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Sociodemographic Questionnaire Modules for Comparative Social Surveys

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Contents

Abbreviations

BVFG	Bundesvertriebenengesetz [the Federal Expellees Act]
CAPI	Computer-assisted personal interview
CASMIN	Comparative Analysis of Social Mobility in Industrial Nations
CATI	Computer-assisted telephone interview
DACA	Deferred Action for Childhood Arrivals program
DREAM	Development, Relief, and Education for Alien Minors Act
ECHP	European Community Household Panel
ECHP UDB	European Community Household Panel User Data Base
EFTA	European Free Trade Association
EGP	Class scheme developed by Erikson, Goldthorpe, and Portocarero
ESS	European Social Survey
EU	European Union
Eurostat	Statistical office of the European Union situated in Luxembourg
EU-SILC	European Statistics on Income and Living Conditions
GED	General Educational Development test
GSS	General Social Survey
HBS	Household Budget Survey
ILO	International Labour Organization
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
ISEI	International Socio-Economic Index of Occupational Status
ISO	International Organization for Standardization
LFS	Labor Force Survey
MISSOC	Mutual Information System on Social Protection
OECD	Organisation for Economic Co-operation and Development
PAPI	Paper-and-pencil interview
PPP	Purchasing power parity
SCP	Social and Cultural Planning Office of the Netherlands
SIOPS	Standard International Occupational Prestige Scale

U.S.	United States of America
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNSD	United Nations Statistics Division

Chapter 1
Introduction, Problem, and Research Question

Abstract In this chapter, we explain why sociodemographic variables in cross-national comparative surveys cannot simply be translated, but rather must be harmonized. We define the concept of harmonization and outline its theoretical background and its implications for all phases of cross-national comparative survey projects. The chapter concludes with an overview of the contents of the book.

Keywords Sociodemographic variables · Harmonization

Surveys and polls are used to measure behaviors, opinions, and attitudes. By means of interviews and questionnaires, they collect data about the social structure of societies and groups of individuals. Demographic and socioeconomic measures serve mainly as independent variables that explain social facts. In order to be able to compare data across surveys, we need standardized demographic and socioeconomic background variables that measure identical facts in the countries compared. This is ensured when these variables are measured with the same fieldwork instruments, the same questionnaire, identical question wording and format, and the same response categories in each survey. Standardized measures allow us to compare different surveys and polls within the same country or culture, provided these surveys and polls used the same method to measure the sociodemographic variables. Standardized measures are often used to compare national population data from official statistics with the outcomes of survey samples and interviews (see Fig. 1.1).

In order to be able to compare survey data across countries and cultures and over time, we must ensure that the instrument applied measures the same social fact in all countries and cultures observed and at all points in time compared. Although the translation of the survey questions into the languages of the participating countries is a must, translation alone is not sufficient to obtain comparative measures across countries or cultures. Therefore, demographic and socioeconomic variables must be harmonized into cross-nationally comparable measurement instruments.

Culture is "the human creation of symbols and artifacts" (Jary and Jary 1995, 101f.). Different cultures produce different social concepts. In turn, these concepts produce historically evolved national structures. Cultural differences between social groups are temporally and regionally determined by commonalities of internalized

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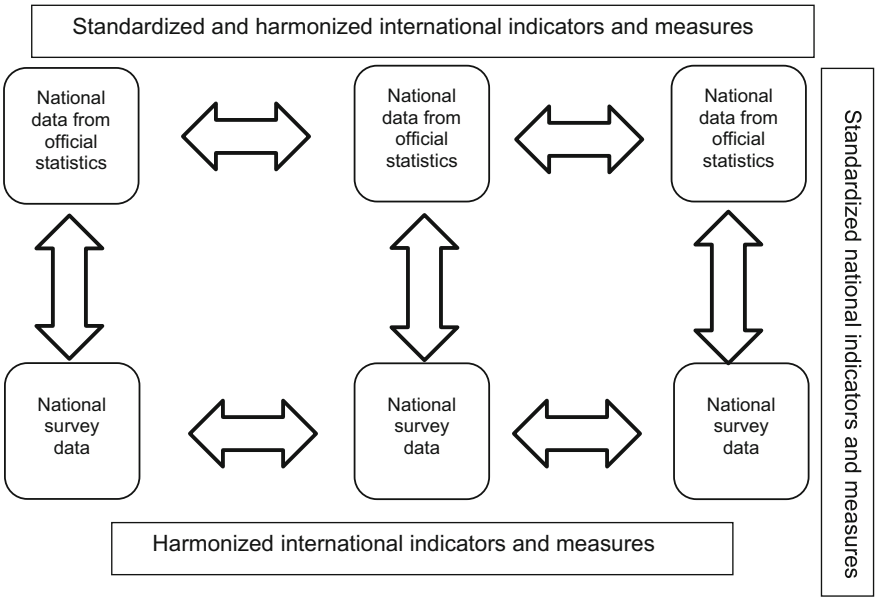

Fig. 1.1 Standardized and harmonized indicators and measures

values and shared meanings. These values and shared meanings shape the institutionalized ways of life of the group members. Countries with different cultural traditions have their own social, political, legal, and economic structures—for example, national education systems, the national organization and legal regulation of labor markets, the implementation of national welfare systems, and national contributions to the social security and the tax systems.

As Hoffmeyer-Zlotnik and Wolf (2003, 393) noted, "[t]he measurement of demographic and socio-economic variables requires profound knowledge of the different national concepts, the cultural and organisational structure behind the variables, and the national indicators used to measure the variables of interest." This profound knowledge helps researchers to solve specific problems in comparative surveys. Linguistic differences across countries and cultures are evident in survey research. Structural differences between societies with different forms of political, social, legal, and economic organization influence measures in comparative surveys. Statutory restrictions on surveys, and national survey traditions limit the comparability of the measurements. National cultural differences have an impact on the conceptualization of measurement constructs and the meaning of question items in surveys. Differential survey administration and the organizational and procedural implementation of the fieldwork produce different patterns of survey error. Moreover, the realization of surveys is documented differently across countries. As Smith (2010, 757) noted: "Comparative survey research faces the great challenge that languages, social conventions, cognitive abilities, and response styles vary across societies. … Survey-

design variation and measurement error need to be minimized and equalized to obtain valid, reliable, and consistent substantive data."

These particularities and specific characteristics of surveys across countries and cultures have implications for the development and creation of fieldwork instruments, the selection of comparative measurement concepts, the compilation of harmonized questionnaires, and the realization of the survey interviews.

For the psychology of survey response, Schwarz (2008, 374) postulated that answering a survey question entailed the following tasks:

> Respondents' first need is to understand the question posed to determine what information they are asked to provide. If the question is an attitude question, they may either retrieve previously formed judgments from memory or form a judgment on the spot. … To form a judgment, the respondents need to retrieve the relevant information from memory. Usually they will also need to retrieve or construct some standard against which the attitude object is evaluated. Once a 'private' judgment has been formed in respondents' minds, they have to communicate it to the researcher. Unless the question is asked in an open format, they need to format their judgment to fit the response alternatives. Finally, respondents may wish to edit their response before they communicate it, due to self-presentation and social desirability concerns.

These postulates also claim validity in comparative surveys across countries and cultures. However, in the context of harmonized measures of demographic and socioeconomic variables administered in cross-national and cross-cultural comparative surveys, the following questions must be asked: (a) Do respondents from different countries or cultures understand the question in the same way, so that their determination of the information they are asked to provide is cross-nationally and cross-culturally comparable? (b) Do respondents from different countries and cultures retrieve similar answers, or do they form comparable answers using their national or cultural backgrounds? (c) Do respondents from different countries or different cultural contexts have the information they need to generate an answer to the question asked? Do they use comparable standards when they evaluate their intended response? (d) Are respondents able to fit the response they have generated into the list of response categories provided by the comparative researchers? and (e) Does the degree and content of self-presentation and social desirability concerns differ across countries and cultures and change over time? In the course of presenting our proposed process of harmonizing background variables, we shall answer these questions and endeavor to solve the problems associated with developing valid, reliable, and comparable measures for social surveys across countries and cultures and over time.

In comparative social survey research across countries and cultures and over time, the major problem is that survey respondents from different countries or cultures or from different birth cohorts must understand and interpret the question in the same way. For measurement instruments applied in polls and surveys, it is particularly important to first define the object of the measurement. Then, the question must be rephrased, so that the respondents have no difficulties recognizing and understanding the question stimulus and generating the required response. Respondents need response options that are meaningful in their social, cultural, political, or economic context. Therefore, in the next step, response options must be determined that repre-

sent the same measurement despite national and cultural differences. These processes require more than the translation of a commonly agreed and drafted source questionnaire into the languages of the countries and cultures participating in the survey. They also require close collaboration between research teams from these countries and cultures to develop functionally equivalent measurement instruments that enable meaningful comparison.

Harmonized sociodemographic variables allow us to compare survey data across two or more countries or cultures and over time provided the harmonized measurement instruments are applied during data collection in the countries and cultures under study.

We define harmonization as a scientific, theory-driven process designed to make measures comparable across countries or cultures and over time with the aim of ensuring that the variables measure functionally equivalent social facts in the respective national or cultural contexts. Figure 1.1 gives an overview of how the terms are used here.

The main focus of the present book is twofold: First, we introduce the demographic and socioeconomic background variables of interest and their measurement in comparative surveys. Second, we illustrate how actors participating in international survey research (i.e., the central project coordinators, the national researchers, the national fieldwork agencies and their interviewers, the respondents, and the data processing units) apply the harmonized measures of demographic and socioeconomic background variables, and we identify several sources of error and failure.

Our intention is to reduce obstacles and barriers in comparative survey research by reducing measurement errors across countries and cultures and to increase the comparability of demographic and socioeconomic background measures in comparative surveys.

In the first part of the book, we illustrate five steps toward harmonized demographic and socioeconomic variables. We introduce the main variables of interest and outline the rules for harmonizing survey questions in such a way that comparative measures can be obtained across countries and cultures.

Part II presents a questionnaire for demographic and socioeconomic variables in comparative surveys. The proposed questionnaire modules can be used as a blueprint and must be modified according to the research question. When doing so, researchers must ensure that they maintain the integrity and comparability of the intended measurement.

Part III focuses on the various actors involved in the realization of comparative surveys across countries and cultures: (a) the central project coordinators, (b) the teams of researchers from participating countries or cultures, (c) the fieldwork agencies and their interviewers, (d) the survey respondents, and (e) the team responsible for editing and cleaning the data.

Part IV is an annotated description of web resources for comparative survey research, which we supplement with a brief overview of the main international organizations that provide information on comparative demographic and socioeconomic characteristics. We list web-based tools for the establishment of comparability of these measures and briefly discuss their application in surveys.

A comprehensive discussion of, and detailed material about, the measurement of sociodemographic variables in comparative social surveys can be found in Hoffmeyer-Zlotnik and Warner (2014), *Harmonising Demographic and Socio-Economic Variables for Cross-National Comparative Survey Research*. Rich documentation of instruments from national and international surveys, administrative data collections and international large-scale datasets are available for the concept of private household (Hoffmeyer-Zlotnik and Warner 2008, 2009), occupation and labor force status (Hoffmeyer-Zlotnik and Warner 2011), ethnicity (Hoffmeyer-Zlotnik and Warner 2010), education (Hoffmeyer-Zlotnik and Warner 2007), and total net household income (Hoffmeyer-Zlotnik and Warner 2006, 2015).

Acknowledgements Table 3.1 is reproduced from Hoffmeyer-Zlotnik and Warner (2007, 138). Table 3.2 is reproduced from ILO (2016). Table 3.3 is reproduced from Hoffmeyer-Zlotnik and Warner (2011, 47).
Tables 3.4 and 3.7 are based on data from Eurostat, the European Community Household Panel (ECHP) and the European Union Statistics on Income and Living Conditions (EU-SILC). The responsibility for all conclusions drawn from the data lies entirely with the authors.
Tables 3.5 and 3.6 are based on data from the European Social Survey (ESS). The data are available without restrictions, for not-for-profit purposes. In accordance with data protection regulations in participating countries, only anonymous data are available to users.
Figure 3.1 is reproduced from Eurydice (2016). Figure 3.2 is reproduced from ILO (2013, 17). Figure 3.3 is reproduced from Hoffmeyer-Zlotnik and Warner (2014, 119).
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Part I
Harmonization of Survey Questions

Chapter 2
Harmonization of Demographic and Socioeconomic Survey Questions: From National Concepts to Internationally Comparable Measurements

Abstract Sociodemographic variables, such as private household, education, labor force status, occupation, job autonomy, household income, and ethnicity, are based on national concepts and structures. In comparative surveys, these national concepts, which are transposed into national structures via national law, can be measured only in a country-specific way and must be rendered comparable by means of harmonization. This can be done either via input harmonization carried out prior to data collection or via output harmonization after data collection. The present chapter describes the steps that these two strategies involve.

Keyword Rules for harmonization

Background variables describe the social, demographic, and economic context of survey respondents. Following Braun and Mohler (2003, 101), these variables "provide the 'independent' information against which study-specific 'dependent' data are analyzed. … In addition to providing general contextual/collateral information, they are used as independent variables, as socio-economic covariates of attitudes, behavior, or test scores, etc. and in all sorts of statistical models, in particular, as exogenous factors in causal analysis." Background variables allow data users to establish homogeneous subgroups of observations. Furthermore, they enable researchers to gauge the data quality of the realized sample by comparing the sample statistics with population indicators from official statistics.

Przeworski and Teune (1970, 42) postulated that, for international comparison, "cross-system comparisons of single variables will be dependent upon the units and the scale of measurement within each social system." This also holds true for independent, explanatory variables, and particularly for demographic and socioeconomic measures. Przeworski and Teune (1970, 96f.) noted that direct measurement was based "on definitions by fiat" and required "that the language of measurement be common to all observations, reflect relationships among the phenomena observed, and be consistently applied." Later, Lynn et al. (2006, 7) argued that, for comparative surveys, functional equivalence must be established for these measures. Following Johnson (2003, 351), functional equivalence is "the degree to which survey measures or questions are able to assess identical phenomena across two or more cultures."

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Construct equivalence, measurement unit equivalence, and scalar equivalence are the different levels allowing meaningful comparison of variables across countries and cultures. According to Behr et al. (2016, 3), construct equivalence exists when "the same underlying dimension is measured in the various countries. … To ensure construct equivalence, it may be necessary to use different measurements in different countries. … Measurement unit equivalence means that the measurement unit of the scale is identical across countries, but that the origins of the scales are not necessarily identical. Scalar equivalence, on the other hand, means that both the measurement unit and the origins of the scales are identical."

In the case of different national and cultural demographic and socioeconomic structures and concepts, mere translation of the survey questionnaire into the languages of the respective countries and cultures is not enough to establish comparability. Rather, to achieve functional equivalence and comparative survey measures, survey questions and response options must be *harmonized*. The following two main harmonization strategies are in common usage:

(1) Input harmonization before data collection. The same instrument with the same questions and the same response categories is applied in the surveys of the participating countries or cultures.
(2) Output harmonization after country- or culture-specific data collection. The best available country- or culture-specific instrument is used during the fieldwork. After data collection, the answers are converted during data preparation into the commonly defined and agreed variable and its response categories measuring the intended same social fact across countries and cultures.

Harmonization comprises up to five steps. Step 1 clarifies the purpose of the measure. This is a process driven by social theories, and it defines the measurement concept. The research team develops the research question and the object to be measured. An indicator, or set of indicators, is developed that represents the information necessary for the measurement. For example, *education* as a demographic background variable can be defined as "a formal educational qualification as an entrance ticket to the labour market. The higher the qualification, the more prestigious the labour market positions to which the holder has access. It is relatively unimportant how—i.e., by what route—the highest qualification has been obtained" (Hoffmeyer-Zlotnik and Warner 2014, 99).

Step 2 analyzes the underlying national and cultural structures of the selected measurement concept. In this step, the researchers analyze the legal and political organization of the social context in which the respondent generates the answer to the survey question and selects the appropriate answer category (or categories) from the list provided in the questionnaire. The aim is to ensure that respondents from different countries and cultures are able to provide the required information. For example, the organization of basic education, the education that normally leads to skilled manual activities, the higher education of elites, and the various combinations of school-based education and on-the-job training differ across countries. Kuhry et al. (2004, 79–87) from the Social and Cultural Planning Office of the Netherlands (SCP) classified the European education systems "according to the degree of differentiation

within the educational sectors (integrated versus stratified systems); the way in which countries provide for children with special needs; and the position of vocational education in the system" (Hoffmeyer-Zlotnik and Warner 2014, 99).

In Step 3, the researchers select the appropriate measurement instrument. For education, for example, some tried-and-tested instruments are already available. In cross-national social research, the variable "years of schooling" is heavily used. The categories from the Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) are also acceptable. Official statistics use the International Standard Classification of Education (ISCED) as a standard measure of education. If the instruments available do not meet the requirements of the research question, the researchers must develop their own survey instrument for the measurement of education across the countries and cultures observed.

Central to Step 4 is the harmonization strategy. Input harmonization "takes as its starting point internationally agreed standards—such as definitions, concepts, aggregations, and classifications—and then uses harmonised survey methods to implement these standards" (Hoffmeyer-Zlotnik 2008, 8). Ideally, all survey countries must use exactly the same survey procedures; country-specific measures are permissible only if there is no alternative (Information Society Technologies 1999, 1). Whereas input harmonization takes place during the fieldwork before data collection, output harmonization "starts with a common, internationally agreed definition of a variable representing a common indicator. The target variable to be surveyed is determined. The selection of suitable survey methods is left to the participating researchers, and the survey is conducted using a measurement instrument which takes national specificities into account. It is important that the national researchers strive to achieve an optimal operationalisation of the common indicator" (Hoffmeyer-Zlotnik 2008, 7). Hence, output harmonization is a process that takes place after data collection.

If the research team decides on output harmonization, a fifth step is necessary. The aim of this step is to find categories that are comparable across countries and cultures. Data collection is conducted using the best survey instrument available for the country or culture in question. The responses collected are then coded into the categories of the agreed comparative indicator using a correspondence table between the country- or culture-specific categories and the categories of the international variable. For example, International Standard Classification of Education (ISCED) codes are assigned to national education categories using mappings provided by the UNESCO Institute for Statistics (UIS). "These mappings are essential tools for organizing information on national education systems, their programmes and related qualifications in order to ensure the cross-national comparability of education statistics and indicators and to assist analysts to understand and interpret them" (UNESCO-UIS 2017).

Rules of Harmonization

Generally speaking, the following eight rules should be observed when harmonizing sociodemographic variables in cross-national comparative surveys (Hoffmeyer-Zlotnik and Warner 2014, 13f.; see also Hoffmeyer-Zlotnik 2008, 11f.; Hoffmeyer-Zlotnik and Wolf 2003, 404f.):

"1. Agree on a common definition of what you wish to measure with each variable."
The aim of this first rule is to agree on a common measurement. It ensures that, in all participating countries and cultures, the instrument measures what it is supposed to measure.
"2. Make sure that this common definition denotes comparable things in each of the survey countries."
The aim of this rule is to obtain comparable measures across countries. It ensures that the intended variable is comparably measurable in the participating countries and cultures.
"3. Analyse the national concepts and structures behind the variables to be measured. Each researcher should act as a specialist for his or her country."
The aim of the third rule is to develop the answer categories to be presented to the survey respondents in the participating countries and cultures. This calls for the analysis of the concepts and national or cultural structures underlying the variables.
"4. For each individual variable, identify the similarities between the national concepts and structures."
To enable harmonization, similarities between the national or cultural measures and deviations from the agreed common measurements must be elaborated and documented. The aim of this rule is to clarify the strategies for harmonization.
"5. Find a valid indicator, or a set of valid indicators, that represent(s) both the variable in question and the specific national characteristics thereof."
The aim of the fifth rule is to identify an instrument that validly measures the target variable. This may be a newly developed survey question, a set of questions, or an approved national or international instrument that collects the information required for research and comparison purposes.
"6. Decide whether the variable should be converted into a common classification system before data collection begins (input harmonisation), or whether it should be measured with the usual country-specific instrument. In the latter case, the data must be mapped to a common instrument or classification system after collection (output harmonisation)."
The aim of this rule is to decide on the survey instrument to be applied. If tried-and-tested country-specific instruments exist in the participating countries and cultures, it is important that they measure the intended sociodemographic facts. In that case, it is indispensable to establish a correspondence between the national response categories and the categories of the internationally comparable classification system. As mentioned above, this output harmonization is carried out after data collection. If such country-specific instruments do not exist, if it is not possible to recode the national answers into the common classification system, or if the existing instruments do not measure the intended social fact, a new survey instrument must be developed. This instrument must be designed before data collection with the aim of measuring in all countries and cultures the social fact that is supposed to be measured.
"7. If input harmonisation was chosen, test whether the common measurement instrument or classification system realistically reflects the empirical structures in the individual survey countries and is logically related to the jointly developed definition of the variable to be measured."

In the case of input harmonization, it is self-evident that the instrument created must be tested for its validity, reliability, and measurement quality. In comparative surveys across countries and cultures and over time, it is indispensable to test (a) the understandability of the question wording and (b) whether, and to what extent, the stimulus has an equivalent meaning across countries and cultures.

"8. Make sure that the common instrument can be understood by the average layperson irrespective of his national or cultural context, and that all respondents can answer the questions correctly." The aim of this general rule is to ensure that respondents are able to understand the question, to generate an answer, and to select the response that corresponds to their situation, so that the information collected can be meaningfully compared.

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Chapter 3
Demographic and Socioeconomic Questions in Surveys

Abstract In this chapter, we list and briefly define the sociodemographic background variables required in social surveys. We then provide a step-by-step description of the harmonization process for the core sociodemographic variables private household, education, labor force measures, total net household income, and ethnicity. To prepare these variables for cross-national comparison, five steps are required in each case: (1) definition of the measurement concept, (2) description of the underlying national concepts and structures, (3) development of an appropriate measurement instrument, (4) selection of the harmonization strategy, and finally (5) the measurement instrument.

Keywords Measurement concept · Social structures · Measurement instrument

3.1 List of Demographic and Socioeconomic Variables

The following are the most common demographic and socioeconomic background variables in cross-national and cross-cultural comparative surveys:

Sex

Traditionally, this variable is collected as the biological sex of the respondent. "Male" and "female" are sex categories, whereas "masculine" and "feminine" are gender categories.

Age

Usually, the month and year of birth are collected. Additional information is necessary if the respondents do not use the Gregorian calendar but rather a calendar commonly used in their country or culture.

Legal marital status

Of interest here are all forms of legal relationships between two persons (marriage, same-sex registered/civil partnerships) that are recognized by the laws of the survey country.

J. H. P. Hoffmeyer-Zlotnik and U. Warner, *Sociodemographic Questionnaire Modules for Comparative Social Surveys*, SpringerBriefs in Population Studies,
https://doi.org/10.1007/978-3-319-90209-8_3

Consensual union

Consensual union, that is, living together in marriage-like partnership, covers all forms of long-term extramarital cohabitation that are not regulated by national law.

Ethnicity

Ethnicity measures the respondent's citizenship(s), country of birth, mother tongue as an indicator of the degree of integration, and self-assignment to an ethnic group, as well as the country of birth of the respondent's father and mother.

Education

Education measures the highest level of general school education attained and the highest vocational/professional education qualification achieved.

Labor force status

This section of the questionnaire collects information about the number of hours worked, the respondent's occupational activity, and his or her job autonomy. If the respondent is not active in the labor force or is only marginally employed, the labor force status of the main earner in the household is collected.

Private household

We collect the number of persons living in the respondent's household and the household composition. These measures depend strongly on the country- or culture-specific definition of household and household membership.

Household income

Here, we are interested in total net household income. This is the income accruing to all household members and from all sources, including all types of money transfers to all persons living in the household, minus all taxes and mandatory social security contributions.

For the variables private household, education, labor force status, occupation, job autonomy, total net household income, and ethnicity (with citizenship, migration background, mother tongue, and ethnic group membership), we demonstrate in what follows the five steps of harmonization toward questionnaire modules for demographic and socioeconomic variables that are comparable across countries and cultures. These variables are highly dependent on the national culture (e.g., private household) and on the national structures and laws, (e.g., citizenship and education), the labor market regulations, the tax system, and the state welfare system. If age, sex, and marital status are collected in accordance with the definitions provided above, they must not be harmonized because they are already comparable.

3.2 Private Household

The measurement of characteristics of the "private household" is important in social surveys for a number of reasons. First, in many surveys, the household is the sampling unit, starting with the selection of a target household at a particular address within which an eligible person is selected using a random process such as a Kish table. The characteristics of the surveyed households compared to those of the households in the sampling frame (often from official statistics) serve as a quality indicator for this selection procedure. Second, households are meso-level social organizations situated between the macro level of societies and cultures and the microlevel of individuals and social actors. Households transmit values, norms, and thoughts about the social order from the societal level to the individual behaviors, opinions, and attitudes of survey respondents. Third, households distribute social, human, and economic capital among their members. Household members' social prestige and reputation, their socioeconomic status, and their lifestyles are shaped and predetermined by the household situation and the position of the household in the stratified society. It is therefore important to measure household characteristics that have an impact on respondents' opinions, attitudes, values, and norms.

We conducted in-depth interviews with 46 students, 25 researchers, and 118 CATI interviewers in Germany about their understanding of the term "private household." Between them, the three groups of interviewees used eight different elements to describe private household (Hoffmeyer-Zlotnik and Warner 2008, 40–43), namely:

1. the dwelling unit: living under one roof, having an entrance door and/or a rental agreement;
2. dwelling-share with common housekeeping, described in terms of "living together with common housekeeping";
3. the family: "being related to each other" and "living together in one house";
4. affective ties, which are also described using the words "being very close";
5. common activities: (a) common housekeeping, (b) working together with the emphasis on "sharing housework," (c) common living arrangements: eating, sleeping, etc.;
6. financial dependence: common financial budget, sharing the costs of living, etc.;
7. common planning or life planning, taking care of each other; and
8. the same address.

The number of different descriptions was even higher because combinations of the eight elements were sometimes used by the interviewees.

Coast et al. (2016) examined the census documents of England and Wales and France from 1960 to 2012 and conducted interviews with experts on household data production and users of household statistics. They concluded that "despite standardisation and harmonisation, the term 'household' may mean different things in different contexts and is not strictly comparable." Although a common and uniform definition of household is provided and mandatory for all the census countries, national political, and institutional differences affect the way individual countries interpret

the international and comparative household concept provided by the United Nations Statistics Division (UNSD).

We reviewed the population and household census forms of the EU member states, the EU Labor Force Survey questionnaires, and other selected surveys. We found that 27 different definitions of private household existed in the 28 EU member states, and we assigned these definitions to four dimensions with 17 categories (Hoffmeyer-Zlotnik and Warner 2008, 19–20):

(1) housekeeping, financial: share common budget; share income; share expenses; share costs of living; contribute jointly to essentials of living;
(2) housekeeping, organizational: common housekeeping; common living room; share food; share meals; common living arrangements;
(3) (co-)residence: live together; share a dwelling; have the same address; the same address in the population register; the address where most nights are spent; and
(4) family: degree of legal relationship by blood, marriage, adoption or guardianship; affective ties.

It is obvious that this variety in the use of the term *household* means that one generally accepted definition of household cannot be expected in surveys across countries and cultures. To achieve a comparative measure, it is necessary to provide interviewers with a definition of private household, which they should communicate to the respondents. This definition must be comprehensible for all those involved—the interviewees, the interviewers, and the researchers.

The following five steps illustrate the harmonization of the variable "private household" in social surveys:

Step 1: The definition of the measurement concept

Private households make social, economic, and human capital available to the household members. They minimize social and economic risks. Moreover, private households contribute to the production of welfare by providing personal services, health care, family support, a dwelling, and consumer durables. Households and their members decide how to use scarce disposable time and how to allocate tasks, responsibilities, costs, and expenses. Households distribute resources (time, income, and savings). Household members share the same socioeconomic traits and are often homogeneous in their sociodemographic characteristics.

What is important for comparative purposes is that the definition of private household includes the reciprocal responsibilities of the household members. We therefore propose a household definition based "on the principle of common housekeeping in the financial and organizational sense with mutual rights and obligations" (Hoffmeyer-Zlotnik and Warner 2014, 189).

Step 2: The underlying structures

Across modern societies, private households are organized according to four main types of living arrangements and their combinations (Hoffmeyer-Zlotnik and Warner 2008, 19–21), namely:

(a) housekeeping (financial): share common budget, income, expenses, and living costs;
(b) housekeeping (organizational): common housekeeping, common living room, sharing food, and sharing meals;
(c) cohabitation: living together, sharing a dwelling, and residing at the same address; and
(d) family: degree of legal relationship by blood, marriage, adoption or guardianship.

All four living arrangements constitute different types of households, determine different rules of membership, and include or exclude different persons in/from the household. If countries or cultures apply different principles of living arrangements and different household concepts, comparison becomes impossible.

Our instrument takes into account the structural relationship between address, living arrangements, and common housekeeping. We analyzed the households described in the population censuses in various countries (Hoffmeyer-Zlotnik and Warner 2014, 190–191) and found that, depending on the country, (a) a household consists of several dwelling units at the same address, (b) one dwelling is one household if there is common housekeeping, (c) more than one household with its own housekeeping may exist in one dwelling, or (d) one household may be spread over more than one dwelling and address if the relationship of the members is based on emotional ties or economic interdependence.

Step 3: The appropriate measurement instrument

Our review of most of the population census questionnaires (Hoffmeyer-Zlotnik and Warner 2008; 2014, 190–191) did not yield a basis for the development of a set of survey questions that would have allowed the comparison of the household variable across countries. The national survey instruments differ in terms of measurement concepts, question wordings, and survey instructions to the interviewers and respondents about the meaning of household. Hence, we opted for the development of a new set of questions, which will be input harmonized.

Gerber et al. (1996) modified the rules for including/excluding household members in/from the living arrangement and asked respondents what, in their view, constituted household membership. Their study demonstrated that household membership is not self-explanatory and that it is necessary to present respondents with a list of "typical" persons who should be (a) included in their household and (b) excluded from their household.

Step 4: The harmonization strategy

We are seeking a consistent measure of household that measures the same living arrangement across countries and cultures. Common housekeeping in the financial and organizational sense with mutual rights and obligations is the focus of the measurement. For a common set of comparable survey questions, it is important to identify the functional equivalence of this organizational principle in each country and culture and to ensure that respondents are able to generate meaningful answers. We

recommend careful pretesting of the elaborated questionnaire module in all countries and cultures.

Step 5: The instrument

Our survey instrument for the measurement of household, defined as a living arrangement with common housekeeping in the financial and organizational sense and with mutual rights and obligations, is based on two lists. The first list contains the persons who belong to the household: the respondent him- or herself, all other adults, all children including infants, persons who are temporarily absent, domestic staff, and au pairs. The second list contains persons who are not counted as household members, for example, soldiers and police officers living in barracks, family members living in nursing homes and homes for the elderly, persons absent for more than six months, and visitors. The last question identifies the relationship between dwelling and household: Is the household spread over more than one dwelling, and how many people share housekeeping in the household?

3.3 Education

Education is one of the most important independent variables in social science surveys. That is why there are established instruments or procedures in social survey research and official statistics to measure respondents' highest level of educational attainment.

The following instruments or classification systems are used by the majority of survey research projects:

(1) "Years of Schooling" (e.g., the General Social Survey, GSS):[1]

Respondents are asked to report the number of years spent in the education system. For comparison purposes, educational certificates are often recoded into years of schooling. In Germany, for example, respondents with compulsory education left school after nine years. Those with certificates from vocational schools with full-time education received 10 years of schooling. People who successfully completed upper secondary level with a general education or an apprenticeship (part-time vocational school and on-the-job training) or full-time vocational school obtained 12 years of schooling. Vocational and technical college diplomas are recoded into 15 years of schooling. A Bachelor's degree is obtained after 15 years of schooling, a Master's degree after 17 years, and a doctorate after 20 years of schooling.

Appropriate measurement becomes problematic if the education system allows students to repeat years, or if the education system is subdivided into several parallel tracks leading to different levels of education. In the latter case, the meaning of "10 years of schooling" and the level of education attained differ across the different tracks.

[1] See gss.norc.org. Accessed on January 26, 2018.

(2) Educational levels (e.g., European Commission 2014):

The education system is subdivided into three sectors: primary, secondary, and tertiary. The secondary sector can be subdivided into lower secondary, up to grade 10, and upper secondary, leading to a higher education entrance qualification. In most modern societies and western countries, the lower secondary leaving certificate is the basic certificate that allows individuals to enter the labor market.

In descriptive tables, three categories of educational attainment are often used. Individuals who have only primary schooling, and those who do not have a lower secondary leaving certificate, are classified as low educated. Middle-educated individuals are those who hold a certificate from lower secondary and/or upper secondary level, including a higher education entrance qualification and a certificate of apprenticeship. High-educated respondents are those who hold a master craftsman's certificate or a college or university degree. This grouping of educational attainment into three categories is justified by the normative and political argument that responsible and full participation in modern societies and the modern economy requires at least the middle category of education and that inequality is explained by the different levels of social participation.

(3) Certificates:

Because respondents themselves think in terms of certificates, it is meaningful, at least nationally, to request them to report general education qualifications and college or university degrees using the appropriate certificates. For vocational education, the duration is important. Vocational education programs are often organized on the basis of step-by-step training, where the following step leads to a qualification that is more valuable on the labor market. This next-higher certificate allows entrance to jobs with higher occupational prestige and higher salary.

(4) Educational Qualifications Classified According to Occupational Prestige (Hoffmeyer-Zlotnik and Warner 2005, 233; 2014, 91–93):

Here, general school qualifications are combined with all possible vocational and professional education certificates. In a second step, these combinations are assigned to the occupational prestige that can be achieved in the labor market. Occupational prestige scales (e.g., the Standard International Occupational Prestige Scale, SIOPS, Ganzeboom and Treiman 2003) rank order educational levels.

(5) CASMIN Educational Classification (Brauns et al. 2003):

The Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) educational classification was developed by mobility researchers and tested in European countries. This classification combines general schooling with vocational and professional education, and divides this into hierarchical levels.

(6) International Standard Classification of Education 2011 (ISCED 2011; see OECD, European Union, UNESCO-UIS, 2015):

The International Standard Classification of Education (ISCED) is an official statistics instrument that was developed for the purpose of international education

reporting to enable educational qualifications to be compared across countries worldwide. In order to accommodate all education systems throughout the world, ISCED 2011 is divided into eight levels, and a three-digit coding scheme is used. The first digit differentiates the level (10 codes); the second digit differentiates the orientation of the educational program (22 codes); and the third digit (32 codes) differentiates at levels 2, 3, and 4 whether, or to what extent, the program is sufficient for completion of the level and whether it provides access to higher ISCED levels.

The ISCED 2011 classification system (UNESCO-UIS 2012) is very suitable for application to official educational statistics data. However, it is difficult to implement in surveys, as a large number of questions must be asked. The mapping of national educational qualifications into ISCED 2011 (UNESCO-UIS 2018) is very complex. In most countries, around 30–40 qualifications must be measured and mapped into ISCED 2011. In Germany, however, 125 qualifications/qualification variants are listed. This overtaxes respondents' cognitive capacities.

In the European Social Survey (2014), education is coded into 26 categories according to ISCED 2011. However, most participating countries measure education in just 11–18 categories, of which seven are required across all countries to capture higher education qualifications.

The ISCED 2011 classification system is therefore unsuitable for collecting data in cross-national surveys, as too many, and too abstract, questions must be asked. However, ISCED can be applied in the social sciences for analyses that are limited to the first level.

All of the aforementioned instruments for the measurement of education have a specific background and intention. But what do social survey researchers want to measure when they compare the sociodemographic variable "education" across countries? This question must be asked before the selection or construction of an instrument begins.

Step 1: The definition of the measurement concept

In social survey research, the education question serves, on the one hand, as a means of determining the respondent's social status. On the other hand, Hoffmeyer-Zlotnik and Warner (2014, 99) regard "…a formal educational qualification as an entrance ticket to the labour market. The higher the qualification, the more prestigious the labour market positions to which the holder has access."

Step 2: The underlying structures

We analyzed the education systems of 38 European states and identified four basic system types (Hoffmeyer-Zlotnik and Warner 2007, 119–129; see also Kuhry et al. 2004, 79–87) that are distinguished by (a) the duration of compulsory schooling, (b) the first, basic qualification recognized on the labor market, (c) the degree of differentiation within each level, and (d) the higher education entrance qualification. Although the education systems presented in Fig. 3.1 are those of EU member states, the same logic applies to Central and Eastern European states, Arab states, states from Central Asia, East Asia and the Pacific, South and West Asia, Latin America, and

the Caribbean, North America, and Sub-Saharan African states, where the education systems are documented in such a way that the criteria used for the typology can be identified.[2]

Fig 3.1, Type 1 is represented by Germany.

Compulsory education begins at the age of six years. Primary level comprises between four and six years of schooling. On transition to lower secondary level, the

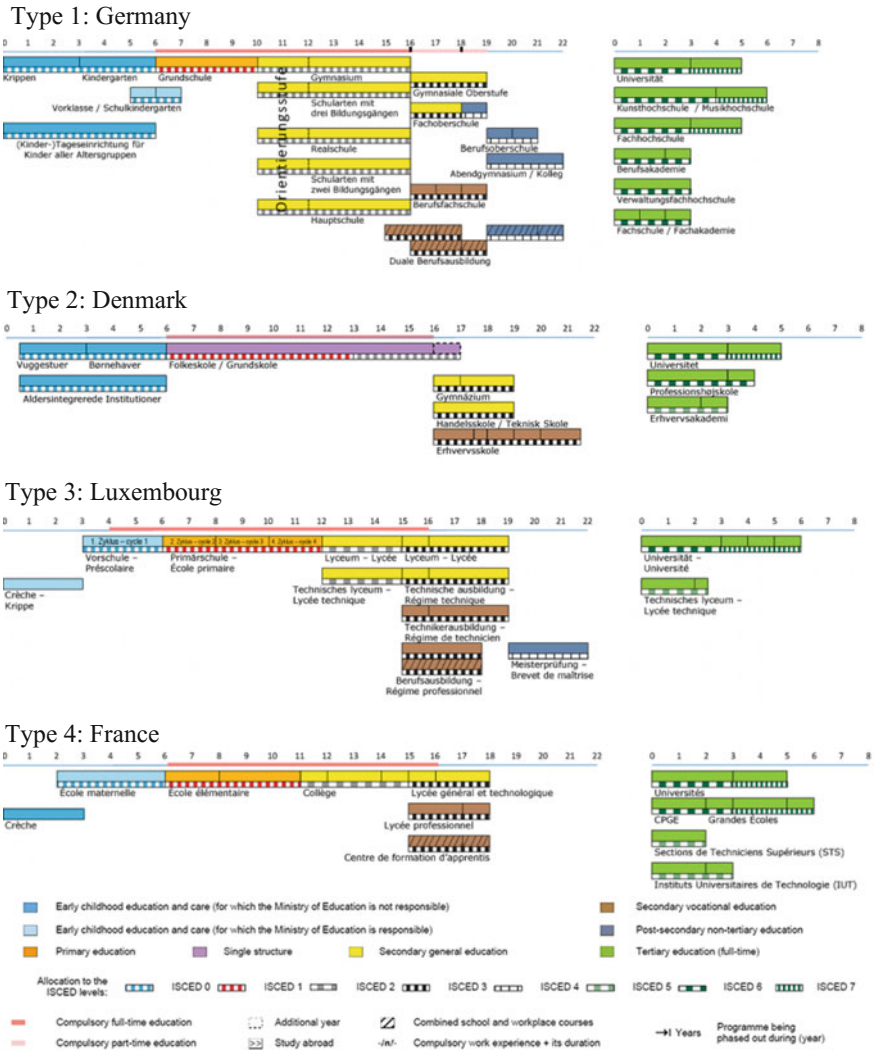

Fig. 3.1 Comparison of the structure of the education systems, Types 1–4 (*Source* Eurydice 2016)

[2]For example UNESCO Institute for Statistics. ISCED Mappings. http://uis.unesco.org/en/isced-mappings. Retrieved on January 26, 2018.

system differentiates into three tracks. The basic qualification, the first school leaving certificate, is obtained at lower secondary level. Upper secondary level comprises (1) general education leading to a higher education entrance qualification and (2) vocational orientation with full-time schooling or part-time on-the-job vocational training and part-time vocational school. The tertiary sector consists of different types of universities, colleges, and technical higher education institutions.

Fig 3.1, Type 2 is represented by Denmark.

Compulsory education begins at the age of six years. Primary and lower secondary level constitute a single structure, which covers the entire period of compulsory education and ends with the basic qualification after 10 years of schooling. Differentiation begins at upper secondary level with different school types that lead to higher education entrance qualifications. The tertiary sector comprises, in the main, universities and equivalent institutions of higher education that offer a differentiated academic education.

Fig 3.1, Type 3 is represented by Luxembourg.

Compulsory education begins at the age of six years. Primary education lasts six years. Lower secondary is differentiated into a technical and a general education track and ends with the basic qualification. Upper secondary continues with general education and vocational schools for a further three or four years and ends with a higher education entrance qualification. In the tertiary sector, there are the professional colleges, technical schools, and a university.

Fig 3.1, Type 4 is represented by France.

Compulsory education begins at the age of six years. Primary education lasts five years. Lower secondary level has a common core curriculum and ends with the basic qualification. Upper secondary is divided into a general and a vocationally oriented track. Tertiary level is differentiated into general and specialized colleges, universities, and occupation-oriented technical higher education institutions.

Step 3: The appropriate measurement instrument

"Years of schooling" is a suitable measure when comparing countries with the same type of education system. However, when comparing years of schooling from different types of education systems, the same number of years may lead to different levels of qualifications that have different value on the labor market. Moreover, multitrack education systems award equivalent certificates after different years of schooling. This limits the usefulness of years of schooling for cross-national and cross-cultural comparison, even though the survey question about years of schooling is easier to answer than questions based on other indicators.

"Education levels" is a crude measure that does not distinguish the value of educational attainments as entry tickets to the labor market. No difference is made between general education and vocational education and training.

"Educational certificates" are easy to recall during a social survey interview. However, they are difficult to compare across education system types. Even within the same system type, certificates cannot automatically be compared over time because the value of the qualifications on the labor market changes.

The advantage of "educational qualifications classified according to occupational prestige" is the combination of educational credentials with the prestige they bring on the labor market. For comparison purposes, however, the disadvantage is that the relationship between educational qualifications and labor market starting position depends on national, cultural, and historical circumstances.

The CASMIN Educational Classification classifies combinations of general and vocational education according to their selectivity for social mobility. The institutional diversities of the national education systems are reduced, and the years of schooling are not taken into account. The major disadvantage of the CASMIN Educational Classification is that there are no internationally agreed conventions about the relationship between national qualifications and the international categories of this common classification system.

ISCED 2011 overcomes this disadvantage and offers a sophisticated system for mapping national educational programs and attainment levels into the internationally harmonized classification system. For most countries, the mappings list around 30–40 national educational attainment levels sorted into the 32 valid three-digit codes of the ISCED 2011 attainment levels. Some countries have over 40 national education certificates; the mapping for Germany lists 125 qualifications and their equivalent ISCED 2011 attainment codes.

The modified ISCED 2011 classification used by the ESS offers 27 valid three-digit codes for the respondent's highest level of education. On average, 14 international categories are used by the countries. All countries reserve seven international codes for college and university degrees.

The complexity of the original ISCED 2011 and the reduced version developed by the ESS makes it unlikely that, in social surveys, ISCED coding will be reliable in all countries.

Step 4: The harmonization strategy

A measurement instrument in social survey research that collects data about educational attainment comparing countries and national education systems asks respondents to report national certificates, diplomas, and degrees. It is useful to separate vocational and general educational attainment, and it is meaningful to consider the university and college degrees from the tertiary sector as professional or vocational certificates.

With two common questions we ask for "the highest general education school certificate achieved" and "the vocational/professional education certificates achieved." The answer categories for both questions are the qualifications awarded in the national education system (see Table 3.1).

Step 5: The instrument

In the general education system (see Table 3.1), "no qualification" means that the person left school without obtaining the basic qualification. In former times, the first qualification was obtained after five years of schooling; nowadays, in most education systems the "first qualification" in general education is obtained after

Table 3.1 Hoffmeyer-Zlotnik/Warner matrix of education

		General Education School–Attainment Level				
Vocational/ Professional Education	ISCO major group	No qualif.	First general qualif.	Second qualif.	Third qualif.	General university entrance qualif.
No qualification	9, 8	1	2	3	6	7
Dual system	8, 7	4	4	5	5	5
Full-time vocational school	4, 5	4	4	5	5	5
Vocational college	3, 4	X	5	5	8	8
Bachelor's degree	2, 3	X	X	9	9	9
Master's degree	2	X	X	X	10	10
Doctoral degree or higher	2	X	X	X	11	11

Source Hoffmeyer-Zlotnik and Warner (2007, 138), (2014, 102)

eight or nine years of schooling. A general "second qualification" can sometimes be obtained after 10 years of schooling, usually at lower secondary level. A third qualification from the general education system is possible if the upper secondary sector awards qualifications that do not lead to colleges or universities. "University entrance qualification" groups together all certificates acquired after 12 or 13 years of schooling that allow access to colleges or universities.

In the vocational education system (see Table 3.1), "no qualification" means no vocational qualification. Persons without vocational qualifications enter the labor market as unskilled or semiskilled workers. The "dual system" groups the qualifications from part-time vocational schooling and part-time on-the-job training leading to skilled occupations. "Full-time vocational school" classifies the qualifications for skilled occupations awarded at full-time vocational schools. "Vocational college" groups together degrees from professional higher education institutions. The Bachelor's degree (or equivalent) is the first university degree; the Master's degree is the second university degree. The vocational/professional education dimension ends with the doctoral degree.

The combinations of general and vocational qualifications are then ranked according to the average occupational prestige a person with these attainments can expect on the labor market. In general, we obtain eleven categories, where "1" means no general and no vocational qualification and the lowest occupational prestige expected, and "11" represents the highest university degree anticipating the highest occupational prestige.

From the analysis of underlying structures of the national education systems, we have seen that not all categories of a dimension are available in all countries. Some countries do not offer vocational education in the form of part-time vocational

schooling and part-time on-the-job training; others do not provide a third general education school qualification. However, all qualifications from the country-specific education systems can be transposed into the proposed matrix, thereby rendering comparability across countries possible.

3.4 Labor Force Measures

This section on labor force indicators consists of three measures: "labor force status," "occupation," and "job autonomy." "Labor force status" describes the respondent's relationship to the labor market. "Occupation" is the kind of work performed in a job. And "job autonomy" is an indicator for the responsibilities and prestige of the respondent's position. Labor force status, occupation, and job autonomy are essential measures for understanding stratified modern societies.

3.4.1 Labor Force Status

For the theoretical framework of the respondent's labor force status, we follow the approach adopted by the International Labor Organization (ILO; see Fig. 3.2). All respondents of working age (in general, 15 years and older) are assigned a labor force status code (ILO, Department of Statistics 2013). They are divided into the currently active population and the population not currently active on the labor market. The economically active are subclassified into employed and unemployed persons. Employed persons are all persons above a specified age who were in paid employment during a specified brief reference period (one week, i.e., seven days) and who worked for wage or salary, in cash or in kind. Also classified as employed are self-employed persons who worked for profit or family gain, in cash or in kind. People who were temporarily not at work during the reference period but had a formal job attachment are also coded as employed. Unemployed respondents are those who were neither in paid employment nor in self-employment nor working as contributing family workers, who were available for paid employment or self-employment during the reference period, and who were actively "seeking work"—that is, they have taken specific steps in a specified recent period to seek paid employment or self-employment. Also classified as "unemployed" are persons without work but seeking employment during a specified four-week period who are available to start work within two weeks. Persons outside the specified age range and persons who are without work, not available for work, and not seeking work are classified as "not currently active." Persons who are not seeking employment or are not available for employment and persons who are not currently active are classified as "outside the labor force."

In official statistics, this coding scheme is used to define the economically active population for the national economies. "The economically active population com-

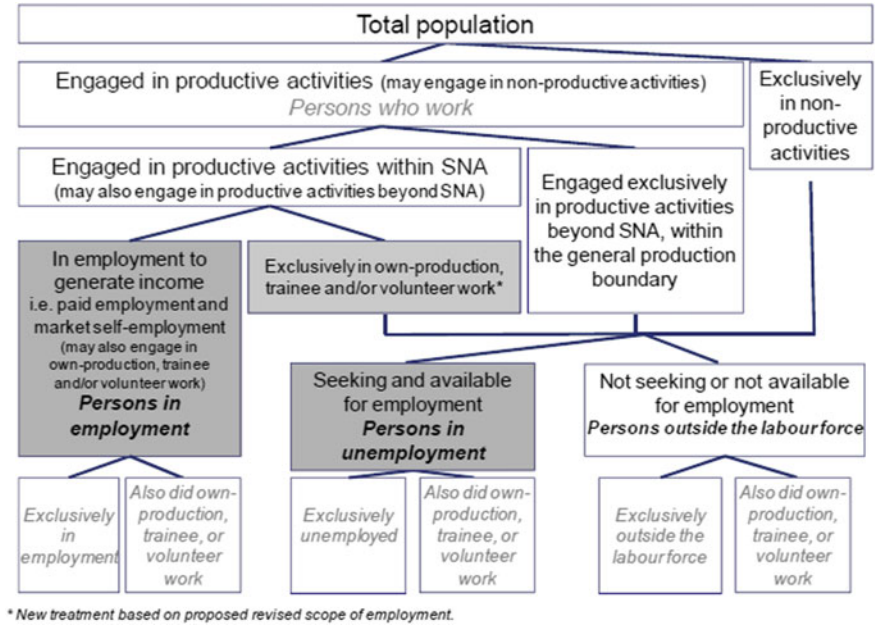

Fig. 3.2 ILO labor force concept of the "economically active population," revised version (*Source* ILO 2013, 17)

prises all persons of either sex who furnish the supply of labor for the production of economic goods and services as defined by the United Nations systems of national accounts and balances during a specified time-reference period" (ILO 1982; European Commission and Eurostat 2015). Depending on the respondent's work situation, between 31 and 61 survey questions are required to measure labor force status in accordance with the ILO concept (Hussmanns et al. 1990, 258–262).

In social surveys, it is important to identify the employed respondents and to classify them by the type and extent of their employment activities. Respondents who are not economically active are also classified during the interviews.

3.4.2 Occupation

Occupation measures the kind of work that a survey respondent performs in his or her job. Together with education and income, occupation predicts a person's social position in a stratified society. The occupational activity performed is also an indicator of a person's lifestyle and social prestige.

Most professions are subject to national regulation in vocational education and training, the required skills and qualifications, and the formal and legal requirements

Table 3.2 Structure of ISCO-08

	Major groups	Sub-major groups	Minor groups	Unit groups
1	Managers, senior officials, and legislators	4	11	28
2	Professionals	6	24	89
3	Technicians and associate professionals	5	20	86
4	Clerks	2	9	28
5	Service and sales workers	2	12	40
6	Skilled agricultural, fishery, and forestry workers	2	6	18
7	Craft and related trades workers	5	16	66
8	Plant and machine operators and assemblers	3	13	42
9	Elementary occupations	6	11	33
0	Armed forces occupations	3	3	3
	ISCO-08 total	38	125	433

Source ILO (2016a)

for performing the job. However, the occupational activity itself remains the same across countries regardless of the different national regulations for occupations and jobs.

The International Labour Organization (2016a) provides the International Standard Classification of Occupations (ISCO). The most recent version, ISCO-08, codes 433 occupational activities using four-digit numerical codes. Unit groups are denoted by four-digit codes; the three-digit codes describe 125 minor groups of occupations; the two-digit codes denote 38 sub-major groups; and the one-digit codes classify the ten major groups of occupational activities (see Table 3.2).

Occupation is an input-harmonized measure. Three common open-ended questions are proposed. The first question asks for the respondent's main job. The second question asks for an exact description of the work the respondent does in that job. The third question requests the specific name of the job. Well-trained coders transcribe the responses into the numerical codes.

Despite the complex procedure for coding responses, it is recommended that the International Standard Classification of Occupations be used. It enables data users to apply (a) prestige scores, such as the Standard International Occupational Prestige Scale (SIOPS: Ganzeboom and Treiman 2003; Treiman 1977), (b) socioeconomic scales, such as the International Socio-Economic Index of Occupational Status (ISEI: Ganzeboom et al. 1992; Ganzeboom and Treiman 1996), or (c) nominal systems of social class categories, such as the enhanced EGP Class Categories proposed by Erikson et al. (1979), Goldthorpe (1980), Erikson and Goldthorpe (1992).

3.4.3 Job Autonomy

Job autonomy measures employees' supervisory responsibilities and self-employed persons' level of self-determination at work. We distinguish five categories of autonomy: (1) elementary jobs carried out by unskilled or semiskilled workers, (2) undemanding, routine jobs, (3) demanding jobs performed independently following general instructions, (4) demanding jobs performed autonomously with limited supervisory responsibilities, and (5) far-reaching managerial responsibilities and decision-making powers (Hoffmeyer-Zlotnik and Warner 2014, 133). These categories are highly correlated with the Standard International Occupational Prestige Scale (SIOPS). With limited interview burden, we thus obtain approximate information about the occupational prestige of the respondent (Hoffmeyer-Zlotnik 2003).

3.4.4 Developing an Instrument for Labor Force Measures

Step 1: The definition of the measurement concepts

In social surveys, we use the labor force status variable to identify the socioeconomic status of the respondent and his or her relationship to the labor market. Therefore, the measurement must ensure that the labor status that is captured is the one that characterizes the respondent. To use labor force status to determine the respondent's status, it is necessary to identify whether the person is employed full-time, or at least part-time. "Full-time employed" persons are persons whose working time is normal or typical in the particular profession and in the particular economic sector. "Part-time employed" means less than "full-time" but not less than half of "full-time." Employment that is less than half of "full-time" is classified as marginal employment. For the classification of a person's labor force status, it is important to know how many jobs and what kind of jobs a person has. The socioeconomic status of respondents who are not employed, or who are marginally employed, is determined by the status of the main income earner of their household.

The occupation variable measures the work that the respondent performs in his or her job, and not simply the job name or designation.

Jobs are defined by specifying the tasks and duties performed. In the context of ISCO-08, the ILO (2012, 11) provides the following definitions of "job," "occupation," and "skill":

> 41. A *job* is defined in ISCO-08 as a set of tasks and duties performed, or meant to be performed, by one person, including for an employer or in self-employment. 42. *Occupation* refers to the kind of work performed in a job. The concept of *occupation* is defined as a "set of jobs whose main tasks and duties are characterized by a high degree of similarity." A person may be associated with an occupation through the main job currently held, a future job, or a job previously held. 43. *Skill* is defined as the ability to carry out the tasks and duties of a given job. For the purposes of ISCO-08, two dimensions of skill are used to arrange occupations into groups. These are *skill level* and *skill specialization*. 44. *Skill level* is defined as a function of the complexity and range of tasks and duties to be performed

> in an occupation. Skill level is measured operationally by considering one or more of: the nature of the work performed in an occupation in relation to the characteristic tasks and duties defined for each ISCO-08 skill level; the level of formal education defined in terms of the International Standard Classification of Education (ISCED-97) (UNESCO-UIS 2006) required for competent performance of the tasks and duties involved; and the amount of informal on-the-job training and/or previous experience in a related occupation required for competent performance of these tasks and duties.

Asking simply for the job name without asking for the kind of work performed in the job may lead to incorrect coding and to measurement error. In the absence of information about the kind of work performed, a respondent who reports that his or her job is "nurse" can be classified with five different ISCO-08 numerical codes, namely:

ISCO-08	English title
2221	Nurse, anesthetics
3221	Nurse, assistant
3221	Nurse, associate professional
3222	Nurse, associate professional: maternity
3222	Nurse, associate professional: obstetrics
2221	Nurse, charge
2221	Nurse, clinical
2221	Nurse, consultant: clinical
2221	Nurse, district
3221	Nurse, enrolled
2221	Nurse, industrial
2221	Nurse, operating theatre
2221	Nurse, orthopaedic
3221	Nurse, practical
2221	Nurse, professional
2221	Nurse, professional: obstetrics
2221	Nurse, professional: occupational health
2221	Nurse, professional: paediatric
2221	Nurse, professional: psychiatric
2221	Nurse, public health
2221	Nurse, registered
2221	Nurse, specialist
3240	Nurse, veterinary
5311	Nursemaid.

Source ILO (2009)

Job autonomy is defined as the responsibilities of the person at work. In the case of self-employed persons, it refers to the level of self-determination at work; in the case of employees, it refers to the degree of managerial power and supervisory responsibilities. For employees, a description of their responsibilities is used to assess job autonomy; for self-employed persons, the number of employees is an approximate

estimate of job autonomy; for farmers, the number of hectares under cultivation is an indicator for the respondent's entrepreneurial responsibility.

Step 2: The underlying structures

Labor force status structures the respondent's legal and contractual relationship with the labor market. Organizational and technical requirements are also relevant. Working time, work remuneration, and performance-linked payments depend on country-specific regulations. Policy-driven labor market programs, such as early retirement, employability programs, etc., may have an impact on the employment status of the respondent. National regulations differ across countries and may affect the assignment of the status "unemployed" or "seeking employment."

Occupations may have different prerequisites in different countries or labor markets. In some contexts, the profession "nurse" requires formal training at a professional college; other countries require dual training at vocational schools and on the job. However, the tasks and duties performed by a "nurse," which is what is supposed to be measured, remain the same across countries. The occupational prestige related to that profession also remains comparable across countries. The social prestige enjoyed by "nurses" is constant across the cultures and countries observed.

Job autonomy, defined as a person's responsibilities at work, is highly correlated with occupational prestige.

Step 3: The appropriate measurement instrument

Our proposed questions for the measurement of labor force status are closely aligned to the concept applied by the ILO, but without the time reference that the ILO imposes. We reduce the interview burden to the minimum necessary in social surveys while retaining the accuracy of the national background variable for comparing the data collected to the official national labor force statistics.

The occupational activity measurement in our survey questionnaire applies the three questions necessary to allow the adequate coding of occupation into ISCO-08, which is comparable across countries. It allows also the transformation of the data into occupational prestige (SIOPS) and socioeconomic status (ISEI) scores.

Job autonomy distinguishes academics in liberal professions; self-employed farmers and members of agricultural cooperatives (if applicable); self-employed persons in commerce, trade, industry, and services; members of cooperatives (if applicable); the bogus self-employed; blue-collar and white-collar workers; civil servants (if regarded as a separate group); and contributing family workers (see Table 3.3).

With the detailed measurement of occupational activity and the crude measure of job autonomy, we follow the approach adopted by Ganzeboom (Schröder and Ganzeboom 2014; see also Ganzeboom and Sno 2015). Repeated measurement using a crude answer scale increases the accuracy of the sociodemographic variable, and the statistically compiled combined scale from the detailed and crude measure increases comparability across countries and social systems.

Table 3.3 Job autonomy, professional status, and SIOPS

Job autonomy		Professional status	SIOPS (Prestige)
1	Low	Unskilled, semiskilled, manual work	6–32
2		Undemanding, routine job	33–41
3		Demanding job following general instructions + small farmers + managers of micro-enterprises + contributing family workers	42–50
4		Demanding jobs with discretionary powers + medium-sized farms + highly specialized small agricultural enterprises + managers of small and medium-sized companies +members of liberal professions with a small number of employees	51–63
5	High	Far-reaching managerial responsibilities and discretionary powers +members of liberal professions with "a large number" of employees + large agricultural or commercial enterprise	64–78

Source Hoffmeyer-Zlotnik and Warner (2011, 47)

Step 4: The harmonization strategy

The questionnaire module presented here collects labor force information in eight steps (see Fig. 3.3).

1. First, we identify the extent of the respondent's labor force participation. We distinguish between full-time employment, part-time employment, marginal employment and "not employed."
2. If the respondent is marginally employed or not employed, we ask for the reasons for this.
3. If the respondent is unemployed or in vocational training, we ask whether he or she is available for work.
4. If the respondent is marginally employed, we ask for the type of work and the number of jobs.
5. For respondents who are not employed at the time of the interview, we collect information about their last main job.
6. For respondents currently or formerly full-time and part-time employed, we ask for the name of the job, the kind of work performed, and the autonomy of the job. This makes ISCO-08 coding possible.
7. If the respondent is not the main income earner of the household, we repeat Step 6 and ask for details of the main income earner's job (job name, the kind of work performed, and job autonomy).
8. At the end, we ask all persons if they worked for pay, profit or family gain for at least one hour during the reference period. If they did not, we ask for the reasons why. Both final questions allow our survey answers to be compared to official statistics that are based on this ILO labor force concept.

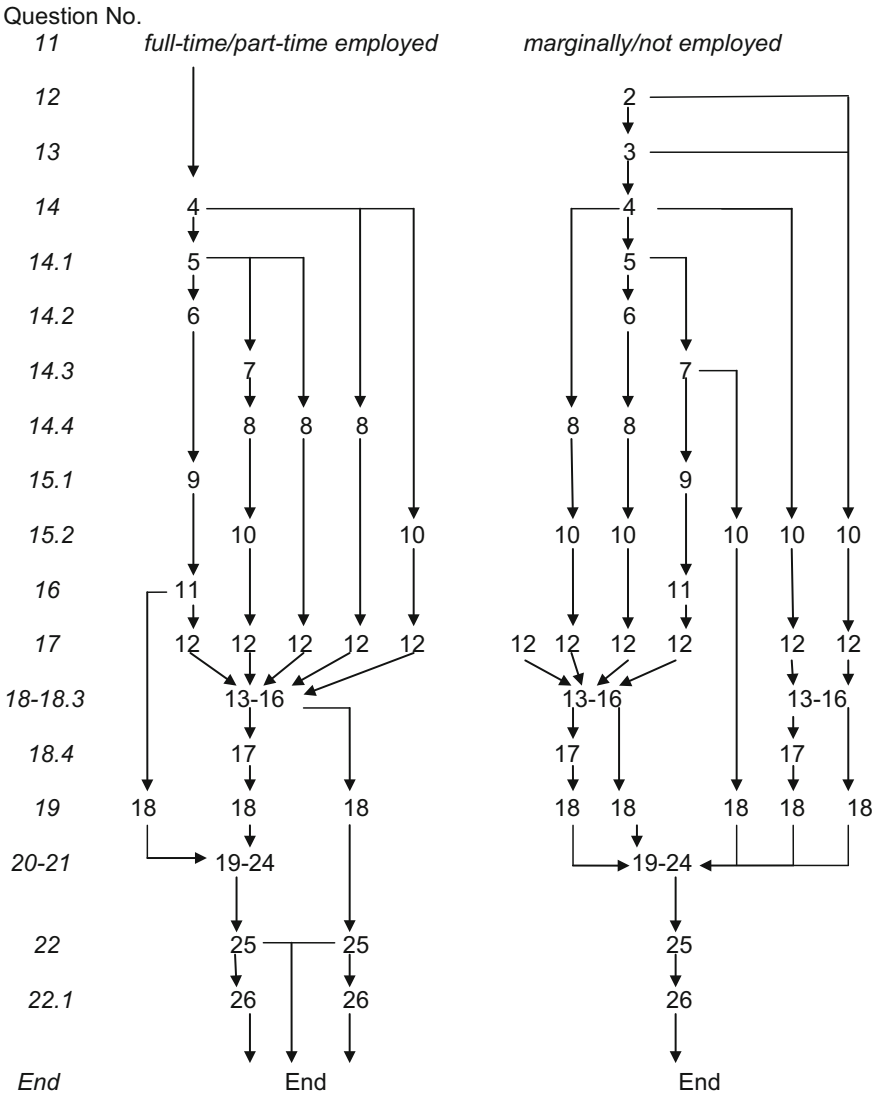

Fig. 3.3 Flowchart for the labor force status and occupation questions (*Source* Hoffmeyer-Zlotnik and Warner (2014, 119); see also questionnaire in Chap. 4)

All the questions in our labor force module are input harmonized, and common question texts are formulated before the national questionnaire is drafted. However, they require careful pretesting in all the participating countries to make sure that the response categories are meaningful in each labor market context.

Step 5: The instrument

Because our intention is to collect information about the respondent's complex relationship to the labor market and the manifold situations on labor markets, the module described in Step 4 appears complicated at first glance. However, full-time and part-time employed persons are asked only nine questions, respondents who are not employed are asked eight questions, and only marginally employed respondents are asked 18 questions, and then only if they have more than one job.

The advantage is that the module measures the labor force situation in such a way that international scales are available for the analysis. The Standard International Occupational Prestige Scale (SIOPS: see Ganzeboom and Treiman 2003; Treimann 1977) or the International Socio-Economic Index of Occupational Status (ISEI: see Ganzeboom et al. 1992; Ganzeboom and Treiman 1996) are simple to calculate.[3]

3.5 Total Net Household Income

"Total net household income" is the next measure that determines the socioeconomic status of a survey respondent and is necessary for the analysis of the social structure of a society.

Step 1: Definition of the measurement concept

Total net household income is a well-proven indicator for a person's lifestyle and his or her chances to achieve a particular social position. Income as a demographic background variable in social science surveys measures the relative monetary position of respondents in stratified societies with unequally distributed financial resources. In sociology, access to scarce economic resources is, in general, one of the major independent variables that explain socioeconomic structures (see Atkinson 2015 for inequality and poverty and Piketty 2014 for the accumulation of wealth and income).

Step 2: The underlying structures

Total net household income comprises income from all possible sources. The Canberra Group Handbook on Household Income Statistics (Canberra Group 2011, 11) recommends 30 components of household income.

The European Statistics on Income and Living Conditions (EU-SILC) is a European Union series of commonly defined parameters for comparative statistics on income distribution and social inclusion. It provides annual information for the 28 EU member states and for Iceland, Norway, Switzerland, and Turkey. The methodology, the instrument, and the techniques for collecting national data that allow the

[3] See: "Harry Ganzeboom's Tools for deriving occupational status measures from ISCO-08" with interpretative notes to ISCO-08. http://www.harryganzeboom.nl/isco08/index.htm. Accessed on January 26, 2018.

Table 3.4 Number of sources of household income for selected countries in ECHP Wave 8, in percent

	Germany	United Kingdom	Italy	Luxembourg
No income source	6.6	1.4	24.6	17.3
1 and 2 income sources	0.8	0.6	1.1	0.0
3 income sources	5.5	5.3	11.5	7.0
4 income sources	7.6	5.9	17.7	10.5
5 income sources	5.3	8.8	6.3	26.1
6 income sources	19.8	25.6	27.1	8.6
7 income sources	18.2	12.4	3.3	19.7
8 income sources	9.5	18.2	6.1	4.1
9 income sources	9.4	11.1	1.7	4.6
10 income sources	7.0	5.8	0.4	1.9
11 income sources	8.6	3.6	0.2	0.3
12 income sources	1.5	1.0	0.0	0.0
13 and more income sources	0.2	0.2	0.0	0.0

Source ECHP UDB version April 2004, own calculation, and Hoffmeyer-Zlotnik and Warner (2006, 313)

compilation of the harmonized target indicators are the responsibility of each country. The German survey uses a questionnaire with 28 income elements at household level and 62 income elements at person level to obtain the microdata necessary to compute the common income indicators for EU-SILC.

Prior to EU-SILC, the European microdata for comparative income research was collected by means of the European Community Household Panel (ECHP) surveys. A commonly defined fieldwork instrument and input-harmonized questionnaires were used to gather the microdata on the income of households and their members. The person questionnaire of the eighth wave of the ECHP asked for 50 different income items. One member of the contacted household was surveyed using a household questionnaire that covered five income items received by the household.

Table 3.4 shows that the greatest proportion of respondents in ECHP Wave 8 had to add up income from between four and seven sources in order to report total net household income as a background variable.

Total net household income comprises the income accruing to all household members. The total net household income measure in social surveys requires respondents to add up their own income and the individual income of about two other household members (Tables 3.5 and 3.6).

Table 3.5 Average and maximum number of household members in ESS 6 (2012)

Country	BE	BG	CH	CY	CZ	DE
Average no. of household members	2.8	2.9	2.7	3.3	3.0	2.6
Max. no. of household members	12	12	8	8	8	12
Country	IE	IL	IS	NL	NO	PL
Average no. of household members	3.2	3.7	3.1	2.8	2.7	3.2
Max. no. of household members	9	13	14	12	7	11
Country	DK	EE	ES	FI	GB	HU
Average no. of household members	2.5	2.5	2.9	2.4	2.8	2.6
Max. no. of household members	8	15	11	12	10	12
Country	PT	RU	SE	SI	SK	Kosovo
Average no. of household members	2.9	3.0	2.5	3.1	3.1	6.3
Max. no. of household members	9	11	14	12	11	24

Notes: *BE* Belgium, *BG* Bulgaria, *CH* Switzerland, *CY* Cyprus, *CZ* Czech Republic, *DE* Germany, *IE* Ireland, *IL* Israel, *IS* Iceland, *NL* The Netherlands, *NO* Norway, *PL* Poland, *DK* Denmark, *EE* Estonia, *ES* Spain, *FI* Finland, *GB* Great Britain, *HU* Hungary, *PT* Portugal, *RU* Russia, *SE* Sweden, *SI* Slovenia, *SK* Slovakia
Source ESS6e01_1, own calculation

Table 3.6 Number of household members in ESS 6 (2012), all countries

Household members	cum. %
1 person	19.2
2 persons	51.6
3 persons	70.8
4 persons	88.0
5 persons	95.4
6 persons	98.2
7 persons	99.1
8 and more persons	100.0

Source ESS6e01_1, own calculation

Table 3.7 EU-SILC 2008 "total disposable household income" decile thresholds

	Low 10%	20%	30%	40%	50%	60%	70%	80%	High 90%
BE	12,012	15,191	18,741	22,837	27,683	33,731	40,012	47,386	59,951
PT	5395	7602	9730	12,078	14,412	16,818	20,504	25,117	34,560
UK	9561	13,217	16,684	20,314	24,839	29,821	35,911	44,057	58,544
LX	23,165	27,259	35,820	41,519	47,870	55,599	66,001	79,584	99,322
PL	3417	4672	6041	7511	9054	10,872	13,024	15,897	20,571

Notes: *BE* Belgium, *PT* Portugal, *UK* United Kingdom, *LX* Luxembourg, *PL* Poland
Source EU-SILC USER DATABASE Version from 01-08-11, own calculations

The distribution of total net household income differs across national economies. Table 3.7 shows the decile thresholds of "total disposable household income" for selected countries with different income distributions. These country-specific differences in income distributions render it almost impossible to establish one common response scale with the same income brackets for all countries.

Step 3: The appropriate measurement instrument

The generation of a response during the interview by recalling and adding up several regular and temporary sources of income received by the respondent and other household members is a demanding task.

From pretests of our sociodemographic questionnaire module, we learned that, in particular, income that was not regularly received and payments that were not related to work tended to be forgotten by respondents, and thus not included in the sum of the household income. Therefore, we start our income section with a question about all sources of household income, and we provide a list of the main categories, including transfers paid to the household. This helps the respondent to recall all income sources. Here, we allow multiple answers because households may have more than one source of income, for example:

- wages or salaries, including performance bonuses, Christmas and vacation bonuses, supplementary payments such as overtime payments and profit sharing;
- income from self-employment, farming, or freelance work;
- old-age and survivors' pensions;
- unemployment benefit, unemployment assistance, sickness benefit, and grants for education and training;
- income from the rental of property or land;
- public transfer payments such as social assistance and support, including children's and family allowances, orphans' pensions/benefit, and parental child-raising allowance;
- private transfers, especially alimony;
- income from other sources, for example, tax rebates, insurance dividends, investments, savings, and lottery winnings.

The next question measures the total net income. The question text includes the following definition of "net": "Net means after deduction of national taxes and compulsory social security contributions." The next question asks for the main source of the household income and uses the list of income categories again. In this case, however, only one answer—the main income category—is possible. The aim of fourth question is to determine how many household members contribute to the total net household income. The final question in the income section is about the main income earner of the household. We assume that (a) if the respondent and his/her partner are responsible for the household income, we will obtain a more reliable answer, and (b) if the respondent is the main income earner's father or mother, son or daughter, or any other person in the household, the answer will be less reliable. In general, a respondent who is not the main income earner or his/her partner will tend to underestimate the total net household income because of a lack of information about the economic situation of the household as a whole (Hoffmeyer-Zlotnik and Warner 2014, 142–143).

Step 4: The harmonization strategy

The composition of household income differs across countries, not only in terms of the number of income sources but also in terms of income types. Depending on the national organization of the social security system and the welfare state, different benefits are paid to households and their members. The harmonization task is to establish a correspondence between functionally equivalent welfare payments across countries. The tradition of wage, salary, and work-related payments differs also across national labor markets. In some countries, remuneration for employment is paid weekly, other countries have monthly wages and salaries, and some countries have the tradition of annual work remuneration. Therefore, it is useful to provide respondents with weekly, monthly, or annual income categories as response options.

The distribution of household income differs across countries. Household income as a sociodemographic variable aims to measure the economic position of the respondent's household relative to the national income distribution. Therefore, we recommend creating the answer categories in such a way that they take into account the country's unequal distribution of household income. Only 10% of the households in Luxembourg have a disposable income of 23,165 euros and less, whereas in Portugal 80% of the households have 25,117 euros or less at their disposal (Table 3.7). The accuracy of the response categories depends on the accuracy of the reference statistics reproducing the national distribution of household income, including all types of incomes and transfers accruing to all household members.

On the showcard presented to the respondents, response options (income categories) are represented by randomly assigned letters. Rather than reporting an amount, respondents give the code letter of the category that best describes the net household income. This respects the privacy of the respondent vis-à-vis the interviewer and increases his or her willingness to answer the income question in countries where this question is sensitive.

Step 5: The instrument

The battery of questions about "total net household income" starts with a question about all the sources of income that are received by the household as a whole and by the individual household members. The response categories remind the respondent of different types of regular and temporary work-related remuneration (including once-off payments), assistance from the social security system (e.g., old-age benefits, public transfers, and family or child allowances), private transfers from other households and persons, and finally, revenue from tax refunds and insurance. This list of income items is country-specific and features the major income sources, benefits, and transfers received by households in the respective countries.

The second question is about the amount of household income. The question text includes the instruction that "total" means that all income types received by all household members must be added up. The question also provides a definition of "net": "Net means after deduction of national taxes and compulsory social security contributions." We propose three different showcards: (a) one for countries with low net household income, (b) one for countries with medium net household income, and (c) one for countries with high net household income.

The third question asks for the number of household members that contribute to the household income. It enables a plausibility check of the amount of household income reported in response to the second question. The fourth question uses the same showcard of income sources used for the first question, but this time the respondent is asked to report the main source of income.

The fifth question in this section asks about the respondent's position in the household. This gives researchers an idea of the reliability and validity of the answers to the income questions, as it provides an indication of the extent of the respondent's information about the economic situation of the household.

3.6 Ethnicity

In the tradition of Weber (1978, 389 ff.), Francis (1976, 382) defined ethnicity as follows: "Ethnicity refers to the fact that (1) a relatively large number of people are socially defined as belonging together because of the belief in their being descended from common ancestors; that (2) because of this belief, they have a sense of identity and share sentiments of solidarity."

For social surveys, a more practical and operational statement defines ethnicity as a "shared racial, linguistic, or national identity of a social group" (Jary and Jary 1995, 206) with two fundamental principles: first, objective group membership, which is described mainly on the basis of legal criteria (see Sect. 3.6.1); second, emotional belonging to an ethnic group, which is described mainly on the basis of subjective affiliation (see Sect. 3.6.2).

Ethnicity is a multidimensional concept. Ethnic group members may share a multiplicity of characteristics, and ethnic groups are organized around different cultural, historical, religious, and traditional determining elements.

3.6.1 Objective Criteria: Citizenship, Residency Status, Mother Tongue, and Migration Background

In the context of the cross-national comparison of ethnicity-related sociodemographic background variables, it is important to note that national states differ in their relationships to minority groups and in the way they integrate—or do not integrate—members of these groups. For survey respondents, the ways of obtaining citizenship or preserving their origins are determining and decisive factors. Hence, we include in our module a question about acquisition of citizenship and about the length of the respondent's stay in the country of residence.

Another problem is related to the population of social surveys in societies with a significant population from minority groups. In most surveys, the eligible persons are residents of the country from a specific age group who are living in private households. Citizenship or ethnicity is immaterial. During the interview, it is fundamental that the eligible contact person understands the survey question. "Understanding" refers here to (a) linguistic understanding of the question wording, so that the respondent recognizes the question stimulus and can provide an answer, and (b) cultural understanding so that the respondent recognizes the sense of the question. Cultural understanding depends on respondent's cultural origin and background, as well as on his or her social opportunities and possibilities.

When measuring ethnicity during survey interviews, the following facts must be recorded to enable researchers to interpret the sociodemographic background of the respondent:

1. The legal status of the respondent must be clarified in order to be able to assess whether or not the person can avail of full citizen's rights and whether he or she holds, or is entitled to acquire, citizenship.
2. It must be asked what citizenship the person holds and how that citizenship was acquired.
3. If the respondent is not a citizen of the survey country, the extent to which he or she is entitled to participate in the economic life of that country should be determined. In other words, it must be asked which residence permit the person holds because different resident permits are associated with different rights and obligations.
4. Minorities and their cultures are defined not only by the actual experience of migration, but also by the migration experiences of previous generations. Therefore, irrespective of citizenship, the migration background of the respondent is part of the ethnicity measurement. This historical migration experience is use-

ful for the interpretation of the respondent's opinions about social and political circumstances.

5. The integration of immigrants presupposes linguistic communication between the members of the minority and the majority. This is a way of meaningfully determining the respondent's "mother tongue."

Step 1: The definition of the measurement concepts

The meanings of *citizenship* are driven by two fundamental judicial concepts: (a) *ius sanguinis*, the principle of descent, and (b) *ius soli*, the principle of territory and birthplace. The principle of descent strives for ethnic homogeneity based on common origin and shared ancestry. Children who have at least one parent who is already a citizen of the country can become a citizen of that country. The principle of birthplace grants citizenship to all children born on the state's territory regardless of the parents' citizenship. In most modern countries, the legal regulations on citizenship are mixtures of both judicial interpretations. However, one legal principle often dominates. A sociodemographic "citizenship" variable measures the respondent's citizenship(s) and how the citizenship of the country of actual residence was acquired.

The *residency status* of a respondent is a two-dimensional concept with a time dimension and a rights and obligations dimension. The time axis ranges from temporary residence to unlimited or indefinite residence; the rights and obligations dimension regulates mainly freedom of residence and access to the national labor market. Only unlimited or indefinite residence and full access to the labor market grant equal social and economic participation in the country.

The respondent's *migration background* provides information about the respondent's and his or her parents' and grandparents' experiences of migration. For this measurement, irrespective of the respondent's citizenship, we need to know the place of birth of the respondent's parents (and ideally also that of the grandparents).

Mother tongue is an approximate measure of the integration of the migrant in the host society. Alba (2005) describes the stepwise language acquisition of immigrants and subsequent generations: The first generation learns as much of the host country's language as is necessary for work and first social contacts. The second generation uses the parents' language of origin at home and learns the language of the host country at school and among their peers. For the third generation, the language of the host country becomes the mother tongue. The use of languages at home is a reliable indicator for the degree of integration in the society of the host country.

Step 2: The underlying structures

Normally, a person has only one *citizenship*. However, it is possible to accumulate citizenships on the basis of the different legal principles described in Step 1 above. If a child is born in a country in which *ius soli* (principle of birthplace) applies, and the parents hail from two different states in which *ius sanguinis* (principle of descent) applies, he or she can accumulate up to three citizenships. Dual citizenship is legally possible in many countries for specific population groups and is used very differently in different countries. Citizenship, including dual citizenship, is regulated by national law that includes individual rights and obligations.

Citizenship can be acquired, on the one hand, by birth according to the applicable principle. On the other hand, it can be granted by an administrative act. Hence, it is important to work out what possibilities of acquiring citizenship are, or have been, offered by the respective countries.

National laws on citizenship and the regulations on the acquisition of citizenship change over time. For example, persons of German descent who were born east of the Oder-Neisse line and who immigrated to Germany as so-called *Aussiedler* (ethnic German resettlers) before January 1, 1993 were automatically deemed to be German citizens (BVFG 1953). The same mechanism applied until the end of 1992 for persons of German descent (*deutsche Volkszugehörige*) born, for example, in Transylvania (Schneider 2005). Since 1993, both groups have had to undergo an individual acceptance procedure (BVFG 2015, §4).

Until 1998, Algerians who had been living in the French *départements* of Algeria before Algerian independence in 1962, and their offspring, could apply for "reintegration into French nationality" when they immigrated to France (Ruf 2002).

Until the early 1980s, British citizenship was granted to people from the former British colonies under the British Nationality Act 1948. However, under the British Nationality Act 1981, full British citizenship was denied to people from the former colonies. As a result, even residents of Hong Kong who hold a British passport have no right to settle in the United Kingdom.

The way in which countries regulate immigration and *residency status* differs. Of importance is the residential status that allows indefinite residence and free access to the labor market. Countries' residential status regulations define different types of residence and varying degrees of rights on the labor market. Moreover, countries differ as to whether or not residency status and labor market rights are linked. However, all countries regulate the transition from limited to indefinite residence.

In 2012, following the renewed failure in 2010 of the DREAM Act bill (Development, Relief, and Education for Alien Minors Act, Congres.gov 2001, 1291), which was first introduced in 2001, then-President Obama established the Deferred Action for Childhood Arrivals program (DACA) to give undocumented immigrants who had arrived in the country before the age of 16 and who had been living there for at least five years and were no older than 31 years of age a chance to obtain "conditional" status of residence, provided they had graduated from an American high school, had passed the General Educational Development test (GED), or were studying at a U.S. higher education institution. These immigrants were considered valuable for the U.S. American labor market (U.S. Citizenship and Immigration Services 2017). The program was rescinded by the Trump administration in September 2017, but full implementation of the rescission was postponed to give Congress time to resolve the DACA issue.[4]

[4]See United States District Court Order for the Northern District of California filed on January 9, 2018 granting some provisional relief from the rescission. https://www.uscis.gov/sites/default/files/USCIS/Humanitarian/Deferred%20Action%20for%20Childhood%20Arrivals/234_Order_Entering_Preliminary_Injunction.pdf. Accessed on January 26, 2018.

In addition to a country's national laws, there are international and supranational agreements and understandings. For example, persons from one member state in the European Union have indefinite residence rights in, and unlimited access to the labor market of, the other EU member states.

The *migration background* of a survey respondent is influenced by his or her self-assignment to a country, territory, or city of birth. Wars, the collapse of states (e.g., the Soviet Union), and the breakup of nations (e.g., Yugoslavia) change national borders of countries. Thus, the state to which the respondent's place of birth belongs may change. The problem here is how the respondent assigns his or her own place of birth to a country.

The *mother tongue* is the language used at home and among members of one's own family. Some countries have several official languages—for example, Switzerland, where the official languages are German, French, Italian, and Romansh. The United States of America has no official language. However, 25 states use English as a common language, and five states have at least two official languages. Some countries have regional official languages besides the national language. This is the case in Spain with Aranese, Basque, Galician, and Catalan, or Italy with German, French, Ladin, and Slovenian. A third type of language structure is represented by countries with protected minority languages. The Italian example shows the complexity of cultural linguistic diversity in such countries. In Italy, the following minority languages are protected: Albanian; German in the variants Southern Tyrol German and Walser Valley German; Franco-Provençal and Occitan in the Aosta Valley; Furlan in the region of Friuli; Catalan in Alghero; Griko, Croatian, and Ladin in Southern Tyrol, Trentino, and Belluno; Ligurian, Rhaeto-Romansh in Livigno, Sardinian, Slovenian, Venetian, and Cimbro.

Step 3: The appropriate measurement instrument

Because of the two principles of *citizenship* and their combinations, up to three answers are accepted in our questionnaire. A follow-up question is needed to determine whether the respondent has any other citizenships besides that first reported (a maximum of two other citizenships can be recorded). During computer-assisted interviews, a background list of nationalities based on ISO 3166 is helpful.[5]

The next question records how citizenship was acquired. Seven answer categories are possible: "By birth" will be the most common answer. However, it is not yet differentiated according to the principles of citizenship. Therefore, it is necessary to ask about the country of birth in order to get information about *ius soli*, the principle of birthplace. It is important to observe the changes of borders and the formation of new states to which the place of birth belongs. The current country of birth is not necessarily the country that shaped the respondents or their parents. In the social sciences, it is more meaningful to ask for the state at the time of birth. However, official statistics agencies have agreed to record the actual country of birth. In the case of the formation of a new state, it is wiser to ask for the current country of

[5]International Organization for Standardization. Country Codes ISO 3166. https://www.iso.org/iso-3166-country-codes.html. Retrieved on January 26, 2018.

birth. A person born in Zagreb during the 1970s was born in Yugoslavia but now has Croatian citizenship. A person born in Rhodesia during the 1950s is now a citizen of Zimbabwe. And a person born before 1945 in Königsberg in the then-German province of East Prussia was born in Germany, even though Königsberg has belonged to Russia since 1945. If this person now lives in Germany, he or she is not considered to be a migrant, because he or she was born as a German and his or her citizenship is still German. The next citizenship acquisition category is "through (one of) my parents." This answer indicates that *ius sanguinis*, the principle of descent, applied. If parents change their citizenship, the citizenship of minor children also changes. The category "by adoption" indicates that the child acquired the citizenship of the adoptive parents/parent. "On reaching the age of majority" is the category for those who opted for a citizenship when they reached the age of majority. The next answer category is for those respondents who changed citizenship "by marriage." Category 6 is "by naturalization." The last answer option is for those respondents who obtained citizenship "by descent", as in the case of the ethnic German resettlers in Germany (*Aussiedler*) or the Algerians who moved to France before 1998. This list of answer options can be enlarged to cover the survey country's particularities.

The last question about citizenship asks for the year in which citizenship was acquired. This enables the researcher to determine since when the respondent has been dealing with the rights and obligations of the host country and has become familiar with the host country's institutions.

The next question addresses the *residential status* of noncitizens. First, the national categories for three transitions must be elaborated: (a) indefinite residence, (b) limited residence with a work permit, and (c) limited residence without a work permit. The residuals are asylum seekers and refugees.

The *migration background* question asks for the father's and mother's country of birth and follows the same conditions as the question about the respondent's country of birth.

The final question is about the *mother tongue* that the respondent speaks at home with the members of the family. The answer categories are listed using the language codes from ISO 639.[6] As migrants may, of course, be bilingual and use one language with members of their own generation and another language with other generations, or one language within the family and another language outside the family, we allow two answer options, although there can actually be only one mother tongue.

Step 4: The harmonization strategy

All questions from the section "objective criteria for ethnicity" are input harmonized. All questions and answer options can be translated into the survey language. The response categories may change only in the case of the question about the acquisition of citizenship, with additional options being used in countries that allow or allowed other ways of acquiring citizenship.

[6]International Organization for Standardization. Language Codes ISO 639. https://www.iso.org/iso-639-language-codes.html. Retrieved on January 26, 2018.

The major problem is the different use of the terms "nationality" and "citizenship." Some countries ask for "nationality," other countries ask for "citizenship." Citizenship describes membership in a state, whereas nationality indicates the rights and obligations that a member of a state has. In social survey research, we are interested in the respondent's membership in a state. Therefore, we recommend that "citizenship" be used.

Step 5: The instrument

The proposed instrument measures the objective criteria of the respondent's citizenship, residency status, mother tongue, and migration background with four questions including sub-questions. A person with one citizenship who was born in the survey country is asked only a few questions. For persons with a migration background, the questionnaire module is slightly more time-consuming. If it is necessary to shorten this section, the questions about migration background and mother tongue are the most dispensable. However, dispensing with these questions means that there is a risk that the attitudinal questions will be wrongly interpreted in the absence of information about migration background.

3.6.2 Subjective Criteria: Ethnic Group Membership

Weber (1978, 389) defined "ethnic groups" as follows:

> We shall call "ethnic groups" those human groups that entertain a subjective belief in their common descent because of similarities of physical type or of customs or both, or because of memories of colonization and migration; this belief must be important for the propagation of group formation; conversely, it does not matter whether or not an objective blood relationship exists. … In our sense, ethnic membership does not constitute a group; it only facilitates group formation of any kind, particularly in the political sphere.

The present section focuses on respondent self-assignment to an ethnic group. Hence, it targets not only persons with a migration background who still feel connected to the culture of origin but also "older" minorities in the survey country. Such minorities exist in almost all countries and have lived on the national territory sometimes for centuries. They include:

1. Indigenous groups, such as the Aboriginals in Australia or the Bretons in France, or people who settled across national boundaries, such as the Sami in Norway, Sweden, Finland, and Russia, or the Inuit in Canada and Greenland.
2. Historical immigrants, for example, Greek population groups who migrated to Southern Italy between 1500 and 2000 years ago, or the Romany in Hungary, Bulgaria, and Romania.
3. Historical settlers, such as the Transylvanian Landler, who migrated from Austria to Transylvania during the eighteenth century, or the Transylvanian Saxons, who migrated to Transylvania in the twelfth century.

4. People related to new cultural of linguistic territories because of postwar national state formation, for example, the South Tyroleans, who became Italians, or the Danish minority in Germany.

Step 1: The definition of the measurement concept

Membership in an ethnic group means that a person has a specific cultural background, which must not be identical with the culture of the host country. The perceived affiliation to a group increases the feeling of solidarity. This is particularly important if persons are not part of the majority and feel that they are discriminated against. Martin and Gerber (2005, 3) point out that "cognitive interviews with persons who have multiracial heritage demonstrate the relevance of the principle that race is a social construct, and illustrate the complex factors that influence racial identifications."

The feeling of affiliation to a group is very subjective, even when this ethnic group has been present in the host country for a long time. Therefore, response options should include not only the large and visible more recently arrived groups but also the indigenous and "older" ethnic groups.

Step 2: The underlying structures

We can distinguish four types of relationships between the majority and minority ethnic groups: (a) the relationships between groups who have equal rights in a country, for example, the four language groups in Switzerland, (b) the relationship between groups that form the national state and are integrated into the common nation, as in the case of France, Spain, and the United Kingdom, for example, (c) the relationship between the majority and indigenous minorities is regulated by law and gives specific rights to members of the minority ethnic groups, and (d) the relationship between the national majority and immigrant groups.

Step 3: The appropriate measurement instrument

The survey instrument asks for the respondent's self-assigned membership in an ethnic group. The response options begin with the groups that have the same rights as the majority. These are followed by the minority groups with cultural and/or religious autonomy protected by law. More recently arrived immigrant groups are distinguished on the basis of their legal rights of residence: Do they have residential freedom under bilateral or multilateral agreements? Are they labor migrants with particular freedom on the labor market of the country regulated by national agreements or law? Do the immigrants belong to population groups with limited rights? All visible groups must appear on the list of response options. The majority group must also be included as a response option. Crude categories, such as "White," "Black," "Asian," and "Mixed" in the United Kingdom or "Hispanic," "White," "Black," "American Indian or Alaska Native," "Asian," "Pacific Islander," and "Other race" in the United States of America, do not fulfil the requirements of a survey measurement.

Sometimes respondents assign themselves to more than one ethnic group, for example, because they have mixed-ethnic parents or because they feel they belong

to both their culture of origin and to the culture of the host country. Therefore, two responses should be allowed. However, we do not recommend allowing more than two responses because this renders interpretation very complex—as in the case of the U.S. population census.

Step 4: The harmonization strategy

The question about the subjective criteria for ethnicity—self-assigned membership in an ethnic group—is output harmonized. The complex situation in each country makes it necessary to adapt the instrument to the national circumstances that describe the relationship between the various ethnic groups in a country. Only national research experts familiar with the subject can have an overview of the complexity of ethnic group memberships.

For cross-national comparative purposes, a common system of categories could be as follows[7]:

1. minorities with the same rights as the majority;
2. minorities with similar rights to the majority, but with national, cultural, or religious autonomy;
3. immigrants with freedom of settlement and residence, guaranteed by bilateral or multilateral agreements;
4. labor migrants with freedom on the national labor market regulated by bilateral or multilateral agreements;
5. immigrants with limited citizen rights in the survey country;
6. immigrants with no rights in the survey country.

Step 5: The instrument

The proposed instrument measures self-assigned membership in an ethnic group regardless of whether that ethnic group is defined by language, culture, or religion. Two answers are possible so that there is no major conflict of loyalties among respondents with multiethnic group membership.

The answers are collected with the help of a showcard listing ethnic groups. As there may be too many small groups that cannot be summarized, they are surveyed with an open residual category. After data collection, output harmonization should summarize the answers into general categories similar to the options listed in Step 4 above, so that comparative analysis across countries becomes meaningful.

[7] Our intention is to collect the most detailed possible information in order to reduce "noise" and to obtain the most reliable, valid, and robust measurement possible. However, for cross-national and cross-cultural analysis, a compromise is acceptable, provided it allows data to be compared across countries and cultures.

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Part II
The Questionnaire

Chapter 4
The Harmonized Questionnaire for Sociodemographic Measures

Abstract This chapter presents the sociodemographic questionnaire that we have designed for use in cross-national comparative surveys. The questionnaire features all core demographic and socioeconomic variables, including question texts, response categories, interviewer and respondent instructions, and filters.

Keyword Sociodemographic questionnaire modules

In Chap. 3, we presented the main sociodemographic variables required for social surveys. For most of them, we illustrated the harmonization process from the definition of the measurement concept and the analysis of underlying structures, through the selection of the appropriate measurement instrument and the harmonization strategy for comparison across countries and cultures, to the final instrument. The present chapter introduces questionnaire modules for sociodemographic background variables in cross-national or cross-cultural social surveys (see Hoffmeyer-Zlotnik and Warner 2014, 210–231). The following questions have been formulated for computer-assisted personal interviews (CAPI), where lists or tables of response categories do not have to be integrated into the questionnaire. Instead, they can be shown to the respondents separately on showcards. The questionnaire design and the filtering instructions must also be adapted to the interview mode and/or technology. Our proposed questionnaire includes the question routing, interviewer instructions, and explanations for the respondents. For paper-and-pencil interviews (PAPI) and online surveys with no interviewer present, the instructions must be adapted to support the respondents. For computer-assisted telephone interviews (CATI), minor modifications are necessary.

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Sex
The variable "sex" measures the respondent's biological sex in two categories only, namely male and female.

1. Are you …
   male? ☐
   female? ☐

Age
Age is measured via the month and year of birth. In this way, the researcher can decide whether to convert age into years or to work with birth-year cohorts.

2. When were you born?
   Please tell me the year and the month of your birth.
   Year ☐☐☐☐
   Month ☐☐

Legal Marital Status
Legal marital status refers to the status of a person under national family law.

3.1 What is your current legal marital status?
   1. Married or in a registered partnership and living with spouse/registered partner ☐
   2. Married or in a registered partnership but not living with spouse/registered partner ☐
   3. Divorced and not remarried (including dissolved registered partnership) ☐
   4. Widowed and not remarried (including widowed from registered partnership) ☐
   5. Never married and never in a registered partnership ☐

Filter:
If code 1, go to question 4
If code 2, 3, 4 or 5, go to question 3.2

Consensual Union
Relationships between persons living together as a couple, which, although not formally ratified by law, are characterized by marriage-like commitment are classified as consensual unions.

3.2 Are you living in a consensual union with a partner in the same household? By consensual union we mean a marriage-like relationship with a partner in the same household.
   1. Living in a consensual union with a partner in the same household ☐
   2. Not living in a consensual union with a partner in the same household ☐

Ethnicity

The following variables can be subsumed under the superordinate concept of ethnicity. There are six topics in all:

- Citizenship
- Residency status
- Ethnic group membership, self-defined
- Country of birth
- Country of birth of mother and father
- Integration

Citizenship

4. Are you a citizen of [the survey country]?
   1 Yes ☐
   2 No ☐

Filter:
If code 1, go to question 4.1.
If code 2, go to question 4.4 .

4.1 Do you hold any other citizenships?
   1 No other citizenship ☐
   2 Write in the second citizenship: ……..…….
   3 Write in the third citizenship: …….……..

(Code citizenships into ISO 3166-1. The first citizenship is automatically entered using the ISO 3166-1 code of the country in question)

4.2 By which legal procedure did you become a citizen of [the survey country]?
   1 By birth [in the survey country] ☐
   2 Through (one of) my parents ☐
   3 On reaching the age of majority ☐
   4 By marriage or registered partnership ☐
   5 By adoption ☐
   6 By naturalization ☐
   7 By descent ☐

The list of response categories can be extended in order to cover country-specific provisions

Filter:
If code 1, go to question 7.
If code 2, go to question 6.
If code 3 to 7, go to question 4.3.

4.3 In what year did you acquire citizenship of [the survey country]?
   Around: ☐☐☐☐

Filter: Go to question 7.

4.4 What citizenship do you hold?
1 Write in the first citizenship: ……...
2 Write in the second citizenship:…….....
3 Write in the third citizenship: ……...……
4 Stateless person □
(Coded into ISO 3166-1)[1]

Residency status

5. What residency status do you hold?
1 I hold an indefinite residence permit □
2 I hold a temporary residence permit and a work/ employment permit □
3 I hold a temporary residence permit but no work/ employment permit □
4 I am a refugee/asylum-seeker □

5.1 In what year did you acquire this residency status?
Around: □□□□

Country of birth of respondent

6. Were you born in [the survey country]?
1 Yes □
2 No □
Filter:
If code 1, go to question 7.
If code 2, go to question 6.1.

6.1 In what country were you born?
Write in the country of birth: ……...
(Code into ISO 3166-1: If answer to 6 is yes, automatically enter the ISO 3166-1 code of this country)

6.2 In what year did you first come to [the survey country]?
Around: □□□□

Ethnic group membership

7. To which ethnic group in [this country] do you belong?
Please choose your answer from this card (country-specific list of groups).
INTERVIEWER: A maximum of two categories may be chosen.

[1]Note: ISO 3166-1 is available at www.iso.org/iso-3166-country-codes.html. Retrieved on January 26, 2018.

Showcard based on the demographic structure of the country and featuring the main visible ethnic groups (see Section 3.5.2).

Country of birth of father and mother

8.1 Was your father born in [the survey country]?
1 No, he was born in: .....
(Write in the country and code into ISO 3166-1)
2 Yes □
(Automatically enter the ISO 3166-1 code of this country)

8.2 Was your mother born in [the survey country]?
1 No, she was born in: .....
(Write in the country and code into ISO 3166-1)
2 Yes □
(Automatically enter the ISO 3166-1 code of this country)

Integration[2]

Questions 9.1 and 9.2 measure the language(s) spoken at home.

9.1 What language do you speak most often at home?
Write in the most frequently spoken language: ……..
(Coded into ISO 693-2)

9.2 Do you frequently speak a second language at home?
1 Yes, I speak: ……
(Write in the language and code into ISO 693-2)
2 No □

Education

Education is recorded in a matrix (see Table 4.1) in which the columns represent the highest general education school qualification achieved and the rows represent the vocational/professional education qualifications achieved. Because each matrix is country-specific, the resulting survey data reflect the characteristics of the national general school education and vocational/professional education system.

Education is measured either with one question that combines both general and vocational/professional education or with one general education question and one vocational/professional education question. In both cases, a showcard with the educational qualifications in the country in question is presented to the respondents. In the first case, this showcard will feature both general and vocational/professional education programs; in the second case, two separate showcards will be used.

[2]Note: ISO 693-2 is available at www.loc.gov/standards/iso639-2. Retrieved on January 26, 2018.

10. What is the highest educational qualification that you have achieved?
Please select your highest educational qualification from this list.
INTERVIEWER: Enter the highest educational qualification

As an alternative to Question 10, education can be measured with two questions. First, the respondent is asked to indicate the highest general education school qualification achieved. Equivalent qualifications achieved by combining a general education school qualification and one or more vocational/professional education qualifications must be allowed for.

The second question measures vocational/professional education qualifications, including degrees from universities of applied sciences and universities. In Germany, these questions would be formulated as follows:

10.1 What is the highest general education school qualification that you have achieved? Please remember that *Mittlere Reife* and *Abitur*, which gives you access to university, can also be achieved by successfully completing vocational training.
Please select your highest general education school qualification from this list.
INTERVIEWER: Enter the highest qualification into the matrix.

10.2 What vocational/professional education qualifications have you achieved? Vocational/professional education qualifications also include university degrees.
Please select from this list the vocational/professional education qualifications that you have achieved.
INTERVIEWER: Enter all the vocational/professional qualifications into the matrix.

Instruction for the survey researcher:

1. If general and vocational/professional education are collected with one question, draw up one country-specific list featuring all possible general and vocational/professional education qualifications.
2. If general and vocational/professional education are collected using two separate questions, draw up a country-specific list of all possible general education qualifications and a country-specific list of all possible vocational/professional education qualifications.
3. Develop a country-specific matrix as a coding schema for the national education system. The correct code is to be found in the matrix cell in which the row and the column intersect. It can have a value between 1 and 11.

Table 4.1: Matrix for Germany:

		General Education School – Attainment Level				
Vocational/Professional Education	ISCO major group	No qualif.	First general qualif.	Second qualif.	Third qualif.	General university entrance qualif.
No qualification	9, 8	1	2	3	6	7
Dual system	8, 7	4	4	5	5	5
Full-time vocational school	4, 5	4	4	5	5	5
Vocational college	3, 4	X	5	5	8	8
University of applied sciences or equivalent	2, 3	X	X	9	9	9
University	2	X	X	X	10	10
Doctoral degree or higher	2	X	X	X	11	11

Employment

The "employment" question block comprises quite a large number of questions with sub-questions, the first of which is aimed at clarifying whether, and to what extent, the respondent is employed. The elements of the question that require local adaptation are enclosed in square brackets, for example:

Are you currently ...

1 employed full-time with a weekly working time of [number of hours defined in accordance with the survey country's national norms]?

The three levels of working time — full-time, part-time, marginal — should be defined in accordance with national norms. In other words, the number of hours cited in category 1 of Question 11, quoted above, should be the average number of hours deemed to constitute the lower hours threshold of "full-time" working in the country in question. "Part-time" must be defined in relation to "full-time." It begins below the lower hours threshold of "full-time" and ends at 50 per cent of "full-time." Anything less than "part-time" should be designated as "marginal."

11. Are you currently ...
    1 employed full-time with a weekly working time of [number of hours defined in accordance with the survey country's national norms]? ☐
    2 employed part-time with a weekly working time of [between 50% of full-time and less than full-time hours defined in accordance with the survey country's national norms]? ☐
    3 employed part-time, or on an hourly basis, with a weekly working time of less than [50%

of full-time in accordance with the survey country's national norms]? ☐
4 not employed? ☐
97 Refusal ☐
99 Don't know ☐

INTERVIEWER: "Employed" refers to work for pay (wage, salary, fee), profit (in the case of self-employed persons), or family gain (in the case of contributing family workers).
Filter:
If code 1 or 2, go to question 14.
If code 3 or 4, go to question 12.
If code 97 or 98, go to question 22.

12. Are you currently …
1 undergoing vocational education and training (apprenticeship, secondary-level vocational school, post-secondary vocational school, school for master craftspersons, third-level vocational college, work placement, trainee program, etc.)? ☐
2 attending a general education school or a university? ☐
3 in a retraining program? ☐
4 unemployed, seeking employment? ☐
5 a homemaker (doing housework, looking after children or other persons)? ☐
6 on maternity or parental leave? ☐
7 [a conscript in compulsory military or community service, doing a voluntary social or ecological year, and other country-specific categories?] ☐
8 in early retirement? ☐
9 retired? ☐
10/11 [country-specific categories, e.g. in Germany: in the work-free phase of pre-retirement part-time work for older employees] ☐
12 unable to work because of sickness or disability? ☐
13 economically inactive for other reasons? (open response): ……
97 Refusal ☐
98 Don't know ☐

Filter: If code 3, 4, 97 or 98, go to question 13. All others go to question 16.

13. If you were offered a job today, could you start work within two weeks?
    1 Yes ☐
    2 No ☐
    97 Refusal ☐
    98 Don't know ☐

Filter: If question 11 = code 4, go to question 16.
If question 11= code 3, go to question 14.

INTERVIEWER: If question 11 = code 3, then read out the following additional introductory text:

14. Now, you stated that you work less than 17 hours a week,
    All others:
    Are you …
    1 an employee? ☐
    2 self-employed or freelance? ☐
    3 an employee and self-employed or freelance? ☐
    4 a contributing family worker? ☐
    97 Refusal ☐
    98 Don't know ☐

Filter: If code 1, or 97 or 98, go to question 14.1.
If code 2 or 4, go to question 15.2.
If code 3, go to question 14.4.

14.1 How many jobs do you have as an employee?
    1 One ☐
    2 Two ☐
    3 More than two ☐
    97 Refusal ☐
    98 Don't know ☐

Filter:
If question 11 = code 1 or 2, and question 14.1 = code 1, go to question 15.2.
If question 11 = code 3 or 4, and question 14.1 = code 1, go to question 14.2.
If question 14.1 = code 2, go to question 14.3.
If question 14.1 = code 3, go to question 15.2.
If question 14.1 = code 97 or 98, go to question 19.

14.2 Are you …
    1 marginally employed and do you work less than half a working day? ☐
    2 marginally employed and do you work only occasionally? ☐
    3 a seasonal worker? ☐

4 employed in a [national labor-market program of the survey country such as a job-creation scheme or a "one-euro job"]? ☐
97 Refusal ☐
98 Don't know ☐

Filter: If code 1 or 2, go to question 15.1.
If code 3, 4, 97 or 98, go to question 16.

14.3 How many hours do you work in each of your two jobs?
1 Both jobs are half a full-time job. ☐
2 Only one of the jobs is at least half a full-time job. ☐
3 Both jobs are less than half a full-time job. ☐
97 Refusal ☐
98 Don't know ☐

Filter:
If code 1, go to question 14.4.
If code 2, go to question 15.2.
If code 3, go to question 15.1.
If code 97 or 98, go to question 19.

14.4 Do you …
1 do the same work in both your jobs? ☐
2 do different work in each job? ☐
97 Refusal ☐
98 Don't know ☐

INTERVIEWER: If code 2, then tell the respondent: "Please note that the following questions refer to the job that you think has the higher status."
Filter:
If code 1, go to question 15.2.
If code 2, go to question 17.1.
If code 97 or 98, go to question 19.

15.1 How many hours do you normally work each week?
INTERVIEWER: 997: Refusal / 998: Don't know
total working hours ☐☐
(range 0 to 98)

Filter: Go to question 16.

15.2 How many hours do you normally work each week?
INTERVIEWER: 997: Refusal / 998: Don't know
total working hours ☐☐
(range 0 to 98)

Filter: Go to question 17.1.

16. Have you ever been employed full-time or part-time in the past?
    1 Yes ☐
    2 No ☐
    97 Refusal ☐
    98 Don't know ☐

Filter: If code 1, go to question 17.1.
If code 2, 97 or 98, go to question 19.

17.1 What is your main job at the moment / What was your main job in the past?
If you are no longer working, what kind of work did you do in your last main job?_____

INTERVIEWER: Refusal = 97, Don't know = 98

17.2 Could you please give me an exact description of the work you do/did in that job. _____
INTERVIEWER: Refusal = 97, Don't know = 98

17.3 Does that job have a special name? _____
INTERVIEWER: Refusal = 97, Don't know = 98

18. Could you please tell me which of the following categories that job belongs to:
    1 academic in a liberal profession ☐
    2 self-employed farmer, collective farmer ☐
    3 self-employed in commerce, industry, crafts or services, member of a cooperative ☐
    4 employee (blue-collar or white-collar worker) ☐
    5 civil servant (employed by the State) ☐
    6 contributing family worker ☐
    97 Refusal ☐
    98 Don't know ☐

Filter: If code 1 or 3, go to question 18.2.
If code 2, go to question 18.1.
If code 4 or 5, go to question 18.3.
If code 6, 97 or 98, go to question 19.

18.1 How many hectares does your farm have under cultivation?
    1 Less than 10 hectares (small farm) ☐
    2 More than 10 hectares (medium-to-large farm) ☐
    3 More than 1,000 hectares of agricultural land or forest ☐
    97 Refusal 98 Don't know ☐

Filter: Go to question 19.

18.2 How many employees does your business/office/practice have?

1 No other employees apart from myself ☐
2 Between 1 and 4 employees ☐
3 Between 5 and 50 employees ☐
4 More than 50 employees ☐
97 Refusal ☐
98 Don't know ☐

Filter:
Go to question 19.

18.3 Which of the descriptions on this card best describes the kind of work you do?

1 You are employed as an unskilled or semi-skilled worker *(such as: waiter, machine operator, assembler, truck driver, transport worker, warehouse worker, window cleaner, farm laborer, nanny).* ☐
2 You are a skilled worker engaged in routine tasks *(for example: salesperson, typist, clerical worker, skilled farm worker, miner, welder, skilled craftsperson, skilled machinery and plant operator).* ☐
3 You carry out demanding tasks independently in accordance with general instructions (*for example, bookkeeper, bank official, case officer, technical draughtsperson, kindergarten teacher, customs official, watchmaker, photographer, electrical plant fitter*). ☐
4 You independently perform demanding tasks in a responsible job, or you have limited responsibility for other employees (*for example: municipal administrator, operations manager, head of department, sales manager, research associate, midwife, teacher, librarian, pilot, police inspector).* ☐
5 You have far-reaching managerial responsibilities and powers of discretion, (*for example: company director and general manager, scientist, architect, doctor, judge, school inspector, member of the armed forces from the rank of colonel upwards).* ☐
97 Refusal ☐
98 Don't know ☐

Filter:
If code 1, 2, 3, 97 or 98, go to question 19.
If code 4 or 5, go to question 18.4.

18.4 Do you supervise other employees?
- 1 Yes ☐
- 2 No ☐
- 97 Refusal ☐
- 98 Don't know ☐

19. Who is the main income recipient/earner in this household?
- 1 I am the main income recipient/earner. ☐
- 2 Another household member, namely:

(enter designation for that person)

INTERVIEWER: Refusal = 97, Don't know = 98
Filter: If code 1, go to question 22.
If code 2, go to question 20.1.
If code 97 or 98, go to question 22.

20.1 What is [the main income recipient/earner in the household's] main job?
INTERVIEWER: Refusal = 97, Don't know = 98
_____

20.2 Could you give me an exact description of that job?
INTERVIEWER: Refusal = 97, Don't know = 98
_____

20.3 Does that job have a special name?
INTERVIEWER: Refusal = 97, Don't know = 98
_____

21. Could you please tell me which of the following categories that job belongs to:
- 1 Academic in a liberal profession ☐
- 2 Self-employed farmer, collective farmer ☐
- 3 Self-employed in commerce, industry, crafts or services, member of a cooperative ☐
- 4 Employee (blue-collar or white-collar worker) ☐
- 5 Civil servant (employed by the State) ☐
- 6 Contributing family worker ☐
- 97 Refusal 98 Don't know ☐

Filter: If code 1 or 3, go to question 21.2.
If code 2, go to question 21.1. If code 4 or 5, go to question 21.3.
If code 6, 97 or 98, go to question 22.

21.1 How many hectares are under cultivation on that person's [the main earner in the household's] farm?
- 1 Less than 10 hectares (small farm) ☐
- 2 More than 10 hectares (medium-to-large farm) ☐
- 3 More than 1,000 hectares of agricultural land or forest ☐
- 97 Refusal 98 Don't know ☐

Filter: Go to question 22.

21.2 How many employees does that business/office/practice have?

1 No other employees apart from myself ☐
2 Between 1 and 4 employees ☐
3 Between 5 and 50 employees ☐
4 More than 50 employees ☐
97 Refusal ☐
98 Don't know ☐

Filter: Go to question 22.

21.3 Which of the descriptions on this card best describes the sort of work that [main income recipient/earner] does?

1 He/she is employed as an unskilled or semi-skilled worker *(for example: waiter, machine operator, assembler, truck driver, transport worker, warehouse worker, window cleaner, farm laborer, nanny).* ☐
2 He/she is a skilled worker engaged in routine tasks *(for example: salesperson, typist, clerical worker, skilled farm worker, miner, welder, skilled craftsperson, skilled machinery and plant operator).* ☐
3 He/she carries out demanding tasks independently in accordance with general instructions (*for example: bookkeeper, bank official, case officer, technical draughtsperson, kindergarten teacher, customs official, watchmaker, photographer, electrical plant fitter*). ☐
4 He/she independently performs demanding tasks in a responsible job, or has limited responsibility for other employees (*for example: municipal administrator, operations manager, head of department, sales manager, research associate, midwife, teacher, librarian, pilot, police inspector).* ☐
5 He/she has far-reaching managerial responsibilities and powers of discretion *(for example: company director and general manager, scientist, architect, doctor, judge, school inspector, member of the armed forces from the rank of colonel upwards)* ☐
97 Refusal ☐
98 Don't know ☐

Filter:
If code 1, 2, 3, 97 or 98, go to question 22.
If code 4 or 5, go to question 21.4.

21.4 Does [the main income recipient/earner] supervise other employees?

1 Yes ☐
2 No ☐
97 Refusal ☐
98 Don't know ☐

Filter: In each case, go to question 22.
INTERVIEWER: To all respondents
INTERVIEWER: Only if question 19 = code 2 (transitional phrase): Now let's talk about you again.

22. Did you do any work for pay, profit or family gain for at least one hour during the last week (as an employee, a self-employed person, or a contributing family worker)?

1 Yes ☐
2 No ☐
97 Refusal ☐
98 Don't know ☐

Filter:
If code 1 or 97 or 98, go to question 23.
If code 2, go to question 22.1.

22.1 What is the main reason that you didn't work (at all) last week?
INTERVIEWER: Assign spontaneous response to a category.
If necessary read out the categories.

01 Short-time working for technical or economic reasons ☐
02 Labor dispute, strike ☐
03 School or vocational education, or further training ☐
04 Sickness, accident or temporary incapacity to work ☐
05 Maternity leave ☐
06 Parental leave ☐
07 Vacation ☐
08 Compensatory leave (in lieu of overtime pay or within the framework of a working time account) ☐
09 Personal or family reasons, child care, caring for household members or family members, sabbatical ☐
10 Bad weather ☐
11 Other reasons ☐
97 Refusal 98 Don't know ☐

Number of Persons in the Household

Individuals and cultures define the concept of private household very differently. The number of people included in the household varies from definition to definition. Hence, when collecting information on private households in surveys, it is essential that the concept be clearly defined.

23. A household consists of a group of people living together with common housekeeping, or a person living alone. Including yourself, how many people live here as members of this household?

23.1 Please fill in the number of persons	No. of persons
Yourself	01
All other adults [aged x or over] who live here permanently	□□
All children, including infants, who live here permanently	□□
All persons who are temporarily absent at the moment because of education or training, for example boarding school pupils and university students	□□
Persons absent at the moment because of their job, for example weekend commuters, seasonal workers and persons on construction jobs	□□
Persons absent because of community or civilian service or military service	□□
Persons absent for a maximum of six months because of sickness or holidays	□□
Persons absent for a maximum of six months for other reasons, for example imprisonment	□□
Resident domestic staff, au-pairs and caregivers/nurses	□□
Please fill in the total number of persons:	□□

23.2 Persons not counted as household members

Please fill in the number of persons	No. of persons
Regular professional soldiers and policemen living in barracks	□
Family members living in nursing homes and homes for the elderly	□
Persons absent for more than six months	□
Visitors, including long-term visitors	□
Please fill in the total number of persons:	□□

24. Is this household spread across more than one dwelling unit?

1 No □
2 Yes □

Filter: If code 1, go to question 25. If code 2, go to question 24.1.

24.1 How many different dwelling units?

Please, fill in the number of dwelling units: □

24.2 In this dwelling unit, how many people share common housekeeping? Please count again all persons including children and persons absent for a maximum of six months because of work, education, illness, holidays, civilian or military service, imprisonment etc.
Please enter the number of persons: □□

Total Net Household Income

To allow for customary national practice and individual preferences, respondents are given the option of expressing net household income in weekly, monthly, or annual terms. Three income tables are available: Type 1 for countries with low net household income; Type 2 for countries with medium net household income; and Type 3 for countries with high net household income levels.

25. Please consider the income of every member of the household and any income that may be received by the household as a whole. What are the sources of income in your household? Please tick *all* applicable income categories on this card.

Showcard: All income sources in your household

1 Employee income – including bonuses (e.g., vacation or Christmas bonuses), tips, extra payments (e.g., overtime and shift work), profit sharing □
2 Income from self-employment or farming, including freelance work □
3 Pensions – for example, old age pensions, widows' pensions, retirement pensions □
4 Unemployment/redundancy benefits – including benefits related to training and sickness allowances □
5 Rentals and property income □
6 Current public transfers received, social benefits and grants – including child and family allowances, universal and/or means-tested social assistance and orphans' pensions, educational grants □
7 Regular private transfers from persons outside your own household – including alimony □
8 Income from other sources – including tax and insurance refunds, lottery winnings □

26. If you add up the income from all sources and all household members [aged x or older (x = country-specific lower age cut-off for the survey population, e.g. 15 years)], which letter on this card describes your household's total net income? "Net" means after deduction of national taxes and compulsory social security contributions. If you don't know the

exact figure, please give an estimate. Use the part of the card that you know best: weekly, monthly or annual income.

Table 4.2: Proposed categories for Type 1 countries such as Italy and Portugal:

Your net household income

	Approximate weekly	Approximate monthly	Approximate annual	
M			Less than 2,500€	M
B			2,500 to under 5,000€	B
F			5,000 to under 7,500€	F
G			7,500 to under 10,000€	G
Q			10,000 to under 12,500€	Q
N			12,500 to under 15,000€	N
T			15,000 to under 20,000€	T
D			20,000 to under 25,000€	D
K			25,000 to under 30,000€	K
W			30,000 to under 35,000€	W
H			35,000 to under 40,000€	H
C			40,000 to under 45,000€	C
J			45,000 to under 50,000€	J
U			50,000 to under 55,000€	U
I			55,000 to under 60,000€	I
Z			60,000€ and more	Z

Table 4.3: Proposed categories for Type 2 countries such as Germany, United Kingdom, Finland:

Your net household income

	Approximate weekly	Approximate monthly	Approximate annual	
O			Less than 5,000€	O
V			5,000 to under 10,000€	V
L			10,000 to under 15,000€	L
T			15,000 to under 20,000€	T
D			20,000 to under 25,000€	D
K			25,000 to under 30,000€	K
W			30,000 to under 35,000€	W
H			35,000 to under 40,000€	H
C			40,000 to under 45,000€	C
J			45,000 to under 50,000€	J
U			50,000 to under 55,000€	U
I			55,000 to under 60,000€	I
S			60,000 to under 70,000€	S
E			70,000€ and more	E

Table 4.4: Proposed categories for Type 3 countries such as Luxembourg:

Your net household income

	Approximate weekly	Approximate monthly	Approximate annual	
AA			Less than 10,000€	AA
L			10,000 to under 15,000€	L
T			15,000 to under 20,000€	T
D			20,000 to under 25,000€	D
K			25,000 to under 30,000€	K
W			30,000 to under 35,000€	W
H			35,000 to under 40,000€	H
C			40,000 to under 45,000€	C
J			45,000 to under 50,000€	J
U			50,000 to under 55.000€	U
I			55,000 to under 60,000€	I
S			60,000 to under 70,000€	S
Y			70,000 to under 80,000€	Y
X			80,000 to under 90,000€	X
A			90,000 to under 100,000€	A
R			100,000 to under 110,000€	R
P			110,000€ and more	P

27.1 How many household members contribute to the household's total net income?
Please, fill in the number of persons: □□

27.2 Please consider the income of every member of the household (from the target population) and any income which may be received by the household as a whole. What is the *main* source of income in your household?
INTERVIEWER: Only one answer possible.

Showcard: The main source of your household income

1 Employee income – including bonuses (e.g., vacation or Christmas bonuses), tips, extra payments (e.g., overtime and shift work), profit sharing □
2 Income from self-employment or farming, including freelance work □
3 Pensions – for example, old age pensions, widows' pensions, retirement pensions □
4 Unemployment/redundancy benefits – including benefits related to training and sickness allowances □
5 Rentals and property income □
6 Current public transfers received, social benefits and grants – including child and family allowances, universal and/or means-tested social assistance and orphans' pensions, educational grants □
7 Regular private transfers from persons outside your own household – including alimony □
8 Income from other sources – including reimbursements □

28. Who is the main income recipient/earner in your household?

1 I am. □
2 My partner/spouse □
3 Myself and my partner spouse □
4 My father and or my mother □
5 My son/daughter □
6 Another member of the household □

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Part III
Guidelines for Handling the Harmonized Questionnaire

Chapter 5
Guidelines for Handling the Harmonized Questionnaire—Introduction

Abstract This chapter introduces Part III of the book, which presents guidelines for the individual groups participating in international surveys to assist them in handling the socioeconomic questions in the common questionnaire. The groups in question are the central project coordinators, the national research teams, the national fieldwork agencies and their interviewers, the respondents, and the data processing units. The present chapter provides an overview of the specific tasks and responsibilities of these groups and thus prepares the ground for the subsequent chapters.

Keywords Guidelines for harmonization

Different groups of actors are involved in comparative survey research. Each group has specific tasks and responsibilities in the development and handling of sociodemographic measures, survey questions, and variables (see Fig. 5.1). The different tasks and responsibilities are described in the following guidelines. Failure to observe the rules threatens the comparability of the data from the countries and cultures involved in the survey.

The first group of actors are the *central project coordinators*. They establish the rules of the survey that apply to all the participating countries and cultures. These rules specify the population frame and the sample units, sample selection, and the eligibility of potential respondents. They also specify the interview mode and the instructions for the interviewers. The central project coordinators also provide the guidelines for coding the answers and the rules for editing the data files, including the checks for plausibility and errors. The main task of the central project coordinators is the theory-driven selection of the measurement concepts and the decision about what should be measured by the sociodemographic questions in the questionnaire.

Together with the national research teams, the central project coordinators decide on the most appropriate measurement instruments that measure what is supposed to be measured and compared in the countries and cultures covered by the survey. In collaboration with the national teams, the central project coordinators select the harmonization strategies for each individual sociodemographic variable. The translation of the source questionnaire into the survey languages is also part of this collaboration.

J. H. P. Hoffmeyer-Zlotnik and U. Warner, *Sociodemographic Questionnaire Modules for Comparative Social Surveys*, SpringerBriefs in Population Studies,
https://doi.org/10.1007/978-3-319-90209-8_5

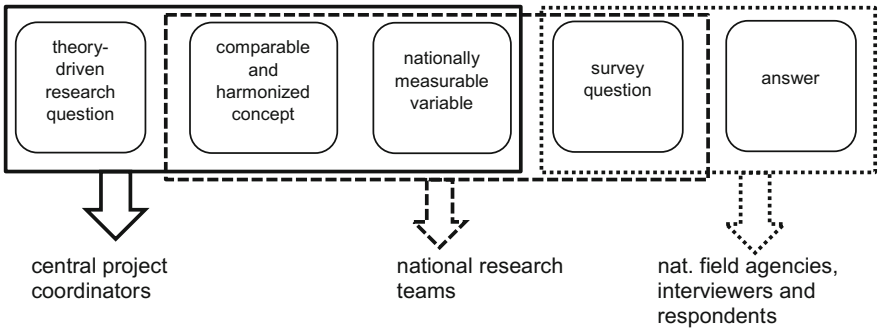

Fig. 5.1 Actors and main tasks in comparative social surveys

The *national research teams* are responsible for the implementation of the commonly agreed survey in their country or culture. In conformity with the agreed sampling rules, they draw the national sample. They apply the rules for the interview techniques and modes. A central task of the national research team is the translation of the questionnaire, the interviewer instructions, and information for the respondents. In multilingual countries, or countries with large ethnic and linguistic minorities, these documents must also be translated into the languages of the minorities, and, if necessary, the measurement instruments must be adapted to and harmonized for the cultural circumstances of these minorities. The pretesting of the questionnaire and, if necessary, its different national versions, is important. After the tests, the revision of the questionnaire takes place in collaboration with the central project coordinators and the national research teams, who are experts on the cultural and linguistic minorities of their respective countries. Intensive exchanges of experiences and discussions about culture- and country-specific particularities are a prerequisite for the establishment of comparability across countries and cultures. The national research team commissions the national field agency.

The *national field agency* is responsible for selecting the interviewers and conducting the interviews. Interviewer training is important, especially when the comparative measurement questions diverge from national practice and conventions for surveying sociodemographic variables. During project-specific training, the interviewers learn to understand the questionnaire and the measurement concepts. The national field agency organizes the interviewer activities in accordance with the commonly agreed rules for the fieldwork in the participating countries, which specify the number of interviewers; the workload of interviewers (e.g., the number of interviews per interviewer); the number of contacts with the sampled potential respondents; the recontacting of potential respondents; the documentation of the establishment of contact; the reporting of noncontacts; and finally, the documentation of refusals. Together with the national research team, the field agency supervises the interviewers and offers survey-related support, for example, by issuing press releases describing the aims and purposes of the survey and sending contact letters.

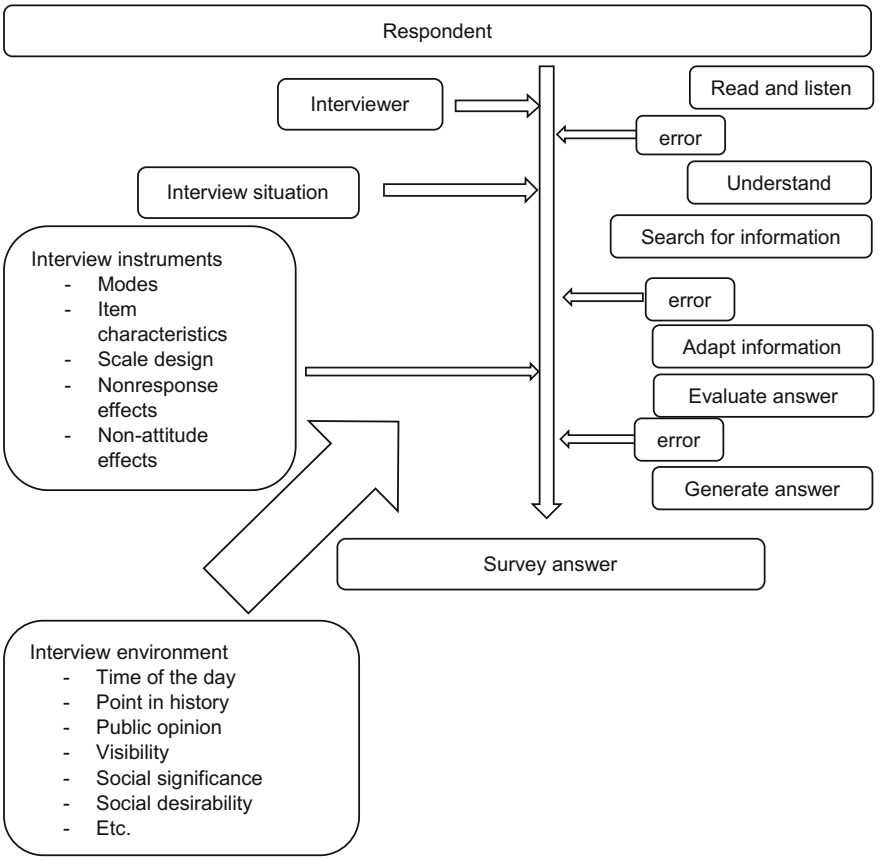

Fig. 5.2 The survey interaction between interviewer and respondent

The *interviewer's task* in the field is to present the intended question stimulus to the respondent so that he or she can generate the answer needed for the measurement. In survey interviews that collect data for comparative social research across countries and cultures, it is indispensable that the question stimulus be the same in all countries and cultures to ensure equivalent measurement (see Fig. 5.2).

Interviewers must therefore be trained in standardized data collection. In addition to the general characteristics of standardized interviews,[1] they must learn about the measurement concepts implemented in the comparative questionnaire, as the commonly agreed measure may diverge from the questions usually asked in national surveys.

[1]The main characteristics of standardized interviews are that the interviewer asks each respondent the same questions in the same sequence, that all instructions are applied, that all answers are recorded in the same manner, that the interviewer does not influence the respondent, and that the interviewer does not evaluate the answers.

The *respondents* are the most important actors in survey research. Without them, it is not possible to collect interview data. Respondents read or listen to the question text and the response options. They try to understand the question text. They search their memory for the information necessary to create a preliminary answer and they adapt this preliminary answer to the information about the interview situation. They evaluate this preliminary answer for consistency with their opinion and often with social desirability, and they then generate a final answer and select the appropriate response option (see Fig. 5.2). This process is prone to error in national survey interviews. However, in cross-national and multicultural surveys, country-specific differences and cultural misapprehensions further increase the risk of error during the generation of answers (see Schwarz 2008).

After data collection and before data usage, it is essential to *prepare the data* and to document the *process of data generation*. The national team is responsible for the first step in this process. They check the data for completeness, plausibility, and coding errors. In the case of input-harmonized measures, they ensure the assignment of the common answer categories and the adequate application of response scales. For output-harmonized variables, they document the mapping of the national response categories and codes into the international standardized measurement categories. A particular point here is the national use of the different refusal codes. Field agencies in different countries have various practices for the application of "don't know," "not applicable," "refused," and "no opinion" categories.

The central project coordinators are responsible for the second step. They compile the integrated dataset (including the data documentation) for comparison. They make the international or cross-cultural data available to users and describe the harmonization strategies applied to each measurement. This description includes the national deviations and discrepancies from the international measurement concepts, the common survey instruments, and the questions implemented.

Chapter 6 presents the responsibilities of the international project coordinators during the design of comparative sociodemographic survey measures. Chapter 7 outlines the implementation of harmonized sociodemographic variables by the national research teams. Chapter 8 demonstrates the application of harmonized sociodemographic questions during the fieldwork and the interviews. Chapter 9 illustrates how survey respondents answer questions about sociodemographic characteristics in surveys across countries and cultures. Chapter 10 summarizes the activities of the data processing units.

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Chapter 6
Central Project Coordinators

Abstract This chapter outlines the tasks and responsibilities of the central project coordinators. In cross-national comparative surveys, the central project coordinators are responsible for establishing and overseeing the implementation of general survey guidelines. Their key tasks include the development of the source questionnaire. In order to ensure that the data collected will be comparable across the participating countries, the central project coordinators must, from the very beginning of the project, give thought to how the required sociodemographic information should be collected.

Keywords Central project coordination · Development of the source questionnaire

Following the clarification of the theoretical foundations of the research, the design of the joint project, the selection of national partners, and the establishment of the general guidelines and the organizational framework, the next task for the central project coordinators is to develop and design the common source questionnaire. Together with the national research teams, they decide on the topics of the survey and the measurement instruments and question items to be implemented in the questionnaire.

The measurement of sociodemographic variables depends on their underlying national structures and concepts. It is therefore important that the central coordinators and the national researchers jointly determine what should be measured and how it should be measured, so that harmonized common sociodemographic variables are comparable across countries and cultures. This strong collaboration between the central project coordinators and the country experts of the national research teams helps to avoid cultural and national bias, which may occur if only one country's researchers decide on the measurements.

After the common source questionnaire has been constructed and the decisions regarding this blueprint have been documented, the questionnaire must be translated into the survey languages. It is the task of the national coordinators to hire translators and oversee the translation process. However, the transfer of the source questionnaire into the national questionnaires must take place in close collaboration with the central project coordinators in order to ensure common and comparable measurement.

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It would therefore be advisable to establish a methods group at international level to oversee the translation. This group would work closely with the central coordinators and would not only supervise the national translators but also advise the researchers. The group members would be familiar with the theoretical background of the respective measurement instruments, with the commonly defined measurement concepts, and with the expected harmonization of the sociodemographic variables. Using the feedback from the national translators, they would document the transfer of the common source questionnaire into the national questionnaires and survey instruments.

6.1 Harmonization of Sociodemographic Variables–The Tasks and Responsibilities of the Central Project Coordinators

The central project coordinators are mainly responsible for the harmonization of the sociodemographic variables. As the principal investigators of the comparative project, they define the measurements required for the study. This entails the theory-driven clarification of the social facts that are to be measured across the countries and cultures. In close collaboration with the national research teams, the central project coordinators evaluate nationally available measures of sociodemographic variables and take the national particularities of the sociodemographic variables into account. The following questions must be asked: Do the nationally available measurement instruments adequately fulfil the requirements of harmonization and comparability? If suitable national-level survey measures are not available, are official statistics measures available that allow the sociodemographic characteristics required for the common project to be quantified?

If no suitable measures are available, the central project coordinators must themselves develop survey instruments (comprising survey questions, response categories, instructions for the translators, references for the national research teams, documentation for the national survey agencies, interviewer instructions, and instructions for the respondents). This calls for input from national experts.

If national survey measures are available, but the response categories differ across the countries and cultures, the central coordinators and the national researchers must develop correspondences between the national or cultural survey responses and the comparable harmonized categorical scales. The implementation and programming of this output harmonization is the responsibility of the data managers at central-coordinator level. The data managers also document this process and the national deviations from the commonly agreed measurements.

The measurement of educational attainment in the ESS uses a commonly defined question text: F15 CARD 62 "What is the highest level of education you have successfully completed?" (ESS 2014b, Round 7) and country-specific response categories. After data collection, national education experts recode the survey responses into a commonly agreed comparable classification scheme (ISCED 2011). In addition, they

describe the national education system and they document (a) the national education variables and categories and their labels, (b) the recoding of national categories into the common ISCED 2011 categories (ESS 2014a), and (c) deviations from the official ISCED mappings provided by UNESCO-UIS (2018).

6.2 Handling National Particularities of Sociodemographic Measures

National particularities are present in nearly all sociodemographic background variables. Problems arise when the central project coordinators make decisions and take action without feedback from national research teams. The variable "private household" in ESS Round 7 provides an example of the construction of a misleading survey instrument. The variable was measured inter alia with the following question: F1: "Including yourself, how many people—including children—live here regularly as members of this household?" (ESS 2014b, Round 7, Source Questionnaire, question F1).

The following common definition of "private household," which was mandatory for the survey in all countries, was provided in the project instructions: "One person living alone or a group of people living at the same address (and have that address as their only or main residence), who either share at least one main meal a day or share the living accommodation (or both)" (ESS 2014c, 14, Round 7, Project Instructions). However, this definition was not available to the respondents because it was not included in the questionnaire.

Since its first round in 2002, the ESS has applied the official definition of "private household" used in the United Kingdom. In Italy, however, the ESS questionnaire uses the word *famiglia* in the question (ESS 2002, question F1). The Italian concept of private household is based on blood and kinship and differs fundamentally from the British concept because the Italian and British understanding of "private household" includes or excludes different members in/from the group. Comparing the variable "private household" across these two countries is almost meaningless because the different underlying concepts mean that groups of different sizes are measured in each country.

When the wording of the private household question does not communicate the household definition to the respondent, the interpretation is left to the respondent, who must try to understand the question stimulus and generate an appropriate response. The respondents are not asked to articulate their interpretation during the interview. However, cognitive tests among laypersons and interviewers revealed that people use various meanings of "private household" (Hoffmeyer and Warner 2008, 38–43). Even experts in household statistics from different countries use different concepts of "private household" (Coast et al. 2016; see also Sect. 3.1). This uncertainty has an impact on the quality of the measurement of the size of the household and also affects other sociodemographic variables such as the number of household mem-

bers contributing to the "total net household income" or consuming the household resources.

6.3 Handling Sociodemographic Variables

Education

The measurement of respondents' level of educational attainment is indispensable for the analysis of social structures and social inequalities. The respondent's position in a stratified social structure depends among other things on the level of education achieved. This level determines the level of entry to the labor market and the unequally distributed chances of finding a well-paid job. The sociodemographic variable "education" does not measure knowledge, capabilities, and skills, but rather uses certificates from the national education system as an indicator for the respondent's life chances.

The levels of educational attainment in the 2011 version of the International Standard Classification of Education (ISCED 2011; UNESCO-UIS 2012) measure knowledge, skills, and the right to access the next level of education. We consider ISCED 2011, which comprises 59 codes for education programs and 32 codes for education levels, to be a substantial classification that is useful for comparing the national education systems in official statistics and the educational sciences.

In surveys, by contrast, the sociodemographic variable "education" measures the highest level of general school education and the highest vocational/professional qualification achieved (Hoffmeyer-Zlotnik and Warner 2007). Together, these two variables measure the respondent's labor market entry level. This calls for national lists of response categories comprising the qualifications that are recognized on the national labor market. One qualification may be represented by several certificates and their equivalents that have the same value on the labor market.

In collaboration with national experts from the country teams, the answer categories are ordered from the lowest to the highest qualifications from the general school education sector and the vocational/professional education sector, and two separate questions are asked (see Chap. 4, Questions 10.1 and 10.2). Crossing both educational outcomes, a matrix is generated with ten to twelve codes in hierarchical order (Hoffmeyer-Zlotnik and Warner 2007).

Labor force status

Official statistics use the ILO labor force concept of the "economically active population." This covers all types of employment that may exist in a given country, including short-time and part-time work, casual and temporary employment, on-call work, employment in the informal sector, and other types of informal employment (ILO 1982). Hussmanns et al. (1990, 258–262) demonstrated that between 31 and 61 survey questions were needed to measure labor force status in accordance with

the ILO concept. This heavy interview burden is incompatible with the requirements for a sociodemographic background variable.

Eurostat (European Commission and Eurostat 2011, 33–35) proposes that respondents' "self-declared labor status" be collected in order to measure their relationship to the labor market.

If the central project coordinators opt for such a measurement, it is necessary to develop comparative response categories in close collaboration with the national experts. It is important that—in every country and culture—each common category contains the same information about the respondent's relationship to the labor market. This calls for response options that reflect the national labor market regulations, national labor market programs, and policies. A common question with national response categories is needed, together with a detailed description of how to map the national responses into comparable labor status categories.

Occupation

The instrument most frequently used to measure the occupational activity of respondents for comparison purposes is the International Standard Classification of Occupations (ISCO; ILO 2009). This classification requires that the data be collected using a set of mandatory questions about occupational activity. Statistical agencies sometimes collect occupation and job titles using national instruments and national coding schemes and then map the national codes into the international classification. This is an error-prone procedure because job titles do not necessarily reflect the occupational activities performed. Comparability across countries and data is threatened if the intended concept of occupational activity is not measured. Therefore, we recommend that the central project coordinators should insist that the common survey instrument, including the questions, the definitions of the answer categories, and the coding instructions, be applied in each country participating in the survey.

A proper collection of data about occupational activity in accordance with the ILO instructions and the ISCO-08 classification allows the application of scales for the comparative analysis of social stratification. Tools are available to transfer ISCO codes into (a) the Standard International Occupational Prestige Scale (SIOPS: Treiman 1977; Ganzeboom and Treiman 2003, 170–171), (b) the International Socio-Economic Index of Occupational Status (ISEI: Ganzeboom et al. 1992), (c) the social class categories developed by Erikson et al. (EGP: 1979; see Ganzeboom and Treiman 2003, 176–191),[1] and (d) the class scheme developed by E. O. Wright (see Leiulfsrud et al. 2005).

Private household

The understanding of household as a background variable differs across countries, cultures, and actors involved in survey research (see Sects. 3.1 and 5.2). Together with the national researchers, the central project coordinators select a concept of

[1] "Harry Ganzeboom's Tools for deriving occupational status measures from ISCO-08 with interpretative notes to ISCO-08." http://www.harryganzeboom.nl/isco08/index.htm. Retrieved on January 26, 2018.

private household that can be applied in all survey countries and cultures and that measures a comparable group of persons belonging to the same household. Our previous research (Hoffmeyer-Zlotnik and Warner 2008; 2014, 189–193) revealed that a household concept based on "living together" and "common housekeeping" covers private households in most modern industrial societies.

By using a list of persons to be included in the household and a list of persons who should be excluded, one can avoid misreporting of household members and measurement errors. The list of persons to be included in the household includes persons (e.g., weekend commuters) who are temporarily absent but who share in the common housekeeping with the other members. The list of persons who are excluded from the household includes those who do not share housekeeping (e.g., economically independent subtenants).

Given that, in most of the countries and cultures, the social science concept of private household differs from interviewers' and respondents' everyday understanding of the concept, the national researchers must ensure that both the interviewers and the respondents are aware of the underlying definition of "private household." This decreases the risk of collecting household information based on different concepts.

Total net household income

For total net household income as a sociodemographic measure, it is essential to define the income concept for the study. This background variable is used in social structure analysis to determine the position of households in stratified societies. It can also serve as an indicator for the lifestyle of the household members. The comparative measurement of household income calls for close collaboration between the central project coordinators and the national experts. The degree of sensitivity of questions about money differs across countries. If the privacy of respondents is not adequately protected, the risk of refusals increases.

The types and sources of income that make up total household income differ across countries. The central project coordinators and the national experts must decide on the types and sources of income that should appear on the list of response options (see Sect. 3.4 and Question 26 in the questionnaire in Chap. 4 with proposed categories for three different types of countries). This list helps to reduce recall errors and reminds respondents of the main sources of income of the household and its members. Not all nationally possible sources of income can appear in detail on the list, but the response options must include the major groups of income sources and types. In close collaboration with the national teams, a decision must be reached about the income brackets to be presented to the respondents as response categories.

From ESS Round 4 onwards, the categories have been national categories based on deciles of the actual household income distribution in the country in question. The deciles should be derived from the best available source for that country. Possible sources for the calculation of deciles may be national register data or representative countrywide surveys (for example, EU–SILC). Using the median income as the reference point, 10 deciles should be calculated, with the median itself at the top of the fifth decile. The decile thresholds create the income brackets of the ten answer

categories (ESS 2008, 2). This measure reflects the relative position of the household in the national income distribution. Measurement quality depends on the quality of the "best available source." Another method of creating the response options is to measure the absolute amounts of income. The income brackets are constructed for groups of countries with different income distributions (see Question 26 in the questionnaire in Chap. 4). Countries with similar income curves use the same income categories as response options.

Ethnicity

Self-assigned ethnic group membership is the measurement proposed for this sociodemographic background variable.

The first decision to be made concerns the types of ethnic groups: language groups, as in Switzerland, Belgium, or Spain; indigenous peoples, for example the Sorbs in Germany or Ladins in Italy; migrants from former colonies; and current migrants, or religious and cultural groups. The second decision is how to categorize the ethnic groups. One possibility is to classify indigenous groups by their cultural autonomy and to classify migrant groups by differentiating their legal residential rights.

In a next step, it must be decided how many response categories respondents may choose to report their ethnicity. If only one response is allowed, second- and third-generation migrants are obliged to decide between belonging to the host country's majority or belonging to the ethnicity of the country of origin, and children of parents with different citizenships must opt for one ethnic group. On the other hand, if respondents are allowed to assign themselves to more than two ethnic groups, the combinations of responses become complex for the subsequent analysis. Therefore, we recommend allowing respondents to select up to two answers from the list of options.

The last decision that the central project coordinators must make together with the national research teams relates to the rules about how to summarize the national minority categories into comparable common population groups. This calls for the mapping of the national responses into the commonly agreed categories. Each country reports a list of correspondences.

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Chapter 7
National Research Teams

Abstract The countries participating in a comparative survey are represented by their national research teams. The present chapter outlines the tasks and responsibilities of these teams. They are responsible for implementing the survey guidelines established by the central project coordinators. Their key tasks include the transfer of the questionnaire to the national level in such a way that it is not only understandable for the general population but also harmonizable for cross-national comparison.

Keywords National experts · Development of the national questionnaire
Cognitive pretesting

The main tasks of the members of the national research teams are to realize the survey in their countries according to the commonly agreed rules, to implement the national particularities in the fieldwork instruments, and to collect, prepare, and transmit the national data. This means that the national experts must (a) draw the sample in accordance with the common requirements, (b) transform the common source questionnaire into the national survey instrument, (c) organize and supervise the fieldwork, and (d) prepare and check the national survey data and transmit them together with the national documentation to the central project coordinators.

Of importance is the close collaboration between the central project coordinators and the national research teams while the source questionnaire is being designed, so that country- and culture-specific differences can be taken into account. The transfer of the source questionnaire into the national questionnaires must respect the psychological response-process model of comprehension, retrieval, judgment, and response. Furthermore, as Miller and Willis (2016, 212) noted, "proponents of the socio-cultural approach argue that socio-cultural context must also be a focal point. This perspective does not run counter to psychological models, but rather emphasizes that the interpretation of a question depends on the context of respondents' lives."

Following Johnson and Braun (2016, 44f.), when transferring the common source questionnaire into the national survey instruments, the national research teams must take into consideration

> … that social interactions and communication patterns are largely mediated by cultural norms, which may influence 'standardized' survey data in numerous ways. In comparative

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> analysis, these differences may be misinterpreted as substantively meaningful response differences in attitudes, beliefs, and/or behaviors when they in fact represent variability in how respondents react and respond to survey questions during social encounters.

The sociodemographic variables must be transferred from the source questionnaire into a functionally equivalent national instrument, which must then be tested for cultural understandability. In this connection, the national contexts of the measures and the underlying social structures must be considered. Respondents must understand the questions and must be able to generate an answer for the purposes of the research question. They must also be able to understand the response options provided so that they can choose the appropriate category. That is why the questions and the response options must undergo cognitive pretesting to determine their cultural implications and their dependence on national social structures.

The section of the questionnaire devoted to the sociodemographic measures must also undergo cognitive pretesting because "… pretesting is the only way to evaluate in advance whether a questionnaire causes problems for interviewers or respondents" (Presser et al. 2004, 109).

7.1 Cognitive Pretesting

Cognitive pretest interviews are approved methods for testing the understandability of survey questions. "Ordinary interviews focus on producing codable responses to the questions. Cognitive interviews, by contrast, focus on providing a view of the process elicited by the questions" (Presser et al. 2004, 111f.). Cognitive pretest interviews evaluate the way in which respondents understand the question formulation, the wording of the stimuli, and the terms used in the questions. According to Beatty and Willis (2007, 288), the material generated by cognitive interviews may include:

(1) respondent elaborations regarding how they constructed their answers,
(2) explanations of what they interpret the questions to mean,
(3) reports of any difficulties they had answering, or
(4) anything else that sheds light on the broader circumstances that their answers were based upon.

Presser et al. (2004, 112) noted that during cognitive interviews:

> Concurrent or retrospective "think-alouds" and/or "probes" are used to produce reports of the thoughts respondents have either as they answer the survey questions or immediately after. The objective is to reveal the thought processes involved in interpreting a question and arriving at an answer.

7.1.1 The Think-Aloud Method for Pretesting Questionnaires

The think-aloud method entails requesting the respondents to describe out loud all the thoughts that they have after they hear the question and to report their deliberations while arriving at an answer. This reveals the way in which the respondents understood the question and interpreted the question stimuli and the considerations and mental associations they used to find their answer. The strategy employed by the respondents to select the answer from among the response options also becomes observable. The think-aloud procedure can be administered while the survey question is being answered (concurrent think-aloud). In this way, the interviewer hears first-hand the respondent's process of generating the answer. The alternative is to administer the think-aloud after the respondent has answered the survey question (retrospective think-aloud). Both techniques have their advantages and disadvantages (see Beatty and Willis 2007): If the think-aloud is administered before the actual question is asked, this may suggest to the respondent that there is a problem with the question. If the think-aloud is administered after the question has been answered, the respondent may give a very abbreviated account of his or her thought processes.

7.1.2 Probes

Probes try to get to the bottom of the respondent's cognitive process of understanding survey questions and finding answers:

> When the questionnaire is filled in or the interview is carried out, the interviewer asks the respondent a number of probes regarding his/her understanding of the questions and how he/she arrived at his/her answers. Probes can have different purposes and are used in various ways. The answers to probes are unstructured (Statistics Sweden 2004, 53 ff.).

Different types of probes are useful under different conditions (see Statistics Sweden 2004, 53–55):

(1) Common probes: Common probes are administered to all respondents; the aim is to detect cognitive problems of a question. Examples: "What do you understand by the highest educational level achieved?" "Did you also consider certificates from informal education?"
(2) General (common) probes: These probes are used to detect general difficulties understanding the question. Examples: "Can you tell me more about this?" "How did you obtain your highest level of education?"
(3) Random probes: Here, randomly selected respondents are asked how they understood the survey question. The interviewer decides which respondents should be asked and why. Example: "Can you tell me more about this?"
(4) Special (specific) probes: These probes are administered during the interview if the interviewer gets the impression that the respondent has misunderstood the survey question or the respondent gets confused about the answer options. In this case, the interviewer continues the pretest by asking, for example: "I

noticed you hesitated before answering the question about your highest level of education. Why?"

7.1.3 Pilot Study

After qualitative pretesting, quantitative pretesting is conducted in the field with selected respondents from specific population groups. "Each interviewer is required to carry out follow-up probes for a set of closed items randomly selected from the interview schedule for each of his respondents" (Schuman 1966, 219). This application of the questionnaire in the field allows difficulties and problems arising from the complexity of the survey instrument to be identified. It detects problems related to the question translation. In comparative surveys, it reveals national and cultural differences in the understanding of the question items.

After the questionnaire and all necessary survey instructions have been produced, the national research teams tests the survey instrument in the field. The pilot study realizes all procedures and steps planned for the full survey with a small sample of about 10% of the respondents. This allows workflows to be evaluated; it includes (a) drawing the sample, (b) recruiting and training the interviewers, (c) supervising the interviewers, (d) testing the questionnaire for sequence errors, incorrect routing, and missing instructions, (e) detecting unused, non-applicable, or missing response options, (f) conducting the interviews in the field, (g) coding the survey responses, (h) conducting preliminary analyses and detecting missing, incomplete, or illogical information about the respondents. Pilot studies are time-consuming and costly. However, these disadvantages are counterbalanced by the fact that problems during the main survey are reduced (see Schnell 2012, 154f.).

7.2 Documentation

One main focus of the national research team members should be to document all the decisions made during the production of the national questionnaire. This always applies when the cultural or social structure of a country must be considered during the translation of the source questionnaire, the harmonization of measurements, and the pretests. For sociodemographic variables, this documentation reports the selection of functionally equivalent stimuli and question formulations, the choice of response categories, and the harmonization process. This information is important for users of comparative data and prevents misinterpretations based on different cultural norms and country-specific structures, institutions, and national policies.

7.3 Handling Sociodemographic Variables

Education

The education variable measures respondents' labor market entry level and their access to jobs and occupations. The response categories (school leaving certificates and vocational/professional education certificates) are the same as those that usually apply in national surveys. Together with the central project coordinators, the national experts develop correspondence tables between the national qualifications and the common classification to be used for comparison purposes. Because national response options are used during the interview, the respondents are able to identify their level of educational attainment. An open-ended residual category should be included for migrants who were educated in another education system and whose educational qualifications cannot be assigned to the categories of the education system of the host country. This open response is subsequently recoded into the comparative classification using the ISCED mappings provided by UNESCO (UNESCO-UIS 2018).

In the case of respondents who reached their level of educational attainment via an unusual route through schools and vocational education and training institutions (e.g., evening classes, or vocational education and training leading to equivalent general educational qualifications such as a general higher education entrance qualification), it is necessary to ensure that they choose the appropriate response option.

Labor force status

The measurement of labor force status calls for a longer sequence of survey questions. Some of these questions cover specific national labor market programs. If these programs are not included in the list of national responses, respondents may have difficulties classifying their own relationship to the labor market. Reference is made in the question (Question 11 in the questionnaire in Chap. 4) to the survey country's national norms regarding "full-time" and "part-time" work. It is necessary to test the completeness of the response categories by means of probes. The rules about maternity and parental leave and the regulations governing compulsory military or community service differ across countries; they are included in the response list about absence from work (Questions 12 and 22.1 in the questionnaire in Chap. 4). Question 18.3 (in the questionnaire in Chap. 4) lists examples for the various levels of job autonomy. These examples must be adapted to the national labor market situation of the survey country. We recommend pretesting the examples given in the question about "the kind of work you do". The examples should be ranked by their level of job autonomy.

Occupation

The occupation of the respondent is coded using ISCO-08. We consider the three questions about the respondent's job proposed by the ILO to be mandatory. Prepared lists of jobs may confuse the respondents and lead them to answer the question by

reporting the job title rather than describing the kind of work that they do in the job. The responses are reported in open formats and subsequently coded by trained and experienced coders into ISCO-08 at the most feasible and detailed level of the classification scheme.

Private household

The problem with this variable is that almost all countries use different definitions of private household (see Hoffmeyer-Zlotnik and Warner 2009, 5–8). The understanding of private household also differs among the actors involved in social surveys (see Hoffmeyer-Zlotnik and Warner 2009, 13–15). Under these constraints, the national research team must define what should be understood by private household and test this definition at national level. Interviewers should be trained to apply the predefined household definition, and the instructions for respondents must include the definition of private household, so that the respondents are able to generate the appropriate response.

Total net household income

The comparative measurement of total net household income calls for a list of common income sources in the respective survey countries. The Mutual Information System on Social Protection (MISSOC; European Commission 2014) can be used as a reference for the EU member states and the EFTA countries. It lists twelve categories of social transfers: (1) financing, (2) health care, (3) sickness–cash benefits, (4) maternity/paternity, (5) invalidity, (6) old-age, (7) survivors, (8) accidents at work and occupational diseases, (9) family benefits, (10) unemployment, (11) guaranteed minimum resources, (12) long-term care. The experts from the survey country should include the national functional equivalences of these income sources on the showcards presented to the respondents.

If the central project coordinators and the members of the national research teams decide to measure the relative position of a household and its members in a national income distribution (as in the case of the ESS from Round 4 onwards), it is important to document the quality of the reference data used to calculate the income categories. Provided the same income concept applies in the reference data and the planned survey, possible sources of reference data are the European Union Statistics on Income and Living Conditions (EU-SILC; European Commission and Eurostat 2017b), the Household Budget Survey (HBS; European Commission and Eurostat 2017c), or the Labour Force Survey (European Commission and Eurostat 2017a). Alternatively, academic research survey data are suitable for creating the answer categories about total net household income if the survey in question used the same method as that intended to be used in the comparative survey (see Hoffmeyer-Zlotnik and Warner 2015).

Ethnicity

The national research teams create the list of ethnic groups following the rules and definitions provided by the central project coordinators. They describe the ethnic structure of the survey country and classify the ethnic groups into (1) the large ethnic groups that make up the nation; (2) the recognized ethnic minorities (including indigenous groups) that enjoy legally guaranteed cultural or linguistic autonomy; (3) groups who immigrated during or before the 19th century; (4) groups who immigrated during the 20th and 21st centuries; and (5) the various major religious groups. It is important that the list of response options provided allows almost all selected survey respondents to find their appropriate response. However, the list should not be too detailed and thus difficult to apply during the interview. During the interview, respondents must be instructed how to self-assign themselves to an ethnic group and how many options may be selected.

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Chapter 8
National Field Agencies and Their Interviewers

Abstract This chapter describes the tasks and responsibilities of the national fieldwork agencies and their interviewers. The national field agencies in the individual countries participating in a comparative survey are responsible for collecting the data. At this level, it is mainly a matter of implementing the project instructions. Those involved in the actual fieldwork—that is, the supervisors and the interviewers—must be introduced to the fieldwork rules and familiarized with the survey instrument. In addition, the interviewers must be given training to enable them to do their job in accordance with the rules.

Keywords Project instructions · Interviewer training · Fieldwork

The major tasks of the national field agencies are data collection and the realization of the interviews. They are responsible for selecting the sample, designing the layout of the survey instruments, programming the computer-assisted interviews, collecting the data during the interviews, handling noncontacts and the different types of nonrespondents, and preparing the mandatory reports about the implementation of the survey and the realization of the interviews. During this process, the national field agencies follow the commonly agreed rules and requirements laid down by the central project coordinators and are overseen by the national research team members.

Together with the national experts, the field agency compiles a "fieldwork manual" and makes it available to the interviewers. This manual includes all instructions and notes for the interviewers: recommended doorstep techniques; the rules for selecting the respondents from among the household members; the topics of the survey; the sequence of the questions; the remarks for each question; and the explanations of the response categories. The manual also explains the questionnaire and how to deal with reluctant contact persons. The interviewer training is based on the fieldwork manual. During the fieldwork period, the interviewers use the manual as a memory aid.

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8.1 Project Instructions

The quality of the survey data collected strongly depends on how well-trained the interviewers are. Successful interviewer training courses are systematically prepared with written documents and manuals. The use of a common training manual allows interviewer training to be standardized within and across countries. Comparative surveys call for trained interviewers who abide by common standards. Besides the interviewers, the supervisors and the data processing teams also need common manuals in order to realize comparative survey data. "These manuals serve as reference material when the survey itself is under way and should contain all the information needed for the different types of field and data entry staff" (Glewwe 2005, 59).

8.1.1 Project Instructions for Supervisors

The first chapter of the survey instructions for the supervisors contains the description of the international comparative survey and lists the participating countries. In the case of cross-cultural studies, this chapter explains the cultural background of the survey's target populations. Ethical and legal provisions related to the survey and the survey questions are also addressed.

The second chapter summarizes the characteristics of the population and the sample, outlines sample selection, and describes the survey topics.

The third chapter explains the procedures for selecting respondents at an address or in a household, establishing contact with the target persons, and reporting on unsuccessful contacts and the number of repeated contacts. At this stage, it is important to describe the survey's strategy for reducing the number of refusals (Mayer and O'Brien 2001; O'Brien et al. 2002). Knowledge of this strategy is useful for establishing the first contact at the doorstep, because the contact person may refuse to cooperate in finding the survey target person. It may also help to convince the target person to participate in the interview.

O'Brien et al. (2002, 1) outline the following "Five Basic Steps to Encourage Survey Response," which they describe as "the essential building block of training":

(a) Prepare for the visit;
(b) Engage in active listening;
(c) Diagnose the main concern;
(d) Quickly identify a situation-appropriate response; and
(e) Quickly deliver a clear, brief response.

An interviewer who is well prepared for the first contact with the potential respondent knows what communication strategies and techniques are most likely to convince the contact person to participate in the survey. Moreover, the well-prepared interviewer knows how to respond to questions about the content, subject, and topics of the survey and about the institution that commissioned the survey. In order

to establish contact with the target person eligible for the main interview, the interviewer must pay attention to how the contact person reacts verbally and nonverbally during the doorstep interaction. Speedy analysis of the situation and brief and clear responses increase the interviewer's chances of reaching the future interview partner.

Field agencies differ in the way they prepare interviewers to establish the first contact on the doorstep and in the way they train interviewers to carry out the main interviews. Countries differ in their traditions for realizing surveys and polls. Differential participation and refusal rates and differential rates of nonresponse to specific sensitive questions have an impact on the comparability of the survey data. Therefore, it is recommended that the first contact strategies, the interviewer training, and the materials to prepare the interviewer to win the cooperation of the target person should be standardized across fieldwork agencies and across countries.

Finally, the third chapter presents the rules for implementing the standardized interviews. In surveys across cultures and countries, it must be ensured that the question stimuli remain unchanged and that the meaning of the response categories are stable across interviews. This part of the chapter describes the procedures for dealing with and documenting language difficulties and presents the follow-up explanations and probes to be used by the interviewers.

The last chapter introduces each survey question and notes country- and culture-specific differences, particularly for the sociodemographic variables.

8.1.2 Project Instructions for the Interviewers

The interviewer instructions cover the same topics as the manual for the supervisors. In addition, a chapter on strategies for convincing reluctant persons to participate is needed. The following description of the skills imparted at a training workshop is extracted from Groves and McGonagle (2001, 253):

The training workshop itself consists of training in five skills;

(a) learning the themes of sampling persons' concerns;

(b) learning to classify sample person's actual wording into those themes (the diagnosis step);

(c) learning desirable behaviors to address the concerns;

(d) learning to deliver to the sample persons, in words compatible with their own, a set of statements relevant to their concerns; and

(e) increasing the speed of performance on (b)–(d). (Trainers delivered utterances exemplifying diverse themes, demanding that a trainee respond quickly, moving rapidly among the trainees at a progressively faster rate.)

The interviewers are trained to convince target persons to participate in the survey while respecting national, ethical, and legal restrictions. They are also trained to write the protocol about successful contact or nonresponse.

If the sample is a list of addresses or a list of households, the interviewer has to identify a target person for the interview. The Kish selection grid (Kish 1949) and the

last/next birthday selection technique (O'Rourke and Blair 1983; Salmon and Nichols 1983) are well-known methods of finding survey respondents among the residents. The definition of "private household" is already required at this stage to find the household at the address and to list the household members for the Kish grid. The household definition "living together with common housekeeping" includes persons at the dwelling unit in the household grid and excludes specific types of persons from the list of potential respondents.

Related to this selection procedure are the reports about how the contacts to survey participants were realized and the protocols about the nonrespondents.

An important section of the interviewer manual shows the basic rules of standardized social interviews, which are given as follows:

- Interviewers should fit in as well as possible with respondents.
- Interviewers should speak clearly and understandably.
- Interviewers should briefly introduce themselves and the survey, explaining who is conducting the survey, why the interviews are being conducted and why the target person has been selected for the interview, and providing a brief overview of the subject of the survey.
- Interviewers should make a statement about data protection, confidentiality of the answers, and anonymization of the data.
- Interviewers should not express their own opinions during the interviews. They should not talk about their own experiences.
- Interviewers should not complain about a response but pay equal attention to all responses.
- Interviewers should not demonstrate their agreement or disagreement with a response in words or by their tone of voice, posture, or facial expression.
- Interviewers should interview respondents alone because the presence of a third person may distract respondents or violate their privacy.
- Interviewers should ask the questions as they appear in the questionnaire and ask all questions in the same way.
- Interviewers should follow all instructions on the survey instrument, including reading out all instructions for respondents.
- Interviewers should provide respondents with a contact address for further information about the study and, if available, results from previous waves of the project or preliminary results from the current survey (see also Schnell 2012, 219).

Finally, the interviewer manual includes the questionnaire and explains all questions and response options, if necessary. In particular, explanations are essential if the cross-national or cross-cultural measurement instrument, the questions, or the response categories diverge from usual national survey practice.

8.2 Interviewer Training for Face-to-Face Interviews

Üstun et al. (2005, 211) point out that "[t]raining should be long enough for the interviewers to become familiar with not only the techniques for successful interviewing

but also the content of the questionnaire to be used. For experienced interviewers, the training will be shorter than for less experienced ones."

Interviewer training uses the interviewer manual as a reference. It covers all the chapters and topics in the manual and reminds the interviewers of the "general best practice guidelines" for standardized interviews. The following example of such guidelines is extracted from the Project Instructions for Round 7 of the ESS (European Social Survey 2014, 21):

- Questions should be read exactly as written in the questionnaire. They should be read at a slightly slower than conversational pace.
- Before accepting the respondent's answer, the interviewer must be sure that the respondent has heard the entire question. …
- The interviewer should never make assumptions about the respondent's answers, e.g., by skipping a question or starting a question with 'I know this probably doesn't apply to you, but …'
- Whenever a question begins with CARD X, the interviewer should ensure that the respondent has the correct showcard in front of them.
- The interviewer should never let the respondent see the paper questionnaire.
- If the interviewer repeats a question, it should be re-read in the same words … The interviewer should not try to re-phrase the question.
- If the respondent asks for repetition of response options, the interviewer must repeat all response options.
- The interviewer should not give definitions of terms within a question if requested by the respondent (unless explicitly stated in an interviewer note or project instructions).
- If the respondent says 'don't know' the interviewer should accept this answer and move on to the next question.
- If the respondent appears to contradict what he or she said earlier, the interviewer should accept this and move on to the next question.
- The interviewer should never assume how to interpret an answer …
- If the respondent starts to elaborate on their answers, digresses or attempts to engage the interviewer in conversation, the interviewer should use neutral feedback, such as silence, or a phrase such as "we have a lot of questions to get through, so let's move on."

This general introduction for standardized interviews and interviewer behavior during the interaction with the respondent is followed by the survey-specific training in the course of which the survey instruments are presented, the materials required for the interviews are presented, the protocols and reports are introduced, and the questions are discussed one by one. For sociodemographic questions in comparative surveys, the following instructions support the interviewers:

Sex: We ask for the biological sex of the respondent. Only "male" or "female" are accepted as answers. However, "not determined" is increasingly becoming a legal sex category. Instructions agreed by the central project coordinators and the national research teams are indispensable for dealing with this answer option.

Age: For comparative purposes, it is recommended that the respondent should answer the questions about the month and year of birth using the Gregorian calendar.

Legal marital status: This question asks for the country's legally valid categories of partnerships independent of the sex of the respondent and of his or her partner.

Consensual union: A "yes" answer is possible only for persons from the same household, that is, for persons living together with common housekeeping.

Citizenship: This question allows up to three answers.

Residential status: Here, we are interested in the residence permit of the respondent. This permit can be indefinite or temporary, it can be restricted to a work/employment permit, or it can deny the right to work and employment. The last answer option is for respondents with refugee or asylum seeker status.

Country of birth: Here, too, instructions from the central project coordinators are important. The commonly agreed rules must specify how to deal with countries of birth whose national borders changed after a war and with newly created states, such as those that arose after the collapse of communism.

Ethnic group membership: Two answers may be selected from the list of response options.

Integration: Immigrants' use of the national language is an indicator for their integration in the society of the host country. The use of the language of the country of origin shows the respondents' distance from the host society. Languages can be coded using ISO 693-2 (International Organization for Standardization 2017). This is a three-digit alpha code representing the names of languages, and it is standardized for all countries.

Education: The two education questions ask for (a) the highest level of general school education achieved and (b) the vocational and professional education qualifications obtained. It is immaterial whether the qualifications were obtained directly via full-time education or indirectly through part-time programs such as evening classes. Nor are breaks in the respondent's educational trajectory important. For example, a respondent may have interrupted his or her general education to obtain a vocational qualification that provided access to higher education and he or she may then have obtained a university degree.

Employment: The agreed rules should define the working-time equivalent of "full-time," "part-time," and "marginal" employment. For the purposes of comparison across countries and national labor markets, we propose defining "full-time" as 100% of the usual working time provided for in national labor agreements or defined as full working hours in the economic sector in question. "Part-time" is less than 100% of working hours but not less than 50%. Respondents who work less than 50% of the standard working hours are deemed to be "marginally employed." Respondents with a disability who are employed in sheltered enterprises and workplaces should select the response category "unable to work because of sickness or disability."

Occupation: The three occupation-related questions measure the respondent's job(s); the answers are coded into the International Standard Classification of Occupations 2008 (ISCO-08; ILO 2009). To minimize coding errors and inconsistencies, the questions about the main job, about the job description, and about the designation of the job are obligatory. The answers are recorded as open text and later coded by professional coders trained in the coding of occupational information into ISCO-08.

Main income recipient/earner: If the respondent is not the main income recipient/earner, the questions about occupational activity and job autonomy are asked about the main income recipient/earner. The respondent answers by proxy on the basis of his or her knowledge of the work situation of the main income earner.

Household: In comparative surveys, we define private household as a group of persons living together with common housekeeping. This household concept may diverge from the interviewer's and respondent's everyday understanding of the concept. Therefore, a list of persons to be included in the household and a list of persons to be excluded are provided to guide the respondents while they generate the answer to this question.

Total net household income: Depending on (a) the number of household members who contribute to the total income, (b) the various types and sources of income, and (c) the number and frequency of payments, answering this question may be a complex cognitive task for the respondent. To help the respondent to calculate total net household income, a country-specific list of possible income sources is provided. The total net household income question comes after the household membership question, so that the respondent is aware of the group of persons who contribute to the total income. The income question is considered to be a sensitive question in some countries. Obtaining a reliable answer calls for patience and sensitivity on the part of the interviewer; the respondent should not be put under pressure.

The interviewer training sessions are organized in groups of 12–15 trainees. Small groups are an advantage because practical exercises can be carried out (Kockelkoren 2011, 15). As Morton-Williams (1993) noted, learning success is greater if a method mix consisting of lectures, discussions, role play, and subsequent feedback is used. Following Üstun et al. (2005, 212):

> For role playing to be effective, different scripts must be prepared in advance of the training so that the different branching structures of the interview, the nature of explanations that are permitted, and anticipated problems during an interview with difficult respondents can be illustrated. … In addition to role playing, there should be at least one opportunity, before starting the actual data collection, to conduct an interview with a real-life respondent outside of the interviewer group. The practice interviews should be tape- or video-recorded as often as possible for review and feedback discussion during training sessions.

Jansen et al. (2004, 840) also propose exercises in the field with selected sections from real questionnaires and some full interviews.

Following the general interviewer training, introductory workshops are necessary to familiarize the interviewers with the specific survey (see Kockelkoren 2011, 15).

Training sessions about how to reduce the number of refusals complete the interviewer training.

8.3 Handling Sociodemographic Questions in the Field

Education

The measurement of educational attainment calls for two questions to cover general school education and vocational/professional education. For both questions, the answer options represent the ranked national qualifications. In general, these are known to the interviewers and the respondents. During the interviews, the various equivalent attainments leading to the same level of education are problematic. In case of doubt, the interviewers must respect the information provided by the respondents, because they are experts in their own education and training history, and they know best how they achieved their educational qualifications.

Labor force status

This section of the sociodemographic questionnaire is easy to answer if the terms used in the question are well defined and communicated to the respondents. What is complicated, however, is the routing through the questions to cover the various labor market situations of respondents. This calls for attention and patience on the part of the interviewers. The interviewer must pay attention to the different codes for missing answers and must distinguish between "refusal," "not applicable," and "don't know."

Occupation

When measuring occupation, it should be ensured, in particular, that the national field agencies do not use national labor market planning instruments in which a list of national occupational titles can be stored on the computer. Although lists such as these facilitate field coding, the codes cannot be satisfactorily mapped into ISCO-08. ISCO field coding is a different matter (see Hoffmeyer-Zlotnik and Warner 2014, 128–132). However, if the fieldwork agency offers ISCO field coding, the national research team should check in advance whether this offer is genuine.

Private household

For comparison purposes, a common definition of private household is necessary, so that in all countries the same group of persons are measured. The consequence is that this common concept may diverge from that used by the national researchers, interviewers, and respondents. A clear and understandable introduction to the questions about the agreed household concept enables the respondent to identify household members as they are defined for the survey. Thus, the interviewer must read out carefully and in full the instructions relating to the household questions.

Total net household income

For this variable, the respondent must first recall the persons contributing to the total net household income—that is, the household members who are living together and sharing common housekeeping. In a next step, the respondent must recall the numerous types and sources of income received by the household and its members. Finally, the respondent must add up the different income types from all household members and deduct national taxes and compulsory social insurance contributions to obtain the net income. The respondent then selects the appropriate income category from the showcard provided. The interviewer should not request the respondent to estimate the amount of income. Nor should the interviewer estimate the household income based on his or her observation of the household facilities and infrastructure.

In some countries, and in particular in some cultures, questions about income are considered to be sensitive. Interviewers should inform the respondents about data protection and privacy. A declaration of consent is sometimes necessary to collect sensitive information during interviews.

Ethnicity

It is reasonable to provide computer assistance for face-to-face interviews, especially if long response lists are needed, as in the case of citizenship, country of birth, and languages. Interviewers who administer computer-assisted personal interviews are trained in the use of the computer and the handling of long lists of response categories. If a country is ethnically diverse, it is useful to summarize the ethnic groups into broader categories followed by as many examples as possible. An open residual response option should be avoided.

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Chapter 9
Respondents

Abstract This chapter outlines the tasks of the respondents. Particular attention must be paid to ensuring that the survey questions can be understood by the respondents. It must also be ensured that the response categories of the sociodemographic questions are derived from the respondents' cultural context.

Keywords Interview interaction · Answering survey questions

Respondents constitute a third group in the communication process, together with researchers and interviewers. When designing the questionnaire and formulating interviewer instructions, the cognitive ability of respondents to answer the individual sociodemographic questions must be discussed. It is important to note that questions may be asked differently in the context of national surveys than in a cross-national comparative survey context. Walton et al. (2012, 3f.) noted the following:

> Survey interviews are social encounters, and like all social encounters, they are governed by social rules. … Respondents and interviewers bring their tacit knowledge (e.g., commonsense and conversational abilities) into the interaction of a survey interview through drawing on norms of communication.

9.1 Answering Survey Questions

Following Schaeffer and Presser (2003, 66):

> There is an intricate relationship among the survey question as it appears in the questionnaire, the rules the interviewer is trained to follow, the cognitive processing of the participants, the interaction between the interviewer and respondent, and the quality of the resulting data. In an interviewer-administered survey, the question that appears on the screen or the page may be modified in the interaction that ultimately produces an answer.

The researchers formulate the questions and the interviewer communicates them to the respondent. "He or she must comprehend and interpret the question, retrieve relevant information from memory, integrate the information, and respond in the terms of the question" (Martin 2006, 2).

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The respondent uses his or her own memory to find the answer: "Working memory involves the temporary storage and manipulation of information that is assumed to be necessary for a wide range of complex cognitive activities" (Baddeley 2003, 189).

After the respondent has understood the question and found the answer, he or she tries to find an answer category among the response options provided.

> Once a 'private' judgment is formed in respondents' minds, they have to communicate it to the researcher. To do so, they may need to format their judgment to fit the response alternatives provided as part of the question. Moreover, respondents may wish to edit their response before they communicate it, due to influences of social desirability and situational adequacy. (Schwarz 2007, 278)

9.2 Handling of Sociodemographic Variables by the Respondents

Education

The respondents are requested to answer two questions (a) the highest level of general school education achieved and (b) the vocational/professional education qualifications obtained. A problem arises for the respondent when the response categories provided do not represent the school and vocational/professional education certificates obtained. This happens when the attainments were achieved in former, historical, education systems and in education systems whose certificates are not listed. We assume that in such cases respondents will act as experts in their own educational histories and will select the most adequate response options. The second problem relates to certificates obtained in foreign education systems, for example in the case of respondents who immigrated to the survey country after they had completed their education and training. In this case, the respondents should report either the original name of the certificates obtained or they should try to find equivalent qualifications in the survey country's education system. The third problem occurs in the case of respondents with alternative educational trajectories, for example, via second-chance education and/or evening classes. They are classified according to the highest level of educational attainment that they achieved via this alternative route.

Labor force status

This section of the sociodemographic questionnaire begins with the distinction between "full-time" and "part-time" employed versus "marginally employed" and "not employed," defined in terms of the respondent's normal weekly working hours compared to the usual number of hours worked in that economic sector or industry in the survey country. Respondents should understand that "normal" working hours means their contractually agreed working time.

Occupation

Three open questions are necessary to measure the respondent's occupational activity. The interviewer's task is to note the answers as exactly as possible in order to enable the most accurate possible coding into ISCO after the fieldwork.

Private household

Respondents have different notions of household and different perceptions of household membership (Gerber et al. 1996; Casimir and Tobi 2011; Hoffmeyer-Zlotnik and Warner 2009). They must be made aware of the household concept used in the survey. Therefore, it is important that the concept is described in the question text and that the interviewer reads out that description to the respondent.

Total net household income

The sequence of the total net household income questions in the sociodemographic questionnaire reminds the respondent about all possible income types and sources. The first household income question is asked directly after the questions about the household members, so that the respondent is reminded of the persons who live in the household and contribute to the total net household income. This reduces errors in the calculation of the amount of income. The following two questions in the questionnaire in Chap. 4 about the number of persons contributing to the total household income (Question 27.1) and about the main income source (Question 27.2) support the respondent's evaluation of the calculation. The final question about the respondent's relationship to the main income earner/recipient allows researchers to estimate the quality of the answers received. The closer the respondent's relationship to the main income earner/recipient (e.g., spouse or partner) is, the better the quality of the answers (Warner and Hoffmeyer-Zlotnik 2005, 216–218).

Ethnicity

Self-assignment of ethnic membership may be an emotional act for the respondents. In sociodemographic questions, it is not feasible to list in detail all possible ethnic groups in a country. Wider groups of ethnicities constitute the response options. According to Gerber et al. (1998), persons of multiethnic origin are very aware of how they are perceived by the outgroup and how they want to perceive themselves. Nevertheless, we allow respondents to assign themselves to two ethnic groups if they so wish. In this way, they are able to report their multiethnic origins. However, "there are also many respondents who are aware of having ancestors of more than one race, but who prefer to report in only one category" (Martin and Gerber 2005, 3).

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Chapter 10
Data Processing Units

Abstract After data collection, the data must be prepared, so that they can be comparatively analyzed. Data preparation takes place in two steps. In the first step, the national research teams cleanse the national datasets of errors that occurred during data collection. In the second step, the central project coordinators harmonize the sociodemographic variables and merge the national datasets to form a cross-nationally comparable dataset.

Keywords Data preparations · Compilation of the comparative dataset

10.1 Data Preparation by the National Research Teams

In computer-assisted interviews, questions and answers are already in numerical form and linked to variables and values.[1] Variables are numbered and labeled, and most of the answers are already linked to numerical codes and their value labels.

After paper-and-pencil interviews, the first step is to transfer the interview data into a machine-readable format. National coding teams assign variable and value numbers and labels using a national codebook.

(a) Wild codes must be eliminated. "Wild codes" are answer values that are not in the survey codebook.
(b) Missing values must be checked. These are value codes for "refusal," "don't know," "no answer," and "not applicable." The appropriate numerical codes must be different from the codes of valid answers and must be clearly defined in the codebook. This is important for identifying the routing of the interview and the sequence of the questions during data analysis.
(c) Coding of open answers is the responsibility of the national teams. Verbal answers are represented by their numeric values. "Coding of text material is crucial for the ability to analyze statistically the results of surveys, but the act of

[1] Answers to open questions are recorded and later systematically processed using special text analysis software.

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coding itself can produce statistical errors" (Groves et al. 2004, 306). The occupational activity of the respondent is one such crucial text information among the sociodemographic background variables. The ILO (2012) defines 433 occupational activities on 284 pages of tightly spaced text. Experienced professional coders link the open text answers to a four-digit code.

(d) Plausibility checks by the national data preparation unit detect typing errors and illogical values. The variable "number of persons living in the household" has a relatively high risk of invalid answers.

(e) Consistency edits check for the logical sequence of answers. This must be done carefully because not all answers that appear to be inconsistencies are actually errors. In the case of the education variable, in particular, respondents may report educational histories that do not conform to the norm in the country in question. Respondents' job histories are also highly individualized and may deviate from the norm.

(f) "'Imputation' is the placement of one or more estimated answers into a field of a data record that previously had no data or had incorrect or implausible data" (Groves et al. 2004, 330). The net total household income is often estimated on the basis of other survey information and/or auxiliary variables. An additional flag variable indicates the imputed values.

(g) Documentation is mandatory for all the above steps; each decision made during the data preparation process must be documented.

10.2 Data Preparation by the Central Project Coordinators

The central project coordinators prepare a common dataset from the nationally transmitted data. They compile the comparative dataset including the harmonized variables.

(a) The process starts with the technical control of the delivered data file. Do the data conform to the agreed formats and are they readable?

(b) Next, the variables that have yet to be harmonized undergo output harmonization. Using the jointly developed and agreed mappings, the national survey responses are transformed into the comparable variables and values. Educational attainments and ethnic group memberships are measures where output harmonization is essential.

(c) National response categories must be harmonized. Labor force status is one example. Because of the multiplicity and diversity of national labor market programs, these programs must be summarized into functionally equivalent groups.

(d) The documentation of each of the above steps and of each decision allows secondary data users to retrace and reproduce the actions taken by the international data preparation unit and informs about the quality of the individual measurement and the quality of harmonization.

(e) A final consistency check and first statistical analyses reveal whether the questions have measured the same thing across countries.
(f) The data preparation unit at central coordination level is responsible for calculating the weighting variables. The following extract from the ESS publication "Weighting European Social Survey Data" (ESS 2014, 1f.) provides an overview of the weighting variables, design weights, post-stratification weights, and population size weights:

> The main purpose of the design weights is to correct for the fact that in some countries respondents have different probabilities to be part of the sample due to the sampling design used. Applying the weights allows to correct for this and obtain estimates that are not affected by a possible sample selection bias.
>
> (…)
>
> Post-stratification weights are a more sophisticated weighting strategy that uses auxiliary information to reduce the sampling error and potential nonresponse bias. They have been constructed using information on age group, gender, education, and region. The post-stratification weights are obtained by adjusting the design weights in such a way that they will replicate the distribution of the cross-classification of age group, gender, and education in the population and the marginal distribution for region in the population.
>
> (…)
>
> Population size weights are used when examining data for two or more countries combined. The population size weights are the same for all persons within a country but differ across countries. These weights correct for the fact that most countries taking part in the ESS have different population sizes but similar sample sizes. Without this weight, any figures combining data from two or more countries might be biased, over-representing smaller countries at the expense of larger ones.

10.3 Handling Sociodemographic Variables

Education

Two questions are used to measure educational attainment. The first question measures the highest level of general school education achieved; the second question measures the vocational/professional education qualifications obtained. There are three well-known systems for coding comparative categories of education (see Sect. 3.2): first, the International Standard Classification of Education (ISCED; UNESCO-UIS 2012), a complex classification scheme that is difficult to use for sociodemographic analyses; second, the CASMIN Educational Classification (Brauns et al. 2003), which combines general school education with vocational and professional education, and divides this into hierarchical levels; third, the Hoffmeyer-Zlotnik/Warner Matrix of Education (Hoffmeyer-Zlotnik and Warner 2007, 138–146), which codes respondents' labor market entry levels by crossing their rank-ordered general school education with their rank-ordered vocational/professional educational attainments.

Labor force status

Respondents' labor force status is measured using input-harmonized questions. Most of the response categories are also common across countries. However, response categories for Question 12 of our proposed questionnaire (see Chap. 4) also include the major national labor market programs. If applicable in the survey country, the category "compulsory military or community service" is provided as a response option. Question 14.2 captures marginal employment, which is often regulated by national labor market policy. The data preparation units at national and international level must output harmonize these national particularities by determining the functionally equivalent activities across the survey countries. Question 22.1 lists as response categories the legal reasons for absence from work. These reasons may differ across the survey countries and must be harmonized using their functional equivalents.

Occupation

The measurement of occupational activity is input harmonized by administering the questions proposed by the ILO (2012); responses are coded into ISCO-08.

Private household

Private household is measured using input-harmonized questions. The same questions are asked in all countries to ensure that the same question stimulus is used and that the same concept of private household applies across the survey countries.

Total net household income

The household income questions are input harmonized, and all response options, except the income categories, are common across the countries. If deciles from the country's income distribution are used to construct the income brackets, the comparative measure reports the relative position of the household in the national income distribution.

If absolute income values are used to build the answer categories for groups of countries, a common classification system allows comparison across countries. The most common way to compare national currencies across countries and over time is to convert the national absolute income values into purchasing power parities (PPPs). PPP estimates what the exchange rate between two or more currencies would be in order to have the purchasing power for the same market basket of goods and services. After the price levels of the national economies are eliminated, the PPPs express the national currencies in international US dollars. The values of PPPs and their exchange rates are available for nearly all countries and for several years.[2] The data preparation unit may convert the income amounts or make the exchange rates available to data users.

[2]OECD Data (2018) Purchasing power parities (PPP) https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm (Retrieved on January 26, 2018).

Ethnicity

Ethnic group membership is output harmonized, with common question texts and common instructions to respondents ensuring a comparable question stimulus. The list of response options is agreed by the central project coordinators and the national research teams when designing the common source questionnaire. The programming of the comparative dataset follows the instructions from the source questionnaire.

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Appendix

Abstract The appendix introduces the Cross-Cultural Survey Guidelines and translation guidelines. We also briefly describe the major organizations dealing with comparative surveys across countries and their main measurement instruments.

Keywords Cross-Cultural Survey Guidelines, translation guidelines, international organizations, sociological instruments

Cross-Cultural Survey Guidelines

The Cross-Cultural Survey Guidelines (CCSG) are the best overall resource for conducting cross-national survey research.

> The Cross-Cultural Survey Guidelines were developed as part of the Comparative Survey Design and Implementation (CSDI) Guidelines Initiative. The aim of the Initiative was to promote internationally recognized guidelines that highlight best practice for the conduct of multinational, multicultural, or multiregional surveys, which we refer to as "3MC" surveys. The intended audience is researchers and survey practitioners planning or engaged in comparative survey research across cultures or countries. (Survey Research Center 2016)

Survey Quality Predictor (SQP)

The Survey Quality Predictor (SQP) (Universitat Pompeu Fabra 2018) is as follows:

> an extensive open-source database of survey questions and quality estimates built up through the collaboration of the users. The SQP database contains a wide range of survey questions concerning many different topics in many different forms and languages.
>
> a coding system of formal and linguistic characteristics of survey questions which allows a prediction of their reliability, validity and quality to be obtained. This prediction is based on a meta-analysis of the relationships between the quality estimates of survey questions obtained through Multitrait-Multimethod (MTMM) experiments and the formal and linguistic characteristics of the questions in those experiments.
>
> a tool for improving questions. By providing information about the quality of different question formats, the software can help design better questions.

J. H. P. Hoffmeyer-Zlotnik and U. Warner, *Sociodemographic Questionnaire Modules for Comparative Social Surveys*, SpringerBriefs in Population Studies,
https://doi.org/10.1007/978-3-319-90209-8

Translation Guidelines

US Census Bureau Translation Guidelines

> The Census Bureau developed guidelines for the translation of data collection instruments and supporting materials in order to ensure that such documents translated from a source language into a target language are reliable, complete, accurate, and culturally appropriate. (Pan and de la Puente 2005, 5)

Steps are: Prepare, Translate, Pretest, Revise, and Document.

European Social Survey Round 6 Translation Guidelines

These guidelines apply the TRAPD methodology (Translation, Review, Adjudication, Pretesting, and Documentation) for optimizing translation. (Dorer 2012).

Organizations

Here, we present selected organizations and research networks supporting international comparative research. They provide and maintain international classifications for survey questions or they make tools for analyses across countries and cultures available.

Eurostat:

> Eurostat is the statistical office of the European Union situated in Luxembourg. Its mission is to provide high quality statistics for Europe. While fulfilling its mission, Eurostat promotes the following values: respect and trust, fostering excellence, promoting innovation, service orientation, professional independence.[1]

Core Social Variables:

> In 2007 the Core Social Variables Task Force recommended a set of core statistical variables for their systematic introduction in all the EU social surveys. The rationale for doing so was twofold: firstly, to better enable identification of specific populations across all the surveys and a better description of these groups; secondly, to facilitate socio-economic analysis based on the main structural variables. (European Commission and Eurostat 2011)

European Commission: Administrative institution implementing the policies, laws, and treaties of the European Union.[2]

[1]Eurostat. Your key to European statistics. http://ec.europa.eu/eurostat/about/overview (Retrieved on January 26, 2018).
[2]European Commission. http://ec.europa.eu/ (Retrieved on January 26, 2018).

MISSOC:

The EU's Mutual Information System on Social Protection (MISSOC) provides detailed, comparable and regularly updated information about national social protection systems in English, French and German.

MISSOC publishes the Comparative tables on social protection covering:

32 countries: the 28 EU Member States plus Iceland, Liechtenstein, Norway and Switzerland;
12 main areas of social protection: financing, healthcare, sickness, maternity, invalidity, old-age, survivors, employment injuries and occupational diseases, family, unemployment, guaranteed minimum resources and long-term care.[3]

RAMON–Reference and Management Of Nomenclatures, Eurostat's Metadata Server:[4]

- Concepts and Definitions
- CODED (Eurostat's Concepts and Definitions Database) and other online glossaries relating to survey statistics
- Classifications
- International statistical classifications and nomenclatures comprising 166 classifications. Historical versions are available for the most important classification systems. ISCO, for example, starts with its 1958 version and goes up to the version of 2008
- Mathematical Statistics Glossaries
- Online glossaries relating to mathematical statistics.

Integrated Public Use Microdata Series International (IPUMS-I):

Census Microdata for Social and Economic Research. IPUMS-International is a project dedicated to collecting and distributing census data from around the world. Its goals are to

– Collect and preserve data and documentation;
– Harmonize data;
– Disseminate the data absolutely free!; and
– 82 countries—277 censuses—614 million person records.

Source data for IPUMS-International are generously provided by participating National Statistical Offices.[5]

[3]European Commission. Social protection systems—MISSOC http://ec.europa.eu/social/main.jsp?catId=815&langId=en (Retrieved on January 26, 2018).
[4]European Commission. RAMON—Reference and Management Of Nomenclatures. http://ec.europa.eu/eurostat/ramon/index.cfm?TargetUrl=DSP_PUB_WELC (Retrieved on January 26, 2018).
[5]IPUMS International. Harmonized International Census Data for Social Science and Health Research. https://international.ipums.org/international (Retrieved on January 26, 2018).

Cross-National Data Center in Luxembourg (LIS):

> LIS acquires datasets with income, wealth, employment, and demographic data from many high- and middle-income countries, harmonizes them to enable cross-national comparisons, and makes them publicly available in two databases, the Luxembourg Income Study Database (LIS) and the Luxembourg Wealth Study Database (LWS).
>
> LIS is an internationally respected venue for cross-national research in the social sciences, serving as a host of international conferences, visiting scholars, and pre-and postdocs and a virtual host for scholarly exchange.[6]

OECD–Organization for Economic Co-operation and Development:

> The mission … is to promote policies that will improve the economic and social well-being of people around the world.[7]

Guidelines for Micro Statistics Annex E Household definitions in other statistical standards (OECD 2013).

PPP, purchasing power parity:

> PPPs are the rates of currency conversion that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries. In their simplest form, PPPs are simply price relatives that show the ratio of the prices in national currencies of the same good or service in different countries. PPPs are also calculated for product groups and for each of the various levels of aggregation up to and including GDP (Gross Domestic Product).[8]

PPPs and exchange rates.[9]

United Nations (UN)

> … is an international union founded in 1945. It is currently made up of 193 Member States.[10] Social sciences survey researchers are mainly interested in the special agencies dealing with developments and changes in societies.

International Labour Organization (ILO):[11]

> This organization developed the International Standard Classification of Occupations (ISCO), a coding system designed primarily for use in official labor market statistics.

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[6]LIS cross-national data center in Luxembourg. http://www.lisdatacenter.org/ (Retrieved on January 26, 2018).
[7]OECD–Organization for Economic Co-operation and Development https://www.oecd.org/about (Retrieved on January 26, 2018).
[8]OECD Purchasing Power Parities. http://www.oecd.org/std/prices-ppp/purchasingpowerparities-frequentlyaskedquestionsfaqs.htm#FAQ1 (Retrieved on January 26, 2018).
[9]OECD Purchasing Power Parities. http://stats.oecd.org/Index.aspx?datasetcode=SNA_TABLE4 (Retrieved on January 26, 2018).
[10]United Nations. http://un.org (Retrieved on January 26, 2018).
[11]International Labour Organization. http://www.ilo.org/global/lang–en/index.htm (Retrieved on January 26, 2018).

ISCO classifies occupational activities by their "skill-levels" and "skill-specifications." The differentiation of jobs and the job labels are not the main objective. Rather ISCO aims to organize jobs into groups according to their tasks and duties.

Reference: International Labour Organization, 2012: International Standard Classification of Occupations, ISCO-08. Volume 1. Structure, Group Definitions and Correspondence Tables. Geneva: International Labour Office.

United Nations Educational, Scientific, and Cultural Organization:[12]

UNESCO is responsible for coordinating international cooperation in education, science, culture and communication. It strengthens the ties between nations and societies, and mobilizes the wider public so that each child and citizen:

- has access to quality education; a basic human right and an indispensable prerequisite for sustainable development;
- may grow and live in a cultural environment rich in diversity and dialogue, where heritage serves as a bridge between generations and peoples;
- can fully benefit from scientific advances.

The International Standard Classification of Education (ISCED) in the version of 2011:

As national education systems vary in terms of structure and curricular content, it can be difficult to benchmark performance across countries over time or monitor progress towards national and international goals. In order to understand and properly interpret the inputs, processes and outcomes of education systems from a global perspective, it is vital to ensure that data are comparable. This can be done by applying the International Standard Classification of Education (ISCED), the standard framework used to classify and report cross-nationally comparable education statistics.

The UIS and UNESCO-OECD-Eurostat (UOE) data collection programmes will be adjusted according to these new standards. Member States will apply ISCED 2011 in the reporting of their education statistics starting in 2014." (UNESCO Institute for Statistics 2012, iii)

ISCED is designed to serve as a framework to classify educational activities as defined in programmes and the resulting qualifications into internationally agreed categories. The basic concepts and definitions of ISCED are therefore intended to be internationally valid and comprehensive of the full range of education systems. (UNESCO Institute for Statistics 2012, 6).

[12]United Nations Educational, Scientific and Cultural Organization. https://en.unesco.org/ (Retrieved on January 26, 2018).

UNESCO Institute for Statistics, 2018: ISCED mappings.[13]

> ISCED mappings are the outputs of a collaborative process between the UIS and Member States to map national education systems according to the International Standard Classification of Education (ISCED).

The World Bank

> … is a vital source of financial and technical assistance to developing countries around the world. We are not a bank in the ordinary sense but a unique partnership to reduce poverty and support development. The World Bank Group comprises five institutions managed by their member countries.[14]

United Nations Economic Commission for Europe (UNECE):

> UNECE's major aim is to promote pan-European economic integration. UNECE includes 56 member States in Europe, North America and Asia. … Over 70 international professional organizations and other non-governmental organizations take part in UNECE activities.[15]

Canberra Group: Handbook on Household Income Statistics. Second Edition 2011:

> The Canberra Group Handbook on Household Income Statistics, Second Edition (2011), provides a consolidated reference for those involved in producing, disseminating or analysing income distribution statistics. It reflects the current international standards, recommendations and best practice in household income measurement. It also contains updated and expanded information about country practices in this field of statistics and provides guidance on best practices for quality assurance and dissemination of these statistics. (Canberra Group 2011, iii)

Sociological Instruments

To study social inequality and social mobility, three comparative scales are available. They are built on the ISCO codes.

- SIOPS, Standard International Occupational Prestige Scale (Treiman 1977). This scale is based on the respondent's occupational activity. It is valid in industrial and postindustrial societies and ranges from 0 (low prestige) to 100 (highest occupational prestige).

[13]UNESCO Institute for Statistics. http://uis.unesco.org/en/isced-mappings (Retrieved on January 26, 2018).
[14]The World Bank. http://www.worldbank.org/en/about/what-we-do (Retrieved on January 26, 2018).
[15]United Nations Economic Commission for Europe. https://www.unece.org/mission.html (Retrieved on January 26, 2018).

- ISEI, the International Socio-Economic Index of Occupational Status was developed from Ganzeboom et al. (1992). It supplements SIOPS. ISEI measures socioeconomic occupational status on the basis of the respondents' ISCO values the necessary educational level for the occupational activity, and the expected salary and wage from that occupation.
- The Enhanced EGP Class Categories developed by Erikson, Goldthorpe and Portocarero (1979; Goldthorpe 1980; Erikson and Goldthorpe 1992) is a nominal system of social class categories. This typology links the occupation with the labor force status and the respondent's legal relation to the labor market. This includes a categorization of self-employed persons, farmers, and family workers.
- Harry Ganzeboom's Tools for deriving occupational status measures from ISCO-08, with interpretative notes on ISCO-08.[16]
- This web page provides the SPSS-Syntax modules and conversion tools for SIOPS, ISEI, and EGP.

[16]Harry Ganzeboom's Tools for deriving occupational status measures from ISCO-08, with interpretative notes on ISCO-08. http://www.harryganzeboom.nl/isco08/index.htm (Retrieved on January 26, 2018).

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