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Education: The Uruguayan Case in the Latin-American Context

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INTRODUCTION

While widely recognised as important, even basic skills are not as present in the labour force as might be thought, as suggested by, for instance, OECD (1995), Metha (2000), and McIntosh and Vignoles (2001). In particular Carlson's (2002) analysis for Latin America concludes that one of the main problems in the region has been the shortage of youngsters educated and properly qualified to enter the labour market. A description focused on strengths and weaknesses of Latin American education and in particular of Uruguayan education follows.

1: The Latin-American context

In industrial countries primary and secondary education have complete universal coverage, and thus the present effort is oriented towards facilitating student transition from secondary education to further education or to the labour market (Rumberger and Lamb, 2003). In Latin America almost all countries have successfully reached universal coverage at primary level, and are currently engaged in trying to reach the goal of universal good quality secondary education (12 years of schooling), as reported by Tedesco and Lopez (2002).

This is important according to research by Cepal (1997) on Latin America, which shows that there is a strong relationship between educational capital and welfare. More precisely, the research found that currently 12 years of schooling is the minimum that enables those who enter into the labour market to obtain a satisfactory level of welfare, i.e. above the poverty line. The empirical evidence shows that there is a probability of more than 80% that a person with this educational capital would obtain an income high enough to avoid poverty. It also shows that while a difference of two or three years below this threshold does not necessarily have much effect on income, it does affect income when one or more years are accumulated above the threshold.

However, as Carlson (2002) highlights, there is a widening gap in human capital accumulation between Latin America and developed countries. This is made apparent by comparing the evolution of the enrolment rates in Latin America and the OECD countries. Between 1985 and 1997 secondary education enrolment rates increased by 12 and about 16

percentage points in Latin America and the OECD respectively, while in tertiary education the increase is less than 4 percentage points and about 22 percentage points respectively.

Other differences can also be identified. For both developed and Latin American countries universal coverage at primary level is already a reality. However closer examination, as in Tedesco and Lopez (2002), reveals a significant difference in *gross* primary enrolment rates. The gross enrolment rate is defined as the ratio between students enrolled and the population age group for that level (UNESCO), and can exceed 100% if there are students repeating a year, i.e. they are over-aged. This rate has been stable for developed countries during the last three decades at around 100%, but in Latin America the rates have been increasing in the same period to values above 100%, reflecting the incidence of higher repetition rates in Latin American countries. Tedesco and Lopez suggest that the next step for these countries, once universal primary coverage has been attained, is to improve the quality and internal efficiency of provision.

Tedesco and Lopez (2002) also compare the state of secondary education in developed countries and Latin America. As noted above, developed countries have achieved universal coverage of secondary education, but in Latin American countries still a third of the population age-ground is not enrolled. By 2000, Latin America had reached levels of coverage similar to that of the industrial countries 30 years before. Carlson (2002) also highlights the disparities in the ability of the education system to retain students beyond basic education: while almost 100% of youngsters enrol in Upper Secondary School in the OECD, only one half do so in Latin America.

Moreover, the region is behind the developed world not only in enrolment rates but also in completion rates¹, as noted by Shiefelbein et al. (1998). In addition, the difference with the developed world is not only in quantity but also in the quality of education, as noted by Carnoy and de Moura (1999). They report the results of an international comparison of score tests, where children from Latin America show systematically poorer performance than their peers in industrial countries.

¹ Completion rates are defined as the percentage of students initially enrolled in a level that complete the level (in time or not), i.e. 100% minus percentage of dropouts occurred all along the level.

Analyses of the Latin American situation by Birdsall et al. (1998), Lopez et al. (1998), Nelson (1999) and Paus (2003) strongly criticise the educational policies in the region. In general, these authors suggest that more money is not the only thing needed to produce higher levels of educational capital in the population in Latin American countries: allocation (across gender, region, socio-economic groups, etc.) and efficiency matters, and thus far-reaching reforms are required first.

In particular, Birdsall et al. (1998) point out that it is more than a problem of the level of spending on education, since that is comparable to countries with similar income. Rather, it is that the sector has failed to use effectively its resources and deliver an equitable provision (reaching all, including the poor). This, they suggest, explains the low and unequal accumulation of human capital in the region. The Paus (2003) study suggests that failing to develop the human capital base has been a major drawback to the development of the region. Lopez et al. (1998) also stress the importance of quality and equity in the provision of education in obtaining positive economic effects.

Reforms have been indeed implemented in Latin America. However, Shiefelbein et al. (1998) provide a very critical view of this process, asserting that most of the reforms that have been made disregard the cost-effectiveness criterion. They argue, based on a survey of experts' opinions, that some expensive and ineffective measures have been taken (e.g. increasing teachers' salaries), while some cheaper and effective ones have not been favoured by reformers (e.g. encouraging parents to read to their children).

In the particular case of Uruguay some improvements in the performance of the education system have been achieved; however, there is still a long way to go. The enrolment rate has increased notably over time (by more than the growth of population) at all levels, increasing the overall coverage. One of the areas where progress has been noteworthy is in increasing the coverage of primary education, where the current intake rate has reached almost 100% with a completion rate above 90%, both rates being a significant improvement on a decade ago. Another important achievement is the steady increase in the educational capital of the population, and hence of the labour force, as the average years of schooling have been increasing steadily over recent decades.

Abatement of the existing high repetition and dropout rates is the area where progress has been modest, even in comparison with other middle-income Latin American countries. A general problem at all stages of the public education system is the high repetition rates that extend the average length of time required to complete each level, so increasing the cost of providing the service and the opportunity cost for students. Also, completion rates are poor, especially in secondary and higher education. Both factors adversely affect the efficiency of the system, making each student that successfully completes the level very costly.

In Uruguay, analogously to developed countries, educational achievements have shown to have direct effects on workers' wages and on the income distribution. For example, in 2002 the average wage of those workers who had reached the first stage of higher education, i.e. upper secondary education or 10-12 years of schooling, was more than 80% higher than that for workers with only incomplete primary education (INE, 2002). Comparisons between university graduates and the latter group of workers show an even wider gap, with wages for graduates being more than 220% higher (INE, 2002). It is evident that there are substantial skill premia associated with education, i.e. education directly affects an individual's position in the income distribution.

However, the situation of the education system in Uruguay shows worrying features. At primary education, in 2002 tests 33.7% of students failed languages and 51.7% failed mathematics (World Bank 2005a), leading to high rates of repetition (as high as 20% for the first year). Besides this, almost 12% of students dropout after primary school, for those who enter secondary school repetition is near 20% and 26% percent dropout without completing it.

Other important related aspect is that inequality in Uruguay has increased during the last decade and a half and in 2003 about 30% of the population lives in poverty, and in this population children are overrepresented, where 52% of under 15s live in poverty (World Bank, 2005b). For this reasons at primary and secondary education about a half of students come from desfavourable backgrounds. Performance indicators for this group of students are significantly worse: at primary education they are 3 times more likely to repeat than students from favourable background (ANEP 2003) and 10 times more likely to drop after completing primary school (MEMFOD 2004). At secondary education tests in 1999 more

than 80% of students of favourable background obtained high marks in maths and language but the percentage was only a half or less for students from poor socioeconomic background (MEMFOD 2003). This adverse performance at early stages also leads to inequity in the provision at University level (which is free), where only 15% of students come from low socio economic background.

Finally, resources applied to education in Uruguay are low (3.6% of GDP) not only in comparison with industrial countries (5.3% average) but also in comparison with other Latin American countries (4.5% average). This fact coupled with the worrying diagnosis of the sector led to several reforms, where the so-called Plan 96 in secondary education was one of the most important. This reform involved both increased infrastructure, equipment and teaching hours, as well as a change in the pedagogical approach (integration rather than fragmentation of knowledge). The direct effects of an educational reform in secondary education are still being evaluated but it seemed to lead to substantial improvement in the systemic performance: dropouts and repetition rates were reduced about 20 %, rates of completion in time rose 23% (MEMFOD 1999). It is also significant that the reform led to an improvement in the performance (in terms of repetition and dropout rates) of students of poor socio economic backgrounds which is now near the performance of students of favourable socio economic background in the previous plan. However, what are the overall benefits of this improvement or more generally which is the return of the investment in this reform is only vaguely understood, which may hinder future investment in the sector.

It will be useful to present an overall diagnosis of the situation of the public educational system in Uruguay, which follows.

2: Public education in Uruguay

Torello and Casacuberta (1997) analyse the efficiency of each educational sub-system by assessing the effects on costs caused by dropouts and repetition. They estimate the gap between the *optimal cost* and the *actual cost*. The *optimal cost* is the expenditure per student for the formal duration of the level, computed on total enrolment (optimally, i.e. were there no dropouts and repetition, all students would complete the level in time). The *actual cost* is the expenditure per student actually completing the level in time.

Using data for 1991 (or the nearest available) Torello and Casacuberta compare the ratio actual/optimal cost for Primary, Lower Secondary and University. Primary education is the subsystem with the lowest losses through inefficiency (the actual cost is 17% higher than the optimal cost). Lower Secondary follows in the ranking (with 43%) and the worst situation is found at University level, where divergences between optimal and actual costs are as high as 221%.

The Uruguayan institute MEMFOD (2004) developed a different approach to evaluate the performance of the education system using two concepts: internal and external efficiency. Internal efficiency is associated with the functioning of the system (or a subsystem or a group of subsystems) as a closed unit. It is related to the ability to retain students within the system, the percentage of the students entering the level that successfully finishes it (completion rates), and the average time taken to complete the level (for those who do so) in relation to the scheduled duration. On the other hand, external efficiency is associated with the way in which the system interacts with the outside world. Here it is relevant to know how the system is working in terms of recruiting (percentage of coverage of the school-aged population), and particularly in terms of the labour market's expectations and/or requirements in respect of the quality and quantities of the outflow.

Enrolment, repetition and dropout rates can be used to give measures of inefficiencies, as analysed by MEMFOD. The relationship between potential demand and enrolment is defined as the *actual enrolment rate*, and in ideal conditions is 100% (universal coverage). Similarly, the *actual completion rate* relates those who complete the level to those initially enrolled. Another measure to assess efficiency refers to the timing of students' performance. Optimally they will finish as planned in the official schedule (*completion in time*), but repetition causes delays in completion.

Problems of repetition and dropouts are present at all stages in the Uruguayan public education system, affecting internal and external efficiency. In more detail, the situation of the sub-systems is as follows:

- 1) Primary Education has almost universal coverage (the *actual enrolment rate* is 100%), and low levels of dropouts (the *actual completion rate* is above 97%) (MEMFOD 2004).

However, repetition rates are high, above 10% on average in 2001 (ANEP, 2003), and there does not seem to be a correlation between repetition and dropouts. Repetition rates are high both in comparison to the developed world and the rest of the region (e.g. Switzerland, Luxembourg and Chile had rates between 2% and 4% in 2001, ANEP, 2003). A particular feature is the 'pyramidal' structure of repetition across grades, repetition being heavily concentrated at the starting phase of the level. In 2000 the rate for first grade was about 18%, for second grade above 12%, and it was decreasing for the rest of the grades, being only about 2% for the last year (ANEP, 2003). A related fact is that only 70% of students completed the level in time (MEMFOD, 2004).

MEMFOD (1999) research indicates that high repetition rates in primary education, especially in the first grade, have long-term effects on the students' schooling. That is, even though dropouts at this level are not high the problem of repetition causes an increase in the over-age population in schools.² Those who are over-age tend to be more likely to repeat or dropout in further stages of the educational system; and this has been identified as an important factor in explaining high repetition and dropout rates in secondary education. The student's sense of failure and their parents' disappointment at the student's performance have been suggested to affect the chances of the student leaving the system early.

2) In Lower Secondary Education deficiencies in terms of coverage of the target age population are noteworthy, especially given the fact that it is a compulsory level. MEMFOD (2004) reports that in 2001 the *actual enrolment rate* was 88%, and the *actual completion rate* was 73%, but only 86% of those students who completed the level did so in time.

For the period 1996-1998 the average repetition rate for the sub-system was 30% and the average dropout rate was 17% (MEMFOD, 1999/2000), which led to a poor educational outcome at this level. For example MEMFOD (2002) shows that for a cohort starting Lower Secondary Education in 1998 on average only 45% completed the level on time (3 years), while over 30% exited before completing the level, and over 20% were repeaters

² Whereas the primary age range is from 6 to 11-12 years old, 15% percent of students of 13 years old and 8% of students of 14 years old are still at primary school (MEMFOD, 1999).

still in the system after 3 years. Even though these results are unsatisfactory, they are a significant improvement on the sub-system performance due to the implementation of a new scheme in 1996 (the so-called “Plan 96”).

Research from MEMFOD (1999/2000) for the period 1996-1998 also suggests that repetitions and dropouts at Lower Secondary Education are positively correlated. In effect, repeaters are about seven times more likely to drop out than non-repeaters. Also, being over-age seems to be correlated with repetition and dropouts: over-age students are more than twice as likely to repeat, and four times more likely to drop out, than ‘normal’ age students.

3) Upper Secondary registered an *actual enrolment rate* of 86%, with even higher dropout and repetition rates (the *actual completion rate* was about 58%) and 83% of those who completed the level did so in time. The average repetition rate for the level was 26%. MEMFOD (2004) estimates that the cost of the inefficiencies caused by dropout and repetition amounts to 18% and 21% respectively of the budget for current expenditure in Lower and Upper Secondary Education.

4) Teachers’ Training School suffers substantial dropouts in the first year. In 1998 dropouts in the first year were on average about 33%, with higher rates among those students training for secondary school teaching (ANEP, 2003). Partial information available for the 1996 cohort of the latter students shows that only 14% of those initially enrolled managed to get at least some of the credits corresponding to the final year (the fourth) of training in time³ (that is within four calendar years) and only 35% of the initial enrolment were still in the system in the fourth year (MEMFOD, 2000).

The labour market for teachers is quite different for those in primary and those in secondary education. While almost 100% of the teachers in Primary Education are graduates (of which 90% are from the Teachers Training School), the situation is very different in Secondary Education. Here more than 23% of teachers are without any degree at all, while about 50% graduated from the Teachers’ Training School (ANEP and IIP, 2003).

³ Figures of the percentage of students graduating on time are not available but are obviously lower than 14%.

5) University education also shows a mixed situation with high and low points. The number of students enrolled at university has increased notably in the last decades, even though it is still being left behind by growth in the developed countries. The total growth in enrolment between the first and last University Censuses (1960 and 1999) was above 450%, 1974-1988 being the period which showed the fastest growth (134%). But the rapid growth in coverage has been at the expense of the quality of the educational service (Bango, 2003, Torello and Casacuberta, 1997), which rather devalues the success in expanding coverage at the tertiary level.

The University also shows serious problems of dropouts and repetition. However, a flexible schedule and virtually no restrictions in the time allowed in obtaining a degree makes it difficult to measure repetitions and dropouts at university, so there are no official records of their occurrence.

However, a useful indicator of students' performance is the number of years that they lag behind the optimal schedule (achievement in time) while they are enrolled. Of the total number of undergraduate students enrolled in the University in 1997 only 16.8% were performing by the scheduled time, while 48.4% were one to four years behind the schedule, and 34.8% were five or more years behind (INE, ECH 1997). These figures are reflected in the fact that the real average duration of university studies is about 10 years while the average formal schedule is just 4 years. In parallel to this, the average age of university students is rather high, 26 years old, while about 20% of the university population is over 30.

Another dimension of the phenomenon is that in 1999 there were still students from the generation that entered the University in 1960. In fact, 14.7% of the students who entered university between 1960 and 1989 are still in the system, as are 35.5% of those who entered between 1990 and 1995, and 49.8% of those who entered between 1996 and 1999. This latter group consists of students performing optimally and those that are not far behind the optimal schedule (University Census Bureau 2000). A substantial 60% of the students is engaged in part-time or full-time work, not always related to their field of studies

As there are no official records of dropouts from university, Torello and Casacuberta (1997) estimated them using the University Census for 1988, which shows that over 34% of students enrolled subsequently drop out within the first year. But the generalised phenomenon of dropouts, even while reflecting the inability of the system to retain students, leading to inefficiencies, is not a complete waste in terms of the contribution to the building of human capital stock. That is because a worker with some years of tertiary education (but who drops out before graduating) has an average income 26% higher than workers who have only completed Upper Secondary School (INE ECH 1997), suggesting that the market appreciates further study at tertiary level even if incomplete.

Finally, MEMFOD (several articles) highlight the main factors causing widespread problems in the Uruguayan public education system pre-university, not all of them under the control of the education authorities.

On the one hand, the total teaching hours received by students are low compared to standards in the developed world, mainly due to the budget for making extra-payments to teachers for longer hours being insufficient, but also because there is no spare capacity in school buildings (especially at the secondary level, where buildings are fully booked with four shifts a day, including Saturdays). On the other hand, there is a wide range of factors that affect student absenteeism, repetition and dropouts. The educational environment at home, the economic condition of the family, attitudes of friends, etc., affect decisively the chances of a student successfully continuing in the education system. Especially at secondary education level, students' motivation becomes an important issue.

Moreover, there is poor matching between what the students expect from the education system and what the system actually offers. For example, for most students without an academic vocation for higher education the expectation is that secondary education will enable successful entry into the labour market. Unfortunately important shortcomings in literacy and numerical skills are common among students who have completed the compulsory cycle of education. This usually leads to frustrating experiences in the labour market as prospective employers increasingly have the perception that these newcomers are not as qualified as they would expect. Indeed, student surveys show that secondary

education is increasingly seen as not fulfilling students' expectations of being adequately prepared for the work place.

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