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Child poverty – a discussion on conceptualization and measurement.

A Portuguese case study

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Abstract

This work deals with child poverty. Although it is a very topical issue, it is scarcely studied by the social scientists.

The analysis of this problem normally appears as a sub-product of poverty. In fact the living conditions of children cannot be divorced from the family context.

Nevertheless poverty at the level of children displays its own specific features, along with a number of consequences that justify the study of childhood poverty per se. In this work the child is assumed to be a statistical unit. Therefore, from the economic point of view, the analysis of its living conditions is undertaken by considering those elements felt to be more important to its well being. In this context, a direct methodology has been adopted to directly evaluate child poverty.

The paper begins by presenting the objectives of the study, as well the methodology used.

The second and third points address questions related to conceptualization of the phenomenon and its quantification. This analysis allows one to make an initial distinction between the overall poverty problem and that of child poverty. The conclusions prove that, although they are interconnected, the two phenomena could be studied autonomously.

The fourth point synthesizes the results of an empirical analysis of the phenomenon reviewed. To perform this analysis, a survey on the well-being of children living in an urban area was conducted through a sampling process, and its results were subsequently modeled.

An econometric methodology was used to accurately verify the conclusions arising from the survey. The techniques employed are not that common in poverty studies.

1. Introduction

The key subject of this work is child poverty. It is a social phenomenon hitherto explored, but has assumed considerable proportions and has led to serious results for those who must endure this situation, as well as society itself.

The analysis of this problem normally appears as a sub-product of poverty. In fact the living conditions of children cannot be divorced from the family context.

Nevertheless poverty at the level of children displays its own specific features, along with a number of consequences that justify the study of child poverty centered on the child.

In this work the child is assumed to be a statistical unit. Therefore, from the economic point of view, the analysis of its living conditions is undertaken by considering those elements felt to be more important to its well being.

Recent childhood studies¹ suggest that the child must be studied autonomously and not merely as a part of the family. Some social sciences, such as economics and sociology, do not normally assume children to be individuals.

In this context a direct methodology has been adopted to directly evaluate child poverty. This methodology was recently used in the poverty analysis for EUROSTAT (1995) and was developed by Townsend (1979, 1987).

This work begins with a discussion about the concept of child poverty. Under the next heading are presented two specific indexes to measure child poverty, in line with the conceptualization drawn up. Finally, the results of an empirical study applied to children living in an urban area in Portugal, are presented. This work includes the construction of an econometric model, which provides the first explanation of the phenomenon focused for the sample addressed.

2. Conceptualization of child poverty

Hitherto, studies undertaken in the field of child poverty have concentrated on the family. This approach is based on the assumption that child poverty is identified with household poverty, in terms of income.

If we consider a child to be a statistical unit, we will pursue another path of research that fails to reduce child poverty to the most general phenomenon of poverty. However, we must acknowledge the importance of the family context in the children's impoverishment process. Our standpoint is to consider the child as a unit of analysis, and no more. We focus our attention on elements of an economic nature that determine its well being. Such elements are probably not restricted to poverty as forms of deprivation of a household's income.

From the deprivation standpoint, the concept of child poverty differs from the global poverty concept through its contents. The expressions of poverty found in the child are different from those of the adult, which can involve different political conflicts.

This distinction also results from the hypothesis that not all poor families have poor children, as suggested by the analysis of the several forms of life in poverty. This hypothesis is reconsidered under the last heading, where the empirical analysis enables one to test its validity in case of the sample observed.

We should also note that the child has no monetary funds. For this reason, the child poverty concept cannot assume the classic form of the poverty concept, founded on a threshold of monetary poverty.

If, the choice favors a direct poverty evaluation methodology and the child is considered as the main object of the study, one must define its specific conditions of well-being from the economic standpoint.

In our opinion, child poverty may be characterized as being an interacting group of differing needs that can emphasize or attenuate the child's degree of well-being. Child poverty can be considered as a state of deprivation, as Townsend (1979) defines. Therefore the concept of child poverty must be based on the analysis of the child living conditions and not on the family level of income, the methodology that has been used so far. The centered child analysis certainly enriches the study of child poverty. The several empirical works on the phenomenon² prompt the author to select the following fields of deprivation: (i) habitat, (ii) education, (iii) health and (iv) social insertion

These fields of deprivation signify, at upstream level, a lack of family resources and, at downstream level, precarious insertion of these children into the labor market when they become adults.

Like poverty in general, child poverty has a multidimensional character. An analysis of the various deprivation areas covers this multidimensionality feature, but does not exhaust it. This definition of the extent of needs can offer a certain vision of child poverty. Despite including other deprivation fields, these are in our opinion, those that synthesize the essential conditions, linked to the child's economic basis and healthy growth³.

If we focus the analysis of child poverty on the child we can not establish a direct and linear relationship between the poverty of the family, in terms of income, and the living conditions of the child. As Huston (1994: 4-5) points out, 'a child-centered analysis leads to different questions. For example, do income supplements improve quality of life, particularly for children? Do they improve nutrition, parent-child relations, school motivation, neighborhood safety, or physical health? Some of the findings are suggestive.'

2. Quantification of child poverty

Here we present two specific quantifying measurements of child poverty: The Child Poverty Index (CPI) and the Deprivation Factor (DP). These measures are based on the assumption that child poverty is a state of deprivation, as it was discussed under the previous heading.

2.1 Child Poverty Index

The CPI focus is based on three elements essential to the well-being of children: health, education and habitat. Inclusion of these elements in the CPI is performed by variables that can evaluate the three-field deprivation considered. Choice of these variables essentially stems from two judgments: representativity and operationality.

The CPI does not include all the deprivation areas that characterize the child poverty situations. As a poverty-measuring tool, this index selects the most important measurable aspects of the phenomenon. The proportion of children whose physical growth lies outside the normal parameters represents the first dimension considered in the CPI – children’s health – (P1). This variable indirectly interprets health conditions and reflects one of the main requirements of poor children – food.

The second dimension included in CPI – children’s education – is measured by the proportion of pupils in junior education who fail at school (P2). Normally the poor children fail to complete their normal studies and register high school drop-out rates.

The third dimension of CPI – children’s habitat conditions – refers to the proportion of children living in degraded neighborhoods. In Portugal such neighborhoods normally have a very young population, in which is concentrated the majority of poor children. Deprivation in these situations affects the children’s well-being and stimulates their condition of impoverishment.

The mathematical definition for CPI is given as:

$$\text{CPI} = 1/3 (\text{P1} + \text{P2} + \text{P3})$$

where P1, P2 and P3 are the deprivation indicators of the three elements considered as essential to children’s well-being. The CPI is the arithmetical mean of these three forms of

deprivation, which equates to the average level of children's deprivation. It might constitute a way of particularizing the general form of the Human Poverty Index (HPI) presented in the Human Development Report of 1997, which shows in detail the building of the process of mathematical analysis.

The CPI is not a reference measurement; it could range from 0 and 1. The closer it is to the unit, the more serious is the problem of child poverty. A unit value simply means the state of deprivation limit relative to the areas considered, because the CPI does not exhaust all aspects of child poverty. CPI is a measure of child's poverty incidence. If we compute its value regarding only the universe of poor children, the CPI will interpret those aspects related to the intensity of child poverty.

2.2 Deprivation Factor

The concept of child poverty considered in this paper follows the approach of Townsend (1979) toward poverty in general. As in the case of Townsend, we defined several areas of deprivation: health, education, habitat and social insertion.

Definition of the deprivation indicators involves judgment values, "common sense" and the researcher's vision with regard to the poverty issue.

The various indicators of deprivation considered group into four categories, according to the areas of deprivation previously established: category 1 - health-related indicators, category 2 - education-related indicators, category 3 - habitat-related indicators and category 4 - social insertion-related indicators.

Category 1 indicators are designed to evaluate two important aspects of children's health: assistance from a family doctor and food, which are the most significant aspects for poor children.

Category 2 indicators set out to define indicators that can allow one to recognize the most important features of education: assiduity and school success. Once again, children from unfavourable habitats show grave deficiencies, which can seriously jeopardise their school activity and future insertion in the labour market.

The indicators included in category 3 are fundamental, not only as a means of understanding the conditions of the physical habitat, but those of the home environment as well.

Through the indicators defined in category 4, the DF includes the aspects related to social insertion which, as already noted, are highly complex. The objectives of these indicators are to determine if the children establish any relationship with habitats different from the one in which they live. In poor habitats, the fact that the child is dependent on its neighborhood and the lifestyle of its family, which is normally lacking, can seriously limit its social insertion.

Operationalization of the DF as well as the CPI, is covered under the fourth heading, by using the data gathered for the empirical study.

Following the general methodology of Townsend(1979), the Deprivation Factor (DF) is given as

$$C_j = \sum_{i=1}^P p_{ij}$$

where p_{ij} is the value of i-esimo index related to the person j and P – the number of indicators considered. p_{ij} is a binary variable that assumes the value 1 if the child is deprived in relation to indicator i and 0 , on the opposite situation arise.

C_j changes between 0 and P and the closer it is to its maximum value, the more intense is the poverty situation of individual j.

A scale of deprivation was constructed to give more information about children`s pattern of deprivation. According to the value obtained with DF we suggest the following classes of deprivation:

- . Low level of deprivation - $0 < DF < 3$
- . Medium level of deprivation - $3 \leq DF < 7$
- . High level of deprivation - $7 \leq DF \leq 9$

The Deprivation Factor and the scale of deprivation defined above provide us with elements enabling one to evaluate the intensity of the child poverty phenomenon.

3. Empirical Analysis

The shortage statistical data concerning child poverty seriously undermined development of the empirical analysis. This problem was, however, overcome by resorting to a survey. The analytical methodology used to obtain the results was of an econometric nature, and included the estimation of a discrete choice model.

The region studied includes four areas in the city of Lisbon all of which have several poverty bonuses but with low visibility.

As for the questionnaire a sample of 384 elements was selected, including children from poor families (social class 1) and not poor families (social class 2). The definition of poverty used to classify the families was simply based on income.

We wanted to establish, in first place, the main features that distinguish these two clusters and, at the same time, verify if all children living in poor families can be considered poor as well, according to the concept of child poverty presented.

According to the logit binomial model estimated the variables that distinguish children living in poor families from children living in no-poor families are:

- . Structure and family status
- . Parent`s job qualifications
- . School failure and parental support
- . Physical development and medical care
- . Habitat (degraded / not degraded)
- . Dimension of the house
- . Indicator of social insertion (holidays / activities extra-school)

With these elements we are able to construct the deprivation indicators needed to operationalise the Deprivation Factor presented under the last heading.

Category 1 –Health-related Indicators

- Have you been at least once to the doctor`s over the last two years?
- Is your physical growth in keeping with standard parameters?
- Do you eat at least one complete meal a day?

Category 2- Education-related indicators

- Do your parents help you at school works?
- Do you have a repetition number below two?

Category 3 – Habitat-related indicators

- Is the house in which you live in a classical setting?
- Does the house where you live have water, light and plumbing?

Category 4 – Social insertion-related indicators

- Do you enjoy any holidays outside your habitat?
- Do you practice any extra-school activity?

The choice of indicators provides a certain conception of the child poverty problem and is in keeping with the analysis undertaken throughout this work. This choice was dictated by the variables included on the binomial logit model estimated with the survey results.

Evaluation of child poverty in the sample was based on the value calculated from the two measurements, which were tailor-made for this work. Tables 1 and 2 present the results of this evaluation.

The value assumed in the sample of children living in poor families by the Child Poverty Index is about 36%, which means that more than a third of the children of the children analyzed share a deficit situation in relation to the three CPI indicators. Indicators related with habitat (P3) show the importance of this deprivation area as the results of the estimated logit model had already pointed out.

According to the values calculated for the Deprivation Factor, more than a half of the children living in poor families observed, register mediator levels of deprivation. However, there is a large group that registers high levels of privation – about 14%.

Finally we should mention that some 20% of the children in poor families from the sample presents a low deprivation level, which leads us to question the classification of them as poor. Additionally it is interesting to note the difference between the head – count ratio (calculated according to the classical definition of child poverty i.e. based on the familie`s income) – 0.47 – and the CPI – 0.357. These results draw attention to the fact that there are children in poor families with reduced deprivation levels, as noted under heading 2. This fact gives importance to the study of child poverty by itself and not as a merely sub-product of the general problem of poverty. The analysis and the evaluation of the problem of child poverty must be based on a concept directly related with the child and its conditions of well-being.

4. Discussion and conclusion

In this paper we adopted a direct methodology to analyze the problem of child poverty. The child is the central focus of analysis therefore is assumed as a statistical unit.

We presented a reflection on the definition of child poverty, distinguishing this concept from the general concept of poverty. The concept presented considers child poverty as a state of deprivation essentially reflected on four areas: habitat, education, health and social insertion.

Based on the Social Exclusion Theory adopted by Townsend (1987) two measures were constructed to evaluate the phenomenon of child poverty: the Child Poverty Index and the Deprivation Factor.

Globally speaking, we may say that the results of the survey are in keeping with theoretical reflection. Evidence exists that, where the sample is concerned, lifestyle of children in poor families is associated with the four given deprivation domains: education, health, habitat and social insertion; also the household's living conditions are fundamental to the children's well-being. These results give a first validation of theoretical framework that sustains the concept and the measures of child poverty presented.

1. Childhood poverty is essentially a state of deprivation, to be found at four levels: education, health, habitat and social insertion;
2. The situation of the parents or other persons responsible for children in the labour market accounts for child poverty;
3. Child poverty is related to the status and structure of the family;
4. The habitat's living conditions influence child poverty;
5. The poor children are, in particular, victims of failure at school;

The analysis developed shows that child poverty is essentially a state of privation to be found at 4 levels: education, health, habitat and social insertion – hypothesis 1. The modeling undertaken draws on a set of variables to explain the phenomenon, and are

integrated in each of the areas of deprivation, which are the basis of the concept of child poverty.

As for the different deprivation domains, the estimated results of the logit binomial model show that the factors related to education and habitat, prove to be important to ones understanding of child poverty in the sample.

In the case of education, the estimation indicate that the children living in poor follow a specific school path – hypothesis 5 – where is underscored as their own specifications: school failure and the absence of parental support.

The habitat is a particularly important domain where child poverty is concerned. Results of the survey, followed by the modeling exercise, confirm its importance. The lives of children living in poor families from the sample are mostly spent in degraded, restricted habitats. The living conditions of these children have negative effects on their studies and aggravate social disintegration. Moreover, such conditions are a risk to their health as they encourage the appearance of certain illnesses, with very negative effects.

In the area of health, the model estimation displayed the importance of physical growth as a feature differentiating the two groups of children in the sample.

In the case of social insertion, the survey's results and the modeling point to the state of isolation in which the children in poor families observed live. Having little contact with other ways of life and few positive references, these children will probably follow their parent's way of life.

Beyond the four deprivation areas that constitute the child poverty concept, the model revealed facts related to the structure and family status, which moved in the direction of hypothesis 3. It was noted that children who do not live in the classic family (two persons – mother and father) are particularly exposed to poverty, along with children belonging to large families.

There seems to be no proof for hypothesis 2 related to the influence of the parents' situation in the employment market on child poverty. Although the model does not include this variable, results of the survey show that the majority of poor children's parents have few job qualifications. But the modeling process emphasized the importance of the parents' job qualifications as a factor of differentiation between children living in poor and non-poor families, a decisive element regarding the type of insertion in the employment market.

Tables

Table 1 - Child Poverty Index

Indicator	Value
P1	0.172
P2	0.258
P3	0.641
CPI	0.357

Table 3 - Deprivation Factor

Scale of deprivation	% of children
Low level of deprivation	18.8
Medium level of deprivation	66.5
High level of deprivation	14.7

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Footnotes

¹ The work developed within the scope of the European Centre Childhood Programme, as well as the studies published in Huston (1994) are examples of this research work.

² Here are some examples of these works: La Gorce (1979, 1981), Brébant (1984), Silva (1989), Silva et al. (1989, 1990), 1991), Castro et al. (1992), Huston (1994), Penha (1996), Cornia et al. (1997), Bradshaw (1997) and Bastos (1999).

³ From a psycho-sociological perspective, childhood poverty may be seen as a very traumatic situation in terms of high self-esteem, self-confidence and development of the personality. Though this kind of subject lies outside the scope of this study, we cannot disregard the other facets of childhood poverty that can, in fact, permit a better understanding of the problem and stimulate new forms of analysis. The works of Castro et al (1992) illustrate this kind of subject.

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