The Demise of State Run Child Care in Bulgaria: Causes and Implications

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In a majority of state-socialist countries, the later years of the state socialist experience were characterized by high rates of female labor force participation and high rates of enrollment in heavily-subsidized, state-run pre-schools. Among Central and East European countries, female labor force participation rates ranged from about 65% in Poland to 90% in Bulgaria in 1989 (UNICEF, 1999:24; European Commission, 1995), while enrollment rates among pre-school aged children ranged from 49% in Poland to 90% in what would become the Czech Republic (UNICEF, 1999:133). While the quality of care in the state-run institutions is sometimes criticized (Riazantsev, Sipors, and Labetsky, 1992), other studies find that overall the quality of care was quite good by international comparison (Cornia and Sipors, 1991).

The provision of childcare increased choices for women, making possible the high rates of labor force participation. Further, the preschools provided a relatively stable and educational environment for children whose homes were often small and crowded or lacking in books and other materials which would prepare children for school. Participation in the preschools served to significantly level the playing field for children coming into primary school. At the same time, the schools served government purposes of building a unified, socialist culture.

Many predicted that the post-socialist transformation would reduce the prevalence of preschool enrollment, but early writings on the subject differed in the expected causes of this change. Some authors writing in the early 1990s expected the collapse of state budgets to result in the closure of childcare centers, which would force women to withdraw from the labor force in order to care for their children (Sziraczki and Windell, 1992: 483; Fong and Paull, 1993:

238). Other authors expected that the rising costs and reductions in household earnings which resulted from economic restructuring would reduce the demand for child care centers. As child care cost more and real wages fell, women would either seek informal alternatives, like care by members of their extended families, or they would find it economically preferable to withdraw from the labor force altogether. In the Polish case, this dynamic began already under the last round of socialist reforms in the 1980s (Ciechocinski, 1993: 317). These perspectives raise the question of whether the decline in childcare enrollment is supply- or demand-driven--whether it contributes to or is the result of a decline in women's paid economic activity.

A question not addressed by the early literature is the likely impact on the children themselves, their productive futures, and in turn on economic growth and distribution. There is significant consensus that investments in early childhood education are cost effective (Danzinger and Waldfogel, 2000; Currie, 2000), and in countries at the earlier stages of industrial development, standardized, institutional childcare has been shown to provide significant cost advantages in state delivery of basic health care and school preparatory services. The declines in preschool enrollment may thus have significant long term implications for economic growth and equity.

A further problem is the spatial clustering of unenrolled children. If the factors underlying changes in preschool enrollment result in such clustering, this can exacerbate regional differences in economic performance. The low enrollments may generate a kind of negative agglomeration effect: a concentration of poorly prepared children contributes to low performing elementary schools, and low rates of educational achievement thereafter for local

children. Poor human capital stocks then reduce investment incentives in the local economy, which encourages the outflow of more skilled local workers from affected regions. This contributes to a cycle of regional decline.

This paper draws on data from Bulgaria between 1986 and 1996 to explore municipal-level changes in childcare availability and use in the post-socialist period. Using this aggregate, cross-sectional data, we find evidence that changes in enrollment are demand driven. Declines in usage have exceeded cutbacks in the availability of childcare services at the municipal level. On the demand side, both economic and cultural factors appear to contribute significantly to variations in enrollments. Demand for child care does not appear to be driven by purely custodial needs, but also by households' abilities and preferences to invest in preschool education. This has strong implications for the appropriate policy response, which may address the problem of declining enrollments on a number of levels in order to reduce regional differentiation and promote overall growth.

II) The Logic of Providing Childcare

Child care services can be oriented toward achieving different goals, and we begin by distinguishing between custodial and human capital enhancing child care (Connelly, DeGraff, and Levinson, 1996). Child care is probably most often understood in its custodial form, as a service which facilitates women's labor force participation. Child care advocates highlight both the distributional and efficiency implications of providing such a service. By expanding women's work options, child care "accompanies and facilitates women's citizenship" and is thus

a prerequisite for equality between the sexes (Blumberg, 1981; O'Connor, 1988; Craig, 1981). By expanding women's labor force participation custodial child care may also enhance economic efficiency, through allowing women to move into higher productivity occupations (O'Connor, 1998:24).

Pre-schools provide more than custodial care, however. Early childhood education can improve cognitive development and other outcomes (Danzinger and Waldfogel, 2000), thus increasing human capital formation, labor productivity and efficiency. Studies of the impact of state-subsidized pre-school education in France, for example, reveal a strong correlation between pre-school attendance and performance in the first grade, especially among children from poorer backgrounds (Bergmann, 1994:33). Since children have been found much more likely to drop out if they receive poor grades or repeat a grade in early years, the early childhood education may be seen as an effective means of improving human capital acquisition (Currie and Thomas, 1995:359-360). In the US, the Head Start pre-school program has been used to improve learning and social skills, as well as the health status of poor children. Studies of the program confirm that this program has a positive and persistent impact on scores and schooling attainment overall (Currie and Thomas, 1995:341; Ramey and Ramey, 2000:139-140). Although some studies have failed to show a positive relationship between preschool attendance and later performance, many studies are based on non-randomized or small samples. A recent review which focused only on well-structured studies of publicly-funded US preschool programs found large, positive, and significant long term effects on schooling, earnings and negative effects on problems such as crime and welfare use (Currie, 2000).

Broad access to preschool also promotes equity. Studies suggest that children from more disadvantaged and minority ethnic backgrounds benefit more from a full-time preschool setting, in terms of educational outcomes, than other children (Currie, 2000). Reduced gaps in both income and overall "functioning" (Sen, 1985) may result.

Finally, the childcare experience can also be used consciously to create a national identity and sense of common purpose among young citizens, and states often support childcare services for this reason. In France, preschools teach appreciation for French culture through, for example, gradual introduction to French cheeses (Bergmann, 1996:32). Socialist countries used state-run childcare to get an early start on "the creation of new citizens" (O'Connor, 1988: 17; Wald, 1978), while Israel used the schools to create strong and healthy "New Jews" (Bar-Yosef-Weiss, 1973).

If child care is valued mainly for custodial purposes, then the recent radical declines in enrollments across ECE may not be cause for concern. Where unemployment is rising and wages falling, so there may be less of an efficiency argument for broad use of custodial care. Reduced availability of custodial care may have implications for gender equity, but with so many unemployed males available, even these implications are not certain.

A more troubling interpretation of falls in preschool enrollments during transition results if we consider the implications for human capital formation. Declining shares of preschool aged children in childcare represent declining investments in future labor productivity. Reduced access to childcare is occurring at a time when inequality is already rising rapidly (UNICEF, 1999:144) and when rural households, in particular, are increasingly poor and isolated (Meurs,

2000). Since investment in childcare can create significant positive externalities and economic inequality can create significant negative externalities, there may be a strong rational for government intervention, even in a time of extremely tight budgets (Aslaksen, Koren, and Stokstad, 2000:98). But a better understanding of the dynamics underlying falling enrollments is needed, however, if government intervention is to be effective

III) Childcare Under Socialism

Most socialist countries had a two-tier system of state-run childcare. This included a system of nurseries for children 0-2 years of age, which was generally run by the Ministry of Health, and a system of pre-schools, for children 3-6, run by the Ministry of Education. Fertility policies common to state-socialist economies offered mothers extensive maternity benefits, so that many families provided their own care to infants. The share of children 0-2 years having a parent on parental leave in 1989 ranged from 34% in the Bulgaria to 66% in Hungary. Many fewer children of this age attended nurseries (ranging from 3% in Bulgaria to 14% in the Czech Republic) (Cornia, 1995:69).

Pre-school enrollments, on the other hand, were strong across the state socialist economies. Enrollment rates among preschool aged children ranged from 49% in Poland to 90% in the Czech Republic (UNICEF, 1999:133). High enrollments resulted from a combination of low costs, perceived high quality of care, and high labor force participation rates of women.

Low costs were achieved through heavy subsidies from the central-planning states, which could hope to capture the positive externalities generated by investments in early childhood

education. Although the states also used the preschools to instill the characteristics of obedience and ideological adherence, Jean Ipsa, in her book *Child Care in Russia in Transition* (1994) notes that by the 1980s, state-run child care had begun to encourage more independence and experimentation among both teachers and students. Further, Ipsa documents the provision of a safe, stable and loving environment, in which teachers actively promoted the development of gross and fine motor skills, cooperative behaviors, ecological awareness, and basic math and reading skills. In addition, all students attending the pre-schools were regularly examined by a nurse and received a regular schedule of inoculations. Another study found that "altogether, the kindergarten system in Central and Eastern Europe does not fare badly in international comparison. The attendance rate is high and the provisions are good and relatively cheap" (Cornia and Sipors, 1991). The relatively strong health and education indicators seen today in former socialist countries can be attributed, in part, to the preschool policies (UNICEF, 1999).

In Bulgaria as in other countries, use of state-run infant nurseries was limited. In the 1980s, most women either took advantage of paid maternity leave or left children with their mother or another family member if they worked during the first three years of children's lives. Survey data suggest strong differences in nursery use by ethnicity, however. While 3% of Bulgarian Christian households relied on state-run nurseries to care for children under 1 year of age, the minority populations (Turkish, Bulgarian Muslim and Roma) did not use nurseries for children under 1 year. For children 1-3 years of age, 17% of Bulgarian Christian households used state-run nurseries. Minority populations also used the nurseries for children 1-3 years of age, but less frequently: 8% of Bulgarian Muslim households, 6% of Turkish households, and

6% of Roma households reported enrolling their children in the nurseries (authors' calculations based on Town and Village, 1985).

Pre-school enrollments were much more widespread, although some ethnic differences in use can also be seen. By 1965 56% of pre-school age children attended kindergarten. The share of children attending kindergarten rose steadily over time, to 60% in 1980 (Connor, 1988:26), and 72% of children by 1989 (UNICEF, 1999). Daycare facilities for children 3-7 were widely acknowledged as successful. They offered three meals, onsite medical care and screening, and cost from 10-30% of the minimum wage, depending on parents' income. Second children in a family attended free. As a result, demand usually outstripped supply, especially in big cities (Anachkova, 1995:62-63). Pre-school use varied little between Bulgarian Christian and ethnic Turkish households. Survey data from the mid-1980s suggest 58% of Bulgarian Christian households and 53% of ethnic Turkish households relied on pre-schools for the care of children aged 3-7. Forth-two percent of Roma households reported enrolling children of this age in pre-school, while 28% of Bulgarian Muslim households reported such enrollments (Town and Village, 1985).

Significant regional and municipal-level variation in child care use can also be seen in the 1980s. At the municipal level, the estimated[1] share of children 3-6 enrolled in childcare in 1987 varied from 21% to 102% in (the 102% reflects high municipal enrollments and also some overflow use of child care centers by neighboring municipalities) (NIS, various years).

[1] The National Statistical Institute published data only on enrollment by 5 and 6 year olds for 1987, so the total number of enrolled children aged 3-6 had to be estimated. Historically, 3-6 year olds have made up about half of enolled kids, so we estimate 1987 enrollments for 3-6 year olds as two times the enrollments of 5 and 6 year olds.

Surprisingly, there is no significant difference in enrollments between more urban and more rural municipalities (60% versus 58%).[2] These differences may reflect uneven development of educational infrastructure across municipalities and regions in the 1980s. Preschool availability per km^2 ranged from .003 to .58 in 1987. They may also reflect local clustering of minority ethnic populations with distinct social norms regarding child care, or differences in employment opportunities for parents. These explanations will be considered in more detail below.

IV) Recent Developments

The period since 1989 has been characterized by a rapid drop in the availability and use of state-run child care. Between 1986/7 and 1999, 1389 child care centers closed, reducing the number of state-run child care centers by 29% (from 4823 to 3434). While privately run centers did begin to emerge, their (official) number rose only from 0 to 18, providing spaces for 329 students by 1999. The number of teachers employed in the state-run centers fell by 26% and the number of enrolled students fell by 38% (Table 1).

Transition has also been accompanied by a significant drop in birthrates, however. Births per 1000 population fell from over 13 in 1987 to 7.7 in 1997 (NIS, various years). Controlling for the number of children of pre-school age, we find erratic movements in enrollment levels over the last decade. From 1986/7-1991/2, enrollment plunged from 72% of children aged 3-6 to 58% of these children. Enrollment share climbed steadily to reach 66% again in 1996, then fell

[2] Here we consider a municipality "rural" if more than 50% of the population of the municipality is defined as rural by the National Statistical Institute.

back to 62% in 1997/8 (Table 1)[3]. At the same time, child poverty rates have risen dramatically, from 2% of children in 1990 to 43% of children in 1994 (Cornia, 1995). The importance of pre-school as early intervention to protect both efficiency and equity outcomes thus increased dramatically.

Changes in pre-school enrollments are, of course, related to other, simultaneous, changes in society. Unemployment rose over this period, and labor force participation rates fell from 90% for both men and women in 1989 to 78% for men and 75% for women in 1995 (European Commission, 1995:38). Real wages fell too, to 50% of the 1989 level by 1996 (TRANSMONEE Database). As fiscal responsibility for the child care centers was decentralized to the municipalities, user fees were increased to cover costs. Nationally, fees rose from 13% of the average wage in 1989, to 15% of the minimum wage in 1993, before falling back to 9% of the minimum wage in 1994 (Fajth, 1994:47-49). Given that the real minimum wage fell rapidly over this period, however, this represented a steep increase in fees. In addition, there appears to be little regional variation in fees, despite large variations in real wages and employment rates.[4] These changes reduced both the need for custodial care and parents' ability to pay for preschool and its related expenses (especially transport).

[3] Note that reported enrollment rates differ depending on the source of the data. What is clear, however, is that there has been a significant drop in enrollments since 1989.

[4] During the period 1997-2000, de facto fees held steady at 20 lv per month in Sofia and between 15-18 lv per month in provincial capitals and villages (Telephone interviews, Dec., 2000).

Table 1. Dynamics of Childcare in Bulgaria, 1986 - 2000

	1986/87	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/2000
Percent Enrolled in Public Child Care	72	67	58	61	60	60	65	66	62	65	
Number Enrolled in Public Child Care, 1986/87 = 100	100	88	75	77	72	72	74	72	64	64	62
Number of Child Care Teachers, 1986/87 = 100	100	106	103	101	94	89	88	86	76	75	74
Number Public Child Care Centers, 1986/87 = 100	100	95	93	92	80	76	78	77	74	73	71
Number Private Child Care Centers	-	-	-	2	4	6	8	11	14	15	18
Number Enrolled in Private Child Care	-	-	-	21	159	87	194	249	235	258	329

Source: National Statistical Institute

Finally, some aspects of the quality of childcare also declined sharply over the period 1989-1999 as funding for the centers fell. Changes in quality included reductions or elimination of programs to provide nutritious meals and universal medical care through the centers, as well as lack of maintenance of center infrastructure.

These dynamics vary widely across municipalities, however. Among the municipalities for which we have consistent data, changes in the availability of centers varied from a 100% increase (an increase of 7 centers) to a 95% decline (49 centers closed). Municipal unemployment rates varied from 3% to 44% in 1996, while nominal wage increases from 1987-1996 varied from 20% to 115%. Although our data do not permit us to directly compare enrollments in 1996 with those in 1989 (see footnote 2), in 1996, the share of 3-7 year olds enrolled from .41 in to 1.48, the latter again suggesting strong cross-municipality enrollment.

V) Empirical Examination

The formation of adequate policy to address declining enrollments requires an understanding of the causes of this decline. We examine these causes, we first ask: Is the decline, as suggested by Cornia (1995) and Sziraczki and Windell (1992), a supply-driven outcome, resulting from the closing of centers in financially-strapped municipalities? Or is it, as others have suggested (Fong and Paull,1991; Ciechocinska, 1991; Klugman, 1997), a demand-driven outcome, resulting from decreased need for custodial care or reduced household ability to invest in pre-school?

Table 1 clearly suggests a demand-driven explanation. The number of children enrolled

has fallen much faster than the number of centers or the number of employed teachers. Whereas prior to 1989, enrollments were limited by the lack of sufficient places in the centers, the centers today appear to have significant excess capacity: the number of children per teacher has fallen from 12.7 in 1989 to 10.6 in 1996 (NIS, various years)[5].

As the data clearly suggest a demand-driven decline in enrollments, below we further examine the demand-side factors which might influence enrollments, focusing on municipal – level factors which might underlie such aggregate declines in enrollment.

Economic dynamics in the capital city of Sofia are distinct from those in the rest of the country, with Sofia having minimal unemployment levels, good and improving transportation infrastructure, and very high historical and persisting levels of pre-school enrollments. As a result, we have excluded Sofia city from the analysis. Some other municipalities are excluded due to missing or inconsistent data, leaving us with 230 of Bulgaria's 262 municipalities available for analysis. Most of the data we use come from National Statistical Institute publications, including national statistical yearbooks and a volume of regional and municipal indicators (CSO, 1989). Child population data for 1996 were acquired directly from the National Statistical Institute, as these were not published, and data on ethnic makeup of municipalities were taken from the UNDP (2000). Unemployment data come from National Employment Office sources.

Since we are interested in what might have caused the change in enrollment rates since transition, we model the share of pre-school aged children enrolled in 1996 while controlling for

5 A recent studies of changing childcare use in Romania finds a similar problem of underutilization (Fong and

the estimated share enrolled in 1987. We expect the estimated share enrolled in 1987 (ENROLL87) to be strongly, positively correlated with the share enrolled in 1996.

We examine the impact of a number of other factors on municipal-level enrollments. We have seen that use of pre-schools has historically varied by ethnicity, with ethnic Bulgarian households being more likely to send children to pre-school. Post-1989, schooling has been one important nexus of ethnic tension in Bulgaria, with Turkish and Roma groups voicing opposition to national curricula, which they believe disadvantage their language and culture. Perhaps these debates and increased freedom of choice underlie declining pre-school enrollments in municipalities with high percentages of ethnic minority populations. To capture this effect, we include the share of ethnic Bulgarian households in the municipality (BGSH) as an explanatory variable, expecting this to be positively correlated with the share of pre-school aged children enrolled in 1996. We also examine the impact of center availability (centers per k^2) (CTRS96) and center quality, proxied only roughly by teacher/student ratio (QUAL), both of which are also expected to be positively correlated with the share of children enrolled.

Finally, we wish to examine the possible impact of current economic hardship on enrollments. In the face of economic downturn, two dynamics may underlie declining enrollment shares. First, parents may view preschool simply in its custodial function, and with rising unemployment they may willingly substitute home care. Alternatively, parents may view preschool as superior to home care as an investment in their childrens' futures. In this case, it is the inability to pay fees and transport costs, and not the availability of substitute care which

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Loshkin, 2000).

underlies low enrollment levels.

Our ability to distinguish between these two dynamics is limited, as we are not working with data which specifically addresses household preferences. Further, to our knowledge parents have not been surveyed on this question. In a preliminary attempt to explore the relationship further, below we include two variables. We include the average municipal unemployment rate in 1996 (AVUR96), as a proxy for the relative need for custodial care. We also include a proxy for ability to pay, measured as average wage in 1996, weighted by the share of the working age population which is (formally) employed (TOTRESOU). Higher levels of unemployment are expected to be negatively correlated with the share of children enrolled in pre-school, while total resources are expected to be positively correlated. The means and standard deviations of the variables are presented in Table 2. I think you should just make this a footnote… Talk about how the results are robust and that while the variables are somewhat related, that no pair has a correlation coefficient above 0.25 and leave it at that.

Table 2: Mean and Standard Deviation of Included Variables[6]

Variable	Mean	Standard Deviation
ENROLL96	.68	.15
QUAL	.10	.02
AVUR96	16.53	8.34
BGSH	81.13	21.32
CTRS96	.04	.05
TOTRESOU	127.59	241.79
ENROLL87	.69	.13

[6] One might expect a strong correlation between some of the included variables, for example, between AVUR96 and TOTRESOU. Levels of correlation are low, however (all under .31, but most much lower), and the equation below is robust to the inclusion of the individual variables. Alternative specifications can be obtained from the authors.

The results of the regression are presented in Table 3. The equation has an adjusted R^2 of .16, which is reasonable for cross-sectional data such as we are using. As we see, all of the variables have the expected signs. The share of children enrolled in pre-school in 1987 has the largest significant relationship with current enrollment rates. This may capture the impact of previous socialization campaigns, or the impact of overall development levels, or some other factor related to historical enrollment levels. Once we control for historical levels of enrollments, however, we see that a number of other factors are related to municipal-level variations in enrollments in 1996.

Table 3
Regression: Analysis of Municipal-Level Enrollments

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.374	.080		4.701	.000
	QUAL	.345	.428	.052	.808	.420
	AVUR96	-.003	.001	-.200	-3.059	.002
	BGSH	.001	.000	.193	2.981	.003
	CTRS96	.285	.185	.098	1.538	.126
	TOTRESOU	.000	.000	.173	2.661	.008
	ENROLL87	.291	.076	.242	3.849	.000

a Dependent Variable: SH36962

Both measures of economic conditions have significant impacts on enrollment rates. Municipalities with more earnings have higher enrollments, as expected. But even controlling for earnings, municipalities with higher unemployment rates have lower enrollments, suggesting that recent changes in the availability of caregivers also affect enrollments. The two variables have impacts of similar magnitudes, although the negative impact of unemployment on

enrollment is slightly larger than the positive impact of economic resources.

Neither the density of centers nor our measure of quality is significantly related to enrollment rates. The impact of density probably depends on the availability and quality of public transport, which we cannot measure. In the case of our quality variable, other factors like the availability and quality of meals and medical care may influence enrollments more that teacher/child ratios, especially since overcrowded classrooms are not a problem in Bulgaria. Better data is needed to better evaluate the impact of center density and quality on enrollments.

Finally, controlling for historical levels of enrollments and economic conditions, municipalities with high shares of minority ethnic groups in their population have significantly lower enrollment rates that municipalities with more ethnically Bulgarian populations. This impact seems as important as that of the economic variables.

VI) Discussion and Conclusions:

This preliminary examination of the data on childcare enrollments among preschool age children in Bulgaria finds significant variation in enrollment across localities. To some extent, these differences are related to long-standing (pre-1989) differences in local preschool enrollments, which may reflect differences in development levels or other historical factors.

But enrollments were also significantly related to current economic conditions. Our findings suggest that these impact upon enrollments in two ways. Municipalities with higher unemployment rates, and thus a lower need for custodial care, had significantly lower levels of enrollments.

Even controlling for differences in the need for custodial care, lower earnings (average wage weighted by the share of working age population formally employed) also had a significant negative impact on enrollments. Since ability to pay has an impact on enrollments independent of the need for custodial care, this suggests that preschool is valued for other reasons and may be used if resources are available even if alternative custodial care is available. In other words, state socialist policy appears to have been successful in convincing parents that institutionalized childcare can provide long term advantages over parental care, in terms of educational outcomes (see also Fong and Loshkin, 2000). This interpretation is reinforced by information from household interviews held in March 2000. Parents whose preschool aged children were not enrolled in childcare frequently referred to the costs of this in terms of school readiness.

Finally, we found a strong impact of local ethnic make up on preschool enrollments. This is a continuation of historical differences in child care use, but the differences appear to have intensified post-1989.

Although aggregate enrollments have not declined severely in Bulgaria, the relationship we find between low enrollment and economic hardship is a particular concern. It is precisely in the poorest municipalities that the early interventions provided by preschool will have the greatest impact on future efficiency, equity and national integrity. The relationship between low enrollment and ethnic minority populations is similarly a concern, given the large differences which already exist in the educational preparation of Bulgarian Christian and ethnic minority populations (Giddings, 2000).

It thus appears that regionally-targeted policies could make a significant difference in outcomes. Since the population does not appear to view preschool enrollment as purely an issue of custodial care, locally targeted childcare subsidies may be effective in raising enrollments even where unemployment rates are high. (Of course, reducing unemployment would also be an effective policy measure, with many additional benefits!) But locally targeted childcare subsidies will not sufficiently address the problem of low enrollments among ethnic minority populations. To address this problem, more research is needed into the specific reasons for non-enrollment. If the problem is a general social preference for home care, this may be difficult to address, at least in the short term. But if the problem lies in concerns about the disadvantaging of local culture in the national preschool curriculum or by "outsider" preschool directors, state policy could be directed toward increasing local input into school governance.

Current budgetary problems and the resulting short time horizons have limited the attention to the issue of (uneven) declines in post-socialist preschool enrollments. But if Bulgaria and other post-socialist countries hope to continue to compete internationally on the basis of their skilled and trainable workforce and to build a democratic polity, attention to this issue appears essential. The issue should also be of broader, European concern, given the EU commitment to offering similar opportunities to European children regardless of where they are born, and because the "quality of today's European children determines Europe's future" (Micklewright and Stewart, 2000). Appropriate policies appear feasible and relatively low cost.

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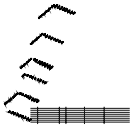
Table 1. Dynamics of Childcare in Bulgaria, 1986 - 2000

	1986/87	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
Number of Private Child Care	-	-	-	2	4	6	8	
Number of Kids Enrolled in Private Child Care	-	-	-	21	159	87	194	
Percent of Kids Enrolled in Child Care	72	66.9	57.9	61.0	59.6	59,7	64,5	
Number of Public Child Care, 1986/87 = 100 %	100,0%	95,2%	92,6%	91,8%	80,0%	75,9%	78,0%	77
Number of Kids Enrolled in Public Child Care,	100,0%	88,3%	75,3%	76,5%	71,9%	71,7%	73,9%	71
Number of Child Care Teachers, 1986/87 = 100 %	100,0%	105,9%	103,2%	100,8%	94,3%	88,6%	87,9%	85

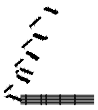
Source: National Statistical Institute

Table 2. Dynamics of Nominal and Real Minimum Wage



Source: National Statistical Institute

Table 3. Dynamics of nominal and real annual average wage



Source: National Statistical Institute

Table 4. Log of childcare enrollment in 1996, cross-sectional data for 247 obshtini (districts)[a]

	1	2	3	4
Constant	-21.083*	-23.565*	-20.353*	-22.987*
	(3.040)[b] *	(3.282)*	(3.328)	(3.578)
LAW96	2.395	2.582	2.351	2.547
	(0255) *	(0.270)*	(0.267)*	(0.284)*
LEAP96		-.295		-0.291**
		(0.149)**		(0.150)
LFHSU[c]			-0.354	-0.261
			(0.639)	(0.638)
Rural vs.Urbun Dummy	-0.295	-0.194	-0.291	0.183*
	(0.134)**	(0.132)	(0.134)**	(3.453)
R^2 Adjusted	0.354	0.362	0.353	0.360

Weighted least squares regressions, weighted by number of kids in obshtina in 1996
Standard error in parenteses
Female share of unemployment rate is calculated as a ratio of female unemployment total unemployment, due to the fact that Bulgarian National Employment Services does not report the female labor force by obshtina.
* significant at 1 %; ** significant at 5%, *** significant at 10 %

Chart 1. Dynamics of Public Child Care in Bulgaria, 1986 - 2000, (1986 = 100 %)

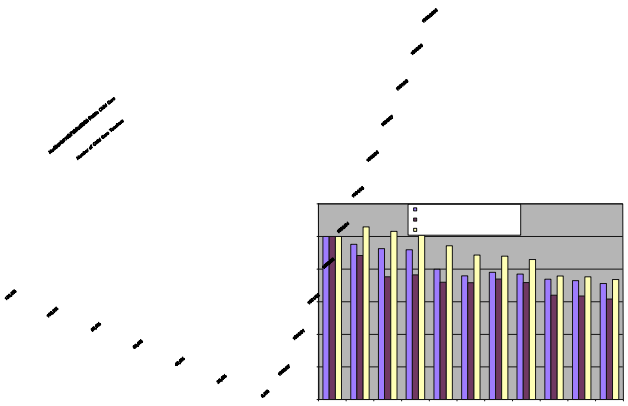


Chart 2. Birth Rate in Bulgaria, 1980 - 1999, new born per 1000 of population