

FEDERAL
STATISTICAL
OFFICE

23

Studies on Statistics

23

The German Microcensus

DES REPUBLIK
DEUTSCHLAND



STATISTISCHES
BÜRO DES SAMT

PUBLISHERS: W. KOHLHAMMER / STUTTGART and MAINZ

Microcensus Sample Surveys

By H. Schubnell¹⁾, L. Herberger²⁾ and W. Linke³⁾

Contents

- A. Development and objectives of the Microcensus
- B. Concepts and definitions of employment statistics used in the Microcensus
 - I. Participation in economic life
 - II. Employment status
 - III. Hours of work
 - IV. Economic activities
 - V. Age
 - VI. Branches of economic activity
 - VII. Groups of income
- C. Sample design of the Microcensus from 1957 to 1961
 - I. Stratification of communities
 - II. First stage of sampling
 - III. Second stage of sampling
- D. Sample design of the Microcensus - Area sample since October 1962 -
 - I. General remarks
 - II. 10%-sample of enumeration districts for the 1961 Population Census
 - III. Preparatory work for determining the sample design
 - IV. Selection of the standard enumeration districts
 - 1. Ordering and numbering of enumeration districts of the 10%-sample of enumeration districts
 - 2. Selection and enumeration districts for the 1%-sample survey, 1962
 - V. Coverage of new construction
 - 1. Introductory remarks
 - 2. Coverage of new construction within the inhabited municipal territory
 - 3. Coverage of new construction outside the inhabited municipal territory
 - 4. Recording of new construction in the marginal regions
 - VI. Rotation plan and selection of enumeration districts up to 1971
 - 1. Rotation plan
 - 2. Selection of enumeration districts for the Microcensus inquiries up to 1971
 - 3. Rotation of the 0-enumeration districts
 - VII. Selection of institutional enumeration districts for the Microcensus
 - 1. Preliminary remarks on the selection of institutional enumeration districts
 - 2. Ordering of institutional enumeration districts
 - 3. Breakdown of institutional enumeration districts
 - 4. Selection of enumeration districts for the 1%-sample and the 0.1%-sub-sample
 - 5. Rotation of institutional enumeration districts
 - VIII. Summary

1) Dr. Hermann Schubnell, Federal Statistical Office, Wiesbaden. - 2) Lothar Herberger, Federal Statistical Office, Wiesbaden, - 3) Wilfried Linke, Federal Statistical Office, Wiesbaden.

- E. Calculation of errors for the 1%-Microcensus sample survey, 1964
 - I. Definition of the sampling error
 - II. Calculation of errors for key-date results of a 1%-Microcensus sample survey
 - III. Estimation of the relative standard error on the basis of cell frequencies
 - IV. Comparison of two key-date results of characteristics
 - V. Estimation of the relative standard error for Laender results

Results of the Microcensus and its supplementary programmes

- F. General review of the Microcensus results, 1957 to 1967
- G. Employment
 - I. Employment of mothers and care of their children (1962)
 - II. Present and former employment of women aged 40 to 65 years (1966)
 - III. Sunday, holiday and night work (1965)
- H. Education
 - Vocational training (1964)
- J. Public health
 - I. Illness and accidents (1966)
 - II. Accidents involving children and juveniles aged under 15 years (1965)
 - III. Physical and mental disability (1957 to 1962, 1966)
 - IV. First-aid training (1964)
- K. Agriculture, forestry
 - Cultivation of vegetables and potatoes on plots of under 0.5 hectares (1962)
- L. Passenger traffic
 - I. Holiday and recreation travel (1962, 1966)
 - II. Weekend commuters and means of transport used (1964)
 - III. Holders of driving licences and utilization of the licences (1965)



69. 1641d

A. Development and Objectives of the Microcensus

The microcensus has been conducted as a current sample survey on population and economic activity in the Federal Republic of Germany since October 1957, i.e. annually with a sampling fraction of 1 % and three times a year with a sampling fraction of 0.1%. About 210,000 households - comprising some 590,000 persons - are at present covered by the 1%-survey. They are questioned by interviewers on demographic facts as well as on occupational, economic and social conditions, particularly on employment. In the years from 1957 to 1962 the 1%-inquiries were performed in October. Since 1963 they have been switched to April. The survey is decentralized and held by the Land statistical offices in the 11 Laender of the Federal Republic. The interviewers are in each case specially trained for their job.

From October 1957 to 1961 a two-stage sampling procedure was used. At the first stage the communities were selected, after standardization and stratification, and at the second stage the dwellings. A description of this sample design is given in Chapter C. Since October 1962 area sampling procedures have been used. The 10%-sample of enumeration districts of the 1961 Population Census provides the sampling frame. From this 10%-sample of enumeration districts another 10%-sample of enumeration districts was selected for the Microcensus after a special arrangement and stratification of the enumeration districts. A supplementary selection of newly built-up areas has further been made every year also according to the principle of area sampling. A detailed description of this sample design is given in Chapter D.

The sampling plan of the Microcensus has been arranged to be universally representative for samples of persons, households, families, dwelling units or houses. This means that the results may be raised to the corresponding universe without any special weighting. Accordingly, the sampling plan of the Microcensus does not permit it to be used for sampling for instance corporations. On the other hand, the sampling plan covers a repre-

sentative selection of 1 % or 0.1 % of each sub-group, for instance of recipients of public assistance, of disabled persons, of divorced persons, of the members of the employees' and the workers' old age insurance fund, of holders of driving licences, etc.

As to the content, there is in the Microcensus a basic and a supplementary programme¹⁾.

The basic programme²⁾, which is invariable for the different surveys, covers, among others, the following characteristics: Sex, age, relation to the head of household, presence or absence, possession of a further dwelling, marital status, year of marriage for married people, nationality, membership in a social insurance scheme, economic activity, source of livelihood, firm, agency, locality and branch of business in which an activity is performed, number of hours worked in the reference week, employment status and for self-employed persons the number of workers other than family members, amount of the net income in the month preceding the inquiry and for farmers the size of the agriculturally used area. It is further determined whether a second economic activity was performed during the reference week.

The supplementary programme of the Microcensus, on the other hand, changes from one survey to the other. During compilation, it is possible to combine the data of the basic programme with those of the supplementary programme; a large part of the data provided by the basic programme is already coded by the interviewer on the questionnaire. Preparatory work with a view to transferring at least part of the basic programme directly to magnetic tape by means of reading devices is still in progress.

Since a household is included into three to five surveys and only then exchanged for another (rotation), it is possible to current-

1) The following part is derived from the paper "Use of Sample Censuses to Increase Scope of Census Subject Coverage" contributed to the World Population Conference 1965 by Dr. H. Schubnell, Federal Statistical Office, Wiesbaden.- 2) Catalogue of questions for the Microcensus surveys see p. 8.

ly determine any changes as to size and composition of the household, the change of occupation or establishment where the person is employed, etc.

In order to understand the role of the Microcensus within the system of official population statistics, it is important to know that the population data of the Federal Republic of Germany are currently adjusted every month according to sex. The basis for this adjustment are the census results for the individual communities. It is a legal obligation for every person changing the place of residence to register with the police at the former and the new place of residence. The number of inhabitants for every community can thus be annually determined by adding births and arrivals and subtracting deaths and departures. The results of the current adjustment provide the basis for raising the results of the sample to the total population.

The major tasks to be jointly solved by the Census and the Microcensus

We shall now deal with the functioning of the system of various inquiries in the field of population and occupation statistics and the "division of labour" which has developed between Census, current statistics of events (e.g. statistics of births, deaths, migration, of schools and institutions of higher education) and the Microcensus.

1. The Census supplies at larger intervals the basic information in the most detailed breakdown for communities and enumeration districts. It also provides highly differentiated material, e.g. the economically active population by sex, age and occupation according to about 440 occupational categories.

The Census therefore constitutes:

the most important basis for differentiated regional and technical data which are needed for regional planning and other purposes;

the basis

for the current adjustment of the population according to communities, for the stratification of the commu-

nities for the purpose of a random selection to be used with sample designs,

for the random selection of the enumeration districts, dwellings and households.

2. The Microcensus disencumbers the Census of data for which more detailed regional breakdowns are either not necessary or inexpedient. Pilot surveys for the census have, e.g., shown that questions relating to the type and extent of social insurance were answered in a very unsatisfactory way because the legal situation is very complicated. The information provided by the respondents on disablement were also very incomplete. These questions were therefore included into the sample survey, because there it is possible for the interviewers to advise the respondents and to check to some extent the information given¹⁾.

3. The Microcensus controls the Census. The Census was taken on 6 June 1961. Microcensus surveys were held in April and July of the same year. It was possible to check the results mutually according to characteristics which had been recorded in both enumerations.

In order to verify the completeness of the Census results, sample checks were made in communities and enumeration districts determined by random selection.

In order to establish to what an extent there had been double counts, enumeration sheets were made out and brought together for all persons the family name of whom begins with an A.

In order to control major characteristics, the questionnaires of the Population Census and those of the Microcensus survey of July were brought together and checked for consistency.

4. The Microcensus supplements the Census:

In point of time: The most important data

1) H. Schubnell "Die Volks- und Berufszählung 1961, Methodische und Organisatorische Probleme", Allgemeines Statistisches Archiv 1, 22-41; 2, 141-148 (1962).

of demographic and occupational statistics are determined for the Federation and the Laender under the basic programme on a quarterly basis according to the latest position, and any changes are observed. For this purpose it was necessary to reconcile the wording of questions, the definitions and the classifications of the Census and the Microcensus with each other.

In topics: The subjects of the follow-up surveys show in which way the Microcensus supplements the Census in topics (see schedule on p. 6).

It is hardly necessary to mention that administration and science submit many more subjects for such follow-up surveys than the interviewers and the population may reasonably be expected to handle. It is therefore necessary to make a selection from these subjects in close contact with the relevant agencies.

The Microcensus organisation (selected enumeration districts, interviewers) may also be used for other sample surveys as has, e.g., been the case in 1%-housing sample surveys and sample surveys on income and expenditure.

It is intended to link the Census to be held around 1970 even more closely together with the Microcensus than has already been possible in 1961 and to make use of the results supplied by the follow-up surveys of the Microcensus for the preparation of the Census.

The graph on p. 7 shows in a schematic way the system for the recording of information in the field of population statistics.

a. Both the Census and the Microcensus provide information on the number and structure of the population. The current adjustments using information obtained from the statistics of vital events and migration permit a permanent observation of the population develop-

ment, the results of which are also made use of for raising the Microcensus figures. The follow-up surveys of the Microcensus bridge the gaps which still exist in educational statistics, e.g. as far as the vocational training in an establishment (cf. No. 6 of the schedule on p. 6) is concerned, or it increases the available information on the economic activity of mothers and its consequences for the custody of their children (No. 2, p. 6) or else it provides in excess of the number of disabled persons direct figures on illness and accidents (No. 10 and No. 12, p. 6). Migration statistics which are compiled on a current basis, as well as the collection of material on commuting according to number and structure of migrants and according to the migration flows from one community to another, compiled in the course of a Census, are supplemented by the recording of week-end commuters (No. 7) in the Microcensus.

b. The graph on p. 7 shows only the linkage of the survey techniques which have been referred to above in the field of population statistics. There are of course very close relationships also with economic and social statistics, as, e.g., with a quarterly observation of the economically active population in the various branches of economic activity and with the recording of the hours worked during the reference week. These are important data for determining the productivity of national economy.

Follow-up surveys of the Microcensus in the years 1962 to 1966

Year	No.	S u b j e c t	Sam- pling frac- tion	Major characteristics
1962	1	Holiday and recreation travel	1 %	Which members of the household have travelled? Type of trip (organized tour, individual trip), time, destination (at home, abroad), principal means of transportation used, type of accommodation (hotel, camping, etc.), financing and total expenditure
	2	Care of children under 14 years of age of working mothers	1 %	Type and daily hours of economic activity, duration of daily absence from family, number, age, sex of children; extent and type of care provided by individuals, nursery schools, schools, etc. during the absence, separately for mornings and afternoons
	3	Cultivation of vegetables and potatoes on plots of under 0.5 hectares	1 %	Size of area, cultivation in home gardens or on other plots
	4	Net income	1 %	Income by brackets (under DM 150, 150-300, 300-600, 600-800, 800-1,200, 1,200-1,800 and over)
1963	5	Illness and accidents (pilot sample survey)	0.1%	Illness on reference day or during preceding 4 weeks, accidents during preceding year; duration of illness, medical treatment, confinement to bed, hospitalization, incapacity for work, type of illness, type of accident
1964	6	Vocational training	1 %	Type of vocational schools which have been attended (incl. institutions of higher education), practical vocational training, time and type of completion of training, relationship between economic activity pursued and training, duration of on-the-job training; former activities in agriculture
	7	Weekend commuters	1 %	Number of trips over the weekend from the place of work or of training to the residence of the family (during the last 12 months), distance in km, means of transportation used
	8	First-aid training	0.1%	Time and type of training, by which organization
1965	9	Holders of driving licences, utilization of the licence	1 %	Type and year of issue of driving licence, utilization during preceding year (regularly, occasionally, not at all), purpose for which licence was utilized (private, business), type of motor vehicle used (private car, lorry, bus)
	10	Accidents involving children and juveniles aged under 15 years	1 %	Sex, age, place and type of accident, need for medical treatment, consequences of accident
	11	Sunday, holiday and night work	1 %	Type and duration of activity, frequency of night work and Sunday work, overtime
1966	12	Illness and accidents	0.5%	see No. 5
	13	Physical and mental disability	0.5%	Sex, age, cause and nature of disability, official recognition, economic activity, vocational education, re-training
	14	Economic activity of women	1 %	Employment of 40 to 65-year-old women during the period from their 15th to their 65th year of age, time and cause of interruption of economic activity
	15	Holiday and recreation travel	0.1%	Type of trip (organized tour, individual trip), time, destination (at home, abroad)

Catalogue of questions for the Microcensus surveys

B. Concepts and Definitions of Employment Statistics Used in the Microcensus

I. Participation in economic life

As is the case with the population and occupation census, the Microcensus relates to households and the persons living there. The participation in economic life is therefore viewed from the individual person, in contrast to surveys where establishments or enterprises are to report the persons they employ.

For representing the data on persons participating in economic life in general, the Microcensus uses the "employment concept"¹⁾ in analogy to the 1961 Population and Occupation Census.

According to the "employment concept", all persons are considered part of the active population if during a report period (reference week) they are in employment, active as self-employed or as unpaid family workers or if they are not gainfully employed. All types of economic activity of these persons are considered as equivalent with regard to the conceptual allocation, irrespective of whether they pursue a full-time activity or have a secondary occupation, e.g. as retired persons, pensioners etc. The duration of such an activity is irrelevant for the allocation of these persons under the employment concept.

The participation of a person in economic life may be considered under two aspects, namely whether the person concerned pursues an economic activity himself and to what an extent, in terms of the time involved, or from which source the means of subsistence are derived.

1) Cf. S. Koller/ H. Schubnell/ K. Schwarz/ H. Sperling: "Das Programm der Volks- und Berufszählung 1961" in *Wirtschaft und Statistik*, 1961, No. 4, p. 209 et seq.; cf. L. Herberger: "Erwerbsstatistische Gliederungsgesichtspunkte in der Berufszählung von 1961" in *Allgemeines Statistisches Archiv*, No. 1, 1963.

Question relating to ...	in the	
	1%-sample survey	0.1%-sample survey
1. Sex	x	x
2. Birth year	x	x
3. Relation to head of household	x	x
4. Present or absent at key-date and reasons of absence	x	x
5. Indication of additional living quarters and whether the person concerned goes from there to work or vocational training	x	x
6. Marital status	x	x
7. Year of marriage	x	
8. Nationality	x	
9. Membership in a legal or private health insurance	x	
10. Membership in the legal old age insurance	x	x
11. Type of principal means of subsistence	x	x
12. Receipt of pensions, assistance, unemployment benefits or relief	x	
13. Manner and period of application for work	x	
14. For economically active persons: location (community) of place of work	x	
15. Branch of business of establishment or firm	x	x
16. Present activity, occupation	x	
17. Employment status	x	x
18. For self-employed: number of workers other than family members	x	
19. Number of hours worked in the reference week	x	x
20. Reasons if weekly working time was less than 42 hours	x	x
21. Net income in March (Not for self-employed in agriculture and family workers)	x	
22. Size of agriculturally used area of 0.5 and more hectares or area used for horticulture, viticulture or orchards, if less than 0.5 hectares	x	
23. Number of days normally worked during the week		x
24. Number of working days lost in the report quarter due to vacation, sickness or other reasons		x

For the Microcensus of April 1964, two basic criteria were distinguished for the evaluation, as had been the case with the 1961 Population and Occupation Census: the active participation in economic life and the principal means of subsistence. The first aspect is represented in greater detail by the "employment concept" and the second by the "subsistence concept".

The combination of the two concepts provides a new insight into the employment and subsistence structure of the population, which had been impossible so far. If a table is drawn up (see Chart 1) in which the pre-column is grouped according to the employment concept and the heading according to the subsistence concept, this yields from left to right for each group of persons under the employment concept the principal means of subsistence, or from top to bottom for every category of the subsistence concept the participation in economic life. The crossed boxes in Chart 1 are not feasible by definition. Economically non-active persons, for example, cannot derive their principal means of subsistence from economic activity since under the definitions of the employment concept they do not pursue any economic activity.

Details on the various concepts of employment statistics have already been given in other connections.

When applying the "labour force concept" (OECD definition), a minimum working time for the activity in the establishment is assumed as the criterion to decide whether the group of unpaid family workers is to be considered as part of the labour force or not. This minimum is 15 hours per week or about one third of the "normal" weekly hours of work. In order to arrive at the scope of the labour force concept, it is sufficient to deduct all unpaid family workers included in the employment concept who worked, by their own decision, in the reference week less than 15 hours. Unpaid family workers who for other reasons, e.g. because of sickness or the specific type of their activity, have worked less than 15 hours in the reference week are under the labour force concept considered as part of the labour force.

Second and sometimes also third economic activities have been reported for some of the economically active persons. When also counting these additional activities, one passes from the statistics of persons to the sta-

Chart 1
Interrelations between the employment and the subsistence concepts

Employment concept		Subsistence concept			
		Persons whose principal means of subsistence accrue from			
		economic activity	unemployment benefits or relief	pensions etc.	family members
Active population	economically active persons	economically active persons whose principal means of subsistence accrue from economic activity	economically active persons whose principal means of subsistence accrue from unemployment benefits or relief ¹⁾	economically active persons whose principal means of subsistence accrue from pensions etc.	economically active persons whose principal means of subsistence accrue from family members
	persons not gainfully employed		persons not gainfully employed whose principal means of subsistence accrue from unemployment benefits or relief	persons not gainfully employed whose principal means of subsistence accrue from pensions etc.	persons not gainfully employed whose principal means of subsistence accrue from family members
Non-active population				non-active persons whose principal means of subsistence accrue from pensions etc.	non-active persons whose principal means of subsistence accrue from family members

1) Mainly persons registered as not gainfully employed who have a minor incidental income from economic activity.

tistics of activity cases, which establishes some sort of analogy with the results of the statistics of establishments on the persons engaged (= employment cases). A complete analogy cannot be reached as a person who performs several activities of the same kind does not always regard them as separate activity cases. It is quite possible that somebody who performs agricultural work in various holdings considers this as a single economic activity. Employment conditions which in spite of a dependent activity approach the form of practising a liberal profession (e.g. the book-keeper working by the hour for several retail establishments) hardly permit a distinction to be made by activity cases if the individual person is queried. In the interest of obtaining information as unbiased as possible with regard to the secondary or additional economic activities, there were no questions concerning the firm or establishment of the second and third economic activity. So it was to a higher degree at the discretion of the respondent to combine or to segregate the economic activities than would have been the case if the individual establishments were to be considered.

II. Employment status

1. Self-employed: Persons who as proprietors, co-proprietors, tenants, entrepreneurs or craftsmen operate independently an industrial or commercial establishment or agricultural holding and have both its economic and organizational direction, further independent distributing agents and all persons with liberal professions. Tradesmen working at home and work agents are also included in this group of persons.
2. Unpaid family workers: Persons working in an establishment operated by the head of household or another family member and receiving neither wages nor salaries; there must not be paid for them any compulsory contributions to the social security schemes either. Persons liable to health and social insurance are counted as employees.

3. Public officials: As public officials are considered all officials of the Federation, the Laender and communities, of corporations under public law, incl. candidates for civil service and officials under training, clergymen and officials of the Protestant Church in Germany, the Roman Catholic Church and the Old Catholic Church (clergymen of other confessions are counted as salaried employees).
4. Salaried employees: All salary earners without civil service commission. They include commercial, technical and administrative employees.
5. Wage earners: All persons receiving wages, further journeymen, helpers and homeworkers.
6. Apprentices/trainees, improvers, etc.: Persons under a contract as apprentice or trainee or otherwise in practical vocational training.
7. Dependently employed persons: They comprise public officials, salaried employees, wage earners, apprentices/trainees, improvers, etc.

III. Hours of work

The Microcensus covers the hours actually worked during the reference week. The data on working time thus include the hours worked without any payment (e.g. hours performed by unpaid family workers, unpaid overtime of public officials) and exclude those paid but not worked (e.g. because of vacation or sickness). Where the working time changes from one week to the other (e.g. at establishments with a sliding schedule of weekly hours of work or where every second Saturday is an off-day), the hours worked during the reference week were covered. Standby hours are considered as working time. For unpaid family workers, only the hours performed for the establishment - not the time used for household work - were to be covered. However, the exclusion of the working time for domestic work, particularly in agriculture, presumably

has not been fully achieved. Cases where the hours worked had not been stated were considered in the calculations with the average value for the relevant employment status and sector of economy.

IV. Economic activities

In the Microcensus all economic activities performed by a person are covered, irrespective of whether these economic activities are decisive for the livelihood of this person. So an economic activity may be performed in addition to another principal source of livelihood, e.g. a pension. A person may also pursue several economic activities at the same time.

V. Age

The age of the respondents was determined as the balance between year of birth and year of inquiry. The age groups included in the tables were formed on this basis.

VI. Branches of economic activity

For processing the inquiries held from October 1957 to October 1960, the branches of economic activity were coded according to the key of the 1950 Census of Non-Agricultural Local Units.

As from October 1961, the "Industrial Classification of Economic Activities for the Occupational Census, 1961" - derived from the new basic Industrial Classification of Economic Activities - has been applied for classifying the economic activities according to branches instead of the key for the 1950 Census of Non-Agricultural Local Units used so far¹⁾.

The following principles have to be consid-

¹⁾ See H. Bartels and H. Spilker: "Systematik der Wirtschaftszweige" in *Wirtschaft und Statistik*, 1959, No. 2, p. 55 et seq., and S. Koller, H. Schubnell, K. Schwarz, H. Sperling: "Das Programm der Volks- und Berufszählung 1961" in *Wirtschaft und Statistik*, 1961, No. 4, p. 214 et seq.

ered if figures of the Microcensus are to be used in a breakdown by economic divisions:

- a) The economically active persons are allocated to the economic divisions according to the main economic activity of the local unit (not enterprise) in which they are employed;
- b) where persons are queried, the indication of the main economic activity of the establishment cannot be as exact as in the case of inquiries involving the establishments;
- c) since October 1961 the classification of the 1961 Population and Occupation Census has been applied for the allocation to the economic divisions, i.e. a number of public institutions and establishments have been allocated as private non-profit institutions (e.g. in the field of education and public health etc.) to Division 7 "Services" rather than - as under the Industrial Classification of Economic Activities and the specialized classification derived therefrom for censuses of establishments - to Divisions 8 and 9 "Private non-profit institutions and private households" and "Central and local government, social insurance".

The systematic changes made following the introduction of the new classification mainly concern the economic sector "Trade and transport" as well as "Services". The differing allocation of the insurance trade (excl. social security) and of finance, banks and stock exchanges (formerly in "Trade and transport" now under "Services") is of greatest consequence. About the following relations can be applied for a re-estimation of former results according to the new economic classification of sectors: Under "Other economic sectors (services)" have to be classified from the former sectors (according to the old classification)

- a) "Trade and transport": 13 % of the male and about 14 % of the female economically active persons,

b) "Production industries": about 0.5 % each of male and female economically active persons.

Changes of the systematic allocation within the other sectors can be disregarded because of their insignificance.

The representations according to the system of the International Standard Industrial Classification (ISIC) as well as in the grouping for the purposes of national accounts are based on the above classification.

VII. Groups of income

The income situation has been recorded since October 1962. The following groups were formed in order to facilitate the determination of incomes:

	under	150 DM
150 to	under	300 DM
300 to	under	600 DM
600 to	under	800 DM
800 to	under	1,200 DM
1,200 to	under	1,800 DM
1,800 DM	and over.	

The net income of the individual household members was recorded (earned income, pension, etc. - after taxes and social insurance contributions). If a person drew incomes from several sources, they had to be added up. The purpose of determining the income situation was to further differentiate several characteristics, particularly the employment status, by considering a breakdown by groups of income. The income situation was neither determined for the self-employed in agriculture and forestry nor for unpaid family workers.

C. Sample Design of the Microcensus from 1957 to 1961

I. Stratification of communities

In the first stage 2,700 communities (about 11 %) were selected from the about 24,000

communities of the Federal Republic. Household inquiries were made only in these communities selected at random.

The selection of the communities was preceded by a stratification of all 24,000 communities of the Federal Republic according to characteristics of demographic and economic statistics.

The characteristics drawn upon for the stratification and ordering are in each federal Land:

Size class of community,

Proportion of the agricultural population in the resident population per community,

Proportion of holdings with an agricultural area of less than 5 hectares in the aggregate of agricultural holdings in a community,

Proportion of out-going commuters in the resident population per community,

Proportion of in-coming commuters in the total number of persons working at the locality, per community

Distance of the community from larger cities (proximity)¹⁾,

Proportion of the economically active persons in industry and handicrafts (excluding construction) in the total number of economically active persons (only for communities of more than 10,000 inhabitants).

Classes were formed for each of the characteristics. The most important of them which as a stratification criterion is more efficient than any other characteristics is the community size class. The class limits for the other characteristics depended on the community size class.

For the proportion of the agricultural population, for instance, three groups were distinguished for communities of less than 1,000

¹⁾ The proximity was determined from the map of communal boundaries considering the location of the community with regard to transport and traffic and using as standard distance for large communities a straight line of up to 50 km in connection with the presumable inward-commuter area.

inhabitants and two groups for communities of more than 1,000 inhabitants. The class limit selected for communities of 1,000 to 3,000 inhabitants was 30 % and for communities of 3,000 to under 10,000 inhabitants 10 %.

By combining the mentioned characteristics, groups were then formed as similar in their structure as possible.

Groups were also formed - beyond the general system of stratification and ordering - for communities with specific particularities. This involved institutional communities, tourist communities, communities with large agricultural holdings and the so-called large peasant communities. As institutional communities¹⁾ were considered all those communities where the proportion of the institutional population in the resident population was more than 25 % (exceptions: Schleswig-Holstein more than 15 % and Bavaria more than 20 %). Among the tourist communities were counted all communities with a high number of overnights per capita of the population. Communities with large agricultural holdings are communities with holdings of 200 hectares and more of agricultural area (exceptions: Baden-Wuerttemberg only for communities of up to 3,000 inhabitants and Hesse already with holdings of 140 hectares of agricultural area and over). Large peasant communities are the relevant communities of the Kreise Oldenburg and Eutin in Schleswig-Holstein and the so-called large Oldenburg communities in Lower Saxony.

For ordering the communities of 10,000 and more inhabitants, two groups were formed according to the proportion of the economically active persons in industry and handicrafts (excluding construction), i.e. under and over 20 %. The upper group (over 20 %) was further subdivided according to the proportion of economically active persons in the economic groups or divisions of mining, stones and earths as well as iron, steel and metal industries. Within the groups the communities were arranged according to the type of the

1) As institutional communities were further considered communities with garrisons of foreign armed forces or in their neighbourhood.

main industrial activity (textiles, leather products, etc.).

II. First stage of sampling

To ensure the rational employment of the interviewers it was decided that in the 1%-inquiry every interviewer should query about 100 persons (or about 30 households in some 20 dwellings); the standard was reduced to 50 respondents only in communities of less than 500 inhabitants. As a general rule, a number of 50 persons per interviewer was fixed for the 0.1%-survey. This yielded the scheme presented in Table 1.

After all communities had been arranged according to the combinations indicated, they were entered, stating the number of their inhabitants, in so-called sampling lists for each Land of the Federal Republic and for each community size class in succession by groups in ordering. The order on the sampling list was determined in such a way that each group of communities differed as to the characteristics or its class limits from the preceding group in ordering only in one point. The communities were arranged within each group according to their code number, i.e. regionally according to administrative districts and Kreise.

Table 1: Size of sampling groups in relation to the size classification used for the communities in the 1% and the 0.1%-inquiry

Communities of...to under ...inhabitants	Community size class	Size of the sampling group (persons) per community for the		Number of interviewers per community in the	
		0.1%-survey	1%-survey	0.1%-survey	1%-survey
under 500	1, 2	50	50	1	1
500- 3,000	3, 4, 5	50	100	1	1
3,000-10,000	6, 7	50	200	1	2
10,000-25,000	8, 9	50	300	1	3
25,000-50,000	10	50	1% ¹⁾	1	0.01% ¹⁾
50,000 and over	11, 12	0.1% ¹⁾	1% ¹⁾	0.002% ¹⁾	0.01% ¹⁾

1) of the resident population.

For the 1%-inquiry, the size of the sampling group was in general fixed at 100 persons to be queried by one interviewer. Accordingly, there is one interviewer for every 10,000 of

the population or - from the point of view of regional distribution and selection technique - every 10,000th person of the population constitutes a sampling point in the sense that in the community of this person one interviewer has to query 100 persons. For the systematic sampling with a sampling interval of 1 : 10,000, the starting point for the selection of communities was first determined with a random sampling number "z" of under 10,001.

The further sampling communities are determined by the cumulative addition of 10,000 to the starting number. As the kth community is selected the one to which belongs the hypothetical number of persons $z + (k - 1) \times 10,000$. An analogous procedure is applied for the sampling groups of 50, 200 and 300 inhabitants. The selection interval is always 100 times the number of persons of the sampling group.

The chance of a community to be selected is with this procedure proportional to the number of its population.

The sampling fractions of the first stage (in %) correspond to the formula:

$$\frac{\text{number of population of the community}}{\text{number of persons of the sampling group}}$$

It shows for each individual community the probability of being selected and yields on an average for a community size class the percentages indicated in Table 2 (primary sampling fraction)¹⁾.

The 0.1%-sample is a subsample of the 1%-sample. The size of the sampling group for the 0.1%-inquiries amounts in all communities of less than 50,000 inhabitants to 50 persons (see Table 1). As a basis for the 0.1%-subsample it was determined for all sampling groups of the 1%-survey how many groups of 50 persons they include. One out of every 10 such groups was then selected at random. The community to which this sampling group be-

1) Example: Of 200 communities of 400 inhabitants each (sampling group: 50 persons), every 5,000th person of 80,000 inhabitants is to be included in the community sampling; thus 16 communities of 200 ($\frac{400}{50} \times 8\%$) are selected.

longed was included in the 0.1%-subsample. All communities of 50,000 inhabitants and more are represented in the 0.1%-inquiry by at least 50 respondents.

Table 2: Proportions of selected communities in the various community size classes¹⁾

Community size class (communities of ... to under... inhabit- ants)	Communities		
	total	of which were selected	
		number	%
	1	2	3
under 200	2,151	75	3.49
200 - 500	7,524	511	6.79
500 - 1,000	6,928	502	7.25
1,000 - 2,000	4,319	602	13.94
2,000 - 3,000	1,241	303	24.42
3,000 - 5,000	913	179	19.61
5,000 - 10,000	612	218	35.62
10,000 - 25,000	306	159	51.96
25,000 and more	183	183	100
Total	24,177	2,732	11.30

1) Population and territory: 13 September 1950.

III. Second stage of sampling

The sampling fraction of the second stage (secondary sampling fraction) is defined as follows:

$$\text{Secondary sampling fraction (\%)} = \frac{\text{number of persons of sampling group}}{\text{number of population of selected community on 13 Sept. 1950}} \times 100$$

The sampling fraction computed in this way indicates - if applied to the latest number of inhabitants - the number of persons to be covered in the selected communities and - if used for the number of dwellings - the number of dwellings to be included.

The selection of communities according to the position of 1950 would first entail - if it were carried out at a later date with the absolute figures used for the selection (50, 100, etc. persons to be covered per sampling community) - for communities which have meanwhile

increased in size, an under-enumeration
decreased in size, an over-enumeration.

However, the two categories of communities are in due proportion contained in the sample - except for random deviations - since

the first sampling stage of the Microcensus constitutes a representative sample of communities. The increase for the growing and the decrease for the shrinking communities, i.e. also the shifts of population, are correctly recorded by adhering to the relative secondary sampling fraction of each sampling community. The only precondition is that the sampling frame within the communities is fully up to date.

The sampling procedure yields a self-weighting sample; there is no need for a subsequent arithmetical weighting as all figures from parts of the sample can be added up.

The dwellings where the inquiries for the Microcensus have been made since 1957 are selected from the material of the housing census taken in September 1956. This material is supplemented by data obtained from the statistics of building activity, because the records of the housing census offer the chance of being selected only to dwellings which were occupied already in September 1956 (census date); dwellings occupied at a later date have as yet no such chance. In order to give these dwellings also a chance to be selected, the secondary sampling fraction is also applied to the reports on occupied new dwellings in Microcensus communities. The sampling frame for the Microcensus inquiries thus always considers the most recent situation.

All households in a selected dwelling are included with all persons who belong there to the resident population. If the household which at the key-date of the housing census lived in the selected dwelling had in the meantime moved, the succeeding household was covered. Households which had moved away were not traced.

The sampling procedure used for the institutional population differs from the above procedure for the other population, in order to account for the specific structure of this group.

Chart 2 presents these data of the 1% and 0.1%-inquiries which are most important for

the sample design.

D. Sample Design of the Microcensus - Area Sample since October 1962 -

I. General remarks

Since October 1962 the Microcensus inquiries have been based on a sample design which is basically an area sample. Sampling units are the enumeration districts of the 1961 Population Census. The sample is drawn according to a one-stage sampling procedure with two phases.

In the years 1957 to 1961¹⁾ the Microcensus had however been performed with a two-stage sampling procedure: There was at the first stage a selection of communities and at the second stage a direct selection of dwellings in the selected communities. For the selection of dwellings the guiding lists of the 1956 Housing Census were drawn upon. New dwellings were given a chance to be selected by way of the statistics on building activity.

The switch-over to the new sample design should be made as soon as possible after the 1961 Population and Occupation Census. There was the possibility of using the 10%-sample of enumeration districts drawn subsequently in particular for some special enumerations of the Population and Occupation Census. Owing to the good regional dispersion which had been achieved by the high sampling fraction, this 10%-sample could be used as a sampling frame for another one-stage sample. It is large enough to be used as a sampling frame for the Microcensus up to the next population and occupation census; additional selections from the aggregate material of the 1961 Population and Occupation Census will not be necessary. The good regional dispersion of the "basic sample survey" of 10 % also permitted to refrain from a dif-

1) See S. Koller, L. Herberger "Der Mikrocensus" in Allgemeines Statistisches Archiv, No. 3, 1960, p. 205 et seq. - R. Deininger and others "Stichproben in der Amtlichen Statistik", p. 135 et seq., issued by the Federal Statistical Office, Wiesbaden.

Chart 2. Main Features of the Microcensus Sample Design

Sample Survey on Population and Economic Activity (Microcensus)						
Bases Expected results * Application Statistical unit Enumeration papers Collection procedure Tabulating unit	1 %-sample surveys		0.1 %-sample surveys			
	total values (proportional values) collection household questionnaire interview mostly: person		total values (proportional values) collection household questionnaire interview mostly: person			
Sampling procedure Stages	two-stage 1st stage | 2nd stage		two-stage 1st stage | 2nd stage		two-stage 1st stage | 2nd stage	
Phases	one-phase | one-phase		two-phase 1st phase | 2nd phase		two-phase 1st phase | 2nd phase	
Sampling unit	community | dwelling		community | community		dwelling | dwelling	
Number of sampling units	24 000 | 13 000 000		2 800		130 000	
Sampling frame	punch-card index compiled according to the results of the Population and Occupation Census, 1950		enumeration documents of Housing Statistics, 1956/57, and Statistics on Completions of Buildings		sampling lists of the preceding 1 %-sample survey	
Stratification characteristics (number of groups)	federal Land (11), community size class (10) 1		federal Land (11), community size class (11) 2		-	
Number of strata ³⁾	10 | 1		11		1	
Sampling fractions in the strata	3 - 100 % | 1 - 30 %		(equal to 1st-stage sample in the preceding 1 %-sample survey) 10 - 100 %		(equal to 2nd-stage sample in the preceding 1 %-sample survey) 10 - 100 %	
Order characteristics	11 characteristics of demographic and economic structure of communities; regionally within the groups		according to selection according to the order of the preceding guiding lists of the Housing Census of 25 Sept 1956 are filed		according to selection sequence of the preceding 1 %-sample survey	
Number of groups in ordering ⁴⁾	3 - 50 | -		-		-	
Selection technique	systematic ⁵⁾ systematic ⁶⁾		random ⁷⁾		systematic ⁶⁾	
Average sampling fraction	12 % | 1.8 %		30 %		0.2 %	
Sample size ⁸⁾	2 700 communities | 130 000 dwellings		760 communities		13 000 dwellings	
Raising procedure	formation of raising groups, adjustment of each group to 1 % of the resident population at collection date by means of random substitution and elimination		adjustment to structural figures of the preceding 1 %-sample survey			
Notes	Executed since 1957 annually in October. - Selection for the survey of October 1957 from the material of the 10 %-Sample Survey of Housing Statistics (two-phase sampling), i.e. the same sample as for the 1 %-Sample Survey of the Housing Statistics, 1956/57		Executed in 1958 and 1959 in January, April and July			

1) See Table 2; size classes of communities of 25 000 and more inhabitants were considered as one size class. - 2) See Table 1; size classes of communities of 50 000 and more inhabitants were considered as one size class. - 3) Per federal Land. - 4) If strata are formed, number within the individual strata. - 5) Proportionally to the population of the communities in 1950; sampling interval dependent on the bench-mark (see Table 2). - 6) Self-weighting sample; the sampling fraction of the first stage is the proportion (%) of the selected communities in the total number of communities, the sampling fraction of the second stage is the proportion (%) of the persons covered in the number of persons living in all selected communities together. - 7) Within zones (groups of communities in the order of the 1 %-sample survey with the same total of bench-marks). - 8) According to sample design.

ferentiated stratification of communities in order to improve the accuracy of the results, which for reasons of sampling methods had been necessary for the Microcensus sample design used up to October 1961. The other aims of the stratification of communities, such as the stability of the sample if Microcensus communities are exchanged, can also be achieved by the new sampling procedure, inter alia by reducing the annual rotation quota.

By consistently applying the principle of area sampling - related to the total area and prospective building land in the selected communities - new construction is also covered without an additional sampling frame. This simplifies the process as compared with the former sample design for which new construction had additionally to be selected from material of the statistics on building activity. The procedure of area sampling furthermore enables new construction to be covered according to the situation at the relevant census date. This could practically never be achieved with the statistics on building activity which entailed systematic under-enumerations with regard to new construction.

The new sample design also offers great advantages for the interviewers. The inquiry is now performed in a small, coherent part of the community. From a psychological point of view it is an asset that the inquiry does not relate to inhabitants of a selected isolated dwelling, but also to all inhabitants in the immediate neighbourhood.

II. 10%-sample of enumeration districts for the 1961 Population Census

For the 1961 Population and Occupation Census the built-up area in all communities of the Federal Republic and Berlin (West) was subdivided into enumeration districts¹⁾. Altogether about 600,000 enumeration districts were formed. As a rule the enumeration districts were fixed in such a way that an average of 100 persons could be covered in a

1) In Berlin, Hamburg, Bremen and in some other cities, the entire urban area was subdivided into enumeration areas.

coherent area. A 10%-sample - i. e. about 60,000 enumeration districts - was drawn from the aggregate of these enumeration districts; it provided the basis for several special enumerations of the 1961 Population Census, particularly for processing the household and family statistics.

The selection of enumeration districts for the 10%-sample was in the federal Laender made per Kreis. The communities in the individual Kreise were arranged according to the number of enumeration districts (incl. special enumeration districts) and, if there was the same number of enumeration districts, additionally in alphabetic order. Every 10th enumeration district was then systematically selected from the communities arranged in this way. The beginning of the selection in the first Kreis was determined by a random starting number which was smaller than 10 or at most 10. The following example is to show how the selection was effected for the 10%-sample:

Example of the selection for the 10%-sample of enumeration districts

Community	Number of enumeration districts in the 1961 Population and Occupation Census	Accumulated number of enumeration districts	Number of selected enumeration districts for the 10%-sample
Altendorf	2	2	-
Buch	2	4	-
Hausen	2	6	1
Altheim	3	9	-
Linden	3	12	-
Steinbach	4	16	1
Neuhaus	4	20	-
.	.	.	.
.	.	.	.
.	.	.	.
Landsberg	16	128	2
.	.	.	.
.	.	.	.

The random starting number in the above example was 5. The first selected enumeration district is therefore the first one in the community of Hausen; the second selected enumeration district - the 15th - is the third

enumeration district in the community of Steinbach, etc. The systematic sampling was immediately continued in the second Kreis.

The enumeration districts included in the 10%-sample constitute the sampling frame for the second phase of selection in which the actual sample was drawn for the Microcensus.

III. Preparatory work for determining the sample design

For determining the new sample design in the light of the data of the 10%-sample of enumeration districts from the 1961 Population Census, preparatory investigations were made on the distribution of the communities according to the number of their 10%-enumeration districts in the individual size classes of communities as well as on the distribution of the size of enumeration districts according to the number of buildings and of persons.

The breakdown of the communities according to the number of their 10%-enumeration districts showed a wide range of variation within the individual size classes of communities of less than 5,000 inhabitants (see the following table). So, for instance, 12.9 % of the communities of the size class "1,000 to under 2,000 inhabitants" had 3 and more 10%-enumeration districts. The large number of enumeration districts in the small communities was frequently due to the fact that dwelling-places or isolated houses in scattered communities constitute separate enumeration districts.

The number of buildings per enumeration district decreased as the size of communities increased. In the community size class "under 1,000 inhabitants" the average number of buildings per enumeration district was 17, while in the size class "100,000 inhabitants and more" - apart from the Laender Hamburg, Bremen and Berlin (West) - it amounted to 10 (see Table 3). In the Laender Hamburg, Bremen and Berlin (West) the number of buildings per enumeration district averaged between 3 and 6.

The subdivision of the enumeration districts according to the number of persons showed that with increasing size of communities the proportion of enumeration districts with a high number of persons also rose (see Table 4).

In the light of the results of these investigations the questions concerning the stratification and ordering of enumeration districts for the 10%-sample of the Microcensus were definitely settled.

To sum up, the following major aspects had to be considered for establishing the new sample design for the Microcensus:

1. The sample design had to be established in such a way that a good geographical distribution of the enumeration districts was guaranteed. Only with a strict regional-systematical ordering of the sampling frame it was possible to do away with the former stratification and ordering according to community characteristics.

Community size class (communities of ... to under ... inhabitants)	Number of enumeration districts of the 10%-sample to be expected per community with a uniform size of enumeration districts (100 persons)	Observed frequency distribution of communities by number of their 10%-enumeration districts						Communities, total
		1	2	3	4	5	6 and more	
under 1,000	1	89,3	10.7					100
1,000 - 2,000	1 - 2	87.1		12.9			100	
2,000 - 3,000	2 - 3	9.3	82.0		8.7		100	
3,000 - 5,000	3 - 5	10.0		75.9		14.2	100	

Table 3: Enumeration districts¹⁾ of the 10%-sample survey (1961 Population Census)
by number of buildings and community size classes

Community size class (communities of ... to under ... inhabitants)	Unit	Enumeration districts by number of buildings										Average number of buildings per enumeration district
		1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41 and more	together	
under 1,000	abs.	1 630	784	1 473	1 941	1 448	741	352	164	191	8 724	17
	%	18.7	9.0	16.9	22.2	16.6	8.5	4.0	1.9	2.2	100	-
1,000 - 3,000	abs.	1 152	864	1 996	2 366	1 499	637	240	99	91	8 944	16
	%	12.9	9.7	22.3	26.5	16.7	7.1	2.7	1.1	1.0	100	-
3,000- 10,000	abs.	799	1 296	2 503	2 512	1 244	443	166	78	92	9 133	16
	%	8.7	14.2	27.4	27.5	13.6	4.9	1.8	0.9	1.0	100	-
10,000-100,000	abs.	1 737	3 592	3 577	2 386	1 007	374	131	46	32	12 882	13
	%	13.5	27.9	27.8	18.5	7.8	2.9	1.0	0.4	0.2	100	-
100,000 and more ²⁾	abs.	4 295	3 884	2 080	1 264	576	239	90	58	58	12 544	10
	%	34.2	31.0	16.6	10.0	4.6	1.9	0.7	0.5	0.5	100	-
Total	abs.	9 613	10 420	11 629	10 469	5 774	2 434	979	445	464	52 227	14
	%	18.4	19.9	22.3	20.0	11.1	4.7	1.9	0.8	0.9	100	-

1) Excl. institutional enumeration districts.- 2) Excl. enumeration districts of the Laender Hamburg, Bremen and Berlin (West).

Table 4: Enumeration districts¹⁾ of the 10%-sample survey (1961 Population Census)
by number of persons and community size classes

Community size class (communities of ... to under ... inhabitants)	Unit	Enumeration districts of the 10%-sample by number of persons					Together
		1-69	70-89	90-109	110-139	140 and more	
under 1,000	abs.	3 272	1 483	1 596	1 361	1 012	8 724
	%	37.5	17.0	18.3	15.6	11.6	100
1,000 - 3,000	abs.	2 612	1 905	2 021	1 583	823	8 944
	%	29.2	21.3	22.6	17.7	9.2	100
3,000 - 10,000	abs.	2 128	2 218	2 329	1 617	841	9 133
	%	23.3	24.3	25.5	17.7	9.2	100
10,000 - 100,000	abs.	2 267	3 207	3 633	2 667	1 108	12 882
	%	17.6	24.9	28.2	20.7	8.6	100
100,000 and more ²⁾	abs.	1 688	2 722	3 023	2 948	2 183	12 544
	%	13.3	21.7	24.1	23.5	17.4	100
Total	abs.	11 947	11 535	12 602	10 176	5 967	52 227
	%	22.9	22.1	24.1	19.5	11.4	100

1) Excl. institutional enumeration districts.- 2) Excl. enumeration districts of the Laender Hamburg, Bremen and Berlin (West).

2. In order to limit the increase of random errors which might result from the differing size of enumeration districts, the size of the enumeration districts had also to be included as ordering characteristics into the sample design.

3. In every 1%-sample of the Microcensus only 1/3 of the enumeration districts shall be exchanged each year, among other reasons in order to utilize in the best degree possible the working time required for the cartographic

fixation of the enumeration districts.

4. In the new sample design this partial rotation had to be examined also as to its consequences with regard to the annual exchange of communities it may involve. A high proportion of communities to be exchanged annually would entail a considerable workload for the interviewers. The exchange of interviewers which this supposes would also lead to an increase of the systematic error. Both for practical and for methodological reasons efforts had therefore to be made to keep as low as possible the share of communities to be exchanged annually. This aim was achieved by a special selection technique.
5. For ascertaining the institutional population, an arrangement had to be made within the new sample design which relates the principle of the selection of enumeration districts to the proportionally correct coverage of the institutional population by types of institutions, or of combined groups of types of institutions.
6. The new sample design should permit to cover new construction on the basis of the 10%-sample of enumeration districts. It should also be ensured that the coverage of building activity corresponds to the situation at census date.

IV. Selection of the standard enumeration districts

The following description of stratification, ordering and selection of enumeration districts relates only to the standard enumeration district¹⁾.

1. Ordering and numbering of enumeration districts of the 10%-sample of enumeration districts

The communities involved in the 10%-sam-

1) Standard enumeration district = enumeration district without institutions or establishments of the hotel industry.

ple were grouped in each Land according to the following size classes of communities²⁾:

	under	1,000	inhabitants
1,000	to under	2,000	"
2,000	"	3,000	"
3,000	"	5,000	"
5,000	"	10,000	"
10,000	"	20,000	"
20,000	"	25,000	"
25,000	"	50,000	"
50,000	"	100,000	"
100,000	and more.		

Within these size classes they were arranged according to the number of their enumeration districts selected for the 10%-sample (shortly termed: 10%-enumeration districts). Communities with an equal number of 10%-enumeration districts within the community size classes form a stratum of enumeration districts. The communities with 21 and more selected enumeration districts were combined to a single stratum of enumeration districts. The community size classes "50,000 to under 100,000 inhabitants" and "100,000 inhabitants and more" are therefore at the same time also strata of enumeration districts, because all communities of this size class have 21 and more "10%-enumeration districts". The ordering by the number of 10%-enumeration districts per community permits in the further selection to limit for the rotation the exchange of sampling communities to a minimum - without infringing the principle of random sampling. (See explanations concerning the rotation scheme, Section VI.)

A regional ordering of the relevant communities was then effected in the individual strata of enumeration districts.

The ten size classes of communities remained the major stratification characteristics for the selection.

In order to account in the selection also for the differing size of the enumeration districts, the 10%-enumeration districts

2) The allocation of communities by size classes was made on the basis of the resident population updated to 31 December 1960.

were additionally arranged. They were classified according to the number of buildings, viz. in the stratum "communities with one enumeration district" within the administrative districts and in the strata "communities with 2 and more enumeration districts" (excl. the communities of the size class 100,000 inhabitants and more) within the individual communities. If there is the same number of buildings, another subdivision is made according to the number of persons in the relevant enumeration districts. The enumeration districts in communities of the size class 100,000 inhabitants and more were first combined, according to the number of buildings, in seven subgroups, within which the enumeration districts were then again arranged by quarters. (See Chart 3, Schematic diagram of the sample design of the Microcensus, 1962.)

For the subsequent selections, the enumeration districts of the 10%-sample grouped in this way were in the strata with 2 to 20 enumeration districts per community consecutively numbered according to communities and enumeration districts and in the remaining strata only by enumeration districts.

2. Selection of enumeration districts for the 1%-sample survey, 1962

The selection of enumeration districts for the 1%-sample of the Microcensus from the arranged enumeration districts of the 10%-sample was effected separately for each Land in the ten size classes of communities.

For the systematic sampling, random starting numbers were fixed for each Land and community size class.

The enumeration districts drawn by the systematic sampling in the strata "communities with one enumeration district", "communities with 21 and more enumeration districts" as well as "communities of the size class 100,000 inhabitants and more" were considered - in contradistinction to

the other strata of enumeration districts - as definitely selected. In these strata the enumeration districts of the sample were thus directly determined.

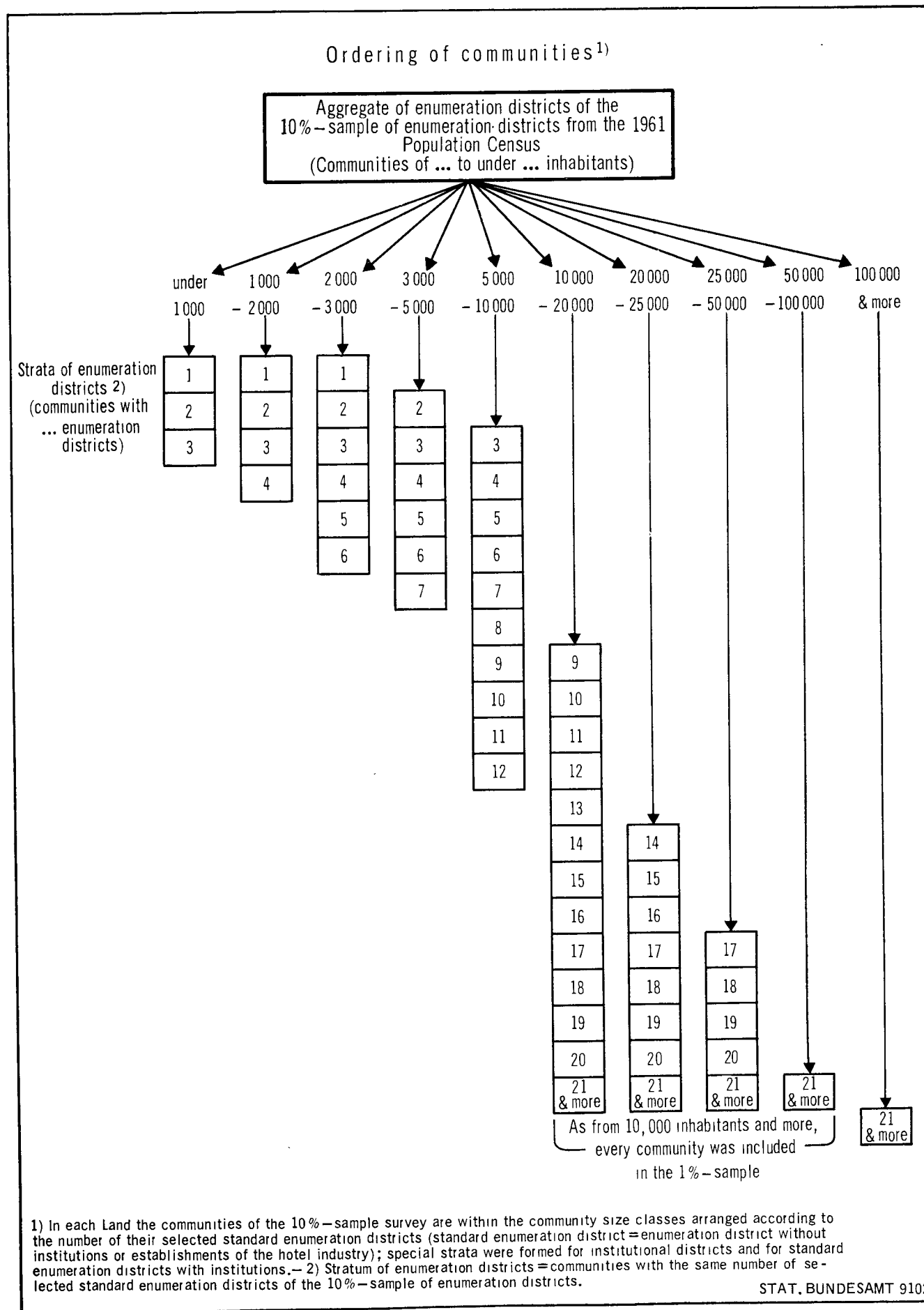
In the strata "communities with 2/3/..., or 20 enumeration districts respectively" a preliminary sample was first formed by systematic selection of every 10th enumeration district - consecutively in all strata of enumeration districts within a community size class; the only purpose was to determine the new Microcensus communities. For each of these strata, the definite selection of enumeration districts for the 1%-inquiry was then effected as follows in the Microcensus communities determined by the preliminary sample:

A specific random starting number, which was not higher than the number of 10%-enumeration districts per community in the relevant stratum of enumeration districts, was determined for every stratum of communities with 2 to 10 enumeration districts. The starting number represented in the relevant stratum the ordering number of the enumeration district to be selected definitely in the first Microcensus community. In the following Microcensus community of the relevant stratum of enumeration districts was definitely selected the enumeration district with the ordering number = starting number + 1, in the third Microcensus community of the relevant stratum the enumeration district with the ordering number = starting number + 2, ... etc. As soon as the greatest ordering number possible (number of 10%-enumeration districts in the Microcensus community) was surpassed, the definite selection was continued with ordering number 1.

In the strata of communities with 11 to 20 enumeration districts it had already been determined by the preliminary sample whether one or two enumeration districts had to be selected in the relevant Microcensus community. The final selection of the first enumeration district in a community began, in accordance with the principle described above, with a random

Chart 3:

SCHEMATIC DIAGRAM OF THE



SAMPLE DESIGN OF THE MICROCENSUS, 1962

Ordering of enumeration districts

Ordering of the enumeration districts in the strata		
I	II	III
by administrative districts	in administrative districts by number of buildings in the enumeration districts	if there is the same number of buildings, by number of persons in the relevant enumeration districts
Regional ordering of communities (with their selected standard enumeration districts of the 10% - sample) in every stratum of enumeration districts	In the communities by number of buildings in the enumeration districts	If there is the same number of buildings, by number of persons in the relevant enumeration districts
Regional ordering of communities	The enumeration districts in the communities combined in sub-groups: 0-4, 5-9, 10-14, 15-19, 20-29, 30-39, 40 buildings and more	Enumeration districts in every sub-group arranged by quarters

starting number between 1 and 11 in the stratum "communities with 11 10%-enumeration districts". There followed immediately the definite selection in the next stratum of enumeration districts etc. up to the stratum "communities with 20 10%-enumeration districts", the ordering number in the first community of a new stratum of enumeration districts being equal to the ordering number + 1 in the last community of the preceding stratum.

For the definite selection of the second enumeration district in communities where 2 enumeration districts had to be selected, the rule applied that the complementary¹⁾ enumeration district was to be drawn which corresponded to the ordering number of the definitely selected first enumeration district. Example: The third enumeration district (ordering number= 3) was first definitely selected in a community. Then the second enumeration district to be selected definitely in this community is the last enumeration district but two.

1) Computation of the complementary ordering number: N be the number of the 10%-enumeration districts in the Microcensus communities and A the ordering number of the first definitely selected enumeration district, then the ordering number of the second definitely selected enumeration district is $N + 1 - A$.

The following was achieved with the systematic sampling of enumeration districts modified in this way:

- a) For the great number of small communities, every ordering number was equally often used. This reduced the random fluctuations for the size of enumeration districts (number of households) as compared with an unlimited random selection.
- b) The selection by means of ordering numbers eliminated periodicities in the size of enumeration districts which might occur and which could be due to the ordering of the enumeration districts according to size.

A survey of the number of communities and standard enumeration districts selected for the Microcensus of October 1962 and analysed by size classes of communities and Laender is given in Tables 5 and 6. These totals apply in principle also to the 1%-sample survey of the following years.

Table 5: Number of communities included in the selection for the October 1962 Microcensus, by size classes

Community size class (communities of... to under... inhabitants)	Schleswig-Holstein	Hamburg	Lower Saxony	Bremen	North-Rhine-Westphalia	Hesse	Rhine-land-Palatinate	Baden-Wuerttemberg	Bavaria	Saar	Berlin (West)	Federal Republic	Sampling fraction
under 1,000	50	-	156	-	60	75	113	148	259	10	-	871	5 %
1,000- 2,000	22	-	82	-	67	56	60	126	143	13	-	569	15 %
2,000- 3,000	8	-	50	-	50	34	30	73	71	8	-	324	27 %
3,000- 5,000	16	-	48	-	83	42	30	87	72	14	-	392	39 %
5,000- 10,000	22	-	69	-	122	50	44	90	93	18	-	508	70
10,000- 20,000	15	-	43	-	102	22	10	44	50	8	-	294	100 %
20,000- 50,000	11	-	17	-	74	13	9	29	19	7	-	179	
50,000-100,000	2	-	6	-	20	1	5	8	8	-	-	50	
100,000 and more	2	1	6	2	23	5	2	5	5	1	4	53	
Communities, total	148	1	477	2	601	298	303	610	720	79	1	3 240	13 %

Table 6: Number of standard enumeration districts included in the selection for the October 1962 Microcensus, by community size classes

Community size class (communities of ... to under... inhabitants)	1)	Schleswig-Holstein	Hamburg	Lower Saxony	Bremen	North-Rhine-Westphalia	Hesse	Rhineland-Palatinate	Baden-Wuerttemberg	Bavaria	Saar	Berlin (West)	Federal Republic
under 1,000	a	507	-	1 554	-	594	750	1 134	1 488	2 593	104	-	8 724
	b	50	-	156	-	60	75	113	148	259	10	-	871
1,000- 2,000	a	225	-	822	-	669	557	596	1 265	1 429	129	-	5 692
	b	22	-	82	-	67	56	60	126	143	13	-	569
2,000- 3,000	a	75	-	510	-	500	342	296	729	716	84	-	3 252
	b	8	-	51	-	50	34	30	73	71	8	-	325
3,000- 5,000	a	164	-	489	-	826	412	304	878	718	143	-	3 934
	b	16	-	49	-	83	42	30	88	72	14	-	394
5,000- 10,000	a	218	-	703	-	1 239	527	456	921	948	187	-	5 199
	b	22	-	70	-	124	52	45	93	95	18	-	519
10,000- 20,000	a	191	-	608	-	1 444	325	159	588	684	137	-	4 136
	b	20	-	62	-	147	32	16	59	71	14	-	421
20,000- 50,000	a	294	-	541	-	2 096	430	304	780	739	216	-	5 400
	b	30	-	54	-	210	43	30	78	74	21	-	540
50,000-100,000	a	186	-	373	-	1 383	72	356	518	430	28	-	3 346
	b	19	-	37	-	138	7	35	52	43	2	-	333
100,000 and more	a	511	813 ^{a)}	1 393	953	5 303	1 262	318	1 472	2 138	147	3 173	17 483
	b	51	162 ^{a)}	140	96	531	126	32	147	214	15	318	1 832
Sampling districts, total	a	2 371	813 ^{a)}	6 993	953	14 054	4 677	3 923	8 639	10 395	1 175	3 173	57 166
	b	238	162 ^{a)}	701	96	1 410	467	391	864	1 042	115	318	5 804

1) a = number of 10%-enumeration districts (excl. enumeration districts with institutions or establishments of the hotel industry); b = number of 1%-enumeration districts (excl. enumeration districts with institutions or establishments of the hotel industry).

a) In Hamburg, 2 % of the enumeration districts were included in the selection and their area halved.

V. Coverage of new construction

1. Introductory remarks

For the coverage of new construction it had to be distinguished between

- a) areas which had been subdivided into enumeration districts for the 1961 Population Census,
- b) areas not yet subdivided into enumeration districts for the 1961 Population Census.

The latter areas are of special importance for the complete coverage of new construction since the 1961 Population Census, because not all new construction relates to

areas which were already built up at the date of the 1961 Census and therefore subdivided into enumeration districts. If the entire municipal territory had not already been completely divided up into enumeration districts for the 1961 Population Census, a procedure was used by which the two-phase sampling could be applied to the areas of the undeveloped municipal territory.

By consistently applying the principle of area sampling to the entire non-built-up area or to those areas of the selected communities which are to be developed, new construction is covered without an additional sampling frame. Compared with the former sample design, where a selection of new buildings had additionally to be made from the data of the statistics of building activity, this means a considerable simplification. The procedure of area sampling further permits the cover-

age of new construction as of the specific survey date, thus avoiding any gaps in coverage.

In order to exclude any bias in this sampling procedure, sampling areas have to be clearly delimited. There are two possibilities:

- a) maps or sketch maps
- b) verbal descriptions for the delimitation of the sampling areas.

Which of the two possibilities is the most suitable to be applied in the individual case, depends first of all on the location of the selected sampling areas. So, for instance, the verbal description of the sampling areas may be entirely sufficient in non-built-up urban areas, while a sketch map will be necessary to cover new construction on the municipal territory which was not subdivided into enumeration districts in 1961.

There were the following prerequisites to the coverage of new construction: The sample design has to guarantee:

- aa) that it can be applied without difficulty up to the next population and occupation census, that the number of borderline cases and of ambiguous cases does not increase with growing distance from the date of the 1961 Population and Occupation Census,
- bb) that doubtful and marginal cases are dealt with according to uniform directives and that it is ensured that these cases are not given any other chances to be selected than the rest of the units, and
- cc) that the partial rotation does not cause any complication with regard to the coverage of new construction either.

2. Coverage of new construction within the inhabited municipal territory

The enumeration districts were in general arranged by streets and house numbers. The limits of the sampling district¹⁾ coincide with the boundaries of the estates they include. All new buildings erected in the sampling districts since 6 June 1961 are automatically covered by the interviewers.

Examples 1 to 4 outline the most frequent cases and indicate the rules applied for covering new construction.

Explanations concerning Examples 1 to 4

Example 1: The sampling district is completely surrounded by other enumeration districts. It is delimited by two streets, one of which has however no buildings as yet. A new building was erected after 6 June 1961 on an already built-up estate of the sampling district.

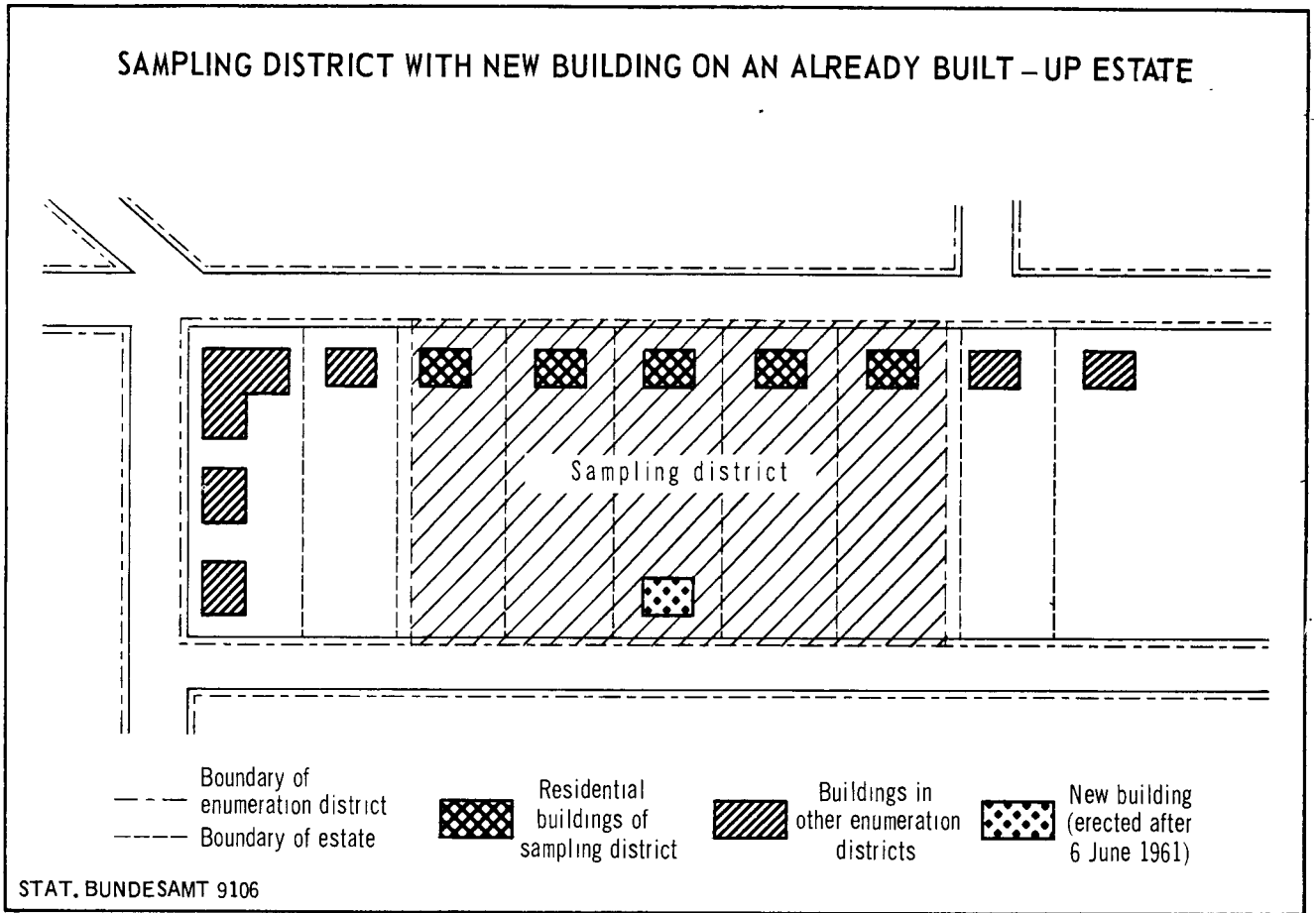
Rule for covering new construction: It has to be established whether any additional new buildings were erected on the already built-up estates of the sampling district (in the example up to the adjoining road at the back). The new buildings have to be covered by the interviewer.

Example 2: The sampling district is on three sides enclosed by other enumeration districts. On these three sides it is delimited by streets. The fourth side of the sampling district is delimited by a footpath which is at the same time the boundary of the estates belonging to the sampling district. At a corner of the sampling district, which consists of blocks of houses, a new building was erected after 6 June 1961.

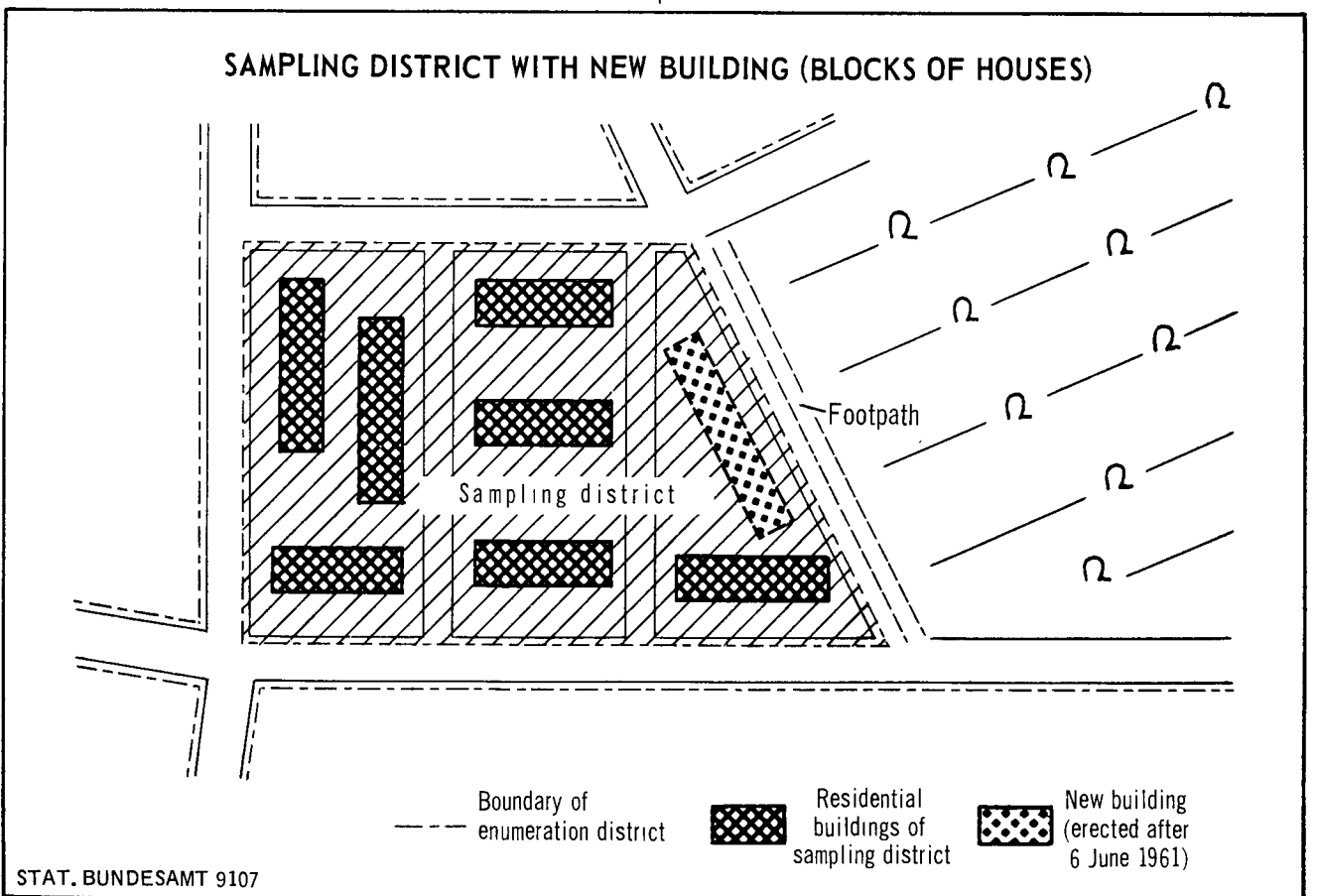
Rule for covering new construction: As it is obvious that the new building belongs to the sampling district, the interviewer

¹⁾The enumeration districts of the 1961 Population and Occupation Census selected for the Microcensus will in the following be referred to as sampling districts.

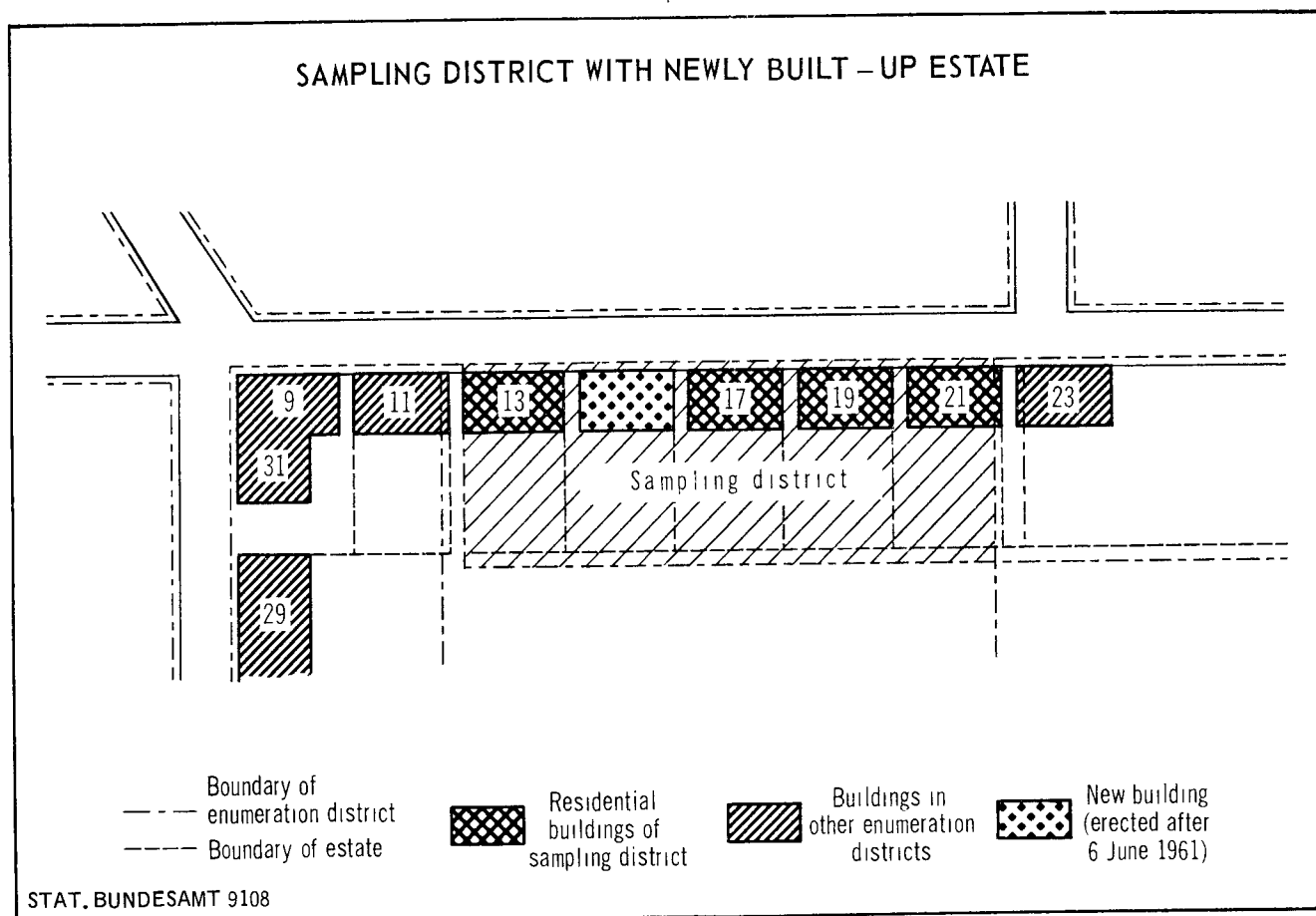
Example 1



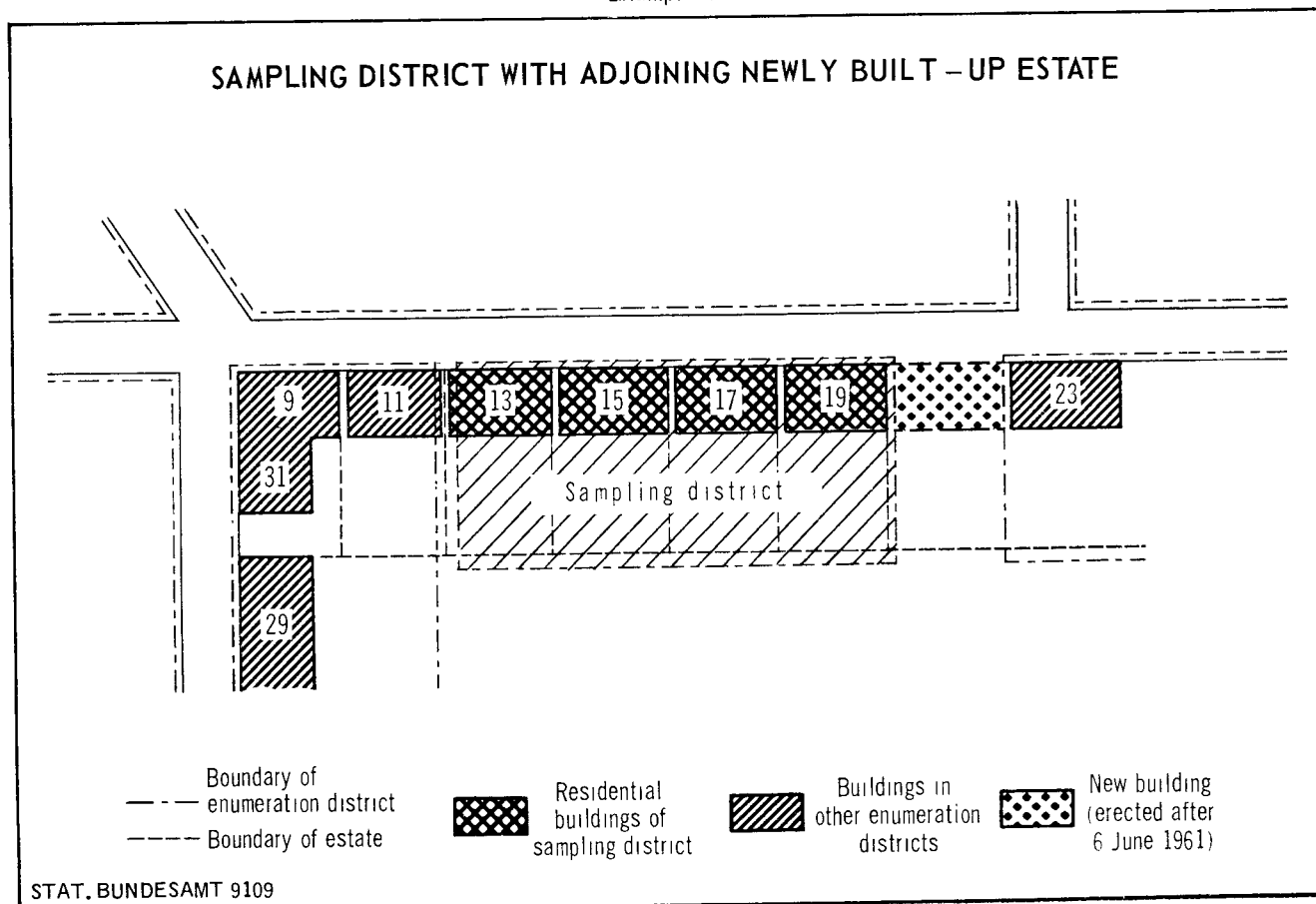
Example 2



Example 3



Example 4



has to include the newly-built house with all its inhabitants.

Example 3: The sampling district is completely surrounded by other enumeration districts. It is delimited by a street as well as by clearly defined estate boundaries. In the middle of the sampling district (formerly a gap in the row of houses) a new building was erected after 6 June 1961.

Rule for covering new construction: As the new building clearly belongs to the sampling district, the interviewer has to include the newly-built house with all its inhabitants.

If an estate with a new building erected after 6 June 1961 bordered on a sampling district, a special rule was applied which is referred to as the "rule of gaps" since there was a gap in the row of houses at the date of the 1961 Census. The application of this rule is illustrated by Example 4.

Example 4: The sampling district is enclosed on three sides by other enumeration districts. On the fourth side - at the upper end of the sampling district, in the direction of the consecutive numbers of the houses - borders an estate on which a new building has been erected after 6 June 1961.

Rule for covering new construction: If the estate on which the new building has been erected has not yet been part of an enumeration district, the estate is included into the sampling district only if this district is adjoining it with a lower house number than other enumeration districts. (Enumeration districts on the opposite side of the street are not considered). The estate mentioned in this example has to be included in the sampling district and covered by the interviewer with all its inhabitants.

In order to apply the above "rule of gaps" correctly, a cartographic fixation or the exact description of both the sampling district and the adjoining enumeration

district is necessary.

Where the sampling district was delimited according to blocks of houses, a procedure corresponding to the mentioned "rule of gaps" was applied to allocate a non-built-up area (within the inhabited municipal territory), provided that this area had not yet been clearly assigned to an enumeration district in the 1961 Census. The pre-condition was however that the (hitherto non-built-up) area to be allocated was not larger than the area of an enumeration district of the population census, i.e. an area on which about as many persons can be accommodated as in an average-sized enumeration district of the population census (30 dwellings or 30 households or 100 persons respectively).

Larger vacant areas within the inhabited municipal territory were first subdivided and then allocated to the adjoining enumeration districts. If therefore a sampling district bordered directly on such an area, a certain part of the vacant area was allocated to it. The subdivision and allocation of vacant areas within the inhabited municipal territory had to be exactly determined in advance, in order to avoid that these areas were allocated several times in later inquiries and thus given a double chance of being selected.

3. Coverage of new construction outside the inhabited municipal territory

In order to select the areas for covering new construction outside the inhabited municipal territory, the Microcensus communities were divided into two groups:

- A. Microcensus communities without zoning or street plans
- B. Microcensus communities with zoning or street plans.

In the Microcensus communities without zoning or street plans (Group A), the area sample intended to cover new construction

was extended to the entire developable area outside the inhabited municipal territory with the following procedure:

The non-built-up municipal territory in the Microcensus communities of less than 10,000 inhabitants was subdivided according to the existing landmarks (e.g. tram lines etc.), into as many about equally large sectors as there were 10%-enumeration districts (excl. institutional enumeration districts) in these communities, and accounting also for soil formations and the probable utilization of the area. One of these sectors was selected at random and subdivided into 10 segments of about the same size. One of these segments was then again selected at random. The selected segment is described as "0-enumeration district".

With this procedure, the municipal territory not considered in the 1961 Population Census is thus subdivided according to the number of standard enumeration districts which had existed in this community available in the 1961 Population Census. The same share of the non-built-up municipal area is allocated to each standard enumeration district.

A community with 4 enumeration districts (excl. institutional enumeration districts) of the 10%-sample of enumeration districts will serve as an example for the arrangement of sectors and segments as well as the selection of the 0-enumeration district.

In the example the sectors are given capital letters and the segments Roman numerals. The marking of the sectors begins in the north-east of the municipal territory and proceeds clockwise. Sector C and in it Segment IX (= 0-enumeration district) were selected at random. The interviewer was instructed to visit this area and to cover all new dwellings built in this segment since 6 June 1961.

A breakdown into sectors is not made in Microcensus communities where there is only one 10%-enumeration district. The entire non-built-up municipal territory is here immediately subdivided into 10 segments.

From these 10 segments, one is then to be selected at random.

The sectors and segments were selected in accordance with the scheme described in Chart 4. The communities were first arranged according to the number of their 10%-enumeration districts (excl. institutional enumeration districts), i.e. according to the number of sectors formed. The group of communities with the same number of sectors was arranged by regions. The sector which was to be selected for the further subdivision into segments was determined as follows:

Chart 4

Sampling scheme for sectors and segments (0-enumeration districts)

Communities with ... 10%-enumeration districts (standard enumeration districts)	Subdivision of the entire non-built-up area outside the uninhabited municipal territory		Selected for 10%-sample survey	
	into directly connected sectors	description of the sectors	sector	segment (= 0-enumeration district)
1	-	-	-	V ¹⁾
1	-	-	-	VI
1	-	-	-	VII
1	-	-	-	VIII
2	2	..B	-	II ¹⁾
2	2	..B	B	III
2	2	..B	-	IV
.
3	3	..B,C	-	X ¹⁾
3	3	..B,C	B	I
3	3	..B,C	C	II
3	3	..B,C	-	III
.
.
4	4	..B,C,D	-	VII ¹⁾
4	4	..B,C,D	B	VIII
4	4	..B,C,D	C	IX
4	4	..B,C,D	D	X
4	4	..B,C,D	-	I
.
.
5	5	..B,C,D,E	-	IV ¹⁾
5	5	..B,C,D,E	B	V
5	5	..B,C,D,E	C	VI
5	5	..B,C,D,E	D	VII
5	5	..B,C,D,E	E	VIII
5	5	..B,C,D,E	-	IX
.
.

1) In every group of communities with the same number of 10%-enumeration districts (excl. institutional enumeration districts) a new random starting point is selected.

In the first community with two 10%-enumeration districts, i.e. two sectors, the sector A is selected for the further subdivision into segments, in the second community the sector B, in the third community again sector A, in the fourth community sector B, etc. For selecting the segments (= 0-enumeration districts), every group of communities with the same number of sectors begins with a new random starting point z (between 1 and 10). The segment to be selected in the sector of the next community is determined by the number z+1 and the segment to be selected in the sector of the following community by the number z+2 (see Chart 4). For communities with one 10%-enumeration district (excl. institutional enumeration districts) this ordering and selection applies only to segments.

The above procedure for arranging and selecting the sectors was used in the same way in communities of 10,000 inhabitants and more - provided that there were no zoning and street plans - so that there resulted in principle a 10%-sample of the area outside the inhabited municipal territory. The segments were not subdivided, but every newly built-up estate located in the selected sector was recorded. Every 10th estate or building is then included into the sample. The basic idea was that in communities of 10,000 inhabitants and more new construction should be observed by means of a 10%-sample survey, in order to achieve a greater accuracy of coverage. Another major aspect in favour of this procedure was that in these communities the building activity is even more lively than in the communities with less than 10,000 inhabitants.

For subdividing the non-built-up municipal territory, ordnance survey maps (1 : 25,000) could be used which exist for the entire Federal Republic and show the boundaries of the municipalities. The described procedures do not presuppose that the maps show the latest zoning status. It need be determined only for the selected area, i.e. segment or sector. If at the time of the 1961 Population and Occupation Census there were already houses in a segment or sector marked as undeveloped, the size of the segment or sector would be reduced by this estate.

The Microcensus communities with zoning or street plans (Group B) comprise practically all communities of 10,000 inhabitants and more. For covering new construction, the procedure of the breakdown by sectors/segments and of selection was also applied here, however only to the area intended for construction according to the zoning plan or to the building land according to the street plan.

Communities with a zoning or street plan which belong to the same stratum of enumeration districts, i.e. the same community size class and have the same number of 10%-enumeration districts (without institutional enumeration districts) could, for reasons of simplification, be combined. When combining communities with 3 or less 10%-enumeration districts (without institutional enumeration districts) it had to be ensured that the communities to be grouped together have also the same reference dates for the Microcensus, since these communities are not included in all of the 1%-inquiries up to 1971. For one of the communities in each of these groups the share of the area in the street plan was then to be selected as the 0-enumeration district as follows:

$$\frac{\text{Number of combined communities of the same enumeration districts}}{10 \times \text{number of 10\%-enumeration districts}} \text{ (excl. institutional enumeration districts)}$$

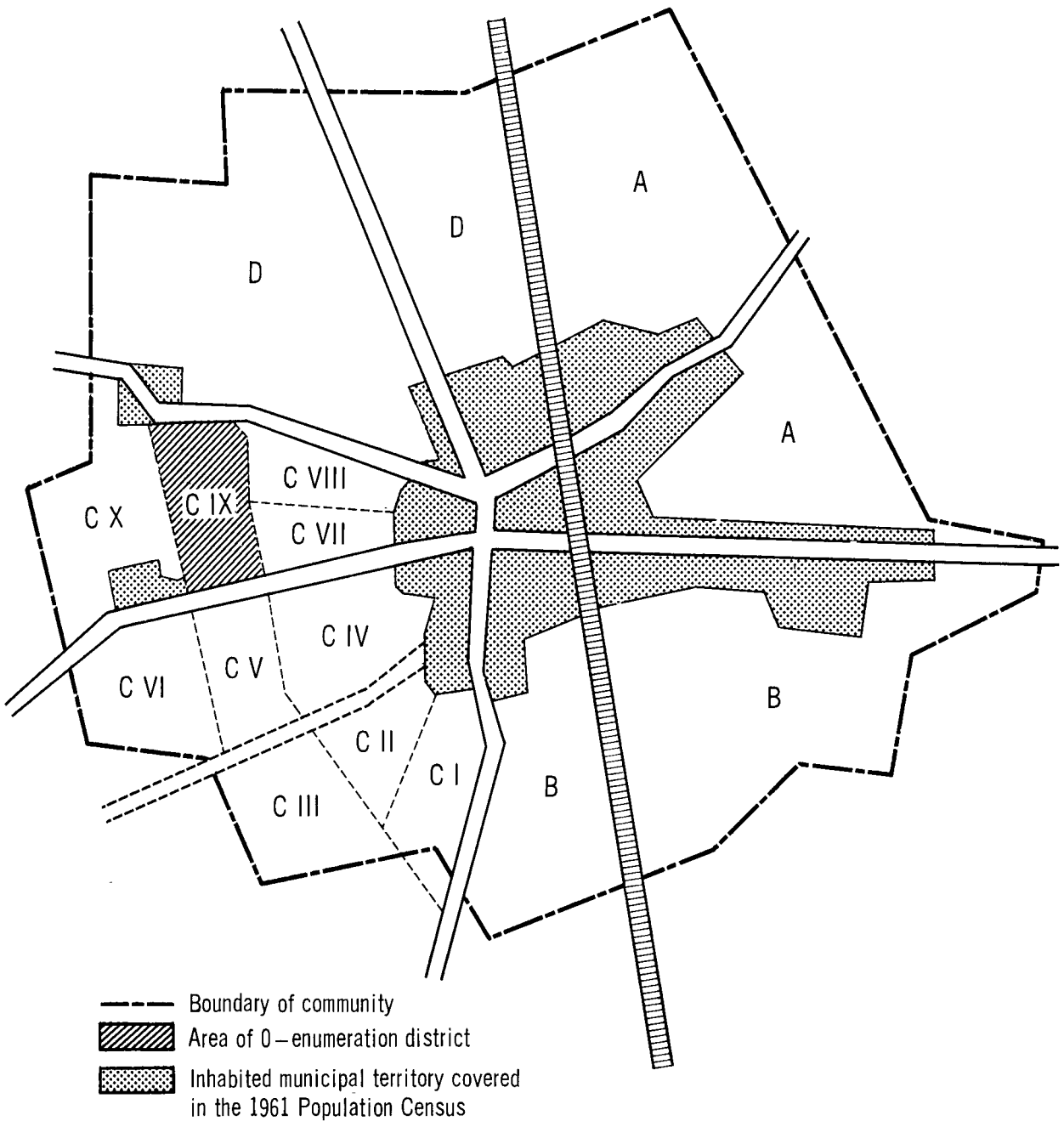
Example:

From 5 communities of the same community size class with 2 enumeration districts in the 10%-sample (excl. institutional enumeration districts) and the same reference date, one community is selected at random and one quarter of the area of the zoning or street plan drawn upon as 0-enumeration district.

Where statistical offices exist in communities of 10,000 inhabitants and more, it was also proceeded in the way that the new housing estates which had developed since

EXAMPLE OF A COMMUNITY WITH FOUR ENUMERATION DISTRICTS
IN THE 10% - SAMPLE OF ENUMERATION DISTRICTS

(without institutional enumeration districts)



6 June 1961 on areas not considered in the system of enumeration districts for the 1961 Population Census were subsequently subdivided into enumeration districts. This subdivision was carried out in the same way as for the 1961 Population Census. In accordance with the procedure used for the 10%-sample of enumeration districts of the 1961 Population Census, a 10%-sample was first drawn from the new enumeration districts and the annual supplementations, from which again 10 % of the enumeration districts were drawn for the 1%-inquiries.

4. Recording of new construction in the marginal regions

Due to the separate recording of new construction on areas inside and outside the built-up municipal territory there arises the borderline problem of covering correctly new buildings on estates located on the outskirts of the community. Sampling rules were laid down also for these cases; it had to be distinguished whether the newly built-up estate on the outskirts directly adjoined the sampling district, i.e. without any separating lines, or whether the newly built-up estate was geographically separated from the sampling district, i.e. by roads or other obvious limits, or whether there was a larger new housing estate the area of which exceeded considerably that of the sampling district.

VI. Rotation plan and selection of enumeration districts up to 1971

1. Rotation plan

Among the conditions to be fulfilled by the new sample design for the Microcensus as described in Section III, the need for a partial rotation of the 1%-sample has already been emphasized. The exchange of only 1/3 of the enumeration districts entails not only a gain in accuracy with

regard to the detection of changes in the results from one inquiry to another, i.e. a reduction of the random error for the balance between the results of two sample surveys, but also a considerable reduction of the preparatory and processing work for the individual inquiries. The conception of the sample design further permits - without infringing the principle of random sampling - to limit substantially the exchange of communities in the rotation.

Due to the change of the reference date from October to April¹⁾, there was no exchange of sampling districts in April 1963. All sampling districts of October 1962 were again used for the inquiry of April 1963. The envisaged partial rotation of the sample therefore began only with the survey of April 1964. Two thirds of the sampling districts were exchanged for this inquiry. Since April 1965 only one third of the sample has been exchanged.

The rotation scheme for the Microcensus sample surveys from 1962 to 1971 is presented in Chart 4. For the 0.1%-sub-samples²⁾ it should be noted that the 0.1%-inquiries - with the exception of the inquiries of 1963/64 and 1964/65 - always followed the first repetitive inquiry.

2. Selection of enumeration districts for the Microcensus inquiries up to 1971

For effecting the rotation it was first necessary as a preparatory measure to divide the 1%-sample of October 1962 into three parts, i.e. to form three 0.33%-sub-samples from the aggregate of sampling districts of October 1962. The sampling districts of October 1962 were arranged for this purpose in accordance with the ordering system of the sample design. The tripartition was then systematically continued with the existing arrangement through all community size classes and

1) See Wirtschaft und Statistik, 1964, No.4, p. 225.- 2) The sub-sample for the 0.1%-samples of enumeration districts is executed in the individual thirds of rotation in conformity with the sample design of the 1%-inquiry.

strata.

The new selection of one third of the enumeration districts of the 1%-sample of enumeration districts, which was needed for the rotation, was in principle effected as follows:

From the remaining enumeration districts of the 10%-sample of enumeration districts in the arrangement according to the sample design of the Microcensus, i.e. from the districts which had not been selected so far for a Microcensus inquiry, those enumeration districts were newly selected which according to the prescribed order followed directly the enumeration districts to be exchanged in the relevant third part.

If, for instance, in a community with four 10%-enumeration districts (excl. institutional enumeration districts) the third enumeration district - according to the order of the Microcensus sample design - had been selected for the first 1%-sample and if this sampling district had to be exchanged, the fourth enumeration district in the prescribed order was newly selected. (See example in Chart 5.)

In order to restrict in the rotation the exchange of sampling communities, the following procedure was used for communities with 2 to 10 standard enumeration districts in the 10%-sample.

(a) If in a sampling community the last enumeration district according to

Chart 5

Example for the rotation in communities with 4 enumeration districts in the 10%-sample of enumeration districts (excl. institutional enumeration districts)

Ser.No. of group of enum. dist. = community (regional ordering of specific com. of 10%-sample)	Order number of enumeration districts											
	in the sampling frame (enum. dist. of 10%-sample)	selected according to the new sample design		selected for rotation								
		provisionally	definitely for the 1%-sample, Oct. 1962	in sequence of 0.33%-samples								
				1st	2nd	3rd	4th	5th	6th	7th	8th	9th
1	1 2 3 4	1	3 ¹⁾	4			1			2		
2	1 2 3 4											
3	1 2 3 4	3	4		1			2			3	
4	1 2 3 4											
5	1 2 3 4											
6	1 2 3 4	1	1			2			3			4

1) Random sampling number "3" = starting point for the definite selection of enumeration districts in the specific stratum.

the prescribed order had to be exchanged, the first enumeration district of this community was newly selected (see example in Chart 5, communities 1 and 3), and so on until all 10% enumeration districts of this Microcensus community had been included.

If in a community all enumeration districts of the 10%-sample of enumeration districts had been included in the selection, the community following in the prescribed order was drawn upon. The selection in the new community began with the enumeration district the order number of which followed that of the enumeration district (of the old community) which was to be exchanged.

The following procedure was used for the rotation in communities with 11 to 20 enumeration districts:

- (b) In communities where only one enumeration district had been selected, the further selection of enumeration districts for the rotation was effected according to procedure (a).

In communities where two enumeration districts had been selected, the enumeration district with the lower order number was exchanged for the next, and that with the higher order number for the preceding enumeration district. If, for instance, in a community with 12 enumeration districts those with order numbers 3 and 10 had definitely been selected, the enumeration districts with the order numbers 4 and 9 respectively had to be selected for the rotation. The rotation procedure was continued accordingly.

For selecting the enumeration districts in communities with 21 and more standard enumeration districts in the 10%-sample, the selection principle was used which applies to the next sampling district following in the prescribed order, i.e. when ex-

changing the last enumeration district of a community it was proceeded to the following community. However, the following rule had to be observed here:

- (c) If in a stratum "communities with 21 and more enumeration districts" the last enumeration district according to the fixed order had to be exchanged, the first enumeration district of this stratum was newly selected (Rule (a), applied to the stratum of enumeration districts).

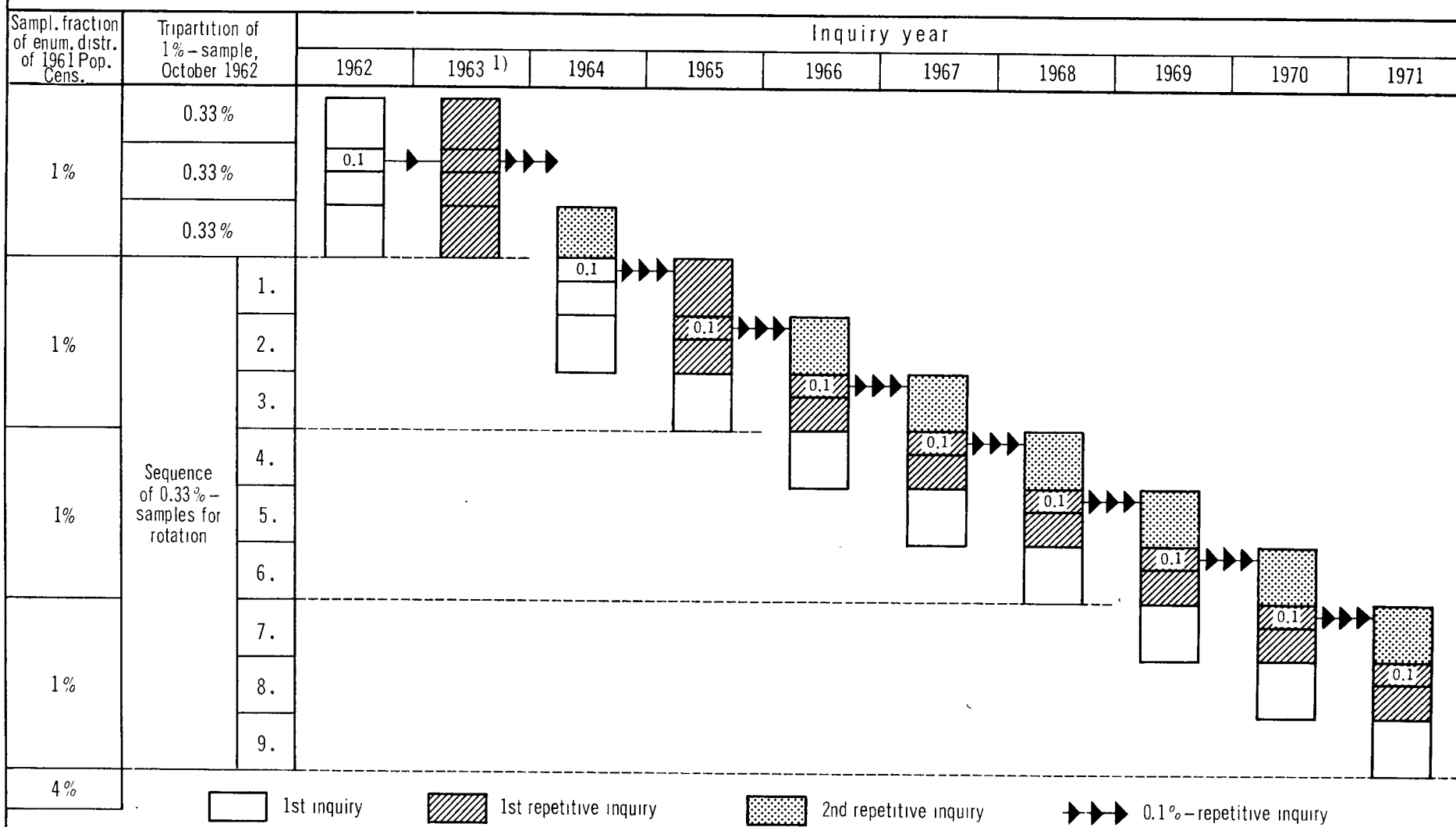
For the further rotations nine 0.33%-samples of enumeration districts have been selected, i.e. altogether three complete 1%-samples. The sequence of the selected 0.33%-samples and their allocation to the various reference dates is presented in Chart 6.

Following the selections of enumeration districts for the Microcensus inquiries up to 1971, two 1%-reserve samples were drawn by means of six further rotations (there were also 0.33%-samples of enumeration districts). The reserve samples were formed as a precautionary measure in case a 1%-sample of enumeration districts should be required in addition to the records used already for the Microcensus inquiries.

3. Rotation of the 0-enumeration districts

For selecting the one third of sampling districts for rotation in communities of less than 10,000 inhabitants, the exchange is synchronized for the area of the 0-enumeration district and the sampling district of the relevant community, i.e. if the sampling district is exchanged, the selected area of the 0-enumeration district in the relevant community changes too, even if no new building has so far been erected on the area of the 0-enumeration district. In order to simplify the coordination, the 0-enumeration district is given the same order number as the

Chart 6
Rotation scheme for the Microcensus sample surveys from 1962 to 1971



1) Change of reference date to April.
For April 1963 the 1% - sample of October 1962 was repeated.

corresponding sampling district¹⁾.

If in a community without a zoning or street plan such a plan is drawn up in the course of the inquiry period, it will not be considered for the selection of O-enumeration districts until the old sampling district is exchanged for the corresponding O-enumeration district. For the new sampling district a O-enumeration district is then selected from the area covered by the zoning or street plan.

The rotation of the O-enumeration districts in communities of 10,000 inhabitants and more is effected irrespective of the sampling districts of the relevant communities. First a regional ordering and tripartition is made for the aggregate of the O-enumeration districts in these communities. For the further 1%-samples there have to be newly selected in every community as many O-enumeration districts as there are O-enumeration districts of the specific communities contained in the third part which has to be exchanged.

VII. Selection of institutional enumeration districts for the Microcensus

1. Preliminary remarks on the selection of institutional enumeration districts

When establishing the sample design it was understood that according to the sample design the principle of area sampling was also to be used as from October 1962 for covering the institutional population. An aspect of special importance was that the proportionate coverage of the institutional population by types of institutions or combined groups of types of institutions had to be ensured. The groups of institutions formed for the sample design therefore represent the most important criterion of stratification for the institutional enumeration districts.

1) For processing, the order number of the O-enumeration district is only marked by "9" as the first digit.

The sampling frame was provided by the special enumeration districts selected for the 10%-sample of enumeration districts for the 1961 Population and Occupation Census, as well as by standard enumeration districts comprising an institution or an establishment of the hotel industry. To permit the proportionally adjusted coverage of the various categories of the population, the two types of institutional enumeration districts were treated separately in the selection.

The principles set out in Section V concerning the coverage of new construction are to be applied accordingly to the selected institutional enumeration districts. For covering new construction it does not matter whether the new building is an institution or a regular residential building. If a regular residential building (not an institutional building) has been erected in a selected institutional enumeration district, it has to be covered just as in the opposite case, where a new institutional building has been constructed in a standard enumeration district. This rule also applies to areas additionally selected in the communities and which had not yet been built up at the time of the 1961 Population Census. In this way the new institutional buildings are also included without systematic error in the selection for the 1%-sample of enumeration districts for the Microcensus.

2. Ordering of institutional enumeration districts

The following arrangement was made in the various Länder separately for the special enumeration districts and for the standard enumeration districts with an institution or an establishment of the hotel industry.

First the institutional enumeration districts were subdivided into 6 groups of institutions. The individual groups of institutions each comprise types of institutions where the share of persons partic-

icipating in economic life is approximately the same.

Quartering of enumeration districts: A - G
 Division of enumeration districts by ten: B

Group No.	Group of institutions
I	Hospitals and psychiatric establishments
II	Homes for the aged and for invalids
III	Workmen's camps, residential homes and camps, etc.
IV	Establishments of the hotel industry
V	Other institutions
VI	Unspecified type of institution

Within the groups of institutions the enumeration districts were arranged according to the number of the institutional population.

3. Breakdown of institutional enumeration districts

In order to avoid for the selection too big clusters due to very large institutional enumeration districts and not to complicate the work of the interviewers, the following breakdown was made for enumeration districts with an institutional population of 150 and more persons:

Enumeration districts with 150 to under 300 persons: halving of enumeration districts

Enumeration districts with 300 to under 1,000 persons: quartering of enumeration districts

Enumeration districts with 1,000 and more persons: division of enumeration districts by ten.

Thus an institutional enumeration district which, for instance, comprises 500 institutional persons, got a fourfold chance of being selected. The very large institutional enumeration districts were subdivided according to the initial letters of the names of the persons living there. For October 1962, for instance, the following groups of letters were used for the individual partition quotas:

Halving of enumeration districts: A - K

4. Selection of enumeration districts for the 1%-sample and the 0.1%-sub-sample

For the 1%-sample a systematic selection of every tenth enumeration district was made from the arranged institutional enumeration districts. The parts of enumeration districts were in the selection equated with the enumeration districts. The selection was made on a continuous basis for all groups of institutions, i.e. it began with the first group and the enumeration districts of the second group followed immediately.

As in the Laender the number of institutional enumeration districts in the 1%-sample is relatively small, the selection for the 0.1%-sub-sample could no longer be effected separately by Laender. The institutional enumeration districts selected for the 1%-inquiry from all the Laender were combined and sorted in the order described above. From the institutional enumeration districts arranged in this way for the 1%-sample of the entire Federal Republic, every tenth enumeration district was again selected systematically; parts of enumeration districts were considered as enumeration districts of their own.

5. Rotation of institutional enumeration districts

The number of institutional enumeration districts selected in the Laender is relatively small. Therefore the adjustment of the institutional population by groups of institutions, as envisaged in the sample design, could not be maintained for the intended tripartition of the 1%-sample of institutional enumeration districts. A partial rotation for the institutional enumeration districts thus is practically impossible. The institutional

enumeration districts selected for October 1962 were therefore retained for the following two 1%-inquiries. A new selection of institutional enumeration districts from the 10%-sample of enumeration districts of the 1961 Population Census was made for the 1%-inquiries of April 1964, 1966, 1968 and was then scheduled for 1970. The 0.1%-sub-samples are newly selected every year.

VIII. Summary

Since October 1962 the Microcensus inquiries have been based on a sample design which in principle is an area sample. In contradistinction to the sampling procedure for the Microcensus inquiries held from October 1957 to October 1961, the new Microcensus samples are drawn according to a one-stage and two-phase sampling procedure. For the 1961 Population and Occupation Census the built-up area in all communities of the Federal Republic and in Berlin (West) was subdivided into enumeration districts (altogether about 600,000 enumeration districts). For special enumerations a 10%-sample (1st phase) was drawn from the regionally arranged aggregate of these enumeration districts. A 10%-sub-sample was then drawn from the 10%-sample of enumeration districts (2nd phase), so that related to the aggregate of all enumeration districts in the Population Census - there was a 1%-sample of enumeration districts. (For the main features of the sample design as of October 1962 see Chart 7.)

The sub-sample was drawn separately for standard enumeration districts and special enumeration districts (enumeration districts comprising an institution).

Before selecting the standard enumeration districts, the communities with at least one standard enumeration district in the 10%-sample were first arranged by 10 community size classes and within the size classes combined to groups of communities with the same number of standard enumeration districts in the

10%-sample (strata of enumeration districts) and then classified by regions. Inside the communities the 10%-enumeration districts were further arranged according to size. The 10%-sub-sample was then systematically drawn with a random sampling number fixed beforehand and independently for every community size class.

All new buildings erected on the estates of the sampling districts since 6 June 1961 (key-date of the 1961 Population Census) are automatically covered by the interviewers. Special rules for the selection have been laid down for the cases where an estate with a new building erected after 6 June 1961 borders on the sampling district, as well as for the partition and allocation of larger non-built-up areas within the housing area.

For covering new construction on areas which had not been considered in the arrangement of enumeration districts for the 1961 Population Census, a special area sample is drawn. For this purpose the Microcensus communities are subdivided into two groups:

- A. Communities without zoning or street plans
- B. Communities with zoning or street plans.

In the communities of Group A the area sample for covering the new construction is extended to the total developable area outside the inhabited municipal territory. The non-built-up municipal territory in the Microcensus communities of this group is subdivided according to existing landmarks into as many sectors of about the same size as there are 10%-enumeration districts (without institutional enumeration districts) in these communities. Only one of these sectors which has to be selected at random is then subdivided into about 10 segments of the same size. One of these segments is then selected at random.

For covering new construction in communities with zoning or street plans (Group B) - this group includes practically all communities of 10,000 inhabitants and more - a subdivision into sectors/segments is also made as

in Group A before selecting a segment, though only for prospective building land. In the communities of 10,000 inhabitants and more it is, if possible, also proceeded in this way that the new housing areas which did not yet exist on 6 June 1961 and were not considered in the system of enumeration districts of the 1961 Population Census are subsequently broken down into enumeration districts. From the newly formed enumeration districts a supplementary sample with a sampling fraction of 1 % is then drawn for the 1%-inquiries.

One third of the sampling districts is exchanged every year for the 1%-inquiry. The sample design permits to restrict considerably the changes of communities for this rotation of the sample without infringing the principle of random selection. For effecting the partial rotation it was first necessary as a preparatory measure to divide the 1%-sample of October 1962 into three equal parts. Three 0.33%-sub-samples were formed from the aggregate of sampling districts. The new selection required for the partial rotation is in principle made as follows: The remaining enumeration districts of the 10%-sample of enumeration districts, i.e. districts not selected so far for an inquiry of the Microcensus, are arranged in accordance with the sample design of the Microcensus. For the new third of the sample those enumeration districts are selected from this aggregate which follow in the order directly the enumeration districts of the relevant third of the sample which is to be exchanged. If the last enumeration district in a Microcensus community has to be exchanged, the first enumeration district of the relevant community is newly selected in order to restrict the change of sampling communities in the rotation. Only if in a community all enumeration districts of the 10%-sample have been covered in this way by the rotation, it is proceeded to the community which follows in the prescribed order.

The special enumeration districts selected for the 10%-sample of enumeration districts for the 1961 Population and Occupation Census as well as the standard enumeration districts with an institution or an establishment

of the hotel industry provided the sampling frame for the selection of institutional enumeration districts. These districts were first subdivided into 6 groups. The individual groups of institutions comprise types of institutions with about the same share of persons participating in economic life. Within the groups of institutions the enumeration districts were arranged according to the number of the institutional population. In order to avoid for the selection too big clusters due to very large institutional enumeration districts, the enumeration districts with 150 and more persons were subdivided. The partition of the very large institutional districts was made according to the initial letters of the names of these persons. For the 1%-sample of the group of institutional enumeration districts, every 10th enumeration district was systematically selected from the ordered institutional enumeration districts of the 10%-sample. Parts of enumeration districts were in the selection equated with enumeration districts. Because of the relatively small number of institutional enumeration districts in the Laender, a partial rotation for the institutional enumeration districts was practically impossible. The institutional enumeration districts selected for October 1962 were therefore retained for two 1%-inquiries. An entirely new selection of institutional enumeration districts is made every 2 years.

E. Calculation of Errors

for the 1%-Microcensus Sample Survey, 1964

I. Definition of the sampling error

Sample surveys involve two types of errors, viz.:

- 1) sampling errors,
- 2) systematic errors.

Sampling errors are deviations due to the fact that only a sample instead of all units of the universe to be studied is actually

Chart 7: Main Features of the Microcensus Sample Design¹⁾

- Area sample as from October 1962 -

	Population and Occupation Census, 1961 Representative Statistics on Households and Families	Sample Survey on Population and Economic Activity (Microcensus)				
		Design for the sample surveys as from October 1962				
		1 %-sample surveys		0.1 %-sample surveys		
Bases of the statistics						
Expected results	total values, proportional values, mean values	total values, proportional values		total values, proportional values		
Application	processing	collection		collection		
Statistical unit	household	household		household		
Enumeration papers	questionnaire	questionnaire		questionnaire		
Collection procedure	completion by respondents	interview		interview		
Tabulation unit	household or family	mostly: person		person		
Sampling procedure						
Stages	one-stage	one-stage		one-stage		
Phases	one-phase	two-phase		three-phase		
Sampling unit	enumeration district	1st phase enumeration district (corresponds to the 10 %-sample for the Household and Family Statistics within the scope of the 1961 Population and Occupation Census)	2nd phase enumeration district 59 200	1st phase enumeration district (corresponds to the 10 %-sample for the Household and Family Statistics within the scope of the 1961 Population and Occupation Census)	2nd phase enumeration district (corresponds to one third of the sample for the preceding 1 %-sample survey)	3rd phase enumeration district 1970
Number of sampling units	592 000		59 200			1970
Sampling frame	list of enumeration districts of the 1961 Population and Occupation Census		card-index of enumeration districts in 10 %-sample			list of enumeration districts in 1 %-sample
Stratification characteristics (number of groups)	federal Land (11)		federal Land(11), community size class (10), enumeration dist. per community(22)			federal Land (11), community size class (10)
Number of strata 2)			202			10
Sampling fractions in the strata	10 %		10 %			30 %
Order characteristics	Kreise, number of enumeration districts per community		regionally, per community according to number of buildings in the enum. dist.			order corresponds to 1 %-sample
Selection technique	systematic		systematic			systematic
Average sampling fraction 3)	10 %		1 % ⁴⁾			0.1 % ⁴⁾
Sample size ³⁾	59 200 enum. dist.		5 920 enum. dist.			592 enum. dist.
Raising procedure	simple expansion or direct evaluation	sex-specific adaptation to the currently calculated population for each federal Land by means of random substitution, then simple expansion		adaptation to structural figures of the preceding 1 %-sample survey		
Notes		Design for the annual survey as from 1962; reference week in Oct., as from 1963 in April. - Special arrangement for enumeration districts with institutions and for areas not inhabited in 1961. - Size of enumeration districts considered by systematic exchange of enumeration districts in communities with 2 to 20 enumeration districts. - Systematic division of the ordered sample into three equal parts to prepare the rotation of enumeration districts.		Design for the quarterly surveys as from 1963; reference weeks as from 1964 in January, July and October.		

1) Extracted from "Das Arbeitsgebiet der Bundesstatistik", November 1966, p. 310, Federal Statistical Office, Wiesbaden.-
2) For federal Land. - 3) According to sample design. - 4) General sampling fraction.

used for the statistical survey.

All other deviations are systematic errors. They are caused by faulty information provided by respondents or interviewers, errors in defining the universe and in allocating the units to specific parts of the universe, loss of units to be covered, as well as errors in the collection and processing of data, unless they are attributable to random selection.

In sampling procedures both types of errors may occur, while total enumerations are subject only to systematic errors.

The exact sampling error can be determined only by a comparison with the results of a corresponding total enumeration. However, in the case of samples drawn according to the principle of random selection, the size of the sampling error can be estimated in the light of the values obtained in the sample survey. This is achieved on the basis of an index number derived from the records of the so-called standard error of the sampling results. Of about 1,000 sampling results from a sample drawn according to the principle of random selection, there is on an average

the sampling error of 683 results smaller than the simple standard error,

the sampling error of 955 results smaller than twice the standard error,

the sampling error of 997 results smaller than three times the standard error.

The size of the standard errors (and thus the order of magnitude for the sampling errors of the results) mainly depends on the sampling procedure used, as well as on the size of the sample and the frequency distribution of the individual characteristics recorded.

II. Calculation of errors for key-date results of a 1%-Microcensus sample survey

About 320 characteristics were selected for a calculation of errors according to the sampling procedure actually used. The relative standard error of estimate x' for the total value of characteristics X with simple expansion was estimated according to the following formula:

$$v_{x'} = \frac{1}{x'} \sqrt{0.99 \cdot 10^4 \sum_{h=1}^L n_h s_{hx}^2}$$

There are:

- L = number of strata (federal Laender, size classes of communities)
- N_h = total number of enumeration districts in the h^{th} stratum
- n_h = number of enumeration districts in the h^{th} stratum of the 1%-sample survey
- x_{ih} = total of enumeration districts = number of persons or cases with the characteristics X in the i^{th} enumeration district of the h^{th} stratum

$$s_{hx}^2 = \frac{1}{n_h - 1} \sum_{i=1}^{n_h} (x_{hi} - \bar{x}_h)^2$$

Variance of totals of enumeration districts for characteristics X in the h^{th} stratum

$$\bar{x}_h = \frac{1}{n_h} \sum_{i=1}^{n_h} x_{hi}$$

Mean value of the totals of enumeration districts

$$x' = 100 \sum_{h=1}^L n_h \bar{x}_h$$

Estimate for the total value of characteristics X (raised sampling result)

This approach corresponds to the actual sampling procedure of the 1%-Microcensus sample survey. It takes into consideration the selection of complete enumeration districts (clusters of processing units) and the stratification of enumeration districts by community size classes in the federal Laender. However it is not possible to consider here the ordering of enumeration districts by size which was effected in order to reduce the sampling error. For this reason the standard errors may in some cases be even more

favourable than with this estimation.

The voluminous calculation of errors was made on the computers of the Federal Statistical Office.

The results of the calculation of errors for a 1%-sample of enumeration districts in the Federal Republic are recorded in Table 8.

The calculation of errors was performed for the 1%-sample of April 1964. The results should however also apply as estimates to the subsequent surveys.

Moreover, the standard error was also estimated for a simple and unstratified random selection of the processing units. According to the binomial approach the relative standard error of a 1%-sample is approximately:

$$v_{x'}(\text{Bin}) = 10 \sqrt{\frac{1 - p_X}{x'}}$$

where

p_X = proportionate value of the processing units - persons or cases - with the characteristics X in the sample (estimate for the share of processing units with the characteristics X in the aggregate of processing units)

x' = raised sampling result of characteristics X.

The results of the error calculation have shown that the relative standard error $v_{x'}$, computed according to the actual sampling procedure, is always larger than the relative standard error according to the binomial approach. There is:

$$v_{x'} = b \cdot v_{x'}(\text{Bin}) \text{ and } b > 1 \text{ for all characteristics.}$$

By means of the correction factor b, which differs for the various characteristics, the standard error of the Microcensus results may by approximation also be estimated with the binomial approach.

The correction factors which have been es-

timated on the basis of the error calculation for the included 320 characteristics are also presented in Table 8 with the results of the error calculation.

III. Estimation of the relative standard error on the basis of cell frequencies

An analysis of the error calculation has shown that the correction factor for the binomial approach does not have a constant value for all characteristics, but that it increases in an approximately linear way with the proportional value p_X (proportion of processing units - persons or cases - with the characteristics X in the aggregate of processing units). The increase differs, however, for the various groups of characteristics.

Considering the incremental function for the correction factor, Chart 9 presents for the individual groups of characteristics the relative standard errors in percentages which have been estimated according to the binomial approach for the federal results depending on the cell frequencies.

By means of these error curves an approximate estimation can be made of the relative standard errors in the Microcensus results of a key-date survey for the Federal Republic. The results have to be allocated to one of the four groups of characteristics.

Example:

In the Federal Republic the number of economically active men in production industries is about 9.6 millions. Chart 9 shows on the error curve E for this frequency a relative standard error of 0.8 per cent.

It can further be seen from the graph of the error curves that the relative standard error for raised frequencies of under 5,000, i.e. for less than 50 persons or cases in the sample, exceeds 20 % for all groups of characteristics. Where the results are subject to a relative standard error of more than 20 %, they have only little significance and should therefore not be used for comparisons.

IV. Comparison of two key-date results of a characteristics

For estimating the sampling error of the index number ¹⁾ from two key-date results of a characteristics, it has to be distinguished between interdependent and independent samples. As merely 1/3 of the 1%-Microcensus sample is exchanged each year, only those samples are independent of each other which are at least three years apart.

About the following estimates apply to the relative standard error of the index number from two key-date results:

Chart 8: Relative standard error of the index number from two key-date results

Interval between the surveys	Relative standard error of the index number
1 year	0.9 times the relative standard error of a key-date result
2 years	1.2 times " "
3 years and more	1.4 times " "

In order to determine whether the difference between two key-date results is still to be regarded as random or rather as significant, i.e. as a genuine increase or decrease, the following criterion will be applied: The difference between two key-date results cannot be regarded as secured until the difference |1-index number| is at least twice the standard error of the index number (level of significance = 5 %).

Example:

According to the results of the Microcensus, the number of economically active persons in the agriculture of the Federal Republic was 3.172 millions in April 1963 and 3.042 millions in April 1964. The index number for the change from 1963 to 1964 is 0.96. This corresponds to a decrease of 4 % as against 1963. According to Chart 8 the relative standard error for the index number is 0.9 times the relative standard error of a key-date result. For the key-date result of the characteristics economically active persons in agriculture, a relative

1) Index number = $\frac{x'_2}{x'_1}$, and x'_i = raised key-date result at the time i

standard error of 2.3 % was calculated. Consequently, the relative standard error of the index number is $0.9 \cdot 0.023 = 0.0207$ and the absolute twofold standard error of the index number $2 \cdot 0.0207 \cdot 0.96 = 0.04$. As the difference $|1 - 0.96| = 0.04$ is not smaller than twice the standard error of the index number, the difference between the two Microcensus results can already be regarded as secured (level of significance = 5 %).

V. Estimation of the relative standard error for Laender results

The error curves for the relative standard error, as shown in Chart 9, apply only to federal results from a 1%-sample of enumeration districts. However, it is also possible to estimate the relative standard errors for Laender results on the basis of cell frequencies according to the binomial approach as explained in Section II.

Relative standard error
in per cent = $b \cdot v_{x'}(\text{Bin}) \cdot 100$

There are

$v_{x'}(\text{Bin})$ Relative standard error according to the binomial approach (see also formula (2) in Section II)

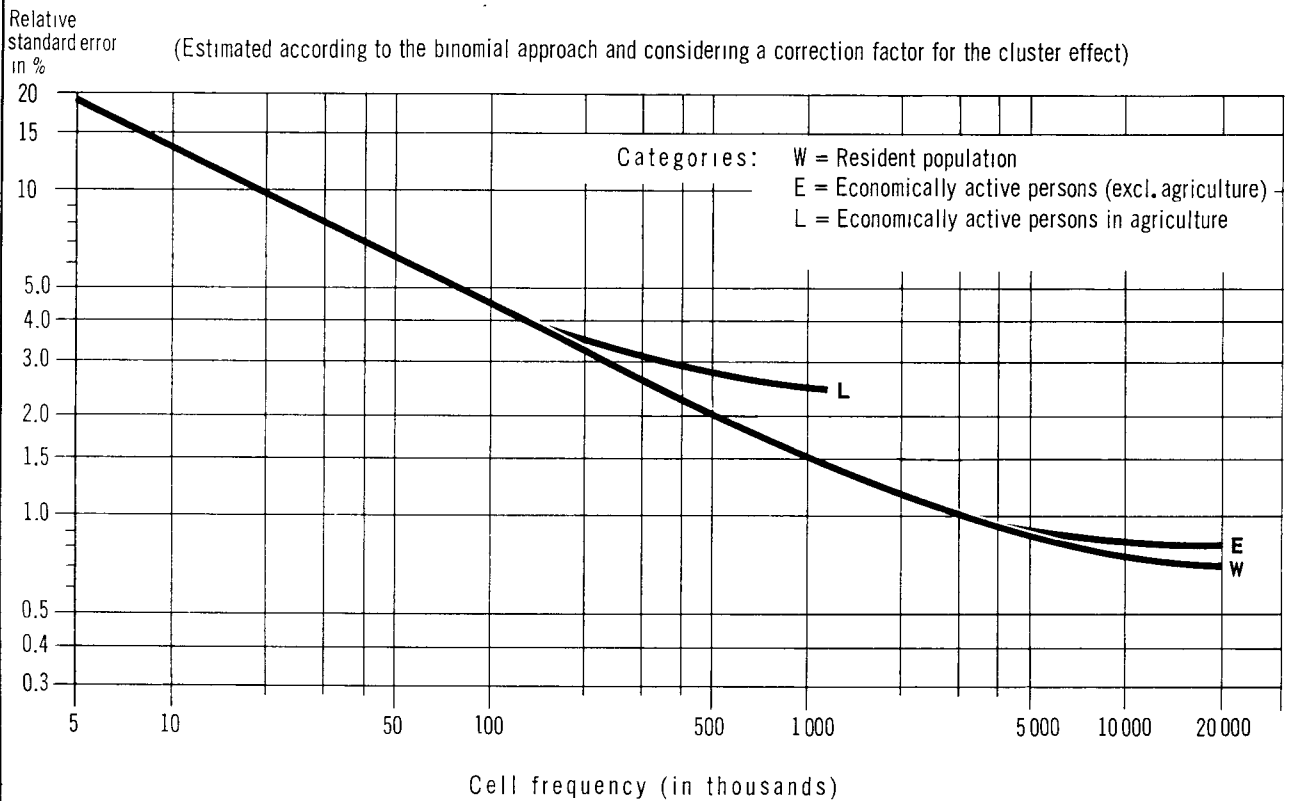
b Correction factor for the binomial approach

The correction factor b for the binomial approach can be derived either from the results of the error calculation for the 1%-Microcensus sample survey of 1964 (see page 44 et seq.) or by approximation from Table 7.

Table 7: Correction factor b as related to the proportional value p_x

Proportional value p_x in per cent	Correction factor b for groups of characteristics		
	W resident population by age and sex	E economically active persons (excl. agriculture)	L economically active persons in agriculture
0.01	1.3	1.3	1.3
0.05	1.3	1.3	1.3
0.1	1.3	1.3	1.4
0.5	1.3	1.3	1.6
1.0	1.4	1.4	2.0
5.0	1.7	1.8	4.4
10.0	2.1	2.2	7.9
50.0	5.1	5.9	-

Chart 9: **RELATIVE STANDARD ERROR
OF A 1% - MICROCENSUS SAMPLE OF ENUMERATION DISTRICTS
FOR FEDERAL RESULTS**



STAT. BUNDESAMT 9110

Example:

In April 1964 there were in Hesse (raised number) about 850,000 economically active women. The aggregate resident population was about 5,000,000. Accordingly, the proportional value $p_x = 850,000:5,000,000 = 0.17 = 17\%$. Thus $v_x'(Bin) = 10\sqrt{0.83:850,000}$

$= 0.01$. From the figures in Column E of Table 7 a rough estimate can be made of correction factor b the value of which is $b = 2.7$. There follows for the relative standard error of the sample survey result "850,000 economically active women" the value $v_x' = 0.01 \cdot 2.7 \cdot 100 = 2.7\%$ or, as an absolute figure, 23,000.

Table 8: Results of the error calculations for the 1%-Microcensus Sample Survey, 1964 for the Federal Republic

Characteristics		Relative standard error in %	Correction factor for the binomial approach	Characteristics		Relative standard error in %	Correction factor for the binomial approach
Resident population				Active population			
	total	0.7	-				
male and female together	0 to 4 years	1.0	2.2	male	25 to 39 years	0.9	2.2
	5 " 9 "	1.1	2.4		40 " 64 "	0.7	1.9
	10 " 11 "	1.3	1.6		65 and over	1.6	1.3
	12 " 13 "	1.4	1.8	together	0.7	3.3	
	14 " 15 "	1.4	1.7				
male, married	16 to 20 years	13.1	1.1	female	under 14 years	15.5	5.0
	21 " 24 "	2.1	1.2		15 to 19 years	1.3	1.4
	25 " 39 "	1.0	2.1		20 " 24 "	1.2	1.4
	40 " 54 "	0.8	1.7		25 " 39 "	1.1	1.8
	55 " 64 "	0.8	1.5		40 " 64 "	0.9	1.8
	65 " 74 "	1.0	1.3		65 and over	2.4	1.4
	75 and over	1.6	1.1	together	0.8	2.7	
16 years and over	0.7	2.9	total	0.7	4.7		
male, single	16 to 20 years	1.3	1.6	Non-active population			
	21 " 24 "	1.4	1.5	male	under 14 years	1.0	2.7
	25 " 39 "	1.5	1.7		15 to 19 years	2.7	1.9
	40 " 54 "	2.3	1.3		20 " 24 "	4.4	2.0
	55 " 64 "	2.2	1.3		25 " 39 "	7.6	2.9
	65 " 74 "	2.1	1.1		40 " 64 "	1.9	1.6
	75 and over	1.8	1.1		65 and over	1.0	1.5
16 years and over	1.0	2.4	together	1.0	3.2		
male	total	0.7	3.6	female	under 14 years	1.0	2.5
female, married	16 to 20 years	3.1	1.1		15 to 19 years	2.2	1.6
	21 " 24 "	1.5	1.3		20 " 24 "	1.9	1.4
	25 " 39 "	0.9	2.1		25 " 39 "	1.1	2.0
	40 " 54 "	0.8	1.7		40 " 64 "	0.8	2.0
	55 " 64 "	0.9	1.4		65 and over	0.9	1.9
	65 " 74 "	1.1	1.3	together	0.7	4.0	
	75 and over	2.2	1.1				
16 years and over	0.7	2.9	Economically active men				
female, single	16 to 20 years	1.2	1.5	agriculture and forestry	under 24 years	3.6	1.5
	21 " 24 "	1.6	1.4		25 to 39 years	2.7	1.7
	25 " 39 "	1.8	1.7		40 " 64 "	2.4	1.9
	40 " 54 "	1.1	1.4		65 and over	3.0	1.4
	55 " 64 "	1.1	1.4	together	2.3	2.7	
	65 " 74 "	1.1	1.5	production industries	under 24 years	1.2	1.6
	75 and over	1.5	1.6		25 to 39 years	1.1	2.1
16 years and over	0.8	2.6	40 " 64 "		1.0	1.9	
			65 and over		2.4	1.2	
female	total	0.6	3.9	together	0.9	2.9	
Active population				trade and transport	under 24 years	1.8	1.2
male	under 14 years	6.3	2.1		25 to 39 years	1.6	1.5
	15 to 19 years	1.3	1.4		40 " 64 "	1.5	1.6
	20 " 24 "	1.2	1.5				

Characteristics		Relative standard error in %	Correction factor for the binomial approach	Characteristics		Relative standard error in %	Correction factor for the binomial approach
Economically active men				Economically active women			
trade and transport	65 and over	3.4	1.1	agriculture and forestry	self-employed	3.8	1.5
	together	1.2	1.9		unpaid family workers	2.4	2.8
others (services)	under 24 years	2.2	1.1		officials, salaried employees (incl. apprentices)	12.1	1.1
	25 to 39 years	1.7	1.5		wage earners (incl. apprentices)	4.2	1.4
	40 " 64 "	1.4	1.7				
	65 and over	3.2	1.1	production industries	self-employed	3.8	1.1
	together	1.2	2.0	unpaid family workers	3.0	1.3	
	total	0.7	3.2	officials, salaried employees (incl. apprentices)	1.5	1.3	
				wage earners (incl. apprentices)	1.9	2.9	
Economically active women				trade and transport	self-employed	2.6	1.2
agriculture and forestry	under 24 years	3.7	1.5	unpaid family workers	2.8	1.3	
	25 to 39 years	2.6	1.7	officials, salaried employees (incl. apprentices)	1.3	1.4	
	40 " 64 "	2.3	2.1	wage earners (incl. apprentices)	2.4	1.3	
	65 and over	3.6	1.4	others (services)	self-employed	3.0	1.2
	together	2.3	2.9	unpaid family workers	3.3	1.3	
production industries	under 24 years	1.9	1.8	officials, salaried employees (incl. apprentices)	1.9	2.2	
	25 to 39 years	2.0	2.2	wage earners (incl. apprentices)	1.5	1.5	
	40 " 64 "	1.4	1.5				
	65 and over	5.2	1.5				
	together	1.4	2.7				
trade and transport	under 24 years	1.6	1.3	Economically active men by hours worked			
	25 to 39 years	1.8	1.2	self-employed	0 hrs. worked	5.6	1.1
	40 " 64 "	1.5	1.3		1-14 " "	6.7	1.1
	65 and over	4.9	1.1		15-23 " "	5.3	1.1
together	1.1	1.5	24-39 " "		4.0	1.1	
others (services)	under 24 years	1.7	1.5		40-45 " "	2.3	1.2
	25 to 39 years	2.1	1.8		46-69 " "	1.5	1.7
	40 " 64 "	1.4	1.5		70 and over	2.4	2.0
	65 and over	4.6	1.2	unpaid family workers	0 hrs. worked	23.9	1.2
together	1.3	2.2	1-14 " "		11.3	1.2	
total	0.8	2.8	15-23 " "		8.2	1.2	
Economically active men					24-39 " "	7.1	1.1
agriculture and forestry	self-employed	2.4	2.2		40-45 " "	5.9	1.1
	unpaid family workers	3.3	1.8		46-69 " "	3.8	1.5
	officials, salaried employees (incl. apprentices)	8.6	1.4	70 and over	4.7	1.7	
	wage earners (incl. apprentices)	3.3	1.6	dependently employed persons	0 hrs. worked	2.5	1.4
	production industries	self-employed	1.7		1.3	1-14 " "	5.7	1.1
unpaid family workers	7.0	1.1	15-23 " "		4.8	1.1	
officials, salaried employees (incl. apprentices)	1.5	1.9	24-39 " "		2.9	1.3	
wage earners (incl. apprentices)	1.0	2.8	40-45 " "		0.8	2.8	
trade and transport	self-employed	1.8	1.3	46-69 " "	1.2	1.9	
	unpaid family workers	7.2	1.1	70 and over	2.9	1.2	
	officials, salaried employees (incl. apprentices)	1.7	1.8	Economically active women by hours worked			
	wage earners (incl. apprentices)	1.6	1.5	self-employed	0 hrs. worked	8.3	1.1
others (services)	self-employed	2.2	1.4		1-14 " "	6.4	1.1
	unpaid family workers	9.2	1.1		15-23 " "	5.6	1.1
	officials, salaried employees (incl. apprentices)	1.6	2.0		24-39 " "	4.5	1.1
	wage earners (incl. apprentices)	1.8	1.4		40-45 " "	3.6	1.2
			46-69 " "		2.4	1.2	
			70 and over	4.0	1.3		
			unpaid family workers	0 hrs. worked	9.1	1.2	
				1-14 " "	5.8	1.6	

Characteristics		Relative standard error in %	Correction factor for the binomial approach	Characteristics		Relative standard error in %	Correction factor for the binomial approach
Economically active women by hours worked				Mothers with children under 18 years			
unpaid family workers	15-23 hrs.worked	3.7	1.4	non-active, single	1 child	3.5	1.0
	24-39 " "	3.6	1.8		2 children	5.6	1.0
	40-45 " "	3.3	1.		3 " "	8.7	1.1
	46-69 " "	2.5	2.2		4 and more	11.2	1.1
	70 and over	4.3	2.5	Resident population (male)			
dependently employed persons	0 hrs.worked	3.8	2.3	economically active	means of subsistence: economic activity	0.7	3.1
	1-14 " "	2.7	1.1		unemployment benefits	33.2	1.7
	15-23 " "	1.9	1.2		pensions etc.	2.4	1.2
	24-39 " "	1.6	1.4		family members	1.6	1.3
	40-45 " "	1.1	2.4	not gainfully active	means of subsistence: unemployment benefits	10.2	1.5
	46-69 " "	2.6	2.3		pensions etc.	12.3	1.1
70 and over	6.0	1.5	family members	10.3	1.1		
Activity cases				non-active	means of subsistence: pensions etc.	1.0	1.6
self-employed	0 hrs.worked	4.6	1.3		family members	0.9	2.5
	1-14 " "	4.0	1.5	principal means of subsistence from	economic activity	0.7	3.1
	15-23 " "	2.9	1.6		unemployment benefits	11.3	1.8
	24-39 " "	3.0	1.3		pensions etc.	0.9	1.6
	40-45 " "	2.1	1.3	family members	0.9	2.6	
	46 and more	1.3	2.0	Resident population (female)			
unpaid family workers	0 hrs.worked	8.3	1.4	economically active	means of subsistence: economic activity	0.8	2.6
	1-14 " "	5.1	1.9		pensions etc.	2.5	1.3
	15-23 " "	3.2	1.8		family members	1.5	1.5
	24-39 " "	3.4	1.9	not gainfully employed	means of subsistence: unemployment benefits	9.9	1.2
	40-45 " "	3.2	1.8		pensions etc.	11.2	1.1
46 and more	2.3	2.7	family members	8.1	1.1		
dependently employed persons	0 hrs.worked	2.8	2.3	non-active	means of subsistence: pensions etc.	0.9	1.9
	1-14 " "	2.5	1.2		family members	0.8	3.6
	15-23 " "	1.8	1.2		principal means of subsistence from	economic activity	0.8	2.6
	24-39 " "	1.5	1.5	unemployment benefits		9.9	1.2
	40-45 " "	0.8	3.5	pensions etc.	0.8	1.9	
46 and more	1.2	2.3	family members	0.8	3.7		
Households				Resident population (total)			
	1 person	1.0	2.4	principal means of subsistence from	economic activity	0.7	4.3
with children under 18 years	2 persons	2.3	1.1		unemployment benefits	8.6	1.7
	3 " "	1.0	1.7		pensions etc.	0.8	2.3
	4 " "	1.0	1.6		family members	0.8	5.0
	5 and more	1.2	1.8				
without children	2 persons	0.8	1.9				
	3 " "	1.0	1.3				
	4 " "	1.5	1.1				
	5 and more	2.7	1.2				
Mothers with children under 18 years							
economically active, married	1 child	1.3	1.4				
	2 children	1.6	1.3				
	3 " "	2.3	1.2				
	4 and more	3.2	1.3				
economically active, single	1 child	2.5	1.1				
	2 children	4.6	1.0				
	3 " "	9.1	1.0				
	4 and more	17.7	1.1				
non-active, married	1 child	1.1	1.6				
	2 children	1.2	1.5				
	3 " "	1.7	1.3				
	4 and more	2.4	1.4				

Results of the Microcensus and its Supplementary Programmes

F. General Review of the Microcensus Results, 1957 to 1967

The results of the 1%-inquiries give a general idea of the total labour force potential and provide a detailed picture of the structure of the active population in the Federal Republic of Germany. The inquiries which are made three times a year with a sampling fraction of 0.1 % are to provide short-term information on changes in the participation in economic life and in the population itself. Supplementary programmes are carried through within the framework of the current Microcensus programme (basic programme) for the purpose of recording data on questions of topical interest in social and economic policy. The supplementary inquiries conducted in the years 1962 to 1966 will be dealt with separately later in the text.

It is another task of the Microcensus to provide internationally comparable figures on the potential labour force in accord with the recommendations of the OECD and of the International Labour Office.

In the years 1957 to 1962 the 1%-inquiry used to be held in October. In 1963 it was advanced to the month of April. The shift was made mainly for the following reasons: The change-over to an earlier month of the year made the results better comparable with the findings of the 1961 Population Census. As the Microcensus is to update the results of the Population Census during the intercensal years, it became necessary to adapt, as far as possible, the date of the Microcensus inquiry to that of the Population Census. It further appeared desirable to have the employment figures of the Microcensus available by the end of each year.

The principal employment data derived from the Microcensus inquiries held from 1957 to 1967 will be briefly outlined below. From October 1957 to April 1967, the resident population increased by more than 10 %, which compares with an increase of only about 1 %

for the active population. The number of economically active women rose by 3 %, whereas the number of economically active men fell by 2 %. Due to the economic recession, the number of the active population in 1967 was below the level of 1966 (see Table 9). Apart from certain temporary influences resulting from the economic situation, the less extensive increase of the active population as compared with the rise in the general population may be attributed to the change in the age structure of the general population and to the decrease of the activity rates (proportion of economically active persons in the total of persons within one age year or one age group respectively) in the younger age groups as a consequence of the longer school education.

The extent of the economic and social changes is reflected by the trend in the proportions of the active population by sectors of economy, on the one hand, and by status in occupation, on the other. As compared with the figures for 1957, the total of persons occupied in agriculture and forestry decreased by 35 % up to 1957, whereas the number of persons working in trade, transport, communications as well as in the service sector increased by 17 %. The number of persons occupied in the production industries rose by 8 % from 1957 to 1966 and by 6 % from 1957 to 1960, while there remained only a minor increase between 1960 and 1966. The downward trend caused by the recession mentioned above may clearly be seen from the 1967 results (see Chart 10 on p.51).

The extensive movement of active persons from agriculture and forestry to other sectors of the economy, the steady growth of the service sector, and the changes in the occupational activities experienced in all sectors as a result of the mechanization process have substantially altered the social and sociological structure of the economically active population. The proportions of self-employed and family workers in the total of economically active persons have decreased steadily, which also holds

good for the proportion of wage earners. When comparing the results of 1957 with those of 1967, there is during this period a decrease of 11% for the self-employed, of 27 % for the family workers and of 6 % for the wage earners, whereas the number of salaried employees increased by 42 % (see Chart 11 on p.51).

Information is collected in the Microcensus not only on the number of the active population, but also on the hours worked during the report week. This is understood to be the time which had been spent on any work for pay or profit, and which is in most cases identical with the time spent at the place of work. According to the inquiry of October 1957, the hours worked by the active population in their main economic activities during the report week averaged 47.5, which compares with an average of 43.4 hours during the report week of April 1957. The inquiries conducted from 1957 to 1967 show that the average weekly hours worked have steadily declined in all economic sectors and for all kinds of occupational status.

(See Tables 9-15 on pages 69-72.)

G. Employment

I. Employment of mothers and care of their children (1962)

Among the information collected in the first supplementary inquiry to the Microcensus of October 1962 were data on the "Care of children (under 14 years) of economically active mothers"¹⁾. This was the first inquiry providing rather precise information on how these children are looked after while their mothers are at work²⁾. It was also for the first time that an interrelated and interdependent system of several inquiry stages was

1) The legal foundation was provided by the Law Amending the Law on the Execution of a Sample Survey on Population and Economic Activity (Microcensus) of 5 December 1960, Bundesgesetzblatt I, p. 873.- 2) For a further presentation of the results see Dr. H. Schubnell, "Die Erwerbstätigkeit von Frauen und Müttern und die Betreuung ihrer Kinder" (Economically active women and mothers and the custody of their children), in "Wirtschaft und Statistik", No. 8, August 1964, p. 444 - 456, 458* - 459*.

employed within the framework of the Microcensus. It was the purpose of the stage proceeding directly from the basic programme to determine how the children of mothers working in other sectors than agriculture and forestry are looked after. Where the entries made in the basic questionnaires led to a household in which there lived mothers working in other sectors than agriculture and forestry and having children under 14 years of age, a supplementary questionnaire had to be completed.

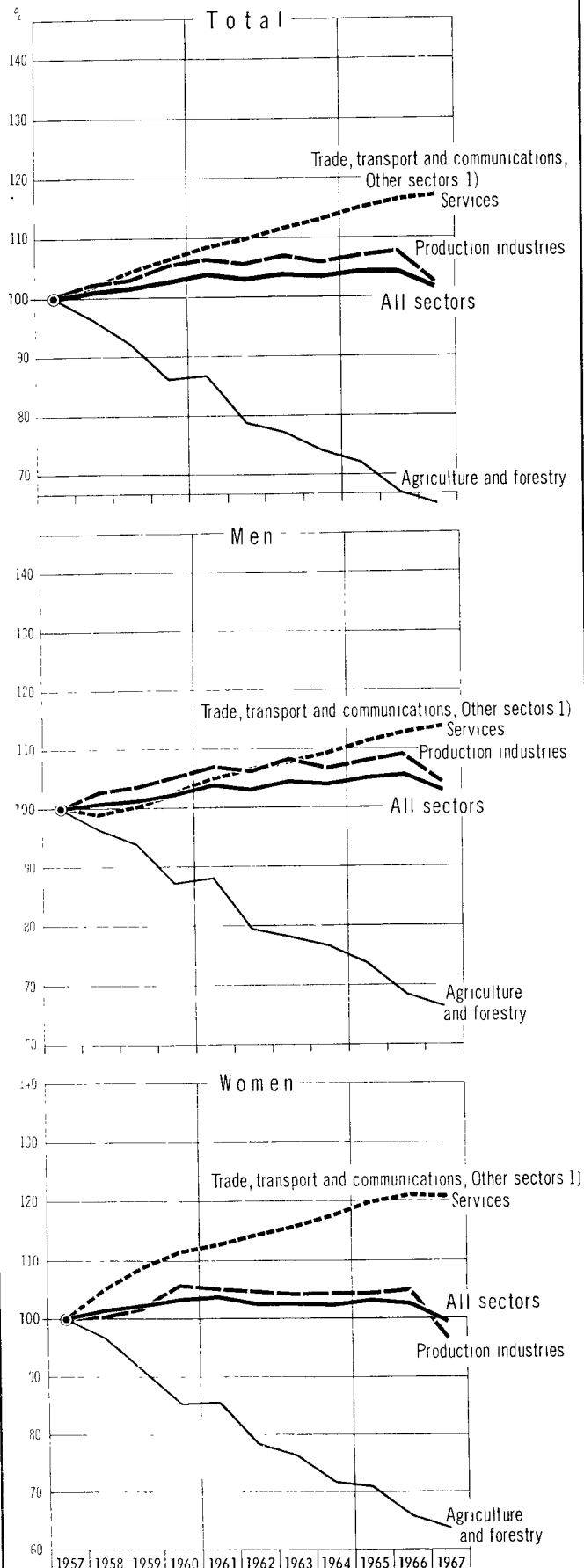
According to the Microcensus, there lived in the Federal Republic including Berlin (West) in October 1962 24.2 million women aged 13 years and over, of whom 9.4 millions or 39 % were economically active. These figures do not include the population living in institutions (hereafter referred to as institutional population). The lower limit was fixed at the age of 13 in order to take into account only those women who were old enough to participate in economic life, because girls at the age of thirteen can be employed either as family workers or, under certain conditions, as apprentices.

Of the 9.4 million working women, 24.7 % care for children under 14 years of age, which compares with 29.6 % for the 14.7 million non-active women. A total of 690,000 or roughly 30 % of the mothers with children of under 14 years are occupied in agriculture and forestry, as against 1.6 millions in the other sectors of the economy.

Of the non-active mothers with children under 14 years of age, 96.5 % were married. The corresponding rates among active mothers in agriculture and in other sectors of the economy were 96.4 % and 85.6 % respectively.

A total of 58% of the working mothers had to care for one child, 27 % for two children, and 15 % for three and more children of under 14 years, whereas 50 % of the non-active mothers had one child, 32 % two children, and 18 % three and more children under 14 years of age. So the mothers participating in economic life had on an average to bring up less children at ages of under 14 years than the

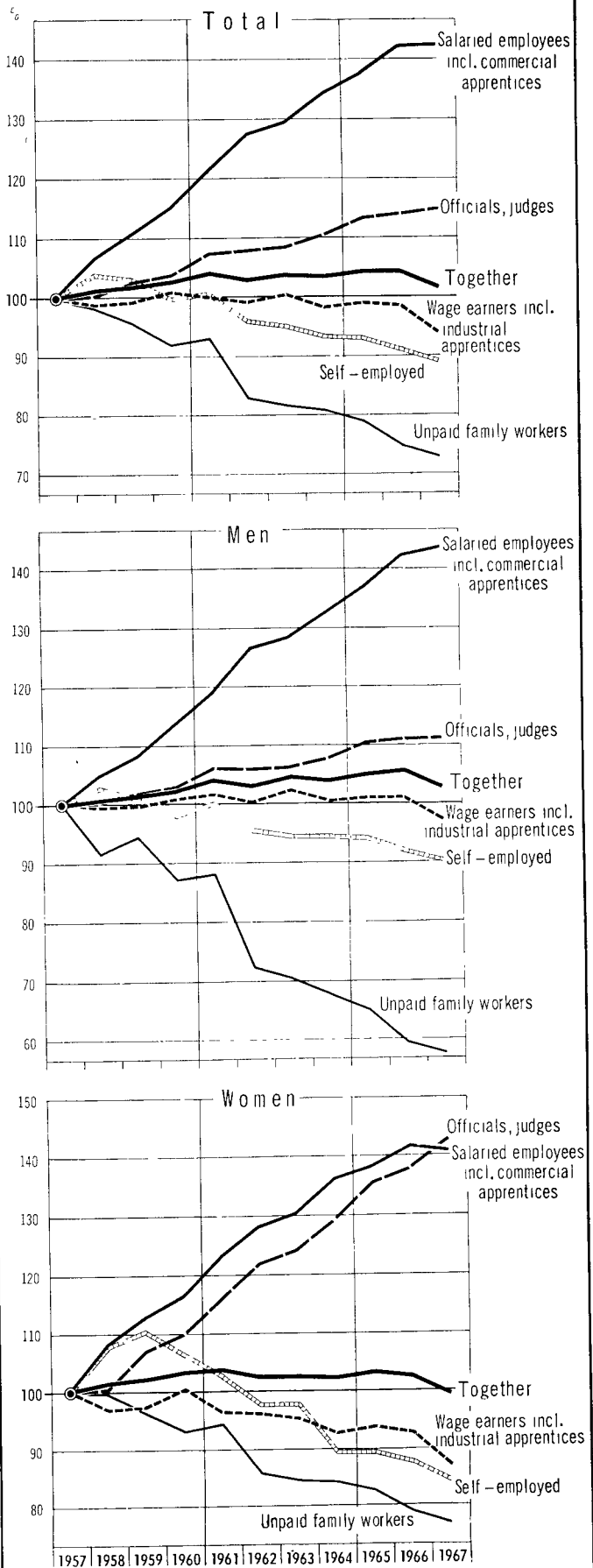
Chart 10 **ECONOMICALLY ACTIVE PERSONS, BY ECONOMIC SECTORS AND SEX**
1957 = 100



1) Including central and local government, social security.

STAT. BUNDESAMT 9113

Chart 11 **ECONOMICALLY ACTIVE PERSONS, BY STATUS IN OCCUPATION AND SEX**
1957 = 100



STAT. BUNDESAMT 9114

non-active mothers.

Of the 9.4 million economically active women there were 1.8 millions working in agriculture and forestry and 7.7 millions or four fifths in the other sectors of the economy. The great majority of the women with and without children under 14 years of age, who worked in agriculture and forestry (94 and 88 % respectively) were family workers or self-employed. This compares with about 13 % for the women who were self-employed or family workers in the other sectors of the economy. Among the economically active women with children aged under 14 years, the proportion was nearly twice as high (20.6 %) as for the economically active women without children under 14 years (11.5 %).

The magnitude of this problem can be seen from the fact that 2 millions of these children, or 88 %, are deprived of their mothers for the whole day and are cared for by other persons or in kindergartens, schools and similar institutions. The mothers of 278,000 children are absent only half days, so that the custody problem is a differing one as far as the time is concerned¹⁾.

Of the 2 million children whose mothers work all day, 1.8 millions or 91 % are looked after the whole day, 170,000 only half days, and 8,000 not at all. A classification of these children by pre-school and school age shows remarkable differences in the extent to which they are cared for. Of the 784,000 children under 6 years of age with economically active mothers in full-time employment, 778,000 or 99% were cared for all day, roughly 1,000 half days and about 6,000 not at all. Among the school children, the proportion of children cared for only in the morning, i.e. mainly at school, and left to themselves in the afternoon, was 14.2 %. With growing age, this category of children gains in number. It was 38,000 children or 7 % for the ages 6 to 10 and 132,000 children or 20 % for the ages 10 to 14. The number of school children in this age range who are left to themselves

1) In order to avoid that mothers feeling guilty about their children answer the question concerning their custody only reluctantly, or not always truthfully, the questions were so arranged that the lack of care could be stated by an unobtrusive and gradual approach.

in the morning and in the afternoon is very low.

How the children are cared for when their mothers are at work can be seen from the breakdown by institutions and individual persons in charge. Of the 1.8 million children with mothers in full-time employment who are cared for all day, 371,000 or 21 % were in kindergartens, day care centres or at school, 673,000 or 37 % were all day in the care of individual persons, and 750,000 or 42 % were part of the day in an institution and for the rest of the time cared for by relatives or other persons.

(See Tables 16 and 17 on page 73.)

II. Present and former employment of women aged 40 to 65 years (1966)

The supplementary inquiry of 1966 on the employment of women aged 40 to 65 years as from their 15th year of life¹⁾ was to determine why an employment had been terminated and whether it might be resumed. The women at ages between 40 and 65 years (only German nationals) were asked, inter alia, whether they had ever been economically active, when they had worked for the first time, whether and, if so, why they had terminated or interrupted their activity, whether they had resumed it or how frequently they had interrupted it and how long the relevant intervals had been. Interruptions not exceeding 1 year were not counted as such. The supplementary inquiry was restricted to the ages 40 to 65 years because women tend to resume their work in their fifties. The proportion of economically active women in the total of all women, which reaches a maximum of 69.8 % for the ages 20 to under 25, is below 50 % as from the 30th year of life, which shows that women who were economically active after completion of school and vocational education stop working because they have to look after their families. The yearly Microcensus in-

1) Ordered by Federal Government Ordinance of 19 April 1966 under the Law on the Execution of a Sample Survey on Population and Economic Activity (Microcensus) of 21 December 1962, Bundesgesetzblatt I, p. 767.

quiries have further shown that, beginning with the 40th year of life, women re-entering economic life on an average outnumber those who stop working.

Information on the labour force participation of women, by age and marital status, is available from the annual inquiries of the Microcensus.

But it had not been known so far, how many of the non-active women had once been active and how many had never been employed. According to the supplementary inquiry of April 1966, 3.8 millions (36.9 %) of the total of 10.3 million women at ages between 40 and 65 years were economically active at the date of the inquiry and 6.5 millions (63.1 %) were not. The latter included 5.4 million women who had been employed before and only 1.1 millions who had not. This means that 9.2 millions (89.6 %) of the women in these age groups had at some point been economically active.

Even these totals show clearly how important a role employment, its termination and eventual resumption may play in a woman's life.

Single (73.5 %) and divorced women (72.2 %) are found most frequently among the active population (see Table 18). Their proportions exceed substantially those of married women (31.9 %) and of widows (30.3 %).

The data collected in the supplementary inquiry permit to ascertain for all women who were economically active some time or the other, at which point they first took up employment.

The investigations have shown that, irrespective of the generation to which they belong and of the circumstances prevailing at the time, more than three quarters of all women start working at ages under 17.

There are two questions of interest which can now be investigated in the light of the results of the supplementary inquiry, viz.

1. Why do women interrupt their economic activity?
2. Why do women terminate their economic activity?

The following two groups have to be distinguished in this connection:

1. Women who interrupted their economic activity (41.8%), irrespective of whether they are still or again working.
2. Women who have given up their economic activity (58.8%), irrespective of whether or not they had interrupted their employment before terminating it.

More than half of the women (54.7 %) who had interrupted their economic activity, reported family considerations as the reason, whereas about 17% had given up due to war events, and for a large part had probably been forced to do so.

Mainly family reasons were also given for the termination of the economic activity, though it happens also very often that women have to stop working for reasons of health (17%). The relative importance of this latter reason indicates that the reasons for giving up employment have relation to the age of the women and the economic situation prevailing at the time when they stop working.

In connection with the investigation into the reasons for interrupting or terminating the economic activity, an answer can be found also to the question which of the reasons for interrupting an activity result most frequently in a termination of the activity for good, or, conversely, which of the reasons for interrupting an activity involve the highest probability of a re-entrance into economic life.

Roughly half of all women have resumed their economic activity after its first interruption.

Accordingly, every second woman who once had been active re-entered economic life, but only 4 in every 10 women who had interrupted their employment in order to get married were found to have resumed work at a later time. However, where women keep their jobs after marriage until giving birth to their first child, about 57% resume work at a later date. This shows that women who wait for a longer period before discontinuing their work are more likely to resume it later.

(See Tables 18 - 23 on pages 74 and 75.)

III. Sunday, holiday and night work (1965)

The Microcensus inquiry of May 1965 was supplemented by an inquiry covering about 200,000 households and dealing with the night, Sunday and holiday work performed by dependently employed persons¹⁾. Included were those persons in dependent employment (officials, salaried employees, wage earners, home workers and apprentices) who had in the months of February, March or April 1965 worked regularly or casually at night (i.e. between 22.00 and 6.00 hours), on Sundays or holidays (between 0.00 and 24.00 hours). Night work was further broken down by shift work and other work. Another question was whether the night, Sunday or holiday work had or had not been performed in the first job.

Of the roughly 21 million persons²⁾ in dependent employment, 2.4 millions (11.2%) had done night work and 2.1 millions (9.8 %) Sunday or holiday work in the period under observation. Both groups cover approximately 1.5 million economically active persons (7 % of all persons dependently employed), who performed both night work and Sunday/holiday work.

Sunday and holiday work is usually not performed quite as regularly as night work. A total of 71 % of the night workers do this work "regularly", which compares with only about 60 % in the case of Sunday or holiday workers. The percentage of women who work on Sundays and holidays (74.2 %) is however much higher than the percentage of men (56.7 %). For nearly 9 in 10 persons working on Sundays or holidays, this work lasts more than 3 hours.

In most cases (1.6 million persons = 67.7 %) the night work is performed as shift work and - in accord with the working time regulations in establishments with shift work - mostly at regular intervals. About 87 % of the persons doing shift work at night per-

1) Ordered by Federal Government Ordinance of 16 December 1963 under the Law on the Execution of a Sample Survey on Population and Economic Activity (Microcensus) of 21 December 1962, Bundesgesetzblatt I, p. 767. - 2) The figures of the 1%-sample have been extended to the total resident population.

formed this work regularly. Night work other than shift work is, on the other hand, for the most part done only casually. Still there are 290,000 dependently employed persons working regularly at night, though not in changing shifts but permanently.

Of the women working at night - whose number is rather small as compared with the men - still 52.5 % did shift work regularly, whereas the relevant rate for the men was 70.1 %. The proportion of women doing night work permanently and not in changing shifts is even greater than that of men (25.8% = 82,000 persons over against 10.1 % = 208,000 persons).

The age classification of male night workers shows that in all age groups under 65 years the proportion of men working in night shifts - as compared with all night workers in the corresponding age groups - is about the same with roughly 70 %. Thus, generally speaking, the shift work, which at regular intervals also includes night shifts, is for men largely independent of the age.

(See Tables 24 and 25 on pages 76 and 77.)

H. Education

Vocational training (1964)

A supplementary inquiry on "vocational training" was made in April 1964¹⁾. All members of the roughly 200,000 households of the Microcensus, who had been at least 14 and not over 64 years of age on 31 December 1963, were asked about attendance and completion of studies at schools providing general education, vocational schools or universities, practical occupational training as well as occupation learnt and practised. As the school and vocational training systems differ in point of time and also regionally, great demands were made on the interviewers. This is why they were thoroughly trained for this very difficult inquiry. It was not always

1) Ordered by Federal Government Ordinance of 16 December 1963 under the Law on the Execution of a Sample Survey on Population and Economic Activity (Microcensus) of 21 December 1962, Bundesgesetzblatt I, p. 767.

easy for the respondents to provide exact information on their education and vocational development. This holds good in particular for the older persons because of the substantial changes in the educational system. This is the reason why 0.9 % of the relevant cases did not provide any classifiable information on education and vocational development at all and could not be considered in processing.

This supplementary inquiry did not cover part of the non-German nationals in the Federal Republic and of the population living in institutions¹⁾.

Data on school education and vocational training as well as occupational data were recorded for a total of 37.5 million persons²⁾ of the age mentioned (17.4 million men and 20.1 million women). They included 24.9 million economically active persons (15.6 million men and 9.3 million women).

The classification of the economically active population - aged 14 to under 65 years - by completed school education shows that 86% of both males and females left school before they had moved up to the upper fifth grade. About 10 % of the economically active women left school after having received the certificate permitting them to move up to the upper-fifth grade. The percentage is higher than among the economically active men, where it amounts to only 8 %. Conditions are reversed for the active population having been awarded their higher school certificates at a secondary (grammar) or night school. There, 6 % in the case of men compare with only 3 % for the women. Among the persons (with completed education at an institution of general education) who were not economically active there is, compared with the economically active persons of the same age, a much higher proportion of persons having left school before reaching the upper-fifth grade. Roughly 1 % of the economically active persons had left a school providing general education after having moved up to

1) These are the reasons why the results differ from those of the basic 1%-inquiry of April 1964 by 2.6 % for the total and 2.4 % for the economically active population. -
2) Raised figures - excl. soldiers.

the upper-fifth grade, but before having obtained their higher school certificate. This is important particularly in the case of the women, where the group of persons who had not been economically active was eleven times as large as the relevant group of men. In particular for women the participation in economic activity tends to be higher when they have attended secondary schools. The proportion of women with higher school certificates among the economically active women is 2.8 % and higher by 30% than for those not economically active, where it is 2.2 %. The situation is about the same in the case of men, though the factor "incapacity for work" is much more important than in the case of women.

When comparing the relations of the types of school leaving in the age group 14 to under 30 years with the other age groups, account has to be taken of the fact that the figures shown in the tables cover only those persons who were not undergoing educational or vocational training at the date of the inquiry. This applies both to men and women.

In the supplementary inquiry, the economically active persons aged 14 to under 65 years were asked whether they had attended a school providing vocational education and, if so, which one, whether they had undergone a practical vocational training and, if so, of what type; and further whether this training provided the basis for the occupation practised at the time of the inquiry. Those respondents who pursued an occupation which was not based on their former training were asked whether this occupation was preceded by any informal on-the-job training and how many months this training had taken. This differentiated questioning provided the opportunity to make the following distinction:

- (a) whether the present activity is practised on the basis of the original vocational training or following only an informal on-the-job training, or
- (b) whether the present activity is not practised on the basis of the original vocational training (included are economically active persons "without any training").

The latter category covers, accordingly, all economically active persons who at the time of the inquiry were occupied in another field of activity than the one they had originally been trained for.

Among the women aged 14 to under 65 years the percentage of persons who, at the time of the inquiry, performed their activity only on the basis of vocational school training was slightly higher than for men of the same ages. Conversely, the percentage of men was higher who performed their activity only on the basis of practical training. This applies also to those persons who both attended a vocational school and underwent practical training. Particularly striking is the high proportion of active women who do not perform their activities on the basis of their original training (including those without any vocational training). This category of persons increases with rising age both for men and women.

The differences found to exist between men and women at ages 14 to under 30 with respect to the better qualification due to both vocational school and practical training are not very great (26.0% for men and 17.5% for women). A breakdown according to the various types of education¹⁾ shows that 2.7 % of the male respondents (aged 14 to under 65 years) reported attendance of universities, institutions of higher education and 0.6% attendance of teacher training colleges as the basis for their present occupation. The corresponding rates for women are 0.8 % and 1.0 % respectively. The proportion of economically active men who have been trained for their present jobs at schools for technicians or at engineering schools is 1.1 %. Among the female respondents, the proportion of those who reported attendance of a full-time vocational school, an administrative school or an advanced full-time vocational school as

1) For the results of the Microcensus inquiry of October 1957 on vocational training and occupations, see *Wirtschaft und Statistik*, 1961/5, p.297. When comparing the results with those of the 1961 Population and Occupation Census, account should be taken of the fact that in the 1961 Census information was collected on education in general and that administrative schools were not considered.

the basis for their occupation at the time of the inquiry was 11.5 % and twice as high as for the male respondents. Another fact which appears to be worthy of note is the higher percentage of women with informal on-the-job training of less than half a year (12.3 %) as compared with the male respondents (10.1 %). The difference is even greater in the younger age groups. For cases with an informal on-the-job training exceeding half a year, the percentages for the men are higher than those of the women.

The remarkable differences in the educational requirements for the activities performed in the various divisions of the economy are due to the specific technical and organisational features of the divisions concerned. This can clearly be seen from the breakdown of the economically active persons aged 14 to under 65 years by economic divisions and type of training for the occupation practised.

The differences established when classifying the economically active population (14 to under 65 years) by status in occupation and type of training for the occupation practised are also very characteristic. Equally interesting is the breakdown of the active population by 25 classes of occupations.

There was yet another question put to the respondents (aged 15 to under 65 years) in the supplementary inquiry, namely whether they had - after 1950 and before taking up their present job - worked in agriculture for a longer and uninterrupted period. The answers given to this question were to provide for this group of persons information on extent and direction of the movement from agriculture to other sectors of the economy since 1950. This special question was not put to persons who were not economically active in April 1964. The information obtained thus relates only to the economically active persons at the age of 15 to under 65 years, who were interviewed in April 1964. It was however impossible to assess in general the extent of the movement from agriculture to other sectors of the economy since 1950, because there were no data available on former

employment in agriculture for persons having retired from economic life, nor for economically active persons aged 65 years and over. Moreover, it was not known how many persons had emigrated or died who had formerly been working in agriculture.

In April 1964, 2.5% (568,000) of the 22.6 million persons aged 15 to under 65 years who worked in other sectors than agriculture had - after 1950 and before their present job - been working in agriculture for a longer period. The proportion applies to both the men and the women of this group. Of the persons working in production industries, 3.2 % had come from the agricultural sector after 1950. The corresponding rates for the men were 2.9 % and for the women 4.2 %. Both in the trade, transport and communications sector and for Other sectors, the proportion of persons who had come from agriculture after 1950 was 1.6 %. For the women of this group of persons, the influx into the Other sectors was stronger than that into the trade, transport and communications sector, which contrasts with the situation for the men of this group.

Of the 568,000 economically active persons who after 1950 left agriculture, 405,000 (71%) had changed over to the production industries, 74,000 (13 %) to trade, transport and communications, and 90,000 (16 %) to the Other sectors. At census date, 94 % of them were dependently employed.

(See Tables 26 - 29 on pages 78-80.)

J. Public Health

I. Illness and accidents (1966)

In July 1963, a voluntary pilot survey on illness and accidents was for the first time conducted at the federal level. Its purpose was to find out in how far inquiries of this kind are feasible from a psychological and technical point of view. The results of this supplementary survey have shown that in this way important information may be obtained for health policies which otherwise could not be secured. The morbidity data available in the

Federal Republic originate for the most part from material not originally produced for use in statistics; they are rather provided by the public health offices from their records on notifiable diseases and by the legal health insurance on cases of incapacity for work. These data thus cover only the incidence of selected diseases or the morbidity among part of the population, namely for the insured persons. The figures relate to cases rather than to diseased persons, so that statistical information on important demographic and occupational aspects for these persons is lacking.

Household inquiries, however, permit an insight into public health conditions and also account for the economic and social aspects which are important for cases of illness and accidents. Representative morbidity statistics covering the households may, accordingly, be a valuable supplementation of the data provided by the public health offices and the legal health insurance. These are the reasons why a supplementary inquiry on "illness and accidents" was conducted in April 1966 within the framework of the current 1%-sample survey of the Microcensus. About 125,000 households comprising approximately 340,000 persons were covered in the Federal Republic and asked whether "a member of the household had been ill, confined to bed or under medical treatment in April 1966" or whether he/she had been "under permanent medical treatment" because of a chronic ailment or for surveillance of a previous disease. Another question was to provide information on whether "a member of the household had been involved in any accident whatsoever (e.g. traffic accident, industrial accident, household accident, etc.) or injured by poison during the period February to April 1966". Information was collected from this group of persons, which had been delimited by these guiding questions, on the type of the disease or accidental injury. It was further determined whether and how long the persons concerned had been under medical treatment, confined to bed, in hospital and/or incapable for work as a result of the disease or accident. For persons injured in accidents, information was collected on date, type, circumstances and consequences of the

accident. Persons who had suffered in the report period from several diseases or had been involved in several accidents were counted only once with the most serious disease or accident. Questionnaires were not to be filled in for household members under permanent treatment by a lay medical practitioner. Routine cases of dental care and all negligible cases were also left out of consideration.

The brief comments given below on the definition of "illness" and on the method employed are to facilitate the interpretation of the results:

There is no clear and universal definition of "illness". Illness is mainly a subjective process. Whether a respondent is ill or not depends in the first place on his (her) own judgement. As, accordingly, illness cannot be covered in a household inquiry as an objective condition, the subjective opinion of the respondent had to provide the point of departure. The interviewers, who were not medically trained, had to take down the answers as they were given by the respondents, irrespective of any diverging opinions with regard to morbid conditions which objectively are of the same nature. So the results were also influenced by the subjective judgement of the respondents with regard to the state of health or illness of the household members. This influence decreases with the growing "gravity" of the disease or accident and the increasing number of objective consequences they have (confinement to bed, medical treatment, incapacity for work, hospitalization) in the individual instance.

Experience gained from similar inquiries on past events has shown that the information given by a respondent is influenced by two further factors, namely, by gaps of memory and the so-called telescoping effect. The former denotes that an event or the date of an event is the sooner forgotten, the greater the time distance between the event and the key-date of the inquiry becomes. The latter results in a shift of the date towards the present. Both effects may have biased in particular the figures on persons with accidental injuries, because they have been bas-

ed on a reference period of three months.

The total of "ill persons" further depends on the wide definition of illness used for the inquiry, and which not only comprises the acutely and chronically ill, but also all persons who in April 1966 were "under permanent medical treatment" for the surveillance of a previous disease.

The groups of diseases recorded in the inquiry largely coincide with the two-digit "German Classification of Diseases, Injuries and Causes of Death for the Statistics of the Social Insurance Institutions", 1962 Edition. The diagnoses reported by the respondents were taken down verbatim by the interviewers.

In the households covered by the supplementary Microcensus inquiry, about 6.3 million persons were recorded as having been ill in April 1966, which is about 10.7% of the resident population in the Federal Republic of Germany. According to the definition for the supplementary inquiry, all persons who were ill at least on one day of the report month, or under permanent medical treatment in the month of April, were to be classified as ill. When considering the duration of illness, four main groups of sick persons can be distinguished.

By far the largest group consists of persons who had fallen ill already on or before the 1st of April and still were ill on the 30th of the month. This group comprises 3.9 million persons (61.1 %), which is 6.6 % of the resident population. More than 2.4 millions of the persons in this group (4.1 % of the resident population) reported that they had been under permanent medical treatment because of a chronic disease (permanent condition) or for the surveillance of a previous disease. The other three groups together accounted for less than 40% of the diseased: 0.8 million persons (11.9 %) had also been taken ill prior to the 1st of April, but recovered again in the course of the month; 1,7 million persons fell ill during the report period, 0.5 millions (8.1 %) still were ill on 30 April, whereas the other 1.2 millions (18.9 %) recovered in the course of

April. When interpreting the figures, account must be taken of the fact that where a person had been affected with several diseases during the report month, only the most serious disease was taken into consideration.

The sick rate of women was about 12 per 100 and 20 % above the sick rate of men. Not counting the population at ages under 15 years, this higher morbidity is observed among women of all age groups.

Similarly to the general morbidity which rises with growing age, the frequency of most diseases also uses to increase with the age. Infective and parasitic diseases except tuberculosis are much more frequent at younger ages, while the incidence of diseases of the respiratory system is about the same in all age groups. The increase due to rising age is particularly conspicuous among the female population. The number of sick persons per 1,000 of the population is in the age range 65 years and over nearly five times the corresponding rate among children and juveniles at ages up to 15 years. The heavy increase in illness with growing age is both among men and women due to the rising number of cases of chronic diseases (in the inquiry referred to as cases of permanent medical treatment) rather than to a rise in the number of acute cases as a result of increasing age.

Of the 26.6 million economically active persons in the Federal Republic, 2.4 millions (9.1 %) were ill on at least one day of the report month of April 1966. The proportion of economically active men who had been ill in the report month was 8.5 %, which compares with 10.1 % in the case of women.

Morbidity among the active population is much lower than among the non-active population. This difference is found both among men and women, and it is most pronounced in the case of men of 40 to 65 years (17.7 % to 32.5 %). Of 100 economically active men, 8 were ill in the report month, over against 11 in 100 for the men not economically active.

Of the male persons among the self-employed

and among family workers, 3.2 % were under permanent medical treatment because of a chronic ailment or for the surveillance of the effects of a previous disease. The corresponding figures were 2.4 % for salaried employees and officials and only 1.8 % for the wage earners. Among the "ill persons in a narrower sense" (mainly the acutely ill) there were on the other hand 6.8 % wage earners, 5.9 % salaried employees and officials and 5.3 % self-employed and family workers.

These differences in the frequencies of illness for various groups of persons are even more pronounced for part of the economically active women. In all age groups over 20 the female wage earners were most often ill.

Though it is true that the economically active women usually are more often ill than the active men, the illness among women somewhat less frequently entails incapacity for work than is the case among men.

Only about 20 % of the chronically ill (under permanent medical treatment) among the economically active persons were incapable for work, which compares with four fifths in the case of the acutely ill. The percentages of both the persons incapable for work, and of those whose incapacity for work ended in April, to the diseased active persons clearly decreases with growing age. The main reason is the percentage of chronic diseases which rises from age group to age group.

The incapacity for work was by far the highest among the chronically ill, as it lasted there four weeks and over in more than 40 % of the cases, whereas about one third of the acutely ill were incapable for work for one to two weeks.

When considering the duration of incapacity for work in the various age groups, it is seen that periods not exceeding two weeks constitute by far the largest proportion among the ages under 40, whereas roughly one fourth of the cases of incapacity for work in the ages over 40 involve comparatively long periods of four weeks and over.

According to the results of the supplementary

inquiry, about 380,000 persons had been injured in an accident in April 1966; two thirds of them were men. The ratio of persons injured in an accident was 4 per 1,000 in the case of women and 9 per 1,000 in the case of men. The proportion of persons injured in accidents is highest (0.9 %) in the age range 15 to under 30 years. From this age onwards, the frequency of accidents for men begins to decrease again.

In the case of women, the risk of getting involved in an accident increases between the 40th and 50th year of age.

The classification of persons injured in an accident by types of accidents shows that "industrial accidents" (except accidents on the way) are the most frequent. Their proportion among all persons injured in an accident, as recorded by the inquiry, was roughly 37 %. Second place was occupied with 18 % by sporting and playing accidents.

Household accidents mostly involved women (70 %) and industrial accidents mostly men (86 %).

The distribution of persons injured in an accident according to the various types of accidents depends not only on the sex, but also on the age.

The active population accounted for twice the number of accidents registered for the non-active population. There were 12 out of every 1,000 economically active men injured in an accident, but only 5 in every 1,000 non-active men. The difference between the quotas of injured for active and non-active persons is however much less marked in the case of women (0.5 % to 0.3 %).

Figures with a relative standard error of over 20 % (less than 10,000 cases raised) have not been shown in the tables, but substituted by a slant line (/).

(See Tables 30 - 35 on pages 81-83.)

II. Accidents involving children and juveniles aged under 15 years (1965)

Within the framework of the 1%-survey of the Microcensus of May 1965, a supplementary inquiry was conducted in households with a child under 15 years of age, who had been involved in an accident or in a case of accidental poisoning.

According to the results of the Microcensus, there was a much greater number of accidents in 1964 than in 1962. If it is correct that the number of accidents involving children has steadily increased during this period, the number of fatal accidents of children should have increased to about the same extent, unless there were fewer fatal accidents during these three years.

According to the statistics on causes of death, fatal accidents of children have slightly increased from 1962 to 1964, though less rapidly than could be expected in the light of the Microcensus figures. This may be attributed to the so-called "memory gap", which may certainly affect the results of an inquiry covering a period of more than three years; this applies in particular to the accidents of the earlier years 1962 and 1963. In the following analysis the emphasis will therefore be placed on the figures for 1964.

In 1964 there occurred 328,000 accidents involving children and juveniles under 15 years of age, of which 207,000 related to boys and 121,000 to girls. The number of children or juveniles involved in the 328,000 accidents was 319,000, so that the ratio of accidents per 100 children/juveniles is on an average 103.

Related to the total of children and juveniles, the ratio is 26 accidents per 1,000 persons, accidents of boys (32) being much more frequent than those of girls (20).

The number of accidents of children and juveniles rises with increasing age up to the age group 8 to under 10 years and then declines again. The rise is particularly strik-

ing in the case of boys where a maximum of 40 accidents was counted per 1,000 boys aged 8 to under 10 years, whereas the number of accidents per 1,000 girls from 3 to under 15 years fluctuated around 21. One of the causes for the increasing frequency of accidents up to the 10th year of age lies in the fact that the children who are out of leading-strings start out on their own without being able yet to realize the dangers of modern life.

When classifying the 1964 figures by location of the accident, it is seen that 71,000 accidents (21.5 %) occurred in road traffic, 124,000 (37.8 %) inside the home and on the premises including the own gardens, and 134,000 (40.7 %) outside the home (except in road traffic). Accidents outside the home were among boys much more frequent than among girls; there were 195 accidents of boys for every 100 accidents of girls. Inside the home the ratio was 162 to 100 accidents and in road traffic 150 to 100 accidents.

It was also determined whether there are any interrelationships between the size of the community, in which the children live, and the risk of accident, particularly in road traffic. It has been found that the number of all accidents per 1,000 persons of the same age actually rises as the size of the community increases, namely from about 17 in communities of 1,000 to under 2,000 inhabitants to about 30 in communities of 100,000 inhabitants and more.

In the 71,000 road traffic accidents of 1964, in which children and juveniles were killed or injured, 35,000 (51 %) of the children/juveniles concerned were pedestrians and 24,000 (34 %) riders of bicycles. In 15,000 accidents the children or juveniles were on their way to or from school.

More than half of the 124,000 accidents (60.4%) which occurred inside the home in 1964, were falls and 12.1% burns or scalds.

For the various groups of accidents - road traffic accidents, accidents inside and outside the home - the supplementary inquiry also recorded the specific circumstances of

the accidents by type and involvement and the injuries or damage resulting from the accident. In order to obtain somewhat reliable information despite the small numbers in some of the categories concerned, the accidents which occurred in the years 1962 to 1965 have been combined, as the effects of the "memory gap" are of only minor importance for the purpose in mind.

Roughly one fourth of the accidents (25.1 %) led to injuries of head, skull, brain, cranial nerves, spine and spinal cord, and a further fourth (24.4 %) to fractures. Though it is true that the danger to meet with an accident is greater among boys than among girls, the consequences of accidents are independent of the sex of the persons involved. They are however dependent on the type of the accident: injuries of head, skull, etc. are much more frequent in road traffic accidents (34.1 %) than in other accidents; and accidents outside the home are more likely to lead to fractures than those inside the home (32.0 %).

(See Table 36 on page 84.)

III. Physical and mental disability (1957 to 1962, 1966)

The yearly inquiries conducted within the framework of the current Microcensus from 1957 to 1962 provided information on physically and mentally disabled persons by type and cause of disablement and by demographic and occupational characteristics. As the results have shown, the group of disabled persons has remained relatively constant in number and composition. It therefore was sufficient to include the questions concerning physical and mental disability only at several years' intervals in a supplementary programme to the Microcensus.

It was not until 1966 that physical and mental disability was again recorded in the framework of the Microcensus as a sort of inventory of all persons suffering permanently

or over a long period from physical or mental disablement due to congenital defects, war events, diseases or accidents. Further questions related to school education, vocational training and reeducation of the disabled.

In October 1962, 3.7 million disabled persons (roughly 6.6 % of the total population in the Federal Republic) were counted in the Microcensus. There were 2.8 million men and 870,000 women. The proportion of disabled persons in the various age groups differs. It increases with rising age and reaches its maximum of 15 % in the age group 60 to 65 years.

The most frequent cause recorded for men was war-connected disablement, whereas in the case of women specific diseases accounted for a share of 39 %. Other frequent causes were industrial accidents, which accounted for 15 % in the case of men and 9 % in the case of women. The share of occupational diseases was 7 % for men and 6 % for women.

From October 1957 to October 1962 the total number of disabled persons rose by about 15%. The greatest increase (87 %) was observed among persons who reported specific diseases etc. as the cause of their disablement. For disabled with congenital defects there was a rise of nearly 35 % and disablement due to an occupational disease or an industrial accident increased by 17 %. A decrease has however been observed in the case of persons disabled due to poliomyelitis, road traffic or other accidents as well as war-connected injuries.

Deformation or loss of limbs is the most frequent type of disability; the proportions are 38 % among men and 24 % among women. The loss or deformation of limbs was by 53 % of the disabled attributed to war events and by 21 % to industrial accidents. The rate of 21% for the loss or deformation of limbs due to industrial accidents equally applies to men and women. A total of 18 % of the women disabled by loss or deformation of limbs reported "other accidents" as the cause. The corresponding proportion among men is 4 %. It cannot be said, however, whether household

accidents are responsible for this difference.

For disabled men (15 years and over), the activity rate is 65 %, which compares with only 19 % in the case of disabled women. The activity rate for the non-disabled part of the population (15 years and over) is much higher both for men (85 %) and women (41 %).

In April 1966, about 4.1 million physically and mentally disabled persons were counted in the supplementary Microcensus inquiry, which is roughly 6.9 % of the resident population in the Federal Republic. More than two thirds of the disabled were men (2.8 millions) and just under one third women (1.3 millions). Of 100 men, 10 reported to be physically or mentally disabled, which compares with 4 in 100 women.

The proportion of disabled persons among the resident population increases with rising age, and is highest among men and women aged 60 to 65 years, namely 28.5% and 10% respectively, as was the case in the 1962 survey.

About two fifths of the male respondents reported war-connected disablement, one fifth attributed their disablement to a disease (except poliomyelitis and occupational diseases), and 12.5 % to industrial accidents. For more than half of the disabled women, diseases were stated as the cause of physical or mental disablement, e.g. poliomyelitis (2.2 %), occupational (3.5 %) and other diseases (42.8 %).

As in 1962, the disablement most frequently reported in 1966 was the loss or deformation (or serious impairment) of upper and lower limbs. More than 1.3 million persons reported this type of impairment, 37 % of the disabled men and 26 % of the disabled women.

The proportion of "other diseases" is much smaller than in 1962, whereas that of nervous and mental diseases and of diseases of heart and circulatory system has increased.

It is of great importance for the financial and social security of the disabled and for their rehabilitation that their disability

is officially acknowledged as such. As far as the disablement of men is concerned, four fifths of all cases have been acknowledged, while the rate is only about 50 % for the women.

(See Tables 37-39 on pages 84-86.)

IV. First-aid training (1964)

A supplementary inquiry¹⁾ on first-aid training was linked up with the 1%-survey undertaken in November 1964. Its purpose was to find out how many persons had participated in any training of this kind. The inquiry covered approximately 20,000 households.

The first question related to the occupation practised at the time of the inquiry or the former occupation in the case of persons who had retired from economic life. The question enabled two groups of persons to be distinguished, namely, those persons who practised an occupation for which first-aid training is a prerequisite²⁾ and those who participated in first-aid training as "laymen" or when in military service. The latter group includes in addition a small number of persons who had once worked in the public health sector, but had later given up this occupation.

The inquiry recorded 4.37 million persons (which is roughly 9.6% of the resident population, aged 14 years and over), who had participated in first-aid training. A total of 416,000 of them were practising or - if they had retired from economic life - had last practised a public health occupation. Another 3.96 million persons had attended a first-aid training course. The type of training may range from a basic course to special training in life-saving.

Of the 3.96 million persons who at the date of the inquiry did not practise, or had not formerly practised, a public health occupa-

1) Ordered by Federal Government Ordinance of 16 December 1963 under the Law on the Execution of a Sample Survey on Population and Economic Activity (Microcensus) of 21 December 1960, Bundesgesetzblatt I, p. 767.-
2) Physicians, nurses, sanitary personnel, midwives.

tion, 3.4 millions reported to have attended a course in first-aid training. More than two thirds of them had been trained by the Red Cross (see Table 40 on page 87). The 560,000 persons who had not attended a first-aid training course, had undergone basic first-aid training along with their vocational education or specialized training.

Of the above 3.96 million persons, there had:

- 407,000 persons been trained as sanitary staff in the armed forces either of the former German Reich or of the Federal Republic
- 550,000 been trained for special life-saving services, and
- 422,000 undergone vocational training for nursing or sanitary service before their present occupation or the last occupation they had practised.

Some of these persons reported to have participated in several types of training. Of the 550,000 persons trained for special life-saving services, 76% or 418,000 persons (343,000 men and 75,000 women) had life-guard training.

K. Agriculture, Forestry

Cultivation of vegetables and potatoes on plots of under 0.5 hectares (1962)

In the Census of Agriculture of 31 May 1960, information was collected from holdings with a total area of 0.5 hectares and over on the cultivation of potatoes and vegetables (except seed growing) on the arable land, on the one hand, and in gardens, on the other. The 1961 Population Census recorded data on arable land and garden land without any further breakdown, but including small plots under 0.5 hectares. In order to bridge the existing gap particularly in respect of the cultivation of potatoes and vegetables, corresponding questions were included in the inquiry programme of the Microcensus.

The data shown in Table 41 with regard to small plots of potatoes and vegetables have been obtained in a supplementary inquiry to the Microcensus of October 1962.

In order to check the accuracy of the results obtained from the supplementary Micro-

census inquiry on the cultivation of vegetables and potatoes on plots of under 0.5 hectares, the relative standard error was estimated at the Federal Statistical Office on the basis of a calculation of errors. As the calculation of standard errors for the sampling procedure applied in the Microcensus involves much time and effort and for technical reasons could not be effected by machine, the calculation of the variances between the enumeration districts had to be restricted to one federal Land which had good averages. The variances between enumeration districts thus calculated were at the same time used as estimates of variances in the calculation of the relative standard error for the Federal Republic as a whole and for the rest of the federal Laender. The simple relative standard errors assigned to the various figures can be seen from column b) of Table 41 on page 87.

L. Passenger Traffic

I. Holiday and recreation travel (1962, 1966)

In October 1962, a household inquiry on holiday and recreation travel was for the first time conducted within the framework of the 1%-inquiry of the Microcensus. The inquiry was repeated in 1966 as a supplement to the 1%-Microcensus survey.

The inquiry of 1962 covered approximately 180,000 households with a total of about 550,000 persons. Information was collected on type of journey, duration (beginning and end), place where the vacation was mainly passed inside the country or abroad, means of transport and type of accommodation mainly used. Another question concerned the expenditure for the individual journey in terms of DM.

According to the definition used in the 1962 inquiry, there were considered as holiday and recreation travels all journeys of 5 days and over outside the permanent residence, and duty, business or other trips only if they were combined with a holiday or recreation trip, provided that the latter lasted 5 days and over. The data to be col-

lected in these latter cases had to relate only to that part of the journey which had been undertaken for holiday and recreation purposes. Visits among relatives, friends and acquaintances and stays of children at holiday-homes etc. were counted as holiday or recreation trips, too.

The inquiry undertaken in 1966 was to provide information only on such matters as time (the month comprising the main part of the trip), length (in weeks) and type of journey, as well as its main destination (inside the country or abroad).

According to the results of the 1962 supplementary inquiry, about 14 million persons (6.5 million males and 7.5 million females) or 26% of the 53.3 million persons living in private households throughout the Federal Republic excl. Berlin participated in holiday and recreation trips in the period from 1 October 1961 to 30 September 1962. A total of 13.1 millions or roughly 94% of these persons made one trip, 789,400 or 5.6% two trips and 91,400 or 0.7 % three or more trips. The 14 million vacationers undertook a total of 15 million journeys, of which 9.2 millions or 61% mainly inside the country and 5.8 millions or 39 % mainly abroad.

Roughly two thirds of all holiday and recreation trips were made to 14 selected tourist regions.

The classification of trips abroad by destination shows which countries are favoured for vacationing. The German population prefers Austria and Italy, which had been visited by roughly two thirds (64 %) of all persons travelling abroad. First place is occupied by Austria which accounted for 2.2 million trips abroad, which is 37% of all such journeys. Second position is held by Italy with 1.6 millions or 27 %. Far behind follow Switzerland (7.4 %), the Netherlands (7.1 %) and Spain (5.6 %). The percentages of all other countries - except France (4.3 %) - are far below this level.

The supplementary inquiry of 1966 has shown that of the 59.1 million population of the Federal Republic about 20.1 million persons

(9.3 million males and 10.8 million females) participated in holiday and recreation trips in the period from 1 October 1965 to 30 September 1966 (hereafter to be referred to as 1966), which compares with about 15 million persons in 1962. The intensity of travel expressed by the proportion of persons going on a holiday or recreation journey versus the total population has increased from 27 % in 1962 to 34 % in 1966. An increase has also been observed in the frequency of travelling, i.e. the ratio of the number of journeys to the number of persons who travelled. In 1962, the proportion of persons who had undertaken two and more journeys in the course of one year was 6.3 %, which compares with 10.2 % in 1966.

The number of journeys undertaken in 1966 by the 20.1 million vacationers was 22.6 millions, of which 14.1 million journeys or 63% mainly inside the country and 8.5 million journeys or 37 % abroad. In 1962 about 15 million persons had undertaken 16 million holiday or recreation trips, of which 9.8 million trips or 61 % were mainly undertaken inside the country and 6.2 millions or 39 % mainly abroad. As the number of journeys inside the country has since 1962 increased at a greater rate (+ 44 %) than the number of journeys abroad (+ 35 %) there has been a slight shift in favour of the former category.

In 1966, approximately 14.1 million journeys were made inside the country, 4.3 millions or about 44 % more than in 1962. Favoured tourist regions were, as in 1962, Bavaria and Baden-Wuerttemberg. A share of 43 % of all trips were made to these Laender, 27 % to Bavaria and 16 % to Baden-Wuerttemberg.

Remarkable shifts have however occurred since 1962, which may be attributable to a differing regional distribution of the absolute increase. Of the 4.3 million "additional" journeys, 26 and 16 % respectively (which is roughly 1.1 and 0.7 million journeys) were made to Bavaria and Baden-Wuerttemberg, but, on the other hand, Schleswig-Holstein alone accounted for 0.7 million journeys (16 %) of this increase.

When considering the development of the entire tourist traffic according to the Laender of destination, Schleswig-Holstein occupies first place with a rate of increase of 78 %, which may be attributed to the seaside resorts. Above-average rates of increase were also recorded for North Rhine-Westphalia (53 %), Hesse (50 %) and Baden-Wuerttemberg (45 %). The rates of increase for journeys to the other Laender range from 21 to 42 %, so that their share in the total internal traffic decreased to some extent.

In 1966, approximately 8.5 million journeys have been made to foreign countries, 2.2 million journeys or 35 % more than in 1962. The foreign countries most favoured by German tourists were again - as in 1962 - Austria and Italy. About 58 % of all journeys were made to these two countries, 34 % to Austria and 25 % to Italy. There followed far behind such countries as Spain and Portugal, the Benelux countries, Switzerland, France and the countries of Northern Europe. Their shares in the total of all journeys abroad range between 8 and 4 %.

(See Tables 42-45 on pages 88 and 89.)

II. Weekend commuters and means of transport used (1964)

The inquiry conducted within the Microcensus in April 1964 on "weekend commuters and means of transport used"¹⁾ was to supplement the information on daily commuters available from the Population and Occupation Census, 1961. Weekend commuters were understood to be all those persons who, between May 1963 and April 1964, travelled over the weekend from the place of work or education to their families ("home residence") during the whole or part of the report year. It did not make any difference in this connection whether the commuters returned over the weekend to their parents' or their spouse's residence. The inquiry on weekend commuters was carried out in

1) Ordered by Federal Government Ordinance of 16 December 1963 under the Law on the Execution of a Sample Survey on Population and Economic Activity (Microcensus) of 21 December 1962, Bundesgesetzblatt I, p. 767.

conjunction with the supplementary inquiry on "vocational training", so that only those commuters could be covered who on 31 December 1963 had reached the age of 14 and not passed the age of 64, and who underwent general education or vocational training or were economically active during the report period. There were not covered by the supplementary survey part of the non-German nationals living in the Federal Republic, nor the institutional staff and the inmates of institutions.

The respondents were asked about the transport mainly used, which is to say the means of transport used for the greater part of the distance covered. Transport used in feeder traffic was not to be reported. Local transport was left out of consideration in ascertaining the distances between the place of work or education and the home residence of the weekend commuters.

In the period from May 1963 to April 1964, about 420,000 weekend commuters were counted in the Federal Republic of Germany, who used to travel over the weekend - if only at irregular intervals - from their place of work or education to their home residence. More than half of them (54 %) used to go by train and about one third (31 %) by private car. Buses (7 %), motorcycles and mopeds (3 %) were used much less frequently, and there were hardly any persons who reported ships, planes or trams as their main means of transport.

Roughly two fifths of all weekend commuters travel every week, about one fifth each once and twice a month, but only 4 % three times a month from their place of work or education to their home residence. A total of 12 % go home at larger than monthly intervals.

The data concerning the distances covered by the weekend commuters with the means of transport used give an idea of the extent and the structure of weekend commuting. Half of all commuters cover less than 100 km to reach their home residence (the average travelling distance being 49 km one way). A share of 22 % of the commuters cover distances between 100 and 199 km (average trav-

elling distance = 132 km), and 16 % have to cover distances between 200 and 499 km (the average travelling distance being 288 km). Only 5 % of the weekend commuters travel 500 km and farther; the average distance for them is 663 km.

A classification of weekend commuters by status in occupation shows that the group of officials and salaried employees (41 %) occupies first place, with the wage earners (25%) following next.

Over two fifths of all weekend commuters have their place of work or education in communities of 100,000 inhabitants and more.

(See Tables 46 and 47 on pages 89 and 90.)

III. Holders of driving licences and utilization of licences (1965)

It was the purpose of the supplementary inquiry conducted within the framework of the 1%-survey of the Microcensus in May 1965 to provide information on driving licences and their utilization¹⁾.

The supplementary inquiry of May 1965 recorded roughly 14.8 million persons who were in possession of a German driving licence. This figure includes all persons who at the date of the inquiry had a German civil driving licence of Classes 1 to 5 or a corresponding service licence of the German Federal Railways, the Federal Postal Administration, the Federal Border Guards or the police. Persons whose driving licences had been withdrawn for some time were excluded, whereas persons who had been temporarily prohibited to drive were recorded.

Non-German driving licences were left out of consideration, as were the so-called "international driving licences" which are required in some countries to prove that the holder

1) The legal foundation was provided by the "First Ordinance on the Supplementary Programme for the Microcensus" of 16 December 1963 (Bundesgesetzblatt I, p. 883) supplementing the Law on the Execution of a Sample Survey on Population and Economic Activity (Microcensus) of 21 December 1962 (Bundesgesetzblatt I, p. 767).

is in possession of a national licence.

Pursuant to the Registration Ordinance for Motor Vehicles (Strassenverkehrszulassungsordnung) in its latest version of 6 December 1960, driving licences of Class 1 entitle the holder to drive motorcycles with engines exceeding 50 cm³ piston displacement. Holders of driving licences of Class 2 are permitted to drive motor vehicles exceeding 7.5 t of permissible gross weight and lorries and trailers with more than three axles. The driving licence of Class 3 covers all motor vehicles not included in Classes 1, 2, 4 or 5. This is the standard driving licence for private cars. Class 4 licences relate to motor vehicles with a piston displacement not exceeding 50 cm³, mechanically propelled wheel-chairs and motor vehicles not exceeding 20 km/h maximum speed. Class 5 licences at last cover bicycles with auxiliary engines, motorized cycles not exceeding 40 km/h maximum speed and wheel-chairs with engines not exceeding 50 cm³ piston displacement or 20 km/h maximum speed. Holders of driving licences of various classes were on principle classified under the class of the highest value.

The distribution of the total of 14,821,000 holders of driving licences among the various classes is as follows:

997,000	or	6.7 %	licences of Class 1
437,000	or	3.0 %	licences of Class 2
5,954,000	or	40.2 %	licences of Class 3
621,000	or	4.2 %	licences of Class 4
556,000	or	3.7 %	licences of Class 5
1,502,000	or	10.1 %	licences of Classes 2&1
4,700,000	or	31.7 %	licences of Classes 3&1

For 54,000 persons the class of the driving licence could not be determined.

There is yet another question which deserves attention besides that concerning the types of vehicles for which the driving licences of the various classes were actually made use of, namely the number of persons entitled to drive vehicles of a specified type.

As every person possessing a driving licence is permitted to drive at least a vehicle covered by Class 5, the total number of holders of driving licences, which is approxi-

mately 14.8 millions, corresponds to the number of persons permitted to drive mopeds and motorized cycles not exceeding 40 km/h maximum speed, the total number of which was about 1.2 millions at the date of the inquiry. In May 1965, there were, accordingly, 12 persons entitled to drive for every vehicle of this type.

When adding up the number of holders of driving licences of Classes 1 to 4, one obtains the total of persons permitted to drive agricultural tractors and motorized cycles with engines not exceeding 50 cm³ piston displacement. These vehicles totalled 1.3 millions on 1 July 1965, so that there were 11 persons entitled to drive for every vehicle.

The holders of driving licences of Classes 2, 3, 2 and 1, as well as 3 and 1 (roughly 12.6 millions) constitute that group of persons who are entitled to drive motor vehicles not exceeding 7.5 t permissible gross weight. The number of these vehicles is 10 millions; included in this figure are 9.3 million private cars and estate cars. The ratio of vehicles per licensed drivers here is 1 to 1.3. In the case of vehicles exceeding 7.5 t permissible gross weight, which may be driven only by holders of Class 2 licences, there are 6 licensed drivers to every vehicle.

The ratio of males to females among the holders of driving licences was 4 to 1. The number of women is smaller in the higher age groups, whereas in the younger age groups, say, in the age group 21 to 24, already every 4th holder of a driving licence is a woman.

The proportion of holders of driving licences among the resident population of the relevant age is largest in communities of less than 5,000 inhabitants, namely, 37 % (63 % for the men). This proportion decreases steadily with growing size of the communities and reaches its lowest level in cities of 100,000 and more inhabitants, where it is only 30 % (52 % for the men). The fact that the proportion of holders of driving licences among the age-specific population in communities of less than 5,000 inhabitants is above the average may be explained by the

very high percentage of the active population who possess a driving licence of Class 4 which is required for agricultural tractors.

In addition to the number of drivers, i.e. the holders of driving licences, there is yet another figure which meets with general interest, namely, the number of those licence holders who actually used their driving licences. A total of 63 % of the holders

of driving licences used the licence regularly on three and more days of the week. Another 5 % still made regular use of their driving licence, though on less than three days every week. Every 5th person (21 %) used the licence only occasionally, and 11 % had not used their licence at all during the year preceding the inquiry.

(See Table 48 on page 90.)

Table 9: Resident population, by participation in economic activity
1 000

Participation in economic activity	Year of inquiry										
	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Total											
Economically active	25 523	25 786	25 949	26 194	26 532	26 271	26 489	26 390	26 629	26 630	25 906
Not gainfully employed	431	342	214	152	91	102	86	97	57	49	290
Active population	25 954	26 128	26 163	26 346	26 623	26 373	26 574	26 487	26 686	26 679	26 196
Non-active population	27 808	28 219	28 734	29 215	29 697	30 375	30 466	31 199	31 739	32 386	33 146
Total	53 761	54 347	54 897	55 561	56 319	56 747	57 040	57 686	58 425	59 065	59 343
Men											
Economically active	15 994	16 123	16 200	16 340	16 640	16 493	16 709	16 630	16 796	16 851	16 441
Not gainfully employed	188	155	105	69	46	49	44	51	31	31	200
Active population	16 182	16 277	16 305	16 409	16 686	16 542	16 752	16 681	16 827	16 882	16 642
Non-active population	8 892	9 059	9 300	9 568	9 718	9 937	9 989	10 391	10 675	10 968	11 270
Together	25 074	25 336	25 605	25 977	26 404	26 479	26 741	27 073	27 502	27 850	27 912
Women											
Economically active	9 529	9 663	9 749	9 854	9 891	9 778	9 780	9 760	9 834	9 779	9 465
Not gainfully employed	243	187	109	83	45	53	42	46	25	19	90
Active population	9 772	9 851	9 858	9 937	9 936	9 831	9 822	9 806	9 859	9 797	9 555
Non-active population	18 916	19 160	19 434	19 647	19 979	20 438	20 477	20 807	21 065	21 418	21 876
Together	28 687	29 011	29 292	29 584	29 915	30 268	30 298	30 613	30 924	31 215	31 431

Table 10: Economically active persons, by economic divisions
1 000

Economic divisions ¹⁾	Year of inquiry										
	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Total											
Agriculture, forestry, animal raising and fisheries	4 112	3 967	3 793	3 541	3 562	3 241	3 172	3 042	2 965	2 756	2 672
Electricity, gas, water supply, mining					801	769	764	742	699	664	602
Manufacturing (excl. constr.)	12 156	12 408	12 526	12 807	10 039	10 040	10 102	10 001	10 130	10 209	9 742
Construction					2 101	2 056	2 137	2 147	2 189	2 236	2 073
Trade					3 068	3 118	3 147	3 130	3 180	3 214	3 190
Transport, communications	5 050	5 068	5 154	5 292	1 497	1 488	1 528	1 569	1 574	1 525	1 498
Credit institutions, insurance companies					496	493	510	540	551	583	596
Services, n.e.s.					2 912	2 985	3 020	3 149	3 221	3 306	3 388
Private non-profit institutions, private households	4 205	4 343	4 476	4 554	533	484	485	483	474	444	442
Central and local government, social security					1 522	1 596	1 624	1 588	1 647	1 693	1 704
Total	25 523	25 786	25 949	26 194	26 532	26 271	26 489	26 390	26 629	26 630	25 906
Men											
Agriculture, forestry, animal raising and fisheries	1 867	1 797	1 750	1 625	1 643	1 483	1 457	1 430	1 375	1 278	1 240
Electricity, gas, water supply, mining					759	726	722	699	657	625	564
Manufacturing (excl. constr.)	9 051	9 299	9 364	9 526	6 918	6 926	7 011	6 907	7 043	7 113	6 907
Construction					2 001	1 963	2 039	2 046	2 080	2 117	1 957
Trade					1 414	1 437	1 458	1 439	1 466	1 489	1 501
Transport, communications	3 051	2 977	3 014	3 082	1 261	1 241	1 274	1 320	1 319	1 275	1 254
Credit institutions, insurance companies					271	266	275	295	296	318	323
Services, n.e.s.					1 155	1 169	1 181	1 248	1 280	1 336	1 377
Private non-profit institutions, private households	2 026	2 050	2 072	2 108	106	122	124	115	121	111	113
Central and local government, social security					1 112	1 160	1 168	1 133	1 160	1 191	1 206
Together	15 994	16 123	16 200	16 340	16 640	16 493	16 709	16 630	16 796	16 851	16 441
Women											
Agriculture, forestry, animal raising and fisheries	2 246	2 171	2 044	1 916	1 919	1 758	1 715	1 612	1 591	1 478	1 432
Electricity, gas, water supply, mining					42	43	43	43	42	39	38
Manufacturing (excl. constr.)	3 106	3 108	3 162	3 281	3 121	3 113	3 091	3 094	3 087	3 096	2 835
Construction					100	93	98	101	110	119	117
Trade					1 654	1 681	1 689	1 691	1 714	1 726	1 690
Transport, communications	1 999	2 091	2 139	2 210	236	247	254	249	255	250	244
Credit institutions, insurance companies					225	227	235	245	254	265	273
Services, n.e.s.					1 758	1 816	1 839	1 902	1 942	1 970	2 011
Private non-profit institutions, private households	2 179	2 293	2 404	2 446	428	362	361	369	353	334	328
Central and local government, social security					410	436	456	455	486	502	498
Together	9 529	9 663	9 749	9 854	9 891	9 778	9 780	9 760	9 834	9 779	9 465

1) See also "Branches of economic activity", p. 11.

Table 14: Economically active persons, by number of activities, hours worked and sex

Inquiry	1st activity				2nd activity				1st and 2nd activity (activity cases)			
	number		hours worked		number		hours worked		number		hours worked	
	1 000	1957=100	mil- lions	1957=100	1 000	1957=100	mil- lions	1957=100	1 000	1957=100	mil- lions	1957=100
	Total											
Oct. 1957	25 523	100	1 211.8	100	834	100	14.4	106	26 357	100	1 226.2	100
Oct. 1958	25 785	101.0	1 203.5	99.3	887	106.5	16.3	115.2	26 674	101.2	1 219.8	99.5
Oct. 1959	25 949	101.7	1 194.3	98.6	958	114.9	16.5	114.5	26 906	102.1	1 210.	98.7
Oct. 1960	26 194	102.6	1 199.5	99.0	1 024	122.9	16.4	114.4	27 218	103.3	1 215.9	99.2
Oct. 1961	26 532	104.0	1 206.2	99.5	1 044	125.3	17.5	121.9	27 576	104.6	1 223.7	99.8
Oct. 1962	26 271	102.9	1 185.4	97.8	984	118.0	15.5	107.7	27 255	103.4	1 200.8	97.9
Apr. 1963	26 489	103.8	1 188.9	98.1	983	117.9	15.9	110.4	27 471	104.2	1 204.8	98.3
Apr. 1964	26 390	103.4	1 183.8	97.7	754	90.5	14.1	97.8	28 144	103.0	1 197.9	97.7
May 1965	26 629	104.3	1 181.2	97.5	781	93.7	13.6	94.9	27 411	104.0	1 194.8	97.4
Apr. 1966	26 630	104.3	1 174.4	96.9	749	89.9	13.6	94.3	27 379	103.9	1 187.9	96.9
Apr. 1967	25 906	101.5	1 124.0	92.8	749	89.9	13.2	91.7	26 655	101.1	1 137.2	92.7
	Men											
Oct. 1957	15 994	100	772.2	100	673	100	11.6	100	16 667	100	783.7	100
Oct. 1958	16 123	100.8	777.7	100.7	714	106.1	13.1	113.0	16 837	101.0	790.8	100.9
Oct. 1959	16 200	101.3	770.6	99.8	766	113.8	13.1	113.0	16 966	101.8	783.7	100.0
Oct. 1960	16 340	102.2	776.6	100.6	818	121.5	13.1	113.2	17 158	103.0	789.7	100.8
Oct. 1961	16 640	104.0	784.0	101.5	831	123.5	13.8	119.6	17 471	104.8	797.8	101.8
Oct. 1962	16 493	103.1	772.9	100.1	798	118.5	12.5	108.5	17 291	103.7	785.4	100.2
Apr. 1963	16 709	104.5	780.1	101.0	798	118.5	12.9	111.9	17 506	105.0	793.0	101.2
Apr. 1964	16 630	104.0	773.2	100.1	631	93.8	11.8	102.2	17 262	103.6	785.0	100.2
May 1965	16 796	105.0	774.4	100.3	661	98.2	11.6	100.6	17 457	104.7	786.0	100.3
Apr. 1966	16 851	105.4	773.0	100.1	638	94.7	11.7	100.7	17 489	104.9	784.6	100.1
Apr. 1967	16 441	102.8	742.5	96.2	641	95.3	11.4	98.4	17 083	102.5	754.0	96.2
	Women											
Oct. 1957	9 529	100	439.6	100	160	100	2.8	100	9 690	100	442.4	100
Oct. 1958	9 663	101.4	425.8	96.9	173	108.1	3.2	114.2	9 837	101.5	429.0	97.0
Oct. 1959	9 749	102.3	423.7	96.4	192	119.5	3.4	120.6	9 941	102.6	427.1	96.5
Oct. 1960	9 854	103.4	422.9	96.2	206	128.5	3.4	119.4	10 060	103.8	426.2	96.3
Oct. 1961	9 891	103.8	422.2	96.0	213	132.9	3.7	131.5	10 104	104.3	425.9	96.3
Oct. 1962	9 778	102.6	412.5	93.8	186	116.1	2.9	104.4	9 964	102.8	415.4	93.9
Apr. 1963	9 780	102.6	408.9	93.0	185	115.3	2.9	104.1	9 965	102.8	411.8	93.1
Apr. 1964	9 760	102.4	410.6	93.4	123	76.6	2.2	79.6	9 883	102.0	412.9	93.3
May 1965	9 834	103.2	406.8	92.5	120	74.9	2.0	71.6	9 954	102.7	408.9	92.4
Apr. 1966	9 779	102.6	401.4	91.3	112	69.6	1.9	68.0	9 890	102.1	403.3	91.2
Apr. 1967	9 465	99.3	381.5	86.8	108	67.5	1.8	64.3	9 573	98.8	383.3	86.6

Table 15: Average number of hours worked by economically active persons in their main activity per economic sector and status in occupation

Status in occupation	Year of inquiry											
	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	
	Total											
	Agriculture, forestry, animal raising and fisheries											
Self-employed	63.6	60.7	58.7	58.2	59.7	61.2	59.8	63.3	60.9	62.0	60.6	
Unpaid family workers	54.2	47.9	48.4	47.5	49.5	50.5	48.6	50.9	49.6	50.6	48.6	
Officials, judges	/	/	/	/	49.4	/	/	51.4	/	/	/	
Salaried employees	51.8	54.5	53.1	51.9	49.6	49.3	48.1	50.5	49.0	49.0	47.3	
Wage earners	52.4	51.5	50.3	49.1	48.6	48.0	47.8	49.8	48.9	48.1	47.5	
Together	56.7	52.4	52.0	51.2	52.6	53.7	52.1	54.8	53.2	54.1	52.4	
	Production industries											
Self-employed	51.5	52.3	50.9	51.1	50.7	51.0	51.2	51.8	51.4	51.7	51.2	
Unpaid family workers	47.8	48.3	44.0	43.7	44.2	44.6	43.7	44.5	43.9	43.2	41.5	
Officials, judges	47.4	/	/	/	/	/	/	43.0	42.3	/	/	
Salaried employees	45.4	45.3	44.9	44.8	44.4	43.8	43.9	43.0	42.7	42.5	41.8	
Wage earners	44.0	44.1	43.8	43.7	43.1	42.5	42.4	42.0	41.7	41.4	40.4	
Together	44.8	44.9	44.4	44.4	43.8	43.3	43.2	42.8	42.5	42.2	41.4	
	Trade, transport and communications											
Self-employed	54.4	54.6	53.6	53.3	53.7	54.1	53.7	54.1	53.5	53.7	53.2	
Unpaid family workers	50.0	47.5	44.8	43.6	44.1	45.4	45.0	45.9	44.6	45.0	43.6	
Officials, judges	46.7	45.5	44.5	45.2	44.2	44.4	44.4	43.7	43.4	43.5	43.1	
Salaried employees	45.9	45.6	45.2	45.1	44.4	43.9	43.7	43.2	42.8	42.2	41.8	
Wage earners	44.7	43.9	43.6	43.6	44.0	43.2	43.4	43.1	43.0	42.6	42.2	
Together	47.2	46.8	46.2	46.0	45.9	45.6	45.4	45.2	44.8	44.4	44.0	
	Other sectors (services) ¹⁾											
Self-employed	55.3	54.8	54.2	53.3	52.8	52.5	52.7	53.6	53.8	53.8	54.5	
Unpaid family workers	55.3	52.9	50.8	49.3	48.1	49.8	50.1	50.9	50.5	50.2	49.5	
Officials, judges	43.7	44.4	43.4	45.7	43.2	44.7	45.1	44.9	44.3	43.7	43.7	
Salaried employees	46.1	45.9	45.3	45.6	44.5	44.3	44.2	43.7	43.4	43.0	42.6	
Wage earners	44.7	44.1	43.2	42.7	41.4	40.2	40.4	40.1	39.7	39.6	39.3	
Together	46.4	46.2	45.3	45.5	44.4	44.1	44.2	44.0	43.7	43.4	43.1	
	All sectors											
Self-employed	57.1	56.2	54.8	54.4	54.8	55.5	55.0	56.4	55.4	55.7	55.2	
Unpaid family workers	53.3	48.2	47.8	46.8	48.3	49.4	47.9	49.7	48.6	49.2	47.4	
Officials, judges	44.9	44.9	43.9	45.5	43.6	44.6	44.9	44.5	44.0	43.6	43.5	
Salaried employees	45.8	45.6	45.1	45.1	44.5	44.0	43.9	43.3	43.0	42.6	42.1	
Wage earners	44.6	44.4	43.9	43.7	43.1	42.4	42.4	42.1	41.7	41.4	40.6	
Total	47.5	46.7	46.0	45.8	45.5	45.1	44.9	44.9	44.4	44.1	43.4	

1) Incl. central and local government and social security.

Table 16: Economically active mothers¹⁾ by status in occupation, number of children and type of employment
Federal Republic incl. Berlin (West)

Status in occupation	Economically active mothers, total	Economically active mothers in other sectors than agriculture and forestry							
		by number of children				by type of employment ²⁾			
		together	1 child	2 children	3 and more children	together	permanent employment	seasonal employment	casual employment (incl. not stated)
1 000									
Self-employed/unpaid family worker	989	359	186	105	47	302	281	5	16
Official	22	22	15	5	(2)	21	21	-	-
Salaried employee	375	374	296	62	16	339	309	(4)	27
Wage earner	953	913	590	231	93	860	748	32	81
Total	2 338	1 647	1 087	403	158	1 523	1 359	41	123
%									
Self-employed/unpaid family worker	42.3	20.6	17.1	26.1	29.7	19.8	20.7	12.2	12.8
Official	0.9	1.3	1.4	1.3	1.3	1.4	1.6	-	-
Salaried employee	16.0	22.7	27.2	15.3	10.1	22.3	22.7	9.8	21.5
wage earner	40.8	55.4	54.3	57.3	58.9	56.5	55.0	78.0	65.6
Total	100	100	100	100	100	100	100	100	100
%									
Self-employed/unpaid family worker	-	100	55.0	31.1	13.9	100	93.1	1.7	5.2
Official	-	100	69.5	23.2	7.3	100	100	-	-
Salaried employee	-	100	79.2	16.5	4.3	100	91.0	1.2	7.8
wage earner	-	100	64.6	25.3	10.1	100	87.0	3.7	9.4
Total	-	100	66.0	24.5	9.5	100	89.2	2.7	8.1

Table 17: Children of mothers working in other sectors than agriculture and forestry, by age and care, 1962
Federal Republic incl. Berlin (West)

Age of children and time of care	Cared for in institutions, total	Institutions			Cared for by individual persons, total	Persons				
		Kindergarten/day care centre, day nursery	elementary school	other schools and institutions		mother	father	grand-parents	brothers/sisters 14 years and over, other relatives	other persons (incl. not stated)
Children under 6 years										
Children of mothers working all day										
Cared for all day	135	132	-	(3)	585	165	13	320	32	55
Cared for in the morning	30	29	-	.	30	13	(2)	6	(2)	7
Cared for in the afternoon	(2)	(2)	-	.	57	15	6	23	(4)	9
Cases of care	166	163	-	(3)	671	193	22	349	38	70
Children cared for	166	-	-	-	644	-	-	-	-	-
Children of mothers working half days										
Cared for in the morning	12	12	-	.	44	(3)	6	23	5	7
Cared for in the afternoon	(2)	(2)	-	.	57	(1)	23	21	6	6
Cases of care	14	14	-	(1)	101	(4)	29	44	11	13
Children cared for	14	14	-	(1)	101	(4)	29	44	11	13
Cases of care, total	181	177	-	(4)	772	197	51	393	49	82
Children cared for, total	181	-	-	-	745	-	-	-	-	-
Children aged 6 to under 14 years										
Children of mothers working all day										
Cared for all day	199	39	142	18	58	20	(4)	26	(3)	6
Cared for in the morning	923	10	827	86	6	(2)	(1)	(1)	(1)	(1)
Cared for in the afternoon	41	34	(2)	(4)	720	225	93	272	62	68
Cases of care	1 163	82	972	108	783	247	98	229	65	75
Children cared for	1 125	-	-	-	780	-	-	-	-	-
Children of mothers working half days										
Cared for in the morning	141	(3)	124	14	7	.	(2)	(3)	(1)	(1)
Cared for in the afternoon	(1)	.	.	.	10	.	5	(3)	(2)	(1)
Cases of care	142	(3)	125	14	18	.	7	6	(3)	(2)
Children cared for	142	(3)	125	14	18	.	7	6	(3)	(2)
Cases of care, total	1 305	86	1 096	123	801	248	104	304	69	77
Children cared for, total	1 267	-	-	-	798	-	-	-	-	-
Children under 14 years, total										
Children of mothers working all day										
Cared for all day	333	170	142	21	643	185	17	346	35	60
Cared for in the morning	953	39	827	86	35	15	(3)	7	(2)	8
Cared for in the afternoon	43	36	(2)	5	776	240	99	295	66	76
Cases of care	1 329	246	972	112	1 454	440	119	647	103	144
Children cared for	1 291	-	-	-	1 424	-	-	-	-	-
Children of mothers working half days										
Cared for in the morning	154	15	124	15	51	(3)	8	26	6	8
Cared for in the afternoon	(3)	(2)	.	.	68	(1)	28	24	8	7
Cases of care	156	17	125	15	119	(4)	36	50	14	15
Children cared for	156	17	125	15	119	(4)	36	50	14	15
Cases of care, total	1 485	263	1 096	127	1 573	444	155	697	118	159
Children cared for, total	1 447	-	-	-	1 543	-	-	-	-	-

Fields of the table which in the sample comprise 5 to under 50 cases (or 500 to 5 000 when raised) have been put in brackets, while those with under 5 cases in the sample have been marked by a dot.

1) Without population living in institutions. - 2) Without 1 240 (raised 124 000) mothers who have not been included in the supplementary inquiry.

Table 18: Women aged 40 to 65 years, by age, marital status and present or former participation in economic life

Age from ... to under ... years	Total	Thereof					
		at present active		formerly active		never active	
		1 000	%	1 000	%	1 000	%
Single							
40 - 45	210	186	88.4	17	8.3	7	3.4
45 - 50	159	139	87.8	12	7.8	7	4.3
50 - 55	151	123	81.8	19	12.8	8	5.4
55 - 60	180	134	74.6	33	18.6	12	6.8
60 and over	221	94	42.6	111	50.1	16	7.3
Together	920	677	73.5	193	21.0	50	5.5
Married							
40 - 45	1 721	676	39.3	911	52.9	135	7.8
45 - 50	1 357	518	38.2	730	53.8	109	8.0
50 - 55	1 328	456	34.3	730	55.0	142	10.7
55 - 60	1 412	392	27.8	841	59.6	179	12.7
60 and over	1 316	233	17.7	887	67.4	196	14.9
Together	7 133	2 275	31.9	4 098	57.5	761	10.7
Widowed							
40 - 45	83	46	54.9	31	37.7	6	7.3
45 - 50	184	86	47.0	82	44.3	16	8.7
50 - 55	372	138	37.2	192	51.6	42	11.2
55 - 60	523	169	32.2	290	55.5	65	12.3
60 and over	712	130	18.2	464	65.2	118	16.6
Together	1 874	568	30.3	1 059	56.5	247	13.2
Divorced							
40 - 45	80	67	83.8	11	13.8	/	/
45 - 50	74	60	81.3	12	15.6	/	/
50 - 55	85	67	78.1	17	19.4	/	/
55 - 60	85	62	73.4	18	21.6	/	/
60 and over	77	34	43.5	39	50.3	/	/
Together	401	290	72.2	96	24.0	15	3.8
Total							
40 - 45	2 095	975	46.5	971	46.3	150	7.1
45 - 50	1 773	804	45.3	836	47.1	134	7.5
50 - 55	1 936	783	40.5	958	49.5	194	10.0
55 - 60	2 200	757	34.4	1 183	53.8	260	11.8
60 and over	2 325	490	21.1	1 500	64.5	335	14.4
Total	10 329	3 809	36.9	5 447	52.7	1 073	10.4

Table 19: Women aged 40 to 65 years who are or were economically active, by present age and age when taking up their first job

Age (in years) when taking up the first job	Unit	Total	Thereof aged from ... to under ... years				
			40 - 45	45 - 50	50 - 55	55 - 60	60 and over
			born in				
			1922 - 1926	1917 - 1921	1912 - 1916	1907 - 1911	1901 - 1906
15 and under	%	64.6	64.0	61.2	63.8	65.4	67.8
16	%	11.0	12.0	12.2	10.5	10.4	10.1
17	%	6.9	7.9	8.4	6.4	6.4	5.6
18 and over	%	17.5	16.1	18.2	19.3	17.8	16.5
Total	%	100	100	100	100	100	100
	1 000	9 256	1 946	1 639	1 741	1 940	1 990

Table 20: Women aged 40 to 65 years who are or were economically active and interrupted their activity at least once, by reasons of first interruption

Reason of first interruption of economic activity	Total of women who at least once interrupted their activity or gave it up	Thereof	
		not economically active again	economically active again
		1 000	%
Marriage	3 972	57.6	42.4
Childbirth	617	43.2	56.8
Care of children	178	52.2	47.8
Reasons of health	683	63.1	36.9
Change of residence	128	33.4	66.6
Unemployment	139	18.2	81.8
No financial need	147	72.0	28.0
War events	889	24.4	75.6
Further education	116	/	97.4
Other reasons	781	39.2	60.8
Total	7 649	49.4	50.6

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 10 cases (raised to 10 000).

Table 21: Women aged 40 to 65 years who formerly were economically active, by age, time when economic activity was given up and reasons

Last economic activity given up in ...	Total	Reason why activity was given up				
		marriage	childbirth and care of children	reasons of health	war events	other reasons
	1 000	%				
40 to under 45 years (1922 - 1926)						
1945 and earlier	205	42.6	8.5	6.7	29.4	12.8
1946 - 1954	446	68.3	17.2	4.6	/	9.3
1955 - 1966	319	22.1	32.1	17.5	/	28.1
Together	971	47.7	20.3	9.3	6.5	16.2
45 to under 50 years (1917 - 1921)						
1945 and earlier	400	58.5	14.2	5.3	13.2	8.9
1946 - 1954	225	57.7	19.1	8.1	/	13.8
1955 - 1966	211	16.2	16.7	32.1	/	34.9
Together	836	47.6	16.1	12.8	6.7	16.8
50 to under 60 years (1907 - 1916)						
1938 and earlier	904	81.6	4.7	4.2	/	9.4
1939 - 1949	641	39.7	17.4	9.0	20.3	13.6
1950 - 1966	536	12.7	4.7	47.2	/	35.2
Together	2 141	49.9	8.5	17.6	6.2	17.8
60 to 65 years (1901 - 1906)						
1938 and earlier	733	77.9	6.1	5.1	/	10.7
1939 - 1949	294	15.7	9.8	20.5	33.5	20.4
1950 - 1966	473	4.3	/	54.4	/	40.1
Together	1 500	42.5	5.2	23.7	6.8	21.9
Total	5 447	47.1	<u>40 to 65 years</u> 10.9	17.1	6.5	18.5

Table 22: Women aged 40 to 65 years who interrupted their economic activity at least once, by age, time of first interruption¹⁾ and reasons

First economic activity was given up in ...	Total	Reason why first activity was interrupted ¹⁾				
		marriage	childbirth and care of children	reasons of health	war events	other reasons
	1 000	%				
40 to under 45 years (1922 - 1926)						
1945 and earlier	693	25.1	7.5	5.5	46.2	15.8
1946 - 1954	816	60.2	16.5	4.2	2.2	10.9
1955 - 1966	212	31.3	31.1	13.3	/	24.1
Together	1 521	42.6	14.4	6.1	22.0	15.0
45 to under 50 years (1917 - 1921)						
1945 and earlier	342	46.2	13.8	5.0	20.7	14.2
1946 - 1954	275	59.4	17.9	5.9	2.9	13.9
1955 - 1966	105	27.8	16.5	26.7	-	29.0
Together	1 323	47.5	14.8	6.9	15.4	15.3
50 to under 60 years (1907 - 1916)						
1938 and earlier	1 802	71.0	5.1	5.4	/	18.2
1939 - 1949	367	41.6	17.5	5.6	24.6	10.8
1950 - 1966	280	21.0	5.3	42.0	/	31.2
Together	3 049	57.1	9.1	8.8	8.0	17.1
60 to 65 years (1901 - 1906)						
1938 and earlier	1 273	69.5	5.9	5.8	0.7	18.2
1939 - 1949	258	22.8	9.9	13.1	38.5	15.7
1950 - 1966	225	5.5	/	53.9	-	39.4
Together	1 757	54.4	5.8	13.0	6.2	20.5
Total	7 649	51.9	<u>40 to 65 years</u> 10.4	8.9	11.6	17.1

1) Or termination of economic activity without previous interruption.

Table 23: Reasons of interruption or termination of economic activity

Reason of interruption or termination of economic activity	Unit	Women who for the indicated reasons	
		interrupted	gave up
		their economic activity	
Marriage	%	43.5	47.1
Childbirth	%	9.0	7.1
Care of children	%	2.2	3.7
Reasons of health	%	6.5	17.1
Change of residence	%	2.2	1.7
Unemployment	%	2.9	0.7
No financial need	%	1.1	4.7
War events	%	17.4	6.5
Further education	%	2.9	/
Other reasons	%	12.3	11.3
Total	%	100	100
	1 000	3 873	5 447

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 10 cases (raised to 10 000).

Table 24: Dependently employed persons working on Sundays or holidays, by age groups, status in occupation, economic sectors and groups of hours worked

Age groups Status in occupation Economic sector	Sunday and holiday work								
	total	regularly				casually			
		together	under 3 hours	3 hours and over	together	under 3 hours	3 hours and over		
	1 000	%	1 000	%	1 000	%	1 000		
Age groups total									
from ... to under ... years:									
under 25	244	163	66.7	10	153	81	33.3	14	68
25 - 35	555	314	56.5	23	291	242	43.5	47	195
35 - 45	527	304	57.7	23	281	223	42.3	47	176
45 - 55	404	250	61.9	19	232	154	38.1	32	122
55 - 65	309	193	62.4	18	175	116	37.6	25	91
65 and over	40	27	68.0	3	24	13	32.0	3	10
Together	2 078	1 251	60.2	95	1 156	828	39.8	167	661
Men									
under 25	137	79	57.4	6	73	58	42.6	10	49
25 - 35	470	253	53.8	19	233	217	46.2	41	176
35 - 45	444	245	55.2	18	227	199	44.8	40	159
45 - 55	333	198	59.5	15	183	135	40.5	27	108
55 - 65	253	151	59.8	14	138	102	40.2	21	81
65 and over	26	17	63.5	2	15	10	36.5	2	7
Together	1 663	942	56.7	73	869	721	43.3	141	579
Women									
under 25	107	84	78.5	4	81	23	21.5	4	19
25 - 35	85	61	71.7	4	57	24	28.3	6	19
35 - 45	83	59	71.5	5	54	24	28.5	6	18
45 - 55	71	52	73.1	4	49	19	26.9	5	14
55 - 65	55	41	74.5	4	37	14	25.5	4	10
65 and over	13	10	76.9	1	9	3	23.1	.	2
Together	416	309	74.2	22	287	107	25.8	26	82
Status in occupation total									
Officials	364	247	67.9	16	232	117	32.1	31	86
Salaried employees 1)	517	293	56.7	24	269	224	43.3	59	165
Wage earners 2)	1 197	710	59.3	56	655	487	40.7	77	410
Together	2 078	1 251	60.2	95	1 156	828	39.8	167	661
Men									
Officials	348	240	69.0	15	225	108	31.0	27	82
Salaried employees 1)	308	142	46.1	16	126	166	53.9	48	118
Wage earners 2)	1 007	560	55.7	43	517	446	44.3	67	380
Together	1 663	942	56.7	73	869	721	43.3	141	579
Women									
Officials	16	7	45.1	.	7	9	54.9	4	5
Salaried employees 1)	209	151	72.3	8	143	58	27.7	11	47
Wage earners 2)	190	150	78.8	13	137	40	21.2	11	30
Together	416	309	74.2	22	287	107	25.8	26	82
Sunday and holiday work in main activity in the economic sector total									
Agriculture, forestry	57	45	78.9	9	36	12	21.1	5	7
Production industries	749	356	47.6	27	330	392	52.4	64	329
Trade, transport and communications	492	317	64.3	22	295	176	35.7	32	144
Other sectors	744	513	69.0	35	479	231	31.0	62	169
Sunday or holiday work in 2nd activity	37	20	54.0	4	16	17	46.0	4	13
Together	2 078	1 251	60.2	95	1 156	828	39.8	167	661
Men									
Agriculture, forestry	41	31	76.9	6	25	9	23.1	4	5
Production industries	729	348	47.6	25	323	382	52.4	60	322
Trade, transport and communications	448	291	65.0	19	272	157	35.0	29	128
Other sectors	416	257	61.9	20	237	158	38.1	45	113
Sunday or holiday work in 2nd activity	29	15	51.4	3	12	14	48.6	4	11
Together	1 663	942	56.7	73	869	721	43.3	141	579
Women									
Agriculture, forestry	16	13	84.2	3	11	3	15.8	.	2
Production industries	19	9	45.1	2	7	11	54.9	4	7
Trade, transport and communications	45	26	57.8	2	24	19	42.2	3	16
Other sectors	329	256	77.9	14	242	73	22.1	17	56
Sunday or holiday work in 2nd activity	7	5	64.4	.	4	3	35.6	.	2
Together	416	309	74.2	22	287	107	25.8	26	82

1) Incl. commercial apprentices. - 2) Incl. industrial apprentices and homework.

Table 25: Dependently employed persons working at night, by age groups, status in occupation, economic sectors and shift work

Age groups Status in occupation Economic sector	Night work								
	total	in shifts			not in shifts			regularly	casually
		together	%	regularly	casually	together	%		
	1 000			1 000		1 000		1 000	
Age groups total									
from ... to under ... years:									
under 25	247	161	65.2	132	29	86	23.8	39	47
25 - 35	728	497	68.4	431	66	230	31.6	87	143
35 - 45	626	439	70.1	381	58	187	29.9	64	123
45 - 55	436	295	67.6	260	34	141	32.4	54	88
55 - 65	313	205	65.7	184	21	107	34.3	38	69
65 and over	32	15	47.5	14	2	17	52.5	9	8
Together	2 381	1 612	67.7	1 403	210	769	32.3	290	479
Men									
under 25	181	122	67.5	101	21	59	32.5	24	35
25 - 35	647	455	70.3	395	59	192	29.7	66	126
35 - 45	555	399	72.0	346	53	155	28.0	47	108
45 - 55	380	266	70.0	235	31	114	30.0	38	76
55 - 65	276	190	68.8	170	20	86	31.2	27	59
65 and over	24	13	53.8	12	1	11	46.3	6	6
Together	2 062	1 445	70.1	1 259	186	617	29.9	208	409
Women									
under 25	66	39	58.8	31	7	27	41.2	15	12
25 - 35	81	43	52.9	36	7	38	47.1	21	17
35 - 45	72	40	55.2	35	4	32	44.8	17	15
45 - 55	56	29	51.4	25	3	27	48.6	15	12
55 - 65	37	15	42.1	14	2	21	57.9	11	11
65 and over	8	2	28.2	2	.	6	71.8	3	2
Together	319	168	52.5	143	24	151	47.5	82	69
Status in occupation total									
Officials	321	203	63.3	187	17	118	36.7	51	68
Salaried employees ¹⁾	419	172	41.1	144	29	247	58.9	87	160
Wage earners ²⁾	1 641	1 237	75.4	1 072	165	404	24.6	153	251
Together	2 381	1 612	67.7	1 403	210	769	32.3	290	479
Men									
Officials	310	199	64.2	183	16	111	35.8	49	62
Salaried employees ¹⁾	284	115	40.5	95	20	169	59.5	49	120
Wage earners ²⁾	1 468	1 131	77.0	981	149	337	23.0	110	227
Together	2 062	1 445	70.1	1 259	186	617	29.9	208	409
Women									
Officials	11	4	36.7	4	.	7	63.3	2	5
Salaried employees ¹⁾	135	57	42.4	49	9	78	57.6	38	40
Wage earners ²⁾	173	106	61.4	91	15	67	38.6	43	24
Together	319	168	52.5	143	24	151	47.5	82	69
Night work in main activity in the economic sector total									
Agriculture, forestry	19	3	14.7	2	.	16	85.3	10	6
Production industries	1 307	1 046	80.0	911	135	261	20.0	57	205
Trade, transport and communications	487	319	65.6	276	43	167	34.4	72	96
Other sectors	537	232	43.3	204	28	304	56.7	144	161
Night work in 2nd activity	32	13	39.1	10	3	20	60.9	8	12
Together	2 381	1 612	67.7	1 403	210	769	32.3	290	479
Men									
Agriculture, forestry	14	3	19.9	2	.	11	80.1	7	5
Production industries	1 218	970	79.6	846	124	248	20.4	50	198
Trade, transport and communications	451	298	66.2	259	39	152	33.8	65	87
Other sectors	354	163	46.1	144	19	191	53.9	80	111
Night work in 2nd activity	25	11	41.7	8	2	15	58.3	6	9
Together	2 062	1 445	70.1	1 259	186	617	29.9	208	409
Women									
Agriculture, forestry	5	-	-	-	-	5	100.0	3	2
Production industries	89	76	85.3	65	11	13	14.7	6	7
Trade, transport and communications	26	21	58.0	17	4	15	42.0	7	8
Other sectors	182	69	37.8	60	9	114	62.2	64	50
Night work in 2nd activity	7	2	29.4	2	.	5	70.6	3	2
Together	319	168	52.5	143	24	151	47.5	82	69

Dots have been used instead of figures where the fields of the table comprise in the sample less than 10 cases (raised to 1 000).

1) Incl. commercial apprentices. - 2) Incl. industrial apprentices and homework.

Table 26: Persons in April 1964, who had attended a school providing general education, by age groups, type of school leaving and participation in economic life

1 000

Age (from ... to under ... years)	Total	Type of school leaving				
		primary school or before upper-fifth grade	after having moved up to the upper-fifth grade	after having moved up to the upper-fifth grade, but be- fore higher school certifi- cate	higher school certificate of secondary or night school	not stated
Total						
Resident population						
14 - 30	10 829	9 445	1 033	69	259	24
30 - 40	7 280	6 236	575	58	396	15
40 - 50	6 282	5 298	595	54	319	16
50 - 65	11 180	9 839	836	87	395	30
Total	35 578	30 818	3 039	268	1 369	85
Active population						
14 - 30	8 960	7 791	878	56	217	18
30 - 40	5 179	4 398	409	41	320	11
40 - 50	4 261	3 538	407	39	267	10
50 - 65	6 223	5 308	520	59	322	13
Together	24 622	21 034	2 215	195	1 126	53
Non-active population						
14 - 30	1 869	1 654	154	12	42	6
30 - 40	2 101	1 839	166	17	76	-
40 - 50	2 021	1 760	188	16	52	5
50 - 65	4 965	4 531	316	28	73	17
Together	10 956	9 784	824	73	244	32
Men						
Resident population						
Total						
14 - 30	5 205	4 596	425	32	140	12
30 - 40	3 549	2 984	277	29	252	7
40 - 50	2 640	2 166	236	24	207	6
50 - 65	4 959	4 240	370	48	292	11
Total	16 352	13 986	1 308	132	890	36
Active population						
14 - 30	5 130	4 537	419	31	133	10
30 - 40	3 517	2 954	275	28	252	7
40 - 50	2 571	2 104	233	24	205	6
50 - 65	4 255	3 583	342	44	277	9
Together	15 472	13 178	1 269	126	866	32
Non-active population						
14 - 30	75	59	7	-	7	-
30 - 40	32	30	-	-	-	-
40 - 50	69	62	-	-	-	-
50 - 65	704	656	27	-	15	-
Together	880	807	39	6	25	-
Women						
Resident population						
Total						
14 - 30	5 624	4 848	608	37	119	12
30 - 40	3 731	3 252	298	30	143	8
40 - 50	3 642	3 132	358	30	113	9
50 - 65	6 229	5 599	467	39	104	20
Total	19 226	16 832	1 731	136	479	49
Active population						
14 - 30	3 831	3 254	460	25	83	8
30 - 40	1 662	1 443	134	13	68	-
40 - 50	1 690	1 434	174	15	62	-
50 - 65	1 968	1 724	178	16	46	-
Together	9 150	7 856	946	69	260	21
Non-active population						
14 - 30	1 794	1 595	148	12	36	-
30 - 40	2 069	1 809	164	17	75	-
40 - 50	1 952	1 698	184	15	50	5
50 - 65	4 261	3 875	289	24	58	15
Together	10 076	8 976	785	67	219	28

Table 28: Economically active persons by occupation practised, type of training and selected classes of occupation
1 000

Selected class of occupation	Economically active persons total ¹⁾	Thereof with training at a				Or with				Education not allocable		
		part-time vocational school	full-time vocational, administrative, advanced full-time vocational school	school for technicians, engineering school	teacher training college, university, institution of higher education	on-the-job training of						
						practical training only (apprenticeship) temporary training	vocational school, university and practical training	less than 1/2 year	1/2 to under 1 year		1 year and over	no training
Farmer	826	199	75	/	/	12	44	/	/	12	460	10
Unpaid family worker in agriculture and forestry	1 361	322	64	/	/	10	34	/	5	11	889	17
Lathe operator	190	/	/	/	/	72	61	25	8	/	14	/
Looksmith (other than structural steel workers)	808	9	/	/	/	332	326	37	16	12	58	10
Mechanic	161	/	/	/	/	31	74	21	5	/	21	/
Maker and repairman of precision instruments, surgical instruments and orthopaedic appliances	54	/	/	/	/	15	28	/	/	/	/	/
Electrician, electrical fitter, cable joiner	349	/	/	/	/	126	149	19	5	6	30	5
Cook, male and female	69	/	/	/	/	15	18	6	/	/	17	/
Engineer, technician (machinery and land vehicles)	130	/	/	31	14	6	74	/	/	/	/	/
Architect, civil engineer, technician (building and construction)	151	/	5	38	25	6	71	/	/	/	18	/
Crane operator	68	/	/	/	/	/	/	35	6	/	18	/
Wholesale and retail dealer, buying agent, salesman, shop assistant	1 479	20	39	/	/	430	435	113	35	28	339	23
Manufacturers' agent, commercial traveller	195	/	6	/	/	41	45	28	9	/	53	/
Bank expert	176	/	17	/	/	49	69	7	5	/	13	/
Car driver	624	/	/	/	/	25	27	93	15	6	442	9
Waiter, steward	104	/	/	/	/	12	15	20	/	/	48	/
Barber, hairdresser	194	/	/	/	/	76	97	/	/	/	11	/
Public service employee of higher or higher middle grade	285	/	75	5	31	28	68	18	9	9	32	/
Industrial or administrative clerk, administrative secretary, clerical worker	1 988	43	245	/	5	444	577	197	91	54	265	31
Accountant	329	8	45	/	/	96	118	17	10	7	21	/
Nurse, male or female	158	/	47	/	/	13	61	/	10	7	11	/
Receptionist to a doctor	61	/	7	/	/	15	17	7	/	/	7	/
Teacher (sciences) at secondary schools	55	/	/	/	52	/	/	/	/	/	/	/
Teacher at intermediate, primary and special schools	186	/	5	/	169	/	9	/	/	/	/	/
Unpaid family worker except in agriculture and forestry	442	6	16	/	/	45	45	28	14	9	265	7

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 50 cases (raised to 5 000).

1) Incl. all cases "Education for present activity not stated".

Table 29: Economically active persons aged 15 to under 65 years¹⁾ who after 1950 and before their present activity had worked in agriculture for a longer and uninterrupted period, by duration and end of former activity in agriculture, age groups, by economic sectors and status in present occupation
1 000

Former activity in agriculture ended between Age groups from ... to under ... years	Duration of former activity in agriculture after 1950				Present activity by economic sectors and status in occupation							
	under 2 years	2 to under 5 years	5 to under 10 years	10 years and over	economically active persons		production industries		trade, transport and communications		other sectors (services) ²⁾	
					total	incl. dependently employed	together	incl. dependently employed	together	incl. dependently employed	together	incl. dependently employed
Men												
1950 - 1953	23	41	6	6	78	72	57	55	11	10	9	8
1954 - 1956	7	33	37	9	86	81	64	63	13	11	9	8
1957 - 1959	/	13	47	14	77	74	57	56	13	12	8	7
1960 - 1962 ³⁾	/	12	17	53	85	80	61	59	14	13	10	8
1963 - 1964 ³⁾	/	/	6	34	44	41	34	32	6	/	5	5
Together	37	103	113	116	368	349	271	264	56	49	41	35
15 - 30	16	49	44	23	132	130	101	100	23	22	8	8
30 - 40	12	32	34	34	111	106	82	81	17	15	12	9
40 - 50	5	10	11	19	44	41	31	30	7	6	6	6
50 - 65	4	13	24	40	81	73	57	53	9	7	15	13
Women												
1950 - 1953	9	18	5	7	38	35	24	23	/	/	10	8
1954 - 1956	/	13	18	6	41	39	27	27	/	/	10	9
1957 - 1959	/	8	31	7	49	46	34	34	/	/	11	9
1960 - 1962 ³⁾	/	8	11	28	49	45	34	33	/	/	11	9
1963 - 1964 ³⁾	/	/	5	15	24	22	14	14	/	/	7	6
Together	18	48	70	64	200	186	133	131	18	13	49	42
15 - 30	9	24	27	10	71	68	47	47	5	/	19	18
30 - 40	5	12	19	18	55	51	38	37	6	5	12	9
40 - 50	/	6	10	14	33	30	21	20	/	/	8	7
50 - 65	/	7	13	19	40	37	28	28	/	/	10	8
Men and women												
1950 - 1953	31	59	11	13	114	107	81	78	15	13	19	16
1954 - 1956	10	45	55	15	126	120	91	89	17	14	19	17
1957 - 1959	7	21	77	21	126	120	91	89	16	14	19	17
1960 - 1962 ³⁾	/	20	28	82	134	125	95	93	18	15	21	18
1963 - 1964 ³⁾	/	6	11	49	68	63	48	47	8	6	12	11
Total	54	152	183	180	568	535	405	395	74	62	90	78
15 - 30	25	73	71	33	203	198	148	147	28	26	27	25
30 - 40	17	43	53	52	166	157	120	118	23	20	23	19
40 - 50	7	16	21	33	77	72	52	50	11	9	15	13
50 - 65	5	20	37	60	122	109	85	81	12	8	25	21

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 50 cases (raised to 5 000).

1) Excl. soldiers. - 2) Incl. central and local government, social security. - 3) Only up to April 1964.

Table 30: Diseased active persons¹⁾ in April 1966, by status in occupation, age groups, incapacity for work and its duration

1 000

Age from ... to under... years Status in occupation	Diseased active persons, total	With incapacity for work (at least on 1 day of the report month)												Without incapacity for work
		which ended in April								which lasted beyond 30 April				
		to-gether	to-gether	duration of incapacity for work (more than ... to ... incl.)						to-gether	duration of incapacity for work (up to 30 April)			
				up to 1 week	1-2 weeks	2-3 weeks	3-4 weeks	more than 4 weeks	not stated		up to 4 weeks	more than 4 weeks	not stated	
Total														
under 20	116	92	70	21	27	/	/	/	/	22	16	/	/	23
20 - 40	790	596	421	120	128	70	26	53	24	175	104	61	11	194
40 - 65	1 353	825	465	89	117	78	36	116	29	360	146	193	21	528
65 and over	158	82	46	11	11	/	/	/	/	36	13	19	/	77
Total	2 417	1 595	1 002	240	283	165	70	185	60	593	278	277	37	822
Self-employed, family workers	459	240	151	47	34	23	11	24	10	89	33	48	/	219
Salaried employees, officials 2)	748	471	313	88	88	45	21	55	17	158	78	71	/	277
Wage earners 3)	1 210	884	538	105	161	96	37	105	33	346	167	159	20	326
Male														
under 20	50	41	31	/	13	/	/	/	/	/	/	/	/	/
20 - 40	443	342	246	73	76	40	14	29	15	96	56	36	/	101
40 - 65	838	532	293	54	74	48	21	77	19	239	91	133	15	306
65 and over	101	55	30	/	/	/	/	/	/	26	/	13	/	46
Together	1 432	970	600	143	170	98	38	115	37	370	163	184	23	462
Self-employed, family workers	233	130	78	26	17	13	/	12	/	52	17	30	/	103
Salaried employees, officials 2)	398	241	161	48	42	22	/	31	/	80	36	38	/	157
Wage earners 3)	801	600	361	69	110	64	23	71	23	239	111	116	12	202
Female														
under 20	66	52	39	12	14	/	/	/	/	13	/	/	/	14
20 - 40	347	154	175	47	53	30	13	24	/	79	48	25	/	93
40 - 65	515	293	172	35	43	30	15	39	10	121	55	60	/	222
65 and over	57	26	16	/	/	/	/	/	/	10	/	/	/	31
Together	985	625	402	97	113	67	32	70	23	223	115	93	14	360
Self-employed, family workers	226	110	73	22	17	11	/	12	/	38	17	18	/	116
Salaried employees, officials 2)	350	230	153	40	46	24	12	24	/	78	42	33	/	120
Wage earners 3)	408	284	177	36	51	33	14	34	/	108	57	43	/	124

1) Excl. soldiers. - 2) Incl. commercial apprentices. - 3) Incl. industrial apprentices.

Table 31: Diseased active persons¹⁾ in April 1966, by age groups, status in occupation and economic sector

Age from ... to under ... years	Diseased active persons, total		Status in occupation						Economic sector									
			Self-employed, family workers		Salaried employees, officials 2)		Wage 3)		agriculture, forestry		production industries		trade, transport and communications		other sectors (services)			
			1 000	% 4)	1 000	% 4)	1 000	% 4)	1 000	% 4)	1 000	% 4)	1 000	% 4)	1 000	% 4)	1 000	% 4)
Total																		
under 20	116	4.4	/	/	49	5.0	60	4.0	/	/	59	4.4	26	4.5	25	4.6		
20 - 30	363	6.1	20	4.3	145	6.3	198	6.3	14	4.3	206	6.4	60	5.5	83	6.6		
30 - 40	427	7.4	55	5.5	126	7.4	246	8.0	29	5.3	250	7.8	68	7.4	81	7.2		
40 - 65	1 353	12.0	273	9.5	407	11.8	673	13.6	133	9.8	645	12.7	231	11.5	344	12.1		
65 and over	158	14.8	105	15.6	21	12.8	32	14.0	60	15.8	41	15.4	25	14.7	32	12.8		
Total	2 417	9.1	459	8.9	748	8.7	1 209	9.4	242	8.8	1 200	9.2	409	8.6	565	9.4		
Male																		
under 20	50	3.7	/	/	11	4.2	36	3.5	/	/	33	3.7	/	/	/	/		
20 - 30	180	5.1	/	/	45	4.6	127	5.4	/	/	124	5.4	25	4.2	24	5.0		
30 - 40	264	6.5	24	4.5	72	6.1	168	7.1	12	4.4	174	6.8	39	6.4	38	5.9		
40 - 65	838	11.7	136	9.1	254	11.0	448	13.2	51	9.0	467	12.1	135	11.1	185	11.9		
65 and over	101	14.4	64	15.0	16	14.3	22	12.8	31	14.4	34	15.0	17	14.7	20	13.1		
Together	1 432	8.5	233	8.5	398	8.2	801	8.6	103	8.1	832	8.4	225	8.1	272	9.2		
Female																		
under 20	66	5.2	/	/	38	5.3	25	5.2	/	/	25	5.9	17	4.9	20	4.8		
20 - 30	183	7.7	13	5.2	99	7.6	70	8.7	/	/	81	8.8	35	7.1	59	7.5		
30 - 40	164	9.6	31	6.6	55	10.4	78	11.0	18	6.0	76	11.9	28	9.7	42	8.8		
40 - 65	515	12.6	137	10.0	153	13.4	225	14.4	82	10.4	178	14.6	96	12.2	159	12.4		
65 and over	57	15.7	42	16.6	/	/	10	17.1	29	17.6	/	/	/	/	13	12.4		
Together	985	10.1	226	9.4	350	9.3	408	11.3	139	9.4	368	11.3	184	9.3	293	9.6		

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 10 cases (raised to 10 000).

1) Excl. soldiers. - 2) Incl. commercial apprentices. - 3) Incl. industrial apprentices. - 4) Proportion in the relevant group of economically active persons of corresponding age and sex on 30 April 1966.

Table 32: Diseased persons¹⁾ in April 1966, by age groups, participation in economic life, onset/end of disease

Age group from ... to under ... years	Sex	Diseased persons ¹⁾									Persons under permanent medical treatment								
		total			active population			non-active population			total			active population			non-active population		
		1 000	% 2)	%	1 000	% 3)	%	1 000	% 3)	%	1 000	%	% 2)	1 000	%	% 3)	1 000	%	% 3)
under 15	total	797	6.0	12.5	/	/	/	795	6.0	20.3	57	2.3	0.4	/	/	/	57	3.2	0.4
	female	428	6.3	15.9	/	/	/	427	6.3	34.1	34	3.9	0.5	/	/	/	34	6.9	0.5
15 - 20	total	369	5.8	10.1	/	/	/	368	5.8	13.8	23	1.5	0.4	/	/	/	23	1.8	0.4
	female	163	4.2	2.6	115	4.5	4.7	49	3.7	1.2	18	0.7	0.5	11	1.6	0.4	/	/	/
20 - 40	total	73	3.7	2.7	49	3.7	3.4	24	3.5	1.9	/	/	/	/	/	/	/	/	/
	female	90	4.8	2.5	65	5.3	6.6	25	3.9	0.9	11	0.7	0.6	/	/	/	/	/	/
40 - 65	total	1 081	6.7	17.0	793	6.8	32.7	288	6.6	7.3	220	9.0	1.4	128	18.9	1.1	92	5.2	2.1
	female	477	5.9	17.7	445	5.8	30.9	32	7.2	2.6	72	8.2	0.9	61	16.0	0.8	10	2.1	2.3
65 and over	total	604	7.6	16.5	348	8.5	35.2	256	6.5	9.6	148	9.4	1.8	66	22.6	1.6	81	6.4	2.1
	female	2 507	13.8	39.5	1 359	12.0	56.0	1 147	16.7	29.3	1 102	45.0	6.1	470	69.4	4.2	632	35.7	9.2
Total	total	1 062	13.5	39.4	842	11.7	58.5	220	32.5	17.6	400	45.6	5.1	275	71.8	3.8	125	25.3	18.4
	female	1 445	14.1	39.5	518	12.7	52.3	928	15.0	34.8	702	44.7	6.8	195	66.3	4.8	507	39.6	8.2
Total	total	1 801	23.3	28.4	158	14.8	6.5	1 643	24.6	41.9	1 053	43.0	13.6	68	10.0	6.4	905	55.6	14.8
	female	2 692	9.7	24.2	101	14.4	7.0	251	23.4	43.9	365	41.6	11.9	43	11.2	6.1	322	65.2	13.7
Total	total	1 149	24.5	31.4	57	15.7	5.8	1 092	25.3	40.9	688	43.8	14.7	25	8.5	6.9	663	51.8	15.3
	female	3 649	10.7	100	2 427	9.1	100	3 922	12.1	100	2 448	100	4.1	677	100	2.5	1 772	100	5.5
Total	total	2 692	9.7	100	1 438	8.5	100	1 254	11.4	100	877	100	3.1	383	100	2.3	494	100	4.5
	female	3 657	11.7	100	989	10.1	100	2 668	12.5	100	1 572	100	5.0	294	100	3.0	1 279	100	6.0

1) Excl. soldiers. - 2) Proportion in the resident population of the relevant age group on 30 April 1966. - 3) Proportion in the active and the non-active population of the relevant age group on 30 April 1966.

Table 33: Diseased persons and persons under permanent medical treatment in April 1966, by age groups and groups of diseases per 1 000 of population

Group of Diseases No. of the German Classification of Diseases, Injuries and Causes of Death for the Statistics of the Social Insurance Institutions of 1962 1)	Total	Male ²⁾				Female							
		to-gether	thereof aged...to under...years				to-gether	thereof aged...to under...years					
			under 15	15-40	40-65	65 and over		under 15	15-40	40-65	65 and over		
Tuberculosis, total	01 - 04	0.9	1.4	/	1.1	2.5	/	0.5	/	/	/	/	/
incl.: of respiratory system	01	0.8	1.3	/	1.0	2.4	/	0.4	/	/	/	/	/
Other infective and parasitic diseases	05 - 19,891	4.1	4.5	15.9	/	/	/	3.8	14.7	/	/	/	/
Neoplasms	20 - 27,892	1.1	0.7	/	/	/	/	1.5	/	/	2.4	2.7	/
incl.: malignant	20 - 25	0.6	0.4	/	/	/	/	0.9	/	/	1.6	/	/
Allergic diseases	31	0.2	/	/	/	/	/	/	/	/	/	/	/
Metabolic and nutritional diseases	32 - 35	4.2	2.8	/	/	4.5	9.3	5.6	/	1.5	7.6	16.9	/
incl.: diabetes	33	3.3	2.3	/	/	3.9	8.9	4.2	/	/	5.6	15.1	/
Mental and psychoneurotic disorders	36	1.3	1.2	/	/	2.4	/	1.4	/	1.1	2.1	2.2	/
Diseases of central nervous system except vascular lesions	38	2.0	1.7	/	1.1	3.0	/	2.3	/	1.2	3.5	4.1	/
Diseases of nerves and peripheral ganglia	39	1.7	1.5	/	1.0	2.6	3.3	1.9	/	1.2	2.9	3.7	/
Diseases of circulatory system	37,40-49,894	27.9	22.1	/	3.9	38.5	87.1	33.1	/	6.4	45.0	103.2	/
incl.: vascular lesions affecting central nervous system	37	1.0	1.0	/	/	1.4	5.7	1.0	/	/	/	4.6	/
chronic heart diseases not specified as rheumatic	45	6.7	6.8	/	/	12.9	25.1	6.7	/	1.1	9.7	20.5	/
hypertension	46	1.3	0.7	/	/	/	/	1.8	/	/	2.7	5.9	/
diseases of arteries, veins and lymph nodes	48,49	2.9	1.8	/	/	3.0	7.0	3.9	/	1.8	5.6	9.7	/
Diseases of respiratory system	30,50-57,895	27.1	28.4	30.5	22.5	29.1	41.2	25.9	29.8	25.3	22.1	30.2	/
incl.: asthma	30	1.7	2.0	/	/	2.9	8.5	1.4	/	/	2.0	4.1	/
diseases of tonsils	50	2.7	2.5	4.5	3.1	1.2	2.9	5.4	4.0	2.0	1.3	1.1	/
influenza	52	15.2	15.0	16.7	14.3	15.1	13.2	15.4	16.7	16.3	13.0	16.9	/
pneumonia	53	1.0	1.1	/	/	1.3	/	0.9	/	/	1.1	1.1	/
bronchitis	54	1.9	2.4	1.6	/	3.4	6.6	1.4	/	/	1.6	2.4	/
Diseases of digestive system	60-69,896	12.4	12.7	4.5	9.9	21.0	19.3	12.1	3.3	7.5	17.2	22.2	/
incl.: ulcer of stomach and duodenum	61	1.2	1.7	/	1.9	3.1	/	0.6	/	/	1.0	/	/
diseases of liver	67	1.8	1.7	/	/	4.0	3.4	1.9	/	/	3.2	4.5	/
diseases of gallbladder	68	2.6	1.1	/	/	2.4	/	4.0	/	1.7	6.7	5.0	/
diseases of urinary system	70,71	2.6	2.7	/	1.6	4.3	7.9	2.5	/	2.6	3.3	3.4	/
Diseases of genital organs, diseases of breast	72 - 74	2.4	0.5	/	/	/	/	4.1	/	4.7	6.6	2.1	/
Abortion, deliveries and complications of pregnancy, childbirth and the puerperium	75 - 77	1.0	x	x	x	x	x	1.1	/	3.1	/	/	/
Diseases of the skin and cellular tissue	78,79	1.2	1.4	/	1.5	1.6	/	1.1	/	1.1	1.0	/	/
Arthritis and arthrosis except acute and sub-acute articular rheumatism	80	2.0	1.1	/	/	2.3	/	2.8	/	/	3.9	8.6	/
Muscular rheumatism	81	2.3	2.1	/	/	3.8	6.3	2.6	/	/	3.6	8.0	/
Other diseases of bones and organs of movement	82	5.1	5.0	/	4.3	9.2	5.5	5.2	/	3.2	8.5	7.5	/
Congenital malformations diseases peculiar to early infancy, debility, prematurity	83 - 85	/	/	/	/	/	/	/	/	/	/	/	/
Diseases of the blood and blood-forming organs	86	0.6	/	/	/	/	/	1.0	/	/	1.0	/	/
Diseases of eye and of ear	87,88	2.2	2.2	3.0	1.1	2.0	4.8	2.2	2.4	1.0	2.0	5.0	/
Senility	890	1.5	0.9	/	/	/	7.6	2.1	/	/	/	12.5	/
Ill-defined diseases	893,897,898,899	2.8	2.4	/	1.7	3.6	4.3	3.1	/	2.4	3.9	5.3	/
Unspecified diseases		0.8	0.6	/	/	/	/	1.0	/	/	1.4	/	/
Total		107.5	96.7	62.6	54.6	134.7	213.2	117.1	57.9	70.3	140.6	245.2	

1) Insufficiently defined answers have been expanded to a third digit in accord with the main groups accounted for in the Classification. - 2) Excl. soldiers.

Table 34: Persons injured in accidents¹⁾ in April 1966, by age groups and type of accident

Age from ... to under ... years	Total ¹⁾			Type of accident									
				road traffic accident		playing/sporting accident		household accident		industrial accident		other accident	
	1 000	%	%	1 000	% ²⁾	1 000	% ²⁾	1 000	% ²⁾	1 000	% ²⁾	1 000	% ²⁾
Total													
under 20	102	26.3	100	16	16.1	47	46.1	11	10.5	15	14.4	13	12.9
20 - 40	136	35.8	100	20	14.9	18	13.0	14	10.1	70	50.8	15	11.2
40 - 65	116	30.1	100	15	13.3	/	/	23	19.8	55	47.7	18	16.0
65 and over	30	7.8	100	/	/	/	/	15	49.0	/	/	/	/
Total	383	100	100	56	14.6	68	17.8	62	16.2	142	37.0	56	14.5
Male													
under 20	71	27.2	100	11	15.9	32	46.0	/	/	12	17.6	/	/
20 - 40	109	42.6	100	16	14.2	16	14.6	/	/	62	56.5	11	9.8
40 - 65	68	26.3	100	/	/	/	/	/	/	45	66.7	/	/
65 and over	10	4.0	100	/	/	/	/	/	/	/	/	/	/
Together	258	100	100	36	14.0	50	19.6	19	7.3	122	47.3	31	11.9
Female													
under 20	31	24.5	100	/	/	14	46.3	/	/	/	/	/	/
20 - 40	28	22.1	100	/	/	/	/	/	/	/	/	/	/
40 - 65	48	37.8	100	/	/	/	/	18	38.7	10	20.8	11	22.1
65 and over	20	15.6	100	/	/	/	/	12	61.0	/	/	/	/
Together	126	100	100	20	15.7	18	14.1	43	34.3	20	16.0	25	19.9

1) Excl. soldiers. - 2) Percentage of Column 1 or 3 respectively.

 Table 35: Persons injured in accidents¹⁾ in April 1966, by age groups and participation in economic life

Age from ... to under ... years	Sex	Total			Active population			Non-active population		
		1 000	%	% ²⁾	1 000	%	% ³⁾	1 000	%	% ³⁾
under 15	total	65	17.0	4.9	/	/	/	65	49.4	4.9
	male	42	16.4	6.2	/	/	/	42	72.5	6.2
	female	23	18.1	3.6	/	/	/	23	30.9	3.5
15 - 20	total	37	9.5	9.4	29	11.6	11.4	/	/	/
	male	29	11.1	14.3	24	12.0	18.1	/	/	/
	female	/	/	/	/	/	/	/	/	/
20 - 30	total	74	19.2	9.1	68	26.8	11.4	/	/	/
	male	59	22.8	15.0	56	27.9	15.8	/	/	/
	female	15	11.9	3.6	12	22.4	5.0	/	/	/
30 - 40	total	63	16.3	7.7	58	23.0	10.0	/	/	/
	male	50	19.3	12.0	50	24.8	12.1	/	/	/
	female	13	10.3	3.3	/	/	/	/	/	/
40 - 65	total	116	30.1	6.4	93	36.7	8.2	23	17.6	3.4
	male	68	26.5	8.7	67	33.4	9.3	/	/	/
	female	48	37.8	4.6	26	49.0	6.3	22	29.5	3.5
65 and over	total	30	7.9	3.9	/	/	/	25	19.3	3.8
	male	10	4.0	3.4	/	/	/	/	/	/
	female	20	15.8	4.2	/	/	/	19	25.4	4.3
Total	total	383	100	6.5	253	100	9.5	131	100	4.0
	male	258	100	9.3	200	100	11.8	58	100	5.3
	female	126	100	4.0	53	100	5.4	73	100	3.4

1) Excl. soldiers. - 2) Proportion in resident population of the relevant age group on 30 April 1966. - 3) Proportion in the active and the non-active population of the relevant age group on 30 April 1966.

Table 36: Accidents of children and juveniles, by age groups and community size classes 1964, and sequels of accidents, 1962 to April 1965

Age group Community size class Sequels of accidents	Accidents of children and juveniles			Of which accidents								
				inside the home			outside the home (excl. in road traffic)			in road traffic		
	total	male	female	together	male	female	together	male	female	together	male	female
1 000												
Age group from ... to under ... years												
under 3	39	22	17	30	17	13	5	3	2	4	2	2
3 - 6	78	50	28	40	25	15	22	16	7	16	9	7
6 - 8	51	32	19	17	10	7	19	13	6	15	9	6
8 - 10	50	34	17	13	9	4	24	17	7	13	8	5
10 - 12	46	28	17	10	7	4	27	17	10	8	5	3
12 - 15	65	42	23	14	9	5	36	23	13	15	9	6
Together	328	207	121	124	77	47	134	88	45	71	42	28
Community size class from ... to under ... inhabitants												
under 1 000	40	26	14	19	13	7	14	10	4	7	4	3
1 000 - 2 000	24	14	10	10	5	5	9	6	3	4	2	2
2 000 - 5 000	30	21	10	13	9	4	11	8	4	6	4	2
5 000 - 10 000	23	16	8	10	7	3	9	6	3	5	3	2
10 000 - 25 000	33	21	12	13	8	5	13	9	5	6	4	3
25 000 - 50 000	27	17	10	11	7	4	11	7	4	6	3	3
50 000 - 100 000	16	10	6	5	3	2	7	5	2	4	2	2
100 000 and over	97	57	40	40	23	17	37	21	15	21	12	8
Together	289	181	108	121	75	46	111	72	39	58	34	24
Sequels of accidents												
Injuries of head, skull, brain, cranial nerves, spine, spinal cord	25.1	26.3	23.0	24.6	25.7	22.9	20.8	22.2	18.0	34.1	35.9	31.4
Fractures (excl. fractures of skull or spine)	24.4	24.6	24.1	18.8	19.1	18.4	32.0	31.5	32.9	19.2	19.6	18.8
Laceration and open wounds, nerve injuries	18.4	18.8	17.7	18.2	18.9	17.0	20.1	20.4	19.4	15.5	15.3	15.9
Superficial injuries, con- tusion and crushing with intact skin surface, excl. superficial injuries of head	11.9	10.9	13.6	9.2	9.2	9.1	9.3	8.3	11.3	21.2	19.0	24.7
Burns, chemical burns, effects of reduced temper- ature, heat, radiation and electric current	5.3	4.9	6.1	13.0	11.9	14.6	1.4	1.4	1.5	.	.	.
Dislocation, sprains and sprains of joints and ad- jacent muscles	5.1	5.0	5.3	3.2	2.7	4.2	7.8	7.5	8.3	3.1	3.7	2.2
Poisonings	2.2	2.0	2.6	3.2	4.8	5.8	0.9	0.7	1.2	-	-	-
Injuries of eye	1.4	1.5	0.9	1.4	1.6	1.0	1.6	1.9	1.0	0.5	.	.
Internal injuries of chest, abdomen and pelvis	0.7	0.7	0.6	0.5	0.4	0.3	0.6	0.7	.	1.0	1.2	.
Other injuries	5.0	4.8	5.3	5.4	5.4	5.3	5.4	5.1	5.9	3.8	3.3	4.5
No injuries	0.6	0.6	0.7	0.6	.	1.0	.	.	.	1.4	1.5	1.3
Together	100	100	100	100	100	100	100	100	100	100	100	100
Number in 1 000	890	560	330	323	199	125	371	243	128	196	119	78

Table 37: Physically disabled persons, by cause of disablement, age and sex, 1962
Federal Republic incl. Berlin (West)

Age groups from ... to under ... years	Physically disabled, total	Cause of disablement									
		congen- ital	polio- myelitis	occu- pational disease	indus- trial accident	road traffic accident	other acci- dents	war-con- nected disable- ment	political persecu- tion	specific disease	cause not stated
Total											
under 15	67	43	6	-	-	.	2	-	.	7	8
15 - 30	199	62	14	3	31	14	16	12	.	33	14
30 - 50	1 223	70	28	31	122	22	38	772	5	109	26
50 - 60	1 011	45	12	103	147	24	45	394	6	208	29
60 - 65	515	19	4	81	80	9	24	109	5	164	20
65 and over	708	25	5	40	113	19	44	268	7	165	23
Together	3 722	263	69	257	494	88	170	1 555	22	686	119
Men											
under 15	33	19	3	-	-	.	2	-	-	4	5
15 - 30	127	26	9	2	28	12	13	9	.	20	9
30 - 50	1 039	32	18	24	106	16	26	748	4	51	14
50 - 60	783	20	7	83	126	16	27	379	3	107	15
60 - 65	375	8	2	66	68	5	12	100	4	100	12
65 and over	492	8	3	31	90	10	16	255	4	64	12
Together	2 849	113	42	206	418	59	95	1 489	15	345	68
Women											
under 15	33	24	3	-	-	.	.	-	.	3	2
15 - 30	71	35	6	1	3	2	3	4	.	13	5
30 - 50	184	38	10	7	17	6	12	25	2	58	11
50 - 60	228	24	5	19	21	8	19	15	2	101	14
60 - 65	139	11	2	15	12	4	12	9	.	65	8
65 and over	216	17	2	10	23	9	28	13	2	101	11
Together	872	149	27	52	76	30	75	60	7	341	51

Table 38: Physically disabled persons, by cause and type of disablement, age and sex, 1962
Federal Republic incl. Berlin (West)
1 000

Cause of disablement Age groups from ... to under ... years	Physically disabled persons, total	Type of disablement									
		blind- ness	disease and injury of eye (except blind- ness)	ear (and deaf- ness)	loss or defor- mation of limbs	injury of back and spine	nervous and mental diseases, brain injury	diseases of respira- tory and diges- tive systems	diseases of heart and circula- tory system	other dis- eases	type of disable- ment not stated
Total											
Congenital	263	6	9	17	52	14	106	4	8	40	7
Poliomyelitis	69	-	.	.	37	2	3	.	.	24	1
Occupational disease	257	2	5	3	23	17	8	96	45	52	7
Industrial accident	494	6	37	5	278	32	19	14	6	80	15
Road traffic accident	88	1	2	.	55	4	6	.	.	17	2
Other accidents	170	4	12	3	84	14	7	4	3	34	6
War-connected disablement	1 555	13	58	26	697	60	114	165	55	299	67
Political persecution	22	.	1	1	2	2	2	5	4	6	.
Specific disease	686	20	21	28	75	25	79	69	117	238	13
Cause not stated	119	2	2	3	5	2	25	5	6	12	57
Together	3 722	52	149	87	1 307	171	370	362	247	801	175
Men											
Congenital	113	3	5	10	26	6	35	3	4	19	3
Poliomyelitis	42	-	.	.	23	1	2	.	.	14	.
Occupational disease	206	1	3	2	16	11	5	91	32	38	6
Industrial accident	418	5	35	5	234	26	17	13	5	65	13
Road traffic accident	59	.	1	.	36	2	5	.	.	11	2
Other accidents	95	2	9	2	46	6	5	3	2	17	3
War-connected disablement	1 489	12	55	24	674	56	107	160	51	285	64
Political persecution	15	.	.	.	1	1	1	4	2	4	.
Specific disease	345	8	9	12	35	11	36	46	62	118	7
Cause not stated	68	1	1	1	4	1	13	3	4	6	34
Together	2 849	34	121	57	1 095	123	226	323	163	575	133
Women											
Congenital	149	3	3	7	26	8	71	1	4	22	3
Poliomyelitis	27	-	.	.	14	.	2	.	.	10	.
Occupational disease	52	.	2	.	7	5	3	6	13	14	2
Industrial accident	76	.	2	.	44	6	2	.	1	16	3
Road traffic accident	30	.	1	.	19	1	1	.	.	6	.
Other accidents	75	2	3	1	37	8	2	1	1	17	3
War-connected disablement	66	.	3	2	23	4	7	6	5	14	2
Political persecution	7	-	.	.	.	.	.	.	1	2	.
Specific disease	341	12	12	17	39	14	44	23	55	120	5
Cause not stated	51	.	.	2	2	1	13	2	3	6	23
Together	872	19	28	30	212	48	145	39	84	225	42
Total											
under 15	67	1	3	2	12	2	25	1	.	13	7
15 - 30	199	3	9	7	61	7	52	7	3	37	13
30 - 50	1 223	11	50	20	526	56	127	107	37	235	54
50 - 60	1 011	11	36	18	319	49	79	130	88	233	45
60 - 65	515	6	18	12	121	27	34	65	73	135	25
65 and over	708	20	34	28	268	30	53	51	46	148	31
Total	3 722	52	149	87	1 306	171	370	362	247	801	175
Men											
under 15	33	.	2	2	6	.	10	.	.	8	5
15 - 30	127	2	7	4	46	5	24	5	2	24	10
30 - 50	1 039	8	45	14	482	45	91	96	26	188	44
50 - 60	783	9	31	14	268	35	52	117	57	167	33
60 - 65	375	4	13	7	89	19	22	59	49	94	19
65 and over	492	10	22	17	203	20	28	46	28	95	23
Together	2 849	34	121	57	1 095	123	226	323	163	575	133
Women											
under 15	33	.	.	.	6	1	15	.	.	6	3
15 - 30	71	1	.	2	14	3	29	2	.	13	4
30 - 50	184	3	5	6	44	12	36	12	11	47	10
50 - 60	228	2	5	5	51	15	27	14	31	66	12
60 - 65	139	2	5	5	31	8	12	6	23	41	6
65 and over	216	10	12	12	65	10	26	5	17	53	8
Together	872	19	28	30	212	48	145	39	84	225	42

Dots have been used instead of figures whenever the fields of the table comprise in the sample less than 10 cases (raised to 1 000).

Table 39: Physically and mentally disabled persons¹⁾, by reduction of earning capacity, type and cause of disablement and age groups, 1966

1 000

Reduction of earning capacity Type of disablement Aged from ... to under ... years	Total	Cause of disablement				
		congenital, polio- myelitis	occupational disease, industrial accident	disease (excl. occu- pational)	road traf- fic acci- dent, other accident	war-connected disablement, political persecution, other cause, not stated
Total						
Officially acknowledged:						
under 50 %	925	23	240	86	69	506
50 - 99 %	942	45	135	133	51	579
100 % incapable for work	802	43	126	347	30	257
Professional incapacity	223	12	49	99	/	58
Together	2 893	123	550	664	156	1 400
Not officially acknowledged	935	118	85	369	95	268
Not stated	227	52	14	53	/	99
Together	1 162	170	99	422	104	367
Total	4 054	293	650	1 086	259	1 767
Blindness	65	/	/	28	/	21
Diseases and injury of eye	189	14	39	40	15	81
Diseases and injury of ear, deafness	113	10	/	39	/	48
Loss or deformation of limbs	1 343	66	279	154	165	679
Diseases and injury of back and spine	244	12	71	56	21	85
Nervous and mental diseases	533	150	25	150	17	193
Disease of respiratory and digestive systems	411	/	104	152	/	152
Diseases of heart and circulatory system	506	/	47	275	/	172
Other diseases	465	16	50	161	18	220
Type of disablement not stated	184	/	24	30	/	119
under 15	104	62	/	14	6	21
15 - 30	212	67	28	43	28	46
30 - 50	980	80	133	144	61	562
50 - 60	1 049	42	172	256	57	521
60 - 65	685	20	150	257	37	221
65 and over	1 025	22	166	371	71	395
Male						
Officially acknowledged:						
under 50 %	783	12	208	47	47	468
50 - 99 %	790	24	119	76	37	535
100 % incapable for work	541	22	107	204	16	192
Professional incapacity	146	/	40	58	/	38
Together	2 260	64	474	386	103	1 233
Not officially acknowledged	424	61	62	136	44	121
Not stated	107	28	11	22	/	42
Together	531	89	73	159	48	163
Total	2 791	153	547	545	151	1 396
Blindness	34	/	/	11	/	15
Diseases and injury of eye	132	10	33	15	13	64
Diseases and injury of ear, deafness	66	/	/	15	/	33
Loss or deformation of limbs	1 021	27	230	60	90	613
Diseases and injury of back and spine	152	/	52	28	11	57
Nervous and mental diseases	288	86	19	68	/	107
Disease of respiratory and digestive systems	336	/	99	104	/	130
Diseases of heart and circulatory system	314	/	40	162	/	107
Other diseases	304	/	41	70	13	171
Type of disablement not stated	144	/	22	12	/	103
under 15	60	37	/	/	/	12
15 - 30	135	38	25	26	22	25
30 - 50	759	39	116	67	44	494
50 - 60	763	21	141	122	34	445
60 - 65	483	12	132	152	21	165
65 and over	591	/	132	170	27	254
Female						
Officially acknowledged:						
under 50 %	142	11	32	39	22	38
50 - 99 %	152	21	17	57	14	44
100 % incapable for work	261	20	20	142	13	66
Professional incapacity	78	/	/	41	/	20
Together	633	58	77	279	52	167
Not officially acknowledged	511	57	23	232	52	147
Not stated	120	24	/	31	/	57
Together	630	81	27	262	56	204
Total	1 263	139	103	541	108	370
Blindness	31	/	/	17	/	/
Diseases and injury of eye	57	/	/	25	/	19
Diseases and injury of ear, deafness	47	/	/	24	/	15
Loss or deformation of limbs	322	39	48	95	75	66
Diseases and injury of back and spine	92	/	19	29	10	28
Nervous and mental diseases	245	64	/	82	/	85
Disease of respiratory and digestive systems	76	/	/	48	/	22
Diseases of heart and circulatory system	193	/	/	113	/	67
Other diseases	161	/	/	91	/	50
Type of disablement not stated	40	/	/	18	/	17
under 15	44	26	-	/	/	/
15 - 30	77	29	/	27	/	21
30 - 50	220	41	17	77	18	68
50 - 60	286	21	31	134	23	75
60 - 65	203	/	18	104	16	56
65 and over	434	15	34	201	43	141

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 10 cases (raised to 10 000).

1) Excl. soldiers.

Table 40: Persons with first-aid training, by age groups and community size classes, 1964
Federal Republic incl. Berlin (West)

1 000

Age groups Community size class	Present (last) occupation											
	public health occupations 1)			other than public health occupation			without occupation			together		
	total	men	women	total	men	women	total	men	women	total	men	women
Age groups from ... to under ... years												
14 - 20	13	-	13	321	180	141	192	97	95	526	277	249
20 - 30	86	14	72	802	503	299	185	70	115	1 073	587	486
30 - 40	74	23	51	595	421	174	73	.	70	742	447	295
40 - 50	99	28	71	564	337	227	153	9	143	815	374	441
50 - 60	74	26	48	481	335	146	118	.	114	673	365	308
60 and over	70	28	42	294	211	83	178	39	139	542	278	264
Total	446	119	297	3 057	1 987	1 070	898	222	676	4 371	2 328	2 043
Communities of ... to under ... inhabitants												
under 1 000	11	-	11	385	251	134	76	9	67	472	260	212
1 000 - 2 000	28	7	21	268	179	89	68	14	54	364	200	164
2 000 - 5 000	38	10	28	338	209	129	141	24	117	517	243	274
5 000 - 10 000	24	5	19	274	187	87	89	22	67	387	214	173
10 000 - 20 000	27	10	17	193	136	57	58	13	45	278	159	119
20 000 - 50 000	74	21	53	307	204	103	77	19	58	458	244	214
50 000 - 100 000	34	9	25	178	110	68	64	13	51	276	132	144
100 000 and over	180	57	123	1 114	711	403	325	108	271	1 619	876	743

1) Physicians, nurses, sanitary personnel, midwives.

Table 41: Small plots of potatoes and vegetables (Microcensus 1962)
Column a: figures, in thousands
Column b: simple relative standard error in %
Federal Republic incl. Berlin (West)

Total area from ... to under ... m ²	Households (1 000) growing																	
	potatoes and/or vegetables, total		incl. potatoes and vegetables		potatoes													
					total		incl. in gardens and on arable land		in gardens		incl. in gardens only		on arable land					
	a	b	a	b	a	b	a	b	a	b	a	b	a	b				
under 300	1 781.8	1.7	582.0	2.3	646.9	2.3	19.7	12.5	630.3	2.3	610.6	2.3	36.3	12.5				
300 - 500	808.9	2.3	461.3	2.3	486.9	2.3	16.9	12.5	478.2	2.3	461.3	2.3	25.6	12.5				
500 - 1 000	822.0	2.3	560.0	2.3	588.5	2.3	31.4	8.5	575.2	2.3	543.8	2.3	44.7	8.5				
1 000 - 5 000	684.2	2.3	499.1	2.3	559.3	2.3	96.5	3.9	515.9	2.3	419.4	2.3	139.9	3.9				
Together	4 096.9	1.7	2 102.4	1.7	2 281.6	1.7	164.5	3.9	2 199.6	1.7	2 035.1	1.7	246.5	3.9				
Total area from ... to under ... m ²	Households (1 000) growing vegetables										Areas (1 000 ha) planted with							
	total		incl. in gardens and on arable land		in gardens		incl. in gardens only		on arable land		potatoes				vegetables			
											in gardens		on arable land		in gardens		on arable land	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b		
under 300	1 716.9	1.7	34.4	8.5	1 689.5	1.7	1 655.1	1.7	61.8	8.5	4.0	3.1	0.3	12.5	12.5	2.3	0.4	8.5
300 - 500	783.3	2.3	22.5	8.5	772.7	2.3	750.2	2.3	33.1	8.5	6.5	2.3	0.5	12.5	13.3	2.3	0.4	12.5
500 - 1 000	793.5	2.3	35.3	8.5	782.4	2.3	747.1	2.3	46.4	8.5	13.0	3.1	1.6	8.5	18.7	3.1	0.6	12.5
1 000 - 5 000	624.0	2.3	93.9	8.5	595.5	2.3	501.6	2.3	122.4	8.5	29.4	3.1	14.9	3.9	26.8	3.1	3.2	12.5
Together	3 917.7	1.7	186.1	3.9	3 840.1	1.7	3 654.0	1.7	263.7	3.9	53.0	2.3	17.2	3.9	71.3	2.3	4.6	8.5

Table 42: Journeys inside the country by tourist regions and age of vacationers

Age group from ... to under ... years	Journeys inside the country, total	In the tourist regions							
		North Sea resorts	Baltic Sea resorts	Luneburg Heath	Harz Mountains	Teutoburg Forest, Weser Hills, Hesse (Cassel)-Waldeck	Bergisches Land, Sauerland, Siegerland	Eifel, Moselle, Hunsrueck, Rhine from Bonn to Ruedesheim, Westerwald	Taunus, Bergstr., Odenwald, Taubergrund
Total	9 156	426	285	136	221	671	390	581	325
1 000									
By age of vacationers									
under 6	533	32	30	12	10	32	24	32	17
6 - 14	1 016	74	45	20	24	67	45	59	32
14 - 18	480	36	19	7	12	30	21	26	14
18 - 25	879	48	33	10	18	40	28	51	25
25 - 45	2 615	128	99	38	56	166	100	156	83
45 - 65	2 694	90	51	33	73	239	125	187	112
65 and over	940	18	9	17	29	97	47	70	41

Age group from ... to under ... years	In the tourist regions (cont'd)							
	Spessart, Southern Rhoen	Black Forest	Swabian Alb	Lake of Constance	Alps, footlands of the Alps	Bavarian Forest incl. Kreis Passau	rest of Germany	not stated
Total	145	849	107	335	1 379	178	2 782	345
1 000								
By age of vacationers								
under 6	6	34	7	14	54	10	198	21
6 - 14	13	75	15	33	118	18	342	35
14 - 18	5	33	6	20	64	10	160	17
18 - 25	8	67	8	45	158	19	278	43
25 - 45	34	232	30	106	430	56	796	106
45 - 65	59	320	30	94	438	52	716	95
65 and over	20	106	11	23	118	13	291	29

Table 43: Journeys abroad by countries of destination and age of vacationers

Age group from ... to under ... years	Journeys abroad, total	Of which to								
		Belgium and Luxembourg	Denmark	France	Great Britain and Northern Ireland (U.K.)	Italy	Netherlands	Austria	Portugal	Spain
Total	5 832	42	137	253	74	1 592	412	2 155	5	328
1 000										
By age of vacationers										
under 6	221	.	12	6	.	55	37	70	.	6
6 - 14	457	.	21	15	.	118	57	173	.	12
14 - 18	302	.	10	19	10	67	33	109	.	83
18 - 25	964	6	23	61	21	274	59	294	.	138
25 - 45	2 196	12	47	92	18	664	145	786	.	71
45 - 65	1 438	10	20	48	16	363	69	617	.	7
65 and over	254	.	.	13	.	51	13	105	.	

Age group from ... to under ... years	Of which to (cont'd)								
	Switzerland	Finland	Norway	Sweden	Greece	Yugoslavia	other countries	voyages by ship without longer stays on land	not stated
Total	432	8	21	38	36	99	74	6	120
1 000									
By age of vacationers									
under 6	17	.	.	.	.	.	.	.	5
6 - 14	31	.	.	.	.	6	.	.	9
14 - 18	22	.	.	.	.	.	.	.	6
18 - 25	60	.	5	11	9	25	10	.	20
25 - 45	145	.	8	10	17	38	28	.	43
45 - 65	123	.	5	9	7	21	22	.	33
65 and over	34	.	.	.	.	.	8	.	6

Table 44: Holiday and recreation travel inside the country by Laender of origin and destination, 1966

Land of origin	Period	Journeys inside the country, total	Land of destination								
			Schleswig-Holstein	Hamburg, Bremen and Berlin	Lower Saxony	North Rhine-Westphalia	Hesse	Rhineland-Palatinate and the Saar	Baden-Wuerttemberg	Bavaria	Soviet-occupied zone, Soviet sector of Berlin, not stated
1 000											
Schleswig-Holstein	1962	435	122	21	77	48	29	19	46	55	18
	1966	658	201	-	104	52	50	-	52	100	/
Hamburg, Bremen and Berlin	1962	1 438	262	35	308	134	95	60	140	343	61
	1966	1 845	400	72	360	131	141	69	205	406	61
Lower Saxony	1962	1 123	141	38	305	133	75	44	125	186	76
	1966	1 750	219	79	496	214	134	96	133	233	146
North Rhine-Westphalia	1962	3 371	226	81	393	624	304	376	482	704	181
	1966	4 454	483	163	456	1 024	397	337	490	915	189
Hesse	1962	722	41	25	43	43	122	40	113	233	62
	1966	897	78	/	51	53	190	/	126	247	87
Rhineland-Palatinate and the Saar	1962	540	22	13	27	42	44	98	118	152	24
	1966	691	/	/	/	52	62	160	133	182	/
Baden-Wuerttemberg	1962	1 043	40	32	42	38	48	26	417	320	80
	1966	1 994	92	69	/	87	94	65	914	526	109
Bavaria	1962	1 111	23	36	31	45	53	33	109	689	92
	1966	1 836	/	54	/	79	90	73	196	1 198	76
Federal Republic	1962	9 783	877	281	1 226	1 107	770	696	1 550	2 682	594
	1966	14 125	1 560	530	1 557	1 692	1 158	852	2 249	3 807	720

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 10 cases (raised to 10 000).

Table 45: Holiday and recreation travel abroad by Laender of origin and countries of destination, 1966

Land of origin (summary)	Period	Journeys abroad, total	Country of destination							Other countries, not stated
			benelux	Northern Europe	France	Switzerland	Spain and Portugal	Italy	Austria	
1 000										
Schleswig-Holstein, Hamburg, Lower Saxony, Bremen, Berlin (West)	1962	1 457	73	155	54	93	79	319	568	116
	1966	1 957	39	182	81	114	163	383	692	243
North Rhine-Westphalia	1962	1 795	306	34	71	122	131	390	628	113
	1966	2 510	400	84	85	161	244	482	802	252
Hesse, Rhineland-Palatinate and the Saar	1962	862	50	14	58	66	63	234	321	56
	1966	1 071	55	/	83	79	101	239	358	119
Baden-Wuerttemberg and Bavaria	1962	2 144	38	26	82	171	81	751	841	154
	1966	2 924	/	50	163	183	146	979	1 006	351
Federal Republic	1962	6 258	467	229	265	452	354	1 694	2 358	439
	1966	8 462	600	353	412	537	654	2 083	2 858	965

Slant lines (/) have been used instead of figures where the fields of the table comprise in the sample less than 10 cases (raised to 10 000).

Table 46: Weekend commuters and means of transport used, by Laender and community size classes

Land Community size class from ... to under ... inhabitants	Unit	Weekend commuters, total	Of which using							not stated
			train	private car	bus	ship	plane	tram	motor-cycle, moped	
By Laender										
Schleswig-Holstein	1 000	27.2	14.4	8.4	3.0	-	-	-	1.1	0.3
Hamburg	1 000	12.0	7.9	2.5	0.7	0.1	0.1	-	0.1	0.6
Lower Saxony	1 000	58.5	28.7	19.4	3.6	0.2	0.1	1.0	2.2	3.3
Bremen	1 000	3.8	2.7	0.9	0.2	-	-	-	-	-
North Rhine-Westphalia	1 000	117.2	69.4	33.7	6.7	-	0.4	0.8	1.2	5.0
Hesse	1 000	24.4	12.0	10.2	0.8	-	-	0.1	0.2	1.1
Rhineland-Palatinate	1 000	19.4	10.4	5.6	2.6	-	-	0.1	0.3	0.4
Baden-Wuerttemberg	1 000	80.4	46.5	22.7	6.6	-	0.1	0.9	2.5	1.1
Bavaria	1 000	72.9	34.6	27.5	4.7	-	0.2	0.3	3.3	2.3
Saar	1 000	1.8	0.5	0.7	0.4	-	-	-	0.1	0.1
Berlin (West)	1 000	3.7	1.9	0.8	0.2	-	0.6	-	-	0.2
Federal Republic	1 000	421.3	229.0	132.4	29.5	0.3	1.5	3.2	11.0	14.4
	%	100	54.4	31.4	7.0	0.1	0.4	0.8	2.6	3.4
By community size classes										
under 5 000	1 000	89.0	35.7	37.6	8.0	-	-	0.3	4.8	2.6
5 000 - 10 000	1 000	39.0	19.6	14.7	1.9	-	0.1	0.5	1.4	0.8
10 000 - 50 000	1 000	74.3	37.9	26.7	4.7	0.2	-	0.9	1.6	2.3
50 000 - 100 000	1 000	43.6	25.9	9.5	6.3	-	0.1	0.2	0.8	0.8
100 000 and over	1 000	175.4	109.9	43.9	8.6	0.1	1.3	1.3	2.4	7.9

Table 47: Weekend commuters and means of transport used, by periodicity of trips and distances
1 000

Periodicity Distance in km	Weekend commut- ers, total	Of which used							
		train	private car	bus	ship	plane	tram	motor- cycle, moped	not stated
By periodicity									
Once a month	88.1	61.6	19.8	3.5	0.1	-	0.7	1.5	0.9
Twice a month	85.7	51.9	25.1	5.8	-	0.4	0.4	1.5	0.6
Three times a month	18.7	10.4	6.0	1.4	-	-	0.3	0.4	0.2
Weekly	166.2	65.7	72.4	17.5	0.1	-	1.7	7.2	1.6
Less frequently than monthly	50.2	38.4	7.6	1.1	-	1.0	0.1	0.4	1.6
Not stated	12.4	1.0	1.5	0.2	0.1	0.1	-	-	9.5
Total	421.3	229.0	132.4	29.5	0.3	1.5	3.2	11.0	14.4
By distance ¹⁾									
up to 99	211.0	108.7	62.3	26.5	0.2	-	3.2	9.0	1.1
100 to 199	93.7	57.0	33.0	1.2	-	-	-	1.7	0.8
200 to 499	69.5	40.2	27.0	1.1	-	0.4	-	0.1	0.7
500 to 998	19.1	13.1	4.6	0.2	-	1.0	-	-	0.2
Not stated	28.0	10.0	5.5	0.5	0.1	0.1	-	0.2	11.6

1) Entire one-way trip.

Table 48: Confrontation of vehicles and holders of driving licences by groups of vehicles, 1965

Registered vehicles on 1 July 1965		Holders of driving licences in May 1965			
type of vehicle	number 1 000	number 1 000			class of driving licence
		total	male	female	
Group 1: Mopeds					
Mopeds and motorized cycles with auxiliary engine not exceeding 50 cm ³ piston displacement and a maximum speed of 40 km/h	1 207	997	914	83	1
		1 939	1 908	31	2, 2 + 1
		10 654	7 922	2 732	3, 3 + 1
		621	473	148	4
		556	491	64	5
		54	46	8	unknown
Together	1 207	14 821	11 754	3 067	together
Group 2: Motorized cycles, tractors					
Motorized cycles with auxiliary engine not exceeding 50 cm ³ piston displacement and a maximum speed of over 40 km/h	200	997	914	83	1
		1 939	1 908	31	2, 2 + 1
Motor vehicles with maximum speed of 20 km/h (agricultural tractors)	1 138	10 654	7 922	2 732	3, 3 + 1
		621	473	148	4
Together	1 338	14 212	11 217	2 994	together
Group 3: Motorcycles					
Motorcycles with engine exceeding 50 cm ³ piston displacement	717	7 199	6 454	745	1, 2 + 1, 3 + 1
Group 4: Private cars, light commercial vehicles					
Private cars and estate cars, small buses with less than 10 seats	9 267				
Motor lorries not exceeding 7.5 t permissible gross weight	638	1 939	1 908	31	2, 2 + 1
Buses not exceeding 7.5 t permissible gross weight	4	10 654	7 922	2 732	3, 3 + 1
Special-purpose vehicles not exceeding 7.5 t permissible gross weight	54				
Together	9 963	12 594	9 830	2 763	together
Group 5: Heavy commercial vehicles					
Motor lorries exceeding 7.5 t permissible gross weight, incl. road tractors and semitrailer tractors	285				
Buses exceeding 7.5 t permissible weight	34	1 939	1 908	31	2, 2 + 1
Special-purpose vehicles exceeding 7.5 t permissible gross weight	31				
Together	350	1 939	1 908	31	together