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CHILDREN IN BULGARIA:  
GROWING IMPOVERISHMENT  
AND UNEQUAL OPPORTUNITIES

Roumiana Gantcheva and Alexandre Kolev



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Children in Bulgaria:  
Growing Impoverishment  
and Unequal Opportunities

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## Abstract

The social and economic changes in Bulgaria since the beginning of transition naturally raise concern about their impact on child well-being. To some extent, the problems of child rights and child development have started to be investigated in a number of recent studies. However, most of them focus on specific groups of children and do not address the overall deterioration of the social environment that may have disproportionately affected all children in the country. The paper investigates the changes that occurred over the last decade in three dimensions of child welfare recognised as fundamental child rights – economic well-being, health and education. Then it concentrates on particularly vulnerable groups of children – those born of teenage and single mothers and those living in institutions. The data show that the human cost of economic transition has been high and children have been among the most vulnerable groups of the society.

*Key words:* child welfare, poverty, health, education, children in institutions, Bulgaria, transition.

## 1. Introduction

The past ten years in Bulgaria have brought enormous social and economic changes. In the late 1980s the country started a difficult period of transition from totalitarian and command driven economy to democracy and market oriented relations. Gross domestic product (GDP) fell continuously during the first years of the transition period. The cumulative decline by 1993 reached 27 per cent – the deepest fall in GDP registered among Central and Eastern European (CEE) countries apart from Albania and some of the countries from the former Yugoslavia.<sup>1</sup> Although output grew in 1994 and 1995, it was not based on fundamental structural changes in the economy and could not be sustained. Contrary to other CEE countries, with the notable exception of Romania, the situation in Bulgaria continued to deteriorate and in the late 1990s, the level of production was still far below its 1989 level.

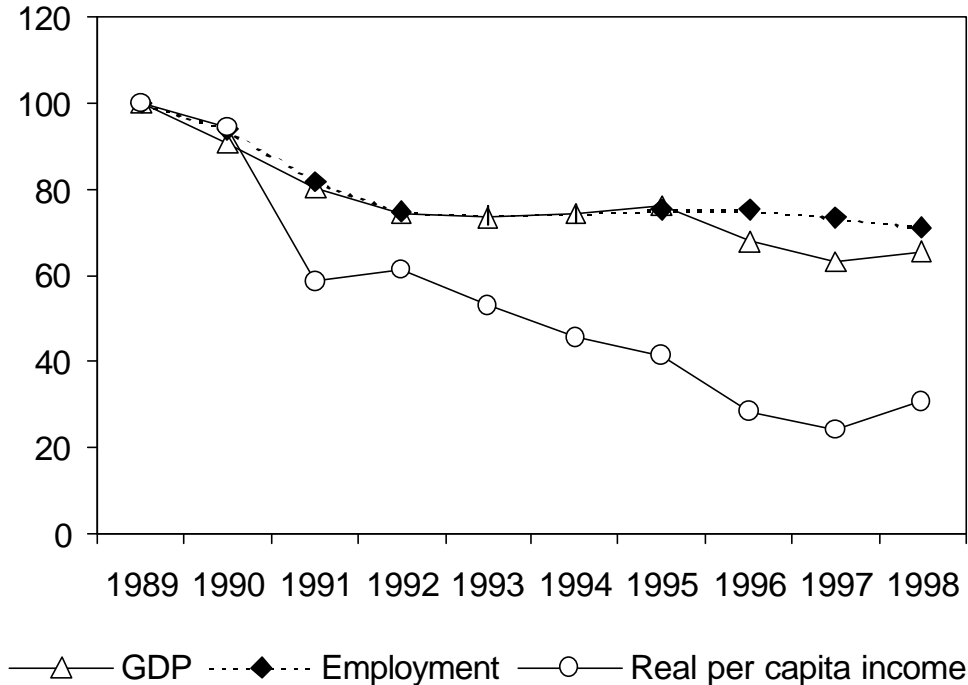
In the context of the deep economic crisis there was a sharp fall in living standards. Real household incomes declined dramatically, by 76 per cent over 1989-97. The reversed trend from 1998 was still far from enough to offset the huge drop over the decade. The general decrease in incomes was accompanied by increasing income inequality. In the late 1990s the Gini coefficient in Bulgaria was the highest among all CEE and Baltic countries.

Figure 1 shows the changes in several principal economic indicators over 1989-98. GDP and employment fell together. Incomes dropped disproportionately. This was due both to policies to maintain employment

<sup>1</sup> The countries from the former Soviet Union are not considered here.

albeit with reduced earnings and to the weakening of State social support to those out of the labour market – unemployed, pensioners and children.

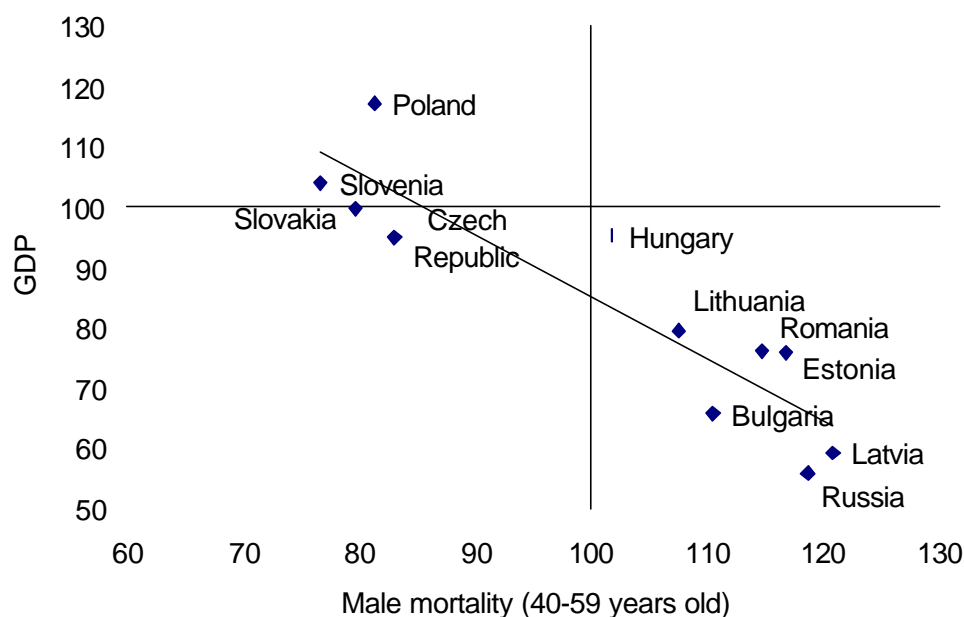
Figure 1: Changes in GDP, employment and real per capita income, 1989-98 (1989=100)



Source: Appendix Table 1.

The decline in real income was accompanied by a worsening in non-monetary welfare indicators. The mortality rates for most age groups deteriorated a lot since the beginning of transition, especially during the second half of the decade. This led to a fall in life expectancy at birth. This trend, together with a steady decrease in fertility, resulted in a fall in the overall population. Middle-aged men were the most affected by the increase in mortality. Figure 2 shows the changes over the last ten years in male mortality among 40-59 year olds in Bulgaria and in other CEE countries like Slovenia, Czech Republic, Slovakia, Poland, Hungary, Romania, the Baltic states – all applicants for accession to the European Union (EU) – and in Russia. It shows that in Bulgaria, as in the other CEE countries, there is an association between the decline in GDP and adult male mortality.

Figure 2: Changes in mortality rates for men 40-59 years old and in GDP between 1989 and 1998 (1989=100)



Source: Appendix Table 2.

The worsening social and economic indicators observed in Bulgaria since the beginning of transition naturally raise concerns about the impact of these changes on child well-being. To some extent, the problems of child rights and child development in Bulgaria have started to be investigated in a number of recent studies.<sup>2</sup> Programmes, run with the extensive support of international organizations, are also under way. However, most of these projects focus predominantly on specific groups of children, for example those out of school, children in child institutions, or those in conflict with the law, but do not address the overall deterioration of the social environment that may have disproportionately affected all children in the country. For policy makers and other international agencies to identify and protect efficiently the most vulnerable, it is essential to start by understanding what have been the main challenges faced by children in Bulgaria during transition.

The aim of this paper is to investigate the changing welfare situation experienced by Bulgarian children during the last decade. This, we hope, will help Bulgarian society to find the appropriate tools to better respond to the

<sup>2</sup> For instance, the World Bank's Survey from 1995, which drew poverty profiles of the Bulgarian population, provided analysis of the public policies in the fields of health care and education and the need for their better targeting.

The joint study conducted under the guidance of the International Labour Organization (ILO) and the United Nations Development Programme (UNDP) in 1998 provided a comparative analysis of different approaches for assessing poverty in Bulgaria and the results of their implication for determining a poverty line in the country. The study provided a description of the existing mechanisms for social assistance and made recommendations for better targeting.



needs of its children. By reducing the adverse impact of transition on child well-being, the country would also substantially improve its readiness for EU accession.

The paper is organized as follows. Section 2 describes the methodology and the main welfare indicators used in this analysis. Sections 3 to 5 investigate the changes that occurred over the last decade in economic well-being, health and education of children, three dimensions of child welfare that have been recognised as fundamental child rights with the ratification by Bulgaria of the UN Convention on the Rights of the Child (CRC) in 1991. Section 6 concentrates on particularly vulnerable groups of children – those born of teenage and single mothers and those living in institutions. The last section summarises the main findings and concludes with a number of policy recommendations.

## 2. Methodology

Our analysis of child welfare in Bulgaria relies primarily on statistical data that are gathered annually by the National Statistical Institute and that cover three dimensions of child welfare: economic well-being – namely – income and expenditure, health and education. Of course, these dimensions are not independent. Children from high-income families are more likely to have better access to health and education, especially when access to these services is being monetised. And those with good health are more likely to remain in education. But the way these dimensions are being affected by the social and economic changes may diverge quite substantially. Thus, an analysis of these economic and non-economic indicators appears essential for a thorough understanding of the changing welfare situation of children.

We start the analysis by looking at the changes in the real level of income and expenditures, their changing structure, and the impact of falling income on the consumption of basic goods. Our analysis is nonetheless constrained by the fact that we observe only the changing economic situation of families with different numbers of children. In other words, we measure only the capacity of families to finance the needs of their children, but we do not observe directly how the resources are reallocated to these children.

The discussion then turns to children's health. We first report on the changes in infant and child mortality and the developments of low-weight births before examining the contribution of specific diseases to child morbidity. The latter refers to typical child diseases like those of the respiratory system but also to other diseases namely neoplasm diseases (cancer), diseases of blood and blood-forming organs (mainly anaemia) and of the digestive system (gastritis, ulcer). It is not our intention, however, to explain the rising incidence of these diseases.

Another important dimension of child welfare, education, is then investigated. We start by looking at the trends in enrolment rates by educational levels and key age groups, before examining the impact of family income on access to education. We also provide some evidence on school achievements in Bulgaria and draw some international comparison, relying on an international survey conducted in 1994 on achievements in the fields of mathematics and science.

The rest of the analysis concentrates on particularly vulnerable groups of children, namely those with teenage or single mothers, with a high risk of poverty and social exclusion, and those living in institutions. We first provide evidence on the trends in teenage and single-mother births and child institutionalization rates. We then address the worsening financial situation of child institutions and the impact of this on child development using sociological data and finance data on child institutions. However, other children at risk, such as street children or young drug abusers, are not investigated here. The main reason is the lack of information on these specific groups of children, which would require special surveys and special attention from State programmes and NGOs.

The list of the statistical indicators used in this paper to assess the changing welfare situation of children in Bulgaria during the past ten years is given below.

#### *Economic well-being*

- Real per capita income by households with different numbers of children
- Share of monthly family allowances in the total cash income
- Percentage share of children by income deciles
- Consumption of basic foods – milk, meat, fresh fruits, bread and cereals, etc. – by households with different numbers of children
- Calorie per capita intake by households with different numbers of children.

#### *Health*

- Infant mortality rate
- Percentage share of low-weight births
- Mortality rate of 5-19 year-olds
- Incidence of neoplasm diseases (cancer) among children
- Incidence of diseases of blood and blood forming organs (anaemia) among children
- Incidence of diseases of the digestive system (gastritis, ulcer) among children.

*Education*

- Enrolment by pre-primary education
- Enrolment by primary education
- Enrolment by lower secondary education
- Enrolment by upper secondary and tertiary education
- Age-specific enrolments
- Share of 5-29 years old enrolled in education
- Private expenditures on education by income groups.

*Children at special risk*

- Teenage birth rate
- Birth rate to unmarried women
- Enrolment of infants in infant homes
- Enrolment of children in orphanages
- Public expenditure on infant and child homes.

Most of these indicators or data necessary for the calculations are published annually and it is possible to monitor their evolution since the beginning of the transition. The changes, rather than the picture at a specific point of time, are of principal interest. The period covered is 1989-98. In some cases, however, the coverage is not complete, either because the information is not available for the whole period or because it is not comparable over time.

Another methodological aspect that needs to be mentioned here relates to the age group used to define a child. The concept of a ‘child’ used in this paper does not always coincide with the CRC that characterizes as a child “every human being below the age of 18 years”. For the purpose of this study, the age concept of a child varies according to the statistical indicator that we use. If this makes any comparison between different dimensions of child well-being more difficult, it has the main advantage to better reflect the age limit of child life most relevant to the events monitored through the indicators. For example the critical age for enrolment in education is defined according to the official age of obligatory education – 15 years old in Bulgaria.

### **3. Economic Well-Being of Children**

As in other countries of the region, the fall in economic activity in Bulgaria combined with high inflation contributed to a sharp decline in real income and expenditures. The associated fall in living standards was nonetheless tremendous in Bulgaria and among the most severe in Central and Eastern

Europe. Previous studies on poverty in Bulgaria attest unequivocally the dramatic deterioration of family welfare. The share of households living below the subsistence minimum rose from 50 per cent in 1992 to 64 per cent in 1996 (ILO/UNDP, 1998a). Another study by Dobrinsky et al. (1996), using a relative poverty line, confirms a sharp increase in poverty. For instance, between 1992 and 1995, and using half the 1992 median of income as a poverty threshold, measured poverty has increased from 6 per cent of households to over 30 per cent.

Alongside the sharp deterioration of living standards, the transition in Bulgaria has also seen very large increases in income inequality. The extent of income inequality in Bulgaria appears not only high compared with established market economies but also compared with other countries of Central and Eastern Europe (UNICEF, 1999). The Gini coefficient of household per capita income rose by more than ten percentage points only in five years and reached 0.366 in 1997. Of major concern for the success of the transition process in Bulgaria is that this sharp rise in inequality has translated into a growing feeling of nostalgia for the past among poor people (World Bank, 1999).

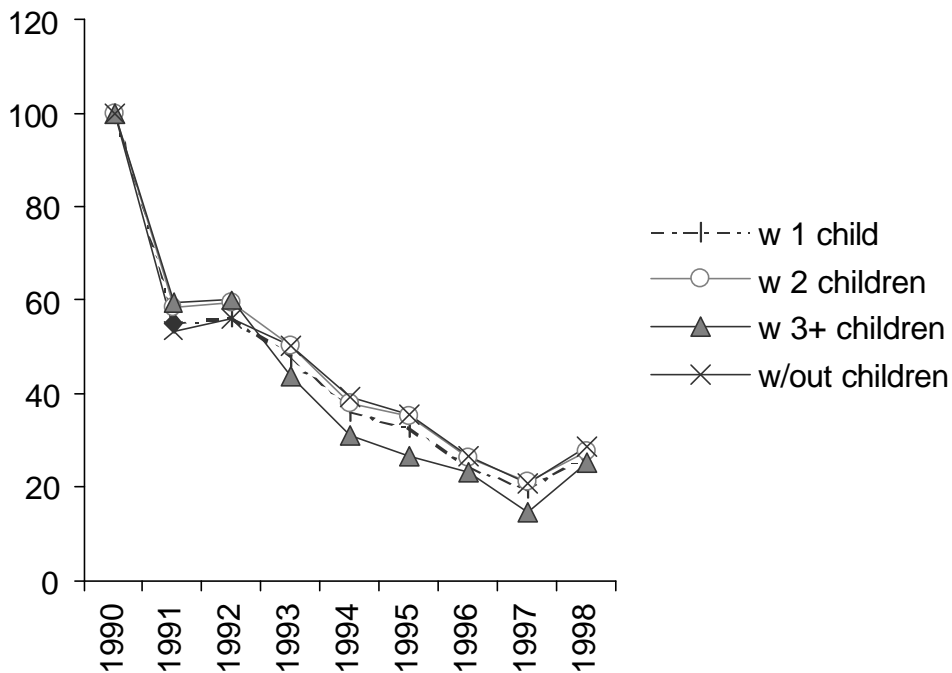
Considering these recent developments, it seems essential to investigate what has happened to children – a group that is generally most affected during periods of economic turmoil. Some earlier evidence suggests that the sharp fall in living standards observed during transition in Bulgaria tends to have disproportionately affected families with children. The study by Dobrinsky et al. (1996) shows, for instance, that while in 1992, the poverty rates for pensioners and children were similar, in subsequent years the poverty rate for children rose faster. And this echoes the findings of the World Bank poverty assessment in Bulgaria which concludes that in 1995 the highest poverty rates were found among families with children (Andrews, 1996). The same study also points to higher incidence of poverty among ethnic minorities. For instance, in 1995, the poverty rate among families with adults and children was 15 per cent for the ethnic Bulgarians, compared with 42 per cent for Turks and 76 per cent for Gypsies.

This section focuses on two specific dimensions of economic welfare, income and consumption, and studies the changes that occurred during transition from a child perspective. It draws on the Bulgarian Household Budget Survey. The results from this source are published annually by the National Statistical Institute and thus allow the income and the consumption of households with different socio-demographic characteristics to be monitored over time.

### ■ 3.1 *Income*

Figure 3 shows the decline in real cash income per capita for different household types since the beginning of transition. The magnitude of the decline has been impressive for all household types but has been largest for those with numerous children. For instance, in 1998, household income represented only 25 per cent of its 1990 level among households with 3 or more children, and 28 per cent among households with no children.

*Figure 3: Real cash household per capita income, 1990-98 (1990=100)*



*Source:* Authors' estimate based on data for income from "Household Budgets in the Republic of Bulgaria" (various) and CPI from EBRD (1999).

*Note:* Children refer to individuals aged 16 and below before 1992 and aged 18 and below since that year.

Table 1 shows the distribution of children by income deciles during the period 1992 to 1998 for which comparable data are available. The share of children in the bottom three deciles tends to have increased slightly during the period: from 33 per cent in 1992 to 37 per cent in 1998, with a peak at 40 per cent in 1994. In other words, the overall rise in income inequality observed during transition has been accompanied by an overall deterioration of the relative welfare position of children despite a slight reverse trend after 1996.

*Table 1: Cumulative distribution of children by income population deciles, 1992-98 (per cent)*

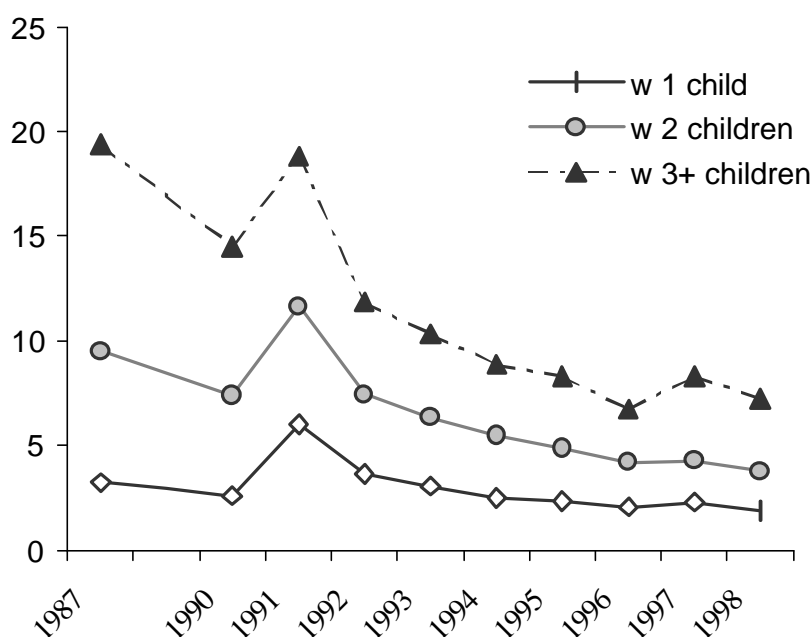
<b>Decile</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
I	13.7	15.2	16.4	15.5	15.6	15.5
II	23.5	27.0	29.2	27.5	27.4	26.8
III	33.6	37.1	39.6	38.1	37.5	36.9
IV	44.9	47.1	49.6	47.9	47.3	46.8
V	56.0	57.6	59.4	57.5	57.2	56.8
VI	67.0	67.8	69.1	67.2	67.1	67.1
VII	77.4	77.8	77.8	76.8	76.9	77.2
VIII	86.6	86.7	85.5	86.0	86.1	86.0
IX	94.4	94.2	93.2	94.1	94.2	94.2
X	100.0	100.0	100.0	100.0	100.0	100.0

*Source:* MONEE Project database.

What has contributed to the observed patterns? The transition in Bulgaria, as in other former socialist countries, has translated into important changes in the structure of income that is represented in Appendix Table 3. For instance, the share of salaries and wages in total family income per capita tends to have fallen over the decade while the contribution of new sources of labour income such as those derived from self-employment increased.

Other changes, however, tend to have been particularly harmful for families with children. In the context of high inflation, child benefits, which used to constitute an important source of income for families with children, have declined dramatically. Figure 4 shows that child benefits amounted from 3 to 20 per cent of household's cash per capita income in 1987, depending on the number of children, but in 1998 they constituted only 2 to 7 per cent. The importance of family benefits for large families fell especially sharply. And since households with dependent children represented a third of all households in late 1998 – of which 54 per cent had one child, and 42 had two children – it is thus a substantial share of the population that have been affected by the fall in child benefits.

Figure 4: Share of family allowances in total household cash per capita income, 1987-98 (per cent)



Source: Household Budgets in the Republic of Bulgaria (various).

Note: Children refer to individuals aged 16 and below before 1992 and aged 18 and below since that year.

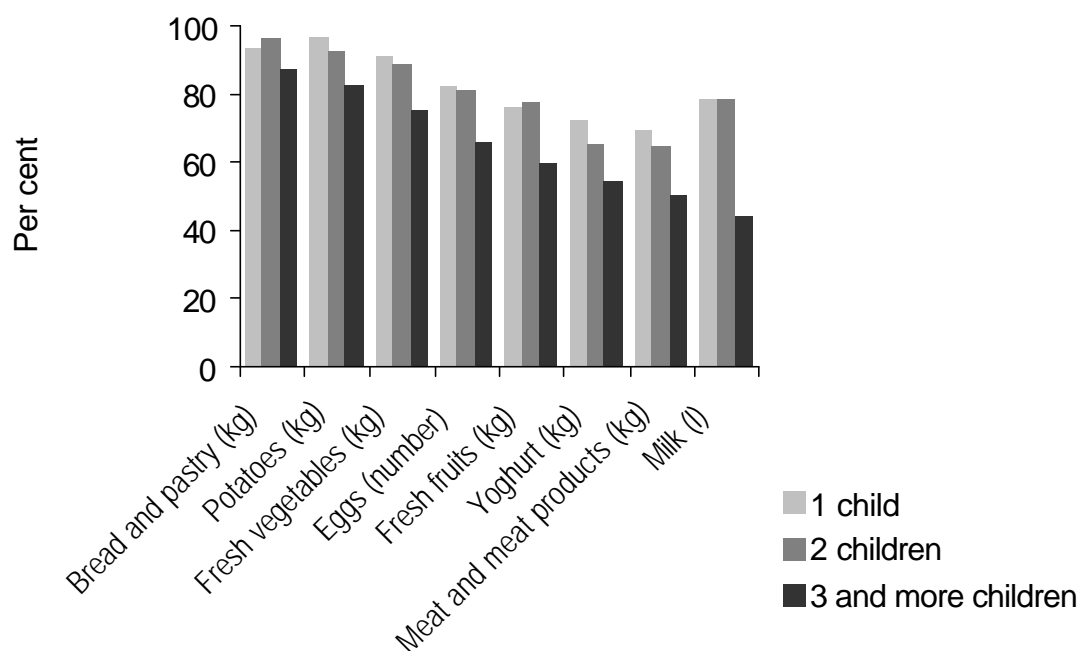
### ■ 3.2 Expenditures and consumption

The fall in real family income has translated into important changes in terms of the structure of expenditures. The share of expenditures spent on different items is represented in Appendix Table 4 for the years 1987, 1992 and 1998.

Food represents the most important expenditure for families throughout the period, and its share has increased quite substantially during the transition among families with children. For instance, among households with one or two children, the share of food rose from 38 per cent in 1987 to more than 45 per cent in 1998. The overall growing relative expenditure on food concentrated among families with children is clearly another indication of the rise in poverty, as these families were obliged to reorient their expenditures towards the most basic needs and to reduce other important expenditures. This is true for expenditures on clothing, furnishing, education and leisure.

The fall in real income was also followed by an important deterioration in the consumption of most food products (see Appendix Table 5). Figure 5 shows the average annual consumption of basic food products in 1998 as a percentage of 1992.

Figure 5: Change in the annual average consumption of basic food products, 1992 and 1998 (1992=100)



Source: Appendix Table 5.

Note: Children refer to individuals aged 18 and below.

A huge fall is observed for the consumption of meat products, fresh fruits and dairy products – all foods essential to child development. But even the consumption of potatoes has slightly declined over the period. Households with three or more children have also been disproportionately affected by the decline in consumption. It is of course very likely that the falls recorded in the diagram would have been even larger had the base year for comparison been from the late 1980s rather than 1992.

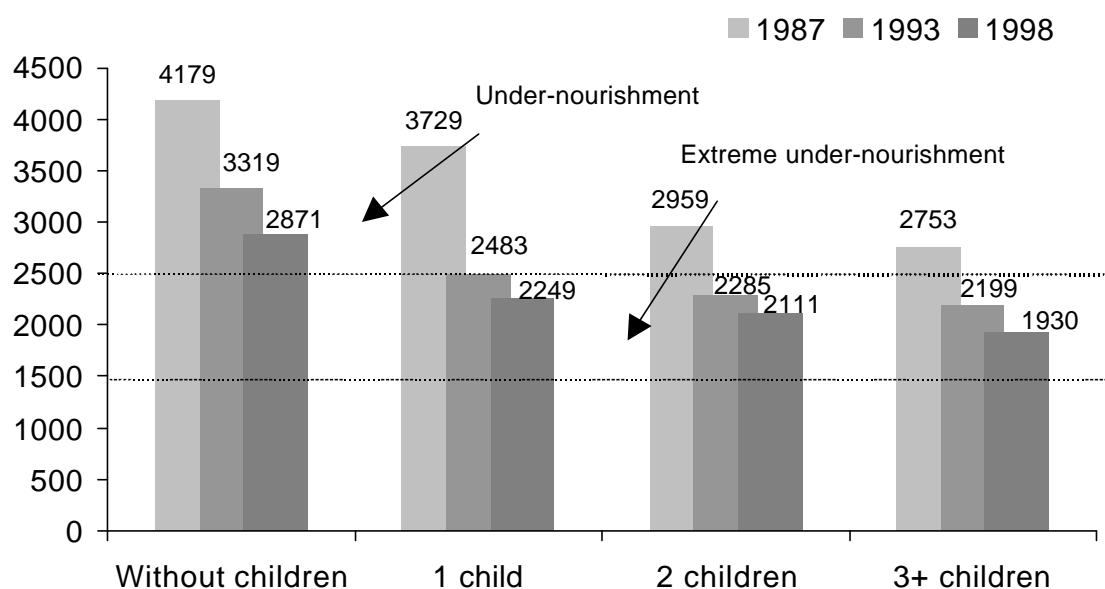
Of major concern is the strong overall decline in the quality of nutrition of Bulgarian children. Figure 6 presents the average calorie intake before the beginning of reforms in 1987, and at two points in time during transition – in 1993 and 1998. (The data on calorie intake are estimates based on consumption, recorded in the Household Budgets Survey.) The average calorie intake declined substantially. Not only does this trend echo the fall in real income that was observed during the last decade, but it also points to a growing problem of poor nutrition among families with children. Between 1987 and 1998, the average daily per capita calorie intake among families with children remained above the 1,500 calorie threshold established by the FAO for extreme under-nourishment but fell nonetheless below the 2,500 calorie threshold for under-nourishment. The lowest levels of calorie intake were registered in 1997. The average daily per capita intake for households



with one child slightly exceeded 2,000 calories in that year, for those with two children it was 1,900 calories and for those with three and more children the average intake dropped to 1,676 calories. This is consistent with the World Bank survey of poor people in Bulgaria which found that although a vast majority of poor people were not starving to death, they could barely make ends meet (World Bank, 1999).

The picture also accords with that in a nationally representative household survey conducted by the National Statistical Institute in 1999, in which only 22 per cent of households with children said they could completely meet their children's basic need for adequate nourishment (NSI, 1999).

Figure 6: Calorie content of consumed food products, 1987, 1993 and 1998 (average calories per capita per day)



Source: Household Budgets in the Republic of Bulgaria (various).

Note: Children refer to individuals aged 16 and below for 1987 and aged 18 and below for 1993 and 1998.

## 4. Children's Health

The health care system is under reform in Bulgaria, but maternal and child basic health services remain as in the past in the sense that they are still provided free of charge, at least in theory. Most pregnant women, after registration, are monitored and receive pregnancy consultations. Trained medical personnel attend child deliveries. Health consultations of young children are provided on a regular basis. Children are immunized and re-

immunized against diseases like tuberculosis, diphtheria, tetanus, pertussis, measles and polio according to the adopted immunization calendar.

However, despite the fact that immunizations are supposed to be provided free of charge and to cover all children under the control of the local and school medical establishments, the rates of immunization during the second half of the decade fell by three to six percentage points on average. This fact, combined with worsening nutrition documented in the previous section, contributed to a weakening of the immune system and to increasing morbidity of children. This section looks at children's health, using some standard indicators for child mortality and morbidity. The results point to increasing health risks over the last decade.

#### ▪ **4.1 *Infant mortality***

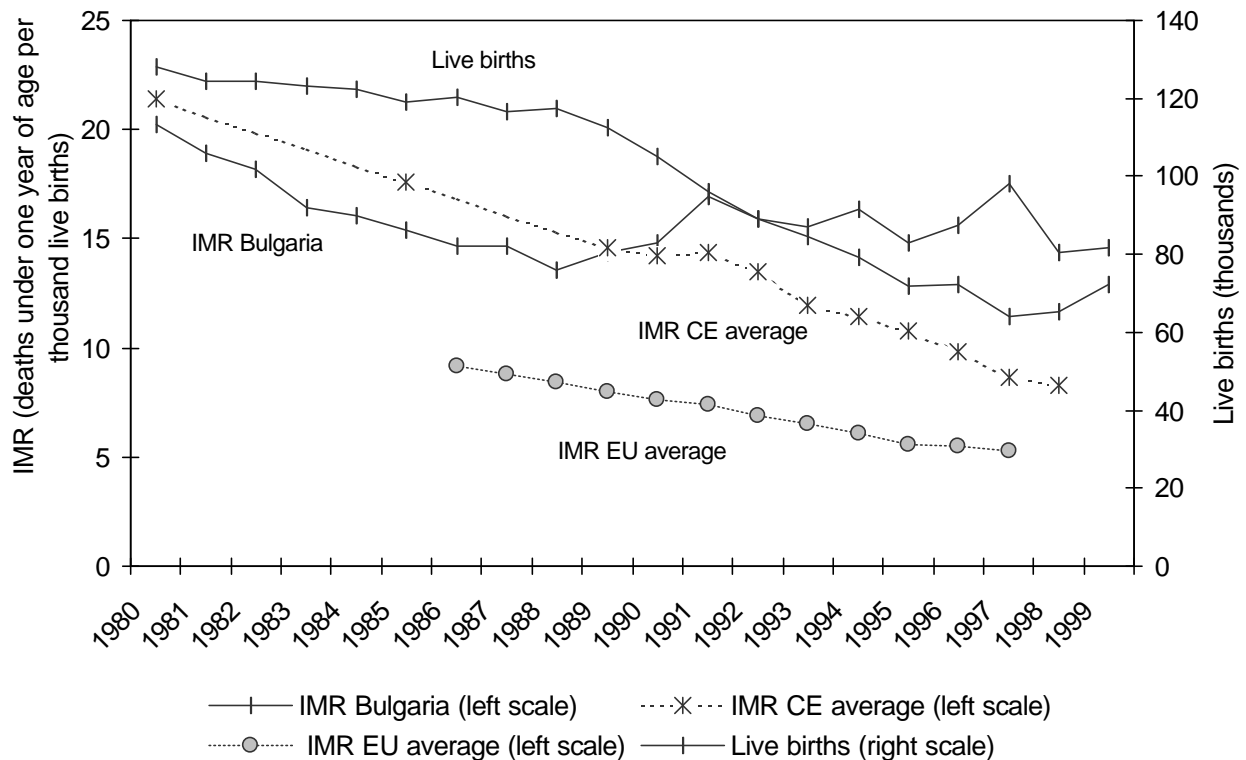
The interpretation of infant mortality rates is strongly influenced by the concept of live birth that any country follows. The WHO defines a live-birth as “a complete exclusion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which after such separation breaths or shows any other evidence of life”. The national concept adopted by Bulgaria in 1970 is close to the WHO definition but a child born with weight less than 1000 grams with any sign of life is considered as a live-born child only if he or she survives the sixth day from the day of birth (if the baby dies before the sixth day, then an abortion, not an infant's death, is registered). This national definition tends to give a lower registered infant mortality rate (IMR) compared to that based on the WHO concept.

During the second half of the 20th century infant mortality in Bulgaria followed a stable negative trend. It fell from about 100 per 1000 live births at the beginning of the 1950s to 13.6 in 1988. For comparison the EU average rate in 1988 stood at 8.4 (EUROSTAT, 1997). Not only was this trend stopped at the beginning of the transition but it was even reversed – a feature not observed in other CEE countries. In fact, as shown in Figure 7, IMR started to increase in Bulgaria after 1989 while it continued to decline in almost all other CEE countries. Even in the Baltic countries, where the drop in output was similar to that of Bulgaria, infant mortality continued to decrease throughout the transition period and reached lower levels in the late 1990s. In 1998, infant mortality declined again in Bulgaria, but the decrease should be treated with care: data for 1999 show a renewed increase in infant mortality, suggesting that the 1998 drop was only temporary. IMR in 1999 was 14.6 per thousand live births compared to the value of 13.6 in 1988.

The overall rise in infant mortality was observed in all regions of the country, with the exception of the capital city of Sofia. Figure 8 shows IMR by regions in 1990 and 1997. While in Sofia, infant mortality declined by more than 25 per cent and reached a level similar to that of Hungary or

Poland, in the Bourgas region it increased by almost 60 per cent and in the Rousse region, by more than 40 per cent.

Figure 7: Live births and infant mortality rates in 1980-99



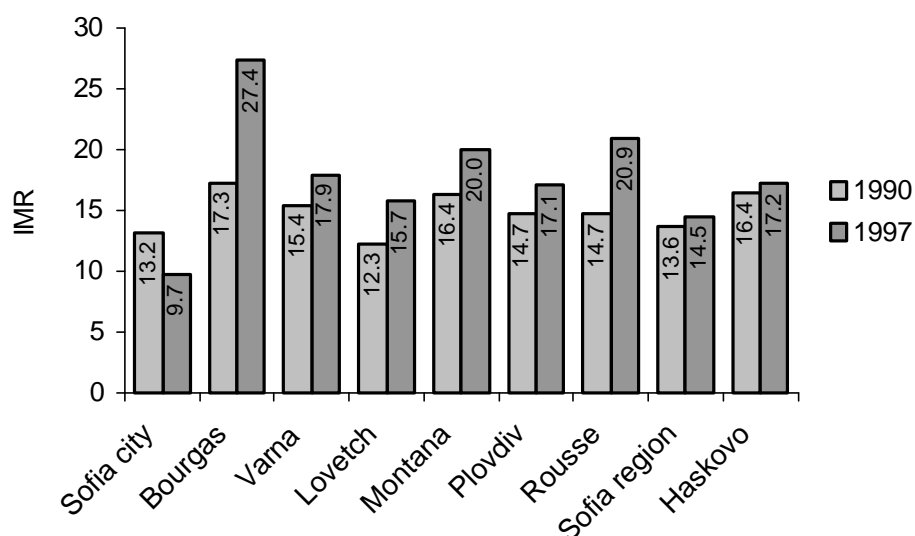
Sources: Appendix Tables 6, 8; NSI (1997); NSI (2000); EUROSTAT (1997, 1998); MONEE Project database.

Note: IMR for CE is unweighted average for Czech Republic, Slovakia, Poland and Hungary.

Several factors can explain these large regional differences in infant mortality. The regions that experienced the largest increase in infant mortality like Bourgas and Rousse were also the most polluted. This is due to the existence of large industrial factories and their release of noxious substances. These regions were also characterized by the presence of large ethnic minority groups, which, as shown later in the paper, tend to have higher infant mortality rates.

It is important to note that the increase in IMR in the past ten years occurred alongside an unprecedented decrease in fertility – something that has happened in most other CEE countries. As also shown in Figure 7, the number of live births decreased by 40 per cent during the period 1989-98. During the same period, the overall fertility rate dropped from 1.9 to 1.1 and the recent increase was still too low to offset the trend. In this situation it is quite possible that there has been a change in the composition of births, affecting IMR.

Figure 8: Infant mortality rates by regions in 1990 and 1997



Source: NSI (1991, 1998).

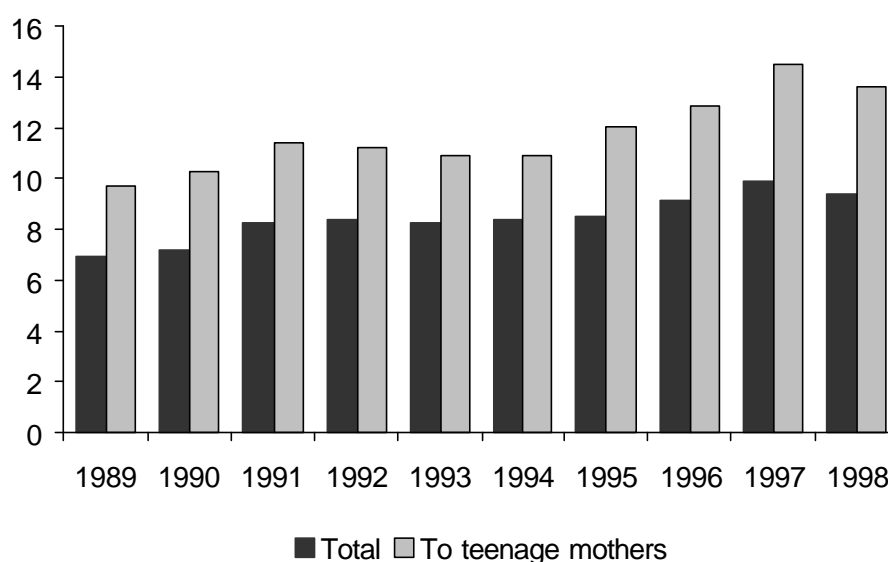
In particular, the share of risky births increased substantially. One such risk is low birth weight. Although low-weight birth is in general considered to be the direct cause of less than 15 per cent of infant deaths in Bulgaria, in most cases it is a precondition for pathologies during the pre-natal period (Kalaikov, 1996). Under-weight new-borns have a high risk of morphological (biological) immaturity that is a main cause of death among infants. They are also more vulnerable to respiratory diseases that are frequent among very young children. Congenital malformations are also over represented among them.

Research in the mid 1990s showed that infant mortality among new-borns in Bulgaria weighing 2000-2499 grams was three times higher than the average for the country, 10 times higher among those weighing 1500-1999 grams, and 18 times higher among new-borns weighing less than 1500 grams (Chalakov and Aleksiev, 1996). Not surprisingly, the chance for low-weight new-borns to survive is substantially lower in Bulgaria than in established market economies.<sup>3</sup> And the proportion of all births that are low-weight has increased during transition (see Figure 9). The share of births that are less than 2501 grams rose from 6.9 per cent in 1989 to 9.4 per cent in 1998 (peaking at 9.9 per cent in 1997).

<sup>3</sup> For instance, a survey of infant mortality among under-weight newborns conducted in the leading national gynecological institute of Bulgaria during the period 1991-95 found that mortality among newborns with extremely low weight (under 1000 grams) in the hospital was 60.4 per cent. For comparison, in the US in the 1990s, the rate was 38.5 per cent in the Columbia Hospital and 53 per cent in the Neonatal Intensive Division of the University of Chicago (Doitcheva et al., 1997).

As in other countries, teenage mothers in Bulgaria have a higher risk of giving birth to low-weight babies. The incidence of low-weight new-borns among teenage mothers was nearly 14 per cent in 1998, almost double that of mothers of 25-29 years and over 60 per cent higher than among mothers of 20-24 years. Figure 9 illustrates the over-representation of low-weight new-borns among very young mothers and the increasing differential with the average level over the last few years. The fact that teenage fertility in Bulgaria is disproportionately high (this phenomenon is discussed in Section 6) combined with the higher risk of giving birth to a low-weight child resulted in about one third of all low-weight births being delivered by teenage mothers over the whole transition period.

Figure 9: Share of low-weight new-borns (per cent)



Source: Appendix Table 6.

Teenage birth is often combined with low educational level of mothers, another factor that has been found to be significant for birth weight and child survival. The transition period in Bulgaria has seen some important changes in the birth behaviour of women of different educational levels. Between 1989 and 1998, the share of births for mothers having upper secondary and tertiary education fell from 67 to 60 per cent while those mothers with a lower level of education - with primary and incomplete primary education - increased from 7.8 to 17.4 per cent. Since infant mortality is found to be substantially higher among infants born of less educated mothers, these recent

changes in the reproductive behaviour of women by educational level had a non-negligible impact on the rise in infant mortality.<sup>4</sup>

## ▪ **4.2 *Child mortality***

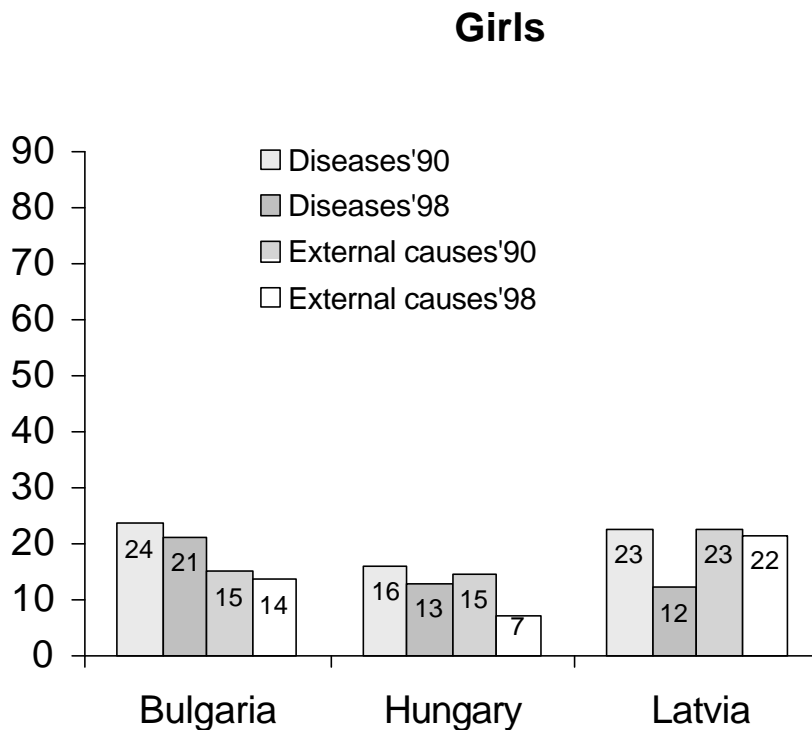
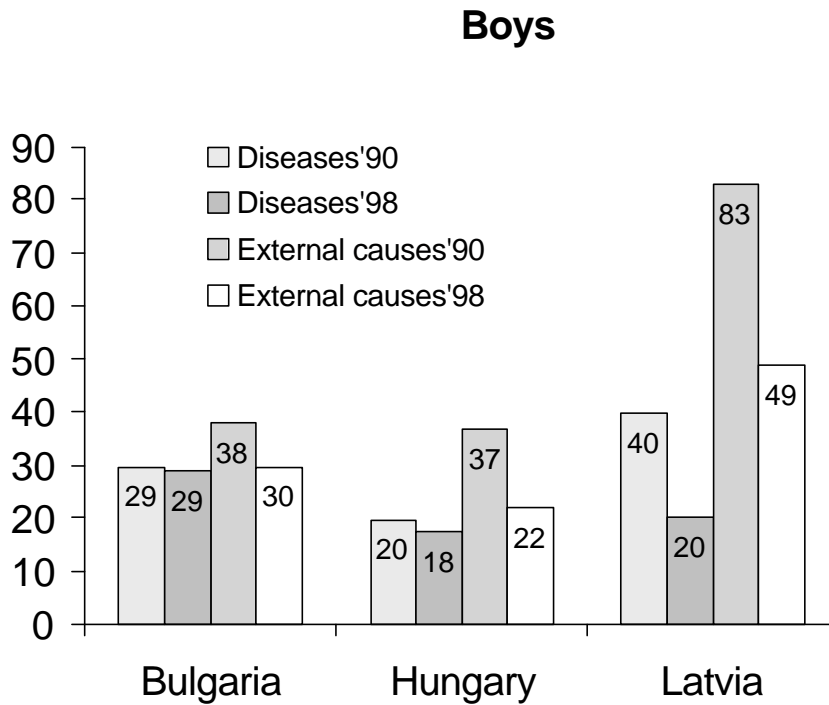
Unlike infant mortality, mortality among children 5-19 years of age in Bulgaria fell somewhat during the transition. After 1990 when the highest rate during the period of 53 deaths per 100,000 of the relevant population was registered, child mortality tended to decrease during the subsequent years. A new peak was registered in 1997, followed by some decrease. But the prevalence of child deaths remained high compared to other CEE countries. The rates were significantly higher, for example, with 15-20 more deaths per hundred thousand of the relevant child population, than in Central Europe throughout the period.

Figure 10 shows how the rates of child mortality in Bulgaria compared with those in Hungary and Latvia, two applicants for joining the EU, in 1990 and 1998. Hungary already had lower child mortality at the start of the transition and continued to experience falling rates during the whole period examined. The Baltic country Latvia, with higher child mortality rates in the late 1980s, made good progress. The rates here almost halved in ten years, mainly due to the significant fall in deaths caused by diseases and the decline of deaths due to external causes.

Unlike Hungary and Latvia, Bulgaria has not seen a substantial decline in child mortality during the transition period. Deaths due to external causes such as accidents, poisoning, violence or suicides, which affect primarily boys, declined somewhat. However deaths caused by diseases both among boys and girls practically did not change over time and remained disproportionately high, suggesting that children's health was not improving. In the late 1990s disease-caused mortality among both boys and girls was a third higher than in the other comparison countries.

<sup>4</sup> The absolute number of births among women of primary and incomplete primary education actually rose by 30 per cent between 1989 and 1998 despite the huge fall in overall fertility, a phenomenon that would be worthy of further investigation.

Figure 10: Death rates of 5-19 year-olds in Bulgaria, Hungary and Latvia in 1990 and 1998 (deaths per hundred thousand relevant population)



Source: *MONEE Project database.*

Note: *External causes for death include: accidents, poisoning, homicide or injury, purposely inflicted by other persons, suicide and self-inflicted injury etc.*

### ▪ 4.3 *Morbidity*

Registered child morbidity has tended to decrease with some oscillation in the past ten years. Morbidity incidence<sup>5</sup> among children aged 0-14 years registered in primary health care units fell from 2,861 per thousand relevant population in 1989 to 2,396 per thousand in 1995 (see Appendix Table 9). The overall child morbidity incidence was maintained at that level also in recent years, when the methodology of the statistics was changed and child morbidity was recorded for the age group 0-17 years. The incidence of respiratory diseases, which represented more than 70 per cent of all child visits in primary health care units, fell by more than 20 per cent throughout the period.

These figures on morbidity should be treated with great care, however. There is some evidence that with the rising cost of medicines and the acute narrowing of eligibility to subsidised medicines, a growing number of parents fail to visit doctors and try to cure their children themselves. According to the 1995 World Bank household survey of Bulgaria, for instance, in 75 per cent of cases of children affected by influenza and respiratory diseases help was not sought from professional doctors. (Influenza and respiratory diseases accounted for 60 per cent of all declared illness among children in the survey.) This had led to a systematic underestimation of child morbidity.

The overall decrease in registered child morbidity was accompanied by a rise in serious diseases, considered as non-typical for children, which has been alarming especially during recent years. The incidence of neoplasm diseases (cancer) increased more quickly among children than among adults. While the total registered cases among adults varied between 8.1 (in 1991) and 11.4 (in 1998) per thousand persons the rate among children doubled - from 1.6 to 3.2 per thousand in only ten years with most of the increase taking place in the last two years. These rates seem remarkably high. For example they mean that in 1998 there was roughly one registered case of cancer at primary health care units in every 300 children.<sup>6</sup>

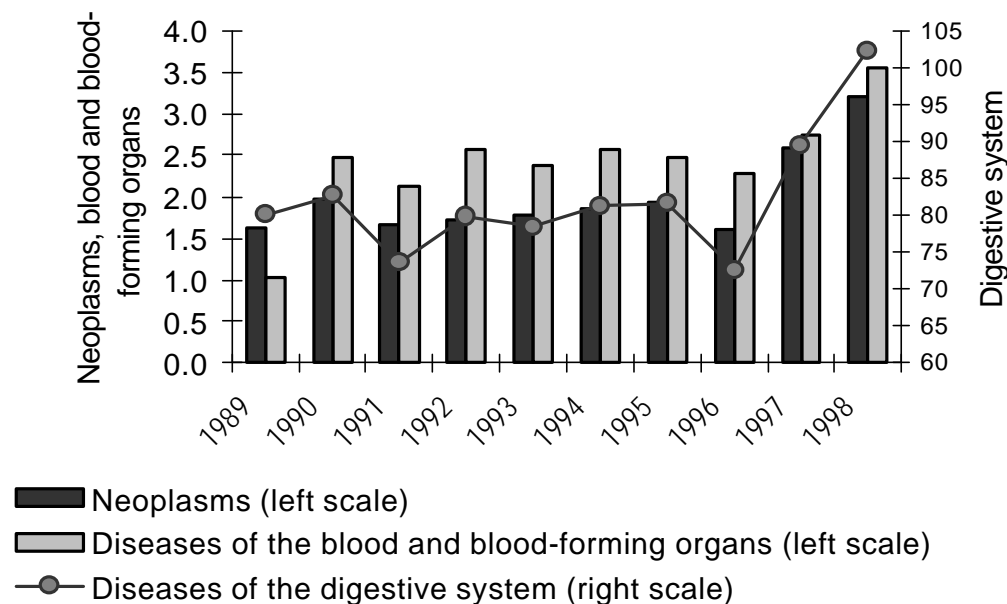
The increase in diseases of blood and blood-forming organs, mainly anaemia, followed a similar trend. As shown in Figure 11, the number of cases exceeded 3.6 per thousand children in 1998. The incidence of diseases of the digestive system, mainly gastritis and ulcer also increased substantially.

<sup>5</sup> Morbidity incidence was calculated as the total number of registered cases at primary health care units per thousand mid-year population of the relevant age group.

<sup>6</sup> In Ukraine, the country which was hardest hit by the nuclear catastrophe of Chernobyl in the late 1980s, the incidence of neoplasm diseases among children was, for example, 1.05 per thousand relevant population in 1990, 1.34 in 1995, 1.41 in 1996, 1.72 in 1997 (State Committee of Statistics of Ukraine, 1998). The rates for Russia were 1.0 per thousand children aged less than 15 years in 1990, 1.6 in 1995, 1.9 in 1997 (MLSDRF, 1995, 1997).



Figure 11: Incidence of three diseases among children (total number of registered cases in the primary health care units per thousand relevant population)



Source: Appendix Table 9.

Note: Age group for 1989-95 is 0-14 years, for 1996-98 is 0-17 years.

According to several observers, a combination of factors can explain the increase in child morbidity during the transition period (Markova, 1998; Merjanov, 1995). The deterioration of nutrition, due to the end of subsidised hot meals at schools and falling family incomes, was an important factor. The number of pupils who had access to subsidised meals at school dropped by 60 per cent between 1989 and 1995.

The collapse of sport facilities and the associated decline of physical activity among children also had an adverse impact on child health. The effect was so strong that in an effort to offset this trend, the Ministry of Education, Science and Technology created a National Centre for after-class and after-school activities in 1995. Thirty students' sport clubs were created that year. But although a lot of new sport opportunities have been created recently, in many cases the fees are so high that they are not affordable for the majority of families with children.

It may also be the case that there has been a rise in psycho-emotional stress at school and at home, due to the rise in uncertainty about the future and the difficulty of adaptation to a rapidly changing environment – other factors that had a negative impact on children's health. However no data are available to test this hypothesis.

## 5. Education

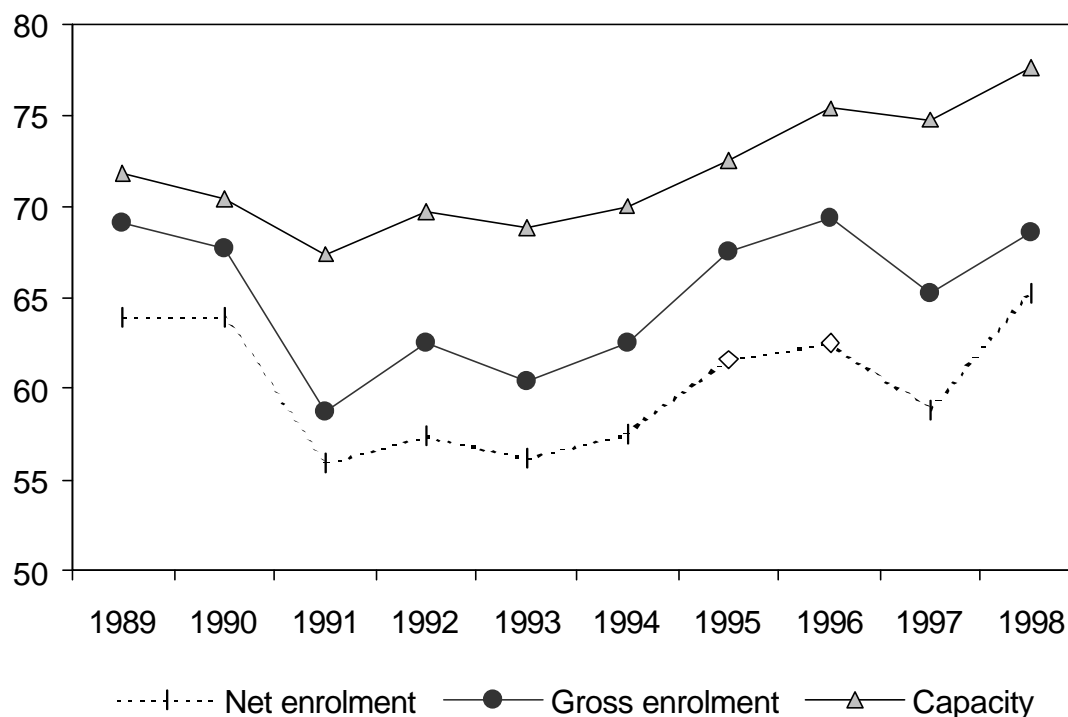
The enrolment rates in education are calculated on both a *gross* and a *net* basis. The former refers to the total number of children enrolled at a given level of education as a percentage of the number of population from the typical age group for this level. The latter corresponds to the number of children from the typical age group enrolled in a given level of education as a percentage of the number of population from the same age group. Other enrolment rates are computed on an *age specific* basis (total enrolment), that is the number of children of given age or age group enrolled at any level of education as a percentage of the total number of population from the same age or age group. The typical age groups by levels of education are the following:

- 3-6 years of age – pre-primary education
- 7-9 (up to 1992/93 school year) or 7-10 years of age – primary education
- 10-14 (up to 1992/93 school year) or 11-14 years of age – lower secondary education
- 15-18 years of age – upper secondary education
- 8<sup>th</sup> grade or 15 years of age – compulsory education.

### ▪ **5.1 Trends in enrolment**

In the late 1980s, pre-primary enrolment stood at about 68 per cent on a gross basis and at around 66 per cent on a net basis. It fell dramatically by about 10 percentage points in 1991, just after the price liberalization. This was largely because many families could not afford the rising cost of kindergartens. As a result, and as seen from Figure 12, the utilization of kindergartens declined. After the initial transitional shock, however, children were gradually sent back to kindergartens. In 1998, enrolment rates in pre-primary education almost reached their pre-transition levels but capacity available was still under-utilized.

Figure 12: Pre-primary enrolment and kindergarten capacity (as per cent of all children aged 3-6 years)

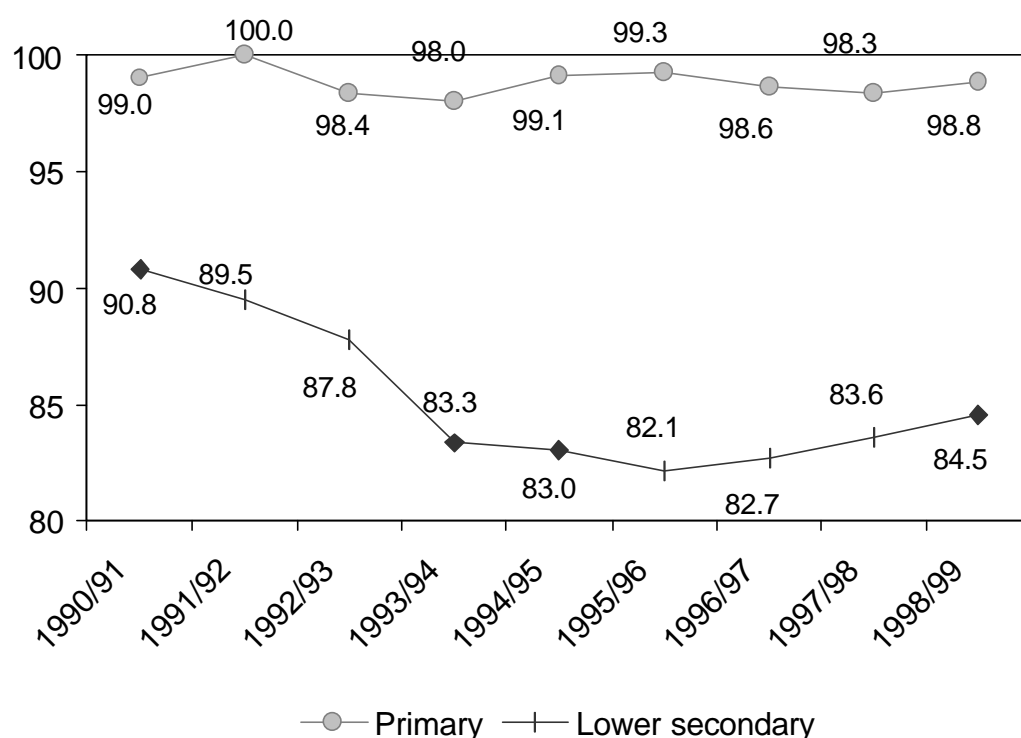


Source: Appendix Table 10.

Bulgaria has nonetheless experienced a large fall in gross enrolment rates in basic education, although it is compulsory. The drop in enrolment was one of the biggest in the CEE countries: from 98.4 to 94.3 per cent in only ten years. The overall decline can mainly be explained by a fall in lower secondary enrolment rates rather than a fall in primary education. In fact, while net enrolment in primary education was high and stable all over the period examined, lower secondary enrolment dropped by almost 9 percentage points between 1990-91 and 1995-96, as seen in Figure 13. And since then, the rates remain below their pre-transition levels.

There is evidence that some negative changes have occurred in attitudes towards schooling. Ability to read and write, but not to obtain the necessary minimum of knowledge through the full course of compulsory education, seems to be considered sufficient for part of the population. This changing attitude is strongly influenced by the lack of means to maintain a student at home and explains the rise in dropout rates after the first 3-4 grades of schooling, observed during recent years. This may be especially true among children of ethnic minorities, in particular for those of Gypsy origin.

Figure 13: Net enrolment in primary and lower secondary education (per cent)



Source: Appendix Table 10.

Part of the increasing difference in enrolment by primary and lower secondary education shown in Figure 13 is however a statistical artefact rather than a real increase in out-of-school children. During the last ten years many upper-secondary schools that admit students after the 7<sup>th</sup> grade rather than after the 8<sup>th</sup> grade have emerged. These schools are attractive for children as they offer more classes in foreign languages and information technology, both skills that are in rising demand in the labour market. The latter caused an increase in the number of younger students aged 14 years who were enrolled in upper rather than in lower secondary education. This, in turn, contributed to the observed decrease in the enrolment rates in lower-secondary education. It is also consistent with the fact that taken together, the enrolment rate of children in compulsory-school ages (7-15 years), regardless of the educational level, remained stable. During the period of study, this enrolment rate stood at around 95 per cent. Table 2 sheds more light by showing the age-specific enrolment rates for some key ages.

Almost all young children aged 7 and 10 were still at school in recent years. But about 2 to 3 per cent had already left school and were at a high risk of remaining illiterate. Among those of age 14 an average of 92 per cent were at school during recent years, while among those of age 15 – the upper age limit of compulsory education – an average of 85 per cent were still at school during the years under consideration. And the remaining 15 per cent had

generally already entered the labour market without any particular knowledge or skills.

*Table 2: Age-specific enrolment rates for compulsory school age*

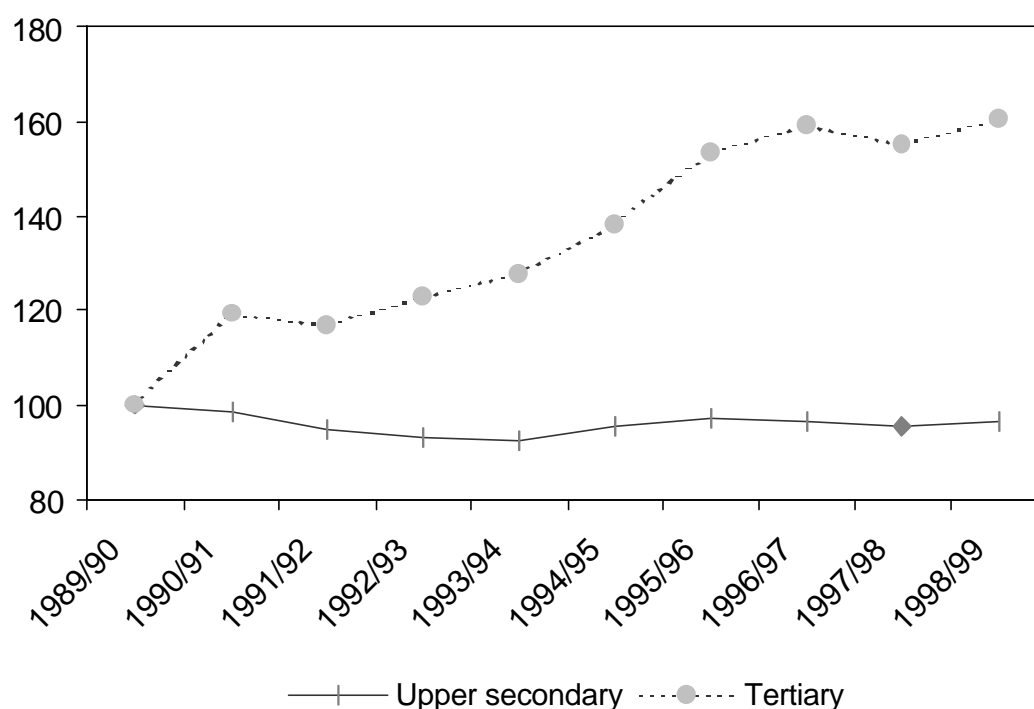
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
Average (7 to 15 years of age)	95.6	95.5	95.2	94.4	95.7	96.1	95.7	95.5	96.1
Age 7	100.0	100.0	98.3	96.7	97.4	97.5	96.1	96.7	97.3
Age 10	97.0	97.4	97.7	98.6	98.8	99.6	99.1	98.8	99.2
Age 14	95.5	92.4	91.5	90.0	90.9	92.0	91.2	91.9	91.9
Age 15	84.0	85.0	86.6	84.0	86.0	86.3	86.8	86.1	87.7

*Source:* Authors' estimates based on MONEE Project database and direct communication with NSI.

Not surprisingly, post-compulsory enrolment rates remained lower than their pre-transition level for quite a long time after the initial shock. Both upper secondary net enrolment rates (calculated for the age group 15-18) and age-specific enrolment rates of children of post-compulsory age (16-18 years) in any level stood at around 62-65 per cent for most of the period. After the decrease during the first half of the decade the rates somewhat recovered and recently reached their pre-transition levels. This occurred alongside a change in the structure of secondary education. Although enrolment in technical schools dominated throughout the period, its share decreased from 60.0 to 56.8 per cent of students. This occurred together with an increase in general secondary enrolment.

Figure 14 shows the diverging patterns of changes in upper secondary and tertiary enrolment. In contrast with the decline in the number of students in basic and upper secondary levels, the number of students following tertiary courses – non-university and university degree – increased from over 153,000 in the late 1980s to over 267,000 in 1999. And the enrolment rate in education for the age group 19-24 increased by 60 per cent during the period. In 1999, it stood at 35.2 per cent.

Figure 14: Changes in gross enrolment by upper secondary and tertiary education (1989=100)



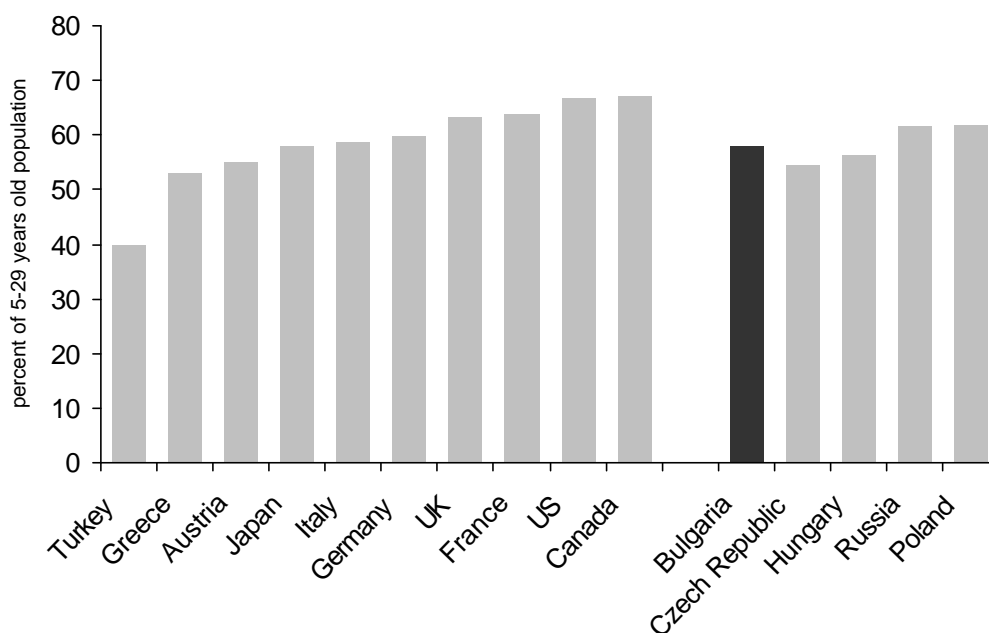
Source: Appendix Table 10.

The rise in tertiary enrolment can be explained by a rise in both the demand for and the supply of university education. On the demand side, and in the context of high youth unemployment, there was the desire of young people to postpone their entry to the labour market and to increase their chances of finding a good job. On the supply side, the number of students increased not only because of the emergence of new private universities, but also because state universities were allowed to admit students on a paid basis in addition to the limited number of those who were traditionally admitted free of charge after they had passed a competitive examination.

It is interesting to compare the enrolment in education in Bulgaria with other countries. Figure 15 shows the enrolment rates in education for the age group 5-29 based on an international survey carried out in 1994 in several OECD and non-OECD countries.

In the mid 1990s, the enrolment rates in Bulgaria were behind those observed in the United States, Canada, and most of the EU countries, similar to those of Japan, and higher than those of the Czech Republic and Hungary.

Figure 15: Population 5-29 years of age enrolled in education in 1994 (per cent)



Source: OECD (1996).

## ■ 5.2 Unequal access to education

Earlier studies have shown that school attendance is strongly influenced by a combination of factors such as the place of residence, household income, family type, parental education and ethnicity (see for example UNICEF, 1998). In Bulgaria, an important factor that can be expected to have adversely affected child attendance and school participation during the transition has been the decline in family income.

Figure 16 shows the concentration curves of household expenditures on education and leisure by child deciles<sup>7</sup> based on data derived from the Household Budget Survey (HBS). Although these data refer only to the period 1992-98<sup>8</sup> and do not reflect the changes that took place immediately after the major initial price shock, they show a large negative impact associated with the rise in income inequalities.

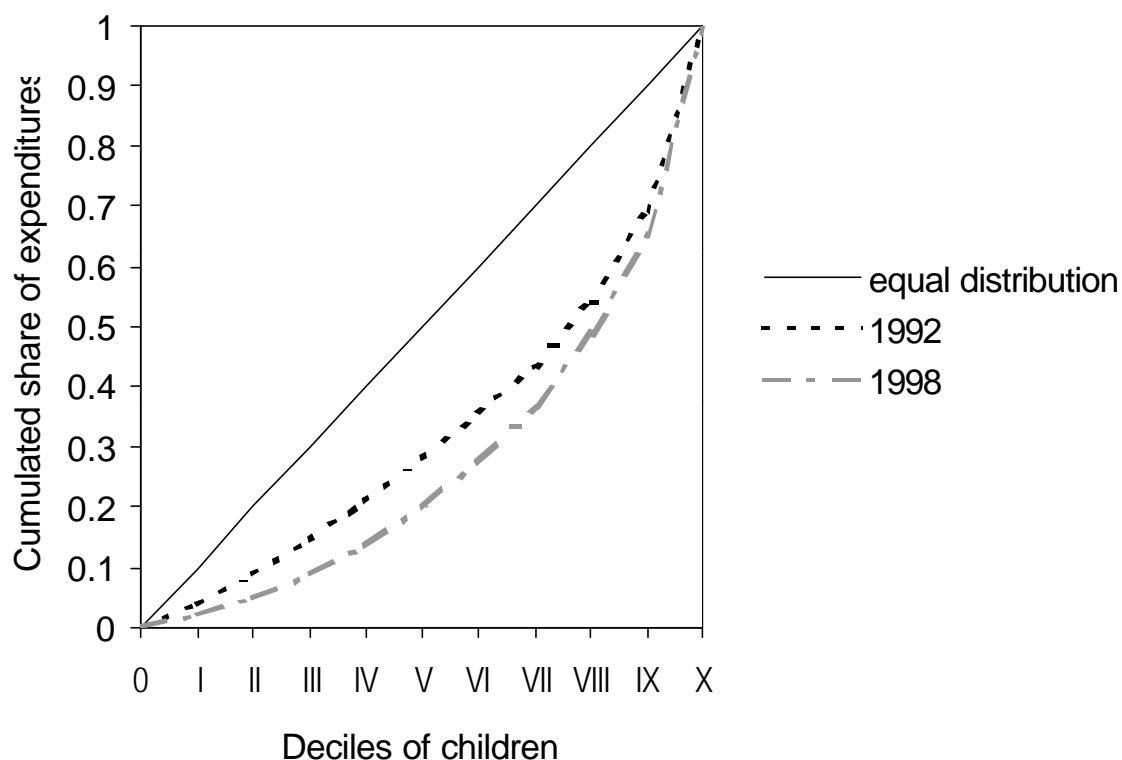
The smaller the disparities in expenditures by deciles, the closer the concentration curve to the diagonal representing an equal distribution in

<sup>7</sup> Data on individual income deciles were recalculated in order to obtain estimates of income deciles of children (using information on the number of children in each individual decile). The standard variable "expenditures on education and leisure" includes expenditures directly connected with a child's education, e.g. textbooks, notebooks, pens, but also tuition fees for private education and leisure.

<sup>8</sup> The methodology of the survey has been changed and data by decile groups started to be published only in 1992.

Figure 16. Expenditure became increasingly concentrated on richer children between 1992 and 1998. About 9 per cent of all expenditures on education were spent on behalf of the poorest fifth of children compared to 46 per cent for those children in the richest fifth in 1992. In 1998, however, the poorest fifth benefited from only 4.6 per cent of all education expenditures, compared to more than 51 per cent for the best-off. Moreover, in 1998, expenditures per child in the top decile of children were 19 times higher than those in the first decile, having been only 8 times higher in 1992. The rising difference in terms of access to education by family income had to be expected given the rising cost of education in both public and private institutions, the development of private lessons after school and fee paying in higher education.

*Figure 16: Concentration of private expenditures on education and leisure by children's deciles in 1992 and 1998*

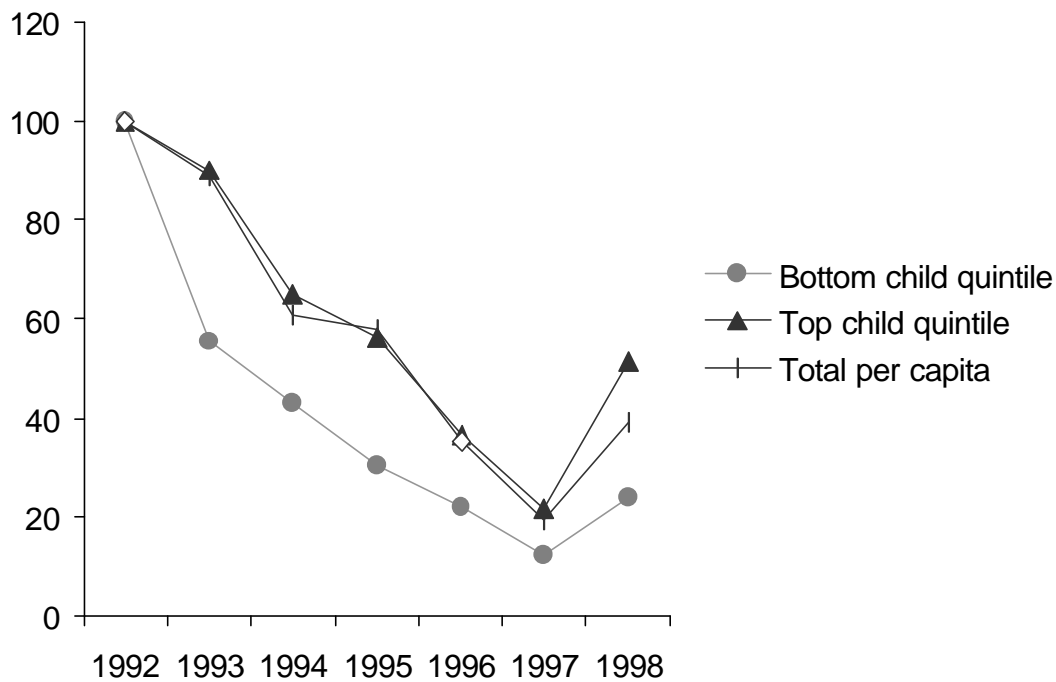


Source: Appendix Table 11.

Not only did poorer children benefit from a lower share of the total but the absolute amount declined more for the worst-off children. This is illustrated in Figure 17, which shows the real changes in expenditures on education and leisure on average and among the poorest and richest fifths of children. This graph suggests that poor children were disproportionately affected by the worsening socio-economic circumstances during the period under review.



Figure 17: Change in private education expenditures in 1992-98 (per cent, 1992=100)

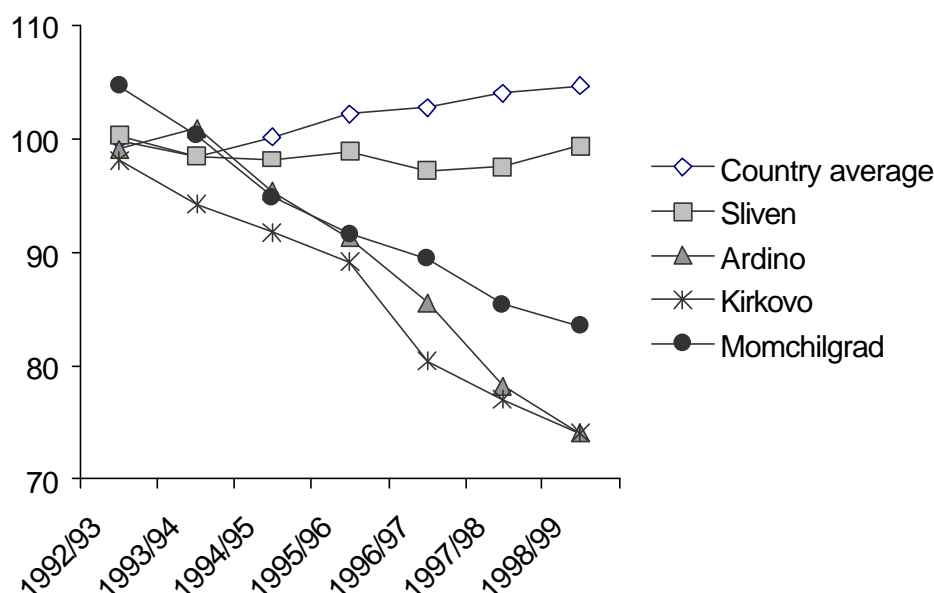


Source: Appendix Table 12.

Poverty is one reason for the more difficult access to education that children from some ethnic minority groups such as the ethnic Turks and the Gypsies have experienced. As seen in Section 3, these groups are over-represented among the poor. Although regular statistical surveys do not disaggregate the data on education by ethnicity, there is some other evidence that children from these ethnic minorities, especially those living in small towns and villages, have a higher risk of dropping-out of school before completing compulsory education. For instance Figure 18 shows that the enrolment rates in primary education in a few small municipalities (Ardino, Kirkovo and Momchilgrad), where the Turkish community predominates, have declined compared to the national average and to the city of Sliven where there is a large Gypsy population.

Other surveys confirm the importance of the problem of out-of-school children, especially among ethnic minorities. For example a survey, conducted by the International Centre of Minorities' Problems and Cultural Interactions among gypsies in 1994, found that only 12 per cent of children aged 3-6 were enrolled in kindergartens and only 48 per cent of children of compulsory school age were enrolled in any level of education (Tomova, 1995).

Figure 18: Gross enrolment by primary education in municipalities with concentration of minority population (per cent)



Source: Appendix Table 13.

Note: Population aged 7-9 years for 1992/93 school year and 7-10 years for 1993/94 to 1998/99 school years.

Other evidence comes from the 1995 World Bank survey, which shows that the share of children not attending school was 5 per cent among ethnic Bulgarians, 10 per cent among Turks and 51 per cent among Gypsies. Roma children constituted half of all children not attending school while the share of this ethnic group in the total relevant population was somewhat below 10 per cent. The main reason for not attending school (38 per cent of cases) was described as “do not like school”. And ninety per cent of respondents who gave this answer were Gypsies. Gypsy children aged 7-15 years had three years of education on average and 22 per cent of them had never been in school. Among non-attendants of Turkish origin the average number of years of schooling was 6. Among ethnic Bulgarian children who were not attending school, two-thirds had not started school because their parents thought they were “too young”. Another 21 per cent had decided that the process of their education had been “done”.

### ▪ 5.3 Evidence concerning the quality of education

Traditionally, the education system in communist countries, such as Bulgaria in the pre-transition period, was largely oriented towards memorizing facts

with little place given to the development of general life skills. With the collapse of the old regime, Bulgaria has engaged in a move towards enhancing broader skills that are generally seen as more appropriate for a market economy. The attitude of parents towards education is also changing, at least according to a number of sociological surveys (Parapulska, 1998).

In the context of rising competition in the labour market, the role of education is becoming more and more important. In order to increase their chance of finding a good job, many young people are trying to remain in education longer. However, faced with the worsening of teaching in public schools, there is some evidence that the necessity to take private lessons in order to succeed is gaining importance. This has an adverse impact on poor children who do not have the means to finance the access to this informal education system.

Despite the rising difficulties experienced by Bulgarian children, there is some evidence that Bulgarian students were doing quite well at school. This, at least, is what emerged from the results of the Third International Mathematics and Science Study (TIMSS) carried out in 1994 by the International Association for the Evaluation of Educational Achievements in 41 countries, including Bulgaria. According to this survey, Bulgarian children aged 13 and 14 years who were studying in 7<sup>th</sup> and 8<sup>th</sup> grades showed high achievement rates in mathematics and science. For instance, in mathematics Bulgarian children stood at the eighth position for those in 7<sup>th</sup> grade and in eleventh position for those in 8<sup>th</sup> grade.

Notwithstanding the good results for average achievement, Bulgaria showed one of the highest rates of dispersion in achievements. Unfortunately the background data submitted were not deemed internationally comparable and were not included in the international TIMSS database. Hence there are no data about variables such as household size, income, number of employed/unemployed, urban/rural location, ethnicity, parental education etc. Thus which children performed badly and which children performed well cannot be identified – an issue that obviously needs further investigation.

The recent TIMSS-repeat, carried out in 1999 showed, however, that the relative position of Bulgarian students worsened over time. Eighth grade students were ranked seventeenth in both mathematics and science. They, together with their peers from the Czech Republic, also showed significant worsening of the absolute scores in the two fields.

## **6. Children at Special Risk**

Growing up healthy and surrounded by a warm family environment is crucial for child development. A number of factors, however, put children at special risk. In Section 4, we saw the negative impact on children's health of teenage

births and births to unmarried women. Those children with very young or single mothers are also disproportionately more exposed to the risk of placement in public institutions, the latter still being the main alternative for family care, with all the negative consequences for their physical and emotional development. The aim of this section is to evaluate these risk factors by examining trends in teenage births and births to unmarried women and by looking at the extent of child institutionalization.

### ▪ **6.1 *Teenage birth rate***

One major problem of teenage birth, as seen earlier, is that teenage motherhood in Bulgaria appears as a correlate of low-weight births, the latter being associated with higher infant mortality. Available data show that at the start of the transition Bulgaria stood in first position among CEE countries in terms of teenage fertility. In 1989, the birth rate among 15-19 year old women was over 75 per 1000 women in Bulgaria, compared with 45 per 1000 in Central European countries and 63 in the former Soviet Union. In established market economies, the figure was far lower, with an EU average teenage birth rate of 16 per 1000 women. The high teenage fertility in Bulgaria is even more striking given that it was not associated with higher overall fertility – the total fertility rates in the above-mentioned countries were the same or even higher than that of Bulgaria.

The immediate reaction of women in the most active reproductive age (20-29 years of age) to the deep impoverishment at the beginning of the transition was to delay having children and to plan their first and often their only child for later. In ten years fertility among women aged 20-24 years more than halved and that of 25-29 years old decreased by a third. Teenage fertility also fell substantially but constitutes a significant share of all childbirth. In the late 1990s the birth rate of women aged 15-19 stood at 45 per 1000 and the share of children born to them represented 20 per cent of all new-borns.

Looking at birth rates by exact age among the teenage years confirms that teenage birth remains a problem in Bulgaria. For instance, in 1998, the teenage birth rates were respectively 5.4 per 1000 among women aged 14, 15 per 1000 among those aged 15, 28 per 1000 among those aged 16, and over 40 per 1000 among women aged 17. And although these rates have tended to decrease in the past ten years, they remained far higher than in established market economies. For instance, in 1994, the average birth rate among 16 year-old girls was 5.3 per 1000 in the EU, compared with 36.8 in the same year in Bulgaria (Micklewright and Stewart, 1999).

## ▪ *6.2 Children born to unmarried women*

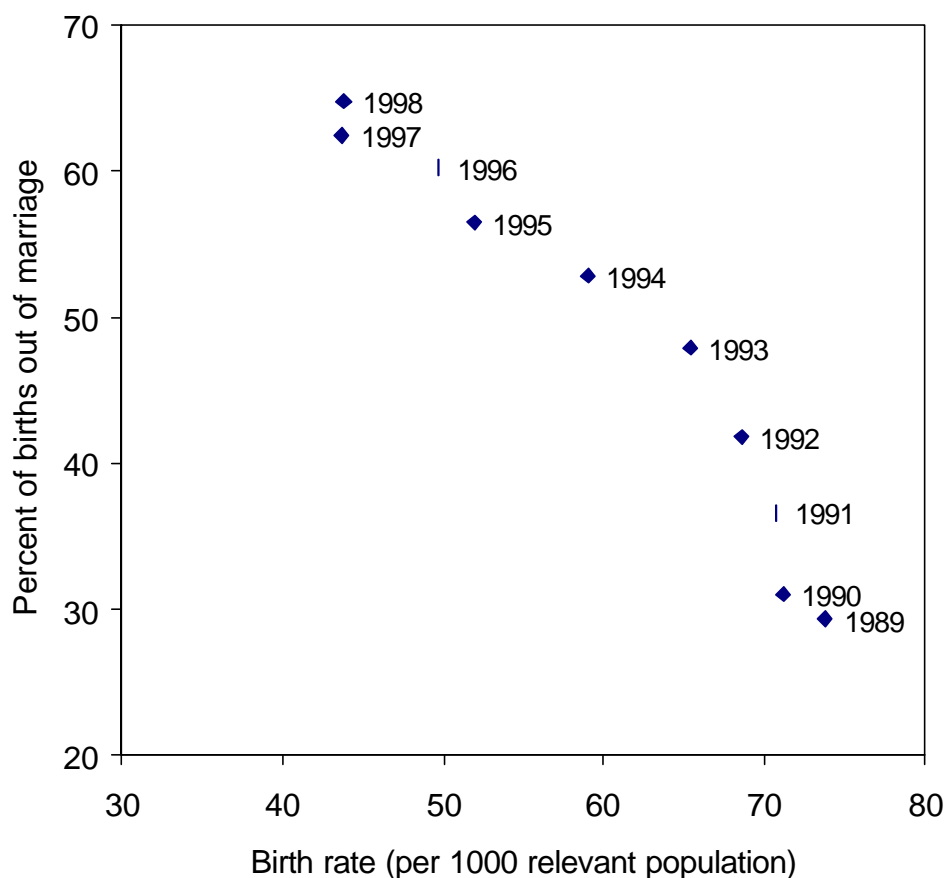
While the overall number of births has declined substantially during the transition in Bulgaria, there was a large increase in the share of children born out of marriage, almost tripling in only ten years. To some extent, the rise in out-of-marriage births was observed in all countries from the CEE/CIS region, especially in the Baltic States. More specific to Bulgaria, however, is that a predominant share of children born out of marriage belong to the lowest income groups. And contrary to many established economies, where cohabiting is widespread, in Bulgaria out-of-marriage birth generally means living in an incomplete family with a higher risk of the child being placed in public institution.<sup>9</sup>

A number of studies have drawn attention to the welfare disadvantage experienced by single-parent families (see for instance Klugman and Kolev, 2000, for the case of Russia). In Bulgaria, the 1995 World Bank survey found that more than 26 per cent of single-parent families (almost exclusively headed by single women) were poor, compared with 19 per cent for married couples with children (ILO, UNDP, 1998a). To some extent, children born out-of-wedlock suffer similar disadvantage to children with very young mothers. They tend to suffer disproportionately from under nutrition and ineffective food balance, with long-term negative effects on their health, and have a higher risk of being placed in institutions.

Figure 19 shows the trends in teenage births and its changing pattern over the transition. Although on the decrease, teenage birth rates remained high in the international perspective. Moreover, there was an increase in the number and the share of out-of-marriage births among teenage mothers. In 1989 children born to teenage mothers out of wedlock constituted about 30 per cent of all births in this age group. Ten years after, their share had more than doubled.

<sup>9</sup> Evidence suggests, nonetheless, that cohabiting was known in Bulgaria among Gypsies even in the pre-transition period. According to a survey carried out in 1992 (see UNICEF National Committee, 1992) about one third of births out of marriage were to women of Gypsy origin, who actually lived with their partners. A more recent study suggests (Tomova, 1995) that sexual activity among Gypsies starts earlier (in 73 per cent of cases, before 15 years of age) than among ethnic Bulgarians, Turks and young people of other ethnic origin. Considering that births of unmarried women are over-represented among Gypsy women, one may assume that many of their children live, in fact, with two parents. However, these children remain at a higher risk of being placed in institutions, mostly for economic reasons.

Figure 19: Birth rates of 15-19 year-old teens and share of teenage births out of marriage in 1989-98



Source: Appendix Tables 6, 7.

### ■ 6.3 Children in public institutions

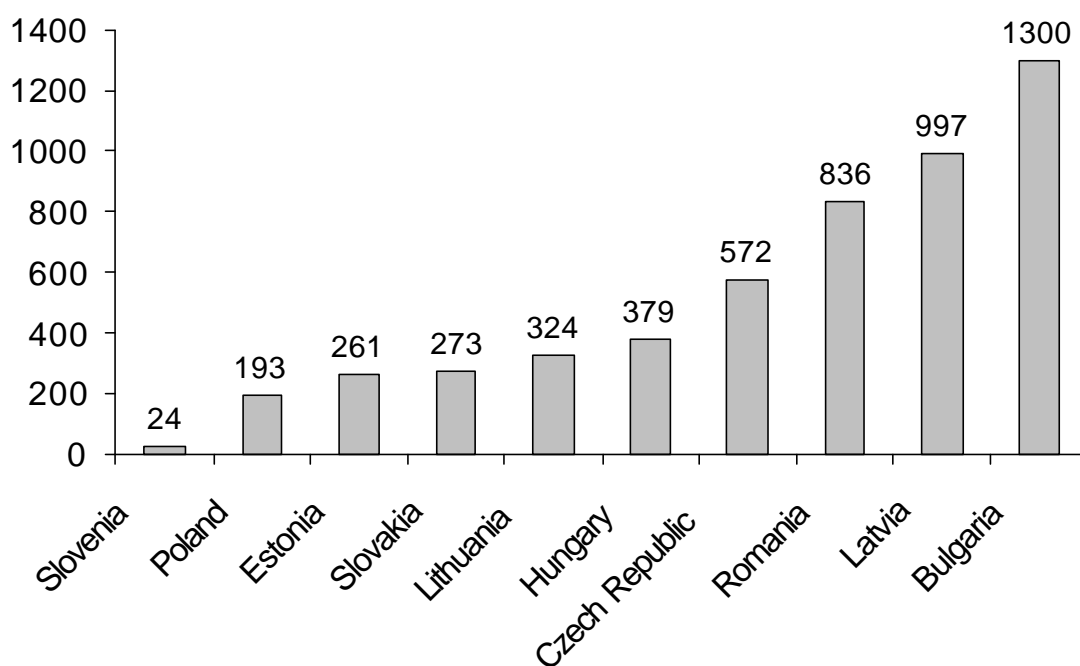
Children in institutions are a group of special concern. Given that non-institutional forms of child-care (e.g. fostering) are strongly under-developed in Bulgaria, institutionalization is often the sole solution for raising children in public care. This is the main reason why most institutions inherited from the old regime were maintained during the transition. However, these institutions are ageing rapidly and are experiencing dramatic financial problems. No new investments were made to improve the state of the existing institutions nor was it possible to open new ones. In many cases, children placed in institutions suffer from poor nourishment and inadequate clothing.

In what follows, we focus on the two most frequent types of child institution that existed under the old regime and that have continued during the transition, namely infant homes for children aged 0-3 (“Mother and Child” homes) and orphanages for older children (“Homes for Children and Adolescents”). There are nonetheless other institutions available for

physically and mentally disabled children and children in conflict with the law. Although these are not investigated here, they raise specific problems and would need special attention.

As shown in Figure 20, Bulgaria is the country with the highest rate of children in infant homes among all CEE/CIS and Baltic countries. In 1998 about 3600 children aged 0-3 years lived in infant homes, more than one per cent of the total number of children of that age.

*Figure 20: Rates of infants in public institutions in 1998 (per hundred thousand 0-3 year-old population)*

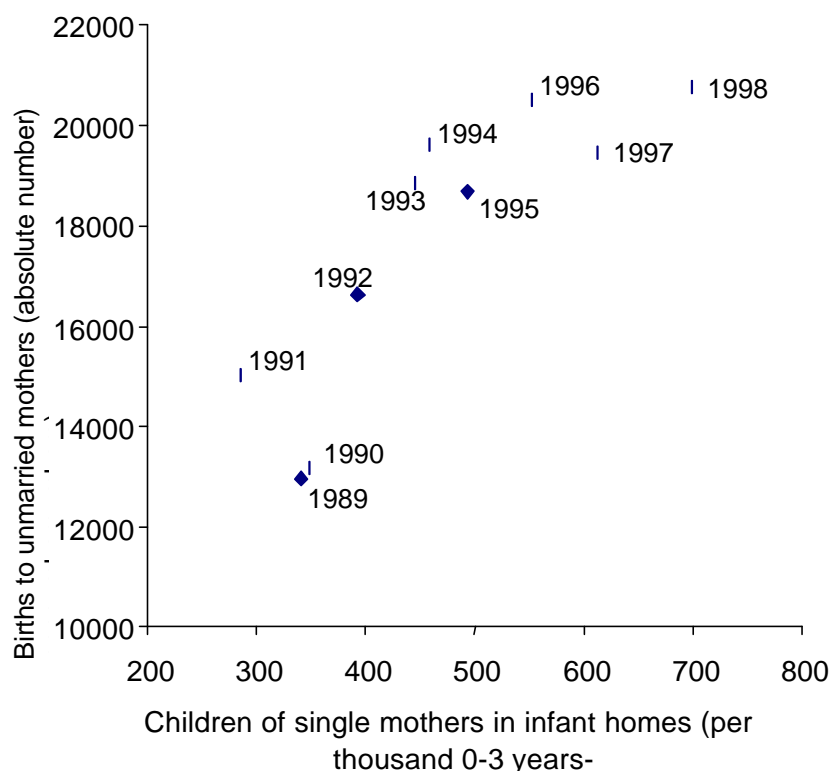


*Source:* MONEE Project database.

*Notes:* Data for Slovenia refer to 1995, for Poland to 1993, for Slovakia to 1996. Data for Estonia refer to children aged 0-7 years in 1997.

A large share of these institutionalized children comes from single parent families. As seen in Figure 21, the number of children of unmarried mothers and abandoned children in public institutions increased over time. The association between the increasing number of out-of-marriage births and the increasing rate of placement in institutions is clearly suggestive of the higher risk of institutionalization among single parent children and abandoned children. Still, the majority of children born to unmarried mothers is growing up in families, and not in institutions. More attention to and support for these children is needed.

Figure 21: Out of marriage births and rates of children to single mothers and abandoned children in infant homes, 1989-98.



Source: *Appendix Tables 6, 14.*

The results of a nationally representative study conducted in the mid 1990s shed some additional light on the family background of children placed in infant homes. According to this study 33 per cent of children placed in infant homes were born to teenage mothers and 64 per cent belonged to ethnic minorities (of which 88 per cent of Gypsy origin) (Antonova Tzv., V. Gatev et al, 1996).

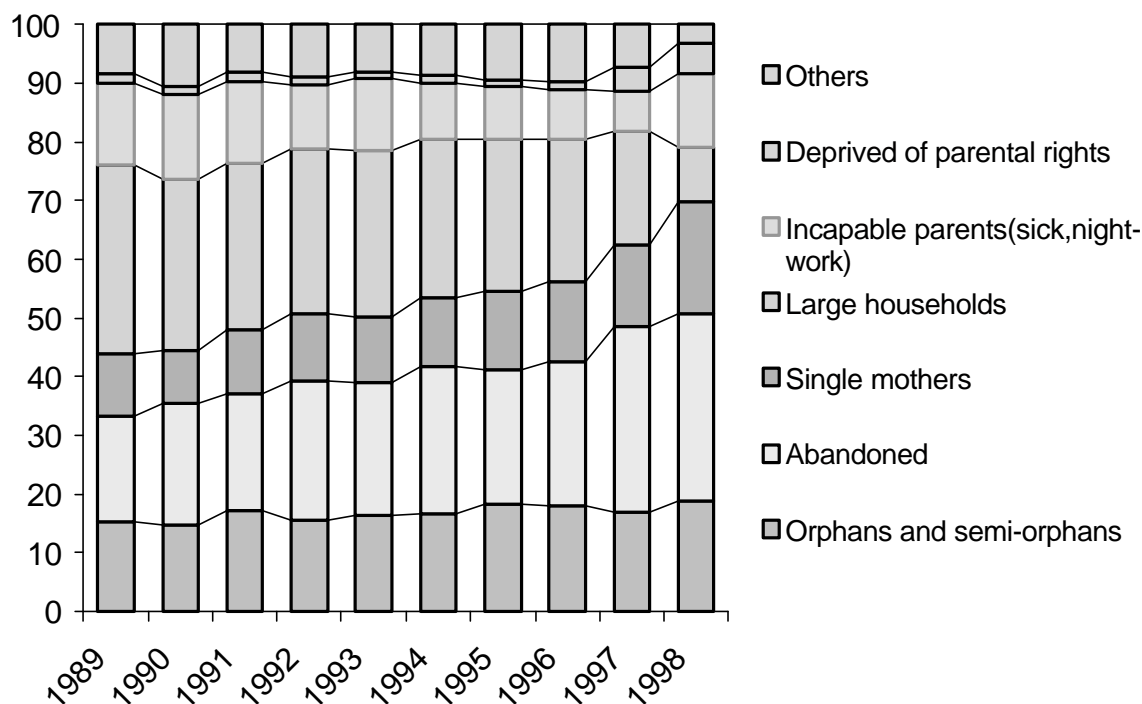
The lack of alternative solutions for placing children in infant homes generally results in the fact that a large share are transferred to orphanages after reaching the age of three. Although the absolute number of children in orphanages aged 4-17 remained constant in the transition at about 8300-8700 children, their rate has increased from 490 per 100,000 at the beginning of the transition to 600 per 100,000 at the end of the decade. This rise in the rate of institutionalization in orphanages was accompanied by some substantial changes regarding reasons for placement.

Figure 22 shows the main reasons for placement in orphanages. While in 1989, the share of abandoned, single parent, or orphan children constituted less than 45 per cent of all children in orphanages, in 1998 they represented more than 70 per cent. And the biggest increase was observed among single parent children and abandoned children, the share of orphans and semi-



orphans (those children with only one alive parent) remaining practically constant.

Figure 22: Children in orphanages by cause of placement, 1989-98 (per cent)



Source: Appendix Table 14.

Note: Data for 1997-98 in this figure were re-structured in order to follow the trends from the beginning of the transition period.

The increasing number of children who had almost no chance of enjoying parental care did not leave much room in child institutions for other children who were also in need of support – predominantly children from large families in a critical financial situation and children with sick or disabled parents unable to provide appropriate care.

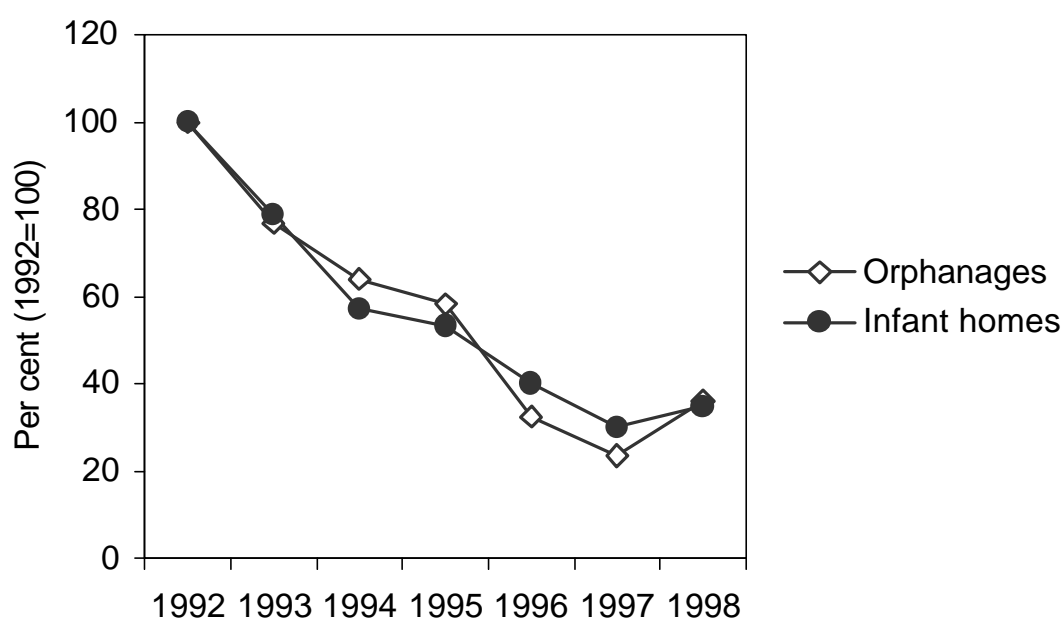
Considering that many institutionalized children are likely to spend most of their childhood in institutions, the environment that they find in these institutions and the care they receive are of crucial importance. Appropriate care does not only mean good nutrition and a hygienic environment. It is also essential for these children to benefit from a friendly environment. It is, however, unfortunate that little information exists on the quality of services received by institutionalized children. Still, some evidence suggests that these children experience the most difficulties.

Anecdotal evidence suggests that in many cases even proper nutrition and clothing were difficult to ensure, especially during the late 1990s. The large

fall in social expenditures has been particularly harmful for child institutions, and the withdrawal of the State has not entirely been taken over by NGOs.

Public expenditures on infant homes and orphanages fell by 70 per cent in real terms from 1992, the first year for which data are available, to 1997 (see Figure 23). Although the trend was reversed after that, the real level of these expenditures remains far below that of the early 1990s. The impact on child-care in these institutions is dramatic, as they have to provide care to the same number of children with substantially worsened resources.

Figure 23: Real change in per child expenditures in orphanages and infant homes in 1992-98 (per cent, 1992=100)



Source: Appendix Table 14.

Expenditures on repairs are often minimal. Even expenditures on food in institutions fell substantially during recent years. Anecdotal evidence suggests that in some homes children did not receive meat and other protein-rich food for months, and the government was obliged to sustain the wages of staff, although at a very low level, to avoid massive resignations.

The same nationally representative study cited earlier found that the incidence of chronic diseases and anomalies were two times higher among children in infant homes (37 per cent) compared to other children of the same age. Most of them were under-weight and under-height at the time of the survey (see Tzvetkova et al, 1996). The share of under-weight children at the time of the survey was higher than at their entry to infant homes. The level of mental development of children was systematically close to the bottom limit

of the normal range and the share of retarded children was found to be higher in institutions than elsewhere.

Some evidence of the impact of child homes on mental development is given in Table 3. This shows the state of mental development of children in infant homes according to the time they have spent in the institutions.

*Table 3: Mental development of children according to the time spent in infant homes, 1994 (percentage shares)*

Time spent in the infant home	Level of mental development				Total
	normal	slight retardation	lower limit of the norm	strong retardation	
one day to 6 months	62.3	15.1	10.1	12.5	100
over 6 months to 1 year	48.2	27.1	15.7	9.0	100
over 1 to 1 and a half year	38.7	21.3	20.0	20.0	100
over 1 and a half to 2 years	38.2	32.7	7.3	21.8	100
over 2 to 3 years	20.0	35.0	6.7	38.3	100

*Source:* Tzvetkova et al, (1996).

The longer the period in an infant home, the worse the level of mental development. One possibility is that those who stay longer in institutions are exposed for a greater period of time to poor living conditions including a monotonous environment, a deficit of communication with adults, and a lack of stimulus. Of course, another possible explanation is that those children who are more retarded stay longer in institutions with decreasing chance of leaving, given the lack of improvement in their health. Their share therefore rises over time, with brighter children being more likely to leave through adoption or re-absorption into their natural families.

## 7. Summary and Conclusions

The aim of this study has been to contribute to a better understanding of the impact of ten years of enormous social and economic change on child well-being in Bulgaria by exploiting available data relating to children and their families.

The decline in real income that characterized the past ten years of transition has on average been large for all family types and appears to have been particularly severe for families with several children. Income inequality has increased and children were found to have slipped down a widening distribution. One factor has been the shrinkage in public social benefits, in particular child benefits, which used to represent a substantial income source

for families with children. The fall in income has translated into a sharp deterioration of nutrition. By 1998 the daily per capita calorie intake averaged less than 2,500 calories in all household types with children.

The deterioration in child economic well-being was accompanied by a worsening in some measured aspects of children's health. Infant mortality stopped falling during the 1990s and child mortality, especially disease-related, remained at a high level. The incidence of several severe illnesses rose. The cost of health care is often reported by families as a reason for not seeking medical help for children.

The impact on education was mixed. After the initial shock, the enrolment rate in pre-school education almost reached its pre-transition level in the late 1990s. There was a decline in the enrolment rate in compulsory basic education, partly due to an increase in early school drop-out, although it seems that the changes are in part a statistical artefact. The picture for tertiary education is somehow different, as increasing numbers of young Bulgarians were studying at university in the hope of finding a good job more easily. It is a matter of concern that access to education is becoming more difficult for the poorest members of the society. This is due to the rising private costs of education. Changes in the quality of education remain unclear.

The final part of this study focused on children at special risk – those with very young or single mothers and those placed in institutions. The results showed that although teenage fertility fell in the 1990s, it is still high in Bulgaria and the share of births to unmarried mothers rose dramatically. Bulgaria comes in first place in terms of placement in infant homes among all CEE countries and the rate of children placed in orphanages has also tended to increase during the transition. This is consistent with the finding that a large share of institutionalized children were born to very young or single mothers. At the same time, the sharp deterioration of living conditions in infant homes and orphanages during the transition raises obvious concerns about the capacity of these institutions to fulfil their social role and to promote the development of vulnerable children.

What, then, can be the scope for Bulgarian policy makers to better protect the fate of the country's children? Our feeling is that although the resources of the government are very limited, a lot can be done. First, the Bulgarian authorities, with the help of international organizations and NGOs, should promote the development of more research on child welfare in order to identify better the needs of children. The few public resources available could then be reallocated with priority to the most vulnerable groups.

Second, further information on the situation of children could be obtained by a more extensive use of existing household data and by conducting, on a regular basis, new surveys with a strong focus on child-related issues. It is also likely that the development of educational campaigns on sexual

behaviour and family planning, which are relatively cheap to carry out, would substantially reduce high risk births and the associated negative effects on children's health and development.

## Appendix Tables

*Table 1: Main economic and social indicators*

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
GDP (rate of change, 1989=100)	100	90.9	80.3	74.4	73.3	74.6	76.2	67.9	63.2	65.7
Employment (rate of change, 1989=100)	100	93.9	81.6	75.0	73.8	74.3	75.2	75.3	73.3	71.2
Real per capita income (rate of change, 1989=100)	100	94.4	58.5	61.5	53.2	45.5	41.6	28.3	24.2	30.8

*Source:* Authors' estimates based on MONEE Project database; CPI from EBRD (1999).

**Table 2: GDP changes and 40-59 male mortality rates in selected CEE countries and Russia**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>GDP change (1989=100)</b>										
Czech Republic	100.0	98.8	87.5	84.6	85.1	87.8	93.4	96.9	97.2	95.0
Slovenia	100.0	95.3	86.8	82.0	84.3	88.8	92.5	95.7	100.1	104.0
Bulgaria	100.0	90.9	80.3	74.4	73.3	74.6	76.2	67.9	63.2	65.7
Estonia	100.0	91.9	79.4	68.1	62.0	60.8	63.4	65.8	72.8	75.7
Russia	100.0	97.0	92.2	78.8	71.9	62.8	60.2	58.1	58.6	55.9
Hungary	100.0	96.5	85.0	82.4	81.9	84.3	85.5	86.6	90.6	95.2
Poland	100.0	88.4	82.2	84.3	87.6	92.1	98.6	104.6	111.8	117.1
Latvia	100.0	102.9	92.2	60.0	51.1	51.5	51.0	52.7	57.3	59.3
Lithuania	100.0	95.0	89.1	85.3	71.6	64.8	67.1	70.4	75.6	79.5
Romania	100.0	94.4	82.2	75.0	76.1	79.1	84.7	88.2	82.1	76.1
Slovakia	100.0	97.5	83.3	77.9	75.0	78.6	84.1	89.6	95.4	99.6
<b>40-59 male mortality rate (deaths per thousand relevant population)</b>										
Czech Republic	9.4	10.0	9.3	9.1	8.4	8.3	8.1	8.0	8.1	7.8
Slovenia	9.6	9.2	8.8	8.5	9.0	8.3	7.8	7.4	7.5	7.4
Bulgaria	10.1	10.0	9.6	10.5	10.9	11.2	11.2	10.9	11.2	11.1
Estonia	12.1	13.5	14.4	14.5	16.9	19.7	18.6	15.4	14.9	14.2
Russia	13.9	14.3	14.4	16.5	21.1	24.1	22.4	19.7	17.4	16.5
Hungary	14.0	14.3	14.5	15.6	15.9	15.7	15.2	14.1	13.8	14.2
Poland	11.8	11.9	12.4	11.8	10.8	10.5	10.6	10.0	9.9	9.6
Latvia	13.1	14.3	15.1	16.5	20.6	23.7	21.5	16.7	15.3	15.9
Lithuania	12.3	12.9	13.6	14.2	16.7	17.8	17.6	15.4	13.7	13.2
Romania	10.5	10.9	11.0	11.9	12.3	12.7	13.2	13.3	13.2	12.1
Slovakia	12.3	12.5	11.8	11.3	10.6	9.8	9.7	9.2	9.4	9.8

Source: MONEE Project database.

*Table 3: Structure of total per capita income, by number of children (per cent)*

Number of children	1987			1992			1998		
	1	2	3+	1	2	3+	1	2	3+
Labour income:	75.9	72.6	57.3	59.4	57.2	43.0	56.9	52.6	56.9
-Salaries and wages	75.2	71.8	56.6	56.6	55.5	41.6	52.9	48.9	52.3
- Other than salaries & wages	0.7	0.8	0.7	2.8	1.7	1.4	4.0	3.7	4.6
Entrepreneurship				2.2	3.0	2.8	5.5	7.9	6.4
Social benefits:	10.2	15.0	24.8	14.2	14.1	19.5	10.8	10.4	12.0
- Pensions	3.4	1.8	1.8	7.7	5.3	7.0	7.0	5.4	3.9
- Family allowance for children	3.0	8.9	17.7	3.0	6.1	8.7	1.5	2.9	5.9
- Other social benefits, scholarship	3.8	4.3	5.3	3.5	2.7	3.8	2.3	2.1	2.2
Home production	4.8	4.4	9.4	13.3	14.4	26.2	13.7	16.8	13.1
Capital income:				2.3	1.3	0.3	1.2	0.6	0.1
- Property incomes				0.3	0.2	0.0	1.0	0.4	0.0
- Property sales				2.0	1.1	0.3	0.2	0.2	0.1
Other income	9.1	8.0	8.5	8.6	10.0	8.2	11.9	11.7	11.5
Total	100	100	100	100	100	100	100	100	100

*Source:* Household Budgets in the Republic of Bulgaria (various).



*Table 4: Structure of total per capita expenditure, by number of children (per cent)*

Number of children	1987			1992			1998		
	1	2	3+	1	2	3+	1	2	3+
Food	37.5	38.3	41.0	40.0	40.4	44.7	45.4	45.5	49.4
Alcoholic drinks and tobacco	6.1	6.0	6.1	4.4	4.4	4.6	3.8	3.7	3.3
Housing	7.3	6.4	10.2	7.1	7.8	9.9	9.6	11.0	13.8
Furnishing	5.2	4.7	6.5	5.1	4.9	4.3	3.8	3.3	1.9
Clothing, shoes and toiletries	11.2	11.9	11.2	10.4	10.3	9.1	8.3	8.4	7.8
Health care and personal hygiene	2.3	2.2	2.1	1.9	1.8	1.7	3.8	3.3	2.9
Education and leisure	4.3	4.8	3.6	4.4	4.6	3.8	3.3	3.5	2.9
Transport	8.9	8.8	5.9	8.6	9.9	5.3	7.5	7.3	5.5
Other	17.2	16.9	13.4	18.1	15.9	16.6	14.5	14.0	12.5
Total	100	100	100	100	100	100	100	100	100

*Source:* Household Budgets in the Republic of Bulgaria (various).

**Table 5: Consumption of basic food products in 1992 and 1998, by number of children (average per capita)**

	1992			1998		
	1	2	3+	1	2	3+
Bread and pastry (kg)	133.8	130.8	150.1	125.3	126.0	131.1
Meat and meat products (kg)	46.0	43.2	37.8	32.2	28.1	19.0
Fish and fish products (kg)	2.5	2.4	1.6	2.9	2.4	2.3
Milk (l)	33.2	31.1	33.6	26.1	24.3	14.9
Yoghurt (kg)	32.0	28.8	27.8	23.1	18.8	15.2
Milk products (kg)	13.1	11.6	8.6	11.4	9.4	7.6
Eggs (number)	135	121	103	111	98	68
Sugar and sugar products (kg)	11.2	10.0	8.3	8.8	7.9	6.8
Potatoes (kg)	25.6	23.7	21.1	24.8	21.9	17.5
Fresh fruits (kg)	40.8	35.2	28.9	31.1	27.2	17.2
Fresh vegetables (kg)	56.5	50.8	43.2	51.7	44.9	32.4

*Source:* Household Budgets in the Republic of Bulgaria (1992, 1998).

**Table 6: Live births**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Births (absolute numbers)</b>										
Total, of which:	112289	105180	95910	89134	84400	79442	71967	72188	64125	65361
to mothers aged < 20 years	23495	22518	22549	21963	21025	18851	16278	15240	13071	12747
Unmarried mothers	12851	13052	14888	16448	18659	19467	18519	20284	19253	20562
Of which aged < 20 years	7220	7322	8628	9525	10384	10222	9408	9369	8312	8384
Low-weight (<2501 g)	7739	7543	7918	7462	6965	6664	6154	6594	6353	6131
Of which to mothers aged < 20 years	2271	2316	2577	2472	2286	2057	1957	1956	1894	1736
<b>Shares (per cent)</b>										
Total births, of which:	100	100	100	100	100	100	100	100	100	100
to mothers aged < 20 years	20.9	21.4	23.5	24.6	24.9	23.7	22.6	21.1	20.4	19.5
out of marriage	11.4	12.4	15.5	18.5	22.1	24.5	25.7	28.1	30.0	31.5
low-weighted (<2501 g)	6.9	7.2	8.3	8.4	8.3	8.4	8.6	9.1	9.9	9.4
Births to mothers aged < 20 years, of which:	100	100	100	100	100	100	100	100	100	100
Out of marriage	30.7	32.5	38.3	43.4	49.4	54.2	57.8	61.5	63.6	65.8
low-weighted (<2501 g)	9.7	10.3	11.4	11.3	10.9	10.9	12.0	12.8	14.5	13.6

Source: MONEE Project database.

**Table 7: Age-specific birth rates (live births per thousand women of the relevant age)**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
All women 15-49	53.3	50.7	46.4	43.4	41.2	38.7	35.0	35.2	31.4	32.2
age < 20 years	75.2	72.7	72.7	70.5	67.3	60.8	53.5	51.2	45.1	45.1
age 20-24 years	175.8	166.0	151.5	137.3	126.1	114.0	100.6	98.3	85.2	84.7
age 25-29 years	86.0	81.3	70.1	65.0	64.4	65.7	61.8	64.6	56.9	59.9
age 30-34 years	31.4	29.9	25.7	24.7	24.0	23.9	22.4	23.6	22.4	24.3
age 35-49 years	4.3	4.1	3.5	3.4	3.3	3.2	2.9	3.0	2.9	2.8

Source: MONEE Project database.

**Table 8: Infant and child mortality**

	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
IMR (deaths of infants <1 year of age per thousand live births)	14.4	14.8	16.9	15.9	15.5	16.3	14.8	15.6	17.5	14.4
U5MR (deaths of children <5 years of age per thousand live births)	18.3	18.7	21.4	20.6	19.6	20.9	19.0	19.8	18.7	15.3

*Source:* MONEE Project database.

**Table 9: Registered cases of child morbidity at primary health care units by types of diseases (during the year)**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
	<b>Absolute numbers</b>									
Total number of registered cases, of which:	5277877	4706104	4248673	4404041	3924287	3642763	3605344	3758890	4084674	4060705
Respiratory diseases	3783239	3374952	3096488	3179122	2794318	2522066	2555994	2650825	2855245	2735987
Neoplasms	3009	3482	2859	2858	2842	2866	2914	2932	4544	5455
Diseases of blood and blood forming organs	1915	4376	3655	4247	3779	3991	3735	4130	4821	6054
Diseases of digestive system	147743	146520	126177	131642	125040	125968	122715	131963	157492	174274
	<b>Per thousand relevant population</b>									
Total number of registered cases, of which:	2861.3	2655.6	2479.0	2669.7	2461.8	2349.1	2396.0	2067.8	2319.5	2382.6
Respiratory diseases	2051.0	1904.4	1806.7	1927.1	1752.9	1626.4	1698.6	1458.3	1621.3	1605.3
Neoplasms	1.6	2.0	1.7	1.7	1.8	1.8	1.9	1.6	2.6	3.2
Diseases of blood and blood forming organs	1.0	2.5	2.1	2.6	2.4	2.6	2.5	2.3	2.7	3.6
Diseases of digestive system	80.1	82.7	73.6	79.8	78.4	81.2	81.6	72.6	89.4	102.3

Source: NSI, "Healthcare", Statistical Handbook (various).

Note: Age group is 0-14 years for 1989-95 and 0-17 years for 1996-98.

**Table 10: Enrolment rates by levels of education (per cent of population of the relevant age group)**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
Pre-primary (net)	63.9	63.9	55.9	57.4	56.2	57.5	61.6	62.6	58.8	65.3
Primary (net)		99.0	100.0	98.4	98.0	99.1	99.3	98.6	98.3	98.8
Lower secondary (net)		90.8	89.5	87.8	83.3	83.0	82.1	82.7	83.6	84.5
Upper secondary (gross)	78.2	77.0	74.2	73.0	72.2	74.8	76.1	75.4	75.0	75.5
Tertiary (university and non-university, gross)	22.0	26.2	25.7	27.0	28.1	30.3	33.7	34.9	34.1	35.2

*Source:* Authors' calculations based on MONEE Project database.

**Table 11: Expenditures on education and leisure by child income deciles in 1992 and 1998 (per cent of total expenditures on education and leisure)**

<b>Decile</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>	<b>VIII</b>	<b>IX</b>	<b>X</b>
1992	3.9	5.0	5.8	6.2	7.1	7.5	7.8	10.7	14.9	31.0
1998	1.9	2.8	4.1	5.0	6.3	7.6	9.0	12.0	16.3	35.1

*Source:* Authors' calculations based on Household Budgets in the Republic of Bulgaria (1992, 1998) and MONEE Project database.

*Note:* Data on expenditures by population income deciles was re-structured in order to obtain child-income deciles.



**Table 12: Real change in households' expenditures on education and leisure in 1992-98 (1992 =100)**

	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
Total per capita	100	88.7	60.9	57.8	35.5	19.5	39.0
Bottom child quintile	100	55.4	42.9	30.3	21.9	12.2	23.9
Top child quintile	100	90.0	64.9	56.3	36.6	21.7	51.4

*Source:* Authors' calculations based on Household Budgets in the Republic of Bulgaria (various), CPI from EBRD (1999).

*Table 13: Enrolment in primary education in selected municipalities*

	Total population in the mid 1990s (1000s)	Minorities in population aged 0-19 years %	Primary education gross enrolment rate						
			Ethnic Turks/ Gypsies	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Whole country	8340.9	12 / 7	99.9	98.5	100.2	102.2	102.8	104.1	104.6
Sliven	143.6	5 / 14	100.4	98.5	98.2	99.0	97.3	97.5	99.4
Ardino	17.7	74 / -	99.1	101.0	95.4	91.4	85.6	78.3	74.0
Kirkovo	32.9	64 / 2	98.1	94.2	91.7	89.1	80.4	77.0	74.0
Momchilgrad	21.1	85 / 2	104.7	100.3	94.9	91.6	89.5	85.5	83.5

Source: NSI (1997); Direct communication.

**Table 14: Child institutionalization**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Children (absolute number)</b>										
In "Mother and Child" Homes, of which:	4030	3803	3633	3632	3712	3771	3578	3756	3711	3593
Of single mothers and abandoned	1571	1533	1198	1545	1633	1594	1623	1720	1800	1930
In "Homes for Children and Adolescents", of which:	9005	8314	8293	8425	8694	8699	8890	9078	8811	8424
Orphans and semi-orphans	1369	1217	1419	1309	1415	1446	1630	1629	1482	1589
Abandoned	1634	1730	1668	1999	1988	2189	2041	2225	2797	2686
Single mothers	944	745	893	975	972	1014	1177	1253	1227	1613
Large households	2908	2423	2351	2356	2459	2338	2309	2200	1693	765
Incapable parents (sick, night-work)	1255	1217	1163	922	1056	844	794	767	617	1072
Deprived of parental rights	136	97	122	103	102	106	110	125	357	429
Others	759	885	677	761	702	762	829	879	638	270
<b>Per child yearly expenditures (thousands of leva)</b>										
In "Mother and Child" Homes				45.7	62.0	88.5	133.8	223.9	1991.2	2820.3
In "Homes for children and adolescents"				19.6	26.0	42.5	62.6	77.7	668.9	1252.0

*Source:* NSI, "Kindergartens and Homes for Children and Adolescents" (various); NSI, Statistical Yearbook (various); NSI - direct communication.

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# CHILDREN IN BULGARIA: GROWING IMPOVERISHMENT AND UNEQUAL OPPORTUNITIES

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The social and economic changes in Bulgaria since the beginning of transition naturally raise concern about their impact on child well-being. This paper investigates the changes that occurred over the last decade in three dimensions of child welfare recognised as fundamental child rights – economic well-being, health and education. Then it concentrates on particularly vulnerable groups of children – those born of teenage and single mothers and those living in institutions. The data show that the human cost of economic transition has been high and children have been among the most vulnerable groups of the society.

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