

## Chapter 1

# **Measuring Demographic and Socio-Economic Variables in Cross-National Research**

### *An Overview*

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## **1. INTRODUCTION**

In the context of cross-national research the comparative measurement of demographic and socio-economic variables has not received much attention in the social sciences so far. Though there are many books and numerous articles dealing with measurement problems in cross-national research (*e.g.* Kohn 1989; Lonner and Berry 1986; Niessen and Peschar 1982; Øyen 1990; Przeworski and Teune 1970; Saris and Kaase 1997; Szalai and Petrella 1977), only very few concentrate on the specific problems of comparing background variables across nations (a comprehensive discussion can be found in Braun and Mohler 2002; discussions with respect to particular variables are, for example, presented by Braun and Müller 1997; Inkeles and Rossi 1956; Schweitzer 1979; Treiman 1977). The main objective of this volume is to help fill this gap, at least, with regard to comparisons between European countries but many arguments made by the authors in this book and most of the instruments presented here will also be applicable to countries outside of Europe. However, one should be especially cautious when researching countries with totally different cultural traditions situated in diverse developmental stages (Jowell 1998; Küchler 1998; Scheuch 1989).

Demographic and socio-economic variables, often also called background variables, “contain information necessary to define homogeneous subgroups, to establish causal relations between attitudes and societal facts, and to define differences between scores on scales. In short, they allow us to define contexts in which respondents’ opinions, attitudes, and behavior are

socio-economically embedded” (Braun and Mohler 2002: 112). Though we will not make the attempt to develop a comprehensive list of background variables (in this respect see Zetterberg 1965: 58-60), there should be wide agreement that measures of age, sex or gender, education, status in employment, occupation, nationality, ethnicity, and household or family related variables are all attributes that fall into this category. Even though background variables play such a central role in social research, be it national or cross-national, the measurement problems these variables pose are only rarely addressed in detail and, as was mentioned before, books specifically dealing with these problems are hard to find. With the current volume we hope to improve this situation for those interested in cross-national social research.

The main driving force behind the effort to edit this volume is our conviction that instruments allowing the compatible measurement of demographic and socio-economic variables are badly needed. The ever growing number of European research projects and the fact that research today is more and more frequently funded by European institutions (*e.g.* the European Commission or the European Science Foundation) will increase the demand for such instruments in the future.

This book is primarily directed towards scientists involved in cross-national research such as the International Social Survey Programme, the European Social Survey or the World Health Survey. Although these researchers come from various disciplines – *e.g.* sociology, political sciences, psychology, economy, epidemiology – they all have the common problem of harmonising the measures of background variables in comparative perspective. In other areas of research, especially in market research and in the field of official statistics, there is a somewhat longer tradition of working on harmonised measures. The globalisation of markets and the process of European integration both resulted in pressing needs for the comparative measurement of demographic and socio-economic variables. We have therefore included contributions from representatives of these two research areas in this volume, since we believe that they have much to add to the topic presented here.

The title we have chosen, is intended to indicate our purpose to present a ‘working book’, *i.e.* a book presenting the ongoing work with respect to the measurement of background variables and serving as a reference source for this matter. Since this line of work is far from complete and a standardised commonly accepted instrument for the measurement of background variables is not in reach so far, the volume is not a handbook but only reflects the developments achieved up to now. We hope to be able to update the book periodically to extend the discussion to more variables and include new measurement instruments.

## 2. GENERAL ASPECTS OF CROSS-NATIONAL RESEARCH

To be sure, the harmonisation of background variables is only a relatively small, although important aspect in cross-national research. Other problem areas include the comparative measurement of opinions and behaviours, sampling techniques, the mode of data collection, data coding and processing (for a recent overview of problems in cross-national research see Harkness, van de Vijver, and Mohler 2002). With respect to survey questions regarding opinions and behaviours special translation techniques have been developed that help assure functional equivalence of indicators. Since some excellent texts are available that cover these techniques we do not discuss them in this volume (see, for example, Behling and Law 2000; Harkness and Schoua-Glusberg 1998; Mohler, Smith, and Harkness 1998).

Nonetheless, it should be stressed that in addition to translating survey questions from one cultural context into another, questions concerning the design of the study have to be solved. For instance, the comparability of two or more data sets is only guaranteed if the sampling frames and sampling procedures are compatible, *e.g.* random samples, and if the sampling is carried out in a comparable form. Of course, this depends on the kinds of registers or alternative techniques available for sampling the target population in the countries involved and the comparability of these registers or techniques. What makes the situation even more complicated is that the optimal sampling approach not only is contingent on the target population but also depends on the mode of data collection. Hence, comparable random samples for telephone surveys differ considerably from samples for face-to-face interviews and these in turn differ from samples for mail surveys. The mode of data collection does not only influence the sampling procedure but has implications for the design of the questionnaire and the wording of questions, too. Of course, all these points do not only apply to international research but also to comparisons of different national studies. However, since national conventions differ in all of the above mentioned areas these problems are more pronounced in cross-national studies. Consequently, studies from different countries are only comparable in the strict sense if all of these problems are considered and every measure is taken to conduct the studies in the same way. Obviously, this is an ideal situation that will never fully be achieved. But it should be clear that the more the studies that shall be compared depart from this ideal situation, the less comparable they are.

General discussions of the different aspects of sampling and data collection are beyond the scope of this volume. However, in those cases where these problems are directly related to specific variables they are discussed in the respective chapters, *e.g.* in Chapter 18 in connection with the measure-

## Chapter 2

### **Harmonising Data in Official Statistics**<sup>1</sup>

*Development, Procedures, and Data Quality*

MANFRED EHLING

#### **1. INTRODUCTION**

Statisticians understand the term ‘harmonisation’ to mean the creation of a desired degree of comparability between statistics of different countries. Comparability is a quality criterion, meaning that it is one of many product properties striven for in drawing up statistics. Comparability may refer both to comparing statistics at different times, as well as to spatial comparison between sets of statistics across a number of regions, nations, *etc.*

Harmonisation by no means only signifies subsequent adaptation of existing data to the numbers existing in other countries. This harmonisation process – ‘creation’ of comparability – is frequently carried out when planning surveys. Here, harmonisation may be highly extensive in nature, and for instance may go as far as standardising specific questions in the countries’ questionnaires.

Irrespective of whether the goal is the extensive adaptation of the whole survey procedure, or merely the subsequent adaptation of existing national results, the first step taken in a process of harmonisation always consists of determining a universal reference concept to which the national statistics are to be adapted. In this instance, the term ‘concept’ comprehensively covers all

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<sup>1</sup> This article is based on results of CHINTEX research project: “The change from input harmonisation to ex-post harmonisation in national samples of the European Community Household Panel – implications of data quality” (CHINTEX) is a shared-cost research project funded by the European Commission’s Fifth Framework Programme for Research and Technological Development. Information on the project can be found on the web page: <http://www.destatis.de/chintex/index.htm>. I wish to thank Dr. Stefan Linz for his helpful contribution to an earlier draft of this article.

the definitions, classifications, *etc.*, needed in order to operationalise an abstract question, and therefore to make it measurable. One might say that the concept is the language in which the desired value is defined for which a country comparison is to be created. An 'international concept' in this context must be sufficiently universal that the particularities of all the participating countries can be collated and adequately categorised.

Statisticians turn their attention to the characteristics of 'institutions', as well as to the 'activities and functions' carried out by these institutions. The institutions, be they enterprises, households or state facilities, are frequently labelled here in terms of their own national structures, and hence can be difficult to compare at international level. The national structures are based on highly specific historical, geographical, legal, social or political circumstances. In order to create comparability, universal concepts must therefore be orientated with reference to activities and functions. One method is, where possible, to isolate the characteristic that is interesting in an international comparison from its institutional context. This may however lead to a situation in which the results lose their concrete authoritativeness, and in an extreme case may measure only an abstract value with virtually no practical benefit.

On the other hand, international comparison entails the danger of surveys being adapted to institutional circumstances, in spite of major differences, in order to avoid a high degree of abstraction. It is however possible in these cases, owing to the structural particularities of the individual countries, that totally different circumstances are being measured which are not actually comparable.

These potential difficulties which arise in defining an international concept may be summarised under the term 'adequation problem'. Because of problems in adequation, a harmonisation process must in many cases follow a very profound approach, where first of all the question is asked as to what precisely is to be measured, and how the respective political or academic question can be implemented in an international framework. This is the only way to ascertain whether harmonisation is possible at all and how it can be efficiently implemented.

## **2. DEVELOPMENT OF STATISTICS HARMONISATION**

It is possible to distinguish between different phases in past trends in the harmonisation efforts in Europe.

### **2.1 Early Academic Approaches to Harmonisation**

The genesis of the harmonisation process probably coincided with the development of a more profound academic approach towards statistical research, which started in the second half of the nineteenth Century. Thus, the International Statistical Institute was established in The Hague in 1885, an academic society aiming to promote progress in official and academic statistics. A main activity of the institute is still to standardise and harmonise statistical data. However, in its recommendations on the harmonisation of country-related statistics to achieve easier international comparability, the institute can only build on its academic authority, having no direct influence on statistical offices (Ehling 1996: 415).

### **2.2 Collection of Data from Various Nations**

The consistent creation of international statistics was given an impetus around the turn of the century from the 19th to the 20th century by virtue of the establishment of international institutes and organisations which in addition to their actual tasks also collected statistical material. Examples are the International Labour Office, created in 1901, the International Agricultural Institute, founded in 1905, and the International Health Office, set up in 1907 (Ehling 1996: 415). The statistical work of the League of Nations, which was largely taken over by the United Nations after its dissolution in 1946, were also of considerable significance (Jacobi 1953: 193). The United Nations Statistics Division, under the aegis of the Secretary-General, is concerned with the collection and publication of statistical material from the various states.

### **2.3 Voluntary Obligations Undertaken by National Official Statistics**

Because the discrepancies between the statistics of the different states became evident in the course of this collection of statistics from various countries, as well as in comparative evaluation, this realisation paved the way for processes to approximate the country results – in other words for the actual harmonisation processes. This led to the creation of an area of opera-

## Chapter 3

# The ISSP and its Approach to Background Variables

MICHAEL BRAUN AND ROLF UHER

### 1. INTRODUCTION

The International Social Survey Programme (ISSP) is a cooperation between national general social surveys of different countries which every year jointly prepare a questionnaire for one substantive topic and conduct their surveys in a similar manner (Braun 1994; Davis and Jowell 1989). General social surveys are research projects designed to collect and distribute social science data for academic research and teaching. Since 1972 the American General Social Survey (GSS) and since 1980 the German ALLBUS have been conducted annually or every second year. The British Social Attitudes Survey began in 1983. Most of the general social surveys have 3 primary goals: (1) to study social change, (2) to provide key data for researchers and students who have no direct access to national samples and (3) to provide data for continuous social reporting. The national research teams realised that the provision of internationally comparable data would greatly enlarge the scope of analyses possible (Küchler 1987).

### 2. A BRIEF SKETCH OF THE HISTORY OF ISSP

In the early 1980s, bilateral cooperation started between the German ALLBUS and the American GSS: Identical questions were introduced into the national questionnaires. It was perceived as highly desirable, however, to do international research on a more regular basis and to have more than just two countries involved. The first steps towards a durable cooperation

between institutes from four countries – Germany, the United States, Britain and Australia – were taken in 1983. There was an agreement to have an annual jointly prepared study added to the single national surveys. 1985 these intentions were realised with a survey on the ‘Role of Government’. Thus, ISSP was constituted as a research network. There was wide interest from other countries to participate in this enterprise. That became obvious by the fact that Italy and Austria immediately joined in and administered the questionnaire. In 1986 the Netherlands, Ireland and Hungary became members, in 1989 Norway and Israel. From 1990 onwards many former socialist countries from Central and Eastern Europe joined the network and many more countries from all parts of the world were added, in particular Western Europe, East Asia and South America. Single ISSP studies have also been administered in countries which at the time of the survey were not members of the ISSP. Today the ISSP has 38 country members from all over the world, while others are considering membership. The ISSP secretariat (see <http://www.issp.org/> for the secretariat’s web site) which is elected by the members every three years provides the necessary coordination and a Methodology Group ([http://www.gesis.org/en/social\\_monitoring/issp/methods.htm](http://www.gesis.org/en/social_monitoring/issp/methods.htm)) has the task of monitoring procedures and making suggestions for improvements. Sample recommendations for collecting and documenting demographic information are presented in the Appendix of this chapter.

The questionnaire which requires some 15 minutes to fill in should be constructed in a format that allows for mail interviews. As a rule, however, it should be administered as a drop-off to the national personal interviews. Each country should use a representative random sample and try to realise at least 1000 interviews per survey. The respective national questionnaires should be transcriptions of the British English master instrument that is designed together by all the member groups. The conduct of the surveys is monitored to some degree and deviations are sanctioned by the group, which might lead to countries losing their vote at the Plenary Meetings (*e.g.* if they have failed to field and deposit two consecutive surveys at the Central Archive for Empirical Social Research) or being excluded from ISSP altogether. However, smaller deviations occur now and then, in particular translation errors, and have to be documented in the codebooks.

### **3. STRENGTH AND WEAKNESSES OF ISSP**

There are several strengths, but also some weaknesses of the ISSP project that should be mentioned here. One major strength obviously is the continuity of the project. The participating nations convened on an open-ended research effort. All the modules of the series will be replicated after some



time – as a rule that will be time intervals from five to ten years. Because replications assume a central place in the design of the programme, ISSP is different from one-shot projects or those where it depends on the interests of single personalities whether renewed measurements are achieved say 10 or 20 years after the first study. By the design as replicative surveys ISSP data offer to monitor social change on a long term basis. In this way questions of social change could be addressed in an interculturally comparative perspective. Not less important is the strategy ISSP uses to single out important topics and determine the most adequate operationalisations. New topics and new concepts are first discussed in plenary meetings in which all countries have an equal say. That ensures that the interests of the majority of the countries are respected. Themes which have been recommended for inclusion in the programme are then handed over to a drafting group which ideally consists of a miniature of the ISSP plenary meeting. In that phase the fact that first-hand knowledge of the topic and of peculiarities of individual countries and the problems of asking questions in a interculturally comparable way can be fully exploited, is a big advantage. That distinguishes ISSP from ‘imperialistic’ forms of organizing research – where one national team figures out a study and implements it in foreign countries relying at best on some technical advice from indigenous pollsters, only – and makes the most efficient use of the competences of the national teams. The number and the distribution of countries across the planet is an additional asset of ISSP. Although increased membership causes some difficulty in the organisation of the research network and quality insurances (Jowell 1998; Küchler 1998), the possibilities provided by the data base and the international contacts are rarely matched by other projects.

The problems of this kind of international cooperation are undeniable. They can be formulated as complements to the advantages mentioned above. The selection procedure in the past regarding new member countries was largely one of first self-selection and second screening rather than active acquisition. This means that there was no procedure to acquire countries which might be desirable for specific research purposes. Thus, ISSP has not yet reached full coverage of all EU countries. Also, there is no way to make sure that every country will run every module in time and some countries might even drop out again – if, for example, financial difficulties arise.

The fact that most of the participating groups add the ISSP as a drop-off to their ongoing national surveys helps reducing the costs of membership and is, at least in some cases, a prerequisite for participation. However, as most of these national surveys are older than the ISSP, they often have national traditions which are, partly for good reason, quite resistant to change. This hinders a homogenisation of the resultant national ‘peculiarities’ in sampling, mode of administration, questionnaire construction, and