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Chagas Lopes, Margarida and Medeiros, João

Technical University of Lisbon, ISEG (School of economics and management),

2004

Online at <https://mpra.ub.uni-muenchen.de/26764/>  
MPRA Paper No. 26764, posted 17 Nov 2010 19:14 UTC

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- Margarida Chagas Lopes, Assistant Professor with Aggregation,  
ISEG, Technical University of Lisbon  
([mchagaslopes@mail.telepac.pt](mailto:mchagaslopes@mail.telepac.pt))
  
- João Cavaco Medeiros, MSc, ISEG, Technical University of Lisbon  
([cavacomedeiros@hotmail.com](mailto:cavacomedeiros@hotmail.com)  
or  
[cavacomedeiros@sapo.pt](mailto:cavacomedeiros@sapo.pt))

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Paper submitted to the ECER 2004 Conference

University of Crete, 22-24 September 2004

# *School Failure and Intergenerational “Human Capital” Transmission in Portugal*

## **Abstract**

A new education reform is about being passed into Law, in Portugal, the extension of compulsory education until the 12<sup>th</sup>. grade being one of the main goals. Given huge values school failure indicators (e.g., illiteracy rates, drop-outs, retention rates...) still exhibit for Portuguese education system, we keep large doubts on the effectiveness of such an aim. Moreover, education outcomes inertia between generations appears to be strong, in the light of some indirect indicators, although no recent specific research has been addressing such an issue. In this paper we therefore try to shed some light on the potential impact intergenerational school achievement would exert upon actual school failing and also control for possible endogeneity both with students’ own previous trajectory indicators and school effect. For that purpose, we rely on 2003 data relative to Lisbon Metropolitan Area four schools as case studies.

**Key Words:** School failure; father’s, mother’s education; students’ previous school trajectories; school effect; Portugal

**JEL:** I 21

## **Introduction**

The possible influence exerted by parents' education upon their offsprings educational success or failure has been for long a matter of concern both for policy makers, school managers, researchers on diverse social science branches, although not always a matter of concern for tax and fees payers.

Portuguese society is not an exception in this light. Actually, severely high illiteracy rates<sup>1</sup> parallel to some of the higher rates of drop-outs and early school-leaving among the EU, strongly emphasize concern on these issues. Now that the new proposal of education reform issued by Government is being reconsidered by the Parliament, after a Presidential veto, it seems advisable to carefully address most failure factors underlying Portuguese educational processes, educational inertia being undoubtedly one important one.

Moreover because, as it comes from most contributes, educational reforms don't exert effects but on the long run, but mostly on the reason they specially impart on the bottom and lower levels of the educational systems (Black, Devereux & Salvanes, 2003).

The new Decree-Law proposal intends, among other things, to extend compulsory education from the 9<sup>th</sup>. to the 12<sup>th</sup>. schooling year; but we strongly bear doubts on the effectiveness of that purpose and wonder about the expected social costs and burden to be imposed, most probably

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<sup>1</sup> Which are by now computed by OECD at about 1 million individuals, that is to say, some 10% of the Portuguese resident population...

upon low income classes: as most research is revealing, the higher the income distribution inequality among society, the lower the intergenerational education outcomes transmission (*ibidem*).

As a matter of fact, parents' education is but one of the multiple factors behind school failure and we will return to this point. But the actual reform is, indeed, the very first one for which a major issue is at stake: compulsory education deviation between parents' and children' cohorts will be set at a eight schooling years interval, on average. Actually, both the 1972 education reform (by Veiga Simão) and the 1986 one<sup>2</sup>, which successively extended compulsory education on to the 6<sup>th</sup>. and the 9<sup>th</sup>. schooling years, respectively, couldn't but recently begin imparting intergenerational education transmission ... provided that inertia wouldn't affect effective reforms implementation, which was not the case.

In this light, we are tempted to agree with Clemens (2004): when criticising some of the Millenium Development Goals (MDG), he stresses that intergenerational resilience and inertia in educational achievement actually do affect much more children' school performance that any specially targeted educational policy. That's why Clemens argues that

*"(...) a solution to low (il)literacy (...) does not depend solely on an expansion in educational facilities"* (Clemens, 2004:4)<sup>3</sup>.

Besides, educational system was strongly segmented according to students' socio-economic origin all along dictatorship, as one easily admits;

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<sup>2</sup> The first education reform after the 1974 democratic revolution.

<sup>3</sup> Our accordance with Clemens scepticism on those Goals derives mostly from the confrontation between actual Portuguese school achievement and some MDG targets, like the one on Universal Primary School by 2015 ...

and this segmentation was founding the separation between the two main educational tracks: the general and the vocational/professional ones.

Given that neither the 1986 reform did adequately overcome that segmentation nor the new reform proposal allows us to expect the Portuguese education system to, finally, achieve an effective equivalence between those tracks, vocational educational still remaining a “second best” among schooling choices alternatives, investigation on these features’ intergenerational transmission seems to impose.

## **Theoretical background**

As in many other education issues, school failure has for long been the subject for diverse social sciences research. But, perhaps, also one in which both economic and sociological approaches most interact, being in conflict sometimes. More recently, other disciplines, like psycho - sociology, for instance, also came into the ground and contributed to explain factors such as the ones behind differences in attitudes, expectations or motivations according to students’ social origin.

Likewise, the theoretical background is here far from unification, thereby contributing to set a very rich multidisciplinary approach<sup>4</sup>.

Departing from Becker’s 1964 and 1981 seminal contributes, economics of education merged for long into the human capital approaches the research on “father-to-son” education outcomes transmission. And despite the severe criticism these theories were successively being subject,

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<sup>4</sup> For a thorough review of the literature on this field, J. Cavaco Medeiros (2004, *op cit*).

temptation to recur has been great, be it under the form of meritocracy, signalling or credentialism, for instance. As if nowadays societies would indeed be meritocratic themselves, school would run in a socially neutral mood or children could (and should ...) be extracted from their families the sooner the better, as in Parsons's (1961), for instance.<sup>5</sup>

Some of the most recent approaches in this light are actually trying to save education from the burden of equalising opportunities... School for itself wouldn't be powerful enough to overcome inequalities arising all over nowadays societies; but isn't it the case that inequality becomes more tolerable once legitimised by education (Meuret, 2000) ? Deserving no further comments, this argument should be set against some new labour market outcomes as, namely, the rising unemployment rates most graduates are facing in societies like the Portuguese one, as if failing credentialism would be revenging from persistent meritocracy...

Conversely, after Marx's theory on social reproduction, alternative approaches were being developed, mostly on the grounds of education sociology: Althusser, to begin with, who encompassed "May '68" with its approach on school segmentation (Althusser & Balibar, 1968), Baudelot & Establet (1971), thereafter, for whom diverse school networks were resulting from social inequalities and would go on deepening their outcomes after the entry into the labour markets, or even Bowles & Gintis (1974), who clearly set how education would replicate the hierarchical division of labour.

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<sup>5</sup> An important critical review of most of these approaches can be found in Stoer, Cortesão & Correia (orgs.), (2001).

But, perhaps, the most meaningful and still holding contribute has been the one developed by Bourdieu & Passeron (1964, 1970). “Cultural capital” and “knowledge inheritance” had to become some of the most reutilised concepts, despite not being exempt from criticism; their main outcomes have to do with the enlightening of most non-economic features behind children’ school performance: in a socially stratified society, cultural capital accumulation begins inside the family and impacts upon intergenerational educational transmission, even though there would be latent differences in economic opportunities behind that capital accumulation processes (Cavaco Medeiros, 2004: 53).

Research on educational status transmission and school failure has for long been attracting Portuguese researchers’ concern. Just to mention a few more meaningful contributes, we will refer to Grácio & Miranda (1977) and São Pedro & Castanheira (1987), on school success and students’ social origin; Benavente (1976, 1978, 1980), with a specific insight on primary education; Carvalho (1995) on families thought and strategies concerning children education... Despite their relevance, the above studies are by now outdated or are they roughly approaching our research purposes or else they only focus on one dominant feature according to a specific disciplinary domain concern.

More recently, OECD (2000) presented other factors despite families’ socio-economic condition as being responsible for the strong educational failure most Portuguese children face nowadays: among them, school organisation, curricula design and teachers training, deserved a special mention. In what concerns educational status transmission, PISA emphasized the intervention of possible endogeneity bias arising from the fact that most factors directly associated with parents’ school achievement

– like family income – also intervene affecting children’s educational success.

With this caution in mind, we must refer, nevertheless, that recent research on education and child labour in Portugal has revealed the prevalence of a strong link between an higher educational achievement by parents and a weaker failure rate (measured throughout the number of grade repetitions) among their children (Chagas Lopes & Goulart, forthcoming)<sup>6</sup>. This result for Portuguese working children is in line with similar outcomes from Grootaert & Patrinos (1999), Strauss & Thomas (1995) or Emerson & Souza (2003), for instance, for other countries. But we must strongly recall that the abovementioned research only deals with a specific kind of children – surely, one of the most deprived ones ...- as they are under 15 or 16 years of age; and as we are fully aware, school failure and derived inequality tends to reinforce along further schooling trajectories, not to mention the transition into the labour market, moment since which inequality imparts even strongly. Own individual’s previous school trajectories and inherent possible failure indicators deserve, likewise, a thorough consideration in order to disentangle these effects from “father-to-son” educational inheritance.

This result, which is not neutral in what has to do with data nature and demandings, as we will refer further on, together with our previous considerations on education reform and perceived surrounding inertia, inspired us to develop the present research.

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<sup>6</sup> In this research we used data for 26.429 children and their families’ representatives, for 2001, from the Portuguese Data System on Child Labour (SIETI/MSST, 2003).

## Analytical framework

Before going further on, we must clarify some of the basic analytical tools with which we are working.

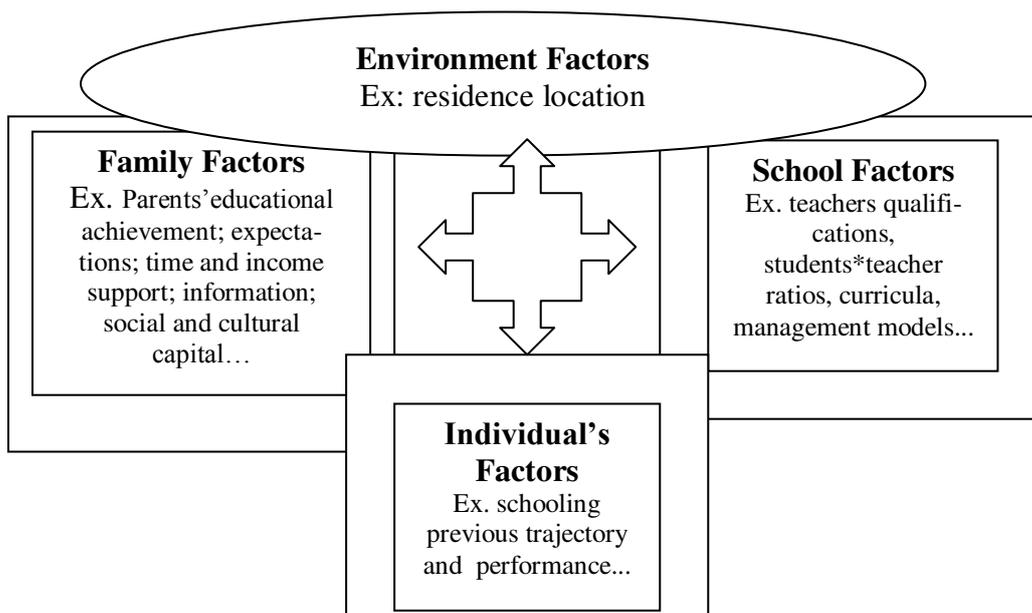
“Failure” is in itself a very imprecise concept. From a macroeconomic and societal viewpoint, school failure can be attributed diverse meanings: failing to equalise youngsters’ opportunities, curricula inertia and mismatch from actual living conditions, actors (professors, parents, managers...) resilience to innovation... being just some of them.

But when one is concerned with individuals’ school trajectories, as it is the case in this paper, school failure is supposed to mean another kind of (also multiple ...) features. For sake of easiness and according to data which we have had access and refers to upper secondary students and graduates<sup>7</sup>, we define school failure as one of the following possibilities: having had to repeat any scholar year or grade, having had to temporarily give up school, having been given evaluation scores lower than average for the corresponding age\*school year. Despite not being in itself a success or failure indicator, we also consider the intention to pursue or not further studies, after completing 12<sup>th</sup>, as a proxy for such an indicator.

Concerning the identification of the reasons for school failure, the approach is not, again, an easy task. Actually, the multivariate nature of the processes compels researchers to check for a diversity of failure reasons, provided that databases will be powerful enough. Duru-Bellat (2002) presents a large and useful scope of factors underlying school failure, which we try to schematize in the next Figure:

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<sup>7</sup> For data characterization please see next section.



One major issue here has to do with endogeneity: as a matter of fact, school quality and performance is all but independent from location, this latter is by no means irrelevant from families' average income, strategies and decision capacity, these latter ones in turn do affect school performance and policies towards different kind of students. Each individual's scholar trajectory will be, in sum, more or less affected by most of these interacting features; likewise, it will be necessary to control for most of them in order to adequately isolate the potential effects exerted by parents' educational achievement and general socio-economic status.

Nevertheless, most authors agree that going further on along educational trajectories one will notice a bias favourable to own previous school history, when comparing with parents' scholar inheritance, in the determination of success or failure in education<sup>8</sup>. This sum of reasons seems to advise the selection of an upper secondary scholar year (as the

<sup>8</sup> See, for instance, Hobcraft (2000), Duru-Bellat (2002), Cappellari (2004).

12<sup>th</sup>. one) as an adequate field for studying intergenerational education transmission.

As to the interactions the above Figure tries to depict, it will be enough to consider class arrangements to conclude on the influence exerted by “some” families – throughout parents’ representatives, for example – upon certain school’s management procedures; and thereby notice the outcomes in terms of social inequality reinforcement (Duru-Bellat, 2002, *op cit*). In this light, it deserves to be mentioned that in Portugal relative educational disadvantage is comfortably under OECD average, despite the huge figures for absolute inequality we still find (UNICEF, 2002).

Despite not being in itself a success or failure indicator, choosing between general and vocational/professional tracks actually reflects as well social origin and /or parents’ education, attitudes and expectations towards children’ scholar pathways: as a matter of fact, and still quite irrespectively of labour market forecasted opportunities, orientation towards professional and vocational tracks remains as a “2<sup>nd</sup> best” choice, frequently being the outcome of a previous failure along the general education programmes. In this light, Cappellari (2004) provides a quite interesting insight into the Italian education reform outcomes, from which we can learn important lessons given the similarity with the Portuguese situation in what concerns educational tracks valorisation and intergenerational education inertia.

Let us just say a word on the ways under which “father-to-son” educational transmission can operate. Here, diversity appears as the most striking feature, as well. Depending on data codification, endogeneity

measurement and control, ability to tackle with unobserved variables<sup>9</sup> and child rearing talent and endowments, research outcomes range from asserting both parents' education influence upon all/some of the children' educational achievement, to denying any influence at all be it from one or both parents' ... A meaningful example of the sensitiveness of this kind of research can be found in Plug (2002).

Most models on intergenerational education transmission assume a probit specification, which general linear form can be written as:

$$ED^c = \beta^m ED^m + \beta^f ED^f + \beta^n X^n + \alpha ER + \varepsilon$$

in which  $ED^c$  stands for children's education level,  $ED^m$  and  $ED^f$  corresponding mothers' and fathers' school achievement,  $X$  a vector of children's own characteristics (such as age, sex, any indicators of previous success or failure incidents...),  $ER$  a dummy variable to control for the eventual intervention of an educational reform and  $\varepsilon$  an error term assumed to be distributed standard normally, as usual<sup>10</sup>.

It becomes easy to realize how powerful has the underlying database to be in order to encompass a number of cases high enough to guarantee robustness in adjustments with so many variables at stake. Unfortunately, this is not the case most of times and we must face data restrictions, as we will describe in the coming section.

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<sup>9</sup> Such as inherited abilities and assortative mating strategies, for instance.

<sup>10</sup> See, for instance, Black, Devereux & Salvanes (2003), Cappellari (2004), Chevalier (2004).

## Data

The most adequate datasets to allow for life cycle and intergenerational studies are, undoubtedly, individual longitudinal surveys, which are not provided by the Portuguese statistical system as yet.<sup>11</sup> So, we have to rely on specially addressed surveys – not necessarily representative, by force – and on case studies data, whenever trying to develop research in these areas.

In this paper our analysis is based upon the results obtained from a specific statistical operation launched in the framework of Cavaco Medeiros's MSc Dissertation, which we have already referred to.

For that purpose, four specific individual enquiries have been designed and addressed to four Metropolitan Lisbon Area secondary schools during April-June 2003, three of them addressed to students, another one to their teachers. Besides these surveys, to which we will come further on, and in order to obtain most in-depth qualitative data, there were also been made semi-directive interviews with parents associations representatives, local government officers, school directors and employers associations; much of this qualitative data became quite useful in cross-controlling some of the enquiries results, as well.

Throughout students surveys 756 individuals have been enquired; from these, 320 were attending 12th. (upper secondary last degree) at the moment of the enquiry (2002/2003 scholar year), 126 had completed this same degree two years before (2000/2001) and the remaining 310 were

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<sup>11</sup> Despite some sectoral surveys having been developed, such as the ones on the transition from education into the labour market (OEVA) and student' and graduates' trajectories follow up (OPES & ODES), they just display segmented, time-discrete and panel data.

recurrent students by the time, in each one of the four schools already mentioned.

By applying this methodology, we have then been able to double control for the economic cycle and long run scholar opportunities. To begin with, because of using the two cohorts from the same generation students, though quite meaningfully differentiated by changing labour market opportunities – and, presumably, by individuals’ expectations, strategies and motivations...- given a same average school opportunities level for their parents’ generation. Secondly, by considering “second opportunity” students (recurrent students)<sup>12</sup>, we allowed for a control by a much broader school mix trajectories, from the age, labour market experience, previous generation indicators and each individual’s fore school histories perspectives.

A first insight into the students data allowed us to confirm some well known results:

- girls are more frequent than boys in the attendance/finishing of the upper secondary, even when we consider recurrent students;
- the great majority of 12<sup>th</sup>. students are under 20 years, but recurrent students are older in average, as expected: some 69,4% of the latter were more than 20 years, according to our data;
- general education tracks attract by and large much more students than vocational/technical ones, even when considering “second opportunity” students, somewhat between 5:1 and 3:1 (the latter for recurrent students) being the corresponding ratios;

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<sup>12</sup> Despite having suffered from so much criticism, this denomination still applies in the new education law proposal and refers to individuals who returned to basic or secondary school after a previous give up episode which would have been most of the times accompanied by a transition into the labour market.

- most 12<sup>th</sup>. students intend to pursue further studies, the large majority of them in public universities, though 2002/2003 students exhibit a slightly smaller frequency relatively to this intention: this is perhaps the result of the worsening in family economic conditions when comparing with the situation two years before;

- this last possibility may quite well be also associated to a meaningful fall in the frequencies relative to the second more important factor indicated as a reason for the graduation field choice - the probability of finding a job: from some 25,4% in 2000/2001 to around 19% in 2003/2004, in this surveyed sample.

In the light of the present research purposes, two main fields of concern had to do with indicators for each individual's previous school achievement and their parents' school achievement data, for the reasons we have been discussing.

As to previous scholar trajectories, we could count on data on pre-primary attendance, repetitions, class missing, temporary interruptions, temporary abandon, changing school before/during upper secondary and classification scores by scholar cycle. But as to the latter variable, we have decided not to take it into consideration on the grounds of control difficulties, namely when comparing ordinary with recurrent students.

According to our data for these case studies, and opposite to most research outcomes, a strong increase in pre-primary education attendance between the two 12<sup>th</sup>. cohorts doesn't seem to have been in parallel with either reducing class missing or repetition prevention: these latter already huge percentages became even higher for the 2002/2003 students *ceteris paribus*. At the meanwhile, other factors besides school changing have to

be sought in order to deepen our understanding on “second opportunity” schooling, which association with interruption episodes reached a peak, as it was supposed. Nevertheless, a further research on these matters will have to count on a much more reliable database than the one with which we had to work.

Relatively to parents’ school achievement indicators, we obtained data for the following variables: mothers’ and fathers’ formal education level, labour market status and occupational grade. For most students (ranging from 77,5% to 84,4%, the latter for recurrent students), fathers’ education level was below 12<sup>th</sup>. or the corresponding upper education final year, while for mothers the corresponding values varied between some 84% and 89,7%, respectively. Considering graduation rates, mothers ranked better than fathers as well, except for recurrent students. Nevertheless, despite this better scholar performance, mothers appear to suffer much more than fathers from unemployment and unemployment increase, as it came clear when confronting the two 12<sup>th</sup>. cohorts.

Before we proceed with statistical analysis, we must refer to the usually known as “school effect”. Actually, there appeared to be considerable differences among the four schools we are considering in so relevant fields such as family socio-economic origin, cultural status, values and motivation towards school. Therefore, strong differences also arise among schools in fields such as parents’ association dynamics, expectation towards children/own future outcomes, perceived school abandon, nature and degree of parents’ satisfaction with school facilities, organisation and

curricula, for instance.<sup>13</sup> Accordingly, control for “school effect” had to be taken into consideration as well.

In the statistical procedures we will describe in the following section, we then tried to access all these factors and effects.

### **Statistical analysis**

To analyse data we have applied both contingency and discriminant statistical methodologies, because of their adequacy to the kind of data we have obtained. Actually, we are in presence of a great diversity of information: some of the variables assume ordinal values, some other are numerical ones; most variables are discrete (binary ones, most times), few of them continuous...Indeed, this is the outcome of our purpose to utilise the maximum information we have got, even though on the cost of less accurate results; to control for this last risk, we then had to make use of statistical procedures which would allow for a broader scope of adjustment statistical tests, as the above mentioned.

In a first moment, we developed analysis for all the four schools jointly considered.

So, to have a first insight on the most meaningful data associations, we systematically began by exploring information on the basis of contingency analysis; therefore, we were able to identify most relevant articulation relations and pursue thereafter to the investigation on

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<sup>13</sup> Most data on these features came clearly from the interviews with both school directors and parents' associations representatives.

joint/multiple association relationships. In the light of our research goals, we arrived to some quite meaningful adjustments, we believe, which description we will next consider.

The huge frequencies which both grade repetition and frequent class missing variables exhibited proved to be quite well in contingency with mother's but not father's school achievement:

**Contingency Analysis: Parents' schooling and school failure**

	Grade repetition	Class missing
Father's formal schooling	$X^2$ (n.s.) $\geq 0,10$	$\chi^2$ (n.s.) $\geq 0,10$
Mother's formal schooling	$\chi^2$ (n.s.) = 0,04 C. coefficient = 0,239	$\chi^2$ (n.s.) = 0,05 C. coefficient = 0,233

Note:  $\chi^2$  (n.s.) ..... Qui-square significance level (acceptance level lower or equal to 0,05, except when explicitly set )

C. coefficient .....Contingency coefficient.

We then tried to get a deeper insight on father's and mother's school achievement influence. Given that the two other school failure variables – school abandon and interruption - appeared to have been meaningfulness except for recurrent students, we then explored other potential areas of influence: present students' extra-school qualification and training, civic/associative participation, hobbies and leisure activities. We then found that both father's and mother's school level proved to be quite in contingency with the students' hobbies and leisure activities and with

volunteer and associative participation; but as to qualification and vocational extra-school activities (learning foreign languages, in particularly) only mother's revealed to be in close association<sup>14</sup>.

For recurrent students, we obtained very strong contingency associations between school track choice and interruptions, a result which will perhaps indicate that probabilities of returning to school on a "second chance" basis would be quite contingent on the nature and field of studies. Also age and economic constraints (having had to search for a paid job in order to help family's income) appear to be in a strong association with most of these students indicators. But we will come to these students later, because of the analysis of "school effect".

Ordinary students, and specially the 2000/2001 cohort ones, exhibited very high contingency coefficient scores for the association between school track choice and variables such as class repetition (0,308), higher further employment probability expectations (0,270) and intention to pursue further studies after finishing 12<sup>th</sup> (0,216). These two latter outcomes clearly advised the adjustment of a discriminant analysis in order to get a deeper insight in what was appearing to be two quite different kinds of students.

The very high frequency values for frequent class missing we obtained for both cohorts ordinary students, led us try to further investigate this feature with the help of discriminant analysis. One statistically meaningful outcome (83,1% // 50,0% cases correctly classified) we obtained was the following:

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<sup>14</sup> For these adjustments and corresponding statistical scores see Appendix.

### **Discriminant Analysis: School track choice by class missing**

	Canonical correlation	Wilks' Lambda	$\chi^2$ (n.s.)
Discriminant function F[General Vocat. Education]	0,215	0,954	0,063

So, despite Qui-square significance level (higher than 0,05) and the modest value for canonical correlation, Wilks' Lambda unquestionable significant level allows us to admit there will be a strong discriminating effect exerted by class missing (and inherent failure processes...) upon the differentiation between "general education" and "vocational" students.

Going further on into the reasons for frequent class missing, we then studied the corresponding modalities absolute values for the standardized canonical discriminant coefficients (s.c.d.c.): "lack of motivation" (0,749) appeared systematically to be the most powerful discriminating variable, followed by "bad health condition" (0,613) and "need to help in family business" (0,449). The former of these reasons magnitude gave us little room for doubt on the need to also check for "school effect" ...

Let us consider now the statistically most relevant adjustments we have obtained, all four schools taken together as yet.

One of these adjustments targeted to discriminate between students who had/had not attended (not yet compulsory) pre-primary schooling,

proposing as discriminating variables students' age, gender and both parents' school level (by the time of the interview).

**Discriminant Analysis: Pre-primary attendance by age, gender and parents' schooling**

	Canonical correlation	Wilks' Lambda	$\chi^2$ (n.s.)	Cases correctly classified
Discriminant function F [ Attended /didn't attend ]	0,286	0,918	0,042	64,2 %

Given the statistical test scores and once selected the adjustment, we obtained the following s.c.d.c. scores (absolute value): 0,861, for father's school level, 0,442, for student gender, 0,069 for her/his age and 0,059 for mother's school level...So, the two opposite outcomes - having/having not attended pre-primary education - appear to become quite well differentiated by parent's but not mother's actual education level, besides students' own gender and age.

An even better outcome did we obtain by discriminating between the modalities "intending / not intending to pursue further studies" and proposing as discrimination variables students' age and gender and their father's, mother's actual school level, occupational grade and labour market status

**Discriminant Analysis: Further studies pursuing intention by age, gender and parents' schooling, occupational grade and labour market status**

	Canonical correlation	Wilks' Lambda	$\chi^2$ (n.s.)	Cases correctly classified
Discriminant function F [ Intending /don't intend ]	0,388	0,849	0,015	92,9 % // 50%

Coming now to analyse s.c.d.c. absolute scores, the discriminating variables influence ranks from (0,801) and (0,720), for mother's school level and occupational grade, respectively, students' own age (0,564) coming next and only after that father's both labour market status (0,460) and school level (0,304).

So, and given the two latter results, could it be that in a life cycle first moment father's "human capital" would be prevailing upon their offsprings school (pre-primary) attendance, only in a further path (by teenage ?) that possible influence coming to be outweighed by mother's in such fields as extra-school training? Or will there be scope for a certain sort of "specialisation", or functional division, between father's and mother's "human capital" areas of influence? And, if so, which ones?

But we must not forget, as well, that school achievement is mostly the outcome of dynamics along individual (also parents...) life cycles, and so both actual mother's and father's school level by the moment of their children enquiry could probably be different from the corresponding ones when those same children began (or didn't) attending pre-primary school. And, likewise, there seems to be scope for further hypothesizing on the probability of intervening some studies pursuing \* labour market insertion crossed strategies between fathers and mothers by the time of their children early childhood.

But it may also be that attending pre-primary - not compulsory and often quite expensive - education should be most contingent upon family's average income by that time, a feature for which father's school level would act as a very robust proxy, given the well known higher difficulties for mothers to enter labour market and/or to reach fathers' pay level.

This last argument is the one we consider to be the most plausible given the Portuguese socio-economic framework and its evolution along the last two or three decades. Notwithstanding, in the scope of the present research and given our database limitations, we can but raise hypotheses of the kind and emphatically suggest the need for thorough investigation on these features.

Finally, we shall come to the "school effect" analysis. Despite having tried several adjustments for the three kinds of students, only for recurrent ones did we get statistically significant results.

Because of the small dimension of this sub-sample, adjustment degrees of freedom were in general quite low, specially for the first

situation between which modalities we intended to discriminate: from who the initiative of returning to school did come – the student her/himself, her/his employer or both. Despite data constraints, a huge number must be stressed – for over 97% of the cases, the decision came from the student’s own motivation, according to their own words.

It is on recurrent students’ labour market status (by the time of the enquiry) that “school effect”, jointly with school track and students’ gender and age, seems to have most imparted, as we are describing in the next table:

**Discriminant Analyses relative to four labour market status indicators by age, gender, school track and specific school**

	Canonical correlation	Wilks’ Lambda	$\chi^2$ (n.s.)	Cases correctly classified
Labour market status= F[employed.../unemployed]	0,310	0,855	0,001	69,9 % // 25,0%
Employment organisation Nature = F [firm,..., gover.]	0,318	0,821	0,004	58,9% // 25,0%
Firm Dimension = F [1,...4 ]	0,471	0,736	0,021	45,8% // 25,0%
Occupational grade = F [1,...5]	0,382	0,820	0,001	49,1% // 20,0%

Nevertheless, s.c.d.c. specific school values never arrive to overcome the other variables' - age, gender and school track – scores and just for occupational grade and labour market status do they come closer to the other ones. Be it modest, we think it wouldn't be advisable to simply discard the “school effect” influence, nevertheless: as we are full aware and just mentioned before, most inequality accumulates along students' life cycles and reveals itself at the outmost when they join (or try to...) the labour market. As a matter of fact, encompassed with school choice, if so, and with differences in parents' opportunity and capacity to influence their children' school strategies and management, there is much endogeneity with “cultural capital”; and the Portuguese situation is quite rich in examples which clearly reveal how strong is the impact from this kind of resource upon the youngsters' opportunities to be succeeded in further employment and professional careers.

## **Conclusions**

Despite the limitations of data with which we have had to work, we think some meaningful outcomes can be derived.

Relatively to both grade repetition and frequent school missing, the most meaningful school failure direct indicators we have studied, they appeared to be quite contingent on mother's (but not father's) school achievement. Father's and mother's school outcomes also appeared to have imparted mostly on sons'/daughters' extra-school qualification and training programmes (only mother's), civic and associative participation and hobbies and leisure activities (both father's and mother's).

Considering students' life cycles, intergenerational "human capital" transmission also appeared to be effective in such moments as children's pre-primary attendance (mostly father's) and the actual intention students reveal to go on into further studies, or not (mostly mother's).

This outcomes, relative to differences between father's and mother's processes, moments and areas of influence as to their children school trajectories, led us to question the possible existence of both parents' crossed strategies towards labour market and/or further studying; strategies which would actually be subject to dynamics and change all over children's school trajectories, mostly on account of a trade-off between income constraints and family care and support needs.

Students' own school success or failure along with past trajectories, and most particularly grade repetition and frequent class missing, (together with further employment /entering the University expectations) also revealed to have important impacts upon school track (general/vocational) choices, even when controlling for father's and mother's education levels.

Frequent class missing, a resilient and strong school failure indicator, has proven to be difficult to eradicate and affects all education levels in Portugal; this fact led us to try to get a deeper insight on the basis of our data. The outcomes suggest that "lack of motivation" goes on being referred as the main reason for class missing, together with some much more modest frequencies for "bad health condition" and "need to help in family business", results which fully agree with the ones we have obtained for the research on child labour.

Recurrency, seemed to be mostly associated with school track and further field of study choices, given previous own failure stories and/or family's income restrictions.

In the light of our data, school effect only proved to be significant for these last students, the ones in “second chance” education. And it seems to be specially imparting upon the students' own decision to come back into school and, mostly, upon their labour market status indicators, together with school track, gender and age. Behind this outcomes, there would be, perhaps, the powerful effect which the association between schooling and labour market experience actually exerts in improving employment opportunities and status; but we must not forget, as well, that “cultural” and “social” capital also affect both school outcomes and labour market status, their impact upon the corresponding compound being most certainly not negligible in nowadays Portuguese society.

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## Appendix

I) Discriminant Analysis: Attending Pre-primary Education by Students' Gender, Age & Father's/ Mother's School Level

### Wilks' Lambda

Test of Functions	Wilks' Lambda	Chi-square	df	Sig.
1	0,918	9,922	4	0,042

### Classification Results

	Attending Pre-primary	Predicted Group Membership (Y)	Predicted Group Membership (N)	TOTAL
Original Count	YES	14	31	45
	NO	12	63	75
	Ungr. Cases	0	1	1
%	YES	31,1	68,9	100,0
	NO	16,0	84,0	100,0
	Ungr. Cases	0,0	100,0	100,0

**64,2% of original grouped cases correctly classified**

### Standardized Canonical Discriminant Functions Coefficients

	Function 1
Age	-0,069
Sex	-0,442
Father's Sch. Level	0,861
Mother's Sch. Level	0,059

II) Discriminant Analysis: Intending to Pursue Further Studying by Students' Gender, Age & Father's/ Mother's School Level, Occupational Grade and Labour Market Status

**Wilks' Lambda**

Test of Functions	Wilks' Lambda	Chi-square	df	Sig.
1	0,849	17,421	7	0,015

**Classification Results**

	Intending to pursue further studying	Predicted Group Membership (Y)	Predicted Group Membership (N)	TOTAL
Original Count	YES	103	0	103
	NO	8	1	9
	Ungr. Cases	1	0	1
%	YES	100,0	0,0	100,0
	NO	88,9	11,1	100,0
	Ungr. Cases	0,0	0,0	100,0

**92,9% of original grouped cases correctly classified**

**Standardized Canonical Discriminant Functions Coefficients**

	Function 1
Age	-0,564
Sex	0,232
Father's Sch. Level	0,304
Mother's Sch. Level	0,801
Mother's Occ. Grade	-0,720
Father L.M. Status	0,460
Mother L.M. Status	-0,289

III) Discriminant Analysis: Civic Participation...by School Effect, Students' Gender, Age & Father's / Mother's School Level and Occupational Grade

**Wilks' Lambda**

Test of Functions	Wilks' Lambda	Chi-square	df	Sig.
1 through 3	0,838	34,431	21	0,033
2 through 3	0,940	12,112	12	0,437
3	0,985	3,013	5	0,698

**Classification Results**

	Modalities of Civic &.....Participation	Predicted Group Membership				TOTAL
		1	(2	3	4)	
Original Count	1	170				171
	2	25				25
	3	2				4
	4	1				1
	Ungr. Cases	88				88
%	1	99,4				100,0
	2	100,0				100,0
	3	50,0				100,0
	4	100,0				100,0
	Ungr. Cases	100,0				100,0

**85,6% of original grouped cases correctly classified**

**Standardized Canonical Discriminant Functions Coefficients**

Function 1
-0,169
0,506
0,674
0,443
0,294
-0,426
-0,584

