Poverty Dynamics in Poland
Selected quantitative analyses

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Abbreviations

CASE – Center for Social and Economic Research
CBOS – Center for Public Opinion Studies
GUS – Central Statistical Office
HBS – the household budget survey
IFiS PAN – Institute of Philosophy and Sociology at Polish Academy of Science
IPiSS – Institute of Labour and Social Studies
IPS UW – Institute of Social Policy of Warsaw University
ISP – Institute of Public Affairs
KRUS – Pension Fund of the Agricultural Social Insurance Fund
LFS – Labour Force Survey
MPiPS – Ministry of Labour and Social Policy
PARPA – State Agency for Prevention of Alcohol-Related Problems
POMOST – data base of the social assistance centers
SAC – Social Assistance Centres
ZEW – Centre for European Economic Research
ZUS – Employee Social Security System

Introduction

The present report summarises the outcome of a research project carried out jointly by researchers of the Polish Center for Social and Economic Research Foundation (CASE) and the German Centre for European Economic Research (ZEW) and funded by the Volkswagen foundation. The objective of this project is to analyse the mechanisms at work in the rise and persistence of poverty during transition in Poland, as well as its consequences for selected groups of the population.

The transition process from a centralised to a market economy in Poland has been accompanied by an unprecedented increase in poverty and a deepening of inequality across households – not only in terms of income but also in terms of socio-economic status. Although a small number of studies describing the economic situation of the poor in Poland have been undertaken, our understanding of the mechanisms that make poverty persist in the household context is considerably limited. The interaction of a number of factors may for example, result in individuals being trapped in a vicious circle of poverty. Low household income may lead to social exclusion and family distress, which is likely to have far-reaching consequences for all household members. Social exclusion may contribute to foster alcoholism, impede the human capital investment in children, and thus jeopardise the socio-economic situation of the next generation. Socially excluded people experience severe difficulties in finding re-employment. Social transfers might even worsen the situation by providing a disincentive to seek work.

We need to understand the causes underlying the developments in social and economic hardship of Polish families during the course of the transition process. The introductory chapter therefore offers a general look at the picture of poverty in Poland; trends and new research results are described. In order to improve our understanding of the causes of social exclusion and to contribute to filling the gap in research we do not, however, restrict our attention solely to the analysis of the extent and nature of poverty in general but rather focus our analysis on issues that have been somewhat overlooked. This project contributes to the literature by investigating empirically different dimensions of the poverty debate in Poland –

ranging from social exclusion through the relationship between transfers and labour supply to the transmission of poverty across generations. The empirical analyses are carried out on the basis of individual and household histories which are observed in the Polish Labour Force Survey and of administrative data on social assistance beneficiaries.

In the first empirical study we examine the relationship between social transfers and labour supply: although poor people may apply for social benefits, the benefit entitlement may result in a poverty trap by providing disincentives to acquire work. Moreover, long spells of poverty without employment are likely to decrease a person's chances in finding a new employment position. The extent to which individuals react to these disincentives and/or are excluded from the labour market after long periods of non-employment has been estimated using the Polish Labour Force Survey – for the periods 1997 and 2000. Applying a logit regression, we test how different transfers and other kinds of non-earned income – given individual, family and regional characteristics – affect the decision to look for a job or not. The results obtained indicate that the propensity to search for employment is highly differentiated between different groups of transferees. The more stable transfers are financially, the lower is the labour market activity of their recipients. Unemployed individuals who are entitled to benefits are less eager to work than registered unemployed maintained by others. The longer a person is off work, the less willing he/she is to search for a job. These findings, however, have to be interpreted with caution, since: i) only proxy methodologies are used in the study, and ii) because of the problems involved in establishing the direction of causality. In addition to receiving transfers, a number of individual characteristics are also found to play an important role in the attitude to work. More specifically, a lower number of children but higher number of adults in the family, the main household income being derived from transfers, living in big cities, being male and unmarried are all positively related to job-search intensity.

In the second study, we look at an essential factor influencing social exclusion in Poland: alcoholism. GUS reports a strong increase in alcohol consumption in Poland since the beginning of the 1990s. Public opinion considers alcohol dependence as one of the most important social problems influencing household's economic performance. The problem of how family and economic situation correlates with alcohol dependence among the poor population is therefore investigated. If being poor and alcohol dependent is correlated with certain types of labour market activity (or lack of such activity) and some family characteristics, then describing these relationships is an important policy input. However, we are aware that it is impossible to state causal relations between alcohol abuse and the economic or social situation of a household as these problems are inseparable/interdependent. To target the poor population of alcohol dependants we concentrated our analysis on social assistance recipients, using administrative data from the sample of social assistance centres. The data provides individual and household information for every social assistance recipient. The analysis was conducted on

the group of recipients who stated alcohol problems together with their poor economic performance and therefore turned to a social assistance centre for help. The outcome of a logit model indicates that reporting alcohol abuse among social assistance recipients is significantly related to gender and labour market activity, family composition and living in rural areas. It is important to note, however, that this research does not cover the whole complex problem of alcohol abuse in Poland. It shows some important relations between alcohol abuse, employability and the household situation that in consequence might lead to household deprivation and social exclusion.

Finally, we examine the extent of intergenerational transmission of poverty through the education of children: The starting point of this chapter is the hypothesis that children are most likely to bear the consequences of their parents being caught in a poverty trap. We therefore estimate the effects of economic hardship of the parents on the situation of the children, in particular with respect to their educational attainment. If parental poverty has a large impact on the educational prospects of the children, poverty is likely to be passed on over the generations. If this happens to a large extent, the transition process may exhibit a detrimental dynamic by which some children are disadvantaged under the new economic system from the very beginning of their lives. Societal disruptions may follow in the medium run. Using the Polish Labour Force Survey we analyse the intergenerational transmission of poverty from Polish parents to their children through children's educational attainment during the transition process of the 1990s. The relationship between family background and education is investigated using an ordered probit model of educational attainment. The results illustrate that children's education is strongly related to household structure, parents' education, city size, and region of residence. Household income and the parents' labour market situation have only a weak, though significant, effect on children's education. We conclude that, if poverty transmission takes place across generations, this seems to be primarily caused by the inheritance of human capital rather than by pure wealth effects. This link has remained comparatively stable throughout the transition process.

The three issues outlined above may be interrelated through a possible line of causation running from long-term unemployment and social transfers dependence, through social exclusion and poverty – often accompanied by alcohol problems and family dysfunction, to the transmission of poverty across generations. If benefit levels are very low, their contribution to the alleviation of poverty is minimal. Children of deprived families have relatively worse educational prospects than those with better-off parents. This leaves them with a comparatively low earnings potential in the future. As a consequence, these children are more likely themselves to have families burdened by economic hardship, and so the vicious circle closes. By providing the links between our three studies we aim to highlight a number of issues of particular importance to the poverty debate in Poland today that may help to improve the effectiveness of the Polish social policy.

The remaining of this report is structured as follows: Part 1 provides an overview of the prevailing problem of poverty in Poland. The labour supply effects of social transfers are studied in Part 2. After an investigation of alcohol abuse among social beneficiaries in Part 3, Part 4 tackles the transmission of poverty from parents to children through the educational attainment of Polish children.

Part I

Poverty in Poland: Causes, Measures and Studies

Stanisława Golinowska

Introduction

Running parallel to the impressive development of Central and Eastern Europe over the last decade has been an unprecedented increase in poverty. Despite the notable achievements in developing a market economy and fostering economic growth in the region, the increases in inequalities and labour market problems that have also arisen were not expected on such a large scale and for such a prolonged duration. "The presumption was that growth would come quickly as countries move forward with the transition process, and that, with good mobility and high level of education, it would reduce the incidence of poverty rapidly. Poverty was believed to be largely transitory in nature, and best addressed through the provision of adequate safety nets" (World Bank 2000, p.V).

The problem of poverty in Poland is especially important as it is connected both with old – and at the same time new – problems of development. New problems have stemmed from the deep restructuring of the economy, which brought with it an often painful deterioration in the labour market. Old problems relate to the fact that there was already a significant number of hidden unemployed and socially excluded members of Polish society.

This chapter offers a general overview of poverty in Poland: trends, measurements and research results, at times in comparison with other countries in the region.

1.1. The Causes of Poverty

Even the briefest of analyses of the ways in which Polish society has developed in recent decades tends to indicate that the growth of poverty is connected with two main processes: the first is the opening up of the agricultural sector to strong market competition, with the

subsequent collapse of many small farmers whose existence had been based almost exclusively on the subsistence (natural) economy.

The small farms sector is no longer able to support the subsistence needs of the rural population. Added to this, widespread bankruptcies of large state-run farms led to large numbers of redundancies in other entities that had been economically interdependent on them. As a result the situation in the Polish countryside deteriorated dramatically and the incidence and degree of poverty in rural areas has become a very serious social and economic problem.

The second process has been connected with changes in industrialisation and urbanisation. Poland's traditional industries have been undergoing massive restructuring for some years. One of the key social questions associated with these large-scale and fundamental changes in the industrial structure of the Polish economy has been the extent to which employees – the most affected by the changes, have been willing and able to adapt to the new circumstances. Failure to do so in many cases has become a further additional source of poverty, this time largely in urban areas. Such industrial changes have to some extent been ameliorated by cross-party support for social programs to ease employees out of traditional workplaces. This has meant that the poverty of these groups has not always been directly connected with redundancy, but with later adaptational difficulties.

1.1.1. The Communist Legacy

Despite great efforts to become an industrial powerhouse via rapid industrialisation and intensive modernisation programmes undertaken during the communist period, Poland failed to catch up on the industrial front with the more advanced economies of Western Europe. Investment plans were poorly worked out and poorly executed, and there was a consistent – and systemic – lack of capital, despite the low level of consumption and large-scale income redistribution. In these conditions incentives to modernise were low. In addition, the political weakness of the authorities further limited possibilities of achieving such aims.

Such "half-baked modernisation" in turn opened up and accentuated three main problem areas: (1) disparities between the living condition in rural and urban areas, (2) strong regional disparities, and (3) low education level of the workforce and low adaptational abilities of certain groups of the population.

Neglect of rural areas and agriculture

During the three decades of accelerated industrialisation (1949-1978) Poland's private agricultural economy was a key source of labour for industrial growth. The authorities' exploitative attitude to agriculture began to change somewhat in the mid-1960s, though a

significant improvement in the rural population's standard of living did not appear until the 1970s, when the authorities significantly reversed their policy towards agriculture and rural areas. Changes began with the removal of key regulatory barriers (primarily the removal of the obligations on farmers to supply agriculture products). In the second half of the 1970s a wide range of investments into the agriculture sector were conducted. The prices of agricultural products, primarily meat products, sold to the state were increased, alongside the simultaneous introduction of advantageous credit policies for farmers, subsidised feed and synthetic fertiliser prices.

In 1977, social insurance for farmers was introduced on similar bases to those for non-agriculture employees; up to that point farmers had been entitled to pensions in return for bequeathing their land to the state.

The change of policy towards agriculture, including private farming, led to a situation in the 1980s in which farmers' incomes had risen to match those of non-agricultural employees, and by the end of the decade they had surpassed them.

But this change did not bring any significant improvements in the land-use structure or major improvements in the technical infrastructure in the countryside (despite private initiatives undertaken to this end, such as the Church Fund, and later, the Village Support Fund).

Regional disparities

Throughout the post-war period the state failed to tackle the underdevelopment of some regions in Poland (especially in the former *Kongresówka* areas in eastern and central parts of the country). The considerable regional disparities that grew in the past have not diminished in the transformation period since 1989.

Educational backwardness

One of the main legacies of communist Poland's educational policy is the dominance of basic vocational training. The accelerated industrialisation of the country over three decades (1949-1978), with an exceptionally intense phase in the first half of the 1950s, demanded a massive increase in the number of highly qualified workers. The vocational secondary schools and its mass growth were seen as the best way to meet this demand. Today, most middle-aged working people only attained basic vocational education (over 50% – Cichomski op.cit.). The financial situation of this group was relatively good and many so-called 'labour elite' and future trade unionists originated from this group, many even ascending to political office in the 1980s and 1990s. The majority of this group became owners of the small- and medium-sized private companies that sprouted *en masse* in the period 1989-1992 (Domański 1998).

Today, however, the politicisation of this group, its only partial acceptance of market rules (especially related to efficiency), as well as lack of willingness to adapt to changing situations on the labour market are today key barriers to development.

1.1.2. Transition and Poverty

Studies on poverty around the world have shown that poverty in transition countries is somewhat different from poverty at other places. The first feature of poverty in transition countries is that those who are poor tend to be what we can term 'the new poor'. In the communist period all had guaranteed employment and regular pensions from the state after retirement. While average incomes were low, income inequalities were insignificant as people's predicaments were similar. Under communism, the greatest concern was access to goods and services. The central planned economy created shortages and people were unable to satisfy their basic needs. There were of course some people living in what we may call a 'culture of poverty', but such groups were rather marginal and the state was able to deal with them in various restrictive ways, for example via institutionalisation, in one form or another.

The introduction of the market economy opened up a huge consumer market and greater opportunities to achieve higher incomes, though not for all. The unemployed, small farmers, adults and children from dysfunctional families, for example, had fewer chances of succeeding and difficulties in adjusting to the market system caused many of them to fall into poverty.

The transition from the centrally planned to the market economy accelerated changes in agriculture as well as industrial restructuring. Poland is following developmental trends that have been prevalent in more advanced economies over the last few decades. The changes in Poland, however, have been exceptionally intense on a regional basis due to the fact that the country's starting point was that much lower and the political incentives introduced in Poland that much stronger. Transformation in the agriculture had been held off for a very long time.

Changes in rural areas

The period of transition to the market economy, together with the liberalisation of foreign trade, brought considerable problems for Polish agriculture and the rural population. The profitability of agricultural production decreased radically – though the "insatiable domestic food market" had already before this become less robust on the demand side. The subsequent improvement in farmers' material situation was primarily associated with the transition from the agricultural to non-agricultural economy, though this had become far more difficult than in earlier years. Internal migration from the countryside to the city and the two-occupational population (farmer-worker) dropped off.

At the end of the 1980s the real income of households involved in agriculture was growing by up to 20% a year. In the 1990s farmers' average income decreased in real terms by approx. 38%. The earnings of employees exceeded income in rural households by approx. 30% on average. These incomes stayed more or less stable for the next few years, dipping again in the second half of the 1990s. At the same time the real incomes of other social and economic groups, including the employed and self-employed, grew steadily after

1994. As a result, the ratio of rural and other household average income to the average income of the employed households has changed (Table 1.1).

Table 1.1. Ratio of rural and other household average income to the average income of the employed households (the average income of the employed households = 1.00)

Economic group of households	1989	1993	1994	1995	1996	1997	1998	1999	2000
Rural	1.16	0.89	0.87	0.94	0.87	0.83	0.76	0.69	0.69
Self-employed	n.a.	1.24	1.27	1.28	1.23	1.23	1.22	1.21	1.21
Pensioners	0.73	1.05	1.05	1.04	1.02	1.04	0.99	1.01	0.94

Source: UNDP 2000 on the basis of data from the GUS.

The decrease in the average agricultural income – both in absolute terms and in relation to other groups of households – was a result of systemic changes and the development of market mechanisms in the economy. The abolition of budget subsidies to food production – intensified in 1989-1990 – was accompanied by liberalisation of prices and margins as well as the appearance of imported food on the market. For the first time in the post-war period there were meat and dairy product surpluses in Poland.

Changes in the labour market was the second key factor lowering the income of the rural population. In the initial stage of transformation (up to 1993), the number of people working in agriculture decreased. This was due, amongst other things, to increased incentives for older farmers to retire. However, since 1994 the number of the people working in agriculture has been growing, largely due to structural and institutional changes on the labour market outside agriculture. The absorption of labour surpluses by the non-agricultural economy was very slow and, at the same time, eligibility for unemployment benefits was restricted. Accordingly, farms became kind of "storerooms" for people who could not find jobs outside agriculture and who were not entitled to unemployment benefit. As a result, relatively high hidden unemployment in the individual farming sector reached, according to some estimates, 900,000 people (Kryńska 1999).

At the same time, mainly due to the collapse of state farms, there was also high official unemployment among that section of the rural population not possessing any land of its own and not involved in individual farming.

As a consequence, poverty appeared in the countryside, though of a somewhat different character to the sense in urban areas in that prevailing that the existence-threatening factors are far less visible; one may call it 'cultural poverty' to a far greater extent than the label applies to urban poverty. Though it is hard today to imagine that people possessing even a small piece of land may suffer hunger, the phenomenon of

limiting to the subsistence economy is relatively common. Cash in many places has become a deficit commodity and is used to cover the costs of mobility and non-foodstuffs. Poverty in the countryside has become a wider phenomenon since 1997. Before this, poverty was concentrated mainly in the former state farms. Today it also affects individual farmers' households to a considerable extent.

Restructuring

Industry has been affected by equally deep-seated changes. The restructuring of traditional sectors, as part of the so-called 'post-Ford transformation' (Mingione, 1996), is accompanied by necessary ownership changes, which, however, makes the process more difficult to co-ordinate and adapt socially. Changes in the industrial structure are often analysed in terms of the ways and degrees to which they act to create and destroy jobs (World Bank 2001).

Restructuring of the economy was intensified in the period 1997-2000. One prominent feature of the process was its asymmetry, with the predominance of job losses over job creation. In the period 1998-2000 the number of employed people decreased by approx. 360,000 (estimation – Witkowski 2001).

New jobs have been created mainly in the private sector and in services, though in recent years both have slowed significantly. In the period 1998-2000 over 80% fewer jobs were created than in 1994-1997 – the period of their most dynamic growth. The decrease in the number of new jobs in services was even bigger – exceeding 90%. These trends can be explained by a lower rate of job creation in the private sector overall as well as estructuring of the public sector (including social services) which even led to the drop in employment.

Restructuring resulted in labour productivity growth. In industry, where the decrease in the number of employees was greatest (over 550,000 in 1998-2000), labour productivity grew by 14% in 2000 alone (Witkowski 2001). Growth in industrial labour productivity reflects a modernising economy and should presage higher efficiency in the economy as a whole. However, without job creation in other sectors to compensate for the job decline in industry, such productivity growth has certain negative effects on the labour market, in particular a dramatic growth in unemployment.

Institutional changes

The transformation towards the market economy has brought with it key institutional changes. New regulations, commercial values, growth in efficiency requirements, individualism against higher living standards in small communities all came too rapidly for many groups and did not leave enough time for necessary adjustments.

Social policy institutions could play a key role in facilitating transformational adjustments. However, they have been used merely as institutions to bear the brunt of the

state's avoidance of the need to adjust to new realities. The old system was based on relatively generous system of social benefits for people leaving the labour market (pre-retirement pensions, disability pensions, pre-retirement allowances and benefits).

Inequalities

It has been empirically validated in many case studies that income inequality is a major cause of poverty in countries with weak economic growth. If inequality grows at times of weak economic growth and there is no significant income redistribution or income redistribution may perversely deepen inequalities, then poverty increases. This kind of connection between inequality and poverty has visibly occurred in transition countries (Klugman, Micklewright, Redmond 2002) (Table 1.2).

Table 1.2. Gini coefficient for income *per capita* and for earnings in the post-communist countries

Region/country	1987-1990	1993-1995	1996-1999
Central E. Europe			
Czech Republic	0.19 (0.20*)	0.23 (0.26*)	0.25 (0.25*)
Hungary	0.26	0.29 (0.32*)	0.25 (0.35*)
Poland	0.28 (0.20*)	0.28 (0.29*)	0.33 (0.30*)
South E. Europe			
Romania	0.23 (0.15*)	0.29 (0.29*)	0.30 (0.37*)
Bulgaria	0.23 (0.21*)	0.38 (0.29*)	-
Baltics			
Lithuania	0.23 (0.26*)	0.34 (0.37*)	0.34 (0.37*)
Latvia	0.24	0.31 (0.34*)	0.33
Estonia	0.24	0.35	0.37 (0.38*)
CIS			
Russia	0.26	0.46 (0.48*)	0.47
Ukraine	0.24	0.36 (0.41*)	0.42*

Note: * Earnings.
Source: Data Bank from Innocenti Research Centre Unicef (2001) and from the World Bank (2000).

Income disparities between rich and poor in Poland increased substantially during the 1980s and 1990s. The average Gini coefficient of disposable income rose from 28 in the end of the 1980s and the first half of the 1990s to 33 for the period 1996-1999 (World Bank 2000). This value places Poland, after only several years of transition, at a level near the OECD (Milanovic 1998).

1.1.3. Challenges of the New Economy Versus Poverty

Globalisation, work and poverty

The problem of job creation at the present stage of economic development is far more complicated than ever before. The basic, and clearly identified, global trend in the area of work is towards a steady fall in employment.

This can be explained in various ways. The process of economic globalisation (primarily the liberalisation of capital flows) is associated, for some, with both a remarkable leap in efficiency but also concurrent large reductions in traditional employment. Others suggest that social policy merely complicates institutional adjustments which would in themselves help create jobs.

Independent of the arguments that seek to explain falls in employment, one cannot fail to observe that the "good" job – in its traditional "wrapping" (in other words workplace in its traditional infrastructure marked by labour laws and industry relations) – has become increasingly rare.

Table 1.3. Global employment rates

World regions/countries	1990	1994	1997	1999	2000
EU	61.5	-	60.7	62.1	63.1
USA	72.2	-	73.5	-	74.1
Latin America	58.2	58.0	57.8	57.0	-
CEE	70.6	63.5	60.7	63.9	56.3
Poland	83.0	60.8	58.3	59.7	56.4

Sources: World Bank 2001, ECLAC 2001.

The global trend of falling employment in the poorer worldwide regions coexists in transition countries with systemic reforms and accelerated restructuring of the economy – factors making the labour market process additionally difficult. Poland is one of those countries where additional tensions on the labour market have a demographic source – relatively large inflows of labour onto the market are expected for the next two decades at least.

The problem of work is therefore of huge strategic importance, and not only a temporary difficulty at the present stage of transformation.

Since about the 1980s most new evidence from household surveys suggests that unemployment is playing an increasingly important role as the main cause of poverty, overtaking low incomes (Lipton 1995), primarily across the industrialised countries. In CEE countries unemployment appears to have even graver consequences than in EU countries (Klugman, Micklewright, Redmond 2002).

In the context of labour market difficulties groups most prone to unemployment are especially vulnerable. Young people are a case in point (Table 1.4). People with poor qualifications are a separate matter. Raising qualifications and improving readiness for work is one of most difficult tasks facing social policy. These groups are most threatened by poverty and social exclusion.

Table 1.4. Unemployment among vulnerable groups

Groups of different vulnerability	1993 November	1996 November	1997 August	1999 February	2000 1st quarter	2001 1st quarter
On average	14.9	11.5	10.7	12.5	16.7	18.2
Young people (15-24)	31.6	26.2	23.5	28.5	37.9	41.2
Female	16.9	13.4	13.5	13.5	18.5	19.8
Persons at immobile age (over 45 years)	8.5	6.5	6.5	6.3	10.6	11.9
Persons with poor qualifications (basic and lower education)	15.0	12.9	12.9	11.7	22.1	22.9
In towns	16.9	12.0	11.5	12.9	17.1	19.2

Source: GUS; LFS.

Increasing skill levels

Developing higher skill levels is one of the most visible challenges for the future, with the knowledge-based economy at the forefront of any future developed economy. Countries that choose not to take up the challenge will be pushed to the peripheries of progress.

This is why improving education in Poland demands answers to many questions, initially in education policy. In the face of a huge increase in the number of young people education policy sought at first to substantially increase the non-public sector. But the predominance of cheap mass solutions revealed deep structural deficits in the education system in Poland, in particular a mismatch between strategic policy directions and labour market demands for skilled and professional employees. Quality deficits also became increasingly visible. Mass education was undertaken by teachers often with low skills via mostly or exclusively oral-based teaching methods (too little practical work and training). In addition to this, the education process was weakly controlled due to the decentralisation of the schooling system.

The low quality of the education process in general and large differences in education results in the latest period are revealed in comparative OECD studies from 2000, known as PISA (*Programme for International Student Assessment*)[1]. PISA research consists of checking the competence of the 15-year old pupils. PISA measures the basic skills required in modern societies to lead economically and personally satisfying lives, and also to participate actively in social and political life.

While the results for Polish pupils were very poor, some Western European countries where the populations are more heterogenic, that is multicultural, with a large group of immigrants or with ethnic differentiation (J. Allmendinger, S. Leibfried 2002), had similar results[2]. In contrast, Poland, a country with a significantly homogenic population from the ethnic point of view, has an education system that is rather unequal in quality terms. The low quality of the education on offer especially affects those with difficult access to education, that is, young people from the countryside and small towns.

Many of these young people have little of external – that is parental or wider family – support and this is another factor influencing inequality of opportunity in education. Results from research in this area reveal that Polish society during the transition has tended to retain a strong degree of conservatism and societal cohesion. Most children tend to reproduce the education patterns of their parents. Parents with basic education tend to send their children to the most basic vocational schools. Parents with higher education likewise tend to seek to ensure that their children go to university – 70% of them at least make efforts to ensure that their children attain secondary level education (on the basis of 8 years (1992-2000) data from the LFS – see Part 4).

The transfer of education levels across generations creates at the same time a mechanism for reproducing poverty. This requires intervention, both to counteract the process itself and to tackle the underlying causes of poverty and social exclusion.

Inequalities

Wide income differentials reflect the existence of considerable poverty in all societies. This derives from the common usage of measures based on the concept of 'relative poverty', which highlights the gap between the lowest income groups and the average.

Income differential trends in EU countries tend to be split north/south, with the north much lower than the south, with the exception of the United Kingdom, where inequalities have been traditionally larger. The rate of poverty in countries with greater income differentials tends to be higher. In southern countries – the poorest countries in the EU – relative poverty tends to be the highest (Table 1.5).

[1] PISA studies are cyclical.

[2] The results for Poland have been available for several years, though earlier poor results were associated with the previous, communist, educational system.

Table 1.5. Diversity of income in the European Union, 1995

Countries	Gini coefficient for income	Change in Gini coefficients during the period of time (in %)	Rate of poverty* below 50% of national income (in %)	Rate of poverty below 50% of income for the EU (in %)
Denmark	0.243	-4.9 (1983-1994)	6.5	4.4
Finland	0.176	9.1 (1986-1995)	4.6	5.8
Sweden	0.242	-1.0 (1975-1995)	5.5	5.9
Norway	0.213	9.4 (19986-1995)	5.0	5.1
Belgium	0.251	2.3 (1983– 1995)	12.6	8.7
Germany	0.251	6.4 (1984-1994)	10.9	7.6
France	0.303	-1.7 (1979-1990)	13.4	10.5
Ireland	0.255		20.0	28.3
Luxemburg	0.298		12.9	1.3
Holland	0.295		11.4	9.2
United Kingdom	0.357		20.6	14.8
Greece	0.354		21.8	42.0
Spain	0.354		19.1	31.7
Italy	0.348	12,7 (1984-1993)	17.9	23.8
Portugal	0.473		26.8	47.5

Note:* poverty line – 50% of median income calculated for one consumption unit according to the OECD equivalence scale
Source: Vogel, 1998 on the basis of ESSPROS data.

1.2. Defining and Measuring Poverty

In the literature there are many approaches to defining and identifying poverty. Some authors refer to recipients of social assistance as the truly poor because the public support, though not deprivational in itself, establishes poverty as a social phenomenon of exclusion. From this point of view, the poor can be identified in two different ways (Mingione 1996). On the one hand, the poor can be identified as these who apply to institutions for social assistance. On the other hand, the poor can be defined as those whose living conditions, consumption or earnings, are worse/lower from an established standard and adopted as desired (Mingione, 1996). In the first case only recipients of social assistance are considered poor. In the second case – all those living below the adopted standard.

The first approach, however, can be effectively applied only if the social assistance institutions do not change their ranges of eligibility and benefits. This would be possible only in countries with very stable institutional structures in this field.

The poor as recipients of the social assistance programmes

According to the first method, only individuals assisted by specific social assistance programmes are considered poor. Identification of the poor with social assistance has some strong limitations,

which is why it is used less often than the first approach to poverty. The main problem of using this method is connected with the obvious difficulty of comparisons over time due to reforms in social assistance systems and also of cross country comparisons due to highly diversified conditions of the national social assistance provisions. One very interesting study into poverty in Germany defined in terms of social assistance (Leisering and Leibfried 1999) claims that it was possible only due to the relative stability of the country's social assistance system (1961 – introduction of *Sozial Hilfe Gesetz*) which made possible a longitudinal cohort survey into social assistance claims.

Dynamic approaches to poverty research (during the life course) have a long tradition. They have been developed on the basis of two opposite hypotheses. The first, developed by Benjamin S. Rowntree (a pioneer of empirical research into poverty), stated that poverty tends to be a temporary phenomenon, with people typically not poor throughout their lives but only during certain stages: when they have dependent families or their earning power is limited, for instance, or in the later stages of life (Rowntree 1901).

The second hypothesis assumes that poverty is a chronic and hereditary phenomenon. Some groups of people live permanently in a culture of poverty. This approach comes from an American study on chronic poverty among immigrants (Lewis 1959).

1.2.1. The Poverty Line Approach

The poverty line approach is based on establishing a criterion separating the poor from the non-poor. There are many alternative proposals and discussions on the best wayto do this, however, and as a consequence different poverty lines have been applied. This does not help in fully grasping the problem. Politicians and society alike tend to want simple answers to the questions: is there poverty and how people suffer from it?

The most widely used poverty line approach identifies the poor as belonging to households with budgets below (officially or statistically) what is defined as 'required income level' (the monetary poverty measure).

This 'required income level' is most frequently defined either as household consumption or household income. Much has been written on the relative merits of each measure (Atkinson, 1998), but no consensus has yet emerge as to which should be applied, though consumption is more often considered the more appropriated measure. In Polish statistical analyses expenditure is used as the key indicator of consumption, more than of income.

Another problem is how to set the poverty line: via detailed analysis of consumption and household needs (the basket method), or by classification of people living at the lowest income level as poor? In the second case a question appears: how to classify lowest income – as 40%, 50% or 60% of the average or rather against the median? Poverty defined as the proportion of a given category relative to average income (expenditure) is called 'relative'.

Both of the two above-mentioned methods have been heavily criticised, the basket method for being normative and reliant to some extent on what its critics call 'expert imperialism', and the proportion method for its failures simply to grasp and explain a large chunk of any given reality. For example, in Great Britain Margaret Thatcher argued, fiercely, that according to the statistics, there were inequalities in Britain, but, at the same time, there was no poverty (J. Klugman, J. Micklewright, G. Redmond 2002). In the case of exclusive deployment of relative measures a situation may appear in which the proportional growth (or fall) in average income may not lead to drop in the poverty rate. As Walter Kraemer wrote in one of manuals, relative poverty is like a ship in a sluice: "... despite raising of the water level, the submerged part of the ship remains the same." (Kraemer 2000, p. 30).

Indicators of relative poverty are applied in cross country comparison studies (e.g. in the framework of Eurostat), bearing in mind that the levels of poverty in the compared countries vary and that the poverty rates are measures of inequality rather than measures of poverty.

In cross country comparisons measures of absolute poverty are also applied. These are based on some permanent levels of consumption or income which express a concept of indispensable consumption, e.g. in World Bank research the indicator of 2 (or 4 in 1996 PPP) dollars per person daily is used as the absolute poverty line.

Subjective poverty

Analyses of poverty have moved increasingly towards accepting some of the definitional properties and arguments developed by subjective measures of poverty. The premise of this group of definitions is a liberal treatment of individual feelings and opinions as having a key significance in defining needs.

In social policy practise particular country specific approaches are applied which respect both the tradition of national social institutions and eligibility for benefits, as well as the analytical achievements of local experts in poverty research.

1.2.2. Measures of Poverty Applied in Poland

In analyses of poverty in Poland, both official and those of various experts, many measures have been applied. This stems from the relatively rich research tradition in this field.

With tradition in mind, one should begin by looking at the criterion for determining the so-called 'social minimum'. In Soviet block countries a special category of 'minimum material security' was used (*minimum meterialnoj obespieczennosti*). This category didn't exactly define poverty but rather the threshold of poverty. Those whose income fell below this level were defined as *maloobespieczennyje*, or with "little security" (McAuley 1979).

Minimum material security in Poland was defined by Tymowski (1973) and Deniszczuk (1978) as the 'social minimum'. In 1981, under the pressure of just created independent trade union (Solidarność) this category was recognised by the government as an official measure for monitoring living conditions. The social minimum describes the indispensable level of consumption determining social participation and social integration, which demands satisfying not only basic needs but also certain other needs beyond them. This is reflected in the contents of the basket of goods and services indicated as 'basic' for satisfying needs on a social minimum level. The contents of the basket allow participation in social life: work, children's education, family life and socialising, participation in culture – all these on a modest level.

The basket of goods and services was recognised by specialists (doctors, diet experts, social workers, statisticians, consumption researchers) as indispensable for the normal functioning of a human being in society.

Since 1982 the social minimum has been estimated by IPiSS and since the beginning of the 1990s published in the quarterly journal *Polityka Społeczna* [Social Policy].

The social minimum is *de facto* not a category of poverty, with a level fluctuating around the average expenditure level in households. Trade unions, however, have used the well-known term as a synonym for poverty in various populist statements.

The social minimum was never used as a criterion for categories applied in social policy, such as the minimum wage, minimum pension or threshold income in the social assistance scheme. However, banks have been known to use information from the social minimum to assess households' creditworthiness and courts have asked for social minimum information in order to adjudicate in alimony cases.

A new category of poverty, the so-called subsistence minimum, based on the budget standard approach, was defined in 1995. This category is used to define absolute, deep-seated poverty. The subsistence minimum was estimated by experts from the IPiSS on the basis of the very low family budget costs. This level of expenditure accounts exclusively for those needs the fulfilment of which cannot be postponed. Any lower level of consumption leads to physical collapse/illness, etc. The subsistence minimum level is more than twice lower than the social minimum.

The relative poverty line is equal to 50% of average expenditure calculated for one consumption unit, according to the OECD's equivalence scale[3] (the unit weights are as follows: 1.0 for the first person; 0.7 for the second and next over 15 years old; 0.5 for each child). The premise of this definition is, on the one hand, the acceptance of the subjectivity aspect of poverty (dependency on the average living condition in the country), on the other hand, pointing to inequalities as the main indicator of poverty.

[3] Eurostat is currently proposing the adoption of the line at the level of 60% of the median of national income with the adoption of new equivalence scales.

A measure of poverty based on subjective evaluations has also been defined and estimated. In Poland the so-called Leyden (Subjective Leyden Poverty Line – SLPL) method has been defined, systematically estimated and applied by GUS since the beginning of the 1990s. It was determined on the basis of the household budget survey question: "what is the minimum amount of income that your family, in your circumstances, needs to be able to make ends meet?" The responses are measured as a proportion to the actual income in the household. A regression line plotted against the responses and taking into account family characteristics gives a level of income which coincides with actual income. That is the basis for the evaluation of "merely sufficient" income (Podgórski 1994). "Taking into consideration the current condition of the household, evaluate the level of income which would enable living on an average, satisfying level, and what income would not enable maintaining the household even on the lowest level" (Podgórski 1991).

To work out the official poverty line in Poland in the first half of the 1990s one needs to look at the income threshold entitling social assistance allowances. This income threshold was defined by the category of the minimum pension, determined as 35% of the average wage. Income per person entitled to social assistance could not exceed 90% of the minimum pension. In the regulations the minimum pension was never officially classified as the poverty line, but social policy from that time indicates that the minimum pension was used as a screening device to separate applicants who needed support from those who did not. It means that in practice the minimum pension determined possibilities of obtaining social assistance and housing allowances (Topińska 1997). The World Bank's poverty studies on Poland were made with the minimum pension serving as the official poverty line (World Bank 1994 and 1995).

Since 1996 the income threshold has been explicitly defined in the law on social assistance. Henceforth the income threshold can be recognised as the official poverty line. The level of this income threshold was set as 35% of the net minimum wage in the starting point (1996) and was indexed against price increases; once or twice a year depending on the rate of price growth. Currently the income threshold is equal to approx. 20% of average earnings.

According to GUS and Eurostat practice, relative poverty lines are systematically applied in Poland, as 50% of the average expenditure basket estimated on the basis of HBS. However, there are several doubts associated with applying this poverty line. The main question is if the relative income approach is really a poverty measure? Some argue that relative poverty is a misleading and muddled concept (Lipton 1995). The main disadvantage of a pure relative measure of poverty lies in the fact that even in a situation of proportional nominal increase in expenditure (or income) the level of poverty remains unchanged.

In the World Bank's studies the so-called two-(or four-)dollar-a-day poverty line is used (actually $ 2.15 per person per day or $ 4.30 in the 1996 PPP).

The relatively wide scope of poverty studies in Poland has meant the use of many poverty definitions. The definitions, poverty lines and institutions providing them are showed in Table 1.6.

Table 1.6. Poverty lines applied in Poland

Categories of poverty lines	Lines applied	Institutions and authors using given poverty measurement
Absolute poverty	Subsistence minimum, Two - dollar-a-day Four - dollar-a-day	IPiSS, GUS, the World Bank
Relative poverty	50% of the average household expenditures per consumption unit (OECD equivalence scale)	GUS
Subjective poverty	Leyden Poverty Line	GUS (Podgórski)
Income threshold in the social assistance institution	447 PLN with application of OECD equivalence scales	MPiPS; social assistance centres
Threatened with poverty	Social minimum; basket of goods and services essential for participation in social life (assuring integration)	IPiSS, GUS, trade unions

Source: Own comparison.

1.2.3. Research into Poverty

Poverty has for some time been always a closely studied area of research in the social sciences in Poland. Various studies were conducted during the communist period, though their findings were either not published at all or were only partially published. The first studies appeared in the 1970s (a period of considerable political liberalisation in Poland) and developed during the 1980s. They were important for developing the methodology of poverty research. These studies provided insights into environments that were at that time euphemistically referred to as 'spheres of deficiency' (Jarosz, Frąckiewicz 1984).

World Bank experts have also taken an interest in the problem of poverty in Poland. They conducted initial research into the prevalence of poverty in the last few years of the 1980s (World Bank 1990).

A relatively rich vein of poverty studies developed in the 1990s, with various types: some aiming to improve methods for poverty research, some to collect better data to be used to identify poverty, others to develop theories explaining the causes and cases of poverty (sociological research), and others that aimed explicitly to develop methods for fighting poverty.

Types of research and authors in the 1990s

Research to date can be generally divided into qualitative and quantitative camps. The former have been to a larger extent conducted in the framework of sociological research. The latter are most frequently used by economists and statisticians, although interesting quantitative analyses have also been made by sociologists.

Table 1.7. Comparison – research into poverty in Poland during the transition period

Author/institution undertaking research	Subject and Scope of Research	Data Source	Period
Qualitative Researches			
Tarkowska, E., *Zrozumieć biednego (*To Understand the Poor) IFiS PAN	employees of the former state farms (PGR)	interviews in the field	1997
Tarkowska, E. /Korzeniewska (ISP)	children of the former state farms' employees	interviews in the field	2000
Tarkowska, E./Laskowska - Otwinowska, J.,	Romans in Spisz	interviews	2001
Fodor, E./Domański, H. Poverty Ethnicity & Gender IFiS PAN	Feminisation of poverty in the countries of Central and Eastern Europe	analysis of a representative sample	2000
Warzywoda-Kruszyńska, W. with a team, *Żyć i pracować w enklawach biedy, (Żyć) na marginesie wielkiego miasta* (To Live and Work in Enclaves of Poverty, (To Live) on the Margins of the Big City) Uniwersytet Łódzki (Łódź University)	enclaves of urban poverty in Łódź	group interviews with employees of social institutions	1993 1994 1997-1999
Zabłocki, G. with a team, Ubóstwo na terenach wiejskich Północnej Polski (Poverty in Rural Areas of Northern Poland) Uniwersytet Toruński i Bank Światowy (Toruń University and the World Bank)	"poor" gminas in Koszalińskie, Słupskie, Pilskie, Elbląskie, Olsztyńskie and Suwalskie voivodships	interviews with residents, analysis of official documents and interviews with key persons	1997
Rossa, J. IPiSS and IPS UW	workers' quarters of Silwan and Stilon plants in Gorzów Wielkopolski	interviews with residents of workers' quarters	1998
Frieske, K. W./Polawski, P. /Zalewski, D.	small towns – seats of gminas	expanded interviews with selected families supported by social assistance	1997 1998
Quantitative Researches			
The World Bank Milanovic, B. Topińska, I.	estimation of poverty rate and poverty gap	HBS	1990 1994 1995
The World Bank Okrasa, W.	dynamics of poverty and research on effectiveness of the social safety net	panel 1993-1996	1993-1996
GUS Szukiełojć-Bieńkuńska, A. Podgórski, J.	estimating rate of relative poverty and lines established by IPiSS (subsistence minimum and social minimum), estimating subjective poverty	HBS	systematically since 1993 systematically since 1990

Table 1.7. Comparison – research into poverty in Poland during the transition period – cont.

Author/institution undertaking research	Subject and Scope of Research	Data Source	Period
Panek, T./Kotowska, I. SGH – Warsaw School of Economics	evaluating the risk of deficiency	special random sample within the framework of the project „Diagnoza 2000" /Diagnosis 2000/	Feb – March 2000
CASE / ZEW Beblo M. Golinowska, S/Laner C./ Piętka, K. /Sowa, A.	intergenerational poverty dynamics	HBS, LFS and POMOST	2000
IPiSS (Sajkiewicz B./Kurowski P.)	valorising the value of subsistence minimum and social minimum	records of prices monitored by GUS	since 1981 in the case of social minimum and since 1996 in the case of subsistence minimum
Quantitative – Qualitative Researches			
IPiSS – Polish Poverty I and II Golinowska, S./Kordos, J.	complex analysis of poverty	HBS	1996 1998
IFiS PAN Beskid, L.	common perception of poverty	surveys by IFiS PAN and CBOS	1989 – 1995
Research of Methodological Character			
Panek, T. SGH	application of multidimensional analysis, monitoring the poverty sphere by the method of multidimensional analysis	HBS HBS	1993-1994 May 1995-November 1996
Szulc, A. SGH/GUS	equivalence scales	HBS	1993-1994 1995-1996
IPiSS PBZ Polish Poverty I (Deniszczuk, L./ Sajkiewicz, B.; co-ordination Golinowska, S.)	defining and estimating the category of subsistence minimum by the basket method verification of the social minimum basket	contents of the basket described by experts	1995 1995

Source: Own evidence.

Research problems

Quantitative research requires representative data bases. Results of research on household budgets (conducted in Poland systematically since 1974[4]) can be treated as such. This research enables cross-sectional and over-time analyses. These data bases are not yet representative enough for margin income groups or for affluent ones or for the poor. Moreover, they are not suitable for the application of dynamic approaches. Dynamic analyses require panel research, that is the participation of the same respondents over several years. It is not easy when research samples are created by rotation method, which is most frequently used for household budgets' data bases. The first panel enabled a two-year-long analyses (in the years 1990/1991, 1991/1992). The longest panel research covered a four year period (1993-1996). Talking about the significance of data sources needed for dynamic approaches, one should note that a considerable part of the coefficients proposed within the concept of open co-ordination of social policy within the EU is based on panel analyses (Atkinson 2001).

Only the dynamic approach allows for verification of the concept of poverty as a temporary phenomenon. This thesis acts as a premise for further research (Benjamin Rowntree, is a kind of founding father of this approach), and even more importantly, for many policies aimed at counteracting and combating poverty. The thesis proposes that the risk of poverty is connected with particular stages in the cycle of human life. Two stages are the most susceptible to poverty: the early period of family life – the period when children are born and taken care of, and later life – the period of old age.

Another concept – in direct contradiction to the last one – holds that the phenomenon of poverty is of a constant character and concerns certain groups which pass the culture of poverty down from one generation to the next. According to some sociologists, these groups form a class, or more precisely an underclass, which in many countries has an ethnic aspect. A classic description of the underclass is the work of Oscar Lewis on the culture of poverty of Mexican and Puerto Rican immigrants in the USA (Lewis 1959 and 1966). The culture of poverty in Poland does not have an ethnic aspect, but there are a few marginalised categories described by sociologists as "candidates for the Polish underclass" (Tarkowska 1998).

Verification of each of the concepts requires different types of research. In the case of the first, quantitative dynamic approaches are necessary; in the case of the second qualitative research is required.

[4] Hitherto they have only been conducted for the employed in the state sector and then not systematically.

1.3. The Picture of Poverty in the 1990s

Looking at the research findings on poverty today, it is natural to wonder about the period proceeding the transition decade. Did poverty exist in the communism period, or not? Studies from the 1970s and 1980s indicate that poverty did exist at that time, though was frequently related to family dysfunction, substance abuse, serious illness and old age. Poverty did not appear among employed persons or their families since full employment guaranteed subsistence, however modest and uniform. According to GUS estimations related to so-called 'low income' (similar to the social minimum category), one can assume that Poland began the transformation with approximately 20% of its population threatened with poverty (Kordos 1992), though not a deep one.

Table 1.8. Poverty rates (poverty headcount) according to different poverty lines – people living at the given poverty level and below this level, as a % of the total population

Poverty lines	1992	1994	1996	1999	2000
World Bank two-dollars-a-day				1.2 (1998)	
Subsistence minimum	-	6.4	4.3	6.9	8.1
Relative poverty line*	12.0 (1993)	13.5	14.0	16.5	17.1
Income threshold in the social assistance scheme	-	-	13.3 (1997)	14.4	15.0
World Bank four-dollars-a-day		10.0 (Milanovic study 1993-1995)		18.4 (1998)	
Subjective**	32.6 (1990)	33.0	30.5	34.8	
Social minimum	32.4	47.9	46.7	52.2	54.0

Notes: * 50% of average expenditure per OECD consumption unit,
** % of households at the level and under the level of poverty.
Source: GUS, IPiSS, World Bank (2000).

In the 1990s we can see two periods with the significant increases in poverty. The first period, in which poverty rose suddenly, was immediately after the collapse of the communist block and the beginning of the transition from the planned to the market economy. In the space of only two years, 1990-1991, GDP fell by approximately 18%[5].

The second period is the end of the 1990s. Since 1998 economic growth has slowed and unemployment grown continuously.

Of the countries in the region Poland comes in fourth behind the Czech Republic, Slovakia and Hungary in terms of the scale of poverty. Polish poverty rates are similar to those in Bulgaria. Other countries in the region have much higher indicators.

[5] Estimation concerning the drop in GDP differ, even in the yearbook of GUS for subsequent years; generally, the later the yearbook, the smaller the decrease. The figure of 18% is the most widely used.

Chart 1. Poland: Poverty rates in 1994 – 2001, according to different measures

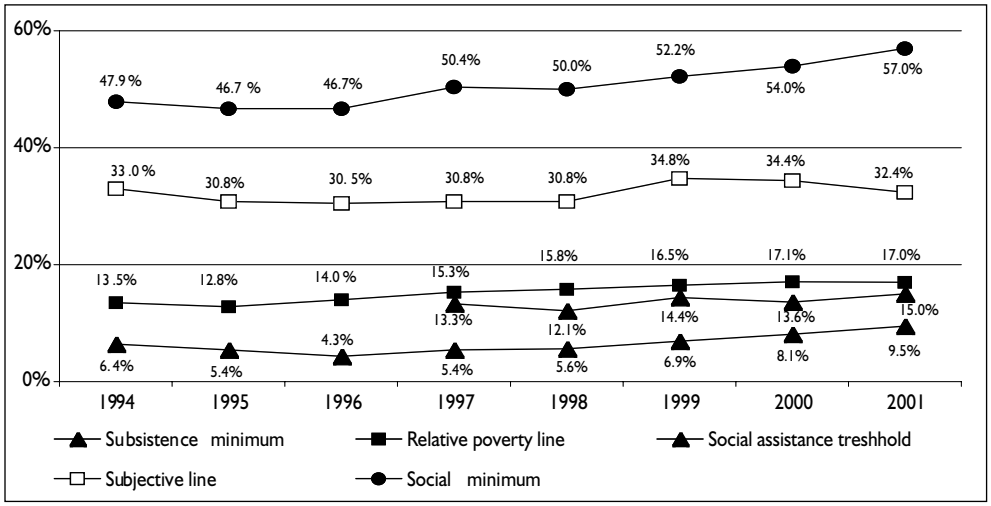

Table 1.9. Rates of poverty in Central and Eastern European countries

Country	Relative Poverty*	Absolute Poverty**
Czech Republic	1.3	0.8
Slovakia	1.7	8.6
Poland	12.0 (1994) 15.8 (1998)	18.4
Hungary	9,9	15,4
Bulgaria	15,0	18,2
Rumania	39,0	44,5
Estonia	37.0	19.3
Latvia	22.0	34.8
Lithuania	30.0	22.5
Belarus	22.0	10.4
Moldavia	66.0	84.6
Russia	22.8	50.3
Ukraine	63,0	29,4

Notes: * Adopted poverty line – 50% of household's expenditure calculated per one consumption unit according to OECD equivalence scales, data from years: 1993-1996;

** Poverty line used by World Bank – 4,30 USD per person daily, data from years 1997-1999.

Source: ICDC Uniceff 1999, Flemming and Micklewright 1999, World Bank 2001, the Author's complements.

1.3.1. Most Vulnerable Groups

Statistical evidence helps in pinpointing who the poor are. Using socio-economic criteria to classify household groups in the sample of the household budgets survey we can see that families living from non-earned sources (unemployment and social assistance benefits) are the most poverty-vulnerable household group. In 2000, in 7% of the total household sample all household members were jobless.

Unemployment as the main cause of poverty

At the beginning of the transformation, 75% of the poor – according to the official poverty line (minimum pension) – were stricken with unemployment (World Bank 1994). Very soon after the emergence of open unemployment in Poland, certain social groups appeared to be disproportionately affected. They included young people, unskilled workers and residents of small towns and villages. At the end of the 1990s unemployment was still a key cause of poverty, but was no longer on such a high scale. The most affected group by unemployment are again young people (below 25 years of age). In general, young people is the segment most exposed to the risk of unemployment. This is a very common feature for many countries suffering from severe unemployment. In Poland, however, the problem of youth unemployment is now much more intensive because labour supply inflows are very high.

Women were the second group most strongly affected by unemployment, in spite of their higher levels of education. The position of women depends very much on the structure of employment by sector and the contribution of male- or female-dominated industries to employment. So-called "female" sectors in Poland (light industry, pharmaceutical industry, and education) are just beginning to see deep cuts and restructuring.

Table 1.10. Unemployment rates according to differently affected groups by unemployment, in %

Most affected groups	1993 November	1996 November	1997 August	1999 February	2000 1st quarter	2001 1st quarter
Average	14.9	11.5	10.7	12.5	16.7	18.2
Young people (15-24)	31.6	26.2	23.5	28.5	37.9	41.2
Unskilled (basic and lower education) workers	15.0	12.9	12.5	11.7	22.1	22.9
Women	16.5	13.4	13.1	13.5	18.5	19.8
Urban population	16.9	12.0	11.5	12.9	17.1	19.2
Elderly (above 45)	8.5	6.5	6.3	6.3	10.6	11.9

Source: GUS: systematic LFS.

Low employability

According to qualitative research on poverty in Poland, the main features of the exclusion process are: long-term unemployment and passivity towards job seeking and/or inability to work in sectors of the economy where demand is highest. There are several overlapping reasons for low employability: low human capital, living in non-urbanised areas, alcohol abuse or chronic illness and disability. If we look, for instance, only at social assistance recipient groups with an alcohol dependency problem, we can see additional exclusion-bred problems: loneliness and rejection by families due to time in prison or a long-term absence from the family, for example due to job migration (in-country or abroad). The overwhelming majority of those people are men.

Table 1.11. Long-term unemployment: the share of the unemployed over one year in total unemployment, %

Most affected groups	1994 November	1997 August	2000 (st quarter)	2001 (st quarter)
Average	22.7	39.2	35.1	40.2
Elderly (more than 45)		41.4		47.9
Women		43.7	38.0	44.0

Source: LFS.

Rural poverty

The worsening of the situation in agriculture is the second major cause of poverty in Poland. Income from agriculture largely collapsed due to the withdrawal of input subsidies and more liberal import policies. The explicit government policy of ensuring rural-urban income parity was ended. At the end of the 1990s disposable real income in the farmers' households declined substantially (by about 30% in 1998-2000), whereas in other household groups the figure increased several percent.

As a consequence, people who live in the countryside and have some link with agriculture (belonging to farmer- or mixed worker-farmer-households) are poor more frequently than the average. Almost 40% of peasants in small farms (under 10 ha) are poor (GUS 2000). But one should also note that the range of income among farmers in Poland is larger than among non-farming employees (Deniszczuk 1998).

Young families poorer

Studies on poverty in Poland carried out in the 1990s showed fundamental changes in income redistribution policy across generations. These changes were advantageous for older generations and disadvantageous for younger generations and children. The syntheses of

results using various poverty lines and definitions (absolute, relative, and subjective) confirmed that households with the highest poverty risk are large families (Golinowska 1996). With each line applied, the poverty rate for families with three or more children is the highest, much higher than for an average family, single-parent families, or pensioners. Poverty rates for families with four or more children are dramatic. In addition to their worse income situation, the health of 20% of persons in these families is endangered, and as much as 85% are below the social minimum.

Table 1.12. Poverty rate among households by different socio-economic groups in 1999-2000

Type of households	Subsistence minimum		Relative poverty lines		Subjective poverty lines		Income threshold in the social assistance		Social minimum	
Year	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000
Total	6.9	8.1	16.5	17.1	34.8	34.4	14.4	13.6	52.2	53.8
Employees	4.7	5.8	12.4	13.6	25.3	22.6	10.7	10.4	51.2	52.5
Farmers	13.3	12.9	29.9	26.2	44.0	43.6	26.8	21.3	68.9	68.5
Employees – Farmers	9.2	8.6	24.7	20.9	28.9	25.6	21.3	16.2	64.8	62.9
Self-employed	3.2	3.7	8.2	8.5	16.4	17.1	6.4	6.5	36.6	38.2
Old age and disability pensioners	6.1	8.0	14.3	16.6	-	-	12.5	13.3	44.0	48.3
- old-age ensioners	3.6	5.1	9.6	10.8	34.9	38.2	8.6	8.4	35.2	39.0
Maintained from other non-earned sources	28.4	30.4	46.9	45.5	78.6	72.5	43.8	30.4	78.4	80.3

Source: GUS 2000.

1.4. Concluding Remarks

Poverty in Poland during the 1990s more closely resembled poverty in European countries than in other regions of the world, such as Asia or South America. Its main trait is the higher probability of falling into poverty among young people and families with numerous children. The older generation, taking advantage of an advanced social insurance system and democratic political structure, can in the main effectively protect itself from poverty.

Polish poverty remains related to the structural backwardness of the economy – relatively high in agriculture, and deterioration in industry, as well as to the high regional disparities. The restructuring process of the economy intensified in the second half of the 1990s and brought many difficulties in living conditions, especially for those groups most strongly affected by the changes. At the same time, a large number of threats potentially affecting young people emerged on the labour market. This high labour supply at the end of the 1990s and beginning of the 2000s is not being met sufficient by available jobs. This in turn makes young people susceptible to poverty. However, the rate of poverty among children depends to a large extent on social policy measures. Social policy in Poland today does not give priority to children's well-being. Perhaps poverty research findings will contribute to changes in social policy goals.

Poverty in Poland is characterised by four different main features. One is connected with the lack of jobs and is the most important challenge facing economic and social policy. The second results from the lack of effectively operating social policy towards families with children. This policy defect concerns mainly benefits for families and the social functions of the educational system. The third is linked to agriculture and life in rural areas. On the one hand this is a problem of on-going economic neglect, on the other hand, little possibilities and low adjustment abilities of the rural population to dealing with competition in the open market economy. The fourth is formed by marginalised individuals and groups. This requires plenty of work to bring them back into work and social life.

A strategy that would be able to deal with such a diverse range of poverty elements itself requires a diversified range of activities across different fields. Such a strategy should not be limited to a narrow social program. Also demands a wide-ranging economic anti-poverty programme.

Table 1.13. Poverty among vulnerable groups of population in 2000, % of persons below the poverty line

Specification	Relative poverty line	Official poverty line – social assistance threshold
Average for the population	17.1	13.6
Living from unemployment and social assistance benefits	49.1	43.1
Households with at least one unemployed person	36.0	-
Households whose head has low education – primary and incomplete primary	28.9	23.9
Rural population	25.8	20.6
Couple with		
3 children	24.5	19.3
4 and more children	47.9	40.8
One parent family	19.2	15.3

Source: GUS 2001 according to HBS.

Part 2

Labour Supply Effects of Social Security Transfers

*Katarzyna Piętka**

Introduction

The effective allocation of social transfers is one of the main dilemmas facing social policy. In Poland, where cash transfers as a share in GDP are particularly high, concern in this area is justifiably high. The objective of social transfers is to replace or supplement earned income. Therefore, modern social policy has to be considered in connection with the labour market policy. One of the indications of the effectiveness of social transfers, other than retirement pensions, is their labour supply effect: Are social transfers well targeted or do they provide excessive financial comfort and therefore create disincentives to acquire work? The consequence of this trap can be long-term unemployment or/and falling into poverty if the level of transfers is not high enough. On the other hand, from the public expenditure viewpoint it creates a long-term financial burden.

This paper is an empirical study on the labour supply effects of social transfers in Poland. Most international empirical works related to the labour supply focus on its links with the tax system. The most prominent programmes aimed at reforming the welfare system in the US (*Earned Income Tax Credit*) and UK (*Working Families Tax Credit*) were related to these studies but also inspired new research. However, the analyses of the relationship between social transfers and the employability of recipients has been, to a certain extent, under-researched. In Poland, social transfers and taxes were usually analysed as a subject of redistribution, and not in the context of the labour market. Several studies (Topińska 1991, Nage, Neneman 1995, Kramer, Neneman 1995, Górecki, Wiśniewski 1998, Topińska, Styczeń 1999, Aksman 2001) were inspired by questions about the redistributive character of transfers and taxes. They generally have shown that there is a classical model: taxes are paid by more affluent

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households, while transfers assigned to poorer families. The end of the 1990s demonstrated higher imbalances in public finances and on the labour market. This led to a new set of questions about the role of transfers and taxes in the context of labour supply and demand. This study focuses on one of these issues – labour supply effects of social transfers. But it also addresses the question concerning the methods of addressing poverty. Are transfers an effective measure to help the poor?

The study is based on the Labour Force Survey (LFS) individual data. The methodology applied in the research was obliged to use a static econometric model since the scope of the LFS and the time-frame of the panel data were insufficient for a dynamic approach. The dynamic aspect of the research was introduced by applying the model at two different points in time: the 4th quarter of 1997 and 2000. Although the static approach does not enable us to draw concrete conclusions as to the causality at play in the relationship between transfers and labour supply it does show a clear relationship between them. Seeking work is positively correlated with receiving transfers. This outcome of the econometric model had already taken into account all the other (11) available individual characteristics that could have had a separate effect on the labour supply. Moreover, an additional presented analysis indicates that the level of transfers is relatively low and may in fact push those transferees who do not supplement benefits with earned income into poverty.

Since the outcome of the research cannot provide clear answers to questions related to the effectiveness of social transfers in Poland, any policy recommendations that stem from them have had to be equally circumspect. Various policy ideas are presented in the *Concluding Remarks*.

2.1. Background

2.1.1. Review of Social Policy in Poland During the Transition

The implementation of the Balcerowicz Plan in 1990 put Poland on a two-pronged transition course: introducing a market economy, while at the same time tackling problems thrown up specifically by the transition itself. As in many other socio-economic spheres, social policy had to address the problems found in all market economies, such as unemployment, poverty and income disparity, replacement of the traditional family model of male 'bread winner' with a larger role played by women in the labour market, and the co-existence of public and private expenditures to achieve social goals. Additionally, the transition process from centrally planned to market economy, which implied social changes, provided separate challenges for policy.

As Golinowska (1996, 2000) has argued, social policy over the last decade has passed through various stages. In the years 1990-1991 the central effort went into replacing price and wages controls, and replacing the existing policy of full employment with a rational social policy devoid of economic parameters. This required liberalisation of prices and wages[1], and the building of institutions and mechanisms in the labour market and in the area of social assistance. A substantial shift from an economic-based social policy to an income-redistribution policy produced some unwanted serious results, such as the absorption of many unemployed into the old-age and disability pension system.

The next two years, 1992-1993, were devoted to correcting earlier over-generous social expenditure decisions. These were mainly in the area of lowering the average level of social transfers, including unemployment and family benefits, as well as price indexation of pensions. Additionally, the eligibility criteria for some of the benefits were sharpened.

The years 1994-1995 brought another shift in social policy. High economic growth and improvement in the public finances were conducive to higher social expenditures. Separate programs were established to develop social assistance. However, besides rises in the level of benefits and pensions and new targeted measures (including family benefits), various programs aimed at increasing activity of beneficiaries on the labour market were undertaken.

The period 1996-1998 was devoted to preparation of systemic changes. A partial reform of the disability system in 1997 redefined 'inability' in 'a biological sense' as 'the remaining capacity to work' and strengthened eligibility controls. Besides this, certain restrictions on the transfers/wage ratio were imposed by replacing the wage indexation of social transfers with mixed (price and wage) indexation. This was an important change also from the fiscal policy viewpoint.

In 1999, four big reforms in the social policy sphere were launched. (1) Old-age pension reform introduced a new obligatory pillar with pension funds in addition to the diminished pay-as-you-go system. In parallel, pensions within PAYG were linked tightly via the formula with contributions accumulated throughout a whole working carrier (Notional Defined Capital). The NDC mechanism is supposed to make the system self-sufficient and stable. This would mean that the pension system is devoid of any distribution mechanisms and practically excluded from the area of public policy and politics. (2) Health reform aimed at introducing so called regulated market with self-governance health institutions under public financing. Health expenditures were always very low in Poland. The reform was expected to push for efficiency of health services providers and better access to health care. The first experiences are showing however, that the institutions hardly increased their efficiency and, instead, high transaction costs and growing liberalisation on that market limited resources for the pure health services. There are signs that it eventually limits the access of population to basic health care and increases final costs of the treatment or creates additional demand for resources in

[1] A tax on excessive wage increases (so called "popiwek") was imposed on the wage bill of companies (and not individual remuneration) and was introduced only temporarily as an anti-inflationary measure.

other spheres of social policy. (3) Education reform aimed at adjusting the education system to the requirements of the modern labour market. (4) Decentralisation, including shifting some social policy areas to local administrations in order to increase their efficiency.

Pension reform assumed also a gradual cancellation of early retirement. It should bear fruit in several years, although its immediate outcome was to increase the number of pre-retirement pensions (introduced in 1997). This is a way of protecting older workers against unemployment at the age just prior to retirement.

Family policy during transition period has rarely enjoyed a clear consensus as to aims or actions. Ultimately, protection of the family against poverty was and remains its only plank, but this is very vague and negligible (Golinowska 2000, p.112).

2.1.2. Social Expenditures

Social expenditures are part of budget expenditures, though are not clearly defined either in the budget law or in the statistics. The United Nations Organisation proposes criteria which allow a separation of social expenditures from overall budget spending:

- expenditures with the purpose of income distribution,
- public expenditures targeted at households,
- public expenditures earmarked for closely defined social goals, regardless of the source and form of financing (Golinowska 1998).

Following these three criteria, Golinowska and Hagemejer estimated the level of social expenditures in Poland in 1990-2001 (Table 2.1).

Total social expenditures over the period of transition grew to a high level of over 30% of GDP, and only in 2000 lowered to 27%. Their dynamics reflect changes in social policies. In particular, the rapid growth in cash transfers during 1990-1992 illustrates the favourable indexation (despite high inflation) and liberal access to transfers during the first years of the transition. Their share in GDP doubled during the first three years of the transition (from 11% in 1990 to 20% in 1992). Some corrections in the system over the subsequent few years caused a slowdown in their real growth to 0.5-2.5% in 1993-1994. Starting in 1995, in parallel with high economic growth and a return to generous social policies, cash social expenditures kept growing in real terms until 1997. The bulk of this growth resulted from old-age and disability pensions and protection for elderly workers against unemployment. Since then the transfers have tended do diminish in general at the expense of payments other than pensions and unemployment benefits. 1998 brought significantly slower increases in cash transfers due to rigorous increases in all kinds of transfers and, additionally, lowering unemployment. The transfers decreased in real terms over the next 2 years due to savings on social assistance and

Table 2.1. Social transfers, including cash transfers to households

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
social expenditures												
bn złoty	14.6	24.6	37.6	48.6	70.2	97.9	129.2	156.0	171.7	n.a.	184.8	n.a.
% GDP	24.6	29.9	32.9	32.6	34.1	31.8	33.3	33.0	31.0	n.a.	27.0	n.a.
real growth, %	-	-0.8	6.9	-4.6	9.3	9.2	10.0	5.1	-1.6	n.a.	n.a.	n.a.
cash transfers												
bn złoty	6.4	14.0	22.8	31.0	42.0	61.2	76.3	90.6	101.8	108.8	116.9	131.4
% GDP	10.8	17.0	20.0	20.8	20.4	19.9	19.7	19.2	18.4	17.7	17.1	18.2
% of social expenditures	43.6	56.9	61.5	63.8	59.8	62.5	59.1	58.1	59.3	n.a.	63.3	n.a.
real growth, %	-	28.4	13.9	0.5	2.5	14.0	4.0	3.3	0.5	-0.4	-2.4	6.5

Source: S. Golinowska, K. Hagemejer 1999, Golinowska 2002, own compilation based on MPiPS 2002.

other forms of cash support (e.g. subsidies for house utilities). The real increase in cash transfers in 2001 resulted from the delayed indexation of pensions that had been due in 2000. In 2001, they reached the level of 18.2% of GDP.

Poland's high level of social expenditures puts it among countries with the highest income redistribution (Golinowska 1998). However, these countries (like Denmark, the Netherlands, Belgium, Sweden and Germany) are at present at a much higher stage of economic development than Poland.

Cash transfers include all transfers directed to households (old-age, disability and family pensions, family benefits, unemployment benefits, social assistance benefits and scholarships, as well as some other discretionary payments). Old-age, disability and family pensions have the largest share in cash transfers – 76% in 1998 (Table 2.2). Second place belongs to family benefits, with a 5.8% share. Other transfers are very small, with social assistance at a very low level of just above 2% of all cash expenditures. This structure shows that high social expenditures in Poland in the part of cash transfer are composed mainly of pensions, and not social transfers based on poverty or other criteria of social non-insurance policy.

2.1.3. Individual Transfers to Households

The main kinds of social transfers to households include:

Old age pensions – currently paid in the PAYG system. The pension is provided to all insured persons who fulfil age, or age and working record, requirements. The legal retirement age is 60/65, although until 1999 the early retirement age was 55/60. In the employee insurance system (ZUS), disability pensions have been automatically changed into retirement pensions at the legal retirement age. In the farming system (KRUS) disability

Table 2.2. Structure of cash transfers in 1990, 1995, 2000, and 2001, %

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Cash transfers, including	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
old-age, disability and family pensions	76.5	75.0	75.0	77.2	78.8	80.5	81.2	75.8	76.3	79.5	79.2	79.3
family benefits	15.5	14.7	12.5	10.3	8.6	6.2	6.0	5.7	5.8	6.9	7.5	7.3
unemployment benefits	3.1	7.8	8.3	8.7	8.8	8.8	8.4	5.7	3.0	3.6	4.9	5.5
social assistance benefits	1.3	1.4	1.5	2.5	2.0	2.1	2.5	2.3	2.2	2.3	2.2	2.0
scholarships	1.3	0.10	0.06	0.05	0.05	0.05	0.05	0.07	0.09	0.09	0.12	n.a.

Source: S. Golinowska, K. Hagemejer 1999, Golinowska 2002, own compilation based on MPiPS 2002.

pensions are not transferred into old-age pensions. In 2000, the average level of an employee retirement pension was 60% of the average wage in the economy (ZUS 2001).

Disability pensions – until 1997 assigned to people based on their state of health; since late 1997 – based on their remaining capacity to work. There are 3 groups of invalidity: III-group disability represents partial impairment (or since 1997 – partial inability to work); II-group disability – complete impairment (since 1997 – inability to work); I-group disability – complete physical (work) inability and independent existence incapacity. I- and II-group disability pensions are assigned permanently. The III-group pension can be withdrawn if, based on the periodical medical tests, an improvement in physical (work) capacity can be assessed. The average duration of the III-group entitlement is around close to 5 years (ZUS 2001); for all the groups together – 13.5 years. In 2000, 50% of disability pensions in the employee system were III-group pensions, 37% – II-group pensions, and 13% – I-group pensions. In 2000, the average level of a disability pension was 44% of the average wage in the economy (ZUS 2001).

Family pensions – pensions from the employee insurance system inherited by family members of the insured family provider (to orphaned children or widowed spouses). The period of entitlement for children is until adulthood or the end of their studies; for spouses it is the moment of retirement. In 2000, the average family pension was 52% of the average wage in the economy (ZUS 2001).

Unemployment benefits – for those insured in the Labour Fund and having an employment record. The duration of the entitlement period is regionally differentiated between 6, 12 and 18 months. The basic level of benefit is set at 36% of the average wage, and the effective rate differs between 80-120% of the basic level depending on the working record.

Table 2.3. Number of pensioners and unemployment beneficiaries in 1990, 1995 and 2000, in thousands

	1990	1995	2000
Retirement pensioners (ZUS+KRUS) *	3 220	4 488	4 630
Disability pensioners (ZUS+KRUS) *	2 628	3 391	3 472
Family pensioners (ZUS+KRUS) *	1 029	1 179	1 310
Unemployment beneficiaries **	892	1 548	549

Notes: * Annual average;
** At the end of the year, the unemployed with benefit entitlement.
Source: GUS (1997 and 2001).

Other transfers – these include all kinds of benefits and allowances with both entitlement based on the insurance and not:

– family benefits,
– nursing disabled benefits,
– child-care benefits,
– maternity benefits,
– social assistance benefits,
– sick, rehabilitation, accident, birth, and funeral allowances.

Mixing incomes from different pensions, benefits or work is limited by the income criteria. Pensions are subject to gradual reduction in case of earnings from work exceeding 70% of the average wage, until complete suspension when the earnings' level reaches 130%. Unemployment benefits naturally cannot be combined with earned income. Most of the benefits are means-tested.

The huge burden of social cash expenditures results mainly from the growing number of pensioners. During the decade 1990-2000 their number increased by 37%, with retirement pensioners growing most rapidly (by 44%). The number of unemployment beneficiaries has been decreasing in recent years since more and more unemployed are losing their entitlements to benefit.

2.1.4. Unemployment in Poland

Since the beginning of the Polish transition employment in public sector enterprises has been undergoing continuous reductions. By the end of 2000 it had been lower by more than half compared to the end of 1990. Wowever, this process encompasses also the effects of privatisation. Growth in employment in the private sector allowed an absorption of a large portion of this laid off labour force (Table 2.4). Not all dismissed employees became unemployed. As discussed above, the pension system played an important role in absorbing specifically older laid-off workers.

Table 2.4. Structure of the employment in Poland, end-year, 1990-2000, in millions

	1990	1995	2000	Balance 1990-2000
Public sector	8.6	5.6	4.0	-4.6
Private sector	7.9	9.5	11.2	3.3
TOTAL	16.5	15.1	15.2	-1.3

Source: GUS (1997 and 2001).

Registered unemployment grew, however, by more than the balance of total employment despite the softening of labour market tensions through the expansion of the pension system (Table 2.5). This was caused not only by the growing inflow of graduates throughout the 1990s, but also due to the registration of people who had been outside of the labour force – specifically at the beginning of the transition. The health reform in 1999 provided additional incentive for the unemployed to register since the registered unemployed were entitled to health insurance.

Table 2.5. Unemployment in Poland, end-year, 1990-2000, in millions

	1990	1995	2000	Balance 1990-2000
Unemployed persons, in millions	1.1	2.6	2.7	1.6
unemployed entitled to unemployment benefit, % of total	79.2	58.9	20.3	-
Unemployment rate	6.5	14.9	15.1	-
Long-term (over a year) unemployed according to LFS, % of total	39.9*	39.9	41.1	-

Note: * figure for 1992, when LFS was launched.
Source: GUS (1997 and 2001).

According to the LFS, the share of the long-term unemployed was over 41% in the 4th quarter of 2000, although the ratio had been relatively stable since 1992 (when the LFS was launched). Structural unemployment, which is responsible mainly for long-term unemployment, started in early stages of the transition.

2.2. Empirical Study

2.2.1. Goals of the Investigation

The empirical study of social transfers' effect on labour supply is based on LFS (4th quarter 1997 and 4th quarter 2000). The aim of the study is to investigate if transfer entitlements provide disincentives to taking work, in two different points in time. The investigation focused

on people aged 15 and above (that is those covered by the LFS) in the groups that should be considered realistic providers of labour and, at the same time, are desired to be active on the labour market. This meant dropping retirement pensioners and all those above the effective retirement age[2], the I-group disabled[3], as well as all kinds of students.

Secandly, there is a group of people who combine earned income with non-earned income (e.g. wages from part-time jobs with a disability pension), or even two kinds of transfers. These people were also dropped in order to eliminate cases which do not fall univocally into one of the groups. Moreover, those transferees who were in work were not directly within our field of interest since they had not lost their link with the labour market. The issue of supplementing transfers with earnings is a separate topic. The share of these people in the whole population is small.

Thirdly, the survey does not provide information on transfer entitlements prior to getting a job in the case of people in work. Therefore, we dropped people who were currently in work, as it was impossible to draw conclusions on the impact of obtaining transfers in the past based on their present vocational activity.

Finally, we decided on a group of people who do not work at all, are of working age and who live off cash transfers or support from others – this is the data base. Taking into account the objective of the research, this population can be divided most effectively into 6 groups of people:

1) Those getting disability pensions,
2) Those getting family pensions (except I-group distabled),
3) Registered unemployed receiving unemployment benefits,
4) Those getting other kinds of non-earned income (other than pensions and unemployment benefits),
5) Registered unemployed maintained by others[4],
6) Those maintained by others but not registered as unemployed (except all kinds of students).

The first three groups (recipients of disability and family pensions, and unemployment benefits) are transferees; the fourth group (getting other non-earned incomes) is not a pure transferee group since it may include also people with income from property or gifts and negative savings. Although the sum of such incomes in the National Accounts constitutes a

[2] This is justified by the fact that in the 4th quarter of 2000, among the LFS population of women (men) at the effective retirement age and above (55+/ 58+) most women (77%) and men (84%) were on retirement, or I/II group or farming disability pension. In 2000, the official effective retirement age in Poland (in the employee system) was 55.9 for women and 58.9 for men.

[3] From the definition I-group invalids are not able to work or even to exist alone. Indeed, only 3% among I-group disabled had any work in the 4th quarter of 2000 survey. Therefore, by dropping this group of beneficiaries we made a negligible mistake of not including potential labour suppliers.

[4] 'Other' represent here another member of a household getting his/her income from working in the non-agriculture or agriculture sectors, or from non-earned source.

very small share in the gross income (below 4% in 2000), we should keep the structure of these incomes in mind while interpreting the results. The other two groups are the controlling groups with people who do not get any income and are financially supported (maintained) by other household members. We separated the registered unemployed from the total number of those maintained in order to test the difference in the attitude to work between registered unemployed without benefit and registered unemployed entitled to benefit. We also expect that among the maintained, those who are registered unemployed have different objectives in their attitude to work than those who are not registered. However, the potential advantages of being registered (like health insurance for all those registered regardless of benefit entitlement) may somehow complicate this picture.

A direct investigation of how receiving transfers impacts finding a job could only be made based on the panel data. The question would then be: which group of people is out of work longest or how getting/losing entitlement to social transfers changes a person's approach to looking for and taking work? The LFS scope and methodology hinder the panel analysis. Firstly, questions in the survey do not refer to the person's past income and do not combine this with data on his or her previous employment. This means that we do not know how long the transferee has been receiving the transfer and what his/her simultaneous working activity was. Secondly, the duration of the panel is too short. The same person is surveyed 4 times over 1.5 years. With some people getting unemployment benefit over a period of 1.5 years we are not able to observe sufficient numbers of people or to observe them over a long enough period after the benefit expired.

Therefore, the analysis has to refer to the less direct relationship between social transfers and their impact on acquiring work. The goal of the investigation will be to check how getting a transfer is related to attitudes to taking a job.

In the LFS, we can identify three main questions which refer to the motivation to acquire a job:

1) Are you seeking a job?
2) If you had ever worked in the past, how long have you been out of work?
3) If you claim you are seeking a job, what efforts have you made to find it: active (searching via private offices, answering advertisements, distributing advertisements, going directly to enterprises, trying to set up own business, other) or non-active (no efforts, searching via friends or family, or registering at the public office, which we consider to be a very minor effort)?

The answers to these questions by our 4 groups of transferees, as opposed to 2 groups of those who are maintained, was the subject of analysis for 2 different points in time: 4th quarter of 2000 in comparison with the 4th quarter of 1997 (see *Profile analyses of the subject of investigation* in Section 2.2.2). The 4th quarter LFS was chosen because in 1994-1998 it was by

far the least subject to seasonal variations than other quarters. 2000 was the last available year at the time of the empirical study. 1997 was chosen for the reference time as a contrasting period to the end of 2000: in 1997 the Polish economy experienced its fastest growth during the transition (6.8%), unemployment stood at the relatively low level of 10.3% and the expansive social policy in 1996 should have manifested itself in wide access to transfers in 1997. The last quarter of 2000 saw a substantial slowdown in economic growth (2.3% yoy), higher unemployment (15.1%) and more restrictive policies towards social transfers.

2.2.2. Statistical Analyses of Work-Related Characteristics Among Transferees and Others

Statistical analyses of the original LFS population

Before we concentrate on the relationship between social transfers and attitudes to work within our sub-population, let us screen the original LFS population (before dropping certain groups) according to the source of income. Knowledge about the relative weight of each survey participant allows us to make the transition from the LFS population to the wider Polish population. Numbers for the whole population are more interesting than numbers for the LFS population because they can be related to other labour markets and social statistics.

Based on the 4th quarter 2000 LFS and GUS weights, we achieved a 30.6-million population at or over the age of 15 (Table 2.6). Of all kinds of social transfers (11 million entitlements all together), the biggest is the number of retirement pensions (5.4 million), followed by the number of disability pensions (3.1 million); the smallest is the total of unemployment benefits (0.5 million). These figures based on the survey correspond to the numbers from the general statistics of pensioners (see Table 2.3). The number of people who get support from others is 7.0 million, including 1.7 million maintained by recipients of some form of social transfer or other non-earned income. The working population accounts for 14.9 million people, with 80% involved in the non-agriculture sector.[5]

The possibility of combining social transfers with earned income from work (both in non-agriculture as well as agriculture) is exercised moderately. Among transferees, the biggest share of working people is in the group of disabled (15%), followed by the group of family pensioners and recipients of other non-earned incomes (all together 12%); slightly smaller in the group of retirement pensioners (9%), and the smallest share among the unemployed (3%).

Social transfers overlap between the five groups of transferees (D, F, U, O, P) to a very small extent. For example, only 1% of family pensioners also receives retirement pensions; in other groups only 1%-2% of transferees combine their transfers with other non-earned incomes, which in some cases did not need to be social transfers.

[5] Note: the definition of a working person is based here on the fact of having work in general as opposed to the LFS definition where the working person has to actually work in the week of the survey.

Table 2.6. Population, 15+, according to main sources of income, at the total population level *, in thousands of people, 4th quarter 2000.

Group of people according to income source **	D	F	U	O	Mne	Mna	Ma	Wna	Wa	P	**Total**
D – getting disability pension	**2636**	0	0	16	4	7	0	250	219	12	**3143**
F – getting family pension	0	**678**	0	10	3	30	2	54	47	4	**828**
U – getting unemployment benefit	0	0	**402**	10	4	26	2	3	11	0	**459**
O – getting other non-earned incomes	16	10	10	**912**	36	62	7	92	30	10	**1185**
Mne – maintained by recipients of non-earned income	4	3	4	36	**1544**	61	13	15	15	0	**1694**
Mna – maintained by workers in non-agriculture	7	30	26	62	61	**4368**	26	53	32	4	**4669**
Ma – maintained by workers in agriculture	0	2	2	7	13	26	**534**	10	19	0	**613**
Wna – working in non-agriculture	250	54	3	92	15	53	10	**10586**	491	256	**11809**
Wa – working in agriculture	219	47	11	30	15	32	19	491	**1954**	229	**3047**
P – getting retirement pension	12	4	0	10	0	4	0	256	229	**4904**	**5418**
TOTAL number of income sources	**3143**	**828**	**459**	**1185**	**1694**	**4669**	**613**	**11809**	**3047**	**5418**	**-**
TOTAL number of people	-	-	-	-	-	-	-	-	-	-	**30640**
With one source of income	2636	678	402	912	1544	4368	534	10586	1954	4904	28518
With multiply source of income	-	-	-	-	-	-	-	-	-	-	2122

Notes: * Weights of individuals in the LSF sample allow transforming the sample into the whole population; for the sake of simplicity, in case of triple sources of one person's incomes he/she is considered only twice; the number of such persons is negligible as it accounts only for 23 people at the population level;

** The table can be read from left to right or from top to bottom; each cell gives the number of recipients. Combining incomes from two different sources is not excluded in the table; therefore some of the individuals are counted twice and that is why the total number of income sources is higher than total number of people. People with a single source of income are represented on the diagonal.

Source: Own calculations based on LFS.

Profile analyses of the subject of investigation

The total LFS 15+ population was reduced to individuals who are realistic providers of labour and, at the same time, willing to be active on the labour market (intermediary sub-population). This meant dropping retirement pensioners and all the other people above the effective retirement age, the I-group disabled, as well as all kinds of students. Before we drop

people who have worked and are therefore not of interest for us here, let us look at the structure of the intermediary sub-population (Table 2.7).

Table 2.7. Intermediary sub-population's recipients of different kinds of income, at the total population level, in thousands, 4th quarter 2000 *

Group of people according to the income source	D	F	U	O	Mne	Mna	Ma	Wna	Wa	**Total**
D – getting disability pension	**1197**	0	0	12	0	4	0	191	115	**1520**
F – getting family pension	0	**131**	0	8	2	5	0	43	16	**206**
U – getting unemployment benefit	0	0	**397**	9	4	26	2	3	11	**453**
O – getting other non-earned incomes	12	8	9	**801**	23	40	5	84	27	**1010**
Mne – maintained by recipients of non-earned income	0	2	4	23	**860**	19	2	9	12	**931**
Mna – maintained by workers in non-agriculture	4	5	26	40	19	**1947**	6	32	27	**2107**
Ma – maintained by work in agriculture	0	0	2	5	2	6	**180**	6	10	**211**
Wna – working in non-agriculture	191	43	3	84	9	32	6	**10204**	481	**11053**
Wa – working in agriculture	115	16	11	27	12	27	10	481	**1864**	**2564**
TOTAL number of income sources	1520	206	453	1010	931	2107	211	11053	2564	-
TOTAL number of people	-	-	-	-	-	-	-	-	-	**18776**
With one source of income	1197	131	397	801	860	1947	180	10204	1864	17580
With multiply source of income	-	-	-	-	-	-	-	-	-	1197

Note: * All the comments for Table 2.6 also valid here.
Source: Own calculations based on LFS.

The total number of potential providers of labour and, at the same time, those willing to work is 18.8 million. The number of jobs in the non-agriculture and agriculture sectors (from Table 2.6) represents 79% of this figure. So, if we assumed that all people were retired at the effective retirement age, all retirement pensioners and I-group disabled were forbidden to work, and all

students were not interested in taking jobs, the maximum unemployment rate (*ceteris paribus*) would be 21%. At the end of 2000, the actual figure was somewhere below this level.

Within the group of potential and desired labour suppliers there are 3.2 million people who receive transfers and other non-earned income (17% of the total); 2.7 million of these are people who do not work at all (14% of the total). These ratios indicate how working people are burdened by adults who receive social transfers. If one adds to this people who are supported directly within the household (3.2 millions of the maintained) then the share of non-working population is 34%. Despite that some of the maintained may be performing certain work at home (e.g. housewives) the burden of non-working people in the group of potential suppliers is quite high.

After excluding working groups and people with multiple incomes we obtain the final sub-population. We must also reorganise the group of unemployed who are maintained by others. We should also investigate separately those unemployed who registered at labour offices (though without entitlement to benefit) and those who did not register. We believe that the non-registered have quite different objectives in job seeking and should not be analysed together. Table 2.8 presents the final sub-population broken down into 6 groups of non-working population.

Table 2.8. Final sub-population's recipients according to their main source of income, 4th quarter 2000

Group of people according to their main income source	LFS sample level		Population level		
		structure, % of total	thousand of people	structure, % of total	structure, % of sub-total
D – getting disability pension	1 867	22.3	1 176	21.7	47.3
F – getting family pension	199	2.4	130	2.4	5.2
O – getting other non-earned incomes	1 217	14.6	786	14.5	31.6
RU – registered unemployed getting benefit	642	7.7	396	7.3	15.9
Transferee sub-total	3 925	47.0	2 487	45.8	100.0
RM – registered unemployed maintained by others	2 484	29.7	1 593	29.3	54.2
NRM – non-registered unemployed maintained by others	1 948	23.3	1 348	24.8	45.8
Maintained sub-total	4 432	53.0	2 940	54.2	100.0
TOTAL NUMBER OF PEOPLE	8 357	100.0	5 428	100.0	-

Source: Own calculations based on LFS.

The final sub-population consists of almost 8,400 people at the LFS sample level (which is roughly 18% of the overall 4th quarter 2000 sample), or 5.4 million people at the population level. The group of transferees is almost equal to the group of people maintained

by others. This is a positive characteristic since these two groups will be mainly opposed to each other.

Almost half of all the transferees receive disability pensions (47%); the smallest is the group of family pensioners (5% of all transferees). Those who are maintained are almost equally spread between registered and non-registered unemployed. Registered unemployed with benefit entitlement are a much smaller group than registered without incomes. This is a result of the substantial scale of structural unemployment, where only 20% of the registered unemployed enjoy benefit entitlement.

Work-related characteristics of the final sub-population

Reasons of quitting/ending the job – for those who have worked previously

19% of the final sub-population have never worked. These are usually young people (68% in the 15-25 age group), which corresponds with growing unemployment among young graduates in Poland. If we look at maintained people versus transferees, a relatively larger number of the maintained has never worked. This corresponds with the average age of the maintained, which is 10 years lower than the age of the transferees (33 and 43 years old respectively).

Among the population that has ever worked, the highest percentage (32%) lost their jobs due to abolition of their work place. Since the beginning of the Polish transition public sector employment has fallen systematically; in the late 1990s this fall process intensified (by 7-8% annually[6]). The second most popular reason for quitting a job is retirement or other pension entitlement (27% of these who have ever worked). 18% of respondents cited family reasons for leaving their job, though there are very strong gender differences here – these are mostly women who interrupt their working lives to bring up their children.

Poles seem to be relatively passive employees – only 3.8% (out of these who have worked) left jobs due to unsatisfactory conditions at work (including financial conditions). Most of them lost their jobs due to decisions made by employers (48%).

Within the groups of transferees and maintained people there are some obvious correlations, for example quitting a job because of receiving a pension – in the case of disability pensioners – or quitting a job for family reasons (mostly to bring up children) among female 'other' transferees or maintained by others.

Period out of work

On average (measured by both the arithmetic mean and the median), among those who have ever worked transferees remain unemployed slightly longer than maintained people (64 months versus 61 months, according to the mean, or 46 and 37 months, respectively, according to the median). The type of a transfer is more important – the disabled stopped

[6] GUS 2001.

working on average 90 months ago (7.5 years) and unemployment beneficiaries – 14 months ago. Such discrepancies must result, to a large extent, from differences between the systems in which transfers are granted. Disability pensions used to be assigned permanently, and if assigned temporarily then were based on individual health conditions; in contrast to this, the period of unemployment benefit assignment is restricted and quite short (up to 6 months in most cases, and up to 18 months in the case of structural unemployment). A long period out of work in the case of disablement may reflect the generous character of this system, but also individual health conditions. However, if we exclude II-group disabled and disabled farmers and leave only III-group of disabled, we do not get a far shorter period of being out of work (84 months on average).

Seeking work

50% of the sub-population are not seeking work (are part of the non-active labour force). Among transferees the ratio is even higher (66%), whilst for the maintained it is two times lower (33%). Transferees appear relatively uninterested in getting work. Looking for a job is again very highly differentiated between kinds of transfers. The least active are disabled (91% do not seek work), while unemployment beneficiaries are the most active (only 16% do not seek work). Among the maintained, the registered unemployed who do not seek work are in a clear minority (13%, that is less than in the case of the unemployed receiving unemployment benefits). As expected, the rest of the maintained represent a far higher percentage of non-job-seekers (40%).

It is very interesting to juxtapose the above information with the working activities of the transferees. Among the intermediary sub-population (realistic providers of labour and, at the same time, desired to be active in the labour market) the share of the transferees or the maintained which are active in the labour market is moderate (Table 2.9). In 2000, transferees represent on average 42% activity: 15% through working and 26% through seeking a job. 58% of transferees are passive on the labour market. This ratio can be seen as another indicator of how transfers deter people from entering the labour market.

The least active are disability pensioners (close to 27% of the disabled). These, who are active, mostly work rather than seek a job. A part of the disabled may not be active due to health problems (despite this we suspect that a large number of the II-group disabled are capable of working as their pensions were assigned in the generous system in the mid-1990s). Also, disability pensions provide the strongest financial stability of all transfers and this may well be another reason why some of the disabled are passive on the labour market. More active are other transferees (41% for family pensioners and 48% for 'other' beneficiaries). The registered unemployed are the most active of all, although those who are maintained by others represent a higher rate of activity than these receiving a benefit (83% and 77% respectively). This could suggest that the unemployed without benefits have

Table 2.9. Transferees or the maintained that are active on the labour market, 4th quarter 1997 and 2000

Group of people according to their main income source	Share of people active in the labour market in % of total in the given group		by working		by seeking work	
	1997	2000	1997	2000	1997	2000
D – getting disability pension	33.6	26.9	26.4	20.1	7.2	6.8
F – getting family pension	28.2	41.4	18.8	28.6	9.4	12.8
O – getting other non-earned incomes	30.0	48.1	9.7	11.0	20.3	37.1
RU – registered unemployed getting benefit	90.0	76.9	7.0	3.1	83.0	73.9
Transferee sub-total	40.1	41.7	17.9	15.4	22.3	26.3
RM – registered unemployed maintained by others	79.1	83.1	2.2	1.2	76.9	81.8
NRM – non-registered unemployed maintained by others	36.6	40.8	8.4	4.9	28.3	36.0
Maintained sub-total	53.1	63.2	6.0	3.0	47.1	60.3

Source: Own calculations based on LFS.

greater motivation to be active on the labour market. All the registered unemployed are mostly active through seeking work, which indicates that unofficial jobs play a marginal role. There is a clear difference between the registered and non-registered unemployed who are maintained by others. The latter are more than two times less active on the labour market. These people appear simply to have decided not to work. This may include women who decided to continue bringing up their children after maternity benefits expired, or farming family members which help in the farm while claiming to be non-working.

For pensioners (disability or family) labour market activity is presented much more via working than is the case with benefit recipients (from the group of 'others' and unemployed with benefits). This tendency may result solely from the fact that pensioners are much less restricted from linking up pensions with earned incomes, which is why we observe much smaller percentage of beneficiaries working. One could also try to explain this with the complementary character of pensioners' work on top of pensions – they may tend to have much smaller work requirements and so more easily find work.

When one compares labour market participation in 1997 and in 2000 one can see it is higher in 2000, in particular in the case of maintained people and only insignificantly in the case of transferees. The worsening of the economic situation did not really raise the activity of transferees but rather of the maintained. We cannot, however, claim that the transfers provided transferees with more stability than other household members did towards those they maintained. The latter ones may also be more active on the labour market for different reasons – e.g. younger, boom generations who have just started to

enter the labour market. What changed over the analysed three year period was the structure. Disabled worked less in 2000 than in 1997, and therefore their activity dropped. The registered unemployed with benefit entitlement also lowered their labour activity, by working but most of all by work seeking. It is not so clear why the unemployed were seeking work less in 2000. One explanation could be that among the unemployed with benefit the share of the long-term unemployed (who qualified for the benefit for the subsequent time) increased. And the longer the person is unemployed – though receives some funds – the less active he or she becomes despite the upcoming benefit expiry. However, the share of the long-term unemployed in the total number of the registered unemployed did not really change during that time (around 45%). Also, it seems that the financial incentive to stay unemployed weakened: the ratio between the average level of unemployment benefit and the average wage in the economy lowered from 29% in the 4th quarter of 1997 to 20% in 2000.

Recipients of family pensions and other non-earned income earners in contrast increased their labour activity from around 30% to above 40%, although in a different way – family pensioners managed to increase their employment, whilst 'others' intensified job seeking. All the maintained – both registered and non-registered – slightly increased their labour market involvement. This may reflect either financial stimulus (due to a general worsening of the economic situation) or some demographic changes, as well as some other structural issues.

However, the average activity of transferees may be considered high. This may indicate that transfers did not push people into complete passiveness. High labour activity may also suggest that the level of the transfers was low enough to motivate them to find alternative sources of incomes. However, other interpretations of these figures also make sense. It may be that most of those who are active on the labour market either tried to milk the social security system and get transfers as additional income sources on top of their work. It is also possible that because they have been seeking work for a long time they were forced to get some pensions or benefits. It is impossible to verify the causality of this relationship.

Immediate employment

Returning to the final 2000 sub-population (that is, transferees and the maintained who do not have any work), among those who seek work, the willingness to take on a job immediately (this or next week) is relatively high and similar for the transferees and the maintained (93% of all who seek work). The level of differentiation between the groups is very small. The most desperate to take on a job are the registered unemployed without benefit (94.4%); only slightly less eager are the unemployed with benefit (94.0%). In other groups around 90% of people seeking work want to take on a job immediately.

Minimal salary required by the unemployed willing to take on a job immediately

The average net wage in the economy in the 4th quarter of 2000 was around 1391 PLN[7]. The minimum wage required by those who are willing to take on a job immediately is someway below the average (841 PLN). One could expect that for people who are able to mix earned incomes with transfers (i.e., many disability and family pensioners as well as some recipients of other non-earned incomes) the desired wages would be a supplement to their transfers and therefore its level should be lower. However, the differences in respect to the minimum wage between the groups are small: the lowest minimum required wage is for disability pensioners (753 PLN), the highest for unemployment beneficiaries (898 PLN). Small differences may indicate that social transfers are low enough to motivate people to work for almost as much as people who would not have any alternative incomes. A low level of the minimum expected salary in the group of registered unemployed may suggest either strong desperation to find a job (after remaining out of work for a long time), or the low working status connected to poor education or experience.

Efforts undertaken to find a job (by the unemployed willing to take a job immediately)

The structure of answers is similar for all groups of transferees and those that are maintained. Most of them contain themselves to rather passive forms of job searching. Close to 40% of people seeking work are registered with public offices, another 23% asked relatives about job opportunities. More active were these who approached employers directly or answered advertisements (33% in total). A relatively small number of people did not make any efforts (1-2%).

Concluding, the total activity of transferees in the labour market is quite high, although lower than the activity of the maintained. From this we can deduce that social transfers are not necessarily associated with significant labour market passiveness. When we consider only people without work, two times more people do not seek work among transferees than among the maintained. The average period out of work matters substantially across the groups. However, an important factor would be here the duration of the transfer entitlement as well as some family characteristics of the maintained. Other work-related characteristics do not point to strong differences between the groups. Therefore, out of all potential characteristics representing the attitude to acquiring work, 'seeking work or not' was chosen for the further econometric analysis.

2.2.3. Econometric Analysis of the Relationship between Transfers and Labour Supply

The relationship between getting a transfer and not seeking work has come up both in the statistical analysis as well as in statistically significant correlations. However, as many

[7] Own calculations.

studies on the labour market mechanisms prove, labour supply depends on a range of factors simultaneously. Simple two-variable correlations do not take into account interrelations between the explanatory variables. The fact of getting, e.g., maternity benefit may have a different impact on work attitude in the case of a single woman who, at the same time, plays the role of family head, and different in the case of a married woman whose husband is self-employed. Taking into account information on marital status, the main income of the household and the status in the family, we should come up with a better estimation of the maternity benefit impact on seeking work.

What we are interested in is not only the simultaneous relationships between more than two variables, but also comparing the strength of the association between them. This requires constructing a regression model. Since we believe that transfers have an impact on attitudes to work,[8] the explanatory variables will be the kind of transfer or financial support and other individual characteristics, and the dependent variable will be 'seeking work'.

The list of available explanatory variables includes:

1) source of income,
2) gender,
3) marital status,
4) position in the household,
5) number of adults in the household,
6) number of children in the household,
7) age,
8) educational level,
9) main source of income in the household,
10) place of habitation (size of town or rural area),
11) region (voivodship),
12) duration of a period without work.

Theoretical background

The dependent variable in the model is dichotomous, taking a 1 value when the person seeks work and 0 value when he/she does not. Therefore we use the logit regression. The explanatory variables have the form of both dichotomy and quantitative variables.

The main idea behind the logit model is to find the relationship between the probability (*Pi*) that *Y* – the dependent variable – will take a 1 value (given the characteristics of an i-individual *Xi*, that is, a combination of explanatory variables *Xij*), and the characteristics of an *i*-individual.

$$P_i = E(Y=1\ (X_i) = \beta_1 + \beta_2 X_i\ )$$

[8] Opposite direction causality is also possible: unwillingness to work or inability to find work may create the demand for transfers.

Besides some other statistical requirements, in order to receive a non-linear relationship between *Pi* and *Xi*, as well as to be sure that the probability *Pi* lies between 0 and 1, the equation *Pi* has been modified and the new representation (logit model) looks as follows:

$$Li = \ln (P_i / (1-Pi) = \beta_1 + \beta_2 X_i),$$

where $(P_i / (1-P_i)$ is the odds ratio in favour of $Y=1$. The higher the odds ratio the bigger probability that $Y=1$.

It can be shown (using calculus) that

$$dP_i/dX_i = \beta_2 Pi/(1-Pi),$$
$$dP_i = \beta_2 P_i/(1-P_i)\, dX_i$$

It "shows that the rate of change in probability with respect to *X* involves not only β_2 but also the level of probability from which the change is measured"[9].

The slope coefficients β_j tell us the direction and relative intensity of how the incremental change in *X* impacts the change in the probability that $Y=1$ (given the initial probability of $Y=1$).

Outcomes

The outcome of the model is presented in Table 2.10.1 (for 2000) and Table 2.10.2 (for 1997).

The model offers interesting conclusions about the relationship between transfer entitlements and work seeking as well as other individual characteristics. The main question asked in the study is answered as might be expected: people receiving transfers are less likely to seek work than these who do not have any source of income and are maintained by others. The disabled are the least likely to seek work, followed by family pensioners and 'other' beneficiaries. The non-registered unemployed maintained by others do not show a far greater interest in seeking work than all other beneficiaries. The most active in seeking work are the registered unemployed without benefit entitlement. They are even more active than unemployed who receive benefit. The effect of the statistical analysis that unemployment benefits may not motivate labour activity (Table 2.9) was also confirmed by the model, that is, after taking into account all other characteristics of the individuals. The fact that the higher probability of seeking work was assigned to the maintained groups suggests that, despite how easy support from household members may be, the maintained may have more motivation to earn their own income (maintained people on average are younger than the transferees by 10 years – aged 32 as opposed to 42).

[9] Gujarati (1995) p. 559.

Table 2.10.1. Outcome of the model, 4th quarter 2000

Dependent variable: seeking work=1, not seeking work=0

Explanatory variables	*Coefficient*	*Significance*	*Stand. dev.*
Main income (ref.: Maintaining the registered unemployed without benefit)			
Disability pension	-4.311	0.000	0.131
Family pension	-3.531	0.000	0.240
Other non-earned income	-2.572	0.000	0.118
Unemployment benefit	-0.639	0.000	0.142
Maintaining the non-registered unemployed	-2.035	0.000	0.096
Male (ref.: Female)	1.322	0.000	0.101
Marital status (ref.: Married)			
Single	-0.072	0.616	0.144
Widowed	0.306	0.504	0.458
Divorced	0.401	0.104	0.246
Marital status of women (ref.: Married woman)			
Single woman	1.129	0.000	0.206
Widowed woman	1.384	0.006	0.501
Divorced woman	0.780	0.012	0.310
Head of family (ref.: Other position in the family)	-0.063	0.533	0.101
Number of adults 15+ in the household	0.078	0.008	0.029
Number of children under 15 in the household	-0.053	0.114	0.034
Age	-0.028	0.000	0.004
Education level (ref.: Basic vocational)			
Pre-primary and primary	-0.304	0.000	0.087
Secondary	0.078	0.554	0.133
Vocational secondary	0.188	0.034	0.089
Post-secondary	-0.155	0.493	0.226
Higher	-0.564	0.008	0.212
Main source of household income (ref.: Employment)			
Farm ownership or farm use	-0.684	0.001	0.213
Self-employment	-0.543	0.000	0.144
Pension	-0.058	0.515	0.089
Unemployment benefit	0.858	0.000	0.208
Other non-earned income	0.824	0.000	0.130

Table 2.11.1. Outcome of the model, 4th quarter 2000 – cont.

Dependent variable: seeking work=1, not seeking work=0

Explanatory variables	*Coefficient*	*Significance*	*Stand. dev.*
Town size (ref.: Rural area)			
< 10,000 inhabitants	0.308	0.014	0.126
10,000-50,000 inhabitants	0.322	0.001	0.096
50,000-100,000 inhabitants	0.351	0.005	0.125
> 100,000 inhabitants	0.364	0.000	0.093
Region (ref.:) Dolnośląskie[1]			
Mazowieckie	-0.102	0.550	0.171
Śląskie	-0.213	0.192	0.163
Wielkopolskie	-0.382	0.019	0.163
Pomorskie	-0.440	0.010	0.170
Zachodniopomorskie	-0.290	0.089	0.171
Łódzkie	-0.101	0.550	0.169
Lubuskie	-0.125	0.492	0.181
Małopolskie	-0.352	0.042	0.174
Kujawsko-pomorskie	-0.340	0.042	0.167
Opolskie	-0.411	0.035	0.195
Świętokrzyskie	-0.347	0.062	0.186
Warmińsko-mazurskie	-0.098	0.574	0.175
Podkarpackie	-0.250	0.160	0.178
Podlaskie	-0.012	0.955	0.219
Lubelskie	-0.113	0.551	0.189
Period out of work	-0.002	0.000	0.001
Constant	2.424	0.000	0.246
Log likelihood	5867		
Pseudo R^2 (Cox & Snell R Square)	0.407		
Pseudo R^2 (Nagelkerke R Square)	0.543		
Sample size	6803		

Notes: * Reference variables are those which equal 1 for the biggest number of cases;

** The final size of the sample included in the regression is smaller than the original size presented in Table 2.8 because including the variable 'period out of work' missed cases of people who never worked. However, it did not really change the specification of the model.

[10] Voivodship ordered according to GDP per capita in 2000, from the highest to lowest; Dolnośląskie – the reference, is on the fourth position.

Another important characteristic confirmed by the model is the impact of the out of work period on attitudes to work. The correlation is negative, which means that the longer the person stays out of work the less likely he/she is to seek work. This is in line with the general belief in the labour economy that returning to work becomes the more difficult, the longer the period of job-lessness. However, the conclusion that transfers provide a good enough alternative to earned income would be too simplistic. There may be other factors (not represented in the model) responsible for the loosening of the link with the labour market.

In the case of men, the probability of seeking work is higher than for women. This is not surprising as women in Poland still play to a large extent a traditional role in a family, whereas men still tend to be the main provider – in the sample, men are heads of families two times more often than women are. The negative correlation between being a head of a family and seeking work would mean that the declarations of heading the family are traditional, while income responsibility in the family does not stick to this traditional model any longer. However, the coefficient by this variable is insignificant.

Marital status is not really a statistically significant factor in attitudes to work. The only significant factor – at 10% – is a divorced status. The coefficient indicates that divorced people are more eager to work than married people. However, when we test the interaction between seeking work and the marital status of women we see an opposite situation: married women are least eager, and divorced women have the higher probability of looking for a job. The probability is even higher for single and widowed women. This is most likely the effect of women's role in the family, which provides less motivation to work. On the other hand, single women may be forced to seek work due for financial reasons.

Size of family is clearly an important factor. The probability of seeking work is positively correlated with the number of adults in the household (the bigger the family the higher the probability). On the other hand, the bigger the number of children up to 15 years old, the smaller probability of looking for a job. Despite the fact that this coefficient is significant at a low level (11%), a possible explanation could be that small children (we do not know their age structure) require more attention and care, whilst older children require more financial support from their parents. Therefore, we might find that the coefficient would be positive for parents of older children.

The probability that a person will look for a job decreases with age. This may result from civilisation differences between generations, as Poland continues to undergo not only economic but also social transition. Younger generations seem to become more open to the emerging dynamics of the labour market and are more able to respond positively to it. Also, the system of transfers may be still considered rather generous, and access to transfers naturally increases with age.

The statistical significance of different education levels is uneven: pre- and primary, vocational secondary and higher education are significant, with vocational level as a reference. Most active in work seeking are people with vocational secondary, followed by those with vocational education. People who stopped at primary or pre-primary education show the least motivation to seek work. This suggests that vocational and secondary vocational education tend to induce labour activity among the unemployed. Most surprisingly, however, is that people with university degrees have the lowest probability of looking for a job. One might expect them to be more motivated to seek work (in search of self-fulfilment, higher income requirements, pressure of the environment) than people with lower education.

Individuals from households where the main income comes from self-employment are less eager to seek work than in the case of employment income. This may be related to the higher on average incomes of self-employed. Individuals from a household where the main income is from farm ownership or farm use are least eager to seek work. Here the explanation could hardly be high incomes. It is rather the poor geographical mobility of farmers or involvement in family farming which constrains these people from seeking work. But if the main income in the household is from unemployment benefit or 'other' non-earned incomes, individuals seem to have more incentives to look for a job. Here, again, the reason may refer to the financial situation of the family. Pensions as the main income in the household do not explain the probability of seeking work (statistical insignificance), that is, other factors must play a role.

The place of habitation of unemployed people has a significant impact on their job seeking. Probability of seeking work is generally higher in cities than in rural areas, and the bigger the town the higher the probability. Labour mobility as well as wider opportunities to find work in bigger towns may have an important influence on the relationship.

There is no clear correlation between the probability of seeking work and the region where a person lives. With Dolnośląskie voivodship as a reference, the correlation is statistically significant in the case of only 7 voivodships (out of 16). The first possible conclusion is that, if we neglect Opolskie and Pomorskie, the higher the unemployment rate in the voivodship, the higher probability that a person will seek work (Table 2.11). This would mean that the unemployment situation within each voivodship is relatively uniform. Another conclusion could be that the higher GDP per capita, the higher probability that people seek work. Such a relationship could mean that people in richer regions have a greater chance of finding work or at least approaching their unemployment with more optimism and creativity. However, if we reverse the causality, the relationship could mean that regions with people more active in seeking work are simply more prosperous. Nevertheless, the territorial structure with 16 voivodships is general and there must be plenty of other factors responsible for differences in job seeking across regions.

Table 2.11. Voivodship as an explanatory variable in 'work seeking' – statistically significant relationships

Voyevodship, ordered acc. to the coefficient (from the highest to lowest)	GDP per capita in 2000, thousand PLN	Unemployment rate, end of 2000, %	Location
Dolnośląskie	16.3	18.4	South-West
Zachodniopomorskie	15.9	20.8	North-West
Kujawsko-pomorskie	14.1	19.2	North
Świętokrzyskie	12.4	16.6	Central-East
Małopolskie	14.2	12.2	South
Wielkopolskie	16.7	12.5	Central-West
Opolskie	13.3	15.7	South-West
Pomorskie	16.1	16.6	North

The correlations between seeking work and available individual characteristics of non-working people and the outcomes of the model are quite similar for the 1997 and 2000 populations.

Different groups of transferees and maintained people present similar probabilities of seeking work: the least probability is in the case of disability pensioners, followed by family pensioners and recipients of other non-earned incomes. The non-registered unemployed who are maintained by other household members have only a slightly higher probability of seeking work than the previous three groups (the disabled, family pensioners and 'others'). Again, the registered unemployed that do not receive benefit are the most willing to seek work – more than the unemployed who still enjoy benefit entitlement.

Gender mattered in 1997 to the same degree as in 2000, where unemployed men were much more likely to seek work than women. Although marital status as such is insignificant here, the interaction of gender shows that single or divorced women are more active in job seeking than married women. The family structure has a similar impact in 2000. Again, the more adults in the family the more motivations to search for work. On the other hand, children in the family are a negative factor in 1997 too. Being the head in the family also does not really seem to matter.

The influence of age differences in the labour market appear to have increased over time, as the age factor is less significant in 1997 than in 2000. However, the relationship between age and job seeking is negative in both years (the elderly are less eager to seek work).

Secondary education increases the probability that a person will seek work – both secondary vocational and simple secondary (insignificant in 2000) have higher coefficients for 1997 than vocational education. Primary education has no impact on job seeking. However, as in 2000 a university degree also provides less motivation to seek work.

Tendencies with regards to the main income source in the household are also quite similar in both years. However, income from farming was statistically insignificant in 1997 and turned to be significant in 2000. This could indicate that the factors making rural people reluctant to seek

Table 2.10.2. Outcome of the model, 4th quarter 1997

Dependent variable: seeking work=1, not seeking work=0

Explanatory variables	*Coefficient*	*Significance*	*Stand. dev.*
Main income (ref.: Maintaining the registered unemployed without benefit)			
Disability pension	-4.776	0.000	0.149
Family pension	-3.381	0.000	0.293
Other non-earned income	-2.359	0.000	0.137
Unemployment benefit	-0.760	0.000	0.125
Maintaining the non-registered unemployed	-2.236	0.000	0.103
Male (ref.: Female)	1.279	0.000	0.111
Marital status (ref.: Married)			
Single	0.140	0.350	0.150
Widowed	-0.037	0.938	0.467
Divorced	-0.079	0.769	0.270
Marital status of women (ref.: Married woman)			
Single woman	0.874	0.000	0.208
Widowed woman	0.444	0.420	0.550
Divorced woman	0.885	0.009	0.341
Head of the family (ref.: Other position in the family)	0.141	0.185	0.107
Number of adults 15+ in the household	0.125	0.000	0.031
Number of children under 15 in the household	-0.094	0.006	0.034
Age	-0.007	0.155	0.005
Education level (ref.: Basic vocational)			
Pre-primary and primary	0.000	0.999	0.091
Secondary	0.318	0.024	0.141
Vocational secondary	0.303	0.001	0.093
Post-secondary	-0.051	0.829	0.238
Higher	-0.563	0.028	0.256
Main source of household income (ref.: Employment)			
Farm ownership or farm use	-0.240	0.309	0.236
Self-employment	-0.500	0.001	0.153
Pension	0.088	0.354	0.095
Unemployment benefit	0.335	0.062	0.179
Other non-earned income	0.856	0.000	0.158

Table 2.10.2. Outcome of the model, 4th quarter 1997 – cont.

Dependent variable: seeking work=1, not seeking work=0

Explanatory variables – cont.	*Coefficient*	*Significance*	*Stand. dev.*
Town size (ref.: Rural area)			
< 10,000 inhabitants	0.201	0.201	0.146
10,000-50,000 inhabitants	0.113	0.113	0.098
50,000-100,000 inhabitants	0.348	0.348	0.126
> 100,000 inhabitants	0.253	0.253	0.098
Region (ref.:) Dolnośląskie[15]			
Mazowieckie	0.050	0.741	0.152
Śląskie	0.140	0.360	0.153
Wielkopolskie	0.501	0.003	0.168
Pomorskie	0.449	0.010	0.175
Zachodniopomorskie	0.070	0.699	0.182
Łódzkie	0.076	0.650	0.167
Lubuskie	0.276	0.223	0.227
Małopolskie	0.016	0.927	0.170
Kujawsko-pomorskie	0.020	0.914	0.181
Opolskie	0.231	0.298	0.222
Świętokrzyskie	0.134	0.563	0.231
Warmińsko-mazurskie	0.113	0.561	0.195
Podkarpackie	0.357	0.056	0.187
Podlaskie	0.417	0.075	0.234
Lubelskie	0.087	0.660	0.197
Period out of work	0.006	0.000	0.001
Constant	1.512	0.000	0.256
Log likelihood		5341	
Pseudo R^2 (Cox & Snell R Square)		0.403	
Pseudo R^2 (Nagelkerke R Square)		0.548	
Sample size		6541	

Note: * Reference variables are those which equal 1 for the biggest number of cases.

[11] Voivodships could not be ordered in 1997 according to GDP per capita because the new territorial structure was introduced only in 1999 and all the macroeconomic indicators before 1999 are presented in the old territorial breakdown.

work (e.g. low mobility), have become more relevant over time. Another interesting factor is that the unemployed from households where the main incomes come from unemployment benefit were less eager to seek work than 'other' transferees. In 2000, their activity in work seeking was relatively higher. This, combined with data showing that the level of unemployment benefit compared with the average wage worsened, would suggest that low benefits motivate more unemployed family members to look for work. The importance of the financial status of the family also appears to manifest itself, as in 2000, in a lower probability of seeking work by individuals from families with self-employed incomes as the main source than with employee wages; 1997 the wages were on average lower than the earnings from self-employment.

Where people live was an insignificant factor in 1997. The conclusion from this could be that the differences in attitude to work activity increased over time as the economic slowdown in the bigger cities outpaced that in small cities or rural areas.

The influence of the regional factor cannot be matched fully with the economic characteristics of regions, as the economic indicators for 1997 are available only in the old voivodship structure. In 1997, only 4 voivodships were important factors in job seeking, and only 2 of them were also significant in 2000. People from these 4 voivodships had a lower probability of seeking work than in Dolnośląskie, though the lowest probability was in relatively affluent voivodships (Wielkopolskie and Pomorskie). Two poor regions on the east (Podlaskie i Podkarpackie) are in the middle.

In the 1997 model, as in the 2000 model, the longer a person stays out of work the less eager he/she is to seek work.

2.3. Concluding Remarks

The analysis – both statistical and econometric – shows that the relationship between seeking work and receiving transfers should not be considered in a simplistic way. There are great differences among transferees in their willingness to take work. However, obtaining or not obtaining transfers partially explains attitudes to work. Most of the available individual characteristics matter as well. Additionally, we believe that the list of these characteristics misses some very important variables, such as health, the number of small children in the family (we know only the total number of kids up to 15 years old), the general level of generosity of the social security and the protection system, e.g. the average period of entitlement for different kinds of transfers (we know that on average disability pensions provide the greatest stability as they are assigned usually for much longer than other transfers; followed by family pensions, 'other' transfers and unemployment benefits, though individual information on the entitlement duration is not available).

The outcomes of the statistical and econometric analysis, however, provide a lot of valuable suggestions. In all the tests the job-less transferees with most stable transfers have a less eager attitude to work. However, all groups of transferees exhibit relatively high labour activity (either through working or job seeking). This also supports the thesis that the level of transfers is generally low and that transferees tend to look for complementary sources of income. This would mean, furthermore, that social transfers do not provide disincentives to work and force transferees to earn additional amounts rather than to look for a permanent job. This also means that all transferees that are passive on the labour market for other than financial reasons must be receiving relatively low incomes. These people may be pushed towards poverty. The model shows that people from households where the main source of income is from unemployment benefit or other benefits are most eager to seek work. Moreover, the average duration of their time out of work is relatively long (over a year in the case of the unemployed with benefit, and several years in the case of other transferees).

The causality of the relationship between seeking work and receiving social transfers cannot be clearly identified. In every case an opposite interpretation is equally possible: people who cannot find work due to a worsening economic situation and rigid labour market were forced by poverty to seek social transfers. The question "do these transfers help people to regain motivation to look for a job or not?" becomes relevant.

The vast majority of transfers in Poland are pensions. Once they are assigned they cannot be taken back unless there is a change in the law (e.g. an overall reform of the system). Therefore, social and labour policies can be practically addressed really only to the access to benefits (which have a limited and shorter duration) and the future assignments of all kinds of pensions.

Taking into account the relatively high labour activity on the part of transferees, macroeconomic policies – including social and labour market policies – should concentrate above all on creating opportunities on the labour market to absorb labour resources. Secondly, the objective should be to sharpen the eligibility criteria for transfers as well as practises of assignments in order to improve transfers targeting but also to define a level of transfers that would be adequate to the modest but real costs of living. Only realistic level of benefits can prevent transferees from falling into poverty.

Part 3

Alcohol Abuse and Poverty

*Agnieszka Sowa**

Introduction

During the political and economic transformation in Poland after 1989 the environment in which Polish households operated changed dramatically. There was a marked rise in the number of cases of social pathology, which fast became a publicly discussed topic. Phenomena that had earlier been almost unknown, such as poverty and unemployment, became social problems almost overnight. Experts pinpoint alcohol as a key factor in the outbreak of pathological behaviour (Sierosławski, Szumlicz 1995). However, during the transition limited research was conducted into social exclusion connected with alcohol abuse. The research presented in this chapter focuses on social assistance recipients and looks specifically at the relationship between alcohol abuse within households and their social and employment characteristics. Available administrative data from social assistance centres allow quantitative analysis of the relationship. They also enable us to identify the characteristics of those households affected by poverty and with officially reported alcohol problems.

The first section provides a description of the pattern of alcohol consumption in Poland. Definitional problems of alcohol abuse, alcohol dependency and their relationship with social and economic factors are described in the second section. The following analysis concentrates not on alcohol consumption for the whole population, but on cases of reported alcohol abuse by recipients of social assistance. Profile analysis shows the structure of social assistance recipients, and compares this to the situation of those recipients that have reported alcohol problems in their households. The logit model is used to investigate the interrelations between reported alcohol problems, family background and economic situation of social assistance recipients (section nine). Conclusions outline some of the policy implications for targeting socially marginalised groups due to poverty and alcohol-related problems.

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3.1. Alcohol Abuse as a Social Problem in Poland

Public opinion tends to see alcohol dependency as one of the most important problems afflicting Polish society during the transformation process. According to a public opinion poll taken by the PARPA in the summer of 1998 on a sample of citizens over the age of 18, alcoholism is rated the fourth most important problem affecting the country (Sierosławski, 1998). Alcoholism[1] (9.9% of responses) lagged behind violence on the streets (20%), unemployment (18.4%) and falling living standards (10.2%). Respondents were also asked which problems were the most important for their local community. In this context, alcoholism was seen as the second most important problem (15.1% of respondents), after unemployment (22.7%).

Over the post-war period alcohol consumption patterns in Poland were similar to those in most Western European countries. The first 30 post-war years were characterised by an increase in alcohol consumption. According to official estimates, average alcohol consumption in Poland measured in liters of pure alcohol consumed per capita[2] in the 1950s was almost double the figure for the pre-war period. It increased further in the 1970s (Moskalewicz, Sierosławski, Szymanowski, Świątkiewicz, Zieliński 1991).

Table 3.1. Average consumption of alcohol in Poland per capita, 1938-1990

Years	Average alcohol consumption (in litres of pure alcohol per capita)
1938	1.5
1950-1954	3.1
1955-1959	3.7
1960-1964	3.9
1965-1969	4.7
1970-1974	5.9
1975-1979	7.8
1980-1984	6.7
1985-1989	6.8
1990	6.0

Source: Moskalewicz J., Sierosławski J., Szymanowski T., Świątkiewicz G., Zieliński A., 1991.

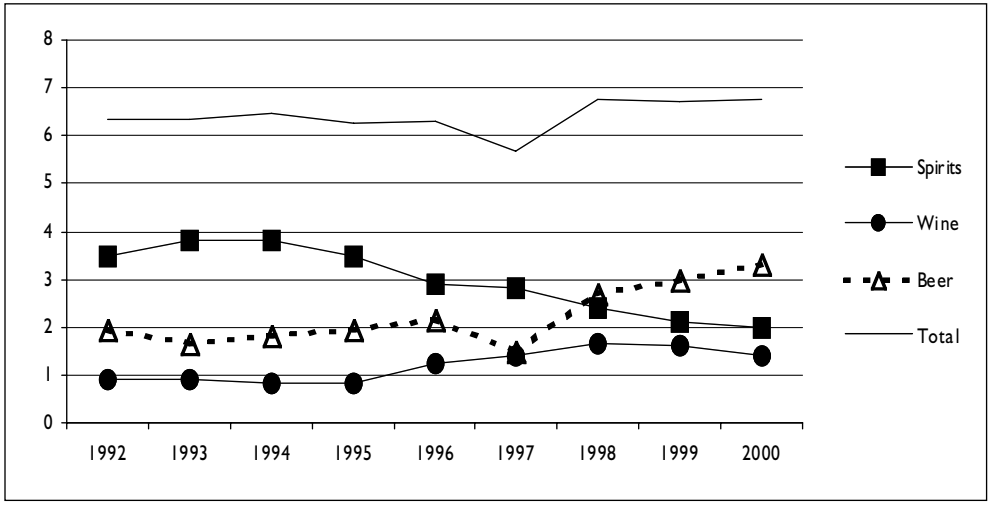
[1] In the survey the question was asked of "alcoholism" not "alcohol dependency" or "alcohol-related problems", as the term "alcoholism" is easily recognized by the public and popularly understood as excessive drinking violating social norms and resulting in social dysfunctions.

[2] This measure is commonly acceptable and allows for comparisons between countries, however one has to remember that this is the average measure, while real consumption varies significantly between groups, with strong concentrations of consumption – according to estimations half of alcohol consumed in Poland is consumed by 10% of the population.

The increase in alcohol consumption can largely be explained in terms of changes in the type of consumption. In 1938 the most common alcoholic beverage was spirits, while in the 1960s the share of spirits dropped while wine and beer increased. However, the consumption of wine and beer did not entirely replace the consumption of vodka. The share of vodka remained at 70%, the highest share for any European country. Alcohol consumption dropped in 1981 due to the social and economic crisis, as well as restrictions on the supply of alcohol during Martial Law. But later in the 1980s alcohol consumption increased once again.

The 1990s decade brought more changes in the pattern of alcohol consumption. Official data from 1990 show a drop in alcohol consumption, though the reliability of such figures can be questioned due to the widespread increase in access to illegal, smuggled alcohol, especially spirits.

Figure 3.1. Average consumption of alcohol in Poland, in litres per capita, 1992-2000



Source: GUS/PARPA 2001.

According to GUS and PARPA data, alcohol consumption in Poland at the end of the 1990s stabilised at 6.73-6.75 litres of pure alcohol per capita per annum. However, this data point to general trends and thus doesn't offer fuller information on the level of alcohol consumption:

1. Data on alcohol consumption compiled by GUS apply only to registered alcohol trade and do not take into account illegal trade. PARPA estimates illegal production and smuggling totals between 20% to 30% of total legal trade. This means that unrecorded consumption may be at around 2 litres of pure alcohol per capita per annum.
2. Data given by GUS relate to the whole population, including children, while some other estimates (e.g. by WHO) relate only to adults (15 as the threshold). According

to WHO, actual average consumption is about 1.5-2 litres of pure alcohol per capita per annum higher.

When taking these factors into account average alcohol consumption per adult (aged 15+) would be 3.5-4 litres of pure alcohol higher than GUS estimations (that is 10-11 litres of pure alcohol per adult).

During the 1990s drinking patterns changed, with the consumption of spirits falling and beer consumption increasing. However, high frequency of drinking combined with heavy drinking (consumption of large amounts of alcohol on one occasion) rates remained more or less the same. This type of drinking is perceived as related to a high risk of alcoholism.

PARPA estimates that 5% to 7% of the population (2-2.5 million people) has a problem with alcohol and about 2% of the population (800,000 people) is alcohol dependent. Another 4% (1.5 million people) are adults living with alcohol dependants, and 4% of the population are children who live in families with at least one alcohol dependant.

3.1.1. Alcohol Abuse, Alcohol Dependency and Alcohol Related Problems – Towards a Definition of the Phenomenon

The consumption of alcohol has always played a part in societies' cultural, social and economic affairs. Aside from any political or religious guises it may have adopted over the years, alcohol's negative side is visible as quickly, if not more so, as any positive effects it may have.

The functions and dysfunctions of alcohol use can be analysed from different perspectives depending on the aspects of the phenomenon they emphasise. Social pathology theory, social disorganization and deviant behavior, as well as public health approaches are among the most influential sociological and psychological theories.

Social pathology theory emphasises the behaviour of individuals and focuses on phenomena that do not meet commonly accepted social rules. Pathology is analysed at the individual, rather than the social, level, without analysis of social context. Individuals whose behaviour is inconsistent with social rules are seen as "sick" and alcohol abuse or alcohol dependency is treated as a "sickness". American psychiatrist Jellinek formulated the following definition of alcoholism as "any use of alcoholic beverages that causes any damage to the individual or society or both". Alcoholism is treated as a permanent, irreversible and progressive sickness. The theory emphasises the loss of control over drinking habits and inability to stop drinking. Treatment via isolation and drying-out in special centres is based on this concept. Its weakness is that it treats the phenomenon in the isolation from any social context.

Social disorganisation theory seeks reasons for social problems in the social system and relates them to the process of social change. Various phenomenon, including pathological drinking, occur during periods of rapid social change and breakdown of moral standards, the theory suggests. A similar approach was proposed by Merton. His deviation theory argues that the behaviour imposed by social change leads to the composition of new strategies. These strategies can be either innovative/constructive, or destructive. Drinking is one way of adjusting to a changing social environment.

The above-mentioned theories, combined with epidemiological data on the quantities of alcohol that can be safely consumed without causing negative health effects,[3] provide the background for traditional definitions of alcohol abuse and alcohol dependency. In 1952 the WHO's definition of alcohol abuse was an excessive drinking that may lead to disturbance of an individual's social functions at the workplace, school or home; such as absenteeism at the workplace, lower productivity, absenteeism at school and negligence in performing household duties (Schafer 1996, PARPA 2001). Excessive drinking may also lead to involvement in gambling, or aggressive behaviour and law-breaking.

Alcohol abuse has to be distinguished from alcohol dependency. They differ in quantitative and qualitative terms, although the relationship between the two categories is relatively fluid. Alcohol abuse may lead to alcohol dependency, but not necessarily (Schafer 1996, PARPA 2001). Alcohol dependency is a multi-dimensional sickness that damages individual psychological, social and mental functions. It is characterised by excessive drinking, combined with the compulsion to drink and loss of control. Dependants tend to drink without respect to their obligations or health. Alcohol dependency also causes psychological dysfunctions (Mellibruda 1999):

- destructive self-image: low self-respect and negative perception of life, suicidal thoughts, feeling of guilt and shame;
- destructive relations with others: aggressive behaviour, isolation from social environment (family etc.), antisocial behaviour;
- breakdown of moral standards.

These symptoms lead to a deficit in social skills and social functions that are not easily reversible. They also demand time-consuming treatment long after quitting drinking.

The WHO's most recent comprehensive approach to alcohol dependency targets problems that often go hand-in-hand with alcohol use. This public health approach concentrates not only on those who are alcohol dependent, but also on those for whom alcohol might lead to individual or social problems. The policy concentrates on early recognition of the problem, early intervention and rehabilitation. The goal of intervention is

[3] According to WHO standards, the amounts of alcohol that can be consumed without the risk of future health damages are 20 grams of pure alcohol for women and 40 grams for men, up to 5 times a week;

the reduction of alcohol-related mortality and social and economic problems. Alcohol related problems are distinguished from other phenomena in terms of the causality between the problem (e.g. family dysfunction, loss of job, car accidents, suicides) and alcohol consumption (Rehm 2001). This is not one-way cause and effect relation, as alcohol is one of many different risk factors that may lead to dysfunctional behaviour. Alcohol related problems may be incidental or long-term. For public health approaches, alcohol dependency as defined as one of several alcohol-related problems. The approach targets the whole drinking population for whom any negative effects of drinking are visible.

3.1.2.The Individual and Social Consequences of Alcohol Consumption

Alcohol consumption has harmful consequences.

Categorising some incidents as alcohol related implies that (Rehm 2001):

- an incident is related to alcohol by "chance", which means coexisting in time and place, without setting a type of relation between the two, or
- alcohol is a risk factor in sparking an incident where there is an assumed – but unproven – causal relation between it and the influence of alcohol, or
- there is a causal relation between alcohol and an incident, but some occurrences may be partially due to alcohol, while others are direct consequences of alcohol.

The effects of alcohol are individual (often medical) or related to social behaviour. Epidemiologists concentrate on the individual health consequences of alcohol consumption – sicknesses or deprivation that alcohol directly causes or for which it is a crucial risk factor. Recent analyses of the effects of alcohol include social problems related to alcohol. As J. Rehm (2001) notes: "the social consequences of alcohol are changes, subjectively or objectively attributed or attributable to alcohol, occurring in individual social behaviour or in social interaction or in the social environment". Changes related to alcohol can be positively or negatively evaluated by the individual and his/her environment (subjective assessment). They can be objectively confirmed by, for example, alcohol tests.

The health consequences of alcohol consumption

Long-term drinking or heavy drinking increases the risk of depression and mortality risks. Some illnesses are directly attributable to alcohol, such as alcohol dependence and alcohol psychosis. In Poland, the share of people suffering from alcohol dependence has been rising steadily, from 1.1 to 4.3 per 100,000 people between 1980 and 1995 (WHO 2001). The risk of illnesses, such as chronic liver disease and cirrhosis is increased by long-term alcohol consumption. Alcohol contributes to psychosis and personality disorganisation that in some

cases results in suicides. According to police records, in 1993 25% of suicides were committed by intoxicated people (Sierosławski, Szumlicz 1995). Intoxication is also one of the major causes of car accidents, many of which end in death, permanent illness or disability.

Most of the health consequences of alcohol consumption affect an individual's situation via sickness or disability, for example. However, alcohol also has social consequences (in terms of the above definition). Treatment of alcohol related illnesses increases health care system costs. Depression related to alcohol impacts on the social relations of the ill person, his/her family life, and his/her activity on the labour market and productivity.

Social environment, friends and public safety

Alcohol consumption is strongly related to social situation. The peer group plays an important role in the initiation of alcohol use, largely conditions the frequency and quantity of further alcohol consumption and the probability of delinquent behaviour. Family and peer associations also condition the age of initiation and act as models for alcohol use. Drinking combined with risk-taking behaviour among adolescents may be a means of gaining status in the group. Alcohol abuse in the social context is characterised by loss of psychological and social barriers and the focus on the "here-and-now" appears to provide opportunities for enjoyment, meeting new people, romance and sexual relations. The end results of alcohol abuse and this loosening of constraints can often be violent behaviour, sexual assault, and vandalism. The frequency of alcohol related violence among groups of friends and acquaintances is hard to estimate as it is rarely reported. Few people report violent occurrences within such groups to the police, while the police tend to disregard violence within groups of alcohol abusers (Pernanen 2001). Alcohol consumption may also lead to behaviour that threatens public safety: noisy behaviour in public places, increased risk of car accidents, crime and violence. The frequency of alcohol related violent behaviour varies between countries depending on legislation and social acceptance of alcohol and type of consumption. In Poland, alcohol is seen as one of the major factors underlying criminal behaviour. According to police statistics, about 25% of crime is alcohol related (Sierosławski, Szumlicz 1995).

Family consequences of alcohol consumption

Alcohol related problems affect the abuser's family, spouses and children, above all. According to estimates, for each person who abuses alcohol at least one other person close to him/her suffers from his/her drinking (Maffli 2001). The consequences of being close to drinking problems are of three types:

– Abusive or other forms of unacceptable behaviour towards relatives by the person under the influence of alcohol. Such behaviour may be extremely aggressive, taking the form of physical violence or sexual abuse. According to PARPA, 2/3 of children and 2/3 of adults living in households with a drinking person have been subjected to domestic violence.

– Suffering social and economic problems, such as isolation from the community, lack of money for basic family needs and household support due to incomes going on alcohol, loss of employment, etc.
– Decomposition of family leading to family break-up and divorce.

While conceptually distinct, these consequences usually coexist. Another possible consequence of alcohol abuse is the "contamination" effect on relatives: which often refers to relatives exhibiting drinking tendencies.

Influence of alcohol problem on children

Children are most susceptible to alcohol related problems simply because they can do little (if anything) to protect themselves. One risk is being subjection to prenatal alcohol exposure. The most serious damage is foetal alcohol syndrome (FAT) characterised by damage to the child's nervous system, growth defects and facial deformity. Other "alcohol-related birth defects" are characterised by learning and behavioural disorders (Maffli 2001).

Children growing up in families with disorders due to alcohol often suffer from physical violence, sexual abuse, abandonment, and emotional abuse. Research on parent-children relations in families with alcohol-related problems show that children in these families tend to be endangered by the risk of being drawn into drinking activities themselves. No causality has been properly outlined in this case, and the risk is differently estimated by researchers, but the relation is no doubt a significant one.

Children in families with alcohol-related problems are also more inclined than their peers to take responsibilities inappropriate for their age. They often feel obliged to look after their drinking parent(s), are involved in parental disputes and arguments, and are worried about household finances, etc.

Influence of alcohol problem on spouses

The most evident influence of alcohol problem on the spouse is violence and marital disruption. Evidence suggests that alcohol is not in itself a necessary or sufficient condition for domestic violence, but that there is a strong positive association between the two. There are also health and psychological consequences of alcohol and domestic violence. Alcohol abuse as the cause of marital disputes may often result in marital break-up. Drinking is not the only reason of divorce – there may also be financial difficulties, problems keeping down a job, unpredictable behaviour, aggressiveness and violence towards partner and/or children, all resulting from drinking. In Poland in the 1980s and 1990s alcohol abuse was cited as the second most frequent reason for divorce – about 25%-29% of marriage break-ups were caused by alcohol related problems (Sierosławski, Szumlicz 1995).

Economic consequences of alcohol consumption

Alcohol consumption has economic consequences in several dimensions:

- social transfers from the budget to families requiring help due to problems resulting from alcohol,
- impact on the education of children and adolescents, which further influences their economic performance,
- direct influence on an individual's economic performance: absenteeism at work, accidents resulting in death or injury, low productivity, theft, crime and inappropriate behaviour, poor co-worker relations and low morale,
- costs for employer due to above listed poor performance of alcohol abusers,
- however, at the same time, companies producing alcohol are an important employer,
- indirect taxes imposed on alcohol consumption contribute to the state budget.

The list of economic consequences of alcohol consumption can be broadened, however, for the purpose of this research the first two are taken as the most important.

The poor school performance of a child or adolescent may result from his/her direct involvement in alcohol-related activity or an alcohol problem within the family: prenatal exposure to alcohol or alcohol abuse by parents. Prenatal exposure to alcohol affects a child's problems with concentration, hyperactivity, and academic difficulties. Research confirms that living in a family with alcohol problems is associated with children's' poor performance at school and truancy.

On the other hand, many adolescents themselves also engage in drinking activity that may influence school attainment. An adolescent's involvement in alcohol consumption may also be partially attributable to lack of parental care and/or being surrounded by peers who abuse alcohol. These factors indicate a vicious circle of drinking, truancy and poor school performance. This cycle leads often to low participation in the labour market (Rehm, Rossow 2001).

Alcohol abuse by adults is a risk factor for poor performance at work due to absenteeism, drinking at the workplace or low productivity caused by hangovers, and is associated with unemployment. Here causality is not clear and can work in both directions: heavy drinking may lead to unemployment, or loss of work may cause drinking. Some research studies also suggest that using alcohol may be related to taking up jobs for shorter periods of time than non-drinkers do.

Finally, while analysing the economic costs of alcohol consumption one has to include the problem of poverty. Lower activity of alcohol abusers combined with high expenditure on alcohol results in the household's lower economic status. In 1993, on average, expenditures on alcohol amounted up to 20%-25% of total household expenditures on food (Sierosławski, Szumlicz 1995). However, these expenditures are strongly differentiated among households. According to PARPA, in 1993 for about 4% of Polish households

(480,000 households) money spent on alcohol counted for 50% or more of their total food expenditures, and 30% spent on alcohol more than 10% of their total food expenditure (Sierosławski, Szumlicz 1995). For these households alcohol expenditures are a significant burden to their budgets.

3.2. Empirical Study

3.2.1. Research Hypothesis

This study examines social assistance recipients suffering from poverty and various social pathologies, including alcohol abuse. The research seeks to answer the question: what is the likelihood of alcohol becoming a factor in falling into poverty; poverty measured in terms of the entitlement to social assistance benefits. The aim of the research is to uncover the individual and household characteristics that may predispose recipients of social assistance to household-based alcohol-related problems. The central research hypothesis suggests that alcohol abuse is connected with the labour market situation, which in turn is related to family dysfunctionality, especially family decomposition, in households receiving social assistance benefits. There is no necessary direct corelation between poverty and alcohol related problems, or causality can work in both directions: alcohol abuse can be a consequence of poor labour market situation and poverty, or poverty can cause high level alcohol consumption. A subsidiary research hypothesis is that alcohol has a negative impact on an individual's employability, worsens the situation of the household, acts as a barrier to improving the situations of households and as such is a factor of social exclusion. The coexistence of economic and family dysfunctions related to alcohol and poverty causes a vicious circle of social exclusion.

3.2.2. Data Source

In order to target alcohol problems and social exclusion patterns the research is based on administrative data for poverty and dysfunctionality. Analysis is restricted to those people who are dependent on assistance from a variety of social assistance programmes provided by Social Assistance Centres (SAC). The database used is POMOST. It was launched by the World Bank Promotion and Services Project (1999) and is managed by the Ministry of Labour and Social Assistance. The database contains information on social benefits paid to SAC recipients. The goal of the system is to provide the Ministry of Labour with the possibility of monitoring social

assistance and improving social benefits targeting. In the long run the system is aimed at improving the quality of services provided to social assistance beneficiaries as well as rationalising and controlling spending. Despite the system still not being fully in operation nation-wide, there is a representative sample of 15% of all SACs (375 out of 2556).

The database is structured in terms of information on each social benefit given to social assistance recipients in each quarter of the year starting from the first quarter of 2000. To understand the database's construction it is important to be acquainted with the procedure of granting social assistance. SACs provide beneficiaries with different types of benefits depending on the household's situation. Each household's situation is evaluated by a social worker, who decides also on the appropriate type of benefit. Each adult household member can apply to the SAC for assistance. Social assistance, defined by the Social Assistance Act (1990), is addressed to the family, though benefits are granted to individuals. Therefore, each household member may be granted a benefit in cash or in kind individually depending on his/her needs, taking into account the situation in the entire family. Any individual who applies for benefits has to take a "family interview", which determines any assignation of benefits. Since the benefit is formally addressed to a household the "family interview" not only concerns the individual situation of a person but also the situation of each household member. Social benefits are subjected to an income test and dysfunctionality criteria, according to which a person is entitled to the benefit if the household's income is below the threshold level and, at the same time, the household faces one of the problems listed by the Social Assistance Act (Golinowska 2002):

– poverty,
– parentlessness,
– homelessness,
– single maternity,
– unemployment,
– physical or mental disability,
– long-term illness,
– problems in running a household, especially in single–parent families or multi-children families,
– alcoholism[4] or drug addiction,
– difficulties in adjustment after imprisonment,
– ecological disaster.

While the Social Assistance Act lists 11 dysfunctions that provide the basis for determining whether an applicant receives social benefits, in the "family interview" these become 13 problems. Alcoholism and drug addiction are split into two separate categories,

[4] The Social Assistance Act uses the term "alcoholism" and the same form is used in the family interview; alcoholism is understood here as an alcohol abuse or alcohol dependency that lead to household social dysfunctions.

and one category (the incidents) is added. Any individual who takes the "family interview" may pinpoint several problems that his/her household may suffer from. The dysfunction might concern either an individual (or several individuals) within the household e.g. unemployment, alcoholism, or the whole household e.g. poverty, ecological disaster. Since the individual who takes the interview gives information on the whole household's situation it is not clear which household member suffers from which problem (e.g. which household member suffers from alcohol abuse or alcohol dependency).

The social worker decides which benefit should be given to different individuals within the household entitled for social assistance. Each benefit is recorded in the database separately. Each individual receiving some kind of a benefit is given his/her own identification number. It may also the case that not all members of a household that is entitled to social assistance are listed in the database, but only those individuals who are directly entitled to some kind of benefit (including children). Each beneficiary can also potentially receive several benefits during one quarter; in the database there can be more than one observation per person. Identification numbers allow a tracking of individuals within each quarter as well as over quarters and perhaps years. For each individual the following information is entered: type of problem within the individual's household, individual's gender and age, family composition, city size, labour market situation, income per capita within the household, individual's income source, household's maintenance source.

The analysis herein was based on this database covering all four quarters of 2000 for a sample of 375 SACs, covering 216 233 social assistance recipients.

3.2.3. Methodology of the Analysis

The analysis adopts a quantitative approach to alcohol related problems among social assistance recipients. Administrative data from SACs were used for the first time for such analysis and therefore needed detailed preparation for the purpose of the research. Quarterly data were aggregated into a one-year database, and the structure of the database was changed from data organised by benefit to data organised by individual. We identified a group of recipients who indicated alcoholism as one of the problems in their household at least once during the whole of 2000 (0-1 variable, where 0 – household does not suffer from alcohol problem, 1 – household suffers from alcohol problem). Other variables describing the individual's or household's situation were recoded for the purposes of the research.

To explain the interrelations between alcohol abuse among social assistance beneficiaries and its socio-economical determinants we conducted a profile descriptive analysis on two groups: a general social recipients sample and the group of recipients that reported at least once that their household suffered from alcohol abuse. In further analysis we investigated the

strength of the interrelationships between alcohol problems in the household and the recipients' socio-economic situation using a logit model. The aim of the analysis was to come up with the probability that alcohol abuse is a cause of households applying for social assistance, depending on the individual/household situation.

3.2.4. Characteristics of the Studied Groups

Social assistance beneficiaries

Demographic and social characteristics

There is a large disproportion between male and female social assistance recipients, with women accounting for 66.9% of total social assistance beneficiaries in 2000, against 33.1% for men. This disproportion can be explained by several different factors. Partly it is a consequence of targeting some benefits to single mothers, as single maternity is one of the dysfunctionality criteria outlined in the Social Assistance Act. The high proportion of women among social assistance beneficiaries can also be explained by the role of maternity in Polish households, where women take responsibility for providing a part of household income, especially if the mail partners are unemployed.

In terms of age, most social assistance beneficiaries fall into one of two groups: children under the age of 18 and individuals between the age of 35-44.

Table 3.2. Social assistance recipients by age

Age groups	Frequency	Percent
17 years old and less	45 069	20.9
18-24	27 364	12.7
25-34	39 741	18.4
35-44	45 004	20.8
45-54	31 566	14.6
55-64	9 347	4.3
65 years old and more	17 851	8.3
Total	215 942	100.0
Missings	*291*	*0.1*

Source: Own calculations.

This disproportionality in the age of social assistance beneficiaries is coherent with other research on poverty in Poland, which depict – surprisingly – that it is not the elderly that are most threatened by poverty but families with children (World Bank 1995). Children who are

recorded as "beneficiaries" of social assistance generaly do not receive benefits in cash, but 95% of them are granted "childrens' meals at school or kindergarden", 2.7% are granted "family benefits", and each other type of benefits are granted to less than 1% of children. According to information from the Ministry of Labour, meals for children at school are the most commonly given type of benefit, almost in every case of families with children that are entitled to social assistance. However it may be the case that some children in households receiving social benefits are not entitled (individually) to any kind of social assistance, including meals at school. Such children are not included in the database.

Close to 50% of the social assistance beneficiaries' households are married couples with children. This is in line with earlier research on poverty in Poland (World Bank 1995), which found that children as a group are significantly affected by poverty. The second group threatened by poverty are one-person-households. This could indicate that these households are mostly threatened by social exclusion and a high level of alcohol consumption. Among social assistance beneficiaries the number of single mothers is quite high. This tends to result from their underprivileged economic situation as well as due to the targeting of social assistance to them (and that is why it is widely represented in the database).

Table 3.3. Structure of social assistance recipients by family composition

Family composition	Frequency	Percent
Marriage with 1-3 children	57 899	30.7
Marriage with 4 and more children	35 863	19.0
One-person-household	32 758	17.4
Single mother	30 669	16.3
Multi-person household	10 157	5.4
Multi-family household	7 689	4.1
Marriage without children	5 780	3.1
Concubinage (with or without children)	5 061	2.7
Single father	2 326	1.2
Supplementary family	334	0.2
Total	188 536	100.0
Missings	*27 697*	*12.8*

Source: Own calculations.

As also earlier research shows (Golinowska 1997), the highest share of recipients of social assistance is among farmers. In a sample half of the families live in the countryside. Poverty in rural areas is connected with high levels of long-term unemployment and low real incomes

from agricultural production. Such results appear to indicate that larger cities have suffered less during the economic transformation than farmers and inhabitants of small towns.

Table 3.4. Social assistance recipients by place of living

Place of living	Frequency	Percent
Rural areas	118 783	55.8
Town of up to 10 thousand	13 515	6.3
Town of 10-20 thousand	16 511	7.8
Town of 20-50 thousand	31 886	15.0
Town of 50-100 thousand	23 502	11.0
Town of 100-200 thousand	5 035	2.4
Town of more than 200 thousand	3 771	1.8
Total	213 003	100.0
Missings	*3 230*	*1.5*

Source: Own calculations.

Economic characteristics

Social assistance benefits are income tested. An average income per capita in recipients' households is significantly lower than the social assistance income threshold. In 2000 these were PLN 168.7 and PLN 350 respectively.

Most beneficiaries are not active on the labour market as they are either unemployed or they are applying for social assistance help due to permanent illness or physical disability. It is necessary to state that the system of social assistance is targeted at individuals and families suffering from illnesses and permanent disabilities either themselves or family members. Among social assistance recipients there is higher share of people passive on the labour market (51.2%) than the registered unemployed (39.2%) and the working poor (9.2%).

Moving from an individual to the household level analysis, the maintenance income of a household is non-earned for 65% of household-recipients (with at least one family member entitled to social assistance).

Social assistance beneficiaries with alcohol-related problems

An alcohol problem in the Social Assistance Act is outlined as one of the dysfunctionality criteria entitling individuals to apply for social benefits. Research concentrates on individuals suffering from alcohol problems within their closest social environment who admitted in the interview to the existence of an alcohol problem in their household. However there are several problems related to alcohol, such as unemployment, low income and family decomposition, that entitle households to apply for social assistance. Alcohol problems are

Table 3.5. Social assistance of household-recipient by main maintenance sources

Household's main maintenance source	Frequency	Percent
Non-earned incomes other than pensions	56 012	37.5
Employment	39 592	26.5
Old-age, family or disability pension	38 411	25.7
Agriculture	13 324	8.9
Self-employment	1 989	1.3
Total	149 328	100.0
Missings[5]	*66 905*	*30.9*

Source: Own calculations.

often only shamefully admitted to. Therefore, some individuals who suffer also from other problems that qualify them for social assistance – often alcohol related (e.g. unemployment) – may decline from admitting alcohol abuse as a problem in their household. This means that analysing the situation of individuals who admit alcohol related problems allows a targeting of the core of the issue, that is, the population for whom alcohol problems are evident and hard to hide.

This analysis examines the relationship between alcohol abuse/dependency and socio – economic factors at the individual and the household level. For this purpose, a variable representing admitting alcohol abuse was created. The variable helped to aggregate a population that – at least once – pinpointed alcohol problems as one of the reasons of applying for social assistance. This does not mean that social assistance benefits were given to all of them because alcohol abuse/dependency was the households' main dysfunction. In 2000, alcohol abuse was admitted by only 1.9% of all social assistance beneficiaries.

Demographic and social characteristics of social assistance recipients reporting alcohol related problems

More men than women report having alcohol problems. This is particularly striking if one takes into account the fact that social assistance recipients are overwhelmingly women. The figure for men reporting alcohol dependency is almost double that for women. This supports the findings of earlier research into alcohol consumption across society as a whole, and not only among the poor. According to a 1989 survey, men consumed 4.5 times more alcohol than women (Moskalewicz, Sierosławski, Zieliński 1991).

The same research points to age as the second most important factor in determining alcohol consumption. Its findings suggested that the highest frequency of alcohol

[5] There is a high level (30.9% of total social assistance recipients) of missing information on the household's main maintenance sources which may be due to lack of willingness on the part of recipients to provide information on their maintenance (which could also be from working in the shadow economy).

consumption is found among persons between 40-49 and that the lowest is found among young (between 14-19) and older people (over 60). Analysis of alcohol consumption among social assistance recipients conducted 11 years later partially confirms these results. The highest frequency of reporting alcohol related problems is among social assistance recipients between 35-54 (2.5%-3.0% of all 35-54 years olds), while those between 18-24 rarely report having an alcohol problem (0.4%). It is interesting that children were often reported as suffering from alcohol related problems (2.5%). This indicates that among poor households a significant number of children live in families with dysfunctions and poor economic situations, often related to alcohol.

Reporting an alcohol problem within a household is significantly differentiated in terms of family composition. Single mothers and families with up to 3 children least frequently report alcohol related problems despite these types of families being highly represented in the sample. Alcohol abuse is reported relatively rarely by what we may call average families (defined here as a married couple with up to 3 children). Alcohol abuse is reported most often by social assistance recipients living in concubinage with or without children (3% of all the concubinages), by single persons (2.9%) and single fathers' households. Alcohol problems are reported relatively frequently also by larger families with more than 4 children (2.5%). Summing up, the relationships between reported alcohol problems in the family and gender and/or family composition is strong. The share of households with an alcohol abuse dysfunction is above average among one-person-households. These are more often headed by men than women; 33% of men on social assistance and 12% of women live in single-households.

The last significant socio-demographic variable in outlining the pattern of alcohol abuse among social assistance recipients is where people live. Although more than half of those served by SACs live in rural areas, the highest share of reported alcohol related problems is people who live in small towns with up to 20,000 inhabitants. Of these, the most threatened by alcohol dependency tend to be individuals living in towns of between 10,000 and 20,000 (3.6%).

The economic situation of social assistance recipients reporting alcohol related problems

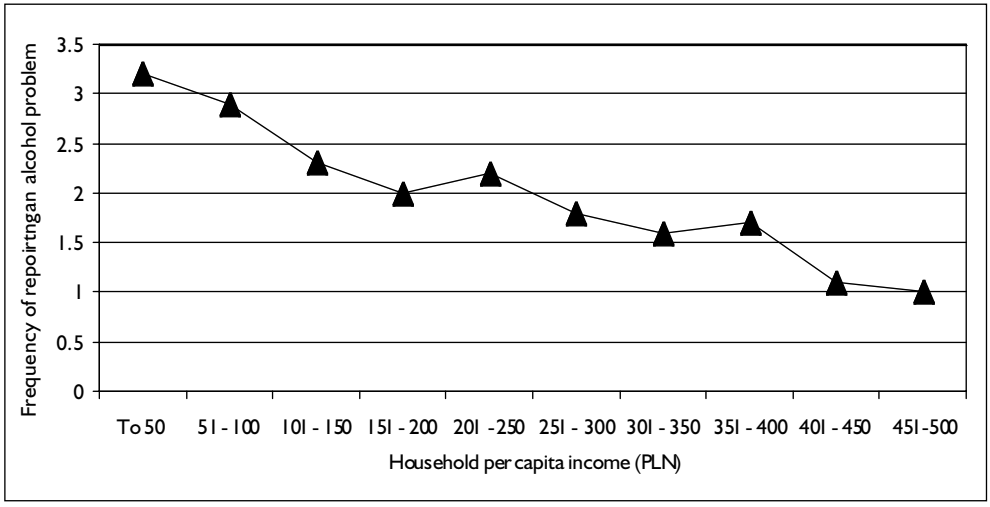
An individual's labour market situation has a significant bearing on the chances that he or she will report having alcohol related problems. Those in work are more likely to report having alcohol related problems (3%) than non-working social assistance beneficiaries or the unemployed (2.5%) or those simply passive on the labour market (1.9%). In examining this relation one needs to focus on labour market factors, including maintenance sources and levels of income for families.

Alcohol related problems are reported most frequently by households' on unemployment benefit and income from agriculture.

The relationship between household income per capita and reported alcohol abuse is strong, in fact almost fully linear. The frequency of reported alcohol abuse is highest among

households with the lowest per capita income and decreases with higher income. Average household per capita income in households with alcohol related problems is significantly lower than average income per capita among social assistance beneficiaries in the sample.

Figure 3.2. Reporting alcohol related problems by household per capita income



Source: Own calculations.

The rough profile of those reporting alcohol problems can be formulated as follows: a man, living in a single household, often working but not regularly, earning a very low monthly income (up to 50 zlotys). At the same time, some social assistance recipient groups rarely report having alcohol problems, for example single mothers.

3.2.5. Factors of Reporting Alcohol-Related Problems by Social Assistance Beneficiaries – Outcomes of the Research

In order to explore the interrelationships between the reporting of alcohol problems and other social indicators we ran a binary logistic regression, which allowed us to gauge more systematically the relationships between reporting alcohol problems within the household and the household's social and economic situation, identified in the profile analysis. It also enabled us to exclude any spurious relationships.

The research goal was to determine the probability that social assistance recipients would report alcohol problems. Its outcome should indicate the risk factors of reporting an alcohol problem in the household. However, one should note that the relationship between reporting an alcohol problem and the household's situation are not instrumental in any causal sense and the direction of causality is not always clear. For example, it is impossible to

unambiguously state whether having an alcohol problem in the household results from unemployment in the family, or that unemployment was the reason for alcohol abuse.

The results of the model should provide answers to the following hypothesis which was formulated on the basis of the profile analysis:

1. Men more often report having alcohol problems than women.
2. Habitation (size of town/city) is an important risk factor in reporting household alcohol problems; living in rural areas or a small town is positively correlated with reporting alcohol abuse.
3. Reporting alcohol abuse is correlated with family composition – single people and those living in broken families are more prone to report cases of alcohol abuse.
4. Unemployment of a family member and the poverty caused by it are significantly related to alcohol abuse.

Explanatory variables are made up by various indicators of the household situation: the social assistance recipient's gender and age, where they live, their type of a family, their labour market position, the household's main source of income and household's per capita income. Each of the variables is recoded into the set of binary variables. The reference category is always the category with the highest frequency. The analysis was conducted on a sample of social assistance recipients over 22 years old, or over 18 and running single households. Children or adolescents living with their parents and reporting an alcohol problem are excluded from the analysis since we assumed that in most cases they themselves are not alcohol abusers and someone in their household is reported as such. Poles tend not to leave home or live on their own until they are in their twenties.

While interpreting the results of the regression one should underline that the data concern individuals who live in households with alcohol related problems. This does not imply that the individuals themselves are alcohol abusers (although this might also be the case). However, for the policy agenda it is important to note that individuals are strongly affected by alcohol related problems in their closest environment (that is, households in which alcohol abuse either by themselves or by other family member(s) leads to poverty and social exclusion of the entire household). It implies, further, that receiving social assistance due to having an alcohol problem is an indicator of the degree to which the household is socially excluded.

The outcome of the model confirms some of the formulated hypotheses.

Gender is an insignificant factor in social assistance beneficiaries reporting alcohol problems, contrary to expectations. However, men who are active on the labour market (either employed or searching for a job) are significantly more likely to report alcohol problems in the household. There seems to be an important relationship between employment and the reporting of alcohol problems, though this has not yet been carefully

Table 3.6. Explanatory variables

1. Gender	Male Female
2. Age	18 – 24 25 – 34 35 – 44 over 45
3. Family type	Marriage without children Marriage with up to 3 children Marriage with 4 and more children Single mother Single father Multi-family/multi-person household* Concubinage Single household
4. Place of habitation	Rural area Town up to 20,000 inhabitants 20,000 – 100,000 inhabitants More than 100,000 inhabitants
5. Individual labour market position	Passive Unemployed Employed
6. Household's maintenance sources	Pension Other than pension non-earned income Employment Agriculture
7. Income	Per capita income in household

Note: * A few families or a few persons not in a marital relationship living in one household.

studied (it is not known, for example, whether this applies to full-time, part-time or temporary employment). As such, one cannot rule out the possibility that this relationship may be spurious. The most interesting positive correlation is between male unemployment and the reporting of an alcohol problem with a female social assistance beneficiary as the reference. There is the additional effect of being unemployed and male. The coexistence of these two features significantly increases the risk of living in a household that has reported having an alcohol problem. The likelihood of an unemployed male reporting an alcohol problem is higher than for an employed male.

In the regression, as in the profile analysis, age is also an important factor in reporting own or family members' alcohol related problems. People between 18-34 are less likely to report alcohol problems than those between 35-44. Although the results relate only to households receiving social assistance, they tend to confirm the general trends in Poland, with the highest levels of alcohol consumption in the group between 35-44 year old and the lowest among 18-25 year olds (Sierosławski, Szumlicz 1995).

Moving from individual to household features we find a positive and significant

Table 3.7. Logistic regression results

Dependent variable: reporting alcohol problem within the social assistance beneficiary's household as one of the reasons for applying for social assistance, values: 1 - yes / 0 - no

Explanatory variables	Coefficient		Standard error	Odds ratio
Individual features				
Gender				
Female	*Reference*			
Male	-0.090		0.097	0.914
Labour market position				
Passive	*Reference*			
Employed	0.943	***	0.085	2.569
Unemployed	0.136	**	0.071	1.145
Gender and employment				
Female	*Reference*			
Employed Male	0.147	***	0.195	0.494
Unemployed Male	0.453	***	0.110	1.503
Age				
35 – 44	*Reference*			
18 – 24	-1.722	***	0.204	0.179
25 – 34	-0.779	***	0.066	0.459
over 45	0.350		0.054	1.035
Household's features				
City size:				
Rural area	*Reference*			
<20,000 inhabitants	0.382	***	0.061	1.465
20,000 – 100,000 inhabitants	0.082		0.056	1.085
>100,000 inhabitants	-0.419	***	0.143	0.658
Family composition				
Marriage with 1-3 children	*Reference*			
Marriage without children	0.136		0.137	1.146
Marriage with 4 and more children	0.025		0.070	1.025
Single mother	-0.971	***	0.095	0.379
Single father	0.063		0.106	1.066
One-person household	0.592	***	0.076	1.807
Multi person/family household	-0.033		0.092	0.967
Concubinage	0.406	***	0.116	1.501
Household's maintenance sources				
Other than pension non-earned income	*Reference*			
Employment	-0.290	***	0.074	0.748
Agriculture	-0.283	***	0.104	0.754
Pension	-0.191	***	0.073	0.826
Per capita income	-0.002	***	0.001	0.998
Log likelihood	18215.489			
Cox & Snell R Square	0.014			
Nagelkerke R Square	0.070			

Note: Level of statistical significance of the variables: * 10 percent, ** 5 percent and *** 1 percent.

Source: Own calculations.

relationship between living in small towns and reporting alcohol related problems. Social assistance beneficiaries living in towns of up to 20,000 are more likely to report alcohol problems within their households than social assistance beneficiaries living in rural areas. At the same time, those living in towns of more than 100,000 are the least likely to report to SACs that any member of their household has alcohol related problems.

The relationship between family breakdown and the reporting of alcohol problems is significant only in the case of single mothers, one-person households, and concubinages, with the average family (married couple, with up to 3 children) as the reference. Single-mother households tend to be least prone to report alcohol problems, even more than the average family. Single households are the most likely to report alcohol related problems. This may imply that individuals living in these households are not only reporting alcohol problems but most likely also drinking themselves. The other group that is only slightly less likely to report an alcohol problem is households based on concubinage.

The outcome for the relationship between household maintenance sources and alcohol related problems suggests that lack of employment among the economically active is the most important factor in inducing the reporting of alcohol abuse among social assistance beneficiaries. Households with incomes from some kind of economic activity or from pensions are less likely to report alcohol related problems than those who live off non-earned income.

3.3. Conclusions

The above analysis allows us to identify those groups of social assistance beneficiaries that are most likely to have alcohol problems, either themselves or in their families, and to report this to SACs. One of the factors most likely to induce reporting of an alcohol problem in one's own household is unemployment of a household member, especially men. Individuals, in turn, become less employable when living in households with alcohol related problems and this is also a barrier to their reintegration into society. Without touching on the causality of the relationship between alcohol problems and unemployment, reintegration of this group into society and increasing their employability is extremely difficult. Those who are socially excluded due to unemployment, poverty and alcohol dependency tend to be at the same time least motivated to take up any activity that will enhance their position. They require complex treatment: psychological assistance, increasing life motivation and social skills as well as training to raise their labour market abilities. The social assistance addressed to such people cannot focus solely on material help, but should also provide these beneficiaries and their families with preventive actions and medical treatment. As the research has showed,

those who tend to report having alcohol problems most often live in single households, with less support from spouses and therefore are in greater need of external motivation.

At the same time the research confirms the differences in deprivation between rural and urban populations in Poland. Rural dwellers more often than urban dwellers apply for social assistance. Moreover, alcohol problems are reported more frequently in small towns than in rural areas, though this relationship might be spurious. It is possible that in rural areas high alcohol consumption is not seen as a problem and therefore tends not to be reported. However, despite the probable underreporting of alcohol problems in rural areas, alcohol consumption is still higher in rural than in urban areas.

Overall, research based on official, administrative data from SACs does not tell the whole story of alcohol related problems among the poor. What it does do is highlight some important relationships between alcohol problems and employability, as well as other social features of households that reports alcohol dependency problems. It provides a useful framework within which policy implications can be formulated. The research also complements previous studies, mostly qualitative analyses, on alcohol dependency and social exclusion in Poland.

Part 4

Family Background and Children's Educational Attainment During Transition

Miriam Beblo and Charlotte Lauer

Introduction

The transition process from a centralised to a market economy in Poland has led to a higher average standard of living within the population. However, transition has also been accompanied by a deepening of inequality across households in terms of socio-economic status. As economic differences between households in terms of their labour market access, educational background, region and other socio-demographic characteristics are suspected to prohibit the equality of socio-economic opportunities for children, this inequality might become even more severe for the next generation. Indeed, the family represents the crucial link that passes socio-economic endowments of the older generation (parents) to the younger one (children). In particular, if parental poverty has a large impact on the educational prospects of the children, poverty is likely to get passed on over generations because a low level of education dramatically increases the risk of experiencing poverty in the sequel. The transition process may exhibit a detrimental dynamic by which poor education and poor opportunities all over the life-cycle perpetuate across generations. The most disadvantaged families may be caught in a poverty trap, which may give rise to societal disruptions in the medium run.

The purpose of this study is therefore to assess the extent to which parental poverty is transmitted to the next generation via the educational attainment of children in Poland. More precisely, we aim at identifying the link between an individual's socio-economic background as mainly provided by the family and his/her educational attainment throughout the transition period. Although the incidence of poverty in Poland as well as the effects of state transfers to relieve poverty have been extensively investigated on a

general level by, for example, Golinowska (1996, 1997), Kotowska (1997, 1998), Szulc (1997) and the World Bank (1994, 1995), a microeconometric analysis of the relationship between family background and children's educational attainment during transition is still missing. Available data sources such as the Labour Force Survey (LFS) provide information on the social situation as well as on the education level of all household members over the 1990s and therefore enable us to identify the characteristics of disadvantaged families and to investigate how these relate to the educational outcomes of children in such families.

In the remainder of the chapter, we will first give a brief overview of the extent and structure of poverty in Poland. Then, we will outline the mechanisms by which poverty may be transmitted from parents to children through the educational achievement of children. In the third section, we will present our empirical analysis of the determinants of children's education using data from LFS. After a description of the Polish education system, we provide an overview of the structure and the developments in enrolment rates and educational levels for our sample of LFS. Next, we apply an ordered probit model to investigate the relationship between family background and children's educational attainment on a multivariate basis and to identify in particular the role of the parents' financial or labour market situation. The chapter concludes with a discussion of the results.

4.1. Poverty During Transition

Although the transition to a market economy has had severe effects on the living conditions of the population through the lifting of price controls, the imposition of fiscal discipline and the cutting of subsidies on the prices of basic commodities (Okrasa 1999b), it has to be stressed that poverty, unlike open unemployment, is not a new phenomenon to Polish society. During the 1970s and 1980s, income inequality was already higher in Poland than in other middle and eastern European countries (see Golinowska 1998 and references therein). Szulc (1997) argues that absolute poverty in Poland was higher in the 1980s than in the 1990s despite the increase in official unemployment[1]. According to Keane and Prasad (2002) as well as Sibley and Walsh (2002), the Gini estimate of income inequality hardly changed over the 1990s at the national level.

However, Golinowska (1997) states that the 1990s are marked by an increase in inequality and hence in relative poverty. In 1994 wages and real income rose again for the first time since 1989 (Golinowska 1998). Nevertheless, mobility out of poverty was limited. The fraction of those who remained poor for two consecutive years according to the official

[1] Unemployment jumped from being unreported to about 17% in 1993 (Okrasa 1999b).

social-minimum criterion[2] increased from 45% in 1988/89 to 72% in the recession period 1991/1992 (Okrasa 1999b). During the growth period of 1993 to 1996, the percentage stabilized at about 60%[3]. That is, the pool of poor people seems to have been rather stagnant. In industrial regions, it consists mainly of (former) blue collar workers, as Kotowska (1997, 1998) shows. Despite the difficulties faced by industrial blue-collar workers, the most dramatic decline in average incomes in the early transition phase was observed in farmers' households (37% between 1988 and 1992) (Golinowska 1997). Moreover, households associated with agriculture had a greater risk of falling into long-term poverty than employee or pensioner households (Okrasa 1999b).

Poverty is also strongly related to unemployment. Of all households with at least one unemployed member, about 27% experience poverty according to the relative poverty line, whereas the share is 10% for families not affected by unemployment. The poverty rate is even higher if unemployment benefits are the main source of income (Golinowska 1998). Following Okrasa (1999b), long-term unemployment seems to be associated with chronic poverty.

According to the World Bank, regional variation in poverty incidence, though existent is not much pronounced. When analysing nine regions covering between four to eight voivodships (Polish regions), the capital city region exhibits the lowest poverty incidence, whereas in the Southeast and Central-West regions it is highest. Differences were a bit more pronounced according to the human development index used by the United Nations. Accordingly, sub-regional disparities in human development increased in Poland between 1992 and 1995, though the pattern remained unchanged (United Nations 1998). The lowest level of human development was found in the Southeast and on the Baltic coast characterised by many rural areas, the highest in large urban centres. In addition, while controlling for regional fixed effects, Sibley and Walsh (2002) report measures of earnings inequality to be higher in regions that are more advanced in restructuring.

The poverty status of a household is strongly affected by the level of education achieved by the household head. For holders of a university diploma, the risk of falling into poverty is three times as low as for other households (Okrasa 1999a). Using the household budget survey data, the World Bank finds a strong inverse relationship between poverty and education level of the household head. Post-secondary or university education even seem to guarantee a living standard above the poverty line. At the lower end of the education scale, however, the World Bank finds that the poverty rates of various social groups are quite similar. The%age of people below the poverty line ranges between 23 and 27 when the household head has only an elementary level of education no matter whether he is a worker or a farmer.

[2] A low-income threshold had been introduced in 1981 as equal to the 1980 social minimum. It was updated thereafter. The low-income threshold was quite similar to the relative poverty line of half-mean income.

[3] Based on the relative poverty line of 50% of mean income in Poland for this period.

To summarise, the households who are most affected by poverty are those living in rural areas, headed by poorly educated people and with unemployed members (see also Okrasa 1999a and 1999b). Moreover, households who prove to be less successful in avoiding poverty are those with a high number of children. A World Bank study (Okrasa 1999b) states that long-term poverty is a generation-skewed phenomenon in the sense that the number of years in poverty grows with the number of children. Poland has an over-proportional share of poor children. Golinowska (1997) also shows that the poverty rate increases as the number of children in the family gets higher. In 1996, the poverty rate measured by the minimum existence level criterion was 5.3% for families with 3 children, and 16% when the number of children exceeded 4. Overall, the transition process has considerably increased the social hardship of children (Golinowska 1996 and Unicef 1997).

The overall rise in disparities with respect to income as well as education across Polish families, accompanied by higher costs of education for families, leads to the fear that in the sequel children and young people will face increasingly unequal opportunities (Golinowska 1998). This problem is expected to be most severe for children with an agricultural background. Not only does the typical poor Polish family live in an agricultural region and have many children, but the children themselves also face worse educational prospects than their peers in urban areas, partly due to poorer access to education institutions. The United Nations (1998) report that 'young people of [rural], origin constitute half of the 19-24 age group, but only 2% of tertiary students of that age group'.

Finally, there is evidence that the number of children is strongly related to the education level of the parents. More than 60% of parents with three and more children have no secondary education, whereas the overall average is 50% (Golinowska 1998). As mentioned above, the poverty status of a household depends on the education level of the household head. At the same time poverty is a question of the number of children and this is in turn related to parents' education. It thus becomes evident that the education of parents and children and other household characteristics reinforce each other, thereby creating a vicious circle of economic deprivation.

4.2. Children's Education as a Mechanism of Poverty Transmission

The extent of poverty and the increase in unemployment arising with the transition process might have far-reaching consequences for the Polish society. To the extent to which poverty is transmitted from one generation to the next, the transition process will have repercussions which go far beyond the transition period itself. Following the human capital theory of Becker (1964) and Mincer (1974), education is a key element which affects

individual earnings prospects. In a broader perspective, educational attainment may be viewed as the primary key to socio-economic success. Indeed, persons with a higher level of education not only have higher earnings prospects when they work, but are also less likely to experience unemployment and social exclusion in general. This link between educational attainment and socio-economic outcomes has been confirmed by numerous empirical studies for a wide range of countries (see for instance a review of the related literature for Europe in Asplund and Pereira (1999)).

For Poland also, it has been found that poor educational achievement strongly enhances the risk of experiencing poverty (World Bank 1994, 1995). Consequently, if parental poverty – understood in a broad sense – has a large impact on the educational prospects of the children, it enhances children's future poverty risk and poverty is likely to be passed on over generations. Considering that the gains from education go far beyond the labour market and have a wide range of positive externalities (on health, criminality, see among others Mayer 1994), it is of substantial interest to analyse the extent to which family background affects one's educational prospects.

Family background may affect children's educational outcomes through various channels. First, children growing in families where the education level of the parents is high might have better educational prospects because they inherit to some extent the learning ability and some other cultural endowments of their parents. Thus, Becker and Tomes (1986), and more recently Ermisch and Francesconi (2001), point to the fact that part of a child's human capital is "inherited" through the transmission of genetic and cultural endowments from parents to children. The greater the degree of inheritability, the more closely related the human capital of parents and children are. Sociologists and psychologists insist on the role of peer effects, meaning that adults or peers to whom children relate set norms of desirable behaviour and achievement (see Havemann and Wolfe 1995). Thus, the educational attainment of the children is influenced by their social background through the transmission of ability as well as of certain patterns of behaviour, preferences and expectations which, to some extent, are internalised by children as standards and affect their cognitive and social-psychological development.

Moreover, parental background might affect offspring's educational outcomes through the availability of financial resources within the family. The acquisition of education may be viewed as an investment, since it entails costs[4] in the hope that it will bring about enhanced earnings in the future (Becker 1964). For initial education, the investment has to be financed by the parents, who are supposed to have an interest in the well-being of their offspring, i.e. to be altruistic to some extent. Thus, children's educational outcomes are dependent on intra-family transfers. In the presence of imperfect capital markets, and if the parents do not

[4] The direct costs which might be associated with education, but also the opportunity costs caused by the time devoted to education which is diverted from the labour market and potential earnings.

dispose of enough money – either because their wages are too low, or because they do not dispose of any earnings nor other sources of income – investment in education might be limited by credit constraints (see Rosenzweig and Wolpin 1993).

The positive correlation between family income and schooling attainment is well documented in the literature, essentially for the United States (Solon 1992, Hill and Duncan 1987, Taubmann 1989) and has been widely interpreted as evidence of borrowing constraints[5]. If parental income also proves to be correlated with children's education for Poland, then the extent of poverty and unemployment, for instance, should have repercussions on the educational attainment of the subsequent generations.

Not only the amount of family resources allocated to the children, but also the nature of these resources and the timing of their distribution influence children's attainment. Thus, children will also be affected by decisions such as the number of siblings, the region where the family lives or the family structure (Haveman and Wolfe 1995). Because they generally have fewer potential wage-earners, single-parent families have less access to financial resources than two-parent families (Boggess 1998). They also have less time to spend on their children, supervising their behaviour or assisting them in their school work. A working mother also has less time to devote to her children, but in this case, there is a trade-off between monetary and time resources. The increased parental income associated with the mother's work might offset the reduction in child care time. In addition there is a cultural aspect of the mother's job status that might have an impact on (particularly female) children's education. Here, the evidence is contradictory, since Hill and Duncan (1987), for instance, find a negative relationship between completed education and mother's work hours, whereas Boggess (1998) does not find any significant impact of mother's employment on children's educational attainment.

There is little evidence on the impact of family background variables like parental education, occupational status or family structure for Poland. Among the few exceptions, Heyns and Bialecki (1993) examine the impact of socio-economic background, as measured by father's education and occupational prestige, on educational attainment for cohorts born between 1920 and 1969. The authors note, that upward social mobility is traditionally low in Poland and children largely replicate the educational attainments of their parents, which is also argued by the United Nations (1998). Heyns and Bialecki (1993) find that the effect of parental status does not vary across cohorts, and that father's education is a far stronger variable in predicting the educational attainment of Polish children than occupational variables. The authors conclude that the increase in access to education seems to result from a more widespread availability of schooling rather than from a change in the socio-economic determinants of educational

[5] However, recently, some studies (e.g. Cameron and Heckman (1998), Shea (2000)) have contested the causal nature of the link between family income and children's educational attainment, arguing that not parental income per se generates higher educational achievement, but rather learning ability, in the sense that the commonly observed effect of parental income would only reflect the correlation between parental income and parental ability, which, in turn, is correlated with children's ability.

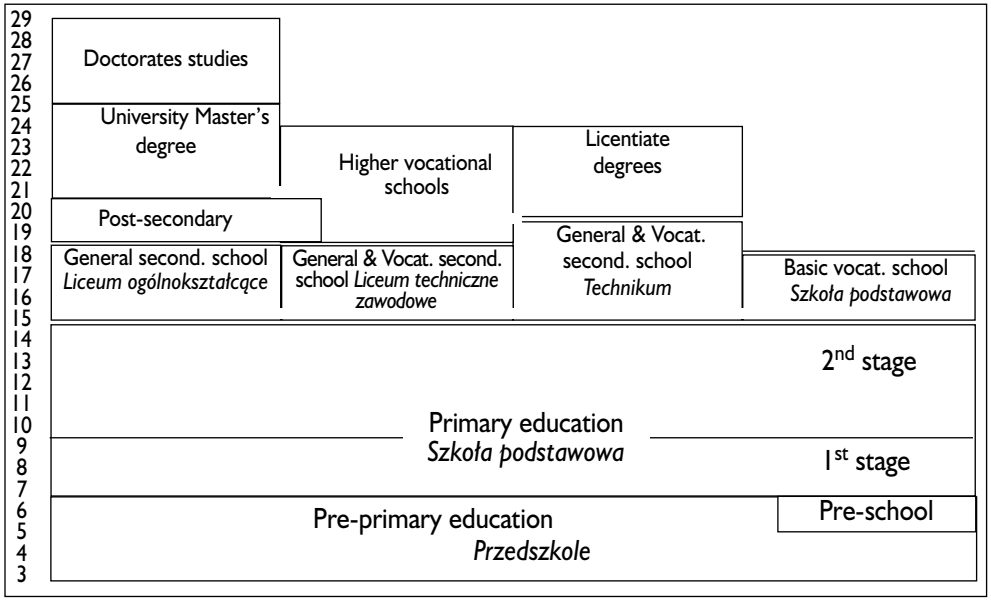
success. This results contrasts with the analysis of the United Nations (1998), which, however, covers a different time period, namely the transition period. Indeed, according to the report of the United Nations (1998), even though the general level of education has increased in Poland since 1989, with a particularly strong expansion of enrolments in higher education, there is evidence that this educational expansion went along with an increase in social disparities in access to education. The report also points to an increase in regional disparities, since young people coming from rural areas have an increasingly difficult access to education at all levels.

4.3. An Empirical Analysis of Children's Educational Outcomes

4.3.1. The Polish Education System

In the following, the Polish education system is presented as it was organised throughout the period under consideration (see Figure 4.1). The exposition largely follows that of the Education Information Network in Europe (Eurydice 1999). In 1999, a reform of the education system has taken effect. Structural reforms at the primary level have already been introduced in 1999/2000 whereas the reform of the upper secondary education level will start in the school year 2002/2003. Since the data available to us only cover the pre-reform period, we will restrict our description to the old system. However, we will hint at changes where applicable.

Figure 4.1. The Polish education system



The first level of the Polish school system is the mandatory pre-primary education for children aged 3 to 6 in nursery schools and pre-school classes (*oddziały przedszkolne*) attached to primary schools. In the latter six year old children have the right to complete a year of preparation for primary education.

Primary education

Primary schools are divided into two stages: the first stage (grades 1 to 3) offering elementary (block) learning and the second stage (grades 4 to 8) at which systematic teaching is provided. Children leave primary school at age 14. There is no leaving examination; children receive the primary school leaving certificate only (*świadectwo ukończenia szkoły podstawowej*).

Secondary education

Secondary education covers the age group 15 to 18 or 19 (20). After the completion of the 8-year single structure primary school, pupils have a choice between the following schools:

- *liceum ogólnokształcące* (4-year general secondary education for students aged 15 to 19)
- *liceum zawodowe* (4-year general and vocational secondary education for students aged 15 to 19)
- *liceum techniczne* (4-year secondary education supplemented with general and general vocational subjects for students aged 15 to 19. This school type is comparatively new, established only in the school year 1995/1996.)
- *technikum* (5-year vocational and technical secondary education for students aged 15 to 20)
- *szkoła zasadnicza* (3-year basic vocational education for students aged 15 to 18)

At the end of the first four types of schools[6] pupils may take the *matura* examination (*egzamin dojrzałości*), which gives them the right for admission to higher education. Graduates from upper secondary schools in Poland have a wide variety of educational possibilities at the level of tertiary education. Those who do not pass the *matura* examination or who were not accepted by higher education institutions, may continue their education in post-secondary schools. Basic vocational graduates receive the qualification of skilled workers[7].

Post-secondary education

Post-secondary schools (*szkoła policealna*), of 1 to 2.5 year duration, are considered as part of secondary education in the Polish classification because of the type of qualifications

[6] These types of educational institutions will start to be replaced by *Liceum profilowane* with the school year 2002/2003 and will completely disappear in 2004 respectively 2005.

[7] With the school year 2002/2003 this institution will be changed to *szkoła zawodowa* in the reformed school system.

they offer. They prepare students for professional life. Students in these schools are trained as nurses, accountants, administrative personnel for enterprises and hotels, computer specialists or librarians. Those who have completed a course of study for a blue-collar occupation obtain the title of skilled worker (*robotnik wykwalifikowany*) in the acquired profession. Those who have completed a 2-year or 2.5-year course of study or a non-worker specialization obtain the title of technician (*technik*) or an equivalent title.

Higher education

There are various types of non-university and university higher education institutions: Teacher training colleges, traditional universities (*uniwersytet*), technical universities (*politechnika*) and academies (*akademia*). At the end of 3 to 4 year higher vocational education, students are awarded the vocational qualification diploma and the title of *licencjat* or *inżynier* (both corresponding to bachelor, depending on the branch of study) which gives them access to the job market or to extended higher studies. Universities and university-type institutions with uniform master-degree studies of 4.5 to 6 year duration are entitled to award the professional titles of *magister* (master), *magister inżynier* (master-engineer), *lekarz* (doctor of medicine). Successful graduates can apply to do a doctorate.

Barriers in access to education / Public expenditures for education

Liberalisation and privatisation, as two systemic changes accompanying the transformation to a market economy, have had diverse effects on the merits and costs of education in Poland. While liberalisation of the labour market led to higher returns to education in terms of job prospects and wages, thus increasing the incentive to invest in education, privatisation of the education system resulted in a diversified quantity as well as quality of educational institutions, particularly outside urban areas (United Nations 1998). What has been diversified at the same time, however, is access to education which now more and more depends on the income level of the parents due to the decline of state expenditures and decentralisation of education services together with inadequate funding at the local level and an increase of the costs to be covered by children's parents. In 1992 state support for education was only 80% of that in 1989, in 1996 it amounted to 90% (United Nations 1998).

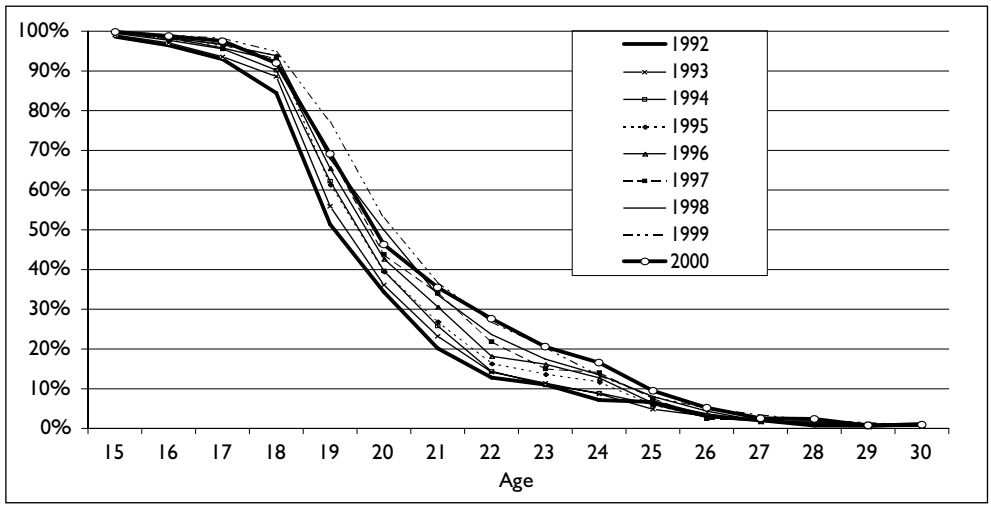
4.3.2. Enrolments and Educational Attainment During Transition

In order to investigate the structure and the determinants of children's educational attainment in Poland, we use data from LFS for the years 1992 to 2000. This way, we are able to cover most of the transition process, though with less emphasis on the early recession period.

LFS is conducted as a national panel survey every three months (Szarkowski and Witkowski 1994). After four preliminary quarters starting in May 1992, and repeated on ever the same sample of households, a rotation system has been introduced in May 1993. According to this system, in each quarter one completely new sample of housing units is selected by two-stage sampling. Each sample is used following a 2-(2)-2 rule. This means that a selected household stays in the survey for two quarters, is out for the next two quarters and back again for another two quarters before it is finally discharged. The survey generally covers all persons aged 15 and above. The respondents fill in two questionnaires: the first one asks for general characteristics at the household level, registering all household members (including children) and gathering information on the housing circumstances and the family relations of all members. The second questionnaire covers only those persons aged 15 and above living in the household. It collects information on socio-demographic and labour-market characteristics at the individual level.

To draw a picture of the changes in the education of young people in Poland during the 1990s and to give a first illustration of the factors mentioned above that are potentially related to it, we are now going to present some stylised facts on enrolments and educational attainment.

Figure 4.2. Enrolment rate of 15-30 year-olds over time (1992-2000)



Source: Own calculations based on data from LFS, waves 1993-2000.

Figure 4.2 depicts the age-profile of participation in education in Poland[8]. The different curves correspond to the years of the survey ranging from 1992 to 2000. As expected, before the age of 15, almost all children are enrolled in education. Henceforth, the enrolment rates are start declining. The decline is characterised by several non-linearities,

[8] The precise question in the PLFS we refer to is: "Are you a student of a day school or university?".

with one major drop in enrolments occurring above age 18 when basic vocational training is completed. Beyond the age of 30, nearly all individuals have left the education system. From the graphs, it is pretty obvious that enrolments have increased steadily over the past decade, at least until 1999 and particularly for the age range 18 to 24. This means that on average Polish people now study longer than they used to at the beginning of the decade, although, in 2000, the enrolment of 17 to 21-year olds has decreased again, even below the 1998 level for those of age 21. Under 18 and above age 24, however, the pattern of educational participation has remained relatively stable over time. Lower secondary education has always been on the agenda for teenagers. It seems that there has been a constant upward shift in upper secondary and post-secondary education over the years, though. Whereas in 1992 only 84% of 18 year-olds and 20% of those aged 21 were studying, in 1999 the respective numbers amounted to 95 and 47%. Higher education enrolments only started to increase significantly in 1995, with yet another shift in 1999.

After having seen that participation in education has expanded during the 1990s and that average schooling duration has become longer, we are now interested whether this quantitative expansion of educational participation translated into a qualitative upgrade of educational attainment in the course of the transition from a centralised to a market economy. In addition, we want to get some first insights into the extent of intergenerational mobility and examine the correlation between the highest education level attained by individuals and some essential characteristics of their family background such as parents' education and income as well as the region of residence.

Table 4.1. Construction of the education level variable

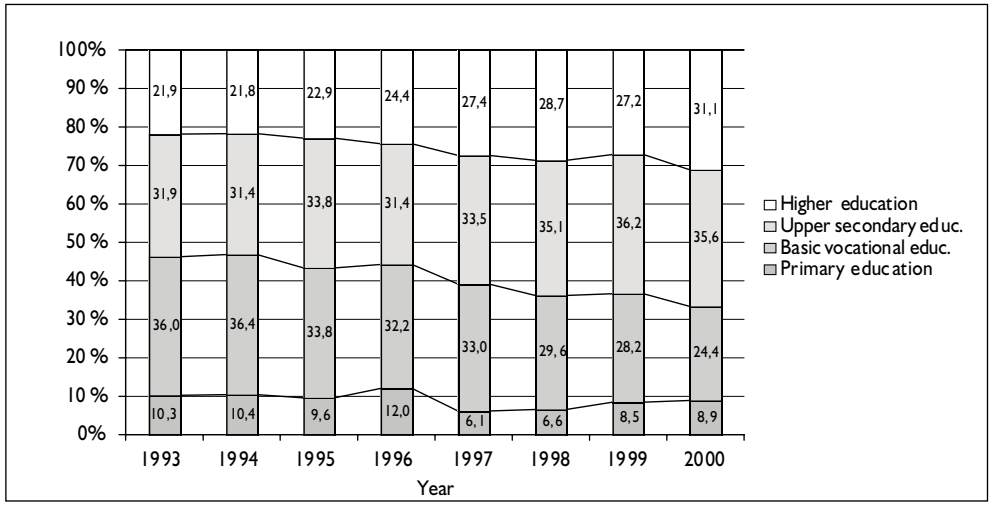
Education level variable	Highest degree obtained	Enrolled
Level 4: Higher education	University	yes or no
	Post-secondary/vocational/ general school	yes
Level 3: Secondary education	Post-secondary school	no
	Vocational school	no
	General school	no
	Basic vocational school	yes
	Elementary school	yes
Level 2: Basic vocational education	Basic vocational school	no
Level 1: Primary education	Elementary school	no
	Less than elementary school	yes or no

The LFS does not ask questions on the respondents' parents. However, by means of a household identification number, it is possible to match individuals with their parents provided they live in the same household. Since the likelihood of having left the parental household and living on one's own rises with age, we focus on younger individuals. For the

purpose of the analysis we have drawn a sample of individuals whom we could link to their parents, young enough to minimise sample selectivity problems, but at the same time old enough to have finished education or be about to finish it. After trying various ages for the definition of the sample, we have finally selected a sample of 21 year-olds, for which a reasonable proportion of which (about 65%) we are able to gather information on their family background. Since a non-negligible part of the 21 year-olds has not yet finished education at that age and is still enrolled in education, we need to take this into account. The PFLS provides information on the highest degree obtained, and also whether the person is currently enrolled in education or not, though not the specific level of education the person is enrolled in. We combine this information to construct four levels of educational attainment, ordered by level, as illustrated in Table 4.1.

First of all, we examine the structure of the highest degrees obtained by our sample of 21year-olds over the time period 1993 to 2000. Observations from the first wave gathered in 1992 could not be considered since no question concerning the highest level of education that the respondent had attained was asked in that year.

Figure 4.3. Highest education level of 21 year-olds over time (1993-2000)



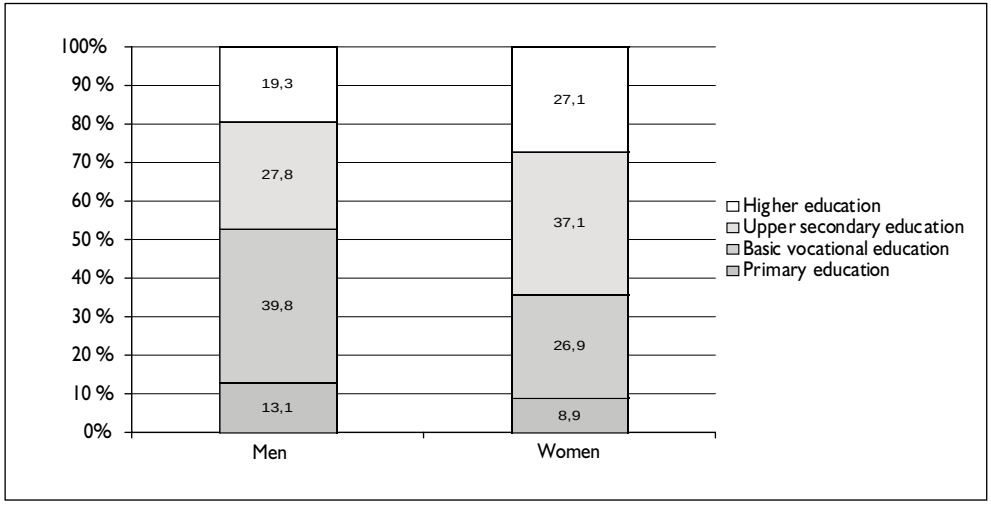
Source: Own calculations based on data from LFS, waves 1993-2000.

From Figure 4.3, it appears that until 1997 the educational distribution is strongly concentrated around intermediate qualification levels. Thus, the bulk of young Polish people has received basic vocational education or upper secondary education at most, while comparatively few people have attained higher education and even fewer hold a primary education degree only. Considering developments over time, we can see that there has been an upward shift during the period observed, with a decreasing percentage of persons with poorer educational attainment and an increasing proportion of persons

with a higher educational attainment. Looking more in detail, it seems that the educational distribution has remained rather stable until 1995 and that an educational upgrade has only occurred since then, presumably because of the expansion of private education institutions. In particular, the proportion of graduates from tertiary level institutions has increased strongly. In 2000, almost a third of the generation born in 1979 has reached the university level. At the same time, the proportion of basic vocational certificate holders has decreased, especially since 1996. The proportion of 21 year-olds with completed primary education only has also decreased between 1996 and 1997 but is now slightly increasing again.

In the following figures, we examine the structure of educational attainment depending on certain characteristics. Hereby, we pool the data over the period 1993 to 2000 and observe the average educational distribution in this period for different groups of individuals. Figure 4.4 shows the difference between 21 year old men and women in terms of educational attainment.

Figure 4.4. Highest education level of 21 year-olds by gender (1993-2000)

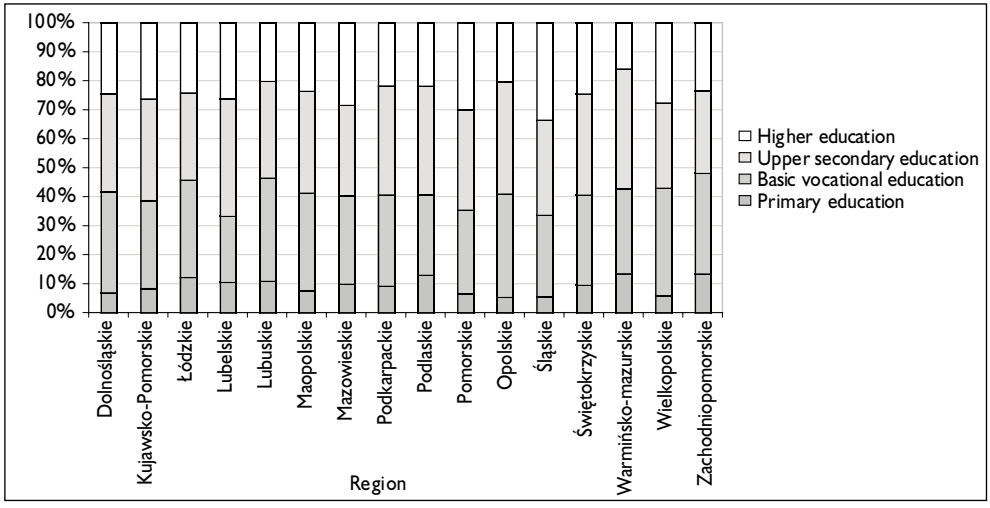


Source: Own calculations based on data from LFS, waves 1993-2000.

Obviously, 21 year-old women have reached a higher education level than their male counterparts: The proportion of women with a higher education degree and with an upper secondary education degree is by far higher than among men, while the percentage of women having a basic vocational degree or having left school after primary education is significantly lower than for men. These differences may partly be due to the types of occupations young women and men choose, as most of the male-dominated jobs require only basic vocational training whereas female-dominated occupations are typically preceded by general secondary education.

As we learned in Section 4.1, it seems that there exist some regional disparities in educational achievement. Therefore, we look at the distribution of educational attainment by region of residence in our sample of 21 year-olds over the time period 1993 to 2000. We thereby distinguish 16 provinces that approximately equal the new Polish voivodships after the territorial reform in 1999[9].

Figure 4.5. Highest education level of 21 year-olds by voivodship (1993-2000)

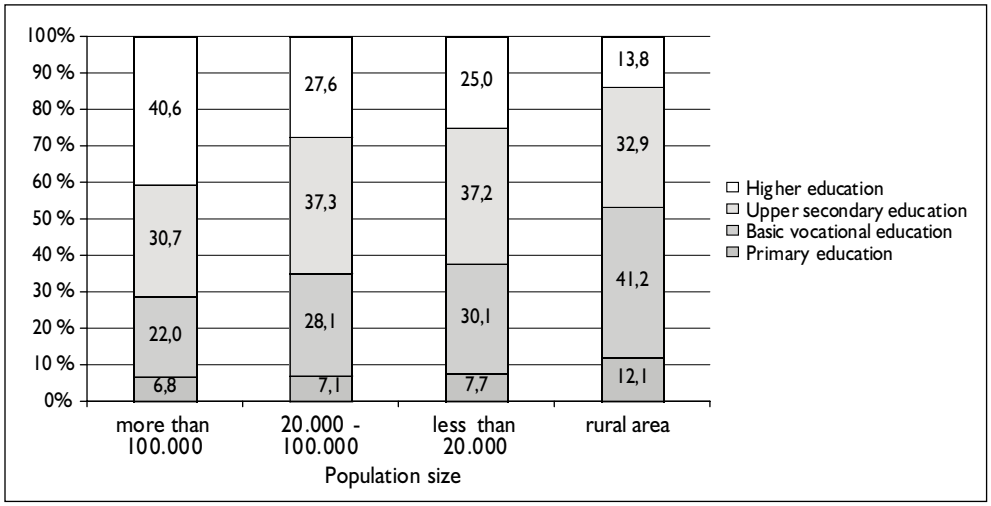


Source: Own calculations based on data from LFS, waves 1993-2000.

As appears from Figure 4.5, overall, the distribution of education looks quite similar across regions, with the same concentration around intermediate qualification levels and comparatively few people with a very high or a very low education level. However, some provinces are outstanding. In the North-East, the proportion of tertiary level graduates is particularly low (Warminsko-Mazurskie is the only voivodship where it is below 20%), while the proportion of young people who completed primary education at most is highest. The lowest proportion of 21-year olds with upper secondary or higher education can be observed in Zachodniopomorskie (North-West). At the other end, the voivodship Slaskie in the South has the highest percentage of graduates from higher education and the lowest with only primary education, followed by Pomorskie in the North-West and the capital region Mazowieckie. Hence, there is not much accordance between these education levels and the picture drawn by the regional poverty rates of the World Bank report. Only the capital city region seems to combine low poverty with a high proportion of high level education.

[9] New voivodship information is only given in the 2000 wave of the PLFS. For the preceding years we aggregated all old 49 voivodships to have a comparable measure. But as the new provinces are based on counties (*powiaty*) instead of old voivodships we could not always ensure a 100% equivalence.

Figure 4.6. Highest education level of 21 year-olds by city size (1993-2000)



Source: Own calculations based on data from LFS, waves 1993-2000.

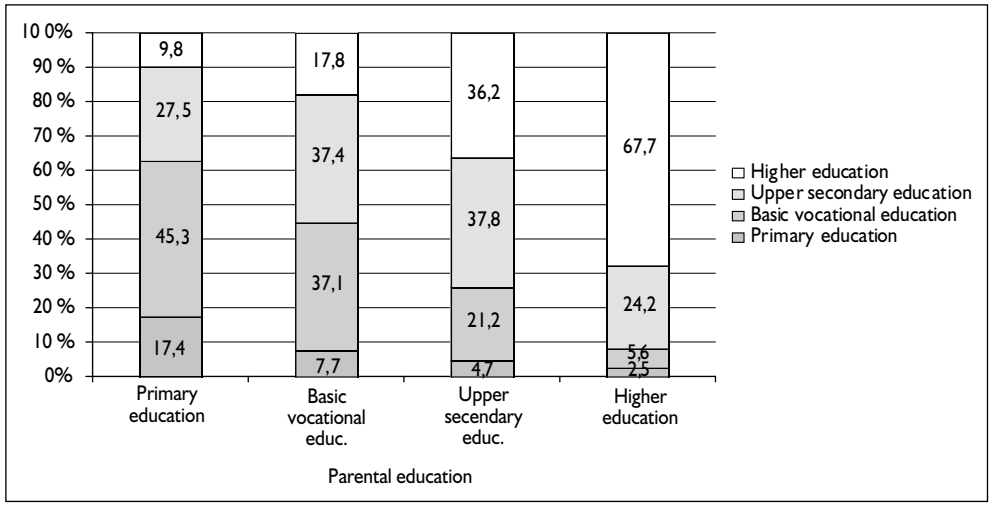
More than region, the size of the city of residence seems to matter (see Figure 4.6). There is a clear and strong relationship between the number of inhabitants of the city of residence and the level of educational attainment: in large cities (with more than 100 inhabitants), the proportion of tertiary level graduates is about 3 times as high as in rural areas, while the percentage of 21-year olds who left school after primary education is only about half.

The proportion of children with a basic vocational degree at most is also particularly high in rural areas, while the proportion of young persons with upper secondary education is in general significantly lower than in urban areas, though about the same size as in big cities and not to the same extent as that of higher education graduates. This picture is most likely due to the supply of educational institutions dependent on city size. While universities are located in larger cities, rural areas are not so well endowed, at least in terms of public education institutions.

Since we are interested in the link between parental background and their offspring's educational outcomes, we now examine the correlation between some essential parental characteristics and the highest degree obtained by the children.

Figure 4.7 depicts the level of education of 21 year-olds depending on the education level of their parents. Here, parents' education refers to the education level of that parent holding the highest degree and is measured by four categories: primary, basic vocational, secondary and higher education. As parents of 21 year-olds have generally finished their education already, the differentiation is a bit different from that of their children and the variable on the education level of the parents can easily be computed on the basis of the highest school degree reported. As appears from Figure 4.7, there is a clear positive

Figure 4.7. Highest education level of 21 year-olds by parents' education (1993-2000)



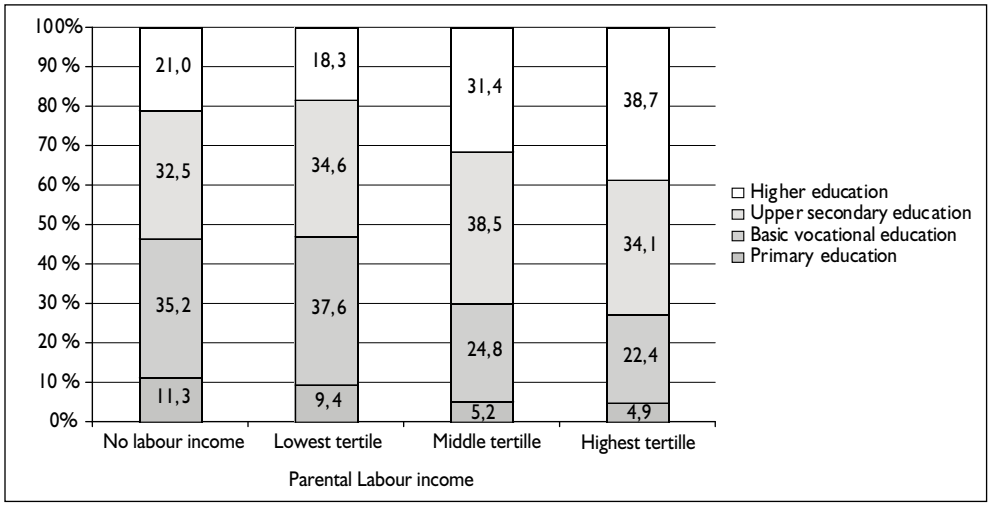
Source: Own calculations based on data from LFS, waves 1993-2000.

correlation between parents' and children's education. While the numbers do not vary that much for upper secondary education, the percentage of youngsters with higher education but also primary and basic vocational education differ remarkably depending on the parents' human capital endowment. For instance, more than two thirds of the individuals with at least one parent having a higher education degree are themselves enrolled in tertiary level studies, while this applies to less than 10% of the sons and daughters of poorly educated parents (having completed at most primary education). Conversely, almost two thirds of the young persons whose parents have only completed primary education hold a basic vocational degree or less, while this concerns only 8% of those persons with highly educated parents.

Furthermore, we look at the relationship between parental income and children's educational attainment. Unfortunately, no information on total household income has been collected in LFS. However, we have information on parents' labour income, but also on the main source of income in the household. Figure 4.8 illustrates the relationship between children's highest degree and total labour income in the household. Due to a currency reform in Poland and due to high inflation rates, income is not easily comparable between waves. We therefore use a relative measure of income indicating in which tertile (33,33% quantile) of the earnings income distribution the household finds itself or whether the parents receive no labour income at all.

As can be seen from Figure 4.8, having parents who fall into the lowest labour income tertile is associated with a lower probability of achieving higher education and a significantly higher probability of achieving only a basic vocational degree or less. Having parents who are in the highest labour income tertile does improve educational prospects

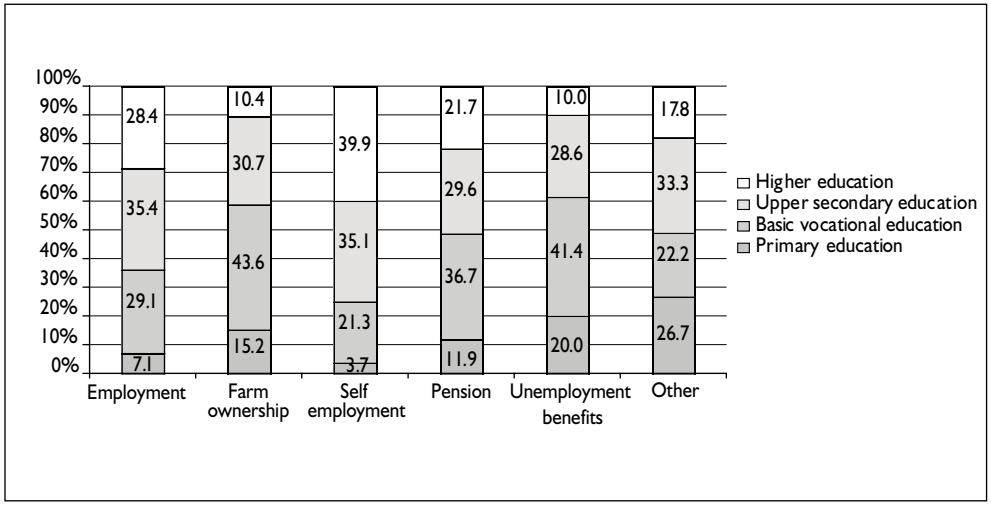
Figure 4.8. Highest education level of 21 year-olds by household labour income



Source: Own calculations based on data from LFS, waves 1993-2000.

compared to the middle tertile, but only very slightly. Those persons living in households with no labour income have slightly better educational prospects than those living in households of the lowest labour income tertile. This might be explained by the fact that part of the households without any labour income may receive income from other sources, for instance from self-employment or state transfers. In order to consider this issue, in Figure 4.9 we also examine the correlation between children's educational prospects and the main source from which households draw their income, as this information is also available in LFS.

Figure 4.9. Highest education level of 21 year-olds by main source of household income (1993-2000)



Source: Own calculations based on data from LFS, waves 1993-2000.

It appears that young persons living in households who draw their main income from unemployment benefits or from farm ownership face the worst educational prospects, with an extremely low probability of entering tertiary level studies and a particularly strong probability of completing primary education or basic vocational education at most. On the other hand, children in households having income from self-employment experience significantly better educational prospects. Sons and daughters of pension beneficiaries seem to have worse educational prospects than those of parents who dispose of labour income as a main income source.

4.3.3. Determinants of Educational Attainment

While these simple correlations between the education of children and their respective family background characteristics provide us with a first impression of the relations at work, they may as well be misleading in the interpretation of social inequality in educational attainment in Poland. Indeed, as conjectured above, background variables may be interrelated and therefore reinforce each other. Given a negative correlation, say between the number of children and their educational prospects for instance, one might wrongly attribute the negative impact to the number of children while it actually stems from the fact that families with many children generally live in the countryside and this is, in fact, the relevant factor which negatively affects the educational prospects. Our analysis therefore aims at disentangling the respective impacts of the various factors on educational attainment. In other words, in our analysis of social inequality in educational attainment of young Polish people, we now test whether the links brought up by the empirical literature and partly confirmed by our figures still hold in a multivariate context. This will give us insights into true correlations as opposed to spurious correlations. For this purpose, we set up an econometric model of educational choice which accounts for the impact of various variables simultaneously.

In this model, we suppose that, for each individual, there exists an optimal amount of education he or she would ideally like to attain, given some constraints, and let us call E^* this desired level of educational attainment. E^* is a continuous variable which is not observable. What can be observed is the actual decision of the individual given some characteristics, i.e. the educational level E chosen among the J possible educational alternatives Ej which can be ranked according to their levels, with $j \in \{1...J\}$ and $j=1$ corresponding to lowest and $j=J$ to the highest educational level. The observable educational choice depends on the desired level of schooling and on the opportunities available.

The decision on educational attainment is assumed to be rational in the sense that it maximises the net perceived utility for the individual, subject to some constraints. Note that it does not matter who in fact makes the decision, whether it is the individual himself or

somebody else (the parents, for instance). What counts is the outcome of the decision among the possible alternatives. Let us suppose that, for each individual i, with $i \in \{1...N\}$, the desired level of educational attainment can be expressed as a linear function of a vector of individual characteristics x_i and a residual term ε_i. Thus, we have:

$$E_i^* = \beta x_i + \varepsilon_i$$

As mentioned previously, we do not observe the continuous variable E_i^*, but the discrete level E_i, which is defined to take a value E_{ij}, with $j \in \{1...J\}$, if E_i^* falls within a certain range $[\mu_{j-1}, \mu_j]$:

$$\begin{array}{rcccccc} E_i = & E_{iJ} & \text{if} & \mu_J & E_i^* & > & \mu_{J-1} \\ & E_{i(J-1)} & \text{if} & \mu_{J-1} & E_i^* & > & \mu_{J-2} \\ & \ldots & & & & & \\ & E_{i2} & \text{if} & \mu_2 & E_i^* & > & \mu_1 \\ & E_{i1} & \text{if} & \mu_1 & E_i^* & > & \mu_0 \end{array}$$

with $\mu_1 = +\infty$ and $\mu_0 = -\infty$.

Therefore, the probability that an individual i opts for educational level E_{ij} given his/her characteristics x_i is:

$$\begin{array}{lcl} Prob\ (E_i = E_{ij}/x) & = & Prob\ (\mu_j \quad E_i^* \quad > \quad \mu_{j-1}) \\ & = & Prob\ ((\mu_j \quad \beta x_i + \varepsilon_i \quad > \quad \mu_{j-1}) \\ & = & Prob\ (\mu_j - \beta x_i \quad \varepsilon_i \quad > \quad \mu_{j-1} - \beta x_i) \end{array}$$

Assuming that the residual terms ε_i are normally distributed with mean 0 and variance σ^2, we obtain for all individuals $i \in \{1...N\}$ and educational levels $j \in \{1...J\}$:

$$Prob\ (E_i = E_{ij}/x) = \Phi\left(\frac{\mu_j - \beta x_i}{\sigma}\right) - \Phi\left(\frac{\mu_{j-1} - \beta x_i}{\sigma}\right)$$

where Φ is the cumulative standard normal distribution function.

This ordered probit model can only be identified up to a proportionality factor. Since we can only identify the ratio of the parameters with respect to σ, it is usual in such models to normalise σ to 1 (see Maddala 1983, p.23). The parameters β and the threshold values μ can be estimated by maximising the likelihood function:

$$L = \prod_{i=1}^{N} \prod_{j=1}^{J} [\Phi(\mu_j - \beta x_i) - \Phi(\mu_{j-1} - \beta x_i)]^{I_{ij}}$$

where I_{ij} is an indicator variable equal to 1 if the individual *i* opts for educational level E_j and 0 otherwise.

Maximising *L* boils down to maximising *ln L* since *L* is a positive function and *ln L* is a monotone increasing transformation of *L*. Thus, the model can be estimated by maximising the log-likelihood function:

$$ln\ L = \sum_{i=1}^{N} \sum_{j=1}^{J} I_{ij}\ ln\left[\Phi(\mu_j - \beta x_i) - \Phi(\mu_{j-1} - \beta x_i)\right]$$

Table 4.2 presents the estimation results of this ordered probit model applied to the sample of 21 year-olds from LFS for whom we could link the information of their parents. The sample we have retained contains 4136 observations and covers the years between 1993 and 2000. The survey year 1992 could not be considered due to missing information on the completed education level. The dependent variable is the highest education level attained in four ordered levels as defined in Section 4.1. To stick to the model notation, E_1 is the lowest level of educational attainment and is defined as primary education or less, E_2 corresponds to basic vocational education, E_3 to upper secondary education and the highest attainable education level E_4 is defined as higher education.

As explanatory variables in the vector of characteristics x_i, we use various indicators of individual features: family structure, parents' human capital and parental wealth. As far as individual characteristics are concerned, a dummy variable for sex is intended to assess the nature and the extent of differences in educational opportunities for men and women. Another dummy variable controls for the fact that disability might reduce educational prospects. The number of children up to age 15 in the household is also included in the regression as an indicator of family structure. This way, we hope to identify whether the negative correlation often stated in empirical literature between the number of children in the family and poverty (see Section 4.1) has for corollary a correlation between the number of children and the educational attainment of children.

We add further information on city size, people living in rural areas building the reference category in relation to which the coefficient estimates are to be interpreted. Fifteen region dummies have also been included to check whether children living in certain parts of the country are advantaged or disadvantaged compared to the reference category of those residing in the Śląskie voivodship in the South of the country[10,11]. Parent's education is represented by the highest educational level attained by the parents. By analogy with the

[10] As in Section 4.2, the voivodship dummies have been built according to the new voivodship definition introduced in 1999. Śląskie has been chosen as the reference category because the percentage of our sample living there is the largest.

[11] In sensitivity analyses we tried other regional differentiations, namely the nine macro regions used by the World Bank and a classification of Polish regions into groups of different regional structure according to the methodology proposed by Scarpetta and Huber (1995). Qualitatively, the results hardly vary between classifications.

descriptive overview in Section 4.1, we consider the education level of that parent holding the highest degree.

As mentioned above, no information on total household income has been collected in LFS, instead only labour income and the main source of income in the household are indicated. Since, according to the literature cited above, this latter variable as well as parents' education are strongly linked to poverty, these variables seem to be good proxies for household income. Analogue to Section 4.1, we use a relative measure of parental labour income which indicates the ratio of total parental labour income to the mean labour income of the year considered. For an average income, the value of this variable will be one, for parental labour income above (respectively below) average, it will be higher (respectively lower) than one. Since a rather large proportion of our sample does not report any parental labour income, we also include a dummy variable indicating this as an additional control variable. The labour income of the parents might not be the main source of income of the household. Therefore, we also include a set of dummy variables indicating where the main source of income of the household comes from (farm ownership or farm use, self-employment, pension and unemployment benefits or other non-earning sources), while income stemming from employment constitute the references category (see also Figure 4.10).

In order to better assess the impact of parental unemployment on the educational prospects of the children, we also include a dummy variable representing whether anyone of the parents is currently unemployed. Better indicators of the family's financial background at the time when the education decision of the child has been made would probably be the incidence or duration of past unemployment spells of the parents. Unfortunately, this information has not been gathered anymore in LFS in the years 1997 to 2000, so that we have to draw on the incidence of current unemployment. Anyway, as a rule, current and past unemployment are strongly correlated. Finally, time dummies have been included with a view to capturing the extent of educational expansion over time.

The estimation results reveal that in the transition generation, women do better than men in terms of educational attainment, other things equal. Being female is positively related to one's education level at age 21, which is true at a significance level of 1%. The probability of reaching a higher schooling level decreases significantly with the number of children and if the person has a disability. Education is also positively related to city size as the education level of 21 year-olds is worst in rural areas, even if other characteristics are controlled for and is best in cities with more than 100,000 inhabitants. The pattern of relative differences according to city size remains similar to that observed on the bivariate level.

Remarkable disparities exist between regions. In Figure 4.5, it was not easy to compare regions with each other: for instance, should a region which has a higher proportion of university graduates than another, but at the same time more people with a very low

Table 4.2. Ordered probit estimation results

Dependent variable: Highest degree obtained.

Explanatory variables	*Coefficient*		*Stand. dev.*
Female (ref.: Male)	0.500	***	0.040
Number of children under 15 in the household	-0.083	***	0.023
Disabled (ref.: Not disabled)	-1.202	***	0.108
City size (ref.: Rural area)			
<20,000 inhabitants	0. 188	***	0.058
20,000-100,000 inhabitants	0. 216	***	0.050
>100,000 inhabitants	0. 310	***	0.049
Region (ref.: Śląskie)			
Zachodniopomorskie	-0.385	***	0.093
Pomorskie	-0.163	*	0.088
Warmińsko-mazurskie	-0.187	*	0.098
Podlaskie	-0.198	*	0.114
Lubuskie	-0.326	***	0.100
Wielkopolskie	-0.118		0.075
Kujawsko-pomorskie	-0.117		0.083
Mazowieckie	-0.127	*	0.069
Dolnośląskie	-0.253	***	0.079
Łódzkie	-0.258	***	0.080
Lubelskie	-0.019		0.086
Opolskie	-0.229	**	0.108
Świętokrzyskie	0.017		0.092
Małopolskie	-0.139	*	0.079
Podkarpackie	-0.152		0.095
Highest education of parents (ref.: Primary education)			
Basic vocational education	0.270	***	0.046
Secondary education	0.766	***	0.049
Higher education	1.439	***	0.084
Main source of household income (ref.: Employment)			
Farm ownership or farm use	-0.092		0.069
Self-employment	0.236	***	0.073
Pension	-0.044		0.054
Unemployment benefits	-0.152		0.116
Parents have no labour income	0.132	*	0.065
Parents' labour income (deviation from yearly mean)	0.124	*	0.050
At least one parent unemployed	-0.180	***	0.063
Year of observation (ref.: 1993)			
1994	0.038		0.072
1995	-0.038		0.080
1996	0.044		0.071
1997	0.205	***	0.070
1998	0.207	***	0.070
1999	0.196	***	0.070
2000	0.267	***	0.074
Threshold values: μ_1	-0.740	***	0.010
μ_2	0.559	***	0.096
μ_3	1.656	***	0.098
Log likelihood	-4737.73		
Pseudo R^2	0.115		
Sample size	4136		

Note: Level of statistical significance of the variables: * 10%, ** 5% and *** 1%.

Source: Own calculations based on data from LFS, waves 1993-2000.

education level be considered as better performing or not? The estimation results now provide a kind of synthetic indicator which enables us to rank the regions in terms of educational attainment. This ordinal ranking is illustrated through the shading of the Polish voivodships in the map in Figure 4.10. The Śląskie voivodship chosen as the reference region appears to be confirmed as the best-performing in terms of the educational attainment of its youth, since all other regional dummies that are significant exhibit a negative sign. However, five regions do not differ significantly from the Śląskie region (Wielkopolskie, Kujawsko-pomorskie, Lubelskie, Świętokrzyskie, Podkarpackie). The region which has the lowest educational attainment of 21 year-olds seems to be the Zachodniopomorskie voivodship, followed by Łódzkie, Dolnośląskie and Lubuskie.

Figure 4.10. Education level by voivodship, conditional on individual characteristics

Note: The darker the shading of a region the lower the highest educational level of 21-year olds in that region, given the socio-economic characteristics listed in Table 4.2.

Source: Own calculations based on data from LFS, waves 1993-2000.

The education of the parents seems to play a more important role than their employment situation. Thus, children of parents with a higher education degree have by far the best educational prospects, while those having parents having completed at most primary education face the worst educational prospects. While the highest level of education completed by parents is significantly positively linked to the educational attainment of their offspring, there is only a weak, though significant, negative relation to parents' current

unemployment. It has to be noted that the correlation observed on a bivariate basis between unemployment and poor educational achievement is likely to be spurious for a part and may essentially reflect the fact that parents experiencing unemployment are generally poorly educated.

Parents' labour income seems to be significantly and positively correlated with the educational achievement of the children, though the impact is limited in scope. The relationship seemed to be stronger when only bivariate correlation was considered. This means that part of this correlation actually stems from other variables, most probably from the education of the parents which strongly determines labour income, rather than from the income itself. The main source the household draws its income from does not seem to have a significant influence on children's educational prospects when other factors are controlled for, except that children of self-employed parents face significantly better educational prospects than other children. Note that contrary to the simple correlation analysis above, sons and daughters of households drawing their main income from farm ownership or farm use are not significantly affected when other factors are controlled for (in particular city size might be more determining, as well as parental education etc.), even though the effect might be indirectly captured by the variable on parents' labour income, which has lower values for agricultural households. The same is true for the offspring of pensioner households.

The year dummies show an effect only for the later transition period from 1997 onwards. The positive signs of the years 1997 and following once again underline the pattern of educational expansion in Poland, with particular jumps in 1997 and 2000, while controlling for individual characteristics.

4.4. Conclusions

To sum up the results, the links between family background and children's education stated in previous studies and the correlations found in the bivariate overview can only partly be confirmed by our multivariate analysis. Similar to the results observed in the correlation analysis, the children of self-employed seem to have better, those of unemployed worse educational prospects, all else equal.

However, when controlling for personal characteristics such as sex, siblings, health status and the parents' human capital endowment, parents' labour income is only weakly related to the educational attainment of children. There may be different effects at work. First, the observed bivariate correlation between parental income and children's education may in fact be spurious and essentially the result of parents' education level, which is a strong determinant of parental labour income. This could explain that when "cleaning" the income variable from

the education component, only a small effect remains for the income variable. An argument for this is that the parental education variable still has a strong and very significant effect on children's educational outcomes even though a variety of other characteristics are controlled for. Nevertheless, the question remains whether the labour income variable represents a reasonably good approximation of the household's wealth status. Also, the variable depicting the main source of household income indicates the occupational position of the parents rather than a true income effect and only imprecisely proxies the exact household income.

Moreover, children from farming families seem to be educationally disadvantaged, less so for financial reasons than because of living in rural areas. The effect of city size is confirmed even in a multivariate context as well as that of the region of residence. The Southern provinces (Śląskie and adjacent voivodships to the East) of the country as well as Wielkopolskie and Kujawsko-pomorskie remain those with the best educational prospects whereas the region from Zachodniopomorskie to Dolnośląskie (in the North-West) and Łódzkie cover those provinces with the worst educational prospects, but the ranking of the other regions alters somewhat if other characteristics are controlled for. The bad educational prospects of children living in the West as opposed to the East may be explained by the provision of public schools in these voivodships. The results may be driven by our selection of 21-year olds who are still living with their parents. If, in the Western part of the country, young people move from their parents' home earlier, for instance to take up studies in a voivodship that provides a university or higher vocational school, the coefficient estimates are affected by this selection. Finally, the negative impact of a large number of children often stated in the literature remains remarkably significant also in the multivariate context, as well as the better educational achievement of females compared to males.

Overall, in addition to revealing the links between children's education and their socio-economic background, these results point to the usefulness of conducting multivariate analyses instead of relying on bivariate correlations that can only tell us a part of the story.

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