the results of the discussions the Tajik team updated the target questionnaire in English, Tajik and Russian language.

In sum, only small changes were necessary in reaction to the pretest results. For example, improvements were made in phrasing the right introductory words to the survey in order to minimize the risks of refusals. Moreover, concrete suggestions for improving the household screening questionnaire were made by the Tajik team. Small adaptations were made to some of the answer categories such as providing additional categories or adapting the answer categories (e.g. in case of questions on migration as migration experiences are very common in Tajikistan). Adjustments were also made on the questions about religion. For example, the original question on veiling was specified taking into account the difference of religious veiling in terms of hijab and Tajik traditional veiling. The traditional veiling does not say anything about the religiosity of the person, while wearing a hijab the person shows clear affiliation to religion and its practice. Furthermore, a few initially planned questions on subjective education and skill mismatch turned out to be too ambiguous and not adoptable to the specific Tajik context. Specifically, the suggested 10-points rating scale is not common in Tajik survey studies. In reaction it was decided to delete those questions.

The final versions of the target questionnaire for Tajikistan in English, Tajik and Russian language was completed after the summer break at the beginning of September 2016. This was right in time of the start of the interviewer training and fieldwork period.

3. Interviewer recruitment and training

3.1. Interviewer recruitment

The survey employed five supervisors who work with SHARQ (ORIENS) Centre regularly. Each supervisor organized the work in one of the five administrative areas. Due to complexity of the survey instrument and sampling design, the national coordinator center of the TEW-CCA survey in Tajikistan decided to recruit experienced supervisors. This choice of experienced supervisors has also the advantage that these fieldworkers are experienced because they are regularly dealing with social surveys and they were systematically trained by professionals. Having participated in many surveys they have a rich experience and professional approach to work, which is helpful in implementing the survey as accurate as possible. They have strong organizational and management skills which qualifies them for their supervisory role. They particularly demonstrated their skills working as supervisors in previous surveys of SHARQ (ORIENS) Centre.

Next to experienced supervisors, 20 interviewers were hired by the SHARQ (ORIENS) Centre. The recruited interviewers consisted of following groups:

- ✓ university graduate students, MA and PhD students from sociology and philosophy faculties of the universities in Dushanbe and Khujand,
- ✓ experienced in-house interviewing staff of the Institute of Economy and Demography of Tajikistan,
- ✓ teachers of rural schools, and
- ✓ staff of local employment centers.

They all have in common that they are familiar with the group of young people to be interviewed. Moreover, they already worked with SHARQ (ORIENS) Centre in previous quantitative studies and, specifically, they have experiences in surveys on youths that were conducted by the SHARQ (ORIENS) Centre before. The main criteria for selection of interviewers were the understanding of the research objectives, professionalism, responsibility and communication skills.

Some interviewers live in Dushanbe, and some in the regions of Tajikistan. For example, in Sughd oblast the interviews were conducted by local interviewers with experience, while in Khatlon oblast interviewers were master or PhD students from the universities of Dushanbe or Khujand who are natives of the region. In the city of Dushanbe, the survey was conducted by the in-house interviewing staff of the Institute of Economy and Demography and students from the Tajik National University. In the Region of the Republic Subordination (RRS), interviewers were students of Master programs in the field of sociology. In the Mountainous Badakhshan Autonomous Oblast (MBAO) two interviewers with extensive experience conducted the interviews, both being originally from the region. All the interviewers participated in similar projects of the SHARQ (ORIENS) Centre, and showed their professional qualities in their previous work.

All supervisors and interviewers had knowledge of Tajik and Russian languages. The supervisor and the interviewers conducting interviews in the MBAO had an additional knowledge of regional languages. Most of interviewers conducting interviews in the Sughd oblast had an additional knowledge of Uzbek language.

Most of the recruited interviewers were aged 20–35 years, while the supervisors were older. As the survey's target population was youth, it was important to consider the age of interviewers as one of the recruitment criteria due to social structure of Tajik society. The young generation shows a great respect to older generation in traditional societies such as Tajikistan. This meant for survey that the youth will be less comfortable talking about their life experiences, especially about the negative ones, with older generation interviewers because they expect to be judged by elderly. From the same perspective, it was decided to recruit older supervisors because, in respect of age, younger interviewers are expected to comply with their work more accurately when being supervised by a person who is much older. All interviewers had completed higher education or were still attending higher education.

3.2. Interviewer training

The Tajik survey team organized two trainings for interviewers that was also attended by supervisors. The first training for interviewers and supervisors took place at SHARQ ORIENS Centre in Dushanbe for a period of five days from 27 January 2017 to 1 February 2017. 22 interviewers and six regional supervisors participated in this training. The second training for interviewers and supervisors took place at the University of Khujand in Sughd oblast for a period of five days from 2 February 2017 to 7 February 2017. Eight interviewers and one regional supervisor participated in this training. Overall, 30 interviewers were trained. So, 10 interviewers were trained in addition to have 10 reserve interviewers for emergency cases or to substitute other interviewers.

Both trainings were done by Dr. Saodat Olimova and Prof. Dr. Muzaffar Olimov from SHARQ (ORIENS) Centre on how to administer the questionnaire and other survey instruments as well as how to find/select eligible respondents. During the trainings interviewers have learned about the survey design, methods of sampling applied during the fieldwork and the target group of the survey. The empirical training included survey instrument specific training and simulation cases of later fieldwork. After the training, the national survey team examined the skills of the interviewers and their readiness for the fieldwork. The trainings had the following structure:

Day 1:

The objectives and tasks of the survey were explained and information about responsibilities and qualities of an interviewer were provided. The following elements of the survey instrument or fieldwork training were crucial and discussed in detail: friendliness and neutrality of interviewers (to be totally neutral, non-judgmental during interview); objectivity, minimizing, reducing bias - exact reading each question, no adding or omitting; avoiding bias in question, interpreting a survey questions in the same way, no different meaning of questions and notions; following question wording exactly; accurate, exact recording responses. The distinctive features of this survey as compared with previous surveys were highlighted in particular, the focus on retrospective questions vs. “snapshot” perspective of today’s situation, and the description of characteristics of the specific target population.

Days 2 and 3:

The questionnaire was presented and discussed in detailed. Using some of the techniques of the general interviewer trainings, such as standardized question-asking technique, the interviewers were trained how to read the questionnaire, making clear all specific details, such as skipping questions, cases of using show cards or reading the answers, the details of answers given on the cards, etc. In addition to understand the questionnaire logic, the interviewers learned how to complete the questionnaire and in particular how to best transition from one question to another (specifically, taking the filtering into account). The most challenging part of the target questionnaire for interviewers was the completion of life history tables. Accordingly, in the afternoon session, participating interviewers surveyed each other in order to improve their understanding of the logic of questionnaire in general and of the history tables in specific.

Day 4:

Detailed instruction on the sampling procedure was provided in terms of the selection of households within SSUs (i.e. application of random walk method) and the selection of eligible respondent within household (i.e. applying the next-birthday method). The interviewers were also instructed how to deal with refusals and about the procedures of revisiting and filling in the household screening questionnaire. They learned about how to deal with interfering guardians/parents or local authorities. In addition, interviewers were trained how to use the routing guide, the official and identification documents. The interviewers were also informed about the different quality control methods and the payment rules.

Day 5:

Practical simulations under conditions close to the field were conducted. Divided into four groups of four to five persons each, the interviewers learned under the guidance of their supervisors how to apply the random walk selection of households on pre-determined routes. They practically trained the random walk procedures in Dushanbe and Khujand and had to fulfill the tasks of finding and conducting interviews of 2 eligible respondents

Day 6:

In the morning session interviewers and supervisors analyzed and discussed their mistakes, uncertainties, difficulties and problems encountered in the field. The trainers further clarified these matters and organizational issues of upcoming fieldwork. The training was followed by a test that

finally decided about being nominated as an official interviewer. However, there were also case that the recruited interviewers stepped down during the training. For example, employees of the Ministry of Labor and Migration stopped participating in training session after the first day after they learned that participation involves trips to distant rural areas.

Special instruction sessions were carried out for supervisors on issues of the fieldwork organization and the monitoring of interviewers in the regions. All of the supervisors underwent this special pre-survey training for half a day during the training period. The key topics for the special supervisor training were how to choose starting points for the random walks, the training of interviewers, organizing quality control of field material, control of cover sheets for survey questionnaire, monitoring the quality of interviewer's work and rules for quality control checks. All instructions, sample, and guidelines for the training and for the survey, contact lists were prepared in Russian and Tajik languages.

A manual with detailed instructions concerning the correct completion of the survey questionnaire and cover sheet was prepared for the field personnel. It also contained the instructions on the sampling methodology and procedures. All interviewers received a copy of this manual to take in the field.

4. Sampling procedure

4.1. Target population and sample size

The target population Is defined as the population of Tajikistan aged 18-35, who left the education system during the period from 2006 to 2015. The survey population is defined as the individuals of the target population who have an ex-ante positive probability of being selected. In this respect, the following groups excluded:

- Areas with difficult access to mountain areas because of logistical reasons. The excluded areas are the districts Murghab, Kuhiston-Matcha and Aini. The total population in these excluded areas is just about 1.5%.
- residents of non-private institutions such as hospitals, jails and military bases, and
- persons who migrated abroad and who were not present in Tajikistan during the survey period.

Based on the definition of the survey population a sample was drawn based on a multistage cluster sampling procedure using stratification (see Section 4.2). The sample size, i.e. the number of completed interviews, is 2000.

4.2. Multistage cluster sampling using stratification

The National Census 2010 and the Annual Demographic Review 2016 as the basis of the sampling framework development

The sample selection was based on the results of the National Census 2010 (State Statistical Agency of Tajikistan 2010) and current statistics data of the Annual Demographic Review 2016 (State Statistical Agency of Tajikistan 2016).

Stratification

Stratification was applied in the development of the sampling frame. Two parameters were used to define the strata: 1) administrative regions and 2) settlement type (urban area, rural area). Five

administrative regions of Tajikistan were distinguished: Dushanbe city, Sughd Oblast, Khatlon Oblast, Region of Republican Subordination (RRS), and Mountainous Badkhshan Autonomous Oblast (MBAO). In each region urban areas and rural areas were distinguished. The only exception was the capital Dushanbe that is only defined as an urban area.

Table 4.3 lists all strata that are defined based on the cross-classification of region (first main column of Table 4.3) and settlement type (second and third main column of Table 4.1). Both absolute numbers and shares in percentages are displayed.

Table 4.3: List of strata, defined by region and rural/urban composition, and the respective population sizes of persons aged 18 to 35

	Persons aged 18-35 per region		**Persons aged 18-35 in urban areas, per region**			**Persons aged 18-35 in rural areas, per region**		
	N	**% overall**	**N**	***% of region***	**% overall**	**N**	***% of region***	**% overall**
Dushanbe	342,640	10.4%	342,640	*100.0%*	10.4%			
MBOA	82,800	2.5%	13,000	*15.7%*	0.4%	69,800	*84.3%*	2.1%
Sughd Oblast	929,000	28.1%	229,000	*24.7%*	6.9%	700,000	*75.3%*	21.1%
Khatlon Oblast	1,188,500	35.9%	211,100	*17.8%*	6.4%	977,400	*82.2%*	29.5%
RRS	767,000	23.2%	100,300	*13.1%*	3.0%	666,700	*86.9%*	20.1%
Total	3,309,940	100.0%	896,040		27.1%	2,413,900		72.9%

Source: State Statistical Agency of Tajikistan (2010, 2016); own calculations.

Definition of numbers and selection of PSUs and SSUs within each strata

Within each stratum districts were defined as the primary sampling units (PSUs) of the TEW-CCA Youth Transition Survey in Tajikistan. Within each PSU secondary sampling units (SSUs) were defined. In urban PSUs the maps of urban PSUs were split into neighborhoods (street blocks) (called "mahallas"). These neighborhoods (street blocks) were defined as SSUs in the case of urban PSUs. In rural PSUs the maps of rural PSUs were split into villages. These villages were defined as SSUs in the case of rural PSUs.

It was agreed in advance that in each SSU 10 interviews are performed in total. Thus, targeting at 2000 interviews in total, 2000/10=200 SSUs (clusters) were selected for the survey.

The number of SSUs in each stratum is proportional to the number of 18-35 years old individuals in each stratum. The numbers of SSUs and interviews to be conducted per strata are given in Table 4.4. Comparing the relative shares of Tables 4.3 and 4.4 reveals that the proportional distribution was reached approximately.

The PSUs to be selected in each stratum were determined proportionally to the number of population of all individuals of any age in the population in each stratum. With the exception of the capital Dushanbe[32], PSUs were selected from the respective stratum using the method of proportional probability size (PPS). As a metric for the size for PPS the population sizes of urban and rural settlements from the 2016 Annual Demographic Review were used (State Statistical Agency of Tajikistan 2016).

[32] In Dushanbe there is only one district – the capital itself. Therefore the stratum and the PSU are identical in the case of Dushanbe.

Table 4.4: Number of interviews, defined by region and rural/urban composition

	Total			Urban areas			Rural areas		
Region	SSUs (N)	Inter-views (N)	%	SSUs (N)	Inter-views (N)	%	SSUs (N)	Inter-views (N)	%
Dushanbe	20	200	10%	20	200	10%	-	-	-
MBOA	8	80	4%	1	10	1%	7	70	4%
Sughd Oblast	62	620	31%	16	160	8%	46	460	23%
Khatlon Oblast	66	660	33%	11	110	6%	55	550	28%
RRS	44	440	22%	6	60	3%	38	380	19%
Total	200	2000		54	540	27%	146	1460	73%

Source: State Statistical Agency of Tajikistan (2010, 2016); own calculations.

The following steps of PPS were applied to each strata:

i. In each stratum the PSUs (districts) are arranged in ascending order according to the number of persons[33] in each PSU. "Cumulative frequencies" were calculated along the ordered PSUs.
ii. The estimated sampling interval (SI) ("selection step") is calculated by $SI_s=N_{l,s}/n_s$ where $N_{l,s}$ is the number of individuals within the respective stratum s and n_s is the number of PSUs to be sampled from the stratum s.
iii. A random number RS between 1 and SI_s is selected as the random start (RS) using the Kish table of random numbers.
iv. The first selected PSU is determined by the random start (RS). To select the remaining PSUs the sampling interval SI is added again and again and each PSU is chosen whenever the calculated number matches the respective PSU in the cumulative sum of the number of persons that were arranged in ascending order as described in (1)

Table 4.5 provides an overview of the selected PSUs (districts) by strata following the PPS procedure described above as well as the number of selected SSUs and number of persons to be interviewed per PSU.

Table 4-5: Selected PSUs and number of SSUs per selected PSU by strata

№	PSUs (NSR-districts)	Population size (N) and mark of selection ("+")	Number of SSUs (clusters) and number of person to be interviewed
(a) Dushanbe			
1.	Dushanbe	802,700	20 urban cluster/200 persons
(b) MBAO			
1.	Khorug	28,000 +	1 urban cluster/10 persons
2.	*Murghob district*	*14,000*	*Excluded due to extremely low population density*
3.	Darvoz district	21,000	
4.	Rushon district	24,000 +	3 rural clusters/30 persons
5.	Roshtqal'a district	24,000	
6.	Ishkoshim district	30,000	

[33] PSUs (districts) were selected according to the total population of the districts, since statistics by age groups by district were not available.

7.	Vanch district	31,400		
8.	Shughnon district	34,000	+	4 rural clusters/40 persons
	TOTAL	3 PSUs selected		8 SSUs (clusters)/80 persons
(c) RRS				
1.	Vakhdat town	40,000	+	2 urban cluster/20 persons
2.	Tursunzade town	47,000	+	2 urban cluster/20persons
3.	Sangvor (Tavildara) district	21,500		
4.	Roghun district	23,800		
5.	Tojikobod district	35,300		
6.	Lakhsh (Jirgatol) district	57,800		
7.	Varzob district	61,000	+	5 rural clusters /50 persons
8.	Faizobod district	78,100	+	5 rural clusters /50 persons
9.	Shahrinav district	91,800	+	5 rural clusters /50 persons
10.	Rasht district	93,700	+	5 rural clusters /50 persons
11.	Tursunzoda district	181,600	+	5 rural clusters /50 persons
12.	Hisor district	231,200	+	4 rural clusters/40 persons and 1 urban cluster/10persons
13.	Vahdat district	240,700	+	5 rural clusters /50 persons
14.	Rudaki district	319,400	+	4 rural clusters /40 persons and 1 urban cluster /10 persons
	TOTAL	10 PSUs selected		38 rural SSUs (clusters)/380 persons and 6 urban SSUs (clusters)/60 persons
(d) Sughd Oblast				
1.	Taboshar town	14,000		
2.	Chkalovsk (Buston)town	28,000	+	2 urban clusters/20 persons
3.	Kairakkum (Guliston) town	40,000	+	2 urban clusters/20 persons
4.	Isfara town	43,000	+	2 urban clusters/20 persons
5.	Panjakent town	43,000		
6.	Konibodom town	46,000	+	2 urban clusters/20 persons
7.	Istaravshan town	55,000	+	2 urban clusters/20 persons
8.	Hujand town	162,000	+	2 urban clusters/20 persons
9.	Shahriston district	32,100		
10.	Zafarobod district	56,300		
11.	Mastcho district	95,800	+	5 rural cluster s/50 persons
12.	J.Rasulov district	108,800	+	5 rural clusters /5 persons and 1 urban cluster/10 persons
13.	Spitamen district	109,400	+	5 rural clusters /50 persons
14.	Asht district	124,900	+	5 rural clusters /50 persons and 1 urban cluster/10 persons
15.	Devashtich (Ghonchi) district	130,900	+	5 rural clusters /50 persons
16.	Konibodom district	173,800	+	5 rural clusters /50 persons
17.	Istaravshan district	208,900	+	5 rural clusters /50 persons
18.	Isfara district	219,200	+	6 rural clusters /60 persons
19.	Panjakent district	226,700		
20.	BobojonGhafurov district	288,500	+	5 rural clusters /50 persons and 2 urban clusters /20 persons
21.	*Ayni district*	*76,900*		*Excluded due to hard physical access*
22.	*KuhistoniMastchoh district*	*22,800*		*Excluded due to hard physical access*
	TOTAL	15 PSUs selected		46 rural SSUs (clusters) /460 persons and 16 urban SSUs (clusters) /160 persons

(e) Khatlon Oblast

1.	Sarband town	14,000	+	2 urban clusters/20 persons
2.	Nurek town	25,000	+	2 urban clusters/20 persons
3.	Kurganteppa town	75,000	+	2 urban clusters/20 persons
4.	Kulob town	95,000	+	2 urban clusters/20 persons
5.	Baljuvon district	24,800		
6.	NosiriKhisrav district	26,600		
7.	Sarband district	36,000	+	6 rural clusters /60 persons
8.	Khovaling district	46,100		
9.	Norak district	47,700	+	5 rural clusters /50 persons
10.	Shurobod (Shohin) district	48,700		
11.	Temurmalik district	56,300	+	5 rural clusters /50 persons
12.	Muminobod district	72,500		
13.	Khuroson district	84,100	+	5 rural clusters /50 persons
14.	Jilikul (Dusti) district	87,300		
15.	Panj district	93,300		
16.	Shahritus district	95,700		
17.	Qumsangir (Jaihun)district	99,300		
18.	Danghara district	113,400	+	4 rural clusters /40 persons and 1 urban cluster /10 persons
19.	Hamadoni district	121 600	+	5 clusters /50 persons
20.	Jomi district	126 200	+	5 clusters /50 persons
21.	Farkhor district	130 000	+	5 clusters /50 persons
22.	Qubodiyon district	136 200		
23.	Vakhsh district	144 400	+	5 clusters /50 persons
24.	Kolkhozobod (JaloliddinBalkhi) district	148 600		
25.	Yovon district	163 300		
26.	Vose district	169 900	+	5 clusters /50 persons and 1 urban cluster /10 persons
27.	Bokhtar district	203 300	+	5 clusters /50 persons and 1 urban cluster /10 persons
	TOTAL	15 PSUs selected		55 rural SSUs (clusters) /550 persons and 11urban SSUs (clusters) /110 persons

Source: State Statistical Agency of Tajikistan (2010, 2016); own calculations.

After randomly choosing 44 PSUs from the strata as described above the definition and the selection of SSU/clusters was done in the following way. The random selection of SSUs in urban PSUs was implemented by assigning a number to each neighborhood. Then, a computer operator drew the required number of SSUs per PSU by randomly selecting numbers and their associated neighborhoods. The random selection of SSUs was implemented by assigning a number to each village. Then, a computer operator drew the required number of SSUs per PSU by randomly selecting numbers and their associated village.

Selection of households

After randomly choosing the SSUs from the PSUs as describe above, the selection of households was conducted by using the method of the random route ("random walking") within each selected SSU. Each interviewer was given a SSU and a randomly chosen starting address within this SSU. In urban areas the starting addresses were houses/buildings on selected streets/blocks as pointed by supervisors. As a rule, the first building/house on the right side of a chosen street was used as a starting address. In rural areas buildings of local administration, schools, bus stations, mosques, or the village electric transformer boxes were used as starting addresses. Since the listed types of

starting addresses were randomly selected, the starting addresses vary across villages. The interviewers did not have any control over the choice of a starting address. The rules of switching apartments were specified in the routing guide.

In Tajikistan it is common that several related households reside together and officially register as one single multi-household house. In such cases, interviewers had to determine whether such households are really one household or separate households by checking whether these households shared the same financial budget or maintained separate financial budgets. If several households shared the same budget, then these households were viewed as a single household. If several households maintained separate budgets, then these households were viewed as separate households and the household to be interviewed was chosen from the top of an alphabetical list of first names of heads of households.

The household screening questionnaire had to be filled by each interviewer. The outcomes of contact attempts with each household (chosen according to the random walking guidelines) were recorded on the contact sheet (representing the cover page of the household screening questionnaire). According to the rules applied in the TEW-CCA Youth Transition Survey in Tajikistan, an interviewer had to visit a designated address three times before he/she was able to move to the next household according to the random walking guidelines in order to find a potential respondent. If the interviewer was still not able to meet residents after three trials or neighbors informed about a long-term absence of residents, the interviewer could switch to another address. Interviewer continued visits of households within the SSU until the predefined number of 10 interviews was achieved in the SSU.

Selection of individual respondents within a household

Within each selected household a screening of the household composition was conducted via filtering questions in order to find out whether there is or whether there is not a target person in the household. If there was no target person in the household, the interviewer continued her/his way to the next household according to the random route guidelines. If there was one target person, this target person was chosen. If there were several target persons in the household, one target person was chosen among the target persons by the next-birth date method. If the chosen target person was at home and willing to participate in the survey, the interviewer conducted the interview based on the individual questionnaire. If the selected respondent was not available, the interviewer had to arrange an interview time to come back and complete the interview. At least two additional visits were made before the respondent was considered to be lost in a follow-up. There were no substitutes in the same household, and replacements were not permitted for an interview if the interview was not completed.

5. Fieldwork management, monitoring and quality control

The implementation of the fieldwork was supervised by the head of the fieldwork Prof. Dr. Muzaffar Olimov, his assistant, and five supervisors. Prior to the fieldwork a schedule of the fieldwork was designed for each region (see Table 4.6). The head of the fieldwork managed and coordinated the field work via internet and mobile communications from the Sharq (ORIENS) Research Centre in Dushanbe.

Each supervisor managed the survey in a respective region in accordance with the schedule. Each supervisor decided on random routes for interviewers and starting points of the random routes in each SSU. Route sheets (a standard form) were used to track the routes. According to the sampling design interviewers had to find a household according to described scheme for random walking inside of territorial unit (SSU). The contact sheets were filled up for each visit in order to document which interviewer visited at which date and time which household in which district of the respective

SSU. As it can be seen in the household screening questionnaire detailed information about the contact attempts and success were collected each time. Reasons for unsuccessful contact attempts and refusals were documented in detail. In case of successful household contacts the interviewers conducted screening questions on each household member to identify potential respondents.

Table 4.6: Schedule of the field work

Region	Start Date	End Date
Dushanbe	05.02.2017	17.03.2017
MBAO	11.03.2017	06.04.2017
Sughd	07.02.2017	29.04.2017
Khatlon	06.02.2017	28.03.2017
RRS	07.02.2017	07.04.2017

Source: Own illustration.

Among eligible persons the one was chosen who had last birthday. If this selected target person was not present or did not have time at that moment to answer the individual questionnaire interviewers returned on another occasion to do the interview with the target person. The information from the household screening questionnaire was used for monitoring and quality control as well as to make exact calculation of response rates. Interviewers handed over all filled household screening questionnaires and all completed individual questionnaires to the supervisors in regular intervals. Supervision and inspection of quality of interviewing were carried out in the following way by the supervisors:

- ✓ The supervisors carried out a visual inspection and logical control of all completed questionnaires (voids, logical inconsistencies, omissions, etc.) In particular, at the beginning of the survey, supervisors personally accompanied interviewers, physically observed their performance and corrected them on the spot. Supervisor's attention was mainly focused on the correctness of selection at the individual sampling stage and the correctness of the implementation of the interview itself.
- ✓ In addition, the supervisors carried out two to three rounds of random inspections per interviewer: In each round of inspection the supervisor accompanied the respective interviewer in two interviews. Moreover, during the fieldwork, the supervisor inspected on average 6–8 interviews of each interviewer by revisiting the interviewees. For each inspection the supervisor filled out a form on the quality of following the screening and interview guidelines. Overall, 10% of all successful interviews were checked in such second follow-up visits.
- ✓ Moreover, 60%, i.e. 1200 of the 2000 successfully conducted interviews were checked by phone calls. Phone verification consisted of 10 questions inspecting demographics and several important questions from the questionnaire.
- ✓ The supervisors also checked about five unsuccessfully contacted households for each interviewer to check whether the contact sheets were filled out appropriately.

The supervisors dealt with detected failures in the quality check in the following way:

- In case of unintentional errors in filling out of the questionnaire, selection of households or respondents, the interviewers had to fix the mistakes through phone calls, re-visits to the respondent or additional new interviews with other respondents selected in accordance with the methodology and sampling procedures. When questionnaires were submitted and verified, a number of unintended mistakes were identified. As a result, 137 questionnaires were returned to the interviewers for correction by telephone calls, repeated visits or additional interviews with new respondents.

- In case of intentional falsification of interviews, the supervisor had to carry out a full telephone control of the questionnaires of this interviewer. If doubts remained after the full control by phone, the supervisor checked the questionnaires of this interviewer again in a personal visit of the respective respondent. If the falsification was confirmed, the interviewer was detached from the survey and all future surveys of the SHARQ (ORIENS) Research Centre. However, no case of intentional falsification was detected. This can be explained by the huge experience of the selected interviewers being well aware on such selection procedures from previous survey work. Moreover, interviewers were aware of the strict quality control mechanisms and fines in case of non-compliance such that the incentives for manipulation were low and risk of detection very high. Furthermore, the remuneration of fieldworkers was done only upon approval of quality of fieldworks and after correction of all problems if found.

The head of fieldwork Prof. Dr. Muzaffar Olimov from SHARQ (ORIENS) Research Centre managed and coordinated the fieldwork. At the end of each week, supervisors provided a report to the head of the fieldwork via phone. The head of fieldwork Prof. Dr. Muzaffar Olimov additionally visited the regional supervisors three times during the survey fieldwork. He observed the implementation of the fieldwork, resolved associated issues, and implemented the substitution of SSU's within each PSU under unexpected circumstances.

During and after the fieldwork data were prepared in form of electronic data set in preparation of quantitative data analysis. Several steps of careful data checking and editing were carried out to produce an accurate and user-friendly electronic database. The logic and filling out of the questionnaires for 100% of interviews were checked question by question before entering the data into the computer. Several experienced data enter operators entered and checked the quality of filling. In order to avoid data entering mistakes double data entering process were used to check the quality of the entered data by some operators. Each portion of entered data was checked by the data base administrator.

6. Response rate

The upper part of Table 4.7 provides information on the outcomes of contact trials, the response and non-response behavior at household level. Overall 3522 (sum of 1H, 2H, and 3H) households were approached according to the random route procedure in Tajikistan.[34] Due to the repeated visits and because of the large number of persons in a household on average there was no case of visiting a household three times without finding a contact person reported in Tajikistan. Thus, during revisits interviewers were successful in contacting households that did not open the door on the first visit. In general, the low rates of closed doors in the TEW-CCA Youth Transition Survey in Tajikistan can be related to the traditional and Islamic society in Tajikistan that is very open towards guests who visit the household. Moreover, relying on experienced local interviewers who are familiar with the specific communities was also a key success factor. 237 households refused to do the household screening interview part such that the interviewers could not continue with these households. However, in the majority of the household contacts the household contact person was willing and able to answer the household screening questionnaire. Based on this information the household level response rate was calculated as 1H/(1H+2H+3H), which corresponds to 93.3%.

The lower part of Table 4.5 provides information on the outcomes of contact trials, the response and non-response behavior at the individual level. Among the 3285 successfully screened households it turned out that in 1112 households there was no eligible respondent (i.e. a person aged 18 to 35 who left education in the period 2006 to 2015). In the remaining 2173 household there was at least

[34] The number of dwellings that were identified as being vacant or not being a private household was not reported by the interviewer. However, these dwellings would not be considered in the calculation of the response rate anyway.

one eligible person. As described above if there were several eligible persons the next birthday method was applied in order to determine the one eligible person for the individual interview. In 173 cases the chosen eligible person was not able to do the interview (nine cases) or refused to answer the individual questionnaire (164 cases). 2,000 interviews were successfully conducted. This gives an individual level response rate of 92.0% (calculated as 4I/2I).

Table 4.7. Calculation of the response rate in the TEW-CCA Youth Transition Survey in Tajikistan

Household level		
1H	Completed household screenings	3285
2H	No one at home	0
3H	Refusal at HH level	237
	Household level response rate	**93.3%**
Individual level		
1I	Screened HH without eligible persons	1112
2I	Screened HH with eligible persons	2173
3I	Number of chosen eligible persons not interviewed, Because	173
	… they were not at home during all visits	0
	… they were not able to do the interview	9
	… they refused to answer	164
4I	Number of eligible persons interviewed	2000
	Individual level response rate	**92.0%**
	Overall response rate	**85.8%**

Source: TEW-CCA Youth Transition Survey in Tajikistan, own calculation.

The overall response rate is determined by multiplying the household level response rate and the individual level response rate. The multiplication yields an overall response rate of 85.8% for the TEW-CCA Youth Transition Survey in Tajikistan.

7. References

State Statistical Agency of Tajikistan (2010). 2010 Population Census. Dushanbe, State Statistical Agency.

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8. Appendices of Chapter IV

The following supplementary material for the TEW-CCA Youth Transition Survey in Tajikistan can be downloaded from http://www.tew-cca.de/academic-publications/working-papers/:

Appendix IV-1: Tajikistan: Household Screening and Individual Questionnaire in English

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Appendix IV-2: Tajikistan: Individual Questionnaire in Tajik

Muzaffar Olimov, Saodat Olimova, SubhonAshurov and Loikdzhon Mirov

Appendix IV-3: Tajikistan: Individual Questionnaire in Russian

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