

Poverty in Switzerland

ROBERT E. LEU and STEFAN BURRI *

1. INTRODUCTION

Switzerland has a reputation as a prosperous country with relatively few social problems. Although this image is still adequate compared to many other countries, it is not as immaculate as it used to be. For example, economic growth has been below the OECD-average for a number of years. Unemployment has risen from less than one percent in the seventies and eighties to over five percent in the mid nineties and has come down only recently below three percent. In addition, there is a widespread belief that poverty has risen since the early eighties and that more and more families are facing problems making ends meet.

In this paper we present evidence on the prevalence of poverty and its development over time in Switzerland. In section 2, the main problems and methods of measuring poverty are discussed. Section 3 describes the design of the National Poverty Study (LEU, BURRI and PRIESTER 1997) referred to in this paper as well as the data collected therein. Some of the major results are displayed in sections 4 to 8. Section 9 contains some concluding remarks.

Our results indicate that poverty is a major problem in Switzerland despite its high standard of living. This is particularly true for certain population subgroups such as people living alone, single-parent households or children. Improving the situation of these groups requires some modifications of the current social security system.

2. MEASURING POVERTY: CONCEPTS AND PROBLEMS

The two main problems in poverty research are the identification of the poor and the aggregation of poverty into an overall measure (SEN 1979). The question of how poverty should be defined is of crucial importance since most poverty indicators react extremely sensitive to changes in the poverty definition (see particularly HAGENAARS and DE VOS 1988). The major problem with respect to aggregation is to find a one-dimensional poverty index satisfying certain basic criteria which will be discussed below.

* Economics Institute, University of Bern. Financial Support from the National Science Foundation (grants #4029-31919 and 4032-036708), from the Federal Social Insurance Office and from the Swiss Federal Statistical Office as well as the research assistance of Carol Ernst are gratefully acknowledged.

2.1. Identifying the poor

The question of what poverty is and how it can be measured empirically cannot be answered without recourse to basic value judgements. It is not surprising, therefore, that a generally accepted definition of poverty does not exist (HAUSER et al. 1981). As DUNCAN (1987) puts it: «Few aggregate indicators are watched as closely as poverty statistics, and yet there is probably less professional consensus on the measurement of poverty than on any other indicator.» A distinction often referred to is between absolute, socio-cultural and relative poverty. Absolute poverty in its initial meaning is defined in terms of basic physical needs. A person is poor according to this concept when her access to essential goods like food, clothing, housing or health care is restricted to those quantities required for bare survival. This notion of absolute poverty is based on the assumption that it is possible to define poverty as a value-free, time- and space-independent, mainly physiologically determined subsistence level which is uncorrelated with the standard of living in the population as a whole (ROWNTREE 1901). The discussion in the literature has made it clear, however, that this assumption is untenable (see particularly TOWNSEND 1979). Even in the case of absolute poverty in the initial sense of the concept some arbitrariness and, therefore, some value judgements are inevitably involved.¹

Relative poverty is defined directly in relation to a parameter of the income distribution (mean, median) without taking the needs of the poor into account. In other words, poverty is not defined as lack of income or of basic commodities (however defined) but rather as an extreme form of economic inequality (LIPSMEIER 1995). Poverty definitions are «perfectly relative» (HAGENAARS 1986) when they are tied to some quantile of the income distribution rather than to the median or the mean, implying that poverty can be eliminated only in a world with an equal distribution of income.

There are two major problems with the relative poverty approach. First, poverty and income inequality are defined synonymously. Using a relative poverty definition implies that the number of poor remains constant independent of the general standard of living as long as the distribution of income does not change. As SEN (1983) has stressed, relative poverty definitions are not well suited as a guide to social policy, particularly in third world countries, for that reason. For example, a proportional decrease in everyone's income would leave the income distribution and, hence, the head count ratio unchanged although the income reduction would put an increasing number of people at the edge of starvation. Obviously, the same argument applies to richer countries as well, even though on a higher level of well-being.

A second problem with relative poverty definitions is that the choice of the poverty line is entirely arbitrary. Economists might agree that employing the median is superior to using the mean. However, since the needs of the poor are not taken into account no

1. For example, food requirements may vary with age, gender, health status, physical activity, regional climate etc.

convincing argument can be made whether using half of the median as the poverty line is superior to using 40, 60 or 70 percent.

A person lives in poverty according to the socio-cultural concept when she does not acquire an income level considered acceptable by society or lacks goods which are thought to be indispensable. The derivation of a minimal standard of living in this concept involves a much larger degree of normative decisions than the definition of a physiological subsistence level. «Every attempt to define an absolute minimum or to draw a lower line remains open to criticism. Does everyone need a roof over his head or is a cardboard box good enough? These questions cannot be answered objectively, but require value judgements» (PIACHAUD 1992).

Whether socio-cultural poverty constitutes an absolute or relative concept remains controversial in the literature. It is absolute in the sense that a direct, systematic and permanent relationship between the standard of living of the entire population and the minimal acceptable level does not exist (SEN 1985, ZIMMERMANN 1993). Once the minimum is defined, a household lacking this endowment is poor no matter how its position changes relative to other households. By contrast, socio-cultural poverty definitions are relative in the sense that these minima are not defined independently of the general standard of living and prevailing values in society (TOWNSEND 1979, MACK and LANSLEY 1985).

Although many researchers seem to agree that poverty cannot be measured satisfactorily employing relative poverty indicators, using this concept can hardly be avoided in international comparisons. The reason is that socio-cultural poverty definitions are always geared to the standard of living and the social values prevailing in those countries to which they apply. Therefore, they are not readily applicable to other countries.

Since the concept of absolute poverty in terms of a physiological minimum seems not adequate for a wealthy country like Switzerland, and since relative poverty concepts measure the degree of income inequality rather than poverty itself, we are using a socio-cultural poverty definition in our study. This corresponds to the approach chosen by the «Swiss Conference for Public Welfare» (SKOS). According to this organization income maintenance «should not only ensure bare survival of the recipients but should at the same time promote their participation in the labor market and in social life as well as increase their self-confidence and their sense of responsibility for themselves (SKOS 1993).»

a) Measuring economic well-being

The economic situation of a household can be identified empirically either directly or indirectly. The direct method focuses on consumption, the indirect method on purchasing power (resource availability). We use the indirect method in this study, which requires two parameters for the identification of a poor person: an indicator of the economic well-being of the household to which the person belongs and a poverty line. A household is defined as poor if the value of this indicator falls below the poverty line. Assuming an equal distribution within the household implies that all members of a poor household

should be counted as poor. In order to derive an estimate of the number of poor individuals, all households are therefore weighted with the number of persons living in them (DANZIGER and TAUSSIG 1979). By contrast, a person is not poor if she lives in a household with resources exceeding the poverty line. Once the poverty line is determined and the indicator is assessed for every household in the sample the poor can be identified unambiguously. The next question then is how to construct a valid indicator of economic well-being.

Most poverty studies use income, adjusted for family size, as the only indicator of the economic situation of a household. Our data enable us to construct a more comprehensive resource indicator, comprising wealth and unavoidable expenditures (like taxes or health insurance premiums) in addition to income. Specifically, we assess the economic situation of a household using the following formula:²

$$R = \frac{Y + aW - E}{S} \cdot \frac{P}{P_r},$$

where R denotes the resources available to the household, Y denotes cumulated income of all household members per year, W is net wealth (gross wealth minus debt) of all household members, a is the share of net wealth added to annual income ($0 \leq a \leq 1$), E is unavoidable expenses per year, S denotes the equivalence scale, P the overall price level, and P_r the price level in region r.

Income (Y) consists of wages and salaries, capital income as well as transfer income. While there is no question that all incomes of all household members have to be taken into account, it is less obvious how net wealth (W) should be treated. There are basically two arguments favoring inclusion of net wealth in the resource indicator: First, when two households have the same income but differ in their accumulated wealth the household owing higher wealth is clearly better off. Treating them as identical violates horizontal equity. Second, because income tends to fluctuate more over time than wealth, a combination of income and wealth is a better indicator of economic well-being than current income (NOLAN et al. 1994). Having established that net wealth ought to be included the question arises of how this should be accomplished. When $a = 1$ all net wealth is added to current income, when $a = 0$ net wealth is neglected entirely. A value judgement is necessary to determine the level of «a».

Some of the means-tested programs in Switzerland contain specific regulations regarding the treatment of net wealth. The Supplementary Benefits Program of the «Old Age and Survivors' Insurance» (AHV), for example, sets «a» to zero up to a certain limit. If net wealth exceeds that limit, between $\frac{1}{3}$ and $\frac{1}{5}$ of the difference is added to in-

2. Basically the same formula is employed by both the «Swiss Conference for Public Welfare» and the «Old Age and Survivors' Insurance» (AHV) to determine whether a household is eligible for income maintenance transfers.

come. Both the limit as well as the value of «a» depend on age and household structure. We use these regulations in computing the resource indicator described above.

From wealth adjusted income ($Y + aW$) we subtract unavoidable expenses. Which expenses should be considered as unavoidable again involves some degree of arbitrariness. Uncontroversial is that taxes, compulsory social insurance contributions, health insurance premiums covering basic care and maintenance or alimony payments ought to be subtracted. It is less clear, however, how housing costs should be treated. We subtract housing or rental costs up to a certain amount (depending on region and family size) since the housing market cannot be considered a functioning market due to government regulation.³

In order to make households with different size and demographic structure comparable an equivalence scale has to be used, accounting for economies of scale in households of more than one person. Equivalence scales can be derived from household budgets or estimated econometrically from population surveys providing microdata (compare ATKINSON et al. 1995). All approaches involve some value judgements and none is clearly superior. This causes a serious problem since the choice of a particular scale has a major impact on the results. Both the number of the poor as well as the population groups most affected differ depending on the scale used (BUHMANN et al. 1988).

In this study, we use the equivalence scale derived from household budgets by the Conference for Public Welfare (SKOS) for two reasons. First, this scale has been designed explicitly for low-income families whose economic situation is measured by the resource indicator described above. Second, analyzing expenditure data econometrically (see GERFIN et al. 1994), we found that the values of this scale were located entirely within the confidence intervals of the estimated expenditure scales. The values of the SKOS-scale are relatively high. This is due to the fact that economies of scale are reduced when housing and rental costs as well as health insurance premiums are deducted.

Another value judgement is needed to decide whether regional price differences should be adjusted for. The prevailing practice of social policy in Switzerland presumes that people have a right to choose the place where they want to live, irrespective of the price level. This implies that regional price differences should be taken into account. Although regional price indices are not available, this can be accomplished partly by including housing and rental costs as well as health insurance premiums covering basic care in the resource indicator.

3. An upper limit was fixed for urban and rural areas, respectively, at the 66th percentile of the distribution of rental costs for each size category of apartments. Each household was assigned to the size category corresponding to the number of its household members. If the actual rental or housing costs were below this limit, actual costs were deducted. Otherwise, the maximum amount as defined above was subtracted.

b) Choosing a poverty line

A final value judgement is necessary in order to determine the poverty line (for a one person household). Setting a poverty line in the context of a socio-cultural poverty definition obviously involves a strong degree of arbitrariness. Contrary to many other countries, there is no official poverty definition in Switzerland and, therefore, neither an official poverty line nor equivalence scale exists. In this study, we use two alternative poverty lines. As a lower threshold we employ the poverty line recommended by the Swiss Conference for Public Welfare (SKOS) which amounted to 980 Swiss francs per adult equivalent and month in 1992 after deducting all the unavoidable expenses described above. The SKOS-poverty line is observed by most cantons and communities when deciding on welfare benefits and has acquired a quasi-official status. As an upper line we use the official income level defining eligibility for Supplementary Benefits in the «Old Age and Survivors' Insurance». In 1992, this income level was at 1'285 Swiss francs per adult equivalent and month, having deducted the unavoidable expenses. Both thresholds are based on a socio-cultural poverty concept.

2.2. Aggregation of Poverty

Once the poor are identified, we are left with the question of how the extent of poverty can be aggregated into a single meaningful index. The most frequently used index is the head count ratio or poverty rate

$$H = q/n$$

where q and n denote the number of poor and population size, respectively. This index has two basic advantages. It is easy to calculate and easy to interpret. Its major disadvantage is that the population is merely divided into two groups, the poor and the non-poor, neglecting the distance between a poor person's resources and the poverty line.⁴

The second traditional measure, the poverty gap G , shows the mean shortfall of the poor's resources from the poverty line:

$$G = \frac{1}{q} \sum_{i=1}^q (z - r_i) = z - \mu_q$$

where z is the poverty line, r_i are the resources of person i and μ_q denotes the mean resources of the poor. Since G depends on the unit in which the poverty gap is measured, the normalized measure I (poverty gap ratio) is sometimes used instead:

$$I = 1 - \mu_q/z$$

4. Since we are using the resource indicator to depict the economic situation of a household the aggregate poverty measures are described in these terms rather than in terms of income.

The poverty gap and the poverty gap ratio are inadequate measures of poverty, however, because the number of poor is not taken into account.

The traditional poverty indicators were severely criticized by SEN (1976) for not satisfying certain basic criteria. In particular, he formulated three properties which he considered crucial for every poverty statistic: the focus axiom, the monotonicity axiom and the weak transfer axiom (see Table 1). The head count ratio violates all but the focus axiom; if the poverty line is based on the relative poverty concept it violates all three of them. The poverty gap satisfies both the focus and the monotonicity axiom but violates the weak transfer axiom.

Subsequently, a number of additional desirable properties for aggregate poverty indices have been developed. Those most frequently discussed are summarized in Table 1.⁵ The top six properties seem to be widely accepted while the bottom three remain controversial. The focus axiom excludes relative poverty indicators and hence the issue of income inequality with respect to the population as a whole. The two sensitivity axioms at the bottom of Table 1 postulate that the poor should have a heavier weight in computing a poverty measure the poorer they are. This value judgement is not universally accepted for obvious reasons.

As can be seen from table 2 the traditional poverty indicators violate about half of these additional properties. In an attempt to remove this unsatisfactory situation, several new poverty indices have been developed since the mid-seventies. All of them combine the number of poor, the poverty gap as well as the income distribution among the poor. The latter is taken into account assigning heavier weights to those poor whose income is farther below the poverty line. Two of these indices were used in our study and are described below.

a) FGT-Index

FOSTER, GREER and THORBECKE (1984) proposed a general class of additively decomposable poverty measures (FGT-Index) which are axiomatically superior to the traditional measures (see RODGERS 1988). Poverty is defined as the weighted sum of the resource shortfalls of the poor. The lower the resources of a poor person are the higher is her index value since the shortfall itself is used as a weight.

5. Not included is a second transfer property which is analogous to the second monotonicity axiom because income transfers across the poverty line have an ambiguous effect on poverty measurement (see RODGERS and RODGERS 1991).

$$FGT = \frac{1}{n} \sum_{i=1}^q \left(\frac{z-r_i}{z} \right)^\alpha, 0 \leq FGT \leq 1$$

where α is a measure of poverty aversion. A large α emphasises the situation of the poorest poor. With a very large α , the measure approaches the «Rawlsian» case (see FOSTER et al. 1984). With $\alpha = 1$, the measure is simply the normalized deficit HI.⁶ With $\alpha = 2$, the measure is $H(I^2 + (1-I)^2 V_p^2)$, where V_p^2 is the coefficient of variation of the resource distribution of the poor (see FOSTER et al. 1984). As Table 2 indicates the FGT-index (with $\alpha > 2$) satisfies all the desired properties listed there.

Table 1: Desirable properties of aggregate poverty indices

Additive decomposability: The poverty index for a population can be written as a weighted average of the poverty indices for a set of mutually exclusive subpopulations.

Anonymity: The aggregate poverty index should be unaffected if any two people exchange incomes, c.p.

Symmetry: The aggregate poverty index should not change if two or more identical populations are pooled.

Monotonicity 1: The aggregate poverty index should decrease (increase) given an income increase (decrease) of a poor person leaving her below the poverty line, c.p.

Monotonicity 2: The aggregate poverty index should decrease (increase) given an income increase (decrease) moving a person across the poverty line, c.p.

Weak transfer axiom: The aggregate poverty index should decrease (increase), given a progressive (regressive) transfer^a of income between two people, both of whom are poor before and after the transfer, c.p.

Focus: The aggregate poverty index should be independent of the incomes of the rich.

Monotonicity sensitivity: The decrease (increase) in a poverty index, caused by a rise (fall) in the income of a person who is poor before and after the change in income, must be larger, the smaller is the income of that person.

Transfer sensitivity: The decrease (increase) in a poverty index, caused by a progressive (regressive) income transfer^a between two persons, both of whom are poor before and after the transfer, must be larger, the lower is the income of the recipient (donor).

Source: RODGERS and RODGERS (1991).

^a A transfer of income from one person to another with less (more) income is called progressive (regressive).

6. $HI = (q/n) (1 - \mu_q/z)$

Table 2: Properties of aggregate poverty indices

Property	Index		
	H	I	FGT
Additively decomposable	yes	yes	yes
Anonymity	s	s	s
Symmetry	s	s	s
Monotonicity 1	v ^a	s	s
Monotonicity 2	s	v	s
Weak transfer	v ^a	v ^a	s
Focus	s	s	s
Monotonicity sensitivity	v ^a	v ^b	s
Transfer sensitivity	v ^a	v ^a	s ^c

Source: RODGERS and RODGERS (1987, 1991).

Key: H = head count ratio; I = poverty gap ratio; FGT = Foster, Greer and Thorbecke's index; s = satisfies; v = violates; a = index remains constant; b = the change in the index is constant; c: satisfies, if $\alpha > 2$ (v^b, if $\alpha = 2$ and v, if $\alpha < 2$).

Given the theoretical superiority of the FGT-measure, it seems surprising that it has rarely been used in poverty studies. A likely explanation is that it is too difficult to interpret compared to the traditional measures such as the head count ratio. The numerical value of the FGT-index (especially when taken just by itself) conveys almost no meaning. One reason for this difficulty is that the index comprises the head count ratio, the standardized poverty gap and the coefficient of variation (when $\alpha = 2$). Thus, a different value can be caused by any combination of all three.

b) Poverty intensity index

RODGERS and RODGERS (1991) proposed a poverty intensity index PI which solves this problem. The PI-index is easy to interpret and has all the properties of the underlying poverty measure. It indicates the intensity of poverty rather than its extent. Therefore, the authors suggest using the index in addition to standard poverty measures. The key advantage of this poverty intensity index is its easy interpretation: a value of 2 (or 0.5) for a specific group k indicates that poverty in group k is twice (half) as intense as in the entire population. More generally, a value of less than, equal to or greater than one for group k indicates that the intensity of poverty in group k is less than, equal to or greater than the intensity of poverty for the entire population (see RODGERS and RODGERS 1991).

The authors recommend using the FGT-index as a base for their measure because it is axiomatically superior and additively decomposable:

$$PI_k^{FGT} = \frac{FGT_k}{FGT}$$

This index has a large potential in poverty measurement. Since it allows for simple comparisons of poverty intensity between groups and over time, it can be used to set priorities in reducing poverty or in evaluating anti-poverty programs (see RODGERS and RODGERS 1991).

3. DATA

The data were collected within the framework of the National Poverty Study conducted by the authors in 1992, combining information from government records such as tax or social security files with information from oral interviews. The nationwide representative sample is stratified by age and income and comprises 6300 individuals with complete records from all data sources.⁷ In addition to income and wealth the data contain detailed information covering a wide variety of living conditions and poverty related problems. The interviews were fully structured and took 70 minutes on average. The response rate turned out to be 70% for the interviews and 98% for government and other official records.

4. RESULTS

Tables 3 and 4 display some basic results with respect to aggregate poverty and poverty intensity for 1992. In particular, the share of each subgroup in the entire population, the head count ratio, the proportion of poor by subgroup, the poverty gap, the FGT-index (for $\alpha = 2$), the poverty intensity index PI^{FGT} based on the FGT-index, and the contribution of each subgroup to overall poverty are presented in columns one through seven. The last column is simply the product of columns one and six (see FOSTER et al. 1984).

4.1. Lower poverty line

According to table 3, 5.6 percent of the entire population fall below the lower poverty line. The poverty gap of 570 SFr. per month amounts to roughly 60 percent of the poverty line. This relatively high poverty gap ratio arises because unavoidable expenses as defined in section 2 are subtracted from both the poverty line and the resource indicator. Closer inspection by subgroup reveals that poverty varies substantially by age, family structure, nationality and language area.

7. The initial sample contained 18 300 individuals. Representativity of the stratified sample based on households as the unit of analysis is ensured using a weighting model developed by S. Schach (University of Dortmund).

Table 3: Aggregate poverty and poverty intensity in Switzerland 1992 (lower poverty line)^a

	Proportion of entire population (in %) (1)	Head count ratio (in %) (2)	Proportion of poor (in %) (3)	Poverty gap (in SFr. per month) ^b (4)	FGT ($\alpha = 2$) (5)	PI ^{FGT} (6)	Contribution to total poverty (in %) (7)
Entire population	100.0	5.6	100.0	570	0.0346	1.00	100.0
Age group							
20–29	17.6	8.3**	26.3	620	0.0602	1.74*	30.6
30–39	28.2	7.1**	35.9	580	0.0444	1.28	36.2
40–49	21.8	4.4(*)	17.1	530	0.0233	0.67*	14.6
50–59	13.5	3.6 *	8.8	570	0.0263	0.76	10.2
60–69	9.7	3.1 **	5.3	450	0.0139	0.40**	3.9
70–79	6.2	4.4	4.9	390	0.0175	0.51*	3.1
80 and older	2.9	(3.2)	(1.7)	480	0.0155	0.45(*)	1.3
Gender							
Female	52.0	5.7	53.4	610	0.0400	1.15	60.0
Male	48.0	5.4	46.6	510	0.0287	0.83	40.0
Family structure							
Single female	8.0	6.4	9.2	540	0.0373	1.08	8.7
Single male	4.6	10.6**	8.7	710	0.0850	2.45(*)	11.2
Single parent	3.6	(11.4)**	(7.3)	620	0.0759	2.19	7.8
Couple without children	31.1	3.2**	17.9	510	0.0178	0.51**	16.0
Couple with 1 or 2 children	32.7	5.5	32.3	610	0.0340	1.13	36.9
Couple with 3 or more children	10.8	7.8*	15.1	340	0.0182	0.52	5.6
Other private households	9.3	5.8	9.6	710	0.0510	1.47	13.7
Citizenship							
Swiss citizens	81.0	5.0**	73.2	590	0.0321	0.93	74.9
Foreign residents	19.0	7.9**	26.8	510	0.0456	1.32	25.1
Language regions							
German speaking	72.3	4.8**	62.1	540	0.0269	0.78*	56.1
French speaking	23.6	6.9 *	29.2	660	0.0529	1.53*	36.1
Italian speaking	4.1	12.3**	8.7	480	0.0677	1.95	8.0

(*), * and ** indicate significance at the 10%, 5% and 1% level, respectively.

^a Poverty line: SFr. 980 per month for a single person household after deduction of unavoidable expenses.

^b Without significance tests.

Age: Both traditional poverty measures, the head count ratio and the poverty gap, decrease with the age of the group to which the household (the interviewed person) belongs. Poverty rates for households in the two youngest age groups significantly exceed the average rate while the share of the poor in the households belonging to the age groups 40–69 turns out to be significantly lower. Both poverty rate and poverty gap are highest for households in the youngest age group, reflecting the fact that its members are likely to be involved in education and training programs, to be in an early stage of a professional career with relatively low wages, to live in households with large expenses and to own little or no wealth.⁸ According to column 3 roughly 60% of the poor live in households belonging to the two youngest age groups while only 12% are members of households in the age groups above 60. The highest share of the poor is observed in households of the age group 30–39 which can be explained readily by the fact that average household size in this group is larger than in the lowest group.

The same picture emerges for the FGT and the poverty intensity index. Poverty intensity is above average (i.e. above 1.00) for households in the two youngest age groups with the difference being significant for those in the lowest age group only. Poverty intensity is below average for all other households and the difference is significant except for households in the age group 50–59. Finally, as column 7 indicates, households in the two bottom age groups account for roughly two third of total poverty while households in the age groups above 60 contribute only 8%.

Gender: Although all four poverty measures are somewhat higher for females, no significant difference emerges. Overall, we therefore reject the hypothesis that poverty is or has turned into a predominantly female problem.

Family structure: Poverty rates are highest and poverty is most intense among single males and single-parent (mostly female-headed) households. The difference between single females and single males partly reflects an age effect in that single males are predominantly young while single females are more likely to belong to higher age groups. Both the head count ratio and poverty intensity are significantly below average for couples without children. By contrast, the poverty rate is significantly higher for couples with three or more children. Somewhat surprising, poverty intensity in that group is almost as low as that of couples without children. This can be explained partly by the relatively low poverty gap for households with three or more children. Taken together, households with children contribute roughly 50 percent to overall poverty. As in other countries (see PALMER et al. 1988 or DANZIGER et al. 1995) children thus appear to be the largest single population group affected by poverty.⁹ Two-parent families with children

8. Excluding persons in education and training programs reduces poverty to 5.2%.

9. The proportion of children up to age 19 among the poor is 28% and 30% for the lower and upper poverty line, respectively.

contribute 42.5 percent to overall poverty although all of their poverty measures are close to average except for the head count ratio of couples with three or more children. This is due to their large share in the population.

Citizenship: The head count ratio is significantly higher for residents with foreign nationality and significantly lower for Swiss citizens compared to the national average. Although the poverty gap is smaller for foreign residents, their PI-index exceeds one by 32% while the PI-index for Swiss citizens is slightly below average. The difference is not significant in both cases, however. Overall, Swiss citizens contribute 75% and foreign residents 25% to total poverty.

Language regions: Table 3 provides a clear picture of the regional poverty distribution. All poverty measures except for the poverty gap are lowest in the German speaking area with the head count ratio and the PI-index lying significantly below the national average. The head count ratio is significantly higher than the national average for both the French and particularly the Italian speaking population subgroups. Poverty intensity is also above average in both areas but the difference is only significant for the French speaking area. The contribution to total poverty of both population groups is above average and amounts to twice its population share for the Italian speaking group.

Residence (not shown in table 3): Both the head count ratio and the PI-index are only slightly higher in rural than in urban areas. This is somewhat surprising for two reasons. First, the general living standard in rural areas is lower, and second, self-employed persons (including farmers) whose incomes tend to be underreported in tax files are also more likely to live in these areas.

4.2. Upper poverty line

Using the upper poverty line (eligibility level for Supplementary Benefits of the Old Age and Survivors' Insurance (AHV)) increases the head count ratio of the entire population by 4.2 percentage points to 9.8 percent (compare table 4). By contrast, the poverty gap and the FGT-index remain roughly at the same level. The reason for the almost identical value of the FGT-index is that the rising poverty rate is more or less offset by the reduction in the coefficient of variation.

Disaggregation by the same population subgroups reveals that the results are fairly robust with respect to the choice of the poverty line. The largest increases in the head count ratio are experienced by households belonging to the age groups 70 and above and by single parents. The interpretation of the results remains the same, however. The poverty gap exhibits only minor changes for most groups (+/- 40 SFr.). A relatively large decrease occurs for members of households in the age group 80 and above while couples with three or more children and other households experience a relatively large increase.

Table 4: Aggregate poverty and poverty intensity in Switzerland 1992 (upper poverty line)^a

	Proportion of entire population (in %) (1)	Head count ratio (in %) (2)	Proportion of poor (in %) (3)	Poverty gap (in SFr. per month) ^b (4)	FGT ($\alpha = 2$) (5)	PI ^{FGT} (6)	Contribution to total poverty (in %) (7)
Entire population	100.0	9.8	100.0	560	0.0357	1.00	100.0
Age group							
20–29	17.6	12.2**	21.9	680	0.0595	1.66*	29.4
30–39	28.2	12.4**	35.8	570	0.0462	1.29(*)	36.5
40–49	21.8	7.9*	17.4	540	0.0254	0.71*	15.5
50–59	13.5	5.9**	8.2	580	0.0252	0.71	9.5
60–69	9.7	6.6*	6.5	420	0.0154	0.43**	4.2
70–79	6.2	11.0	7.0	360	0.0201	0.56*	3.5
80 and older	2.9	10.7	3.2	330	0.0177	0.49(*)	1.4
Gender							
Female	52.0	10.2	54.1	580	0.0403	1.13	58.6
Male	48.0	9.4	45.9	540	0.0308	0.86	41.4
Family structure							
Single female	8.0	11.7	9.6	530	0.0389	1.09	8.8
Single male	4.6	15.6**	7.3	740	0.0841	2.35(*)	10.8
Single parent	3.6	20.2**	7.4	570	0.0777	2.18	7.8
Couple without children	31.1	5.8**	18.5	510	0.0187	0.52**	16.2
Couple with 1 or 2 children	32.7	9.9	34.1	580	0.0361	1.10	35.9
Couple with 3 or more children	10.8	15.3**	15.9	420	0.0266	0.74	8.0
Other private households	9.3	7.8	7.3	780	0.0483	1.35	12.6
Citizenship							
Swiss citizens	81.0	9.0**	74.5	560	0.0331	0.93	75.1
Foreign residents	19.0	13.1**	25.5	550	0.0467	1.31	24.9
Language regions							
German speaking	72.3	8.7**	64.0	530	0.0288	0.81*	58.3
French speaking	23.6	11.3*	27.2	640	0.0522	1.46*	34.5
Italian speaking	4.1	21.2**	8.9	520	0.0696	1.95	8.0

(*), * and ** indicate significance at the 10%, 5% and 1% level, respectively.

^a Poverty line: SFr. 1285 per month for a single person household after deduction of unavoidable expenses.

^b Without significance tests.

Both the numerical values as well as the significance levels of the PI-indices which are the key criteria for intergroup comparisons turn out to be extremely robust and hardly change at all. The ordering between the subgroups remains the same in all cases. Single parents, single males and members of households in the age group 20–39 are most heavily affected by poverty, independent of the choice of the poverty line. Similarly, two-parent families with children contribute more to poverty than any other family type in both cases.

The sensitivity of the results with respect to the poverty aversion parameter α was checked carrying out the same calculations, but using a value of $\alpha = 3$ in combination with the lower poverty line (not shown in table 3). Increasing the value of α amounts to increasing the weight of the poorest persons. The values of the FGT-index rose by about one third, leaving the PI-index almost unchanged for most groups. There were only five notable numerical changes: the PI-index increased for the 50–59 year old, the 70–79 year old, couples with one or two children as well as for households in the Italian speaking area. By contrast, it decreased for couples with three or more children. All inter-subgroup orderings remained the same with one exception.

5. MULTIVARIATE ANALYSIS

Table 5 displays the estimation results of four equations for the poverty risk and the poverty gap, respectively, employing both the lower and the upper poverty line. Some additional variables are included as compared to the bivariate analysis in the previous section. All of the right hand variables are dummy variables. The respective reference groups are indicated below table 5.

Overall, the estimation results confirm the results of the bivariate comparisons. According to equations 1 and 2, the conditional probabilities of falling below the respective poverty line are significantly lower for households in the age groups above 30 compared to the lowest age group (excepting the age groups above 70 in equation 2), exhibiting a u-shaped form. Consistent with our previous results, poverty risk is higher for singles, single parents and families with (several) children compared to couples without children, for foreign residents compared to Swiss citizens and for the French and Italian compared to the German speaking population. Somewhat different results are achieved with respect to the number of children. The estimation results using the upper poverty line imply that children significantly increase the poverty risk and that the risk tends to increase with each additional child, other things equal.

Some interesting results emerge from the additionally included right-hand variables. Higher education seems to reduce the risk of falling below the poverty line while being a farmer, self-employed, disabled (upper poverty line only), not part of the work force (unemployed, in education, early retirement) or living in a peripheral, agricultural-bound community tends to increase that risk. It should be noted, however, that tax files of farmers and the self-employed tend to underestimate the real economic situation of these groups. Finally, having parents with a low social background does not seem to influence poverty risk at all, c.p.

Table 5: Determinants of the poverty risk and the poverty gap

	Poverty risk ^a		Poverty gap ^b	
	lower poverty line (1)	upper poverty line (2)	lower poverty line (3)	upper poverty line (4)
Constant	-1.59**	-1.26**	7.15**	8.18**
Age 30–39 ^c	-0.26**	-0.27**	0.25	-0.09
Age 40–49 ^c	-0.53**	-0.56**	0.06	-0.08
Age 50–59 ^c	-0.64**	-0.59**	-0.36	-0.52*
Age 60–69 ^c	-0.58**	-0.42**	-0.06	-0.75**
Age 70–79 ^c	-0.27(*)	0.01	-0.13	-0.79**
Age 80 and older ^c	-0.49*	-0.06	0.09	-1.02**
Female	-0.01	-0.05	0.43*	0.17
Medium education level ^d	-0.18*	-0.26**	0.42*	0.07
High education level ^d	-0.10	-0.29**	0.49*	0.22
Farmer ^e	0.85**	0.83**	0.29	0.16
Self-employed ^e	0.95**	0.83**	0.60**	0.75**
Disabled ^e	0.14	0.37*	-0.42	-0.16
Not in labor force ^e	0.98**	1.10**	0.96**	0.24
Single female ^f	0.30*	0.32**	-0.07	0.07
Single male ^f	0.47**	0.45**	0.53(*)	0.20
Single parent ^f	0.59**	0.81**	-0.04	-0.58*
Couple with 1 child ^f	0.16	0.30**	0.32	-0.21
Couple with 2 children ^f	0.02	0.25**	-0.24	-0.56**
Couple with 3 children ^f	0.21	0.53**	-0.07	-0.42*
Couple with 4 or more children ^f	0.77**	0.93**	-1.07**	-0.38
Adult person living with parents ^f	-0.28(*)	-0.34*	0.31	-0.05
Other households ^f	0.28(*)	0.15	0.09	0.15
Foreign resident	0.27**	0.24**	0.05	0.17
French speaking area ^g	0.15*	0.10(*)	0.50**	0.26*
Italian speaking area ^g	0.45**	0.51**	0.33	0.17
Peripheral community ^h	0.43*	0.34*	0.50	0.52(*)
Parents with low social background ⁱ	-0.04	-0.08	0.07	0.14
Log Likelihood	-1167	-1768		
Chi ² with 28 df	332**	442**		
(R ²) or R ² , respectively	0.15	0.15	0.15	0.09
n	6082	6082	409	746

(*), * and ** indicate significance at the 10%, 5% and 1% level, respectively.

^a Probit-models. Dependent variable: poor = 1, non poor = 0. (R²) = pseudo R² in equations (1) and (2).

^b OLS-regressions. Dependent variable: logarithm of poverty gap.

^c Reference group: households in age group 20–29.

^d Reference group: mandatory school without further education.

^e Reference group: employees aged 20–62/65.

^f Reference group: couples without children.

^g Reference group: German speaking area.

^h Reference group: all other communities.

ⁱ Reference group: parents without low social background.

Only few systematic relationships between the same right-hand variables and the poverty gap seem to exist according to equations 3 and 4. There are only two consistent results for both poverty lines: the poverty gap is significantly higher for the self-em-

ployed and households in the French speaking area, given that they are poor. In addition, the results imply that the poverty gap decreases with increasing age group of the household (equation 4), is higher for those who are not part of the work force (equation 3), and lower for couples with several children.

6. DEVELOPMENT OVER TIME

In this section, the development of the poverty rate between 1982 and 1992 is analyzed. A data set for 1982 which is compatible with the data set used here is provided by LEU et al. (1986). Since the information contained in the 1982 data is somewhat less comprehensive the comparison had to be accomplished taking these restrictions into account. In particular, the tax unit had to be used as the unit of analysis instead of the household.

We are using the upper poverty line in 1982 as baseline and estimate the head count ratio for that year. We then compute alternative values of the corresponding poverty line in 1992, using the consumer price index and the AHV-index, respectively, as inflator. The first approach amounts to an absolute, the second to a relative interpretation of poverty since the AHV-index considers both price and productivity (wage) increases.

The results are displayed in table 6. While overall poverty decreased slightly (column 2) or remained unchanged over that period, some major changes occurred between the age groups. The head count ratio increased significantly for the lowest and, in column 3, for the second lowest age group. It remained unchanged for the age group 40–59, but decreased dramatically for the households in the age groups above 60. The decrease in the higher age groups can be readily explained by the improvements of the social security system for the elderly. The economic situation of the elderly can be expected to improve further (in relative and absolute terms) with the system of employment based old age insurance (Federal Pension Fund Law BVG) approaching its steady state.

Table 6: Poverty rates by age group 1982 and 1992 (in %)

	1982 (1) ^a	1992 (2) ^b	1992 (3) ^c
Entire population	9.3	8.3*	9.5
20–29	12.0	14.9*	16.1**
30–39	9.9	11.1	13.1*
40–49	6.6	6.9	7.7
50–59	5.8	4.5	5.3
60–69	8.4	5.8**	6.4**
70–79	15.0	5.1**	6.7**
80 +	19.6	6.2**	7.6**

* and ** indicate significance at the 5% and 1% level, respectively.

^a Source: BUHMANN and LEU 1988, p. 102.

^b Poverty line 1982 inflated by CPI.

^c Poverty line 1982 inflated by AHV-index.

The increase in the head count ratio for households in the lower age groups is a more complex phenomenon. One reason is the increase in the number of working poor which is documented in Table 7. The share of this group has increased significantly irrespective of which poverty line is used for 1992 or whether the entire or the working population is employed in the denominator. Although this increase in the share of the working poor corresponds to the development in other countries it does not provide by itself a final answer to the question why poverty rates have increased for households in lower age groups. Rather, it is a development that warrants proper explanation itself. We are presently investigating some other reasons which might help to explain the increase in poverty among younger age groups.

Table 7: Proportion of working poor and poor below age 62/65 1982 and 1992 (in %)^a

	1982	1992 ^b	1992 ^c
Working poor	4.2	5.4**	6.3**
Poverty rate	8.0	10.0**	11.2**

** indicates significance at the 1% level.

^a A person is identified as a working poor if she is living in a poor household and if she or her partner is working full time.

^b Poverty line 1982 (official income level defining eligibility for Supplementary AHV-Benefits) inflated with consumer price index.

^c Poverty line 1982 inflated with AHV-index, taking both inflation and wage increases into account.

7. SUBJECTIVE POVERTY

In addition to the resource endowment we are assessing the perception of the economic situation of the households using the so-called «Deleecq-question»¹⁰ and satisfaction with income as indicators. Surprisingly, 13% of the poor respondents said they were making ends meet «easily» or «very easily», and an additional 26% thought they were making ends meet «rather easily». Taken at face value these results indicate that four out of ten poor persons do not perceive their economic situation as a problem.

One possible explanation is that data from tax files tend to underestimate the economic situation of certain population groups, in particular farmers, other self-employed persons and persons in education and training programs. Our data do indeed provide some evidence for this hypothesis. A second possible explanation is that the interviewees were hesitant to reveal their poor economic situation correctly to an interviewer feeling ashamed. We have no way of judging whether such a phenomenon exists and how im-

10. «Can you make ends meet with the actual income of your household with great difficulty, with difficulty, with some difficulty, rather easily, easily or very easily?»

portant it is quantitatively. A third possible explanation is that the poor respondents have adapted to the limited availability of resources, lowering their expectations as well as their standard of living. A fourth possibility might be that the poor respondents' perception of their own economic situation depends mainly on the economic situation of their friends, neighbors etc. This hypothesis predicts that the poor do not feel too hampered subjectively by their lack of resources as long as they are as well off as their reference groups.

Table 8 contains the estimation results of three equations allowing to test some of these hypotheses. The dependent variable in equation 1 is a dummy variable which is one for all poor respondents stating that they are making ends meet «rather easily», «easily» or «very easily». In equation 2 the dependent variable is one for those respondents only who say that they are making ends meet «easily» or «very easily». Finally, the dependent variable in equation 3 is a dummy variable for «being satisfied with one's income» (compare footnote (c) below the table).

Obviously, the three equations provide some evidence for both the adaptation and the reference group hypothesis. The probability that respondents agree with the statements in equation 1 is higher for respondents whose economic situation is comparable to that of friends. Similarly, the probability that respondents are satisfied with their income is higher for these respondents. Evidence of the adaptation hypothesis is provided by the coefficients on the variables «financial situation worse last year», «financial situation equal to last year» and «expected financial situation next year equal to that in the current year». All the coefficients are positive and significant. The remaining right hand variables are of minor interest in these equations and are employed mainly as control variables.

So far we have discussed some arguments which imply that the subjective poverty indicators should not be taken at face value. On the other hand we find that these indicators tend to be quite consistent with other responses of the poor in the interview. For example, poor households seem to be quite well equipped with durable consumer goods,¹¹ and only 27% said they had financial problems. Overall, these results imply that some of those defined as poor in the present study either are not poor (statistical artefact) or do not perceive themselves as poor. Using as a quantitative estimate of this group those who say they are able to make ends meet «easily» or «very easily» reduces the poverty rate by 0.5 to 1.5 percentage points (lower and upper poverty line, respectively).

8. TAKING LIVING CONDITIONS INTO ACCOUNT

Focusing entirely on income or consumption has been criticized because other problems which may be associated with poverty are not taken into account. Following a number of studies (TOWNSEND 1979, HANESCH et al. 1994 or HÜBINGER 1996) we have tried to over-

11. Durables such as telephone (95%), radio (95%), TV (92%), record player/CD (79%), camera (78%), access to a car (69%), video (54%) etc. More than 98% had (compulsory) health insurance and one third had supplementary private insurance (Zusatzversicherung).

Table 8: Determinants of subjective poverty^a

	Make ends meet rather easily ^b (1)	Make ends meet easily ^b (2)	Satisfaction with income ^c (3)
Constant	-2.21**	-3.78**	-2.06*
Female	0.29	0.22	0.24
Foreign resident	-0.23	-0.62	-0.08
Medium education level ^d	0.61*	1.03*	0.48(*)
High education level ^d	0.10	0.14	0.41
Single female ^c	0.55	-0.10	0.63
Single male ^c	0.41	-0.05	0.47
Single parent ^c	-0.64	-2.36*	-0.44
Couple with children ^c	-0.80*	-1.66**	0.48
Other private households ^c	-0.03	-0.39	0.01
Farmer ^f	1.00(*)	1.26(*)	0.22
Self-employed ^f	0.01	-0.79	0.00
Disabled ^f	-0.27	-2.01	0.04
Retired ^f	-0.40	-1.29*	0.57
Not in labor force ^f	-0.14	0.65	0.67
In education ^f	0.06	-0.49	0.45
French speaking area ^e	-0.84**	-1.02*	-0.51*
Italian speaking area ^e	0.22	-0.94	0.54
Economic situation better than that of friends ^h	0.81	0.76	0.86
Economic situation equal to that of friends ^h	0.76**	0.55	0.60**
Financial situation worse last year ⁱ	1.72**	1.36**	1.32**
Financial situation similar to last year ⁱ	0.79**	0.70(*)	0.81**
Expected financial situation same next year ^j	0.79**	1.26**	0.72**
Expected financial situation better next year ^j	0.28	-0.61	-0.01
Income per month 750–2500 SFr. ^k	-0.45	-0.22	-0.28
Income per month higher than 2500 SFr. ^k	0.65(*)	1.02(*)	0.63(*)
Net-wealth between -10 000 and +10 000 SFr. ^l	-0.65(*)	-0.06	-0.11
Net-wealth greater than 10 000 SFr. ^l	-0.14	0.12	-0.20
Chi ² with 27 df	143**	120**	97**
(R ²)	0.28	0.34	0.20
n	726	726	720

(*), * and ** indicate significance at the 10%, 5% and 1% level, respectively.

^a Probit-models. (R²) = pseudo R².

^b Dependent variable = 1, if respondents' answer to Deleecq question is «rather easily», «easily» or «very easily» in equation 1 and «easily» or «very easily» in equation 2, = 0 otherwise.

^c Dependent variable = 1, if respondents are satisfied with their income (items 1–5 on a 10–item scale), = 0 otherwise.

^d Reference group: mandatory school without further education.

^e Reference group: couples without children.

^f Reference group: employees aged 20–62/65

^g Reference group: German speaking area.

^h Reference group: economic situation worse than that of friends.

ⁱ Reference group: financial situation better than last year.

^j Reference group: expected financial situation worse next year.

^k Reference group: monthly income (according to interview) less than 750 SFr.

^l Reference group: net wealth less than -10 000 SFr.

come this shortcoming by collecting information on «living conditions» (Lebenslagenansatz) in addition to data on income and wealth. The aim of this approach is to measure welfare based on the household's endowments with material and immaterial goods in various areas considered to be essential. The areas typically covered include housing, durable consumer goods, social integration, health and access to health care, education and labor market participation. The endowment in each area is measured by a number of objective and subjective indicators. The choice of areas and indicators necessarily involves some arbitrariness and can only be made referring to a specific society and time period. Therefore, we are clearly dealing with a socio-cultural poverty concept again. To own a telephone, for example, may be a luxury in one society at a given point in time but is considered normal or even a necessity in a different society or at another time.

Some selected indicators of living conditions are displayed in table 9, describing how poor people live, what their main problems other than scarce resources are and how they compare with the entire population.¹² The first five rows contain objective problem indicators. A house or an apartment is considered to be crowded when a household has less than one room (bedroom or living room) per person. Problems with the apartment are assessed using as indicators the questions whether the apartments are «cold», «dark» or «humid» and whether the environment is «noisy», «smelly» or «dusty». The subsequent column indicates whether the respondent has been unemployed at least once over the past ten years. A person suffers from bad health if the self-assessed health status is either «very poor», «poor» or «fair». Living alone and having no close friends is used as an indicator for lack of social integration. Finally, the items «low satisfaction with life», suffering frequently from depression, anxiety and sorrows as well as loneliness are used as subjective problem indicators (BERGER 1984 or SCHOTT-WINTERER 1990).

Table 9: Problem profiles of the poor 1992

	Living in crowded apartment	3 or more problems with the apartment	Unemployed	Bad health	Lack of social integration	Low satisfaction with life	Depression	Anxiety and sorrows	Loneliness
Entire poor population	o		o	o	o	o		o	o
Subgroups of the poor									
Foreign residents	x		x			x			x
Single female				x	x				x
Single male					x	x	x	x	x
Single parent		x	x			x	x	x	x
Unemployed		x	x			x	x	x	x
Disabled		x		x	x	x	x	x	x

o Frequency of problem at least 5 percentage points higher than in entire population.

x Frequency of problem at least 5 percentage points higher than in entire poor population.

12. A comprehensive analysis is provided by LEU et al. 1997.

Table 9 conveys two major results: First, the poor suffer from most problems listed in that table more frequently than the non-poor, although only the first two problems are directly related to low resources (see first row). In particular, the poor are afflicted more heavily with subjective problems. Second, among the poor, the six subgroups listed in the entry of the table suffer more often from (cumulated) problems than the poor population as a whole. Again, subjective problems turn out to be very important. Loneliness is mentioned more often by all subgroups and low satisfaction with life by all but one group.

9. CONCLUDING REMARKS

In this paper the extent of poverty in Switzerland is assessed drawing on the National Poverty Study conducted by the authors. The results indicate that poverty is a major problem in Switzerland despite its high standard of living and its rather extended social security system. This is particularly true for specific population subgroups such as single parents, individuals living alone, persons in the age group 20–39 and persons living in the Italian speaking area. Two-parent families with children are the largest single contributors to overall poverty although their poverty rate, poverty gap and PI-index are all close to average. This is due to the fact that they constitute a very large population subgroup. Couples with children and one-parent families together constitute more than fifty percent of the poor. As a corollary, our results imply that children are by far the largest single population group affected by poverty. By contrast, all aggregate poverty measures for persons aged 60 and above are below average. The contribution of this population subgroup to overall poverty is between eight and nine percent only. This constitutes a major change in comparison to the mid-seventies and early-eighties, reflecting the development of poverty by age group over the last decade. Poverty has increased between 1982 and 1992 in the population between 20 and 39, but has decreased massively in the population above age 60 following substantial improvements of the social security system. Over all age groups, poverty has remained constant or decreased slightly during this time period depending on the poverty concept used. Finally, our results demonstrate that the poor suffer more often from a large number of other problems in addition to their lack of resources. In particular, they are plagued more heavily by subjective problems like low satisfaction with life, depression, anxiety and sorrows, loneliness or social isolation.

Overall, our results imply that the current social security system needs some modifications in response to the major changes that have occurred over the last two or three decades. The social security system is still geared primarily at the elderly. As a consequence, poverty in this population group has diminished substantially and may decrease further, once the Federal Pension Fund Law has reached its full impact. At the same time poverty has increased among younger population groups for various reasons. This

strongly suggests that the focus of the system should be altered, moving it away from the elderly and in the direction of these younger groups.¹³

REFERENCES

- ATKINSON, A., L. RAINWATER and T. SMEEDING (1995), Income Distribution in OECD Countries, Evidence from the Luxembourg Income Study, *Social Policy Studies* 18, Paris: OECD
- BERGER, R. (1984), Problemgruppen, in: Glatzer, W. and W. Zapf (eds.) (1984), *Lebensqualität in der Bundesrepublik*, Frankfurt a.M. and New York: Campus, 264–285.
- BUHMANN, B. and R. LEU (1988), Ganz unten: Wer ist arm in der reichen Schweiz?, in: Frey, R. and R. Leu (eds.) (1988), *Der Sozialstaat unter der Lupe*, Basel and Frankfurt a.M.: Helbing & Lichtenhahn.
- BUHMANN, B., L. RAINWATER, G. SCHMAUS and T. SMEEDING (1988), Equivalence Scales, Well-Being, Inequality, and Poverty: Sensitivity Estimates Across ten Countries using the Luxembourg Income Study (L.I.S.) Database, in: *Review of Income and Wealth* 34, 115–142.
- DANZIGER, S. and M. TAUSSIG (1979), The Income Unit and the Anatomy of Income Distribution, in: *Review of Income and Wealth* 23, 365–375.
- DANZIGER, S., T. SMEEDING and L. RAINWATER (1995), The Western Welfare State in the 1990's: Toward a New Model of Antipoverty Policy for Families with Children, Luxembourg Income Study Working Paper 128.
- DUNCAN, G. (1987), The Perception of Poverty. Book Review, in: *Journal of the American Statistical Association* 82, 959–960.
- FOSTER, J., J. GREER and E. THORBECKE (1984), A Class of Decomposable Poverty Measures, in: *Econometrica*, 52, 761–766.
- GERFIN, M., R. LEU and P. SCHWENDENER (1994), *Ausgaben-Äquivalenzskalen für die Schweiz*, Bern: Bundesamt für Statistik.
- HAGENAARS, A. (1986), *The Perception of Poverty*, Amsterdam etc.: North Holland.
- HAGENAARS, A. and K. DE VOS (1988), The Definition and Measurement of Poverty, in: *The Journal of Human Resources* 23, 211–221.
- HAUSER, R., H. CREMER-SCHÄFER and U. NOUVERTNÉ (1981), *Armut, Niedrigeinkommen und Unterversorgung in der Bundesrepublik Deutschland*, Frankfurt a.M. and New York: Campus.
- HANESCH, W. et al. (1994), *Armut in Deutschland*, Reinbek bei Hamburg: Rowohlt.

13. An extensive discussion about reform possibilities is provided by LEU and EISENRING (1998).

- HÜBINGER, W. (1996), *Prekärer Wohlstand, Neue Befunde zu Armut und sozialer Ungleichheit*, Freiburg: Lambertus.
- LEU, R., B. BUHMANN and R. FREY (1986), Die personelle Einkommens- und Vermögensverteilung der Schweiz 1982, in: *Schweizerische Zeitschrift für Volkswirtschaft und Statistik* 122, 111–142.
- LEU, R., S. BURRI and T. PRIESTER (1997), *Lebensqualität und Armut in der Schweiz*, 2. überarbeitete Auflage, Bern etc.: Paul Haupt.
- LEU, R. and C. EISENRING (1998), Effizienz und Wirksamkeit von Sozialtransfers: ein Beitrag zur aktuellen Diskussion, in: *Aussenwirtschaft* 53, Heft III, 435–465.
- LIPSMIEER, G. (1995), Zur Messung von Armut, Das Konzept der subjektiven Deprivation. Eine empirische Betrachtung mit Umfragedaten, Diplomarbeit, Universität Bielefeld.
- MACK, J. and S. LANSLEY (1985), *Poor Britain*, London: Allen & Unwin.
- NOLAN, B., T. CALLAN, Ch. WHELAN and J. WILLIAMS (1994), *Poverty and Time: Perspectives on the Dynamics of Poverty*, Dublin: ESRI.
- PALMER, J., T. SMEEDING and B. TORREY (eds.) (1988), *The Vulnerable*, Washington D.C.: The Urban Institute Press.
- PIACHAUD, D. (1992), Wie misst man Armut, in: Leibfried, S. and W. Voges (eds.) (1992), *Armut im Wohlfahrtsstaat, Kölner Zeitschrift für Soziologie and Sozialpsychologie*, Sonderheft 32.
- RODGERS, J. (1988), *Properties of Poverty Indices*, Working Paper Series ECO881101, Center for Applied Research, Greensborough: University of North Carolina.
- RODGERS, J. and J. RODGERS (1991), Measuring the Intensity of Poverty among Subpopulations. Applications to the United States, in: *The Journal of Human Resources* 26, 338–361.
- ROWNTREE, B. (1901), *Poverty, A Study of Town Life*, London: Macmillan.
- SCHOTT-WINTERER, A. (1990), Wohlfahrtsdefizite and Unterversorgung, in: Döring, D., W. Hanesch and E.-U. Huster (eds.) (1990), *Armut im Wohlstand*, Frankfurt a.M.: Suhrkamp, 56–78.
- SEN, A. (1976), Poverty: An Ordinal Approach to Measurement, in: *Econometrica* 44, 219–231.
- SEN, A. (1979), Issues in the Measurement of Poverty, in: *The Scandinavian Journal of Economics* 81, 286–307.
- SEN, A. (1983), *Poor, Relatively Speaking*, Oxford Economic Papers.
- SEN, A. (1985), *A Sociological Approach to the Measurement of Poverty*, Oxford Economic Papers.
- SKOS (Schweizerische Konferenz für öffentliche Sozialhilfe) (1993), *Richtlinien für die Bemessung der Sozialhilfe: Kommentierte Empfehlungen*, Bern: SKOS.
- TOWNSEND, P. (1979), *Poverty in the United Kingdom: A Survey of Household Resources*, London: Penguin.
- ZIMMERMANN, G. (1993), *Armut: Konzepte, Definitionen und Operationalisierungsansätze der BRD*.

SUMMARY

In this paper we first discuss the conceptual problems concerning the identification and aggregation of poverty. We then describe the data collected in the framework of the National Poverty Study and present a selection of the main results. For example, our results indicate that poverty has decreased massively between 1982 and 1992 in the population above 60, but has increased noticeable in the population between 20 and 39. Particularly remarkable is the increase of the so-called working poor. Most affected by poverty are households in the age groups below 40, households in peripheral, agricultural-bound communities, individuals living alone, single parents, divorced persons, foreigners, subgroups of the self-employed, individuals below retirement age who are not part of the work force, and persons living in the French and the Italian speaking area. Our results also demonstrate that the poor suffer more often from a large number of other problems in addition to their lack of resources. Overall, they imply that the current social security system needs some modifications in response to the major changes that have occurred over the last two decades.

ZUSAMMENFASSUNG

In diesem Beitrag werden als erstes die konzeptionellen Probleme der Identifikation und Aggregation von Armut diskutiert. Anschliessend werden die im Rahmen der Nationalen Armutsstudie erhobenen Daten beschrieben und eine Auswahl der wichtigsten Ergebnisse präsentiert. Unter anderem zeigt sich, dass die Armut bei den über 60-Jährigen zwischen 1982 und 1992 massiv abgenommen, bei den unter 40-Jährigen demgegenüber deutlich zugenommen hat. Auffallend ist vor allem die Zunahme der so genannten «working poor». Von Armut am stärksten betroffen sind die unter 40-Jährigen, Bewohner agrarisch-peripherer Gemeinden, allein Lebende, allein Erziehende, Geschiedene, Ausländer, Selbstständige, Nichterwerbstätige sowie Romands und Tessiner. Neben einem Mangel an Ressourcen sind die Armen auch bei Problemen in anderen Lebensbereichen übervertreten. Insgesamt ergibt sich die Schlussfolgerung, dass das heutige Sozialversicherungssystem einiger Modifikationen bedarf, um mit der veränderten Problemsituation zufriedenstellend umgehen zu können.

RESUME

Cette contribution traite d'abord des problèmes conceptionnels et de l'agrégation de la pauvreté. Ensuite, on procédera à la description des données rassemblées dans le cadre de l'étude nationale sur la pauvreté et présentera un échantillon des principaux résultats obtenus. Il apparaît notamment que la pauvreté parmi les plus de 60 ans a massivement diminué entre 1982 et 1992, tandis que celle des moins de 40 ans a sensiblement aug-

menté. On note tout particulièrement l'augmentation des «travailleurs pauvres». Les personnes les plus fortement affectées par la pauvreté sont les personnes de moins de 40 ans, les résidents des communes agraires/périphériques, les personnes vivant seules, les familles monoparentales, les divorcés, les étrangers, les indépendants, les personnes pas intégrées dans le marché de travail ainsi que les Romands et les Tessinois. Outre le manque de ressources, les pauvres sont aussi fortement représentés dans les problèmes affectant d'autres domaines de la vie. On peut globalement en conclure que le système actuel d'assurances sociales nécessite un certain nombre de modifications pour gérer de manière satisfaisante la problématique modifiée.