The impact of child welfare reform on child abandonment and deinstitutionalization, Romania 1990-2000

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Nicolae Ceaucescu’s communist dictatorship fell in December 1989. Shortly thereafter, the Western world learned about state-sponsored orphanages where children lived in poor and over-crowded conditions. A priority of the new government was to implement child welfare reform policies that would move children out of these institutions and either back into their natural families, or into adoptive/foster homes. While several qualitative studies have been published describing the predicament of orphans and vulnerable children in Romania (Zamfir, 1995; Holley, 1997; Roth, 1998; Groza et al., 1999), and legal measures to deinstitutionalize them (Jaffe, 1994; Filipescu, 1998; Achitel, 1999), there is little quantitative work published. The most important work guiding this paper is Kligman’s (1998) analysis of Ceaucescu’s pronatalist population policies, including a chapter examining groups of vulnerable children in Romania (e.g. social orphans, street children, and children with AIDS).

This study lends a quantitative perspective to the problem of child institutionalization as it evolved under Ceaucescu’s regime and continued to worsen through most of the transition decade. The data used are national in scope and include baseline information for the last three years of socialism (1987-1989) as well as data for the decade of child welfare reforms (1990-2000). Empirical results provide measured evidence of the effects of Romania’s reforms on institutionalized children.

Romania’s situation of high levels of child abandonment is unique in history because, rather than a war or natural disaster precipitating the rapid increase in the number of orphans, it was caused by the state imposing its ideological interests on the population at the expense of individual welfare (Kligman, 1998; Baban, 1999). First, Ceaucescu implemented strict pronatalist policies with the most infamous pronatalist law being the abortion ban, Decree 770/1966, implemented from 1966 to 1989. This intent of this law was to reverse declining fertility trends and to increase population growth in order to ensure a sufficiently large labor pool to drive his command economy (Kornai, 1992; Verdery, 1996). The ban on abortion was buttressed by an ensemble of other measures including divorce restrictions and an array of birth incentives. However, while these pronatalist policies did practically double total fertility rates (TFR) from 1.9 in 1966 to 3.7 in 1967, the measures were inadequate to sustain desired population growth. By 1974 fertility was declining steadily, and by 1983 fertility had returned to the low levels dominant prior to the pronatalist efforts.
The harsh economic environment that Romanians had to endure through the 1980s was an important determinant of child abandonment. Starting in 1981, in a massive campaign to pay off the foreign debt incurred in the mid-1970s, Ceaucescu imposed austere living conditions on his population. Food and energy, for example, were strictly rationed and basic consumer goods were difficult to obtain as they were earmarked for foreign export. New urban housing apartments were crowded and lacked sufficient plumbing and heating. State childcare services ceased to be free in 1982, and daycare centers were inadequately staffed and poorly equipped (Harsanyi, 1993). In general, the increasingly harsh social and economic environment was not conducive to raising even a small family, and these conditions contributed to a falling birthrate as well as large numbers of children being abandoned to state care.

Yet another notable factor contributing to the growth of child institutionalization in Romania is that, starting in 1970, the state promoted institutionalization of children *en masse* as the principal solution for raising abandoned or orphaned children (Alexiu, 1999). The soviet style law 3/1970 provided the legal basis for the establishment of a system of state-run child institutions, and the official rhetoric declared that the purpose of these new constructions was to play a “humanitarian role” in assisting orphans and abandoned children (Ciobanete, 1988). The specialized institution for pre-school age children was called a *leagan* (literally translated as “cradle”), and by the end of Ceaucescu’s regime there were 65 *leagans* and every county had at least one (figure 1).

Since 1990, the Romanian government has made concerted efforts to improve children’s well-being. It was one of the first nations to ratify the United Nation’s Convention on the Rights of the Child (UNCRC) in 1990, and also one of the first countries to ratify the Hague Convention on the Protection of Children and Cooperation in Respect of International Adoption in 1995. Since 1993 Romania is proceeding on the road to EU accession,

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**Fig. 1. Reported Numbers of Leagans, 1965-1990**

*and Reported Number of Beds in Leagans, 1950-1990*

with full membership expected in 2007.

The issue of child protection in the EU Accession Partnership, as defined in the Copenhagen criteria that govern entry, stipulates that Romania is to undertake full reform of the child welfare system (section 4.1) and improve living conditions for institutionalized children (section 4.2) (European Council, 1999).

Romania’s social and legal commitments to improve child welfare have spurred several major child welfare reform acts. Below, child welfare reform periods are operationalized by framing them with respect to major pieces of legislation; then changes in levels of child abandonment and deinstitutionalization are examined in light of these periods. Results from retrospective event history data show that, compared to the socialist period, child welfare reforms in the transition period have had a varying but positive impact on decreasing the average amount of time that children spend in the orphanage. On the other hand, mostly due to less than effective policies early in the transition period, and widespread poverty persistent throughout economic transition, reforms have not improved overall rates of child abandonment. Specific pilot programs implemented late in the decade in certain regions suggest that improving the welfare of mothers and children can significantly reduce dependence on child institutions.

**CHILD WELFARE REFORM**

By definition, child welfare reform implies the restructuring of social legislation in order to ensure the basic rights and privileges of children (Pecora et al., 1992). The overarching child welfare reform goal in Romania is to ensure that every child, in his or her best interest and with equal opportunity, enjoy the privilege of being raised in a family environment (GOR, 2001). The two strategies to achieve this goal are: 1) to decrease the incidence of children being placed in institutions; and 2) to increase the number and rate of children being deinstitutionalized. Below are outlined the major periods discussed in this study, including the pre-reform period under the socialist regime and the three major child welfare reform periods during the transition decade.

**Pre-reform period (pre-1990)**

The pre-reform period comprises the years prior to the onset of transition reforms. It is characterized by a highly centralized, pronatalist state with virtually unchanging child protection policies. The two laws that frame this period are the Family Code (Decree No. 32/1954 and revisions) and law 3/1970. The Family Code provided vague directives for national adoptions through the local government, and exceptional cases authorized by the president. The soviet-style law 3/1970, not overturned until 1997, promoted large-scale residential institutions as the primary solution for children whose parents were unable to raise them at home. Throughout the 1970-80s, as the economy was decelerating and Ceaucescu continued to enforce his pronatalist policies, families increasingly became dependent on these state institutions to take over child raising functions (Sipos, 1991). In practice, the only way children left the institutional system was if the family decided to resume raising the child at home.
Child welfare reform period I
(1990-1991)

The first reform period is referred to as the “reparation period” (Zamfir, 1995). This brief but momentous period is characterized by a temporary decline in the overall number of children in institutions, mainly due to the exodus of children out of institutions to foreign adoptive families coupled with a brief cessation in the number of children being abandoned to institutions. This situation was short-lived, however, when a year later the government halted all international adoptions. The main laws defining this period are the Law on Approval of Adoptions (law 11/1990) which overturned the ban on international adoptions, and the adoption moratorium (law 48/1991).

The efforts to conform to articles in the UNCRC by allowing international adoptions were well intended, but the full consequences were not foreseen. While the demand for children from Western adoptive families was high, most children ultimately were not adopted from institutions (US Dept. of State, 1993; Verona, 1994). Rather, due to the cumbersome maze of ineffective bureaucracy, prospective adopters opted to patronize informal adoption brokers who made babies available directly from a family. The demand for these intermediary services, plus the lack of legal penalties put in place, made profitable grounds for a black market in baby-trading. The original humanitarian outcome that was intended by legalizing international adoptions backfired as children’s rights were not protected, namely, adoptions were not accomplished through “competent authorities”, through a transparent process, and poor women were exploited by unscrupulous baby brokers who separated them from their children in order to gain a profit (Kligman, 1998).

In the following year, therefore, the moratorium on international adoptions was passed to put an immediate halt to the uncontrolled flow of children out of the country.2

Child welfare reform period II

The second reform period bridging the middle of the transition period is the “re-organization period”. Deteriorating economic conditions during the middle of the decade left many Romanian families in a desperate situation, and children at higher risk for being placed in institutional care. Legislation during this period eventually removed obstacles that blocked international adoptions, but on the other hand still neglected to provide alternative solutions to institutionalization.

Efficient coordination of child welfare reform activities was needed to overcome the restrictions imposed by the 1991 moratorium on international adoptions, and at the same time to ensure ethical adoption procedures through competent authorities. Two pieces of important legislation opened the way for faster and more ethical adoptions to take place. First, law 84/1994 came into effect which officially adopted articles in the Hague Convention on Child Protection and Cooperation in the Area of Adoptions. The intent of the articles was to protect the children, birth parents and adoptive parents involved in international adoptions, and to prevent child-trafficking.
and other abuses. The adoption process would be speeded up because once a child is adopted from a member country then the receiving country would automatically recognize the child’s adoption in the child’s country of origin.

In addition, Romania passed a new adoption law that expedited the eligibility of children for international adoption. This new law, law 47/1993, passed on July 8, 1993, is the Judicial Declaration for Abandonment. It removed a major obstacle to adoptions by giving a clear legal definition to the previously ambiguous status of “abandoned.” In particular, the law manifests the notion of disinterest by stipulating a 6-month period after which the courts may declare a child legally abandoned if not visited by a family member. The Judicial Declaration for Abandonment resulted in many children in leagans finally obtaining legal abandoned status and becoming eligible for adoption.


Regarded as the “real reform period”, this period is the most effective in terms of child welfare reforms. It is characterized by better coordinated efforts to operationalize principles in the UNCRC, to promote alternatives to institutionalization, and to decentralize child protection authority. The legislative centerpiece includes law 108/1998 (formerly Emergency Ordinance No. 26/1997) which finally replaces law 3/1970, thereby abolishing the rigid soviet-style child care system. It promotes decentralization of administrative and financial decision-making to the local level in order to better enable communities to protect children in difficulty. An example of what can be achieved through a decentralized system is the USAID initiative that teamed with local authorities in three counties. These local programs were designed to prevent child institutionalization by supporting new mothers through activities such as maternity care centers, day care centers, and day recovery centers for children with disabilities. Law 87/1998 (formerly Emergency Ordinance No. 25/1997) was also passed in an attempt to stimulate national adoptions by giving priority to Romanian residents to adopt over foreign residents.

SAMPLE AND DATA

A non-probabilistic sample of children was selected in two stages. First, in the absence of a national sampling frame of orphans that would permit a probabilistic sample selection, a sample of 10 clusters was purposefully selected according to a few criteria e.g., size of the leagan, its geographical location, and on two occasions, access to data. A cluster is equivalent to a judet, an administrative unit in Romania roughly equivalent to a county in the United States. Romania has a total of 42 judets, one of which is the Bucharest judet that comprises the capital city. The government of Romania geographically grouped the judets into seven development regions, plus Bucharest, the largest urban conglomeration, which counted as the eighth development region (GOR & EC, 1997). All three judets where USAID implemented pilot programs were selected to be in the sample, plus one judet selected from each development region except for Bucharest. (Bucharest was excluded from the sample because there are six leagans in...
this one urban region which would have increased the complexity of data collection tremendously, especially with the increased risk of double counting of children transferred between *leagans.* In the second stage, data was collected on all children who lived in *leagans* in the selected counties between 1987 and 2000. Data collection lasted from August 2000 to March 2001.

Although this study is not based on a probabilistic sample and therefore a wider inference of the results could be challenged, the sample is believed to be highly representative of children in *leagans* outside of Bucharest. Furthermore, a high level of confidence in the results is inspired by the relatively large sample size—the sample consists of about 35 percent (ranging from 32-40 percent annually) of all children in *leagans* for the period 1987-2000, and the annual number of children in the sample is a strongly correlated with the annual national number of children in *leagans* ($r = .83$).

The units of analysis are children, and the data on these children constitute retrospective flow data. Event history data collected from admission/discharge registers provide information on the child’s birth date, entry date in the orphanage, exit date from the orphanage, and destination upon exiting (Appendix A). There are no left censored cases (i.e. no date of entry was missing because information on admissions was registered serially, according to day of entry), and right censored cases include children still living in the *leagan* at the time of observation, children who died in the orphanage, children who had reached their fifth birthday, and children who were assumed lost to follow-up if they had not exited within five years after the date of entry. Table 1 shows a breakdown of child cases by region; 3464 right censored cases represent approximately 16% of all cases. The data on children in *leagans* is good quality: the data are complete because all abandoned children of pre-school age were effectively institutionalized until 1997; the data are accurate because record-keeping was in standardized registers and provided the basic information reported regularly to central authorities for funding.

Table 2 presents summary statistics for the main variables used in the regression analysis.

<table>
<thead>
<tr>
<th>Jудет</th>
<th>Number cases</th>
<th>Percent distribution</th>
<th>No. right-censored</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brâilã</td>
<td>2219</td>
<td>10.5</td>
<td>277</td>
</tr>
<tr>
<td>Cluj</td>
<td>1198</td>
<td>5.7</td>
<td>212</td>
</tr>
<tr>
<td>Constanța</td>
<td>1532</td>
<td>7.3</td>
<td>326</td>
</tr>
<tr>
<td>Dolj</td>
<td>3168</td>
<td>15.0</td>
<td>692</td>
</tr>
<tr>
<td>Iași</td>
<td>4041</td>
<td>19.2</td>
<td>677</td>
</tr>
<tr>
<td>Maramureș</td>
<td>1304</td>
<td>6.2</td>
<td>216</td>
</tr>
<tr>
<td>Mureș</td>
<td>1945</td>
<td>9.2</td>
<td>272</td>
</tr>
<tr>
<td>Suceava</td>
<td>2030</td>
<td>6.3</td>
<td>202</td>
</tr>
<tr>
<td>Teleorman</td>
<td>2319</td>
<td>9.6</td>
<td>236</td>
</tr>
<tr>
<td>Timiș</td>
<td>2319</td>
<td>11.0</td>
<td>354</td>
</tr>
<tr>
<td>Total</td>
<td>21089</td>
<td>100</td>
<td>3464</td>
</tr>
</tbody>
</table>

Number of cases, percent distribution, and number of right-censored cases
CHILD ABANDONMENT

Rates of child abandonment significantly increased in several postsocialist countries during the transition period, but Romania and Bulgaria grappled with the highest ones. Throughout the transition period, Romania had the second highest institutionalization rates, after Bulgaria, for children age 0-3 years (figure 2). In Romania, institutionalization rates increased 44 percent between 1990 and 1994; in Bulgaria they rose 21 percent during the same period. Between 1994 and 1998 institutionalization rates actually dropped 22 percent in Romania, however, the distinct spike in the statistics exaggerates both Romania’s percentage increase from 1990 to 1994 and the percentage decrease from 1994 to 1998 for 1994. If the spike were flattened and institutionalization rates in 1994 were linearly interpolated between 1993 and 1995, the percent increase in the first period would be reduced to about 37 percent, followed by a two percent increase in institutionalization rates from 1994 to 1998. The spike in Romania’s 1994 institutionalization rates appears again in empirical data collected for this study and are examined below (Figure 2).

The majority of children in Romania’s leagans are social orphans, that is, children who were voluntarily given over to state institutions by their parent(s). In 1996, for example, only 1-2 percent of children in leagans had lost both parents, and 9-10 percent had lost one parent. Ninety percent of children were reported to be admitted for socioeconomic reasons (DPC 1997).

The two main indicators of child abandonment are the absolute number of children living in institutions, and the incidence, or the rate of child institutionalization. Each indicator provides an informative measure of trends over time.
The absolute number fluctuates continuously with children being admitted and discharged at any time so figure 3 shows just the mid-year counts of children living in leagans from 1989 to 1997. The national count varies from a high of 10,954 in 1989 to a low of 7878 in 1992. (Note that the number of children in the sample show similar trends, indicating its representative-ness of the larger institutionalized population.) Two noteworthy observations are: one, after 1989 there is a decline in the absolute number of children until 1992. This is due both to the exodus of children when international adoptions were suddenly legalized, and also to the fact that fewer new children were admitted for reasons described above related to the black market adoption activity. From 1993 to 1997, the number of children living in leagans rises steadily, with a spike in 1994. (The spike is less pronounced in the sample count than in the national count, probably due to the exclusion of children in Bucharest leagans in the sample.) The spike is evidence of another exodus of children leaving leagans in large numbers following the Judicial Declaration for Abandonment passed in July 1993.

Fig. 2 Proportion of Children Institutionalized Aged 0-3 Years, in Selected Central and Eastern European Countries, 1989-1998

Fig. 3 Mid-Year Count of Children in Leagans: National Count and Number in Sample

In contrast to absolute numbers, the rates of child institutionalization disclose a rise and fall in rates relative to the risk pool. Rates are calculated as the annual number of new admissions divided by the annual number of births. These trends show more clearly than the absolute numbers the worsening situation in the transition decade, compared to the pre-reform period. Except for 1990, child institutionalization rates throughout the transition period were consistently higher than the pre-reform period: the average incidence rate in the pre-reform period (using data from 1987-1989) was 15.5 per 100,000 live births, while the overall average for the transition period was 17.0 per 100,000 live births (or 17.7 when the outlier year, 1990, is excluded).

<table>
<thead>
<tr>
<th>Year</th>
<th>New admissions</th>
<th>Live births</th>
<th>Rates: New admissions per 100,000 live births</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-reform period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>1678</td>
<td>109,255</td>
<td>15.4</td>
</tr>
<tr>
<td>1988</td>
<td>1633</td>
<td>106,884</td>
<td>15.3</td>
</tr>
<tr>
<td>1989</td>
<td>1660</td>
<td>103,911</td>
<td>16.0</td>
</tr>
<tr>
<td>Child welfare reform period I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>1120</td>
<td>103,486</td>
<td>10.8</td>
</tr>
<tr>
<td>1991</td>
<td>1124</td>
<td>78,316</td>
<td>14.4</td>
</tr>
<tr>
<td>Child welfare reform period II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>1350</td>
<td>75,202</td>
<td>18.0</td>
</tr>
<tr>
<td>1993</td>
<td>1264</td>
<td>71,481</td>
<td>17.7</td>
</tr>
<tr>
<td>1994</td>
<td>1291</td>
<td>72,269</td>
<td>17.9</td>
</tr>
<tr>
<td>1995</td>
<td>1313</td>
<td>67,257</td>
<td>19.5</td>
</tr>
<tr>
<td>1996</td>
<td>1393</td>
<td>67,932</td>
<td>20.5</td>
</tr>
<tr>
<td>1997</td>
<td>1240</td>
<td>66,120</td>
<td>18.8</td>
</tr>
<tr>
<td>Child welfare reform period III</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>1171</td>
<td>69,256</td>
<td>16.9</td>
</tr>
<tr>
<td>1999</td>
<td>1128</td>
<td>68,088</td>
<td>16.6</td>
</tr>
<tr>
<td>2000</td>
<td>1120 (1)</td>
<td>67,965</td>
<td>16.5</td>
</tr>
<tr>
<td>Total</td>
<td>18485</td>
<td>1,127,422</td>
<td>16.4</td>
</tr>
</tbody>
</table>

(1) There is an undercount of admissions in 2000 since data collection in 3 judets ended prior to December 2000.

**CHILD DEINSTITUTIONALIZATION**

Deinstitutionalization means a child that is living in a leagan is placed in an adoptive or foster family, or is reintegrated with his or her natural family. The Romanian government implemented deinstitutionalization strategies during the transition period to move children out of institutions and place them in a family setting (GOR, 2001). The two key indicators of successful strategies are: 1) more children are placed in family care (versus staying in the institutional system); and 2) the average length of stay for children in institutions is shortened (World Bank, 1998).

In terms of the first indicator, figure 4 presents the flow of children into and out of leagans during the transition decade. Data show that the number of children admitted to a leagan was substantially higher than the number placed in a family
both before and during most of the transition decade. The first tendency towards convergence between the number of admissions and the number of family placements was during the first reform period (1990-1991), but further progress during the re-organization period (1992-1996) was impeded due to the moratorium on international adoptions. The polarized paths running parallel to each other in this period represent the persistence of new admissions and a simultaneous stagnation in family placements.

Child welfare reform measures were better coordinated after 1997; in this period the number of children placed in families, through international adoptions and local foster care programs, increased steadily to meet the long-awaited decrease in new admissions (the first decrease since the very brief one in 1990). In 2000, the number of admissions and the number of family placements finally intersect indicating that, for the first time, the number of children leaving leagans was greater than the number of children brought in.

Fig. 4 Number of Children Admitted to a Leagan and Number of Children in Leagans Placed in a Family, 1987-2000

Similarly for the first indicator, figure 5 shows the share of children placed in families versus those transferred to another institution. The share of deaths of children in leagans is also significant “exit destination”, but further analysis of mortality levels is outside the scope of this paper. During the re-organization period, the share of family placements does not appear to have improved compared to those during the pre-reform period: 37-40 percent of children during both of these periods stayed in the institutional system after leaving the leagan. During the adoption frenzy in the early part of the decade, however, and again after reforms towards the end of the transition decade, the share of children staying in an institution drops to below 20 percent. This improvement indicates significant progress in the efficacy of strategies aimed at deinstitutionalizing children (Figure 5).

The second indicator of deinstitutionalization is the average length of time children spend in the leagan. Successful strategies are indicated by an overall shorter length of time that a child lives in a leagan, and this is analyzed using event history analysis, or survival analysis, as described below.
METHODOLOGY

This study employs a survival analysis of event history data on children in leagans. For flow data such as these that contain censored observations, survival analysis is an appropriate technique that takes into account the censored observations as well as the non-censored observations (Elandt-Johnson & Johnson, 1980; Allison, 1984; DeMaris, 2004). Right censored observations include children who were living in the leagan at the time of data collection, children who were “lost to follow-up” because they were missing an exit date and/or destination, and children who died in the leagan. The term “survival time”, for the purpose of this analysis, refers to the time in months that a child lived in the leagan before the occurrence of an “exit” event, i.e. placement in a family or transfer to another institution.

Step one: Distribution of survival times

The first step in the analysis of children’s event history data is to estimate the distribution of the survival times. The product-limit method in PROC LIFETEST (SAS 9.1.3) was used to produce the underlying, nonparametric distribution of survivor times, the survival distribution function (SDF).

Figure 6 plots the number of events (exits from the leagan) and censored observations (20324) while ignoring any differences among children in the sample as a whole. The percentage of children that were lost to follow-up, were still in the leagan at the time of observation, or had died, is 16.1%. The probability that a child in the sample would be in the leagan longer than t months is: $S(t) = \Pr(T > t)$, where $S(t)$ denotes the survivor function and $T$ is the survival time of a randomly selected child (Figure 6).

The SDF represents the proportion of children in the sample still living in the leagan at the beginning of the next month interval. At the beginning of the first interval, 0 month, 100% of the sample is represented. The curve shows that half of the sample lived in the
leagan for at least 20.2 months (median), with a slightly higher mean value of 22.0 months. The 75th and 25th percentiles are 8.4 and 34.4 months, respectively.

The hazard function is computed using the life-table method in PROC LIFETEST. The hazard estimate is the probability that a child exits the leagan in a given month, given the event has not yet occurred. In Figure 7, children in the sample are all assumed to experience the same hazard regardless of their characteristics. Although the hazard trend appears jagged compared to the SDF, after the first month until the thirtieth month the hazard is relatively constant, and remains slightly below that of the first month (0.045). In comparison, after the thirtieth month, the hazard increases to above 0.050 and remains elevated, with the highest probability of a child exiting in the 36th month (0.092). Indeed, the highest hazard estimate would be expected after the 36th month since law 3/1970 stipulates that children reaching their third birthday must be transferred from the leagan to another institution for older children (Figure 7).

**Step 2: Compare survival strata**

Another important feature of survival analysis is the means to stratify the sample by characteristics thought to be related to survival time and to compare survivor functions of the subpopulations. This is accomplished by dividing the sample into strata of interest and testing for homogeneity. After examining several strata such as sex, region, age at admission, etc. (results not shown), the most informative were differential survival times depending on whether the child is reintegrated into his or her natural family, placed in a foster or adoptive family, or transferred to another orphanage. Figure 8 displays the SDF estimates versus survival time (months spent in the leagan) for three placement strata (Figure 8).

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**Fig. 6 Product-Limit Estimator of Survival Function for Children Exiting Leagans**

![Graph showing survival function for children exiting leagans.](image-url)
That which appears to be significant differences in the placement strata survival distributions through visual examination is confirmed by the results of statistical tests. The rank tests for homogeneity indicate highly significant differences between placements ($p=0.0001$ for log-rank test and $p=0.0001$ for Wilcoxon test). Table 4 displays the disparate values between survival point estimates for the 25th and 75th percentiles, with children reintegrated in their biological family spending the least number of months in the leagan, and those staying in the orphanage system (i.e. transferred to another institution from the leagan) remaining the most number of months. For example, for the 50 percent of children in the sample that had not yet exited, those destined to be reintegrated with their family spent, on
average, another nine months in the leagan. Among the same children, those destined to remain in the orphanage system stayed, on average, another 34 months. Those destined to be placed in an adoptive or foster home averaged another 16 months in the leagan.

Examination of the area under the density curves facilitates the comparison of important trends relative to time. Keeping in mind that the area under each curve sums to one, in figure 9, for example, children who have spent the least time in the leagan are more often reintegrated with the natural family, compared to other destinations (the area under the reintegration density curve is larger than that of the other density curves). Children who have spent one to two years in the orphanage are slightly more often placed in a family than any other destination. Finally, children spending two or more years in the leagan are most likely to remain in the institutional system rather than being placed in a natural or adoptive/foster family.

Step three: Survival regression model

The third step is to employ a parametric model to estimate the dependence of survival time on the explanatory variables shown in table 2. Since negative values for survival time are not theoretically possible, the log of survival time is modeled:

$$\ln t_i = \mu + X_i^T \beta + \sigma \varepsilon_i$$

where the intercept parameter ($\mu$) and the vector of regression parameters ($X^T \beta$) are estimated by maximum likelihood.

Tab. 4 Estimated Remaining Months in Leagan by Percentile

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Reintegration</th>
<th>Family placement</th>
<th>Stay in an leagan</th>
</tr>
</thead>
<tbody>
<tr>
<td>75th</td>
<td>3</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>50th</td>
<td>9</td>
<td>16</td>
<td>34</td>
</tr>
<tr>
<td>25th</td>
<td>20</td>
<td>28</td>
<td>43</td>
</tr>
</tbody>
</table>

Fig. 9 Life-Table Estimator of Density Function for Placement Strata
MLE. The intercept is the fitted value when all covariates are in their reference category, i.e., the fitted value for the combination of reference categories. The regression coefficients are the deviation from the intercept for a specific category of a covariate. In the exponential model, the scale (s) is set to one, assuming a constant hazard of the event of interest over time (the Lagrange statistic tests that the scale is one). The random disturbance term (ε) is assumed to be independent of the observations.

The model described above is an accelerated failure-time model, which means that increases in covariates either accelerate or decelerate the survival time, by changing the scale but not the location of a baseline survival distribution. Maximum likelihood (MLE) is the optimal estimation method for survival time data containing censored and uncensored cases. Specifically, the Newton-Raphson algorithm was used to fit coefficient estimates in this model.

RESULTS OF THE SURVIVAL REGRESSION MODEL

The exponential function is the most parsimonious of the parametric models since it assumes a constant hazard of event occurrence (i.e., the hazard of a child exiting in a given month remains constant over time). An exponential regression model was therefore run first as an approximation of survival time (results not shown). A visual inspection of -ln(S(t)) plotted against time suggested that the exponential distribution did not appear to be the best model (for lack of a straight line through the origin), whereas the straight line for the plot of ln[-ln(S(t))] against time suggests that the Weibull distribution might be a more appropriate model (Appendix B). Furthermore, the Lagrange statistic generated from the exponential model was highly significant which means that the scale was not equal to one, i.e., the hazard of the event occurring was not constant. The Weibull distribution was ultimately selected as the most appropriate model for this analysis. Applying this distribution allows the hazard rate to change over time; the estimated scale in the full model was .72, indicating that the hazard is increasing at a decreasing rate (Allison, 1995; DeMaris, 2004).

Table 5 displays the results of the nested regression models. The quantity being modeled is the log of survival times, crossed with the dichotomous variable for right-censored cases. The highly significant intercept estimates represent the average time in months that a child lived in the leagan, for the combination of reference categories. By exponentiating the intercept values, the range can be interpreted from 23.5 months in the baseline model to 41.1 months in the full model (Table 5).

The resulting coefficient values for each explanatory variable give the estimated additive change in log-survival time for a 1-unit increase in the relevant predictor, net of other covariates. The exponentiated coefficient represents the acceleration or deceleration in survival time for a 1-unit increase in the predictor (DeMaris, 2004). Most of the regression coefficients in the five models are highly significant predictors of survival time. As hypothesized, survival times, interpreted as the months the child lived in a leagan, are shortest for children being placed in an adoptive or foster family or returning to their biological family (33 percent and 54 percent reduction in the intercept value, respectively, in the average number
months lived in leagan, as estimated in the full model). Average survival time is longest for children remaining in the institutional system, being transferred to another institution shortly after reaching 36 months of age (average survival time for this reference category is 41.1 months, the intercept value).

Tab. 5 Results of Parametric Regression Models (Weibull Distribution) for the Log of Survival Time in Months for Children Living in Leagans between 1987 and 2000

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>3.156***</td>
<td>3.475***</td>
<td>3.294***</td>
<td>3.548***</td>
</tr>
<tr>
<td>Exit destinations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stay in leagan (Ref. category)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Family placement</td>
<td>-0.463***</td>
<td>-0.323***</td>
<td>-0.398***</td>
<td></td>
</tr>
<tr>
<td>Family reintegration</td>
<td>-0.803***</td>
<td>-0.752***</td>
<td>-0.785***</td>
<td></td>
</tr>
<tr>
<td>Child welfare reform period</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-reform 1987-1989 (Ref. category)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>CWR 1, 1990-1991</td>
<td>-0.218***</td>
<td>-0.210***</td>
<td>-0.165***</td>
<td></td>
</tr>
<tr>
<td>CWR 2, 1992-1996</td>
<td>-0.136***</td>
<td>-0.074***</td>
<td>-0.030*</td>
<td></td>
</tr>
<tr>
<td>CWR 3, 1997-2000</td>
<td>-0.406***</td>
<td>-0.513***</td>
<td>-0.416***</td>
<td></td>
</tr>
<tr>
<td>Sex female</td>
<td></td>
<td>-0.111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age at admission</td>
<td></td>
<td></td>
<td>-0.114***</td>
<td></td>
</tr>
<tr>
<td>USAID pilot program</td>
<td></td>
<td></td>
<td></td>
<td>-0.072*</td>
</tr>
<tr>
<td>Scale</td>
<td>0.826</td>
<td>0.772</td>
<td>0.807</td>
<td>0.753</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-27210.0</td>
<td>-24628.7</td>
<td>-26937.5</td>
<td>-24186.8</td>
</tr>
<tr>
<td>Df</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Pseudo-R²</td>
<td>0</td>
<td>.10</td>
<td>.01</td>
<td>.11</td>
</tr>
</tbody>
</table>

*p <=.05, ** p <= .01, ***p <= .001

Pseudo-R² = 1 - (LLm/LL0), where LLm is the log likelihood of the model of interest, and LL0 is the log likelihood of the model with no predictors.

Although they explain less variation than exit destinations, reform periods also significantly influence survival times in the hypothesized directions. Compared to the pre-reform period, children lived in leagans for less time, on average, during the transition decade. During the first reform period, the “reparative period”, the average length of time lived in the leagan was reduced by 15 percent, or about 6 months, compared to the pre-reform period (Table 6). (Note that the youngest children who had already lived less time in the leagan were most quickly adopted by foreign families; children who had entered the leagan prior to reforms tend to bias the average survival time towards a longer average time. These older children were not in such high demand by foreign adopting families.) During the second
reform period, the re-organization period, international adoptions were banned and children spent, on average, an additional 5 months in the orphanage—or fourteen percent longer compared to the previous period. Finally, in the last reform period of the decade, when both national and international adoptions were promoted and placing children in foster families was increasingly an option, the average time spent in the leagan was reduced by the greatest amount—32 percent, or just over one year, compared to the previous period.

Tab. 6 Comparison of Average Number of Months that Children Spent in Leagans during Three Reform Periods

<table>
<thead>
<tr>
<th>Child welfare reform period</th>
<th>Coefficient from full regression model</th>
<th>Average no. of months (exponentiated coeff.)</th>
<th>Percent change from previous CWR period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-reform 1987-1989</td>
<td>3.7150</td>
<td>41.1</td>
<td>na</td>
</tr>
<tr>
<td>CWR 1, 1990-1991</td>
<td>3.5505</td>
<td>34.8</td>
<td>-15 %</td>
</tr>
<tr>
<td>CWR 2, 1992-1996</td>
<td>3.6854</td>
<td>39.9</td>
<td>14 %</td>
</tr>
<tr>
<td>CWR 3, 1997-2000</td>
<td>3.2989</td>
<td>27.1</td>
<td>-32 %</td>
</tr>
</tbody>
</table>

na = Not applicable

A child’s age at the time of admission is an important control variable in the full model. The highly significant negative coefficient (-0.114) indicates that a child admitted to a leagan at an older age reduces the average length of time spent there. The age at admission variable is grouped into six ordinal 6-month age categories (0-6, 6-12, 12-18, 18-24, 24-30 and 30-36 months). Interpreting the age coefficient implies an 11% reduction in survival time with each age group increment. Note that the magnitude and significance of the effects of the second reform period, the “reorganization period” from 1992 to 1996, is reduced from $p<001$ (models 3 and 4) to $p<05$ when age at admission is added to the final model. This suggests that much of the ostensible success at lowering average survival times during these years was probably due to older children being admitted and leaving after a relatively short stay: older children spend less time in the leagan not because they are placed in a family, but because after 36 months they are obliged to be transferred to another institution for school age children (or in some cases, to an institution for children with special medical, physical, or mental needs). It is thus possible that a child admitted at two and a half years of age spends only 6 months in the leagan, and if this variable is not controlled for then it is a spurious improvement in the deinstitutionalization indicator.

USAID pilot programs, implemented after 1997 in three județs, showed a slightly significant positive effect on decreasing time spent in the institution. Regarding sex, although slightly more boys than girls live in leagans (52.3 percent vs 47.7 percent), sex was not a significant determinant of survival time. Finally, a separate regression model was also run controlling for region but the results did not significantly improve the model fit.

The coefficients in the regression model can also be examined together to predict their combined effect on survival times. Consider the scenario where, for example, a child is placed in a leagan before the transition period. Not controlling for any other factors, he or
she is likely to spend $\ln T = 3.294 = 27$ months, whereas a child placed in a leagan during the third reform period spends, on average, only about 18 months: $\ln(3.294-0.406)$ (model 3). Considering another scenario controlling for a variety of factors (model 5): a child who is just over one year of age when placed in a leagan during the first reform period, and ultimately placed in a foster family:

$$\ln T = 3.715 - .398 - .165 -.114 (3) – .072 (0) = 2.81$$

which implies a survival time of 16.6 months. The ensemble of covariates in model 5 explain about 21 percent of the variation in survival time.

Finally, a convenient feature of the survival analysis technique is that if the sign of the coefficient is reversed, we get the hazard ratio (the instantaneous, conditional probability of exiting). This is intuitive since a greater hazard of the event happening would imply a shorter length of time spent in the leagan, and vice versa. Hence, for example, a child who is in a leagan where USAID has a pilot program (the value of the coefficient with the sign reversed is 0.072) is interpreted as the hazard of exiting for these children in pilot judets is elevated by about 7 percent compared to no pilot program.

**DISCUSSION AND CONCLUSIONS**

Empirical data show mixed results of the impact that child welfare reforms had on children in institutions during the transition decade. Overall, two broad conclusions can be drawn from this analysis: the decade of reforms had little or no positive effect on reversing rates of child abandonment, as evidenced by the persistently high rates of children being admitted to leagans; and the decade of reforms was measurably successful in transitioning more children, more quickly, out of leagans into families.

Prior to further discussion of results, it should be noted that these efforts, and other such efforts to generate results from nationwide empirical data, are a step forward in monitoring child protection outcomes. However, factors influencing trends in child abandonment and deinstitutionalization are complex and cannot be reflected in their entirety in a statistical model. Certain limitations in this study, for example, are that the data used in the analyses did not include time-dependent economic data. Information on annual economic indicators (or even quarterly information, given the rapid pace of changes in the transition period) over the fourteen year period, by judet, could potentially account for much of the unexplained variance in the models and would permit quantification of their effects on levels of institutionalization and deinstitutionalization. In addition, data on the child’s ethnic origin, mainly for the two largest ethnic groups, those of Roma and Hungarian descent, would serve to clarify any disparities in trends between ethnic groups.

Despite not having time-dependent data in the model, the two conclusions stated above using event history data are unambiguous. On one hand, the significant deterioration in child abandonment throughout most of the transition period is rather surprising given the fact that Ceaucescu’s pronatalist policies had been reversed immediately following his demise. On the other hand, persistently high child institutionalization is a logical consequence to the economic crisis and lack of cohesive
child welfare reform policies in the first part of the decade. Romanians suffered the most severe economic declines of all the transition countries, and economic deterioration in the early and middle of the transition period was the main reason that a large proportion of infants continued to be abandoned (World Bank 1998). The early to middle part of the decade especially was characterized by steep inflation, rapid growth in employment, a shortage in consumer goods, a decline in family benefits, erosion in the value of child allowances, and larger income equalities (Fajth & Zimakova, 1997; Zouev, 1999; UNICEF, 2002). Increases in family disunity also had a negative impact on child abandonment, including an increase in the share of births to single mothers and an increase in divorce rates (CDC, 2001, 1993; UNICEF, 2002).

In addition to the harsh socioeconomics environment in the first part of the transition period, the child welfare reform laws for most of the decade were ineffective in providing alternatives to child abandonment. The soviet style law 3/1970 prescribing child institutionalization as the solution for families in difficulty remained en vigueur until 1997 when it was finally replaced with the new law on decentralization of the child protection system.

Comparing rates of institutionalization over the transition decade, results of this study offer reason for cautious optimism towards the end of the decade. Since 1997 child abandonment rates have at least dropped down to pre-reform levels, and new legislation is promoting local child protection efforts to continue this trend.

The analysis of the event history data indicate that child welfare reforms have had positive effects on children spending less time in leagans, especially towards the end of the decade. This success, however, needs to be qualified. Outside of family reintegration, which has remained more or less steady throughout the pre-reform and reform periods, international adoptions have varied greatly depending on which reform period. Although not discussed in detail as part of this study, international adoptions were a major destination for children in the first and third reform periods, when the legal environment facilitated them (Greenwell, 2001). International adoptions are not, however, the ultimate desired family placement solution. Both Romania and the international community agree that it is more ethical to promote national adoptions over international adoptions (UNCRC article 20(3)). By the end of the transition decade, however, with the demand for children much greater on the outside of the country than within the country, this has not happened.

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NOTES
1. The two main articles in the UNCRC concerning orphans are Articles 20 and 22. Article 20 states that the state is obliged to provide special protection for a child deprived of a family environment and to ensure that appropriate alternative family care or institutional placement is available in such cases; Article 21 specifically addresses the state’s obligation to implement adoption procedures which protect the child’s interests and ensures adoption only through competent authorities.
2. From August 1, 1990 to July 17, 1991, about 10,000 children from Romania were sent abroad (Zagravescu & Iacovescu,
Likewise, the INS International Adoption Statistics reported 2594 foreign adoptions from Romania to the US in 1991, accounting for almost one third of all US international adoptions worldwide—versus less than 2 percent in 1990 (INS 2001).

Data for 1989 is for the end of the year (UNICEF & DPC, 1997); the remaining mid-year counts are from National Commission for Statistics (1997).

BIBLIOGRAPHICAL REFERENCES


DEPT. OF CHILD PROTECTION (DPC) (1997), Census of Children/Youth in Institutional Care in Romania [Recensamantul Copiilor/Tinerilor Plasati in Institutiile de Ocrorire din Romania], vol. 1-3, Bucharest, Childhood Protection Program Technical Assistance Unit—EU/Phare.


GOVERNMENT OF ROMANIA, NATIONAL AUTHORITY FOR THE PROTECTION OF THE CHILD AND ADOPTION (2001), Government
THE IMPACT OF CHILD WELFARE REFORM ON CHILD ABANDONMENT AND DEINSTITUTIONALIZATION

**Strategy Concerning the Protection of the Child in Difficulty (2001-2004), Bucharest, May 2001.**

**Government of Romania and European Commission (1997), Cartea Verde: Politica de Dezvoltare Regionala in Romania, Bucharest, EU/Phare.**


**Groza, V., Ileana, D., Irwin, I. (1999), A Peacock or a Crow Stories, Interviews, and Commentaries on Romanian Adoptions, Williams Custom Publishing**


http://holинтернациональный.org/insstats.html


**Ministry of Health Romania [Ministerul Sanatatii Centrul de Calcul, Statistica Sanitara si Documentare Medicala] (1999), Anuar de Statistica Sanitara 1998, Bucharest.**


**Roth-Szamoskozi, M. (1998), Intersection of Tradition and Need of Change in Romanian Child Protection System, Open Society Institute, Center for Publishing Development.**

http://e-lib.rss.cz/diglib/pdf/64.pdf


**Sorelle, R. (1997), “Born to be forgotten: Orphanages, hospitals and the streets remain the homes for many of Romania’s children”, Houston Chronicle, December 31.**

**UNICEF and National Committee for Child Protection, Government of Romania [Comitetul National pentru Protectia Copilului, Guvernul Romaniei] (1997), Situatiea copilului si a familiei in Romania, Bucharest.**

**UNICEF (2002), TransMONEE 2002 Database, Florence, UNICEF-Innocenti Research Center.**

**Verdery, K. (1996), What was Socialism, and What Comes Next, Princeton University Press.**

**World Bank (1998), Project Appraisal Docu-**
FERN GREENWELL

High rates of child abandonment and institutionalization are a legacy of Nicolae Ceaușescu’s single party rule from 1965 to 1989. When his highly centralized socialist regime fell in December 1989, Romania had one of the largest proportions of children living in state-run orphanages. During the postsocialist transition decade (1990-2000), the new Romanian government implemented several major child welfare reform measures to resolve the problem. As this study shows, the results of these reforms have been mixed. While reforms were measurably successful in transitioning children out of orphanages into families (deinstitutionalization), the rate of child abandonment increased. This paradox—success in deinstitutionalizing children and failure in reversing levels of child abandonment—is due to ineffective policies and persistent widespread poverty during economic transition. This study uses event history data, that is, flow data on infants and young children entering and exiting orphanages, to estimate the impact of child welfare reform measures over the transition decade. Empirical findings show that reform measures have had a significant impact on improving deinstitutionalization especially towards the end of the decade. Results also suggest that decentralized programs that provide alternatives to institutionalization, such as those implemented at the end of the decade, can significantly reduce dependence on child institutions.

SUMMARY

Le grand nombre d’enfants abandonnés et l’institutionnalisation de l’accueil sont deux héritages du régime roumain de parti unique dominé par Nicolas Ceaușescu de 1965 à 1989. Quand le régime socialiste hyper-centralisé s’est effondré en décembre 1989, la Roumanie atteignait des records en termes de proportion d’enfants recueillis dans des orphelinats d’État. Dans la décennie suivante, marquée par la transition post-socialiste, le nouveau gouvernement roumain, a mis en place plusieurs grandes réformes touchant l’assistance aux enfants pour tenter de résoudre ce problème. Cette étude montre que leurs résultats ont été mitigés. Si les réformes sont relativement parvenues à déplacer les enfants des orphelinats vers les familles (déinstitutionnalisation), le taux d’abandon a quant à lui progressé. Ce paradoxe découle de politiques inefficaces et du maintien d’une très large pauvreté lors de la phase de transition économique. Cette étude utilise des données de parcours biographiques (des données sur les flux de bébés ou de jeunes enfants entrant et sortant des orphelinats) pour mesurer l’impact des réformes de l’assistance durant la période 1990-2000. Des résultats empiriques montrent que les mesures signalées ont bien eu des effets significatifs sur le phénomène de désinstitutionnalisation, notamment en fin de période. Ils suggèrent aussi que ce sont les programmes décentralisés, tels qu’ils ont été établis à la fin de la décennie 90, qui sont en mesure de réduire le plus significativement la dépendance vis-à-vis des institutions de prise en charge des enfants.
APPENDIX A

The following pages are from the standardized admission/discharge registers used in leagans. Data for this study were collected from these archived registers.

<table>
<thead>
<tr>
<th>Column 1-7:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>case number</td>
</tr>
<tr>
<td>(2)</td>
<td>month and day of admission</td>
</tr>
<tr>
<td>(3)</td>
<td>first and last name of child</td>
</tr>
<tr>
<td>(4)</td>
<td>year, month and day of birth</td>
</tr>
<tr>
<td>(5)</td>
<td>birthplace including county, locality and street number</td>
</tr>
<tr>
<td>(6, 7)</td>
<td>name, address and occupation of father, and mother</td>
</tr>
</tbody>
</table>

Translation of columns 1-7: (1) case number; (2) month and day of admission; (3) first and last name of child; (4) year, month and day of birth; (5) birthplace including county, locality and street number; (6, 7) name, address and occupation of father, and mother.
APPENDIX A CONT.

Translation of columns 8-13: (8) name, address and national identification number of the person who brought the child; (9) reason for admission and who admitted the child; (10) year, month and day of discharge; (11) reason for discharge and who discharged child; (12) name and address of person to whom child was discharged; and (13) signature of person to whom child was discharged.
APPENDIX B

-\ln S(t) against time

|\ln(-\ln S(t))| against time