

The German Microcensus

By Norbert Schwarz¹

1. Bases and functions of the microcensus

The microcensus, which is a representative one per cent sample survey of the population and its economic activity, was conducted in Germany for the first time in 1957. In the new Länder and Berlin-East, the microcensus was conducted for the first time in April 1991. Like any other official survey in Germany, the microcensus requires a legal basis. The new Microcensus Law of 17 January 1996 will be effective until the year 2004. The microcensus is designed as a multi-purpose sample survey. Its core actually comprises variables of economic activity and socio-demographic variables which, in combination with socio-economic variables, permit a thorough analysis of the labour market including its social components. The microcensus is of importance not only because it continuously provides major basic data, but also because of its flexibility, problem-orientation, up-to-dateness and accuracy as an instrument of data collection. The Labour Force Survey of the European Union is integrated in the microcensus.

The microcensus is an essential component of the overall system of official statistics. The survey covers both private and collective households. In its capacity as a continuous representative multi-purpose survey covering one per cent of the population (about 800,000 persons in Germany) it does not only close the gap between two population censuses, but regularly also provides information for a large variety of purposes. In a detailed subject-related breakdown, the microcensus provides information on the structure of the population, the economic and social situation of both the population as a whole and families, the labour market, the occupational structure and education / training of the economically active population. In addition, it is used as an instrument for expansion, adjustment and control purposes for many other surveys, in particular sample surveys of empirical social research, but also official surveys such as the sample survey of income and expenditure. Apart from its main function to provide reliable information on major changes in population and labour market statistics at short and regular intervals, the microcensus is a data source which has become indispensable for parliament, general government, administrative authorities, re-

search institutes and the general public at both the national and international level.

Integrated into the microcensus, the common annual Labour Force Survey to be conducted in all countries of the European Union in the framework of European cooperation can be carried out in an effective way in line with the German system. The European Union regards the survey as a unique and indispensable instrument in preparing the Union's programmes of action in the areas of employment, unemployment, long-term unemployment and professional or vocational training and also for the purposes of regional, social and economic policies. The main objective of the Union's Labour Force Survey is the availability of harmonised and reliable statistics for taking measures regarding the labour market.

2. Microcensus concept

The sampling fraction for the basic programme and numerous variables of the supplementary programme has to be as large as 1 % since the data of the basic programme are subject to high accuracy requirements. In addition, the sampling frame has to be that large in order to meet the demand for regionalised data. The sampling fraction is smaller for variables which are neither included in the basic programme nor are subject to deep regionalisation. A result of this requirement is a disproportionate sampling fraction of 0.45 % for variables of the Labour Force Survey of the European Union.

The microcensus is based on the reference week concept. Typically, the reference week of the microcensus is a week without public holidays in April. The interviews, which are conducted by interviewers commissioned by the statistical offices of the Länder, usually take place in May or June. Interviews are done by written response and oral response to the questions posed by an interviewer. The aim of using this combination of methods is to guarantee the respondents' right to self-determination. Face to face interviews are the most adequate instrument to achieve a high response rate and good data quality. Through direct contact with an interviewer, the respondents can be better informed about the use and purpose of the survey. In addition, the interviewer can directly respond to questions that might come up.

Compulsory response to most questions is an important factor contributing to a low level of non-response. What is also done to minimise non-response is that interviewers several times repeat their visits to those persons to be interviewed whom they did not meet during their first visit. In addition, an instrument to keep unit non-response low is the option to respond

in writing. Unit non-response amounts to about 3%, while item non-response is up to 25% for questions with voluntary response.

The sample design of the microcensus, which the EU Labour Force Survey is a subsample of, is based on area sampling (sample districts). The current sampling frame used for the former territory of the Federal Republic encompassed the 1987 population census and census of buildings and housing. For the new Länder, a comparable sampling frame was constructed from the *Bevölkerungsregister Statistik* (statistics based on the population register). Annual updating of the sample is based on the data reported for building activity statistics. The components used for defining the sample districts were either complete buildings, a group of buildings or – as for large buildings – parts thereof. The average sample district size was 9 dwellings.

Key data from the continuous population updating procedure are used for adjustment. The expansion frame distinguishes between Germans and foreigners, in combination with the sex. The adjustment is performed within the 123 regional adjustment strata – regional units with an average of at least 500,000 inhabitants – rather than at the level of administrative districts. The adjustment factor of a specific adjustment class is calculated by the ratio between the target number from the continuous population procedure and the actual number from the microcensus, after compensation for the known non-responses.

3. Information in the data

As mentioned above, the microcensus contains a large set of variables. The following synopsis shows a list of important variables conducted every year:

– *Demographic background:*

sex; age; marital status; relationship to reference person in the household; citizenship; years of residence in Germany; number of people and variations during the last 12 months in the household

– *Employment status:*

employment status during the reference week in accordance with the definition of the International Labour Organisation (ILO)

– *Employment characteristics of the main job:*

professional status; occupation; economic activity of the local unit; number of persons working at the local unit; country and region of place of work; year and month in which persons started working for this employer

or as self-employed; full-time or part-time occupation; fixed-term or open-end employment contract

– *Employment characteristics of the second job:*

more than one job or business; professional status; occupation; economic activity of the local unit

– *Working time:*

working days per week (usually and actually during the reference week); number of hours worked per week (usually and actually during the reference week); main reason for hours actually worked during reference week being different from the person's usual hours; atypical work like shift work, evening work, night work and saturday / sunday work

– *Previous work experience of unemployed persons*

previous employment experience; year and month in which person last worked; main reason for leaving last job or business; professional status and occupation in last job; economic activity of the local unit in which person last worked

– *Search for employment:*

seeking employment during previous four weeks; availability for employment during two weeks; reasons for and type of employment sought; duration of search for employment; methods used during previous four weeks to find work; registration at a public employment office

– *Education and training:*

highest level of school education successfully completed; highest level of vocational education or training successfully completed; existence of current education or training; level of this instruction; vocational or general training received for persons 15 years and older in the last four weeks / twelve months; type, level, purpose and total length of this training

– *Income:*

main source of subsistence; receipt of pensions, unemployment allowances or sickness / disability / invalidity allowances; individual net income in the reference month; household net income in the reference month

Some variables are classified in accordance with national and international classifications. Since 1995 the economic activity of the local unit has been classified according to NACE Rev. 1. The basic classification of occupations is a national classification, that is the *Klassifizierung der Berufe Ausgabe 1992*. Furthermore the Federal Statistical Office has developed a conversion table from the national classification of occupations to the International Standard Classification of Occupations especially for purposes of

the European Union (ISCO 88-COM). The microcensus also allows the representation of international classifications in the field of education and training, for example the distribution of students in education and data on educational attainment of the adult population to the International Standard Classification of Education (ISCED).

At regular intervals, the microcensus contains different supplementary questions, the so-called supplementary programme. This is laid down in the current Microcensus Law. For example in 1996, and again in 2000, the microcensus included questions on the journey to work (time, distance, transport), the position of employees in their enterprise and detailed questions about the field of study of persons with a university degree. The one percent dwelling survey was integrated in the microcensus in 1998. Variables were provided about the size, the ownership, the equipment and the costs of the dwelling. In 1999 the microcensus contained questions about individual health insurance and the personal health situation.

An important advantage of the microcensus is the possibility to combine the variables of the supplementary programmes with all other variables. Special fields of interest can be analysed in connection with the socio-demographic background and detailed variables in the field of employment. Another major advantage of the microcensus is its representative basis for in-depth socio-demographic analyses. Analyses can be done also for individuals and in the context of the household or family. The data set contains a large number of variables, with specifications about the household and the family, produced from the information in the questionnaire.

4. Data access

Microcensus data are available in different ways. First of all, the Federal Statistical Office publishes several Subject-Matter Series every year:

Subject-Matter Series 1:

Bevölkerung und Erwerbstätigkeit (Population and Employment)

Series 4.1.1.: *Stand und Entwicklung der Erwerbstätigkeit*

(State and Development of Employment)

Series 4.1.2.: *Beruf, Ausbildung und Arbeitsbedingungen der Erwerbstätigen*

(Occupation, Training and Working Conditions of Economically Active Persons)

Series 3: *Haushalte und Familien*
(Households and Families)

Results for the Länder are published by the statistical office of the Land concerned. Articles about methodological aspects and comments on the latest results of the microcensus are published in the monthly periodical *Wirtschaft und Statistik* (Economy and Statistics).

Apart from that, the Federal Statistical Office carries out special evaluations for clients against payment. This allows clients to get exact data for their studies or scientific projects.

The Federal Statistical Office also provides microdata records of the microcensus exclusively for scientific projects, that is *de facto anonymised microdata*. Scientists working independently in Germany have the possibility to get individual microcensus data for their own analyses in accordance with the Federal Statistics Law. That law allows only scientists in Germany to access individual data of German official statistics. Up to now, the microcensus data records have been available for the years 1989, 1991, 1993, 1995, 1996 and 1997. Since 1996 each data record has contained all microcensus variables with the exception of detailed regional information and some methodological codes. Because of data confidentiality, some items are aggregated, such as the occupation and the economic activity of the local unit. Nevertheless, scientists can use individual microcensus data to perform their own analyses. So they have maximum flexibility for their work.

Further information on the microcensus is provided by the

Federal Statistical Office
Section IX B – Microcensus
Postfach 170377
D-53029 Bonn
e-mail: mikrozensus@statistik-bund.de

as well as by the statistical offices of the Länder.