Working together
www.rcis.ro

Revista de cercetare și intervenție socială

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)
Selected by coverage in Social Sciences Citation Index, ISI databases

---

PARENT INVOLVEMENT AND EARLY SCHOOL LEAVING

Ciprian PÂNZARU, Mihaela TOMIȚĂ
Revista de cercetare și intervenție socială, 2013, vol. 40, pp. 21-36
The online version of this article can be found at:
www.rcis.ro, *www.doaj.org* and *www.scopus.com*

Published by:
Expert Projects Publishing House

expert projects
publishing

On behalf of:
„Alexandru Ioan Cuza" University,
Department of Sociology and Social Work
and
Holt Romania Foundation
REVISTA DE CERCETARE SI INTERVENTIE SOCIALA
is indexed by ISI Thomson Reuters - Social Sciences Citation Index
(Sociology and Social Work Domains)

Parent Involvement and Early School Leaving

Ciprian PÂNZARU[1], Mihaela TOMIȚĂ[2]

Abstract

The first years of life are recognised as essential for the child's emotional development. During this period, the child's character and personality is being shaped. From this point of view, the environment may provide an opportunity for the child's development or a misfortune, depending on how it is configured. This article analyses the role of children postnatal development environment on two important dimensions: emotional and economic. Analysis of the influence of factors such as parental leave length (PLL), parental leave benefits (PLB), family or child allowance (FCA) and child day care (CDC) has generated the conclusion on their influence on the rate of early school leaving (ESL). The analysis was performed using a multiple linear regression model type. Evaluation of factors such as the presence or absence of parents constantly around children, institutionalised support offered to families in child upbringing and the child's academic success were studied on a sample panel which included all 27 EU countries. The results show that we can support the existence of a connection between parental leave length, child allowances and early school leaving rates.

Keywords: parental policies; panel data analysis; early school leaving; European Union.

Introduction

The role of parenting and that of parental caregiving are closely related, and often overlap, they need to be distinguished and treated separately. Parenting refers to a parent's commitment to assume a substantial responsibility to socialize, guide, discipline, and provide financial and emotional support for a child (Sallee, Lawson, Briar-Lawson, 2001: 201). Parents are the main factors that ensure and influence the harmonious development of the child. Some child psychological

[1] West University of Timisoara, Department of Sociology, ROMANIA. Email:cpanzaru@socio.uvt.ro

[2] West University of Timisoara, Department of Social Work, ROMANIA. Email: ceptim2005@yahoo.com

structures develop only in the presence of parents, and lack of secure attachment figure (a constant person in the child's life, who offers basic care and moments of interaction, usually the mother) has long-term negative consequences. Therefore, a child who does not receive much attention from parents may have difficulty in steps of acquiring knowledge and developing skills of the age, with repercussions in the integration process success and the subsequent school life. In the early years of the child, the parent is the main provider of education. The need for interaction between parent and child during early childhood is evidenced by numerous authors (Bronte-Tinkew, Moore and Carrano, 2006: 850; Cojocaru, Cojocaru & Ciuchi, 2011), its presence acting as a protective agent for the child. Changes or disruptions to these early interactions affect the proper biological and especially psychological development of the child. The study Early School Leavers and the Role of Parents, by The Confederation of Family Organisations in the European Union (2009), shows that the physical presence of parents with children and their active involvement is essential in child development, with long-term impact on behaviours they develop.

On the other hand, in order to optimally discharge their responsibilities, parents must have adequate instruments and means. Therefore, along with parents, factors such as income, social class or state involvement play an important role in the childs' development and evolution. A special intervention is borne by political decision-makers by the role they play and which can support parents and children. From this point of view, the relationship between family and state, in order to improve the life and chances of a child, represents a human and social capital development (Giddens, 2011: 110). This change of focus to the child is present in family policies across Europe. If traditionally family policies were focused on job duties of parents (Hermmans, 2012), after 1990 European governments have become more interested in policies that increase children's life chances. Need for state involvement in all things related to child development is revealed by several studies in this regard. For example, 75% of the parents in the UK believe there are many situations in which they felt the need for a more consistent support from the state in exercising their responsibilities of parents (The Report of the Policy Action Team 12: Young People, March, 2000). In other words, parenting support is desirable and even necessary to ensure the necessary framework enabling proper parental involvement in children's education (Gardner, 2003). The family's financial situation and lack of involvement in the child's primary education are key factors for future problems in the evolution of the child. For example, a longer parental leave provides the parent with the possibility of being present for the child for a longer period, contributing to his education. Also, benefits offered to parents in parental leave gives them greater opportunities to contribute to the education of the child. Parental leave and other benefits offered by the state represent family support policies to support child health, appropriately combining work and family responsibilities and is an essential pillar in ensuring early childhood education (Kamerman, 2000).

This study addresses two components related to the environment in which the child develops: the affective component (given by the constant presence of the parent in early life) and the economic component (given by the financial support the family benefits from in the early life of the child). The premise from which we started was that the presence of a parent for a longer period in the child's early years increase its school success and decrease the early school leaving rate (ESL). There are many reasons that cause children quitting school, reasons that vary depending on the cultural context, from country to country, from family to family and from child to child. However, the phenomenon of early school leaving shows some general valid patterns (Official Journal of the European Union, 2011). Among them there are: family financial conditions, primary education received by children, the resource of time invested by parents in child education, etc. Thus, the way parents interact with their own children, but also the degree to which the state intervenes and supports parents in their efforts to educate the child, are dimensions that are commonly invoked when talking about leaving school, deviant behaviour or delinquency among minors. Therefore, the existence of financial benefits enables families to ensure a healthy environment for children's development. Due to these benefits, the parent can afford to stay for a longer period with the child, not being forced to return to work, and thus to get involved in educating it. We considered these issues as a child development niche (Super and Harkness, 1982). In the category of factors that characterise the affective dimension of the relationship between parent and child, we have included parental leave length, considered in terms of duration (PLL). In the category of factors that relate to the economic component, we included parental leave benefits (PLB), family or child allowance (FCA) and child day care (CDC). These values were considered as a percentage of GDP. The working hypothesis was that by which we considered these variables as the elements that may influence the rate of early school leaving (ESL). Therefore, it was considered the dependent variable, and the others were considered as independent variables.

The main purpose of this research was to identify which of the factors analysed influences the rate of ESL. This is essential knowledge to develop and, especially, to improve strategies of intervention. Any intervention must be based on concrete research to ensure its success.

Literature Review

Review of literature brings forward a variety of theoretical and methodological approaches. However, despite numerous opinions and analyses showing the relationship between the parents' time allocated resource, the support they receive (parental leave, child raising allowances, etc.) and the child's academic success, research is quite modest and does not show significant results.

Most studies are quantitative and are based on research surveys or questionnaires based on those involved in the ESL phenomenon (parents, children, teachers) (Shapiro and Tambashe, 2001; Admassie, 2003; Ersado, 2005). Other studies performed analyses of the relationship between different variables influencing the early school leaving phenomenon (Zimmerman, 2003; Anderson, 2005), using statistics specific instruments by often processing secondary data. Another category of studies are those that combine quantitative data with qualitative data (Boyle et al., 2002), from this point of view the findings being more consistently accurate.

Regarding the topic approached, until recently most studies have focused on the relationship between parental leave length and economic consequences of these policies (Waldfogel, 2001; Berger et al., 2005) or have addressed the issue of parental leave length (or other benefits that provide support to raise a child) on its physical and mental development (Rhum, 2002; Pasco and Belsky, 2011). Of course, theories on socialisation emphasise that acquisition of skills, abilities and attitudes developed by the child are the result of the environment in which it lives and parental involvement influences school performances (Maccoby, 1992; Langlois and Downs, 1980).

There are many studies showing that a family with a high degree of cohesion facilitates the child's school performance compared to a family dominated by conflicts and problems (Kurdek, Fine and Sinclair, 1995; Barber and Buehler, 1996; Shek, 1997; Brody, Flor and Gibson, 1999). Ryan and Adams (2005) conducted an analysis of how the relationship between family and school works and how the interaction between parent and child affects its academic success. The conclusion is that the quality of family life affects children's school performance. The quality of family life is heavily dependent on economic welfare. Okagaki and Frensch (1998) also examine the connection between family and school, but enter in the analysis the multiethnic dimensions, too. Liu and Skans (2010) have conducted an analysis of the relationship between the duration of parental leave length and child's school performance. The study started out from the reform in Sweden which extended parental leave length from 12 months to 15 months and analysed school performance for children up to age 16, but the results did not show a strong connection between the variables analysed. Of course, deeper analyses have found evidence between the level of education of parents and school performance. The most frequently invoked relationship is that between parental involvement and monitoring and school achievement (Lee and Bowen, 2006).

Regarding the economic component that affects child development and evolution, the financial situation of the family is considered to be one of the defining variables. Thus, family income is considered to play an important role in the child's school success and especially school dropout (Rumberger et al., 1990). Thus, children from families with financial difficulties are more likely to leave school, and the probability increases as the parents' level of education decreases. Other studies invoke the relationship between parenting and phenomena such as delinquency. For example, Hoeve et al. (2009) performed an analysis of 161 published and unpublished works which show the importance of parenting. Their findings show that almost 11% of the variation in delinquency among children is caused by how parents approach the relationship with children. In fact, the role of parents in this direction is so important, that in some states parents are even sanctioned for developing antisocial behaviour in their children (Bessant and Hil, 1998).

On the other hand, in this context studies which refer to the need to educate parents must be invoked (Cojocaru, 2011; Cojocaru & Cojocaru, 2011), so that they have the capacity to respond as appropriately as necessary to the needs of children (Reder, Duncan and Lucey, 2003: 14). Parenting education is one of the strategies that contribute to the strengthening of the support provided to families (Cojocaru, 2011: 152). Even if the factors leading to school leaving are difficult to quantify, most studies in the field agree that parents play an important role in children's school success. Along with parents, the state, through support provided either to parents in their efforts to educate children, or directly to children, also plays a role. In the Europe 2020 strategy by the European Commission (2010), it is accepted that ESL is a major problem and the strategy aims to reduce this rate below 10%. In fact, the EU recommendations on this issue are widely presented in the study Reducing Early School Leaving in the EU (European Parliament and Nervala et al., 2011). The document analyses the existing situation in many EU countries, bringing to the forefront opinions expressed both by students and by teachers, parents or authorities. One of the conclusions highlights the major role of parents and their closeness to children in the latter's school success. The school leaving issue gains importance especially considering the domino effects it produces. Early school leaving leads, for example, to the growth of public spending, it increases unemployment and generates criminality. It is also known that early school leavers are disadvantaged on the labour market, being more vulnerable to the risk of unemployment, social exclusion or poverty.

In this study, we examined issues concerning the size of the relationship between parent and child during the first years of its life, in terms of its duration and the support offered by the state that benefit parents and children, in order to see to what extent they influence early school leaving. From this point of view, the work is part of a series trying to identify the predictors of school leaving.

The Data Analysed

The empirical sample consists in all 27 European Unions countries (Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom) which share common social features when it comes to family policies. In all EU countries there is the practice of parental leave, and the state is involved when it comes to family support in raising and educating children through various forms of aid benefits.

The period analysed was between 2000 and 2010. The data used come from Eurostat, and their processing was performed using SPSS, e-Views and STATA. Given the homogeneity of the sample countries, we grouped them into a panel. The reason for grouping time series and cross-sectional data (countries) in a panel was to increase the database and therefore obtain more precise estimators for the model's parameters. Scientific understanding of social reality involves choosing in research and using those instruments that allow an interpretation as objective, precise and accurate as possible. We felt that choosing this method may help to increase objectivity and more accurate quantification of the relationship between the variables analysed. As we stated earlier, we considered as dependent variable early school leaving rate (ESL) and as independent variables parental leave length (PLL), parental leave benefits (PLB), family or child allowance (FCA) and child day care (CDC). Early school leaving (ESL) refers to those who leave the education and training system at secondary education level or above this level and are not integrated into the educational system. According to Eurostat, the indicator is defined as the percentage of the population aged 18-24 with at most lower secondary education and not in further education or training. Early school leavers are therefore those who have only achieved pre-primary, primary, lower secondary or a short upper secondary education of less than 2 years.

European Union through the European Foundation for the Improvement of Living and Working Conditions define parental leave as an individual right to leave for men and women workers on the grounds of the birth or adoption of a child to enable them to take care of that child, for at least three months, until a given age up to eight years. There are significant differences from country to country. Central and Eastern European countries offer the longest parental leaves. In some cases, only part of it is paid. For example, in the United Kingdom, although parental leave length is 52 weeks, in 2012 only the first 39 weeks were paid. There are differences in terms of the amount of the sums granted. Sweden grants an allowance equivalent to 80% of salary, and in Romania the amount is 85%. In this study, only the period parental leave was taken into account for which the parent is paid. Parental leave length (PLL) was considered in number of weeks, according to existing regulations in each country of the European Union.

According European System of Integrated Social Protection Statistics, parental leave benefit represents benefits paid to either mother or father in case of interruption of work or reduction of working time in order to bring up a child, normally of young age. The parental leave benefits (PLB) indicator was analysed in percentages of GDP allocated for parental leave payment. Family or child allowance (FCA) is the amount that the state allocates to support families and children up to age 16 or 18, and in some countries even until the child graduates. Thus, benefits in various forms can be provided until the age of 26 years. In this analysis, family and child allowance was calculated as a percentage of GDP. Child day care (CDC) is the child care work performed by persons other than parents, when the latter have to go to work. These other persons may be relatives or older brothers or sisters. In general, however, child care is provided in nurseries and crèches or by a nanny. In general, the state provides financial support for such situations. In this case, the amounts were considered as a percentage of GDP for each country analysed.

Methodology

Our research has used the panel data analysis. Panel data analysis is a popular form of longitudinal data analysis widely used by the social and behavioral science researchers. It is used in psychology, sociology, economy and educational research to study characteristics of groups of people followed over time.

It is used when there is analyzed data which is collected on different moments of time and about the same entities. Therefore, the panel data represents data series which are in the same cross-sectional and time series.

The advantages of the panel data model are: (1) Summarizing through a single coefficient of the impact of a variable on a group of time series dependent variables (group of companies, countries, etc.); (2) Estimation of specific coefficients (constant or coefficients of independent variables) for each time series as dependent variable - fixed effects; (3) Grouping dependent variables in categories and estimating the impact of the categories that the dependent variable are part of on its evolution.

Panel Data Analysis implies using the regression model. The general model of representation of the panel data regression is of the type:

$$y_{it} = \alpha + \sum \beta_{it} x_{it} + \varepsilon_{it} \qquad (1)$$

Where *i* takes values from 1 to N, and *t* takes values from 1 to T. The index *i* shows the cross-sectional size (number of units of the panel; in our case: 27) and the index *t* on time (number of periods; in our case: 11) (Baltagi, 2008).

There are numerous models which use panel data. The main distinction is made between the fixed effect model and random effect model. In a fixed effect model, the exogenous variables may contain unit-specific dummy variables, allowing intercepts to vary by unit. The model is identical to that specified in (1), except that $\varepsilon_{it} = u_i + \lambda_t + v_{it}$, where u_i is the cross-sectional (or country) effect, λ_t is the time effect, and v_{it} is the idiosyncratic effect. As such, we can estimate the fixed effects model using a Least Squares Dummy Variable model (LSDV).

Random effect estimation allows the free coefficient to change – increase or decrease – to a base with a varying degree (a cross-sectional error term). In other words, the estimate assumes that $\varepsilon_{it} = \lambda_t + v_{it}$, where λ_t is the individual effect for the period, and is the idiosyncratic effect. The random effects model is estimated using Generalized Least Squares (GLS).

Differentiation between fixed effects and random effects models is usually done using Hausman test. The test evaluates the significance of an estimator (fixed effect) versus an alternative estimator (random effect).

The theory behind the analysis of time series in panel models is based on stationary time series. A series is stationary (in covariance) when the average, variance and auto-covariances of the series do not depend on time. In general, the time series are not stationary, being characterized by trends of evolution and heteroscedasticity, they become stationary only after a transformation. The statistical theory considers that non-stationary time series cannot be adequately handled. It is, therefore, important to check whether a series is stationary before using it in a regression. The method for testing the stationarity of a series is the unit root test. The most used tests are the Augmented Dickey-Fuller, Phillips-Perron etc.

As we mentioned, the panel data models consist of estimating regression equations. To use the regression, two basic conditions are necessary: (a) existence of a homogeneous dispersion, a condition called homoscedasticity, and (b) lack of autocorrelation. In our case, the homoscedasticity hypothesis was validated based on Breusch-Pagan Lagrange Multiplier test for random effect models and Wald test for fixed effect models. To identify the lack or presence of autocorrelation, we used the Durbin Watson test.

Results

To analyze the effect of increasing parental leave length (PLL), parental leave benefits (PLB), family or child allowance (FCA) and child day care (CDC) on the rate of early school leaving (ESL), we used a multiple linear regression model type within a panel. The equation expressing the relationship between the variables analysed has the following form:

$$ESL_{it} = \alpha + \beta_1 PLL_{it} + \beta_2 PLB_{it} + \beta_3 FCA_{it} + \beta_4 CDC_{it} + \varepsilon_{it} \qquad (2)$$

The descriptive statistics of variables included in the model is shown in *Table 1*.

Table 1. *Descriptive Statistics*

	ESL[1]	PLL[2]	PLB[3]	FCA[4]	CDC[5]
Mean	15.03030	34.74074	0.165576	0.903212	0.294062
Median	12.60000	24.00000	0.122067	0.777276	0.142117
Maximum	54.40000	102.0000	1.327234	2.631876	1.703324
Minimum	4.000000	6.000000	1.00E-07	0.101638	1.00E-06
Std. Dev.	9.464108	24.82023	0.205304	0.550778	0.369644
Skewness	1.884105	1.026124	1.894073	0.894357	1.883867
Kurtosis	6.767652	3.101423	8.518429	3.052221	6.689190
Jarque-Bera	351.3832	52.24732	554.4384	39.62753	344.0985
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	4464.000	10318.00	49.17603	268.2540	87.33633
Sum Sq. Dev.	26512.53	182349.0	12.47635	89.79365	40.44441
Observations	297	297	297	297	297

[1] ESL = early school leaving, [2] PLL = parental leave length, [3] PLB = parental leave benefit, [4] FCA = family and child allowance, [5] CDC = children day care

For a more accurate estimate of the parameters inserted in the model, we used all variables in the logarithm. The first aspect assessed in the analysis of the relationship between variables considered was stationarity. A data series is stationary if it follows a set of rules that do not change over time, and these rules statistically characterise the data sets considered. For stationarity testing, we used 4 statistical tests: the LLC test (Levin, Lin and Chu), the IPS test (Im, Pesaran and Shin), ADF (Augmented Dickey-Fuller) and PP (Phillips-Perron). All these tests have as null hypothesis the existence of a unit root. Although testing for unit root in time series is a common practice among researchers, testing for unit root in panels is more recent (Baltagi, 2008; Im, Pesaran & Shin, 2003; Levin, Lin & Chu, 2002; Choi, 2001).

Unit root tests are presented in *Table 2.*

Table 2. *Unit Root Test*

Unit Root Test		**LLC[a]**	**IPS[b]**	**ADF Fisher[b]**	**PP Fisher[a]**
Variable	Series in:	t*	W-stat	χ^2	χ^2
Log(ESL)	Levels	-2.76344***	-0.67032	70.3583*	58.8352
	First Diff.	-9.95104***	-3.61051***	101.251***	177.245***
Log(PLL)	Levels	-0.32719	-0.18577	1.90748	1.57456
	First Diff.	1.62719*	0.44300**	47.1631***	78.5226***
Log(PLB)	Levels	-1.62087*	0.52667	34.4821	45.1898
	First Diff.	-3.67168***	-2.21451**	61.7579**	115.506***
Log(FCA)	Levels	-3.78997***	-0.19575	51.3359	46.9494
	First Diff.	-7.53666***	-2.97494***	92.6683***	151.508***
Log(CDC)	Levels	0.30728	1.71176	28.9311	46.8320
	First Diff.	-3.78690***	-2.96809***	81.5123***	198.162***

(***), (**) and (*) denotes rejection of the unit root hypothesis at the 1%, 5% and10% levels, respectively.

[a] A kernel sum-of-covariances estimator with Bartlett weights was used. Band-width selection was made using Newey West method. [b] Lenght of lag was selected using Schwartz Information Criterion.

As seen, all variables are non-stationary in level. Use of variables in this form can lead to erroneous results caused by spurious regression. (Baltagi, 2008: 250). Therefore, we chose to use the model in first difference. In first difference, the basic form of the model became:

$$\Delta \log ESL_{it} = \alpha + \Delta \log \beta_1 PLL + \Delta \log \beta_2 PLB + \Delta \log \beta_3 FCA + \Delta \log \beta_4 CDC + \varepsilon_{it} \quad (3)$$

Based on this model, we made an estimate of its parameters both in fixed effect and in the random effect variant.

Using fixed effects estimation tests the null hypothesis that the free parameter is the same for the entire population (e.g., the same influence for all countries), and its rejection shows that early school leaving rate varies cross-sectionally. For fixed effects' estimation we used a regression with dummy variables (LSDV) for both the cross-sectional effect and for period fixed effects.

For the random effect model, we used the GLS estimator (Generalized Least Square). The results are shown in column 3 of *Table 3*.

According to Durbin Watson test value (see column 1 of *Table 3*) which is close to 2, we find that there is no autocorrelation in the residuals.

Table 3. *The Early School Leaving Rate Estimation*

Variables	Dependent: Δlog(ESL)		
	(1)	**(2)**	**(3)**
	LSDV	**LSDV**	**GLS**
Independent	Cross-section Period	Period	Period
Constant	-0.007401***	-0.007410***	-0.007380**
	(-26.69351)	(-38.62281)	(-2.085459)
Δlog(PLL)	-0.278577**	-0.251121**	-0.271108***
	(-2.115180)	(-2.518690)	(-3.235658)
Δlog(PLB)	0.001024	0.001841	0.000838
	(0.278877)	(0.555667)	(0.243323)
Δlog(FCA)	-0.122894**	-0.085603**	-0.073889*
	(-2.017774)	(-1.783308)	(-1.724395)
Δlog(CDC)	0.001025	-0.000115	-0.000615
	(0.262766)	(-0.039248)	(-0.159214)
Observations	270	270	270
Number of countries	27	27	27
R-squared	0.080572	0.136002	0.010355
F-test	1.725684**	1.928313**	1.693221**
DW-stat	2.139904	2.026432	2.022972
F-test $\mu_i = 0$	0.567526		
F-test $\lambda_t = 0$	2.241813**		
Hausman χ^2			6.551640*

(***), (**) and (*) are significant respectively at 1% 5% and 10%, t statistics in parentheses. For GLS it is used White standard errors & covariance (d.f. corrected).

To decide which of the three equations above best estimates the relationships between the variables analysed, we used the F-test and the Hausman test. Thus, using the F-test allowed us to eliminate the fixed effects variant for the section and to keep it only for the period. The results are shown in column 1 of Table 3. The Hausman test allowed us to decide whether a random effect model or a fixed effect model is more appropriate. The test considers as null hypothesis that both methods (fixed effects and random effects) are consistent and effective. The alternative hypothesis is that only fixed effect assessment is appropriate, and random effect assessment is not. In our case, the Hausman test value, as highlighted in column 3 of *Table 3*, indicated that the most appropriate estimate is that with fixed effect.

Discussions

In the studies made so far, the effect of the child raising leave and the financial comfort of the parents on school dropout rate has not been clearly demonstrated. Of course, there are many studies that show the effects produced by the duration and quality of the child raising leave the child and his evolution and on school performance, but the results and conclusions obtained are divided. Some studies have found links between maternity and the child's school results, others have identified links between maternal policies, or policies that regulate maternal child raising leave (both in financial terms and in terms of the length) and the child's development. The results of this study come to complete this researches, some of them being highlighted in the literature review chapter. It analyses in the same package both aspects related to the duration of the leave and the qualitative aspects related to its duration(financial support).

The methodology used was able to adequately filter data so it eliminates as many errors. The fixed effects model permitted the elimination of the dependent variable average at both cross-sectional and temporal level. The random effects model used was based on the assumption that the cross-sectional effect and the time effect are generated by independent random variables with zero mean and finite variance. The tests allowed us consider the fixed effect model (Least Squares Dummy variable method) as the most suitable for research purposes. The statistical validation offered the opportunity to quantify the existing relationships between the variable rate of early school leaving (ESL) as dependent variable and independent variables: duration of child raising leave (PLL), parental leave benefits (PLB), family or child allowance (FCA) and child day care (CDC).

In terms of the variables that characterise the economic environment in which the child develops, only family or child allowance proved to be a predictor of early school leaving. The parental leave benefit and child day care variables show no influence. Parental leave benefit is nothing but an instrument through which the state maintains parents' income when they are unable to earn wages, being forced instead to devote their time to raising a child. In other words, parental leave benefit does not change the financial situation of the parent on parental leave. The parent does not receive a surplus, but keeps incomes had before entering parental leave. Moreover, this income even diminishes, if we consider that, in general, in most EU countries the policy is to provide only a percentage of wages obtained by the parent and in a few cases it is to ensure 100% of previous earnings. Instead, family and child allowance directly represents a surplus for the family. The result indicates that this variable plays a role in shaping the child's school success. Increasing family and child allowance generates the decrease of the early school leaving rates, and vice versa: decreased family and child allowance increases the early school leaving rate.

Conclusions

This paper aimed to assess the impact of family policies on children's academic success. The statistical analysis performed revealed that some of the variables considered influence the early school leaving rates. Thus, parental leave length has been shown to influence, even if moderately, early school leaving. As shown in Table 3, the correlation is inverse. In other words, we can say that the longer parental leave is the more early school leaving rate decreases. The result demonstrates that constant, prolonged interaction with children has an effect on how they relate to school later. Parental leave and especially its length is not a simple economic element by which parents are provided with income and their workplaces are retained. Parental leave is an important element in ensuring a healthy development for children.

Based on those outlined above, it can be argued that the duration of parental leave and the level of family and child allowance should be elements to be taken into account in drawing up family policies. Even if the influence of the two variables is not very consistent, affecting early school leaving rates at a rate of 13% ($R^2 = 0.13$), their role cannot be overlooked. In fact, in some European countries (France, Spain) the trend is to extend parental leave, and in some (France, Germany) to increase the corresponding allowances. The research does not capture in its assessment the quality of time spent with the parent with his/her child, but points out that the quantitative size, duration of the time allocated, is important.

Results suggest that the school leaving rate can be improved through an appropriate policy of family and child allowances, and by optimising parental leave length.

References

Anderson, K. (2005). Relatedness and investment in children in South Africa. *Human Nature,* 16*(*1), 1-31.

Baltagi, B. H. (2008). *Econometric analysis of panel data*. Chichester: John Wiley & Sons.

Barber, B. K., & Buehler, C. (1996). Family cohesion and enmeshment: Different constructs, different effects. *Journal of Marriage and the Family*, 58(2), 433-441.

Berger, L. M., Hill, J., & Waldfogel, J. (2005). Maternity leave, early maternal employment and child health and development in the US. *The Economic Journal,* 115(501), 29-47.

Bessant, J., & Hil, R. (1998). Parenting on trial: State wards' and governments' accountability in Australia. *Journal of Criminal Justice*, 26(2), 145-157.

Boyle, S., Brock, A., Mace, J., Sibbons, M. (2003). *Reaching the Poor: The Costs of Sending Children to School: A six Country Comparative Study*. London: Department for International Development.

Brody, G. H., Flor, D. L., & Gibson, N. M. (1999). Linking Maternal Efficacy Beliefs, Developmental Goals, Parenting Practices, and Child Competence in Rural Single-Parent African American Families. *Child Development,* 70(5), 1197-1208.

Bronte-Tinkew, J., Moore, K. A., & Carrano, J. (2006). The father-child relationship, parenting styles, and adolescent risk behaviors in intact families. *Journal of Family Issues*, 27(6), 850-881.

Choi, I. (2001). Unit root tests for panel data. *Journal of international money and Finance*, 20(2), 249-272.

Cojocaru, D. (2011). Attending parenting education programmes in Romania. The case of the Holt Romania Iasi programme. *Revista de Cercetare si Interventie Sociala,* 32, 140-154.

Cojocaru, D., Cojocaru, S., & Ciuchi, O. M. (2011). Conditions for developing the national program for parent education in Romania. *Revista de Cercetare si Interventie Sociala,* 34, 144-158.

Cojocaru, S., & Cojocaru, D. (2011). Naturalistic evaluation of programs. Parents' voice in parent education programs. *Transylvanian Review of Administrative Sciences*, 34E, 49-62.

Confederation of Family Organisations in the European Union. (2009). *Early School Leavers and the Role of Parents.* http://coface-eu.org/en/upload/ 15_Capacity_ Building/Factsheet%20WG4%20ESL%20en.pdf

Ersado, L. (2005). Child labor and schooling decisions in urban and rural areas: Comparative evidence from Nepal, Peru, and Zimbabwe. *World Development, 33(*3) 455-480.

European Commission. (2010). *Europe 2020: A strategy for smart, sustainable and inclusive growth: Communication from the Commission*. Luxembourg: Publications Office.

European Council. (2011). Recommendation of 28 June 2011 on policies to reduce early school leaving. *Official Journal European Union Information and Notices C, 54,* 191, 1-6.

Gardner, R. (2003). *Supporting families: Child protection in the community*. Chichester: John Wiley.

Giddens, A. (2011). *The Third Way: The Renewal of Social Democracy*. Polity Press.

Great Britain. (2000). *Report of Policy Action Team 12: Young people*. London: Stationery Office.

Hermanns, J. (2012). *Parenting support in Europe. What it brings and what it can take away*. Presentation at the Think parents! Conference in The Hague, the Netherlands on 10-12 October 2012.

Hoeve, M., Dubas, J. S., Eichelsheim, V. I., Van Der Laan, P. H., Smeenk, W., & Gerris, J. R. (2009). The relationship between parenting and delinquency: A meta-analysis. *Journal of Abnormal Child Psychology*, *37*(6), 749-775.

Im, K. S., Pesaran, M. H. and Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of econometrics*, 115(1), 53-74.

Kamerman, S. B. (2000). *Parental leave policies: An essential ingredient in early childhood education and care policies*. Society for Research in Child Development.

Kurdek, L. A., Fine, M. A., & Sinclair, R. J. (1995). School adjustment in sixth graders: Parenting transitions, family climate, and peer norm effects. *Child Development*, 66(2), 430-445.

Langlois, J. H., & Downs, A. C. (1980). Mothers, fathers, and peers as socialization agents of sex-typed play behaviors in young children. *Child development*, 51(4), 1237-1247.

Lee, J. S., & Bowen, N. K. (2006). Parent involvement, cultural capital and the achievement gap among elementary school children. *American Educational Research Journal*, 43(2), 193-218.

Levin, A., Lin, C. F. and James Chu, C. S. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of econometrics*, 108(1), 1-24.

Liu, Q., & Skans, O. N. (2010). The duration of paid parental leave and children's scholastic performance. *The BE Journal of Economic Analysis & Policy*, 10(1), 1-33.

Maccoby, E. E. (1992). The role of parents in the socialization of children: An historical overview. *Developmental Psychology; Developmental Psychology*, 28(6), 1006.

Nevala, A.-M., Hawley, J., & GHK Consulting. (2011). *Reducing early school leaving in the EU: Study*. Brussels: European Parliament.

Okagaki, L., & Frensch, P. A. (1998). Parenting and children's school achievement: A multiethnic perspective. *American Educational Research Journal*, 35(1), 123-144.

Pasco, F. R. M., & Belsky, J. (2011). Infant-mother attachment and the growth of externalizing problems across the primary-school years. *Journal of Child Psychology and Psychiatry, and Allied Disciplines,* 52 (7), 782-791.

Reder, P., Duncan, S., & Lucey, C. (2003). *Studies in the assessment of parenting*. Hove England: Brunner-Routledge.

Ruhm, C. J. (2000). Parental leave and child health. *Journal of Health Economics*, 19(6), 931-960.

Rumberger, R. W., Ghatak, R., Poulos, G., Ritter, P. L., & Dornbusch, S. M. (1990). Family influences on dropout behavior in one California high school. *Sociology of education*, 63(4), 283-299.

Ryan, B.A. and Adams, G. R. (1999). How do families affect children's success in school? *Education Quarterly Review, 6, 30-43.*

Sallee, A.L., Lawson, H. A., & Briar-Lawson, K. (2001). *Innovative practices with vulnerable children and families*. Dubuque, IA: Eddie Bowers Pub.

Shapiro, D., & Tambashe, B.O. (2001). Gender, Poverty, Family Structure, and Investments in Children's Education in Kinshasa, Congo. *Economics of Education Review,* 20(4), 359-75.

Shek, D. T. (1997). The relation of family functioning to adolescent psychological well-being, school adjustment, and problem behavior. *The Journal of Genetic Psychology,* 158(4), 467-79.

Super, C. M., & Harkness, S. (1982). The development of affect in infancy and early childhood, in D. A. Wagner & H. W. Stevenson (Eds.), *Cultural perspectives on child development*, 1-19. San Francisco: Freeman.

Waldfogel, J. (2001). International policies toward parental leave and child care. *The Future of Children*, 11(1), 99-111.

Zimmerman, F. J. (2003). Cinderella Goes to School: The Effects of Child Fostering on School Enrollment in South Africa. *Journal of Human Resources,* 38(3), 557-90.