
Educational opportunities and academic performance: A case study of university student mothers in Venezuela

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Abstract. The transformation of universities from elite to mass models in developing countries has given the opportunity to new social groups to participate in higher education. As a part of this process, diverse groups of students have benefited in different ways from the equal educational opportunities offered to them. In this paper, we approach the problem of institutional efficiency versus social inclusion in a developing country through the case study of the academic performance of a social group of recent participation in a public university in Venezuela, specifically that of student mothers in the Universidad de Los Andes.

This work investigates how student mothers make use of the educational opportunities opened to them and how their academic performance is affected by their particular life circumstances. Evidence shows that the academic performance of student mothers is lower than that of other groups of university students. In practice, student mothers participate as part-time students, although this category is not officially recognized by most Venezuelan public universities. Almost all the life circumstances of student mothers negatively affect their academic performance. The only circumstance that contributes positively to the performance of a student mother is the help provided by her extended family in taking care of her children. The fact that student mothers are able to participate in higher education is mainly due to the help they receive from their extended family. This is a distinctive cultural feature associated to this social group in the context of a developing country such as Venezuela.

Keywords: academic performance, social inclusion, student mothers, university efficiency.

Introduction

There has been recent interest in the subject of massification of higher education and the inclusion of diverse social groups through this process. For example, Schuetze and Slowey (2002) have investigated the inclusion of groups of non-traditional university students in developed countries in the context of the expansion and diversification generated by mass education. On the issue of massification of higher education, developed and developing countries may share some similar challenges in different circumstances in relation to the inclusion of new groups of

students. Currently, Venezuelan public universities face the dilemma of how to combine the massification of higher education, which is perceived as one of the main achievements of the democratization of the country that began in the 1960s, with the maintenance of organizational efficiency. On one hand, mass higher education can be considered as a form of social inclusion in Latin America (Eichelbaum 1977), as well as in a developed society such as the US (Lavin and Hyllegard 1996). On the other hand, low graduation rates, the large amount of time for completing a degree and the cost of producing a graduate are some indicators provided to support the view of Venezuelan public universities as inefficient institutions (Wolf and Brunner 1997).

In this paper, we approach the problem of institutional efficiency versus social inclusion in a developing country through the case study of the performance of a particular group of students in a Venezuelan public university. We adopt this perspective based on the assumption that different groups of students benefit in different ways from the equal educational opportunities offered to them. In relation to the academic situation of students, this means that equality of opportunities in terms of access to higher education would not necessarily produce equality of attainments, in terms of academic performance. The particular group on which we focus is that of women who are mothers and study at the School of Economics and Social Sciences (FACES) in the Universidad de Los Andes (ULA), a free public university located in Mérida, Venezuela. ULA is one of the five biggest public universities in the country. In 2003, the student body consisted of 45,768 students, of which 61% were women and 39% were men. ULA's budget is provided by the national government. According to their income, the composition of the applicants to enter ULA in 2001 was the following: 33% had an income higher than 180,000 bolivars,¹ 59% had an income between 45,001 and 179,999 bolivars, and 8% had an income lower than 45,000 bolivars. (ULA 2003). ULA is located in the state of Mérida, in the Venezuelan Andes and the main economic activity of this state is agriculture. The state capital, Mérida, is a student and touristic city, with 237,000 inhabitants. There are no big industries in the state and most graduates from ULA look for jobs out of the state. In fact, ULA is the biggest employer of professionals in the city.

We refer to the female student who is mother as a student mother. The group of student mothers was selected because their presence is becoming notorious for professors at public universities, who often mention the phenomenon, while it is not the case for professors at private universities.² This illustrates the fact that public universities are

providing these women, until recently absent from higher education³ the opportunity to participate in it. It should be noted that there are no available official data on the number of women with children that study at public universities and thus, these student mothers are not identified as a particular social group among university students in Venezuela.

According to the characterization of non-traditional students made by Schuetze and Slowey (2002), student mothers at FACES-ULA can be considered as a non-traditional group, in the sense that they are an under-represented, marginal group in the university. We shall investigate if their way of participating at the university is also a non-traditional one. The present study is based on the analysis of data on student mothers gathered in two different moments, first in 1998 and then in 2002. In the context of the relationship between the educational opportunities and the academic performance of this group, this paper addresses the following questions: (i) what are the educational opportunities opened up to Venezuelan women by the democratization of the country?. (ii) How do student mothers perform at the university?, and (iii) What are the life circumstances affecting their academic performance?

Women and the educational opportunities opened by the democratization of Venezuela

Rates of enrollment in higher education in Latin America, as in almost all regions of the world, began to dramatically increase since 1960 (García 1996). Specifically, Latin America reached the model of 'massive access' to higher education in the 1980s. 'Massive access' means that between 15% and 35% of the 20–24 age group of the population of the country is enrolled in higher education. In contrast, the 'elite model' refers to a percentage of enrollment of that group lower than 15%, while the 'universal model' applies when this percentage is higher than 35% (García 1996).

Table 1 shows that Venezuela had the highest increase (11.4 times) in enrollment rates in higher education of the population in the age group of 20–24 among Latin American countries, from 1950 to 1975.

This increase is rooted in the changes introduced since 1958, when Venezuela entered into democratic life, after the end of the dictatorship of Pérez Jiménez. The ideal of the political parties that arrived to power was to promote modernization under the conception of a liberal democracy. At the political level, it meant the warranty of political freedom to allow political parties to function. At the social level,

Table 1. Highest enrollment rates in higher education of the population in the age group of 20–24 in Latin America, 1950–1994

Country	1950	1975	1994
Argentina	5.2	25.3	38.9
Colombia	1.0	8.0	17.6
México	1.5	9.0	13.8
Venezuela	1.7	19.5	31.4
Latin América	1.9	11.7	20.7

García (1996, p. 77).

democratization translated into equality of opportunities to overcome the socioeconomic inequalities. The democratization of education was perceived as the best means to achieve these goals. According to Alcalde (1983), the Venezuelan liberal democracy adopted the theory of development proposed by the Economic Commission for Latin America (CEPAL), where education was seen as an investment, an idea linked to the theory of human capital. These political intentions were supported by strong investments in education. The expenditure in all levels of education in Venezuela was one of the highest in Latin America since 1960 (3.7% of the GNP) to 1990 (4.1% of the GNP). Comparatively during this period, Venezuela overcame North America (USA and Canada) in the percentage of its GNP invested in education, in a ratio of 107/100 (González 1994).

At the constitutional level, the Venezuelan state established universal right to free public education as one of its fundamental objectives. The state gave particular emphasis to the expansion of elementary school from 1959 to 1969, since the main goal was to overcome illiteracy. From 1969 to 1973, the emphasis was on the quality of education. New programs for elementary school and the diversification of high school were developed. High school was divided into junior and high, so that once students finished their junior they could enroll in teaching, technical or high schools. Only those with a high school degree could enter the higher education system. The federal state promoted policies to develop the higher education system particularly since 1974.

Table 2 shows how enrollment in high school increased about 4 times between 1961 and 1971. Women significantly benefited from this expansion. While male enrollment increased 3.5 times in this period (from 162,254 to 563,217), female enrollment grew almost 5 times (from 117,202 to 554,603). As a consequence, by 1971 the proportion of men and women in high school was almost equal.

Table 2. Enrollment in different levels of education by gender in Venezuela, 1950–1981

Year	Elementary school			High school			Higher education		
	Total	Male (%)	Female (%)	Total	Male (%)	Female (%)	Total	Male (%)	Female (%)
1950	1,755,097	52.9	47.1	100,911	61.3	38.7	31,635	81.8	18.2
1961	2,503,874	52.5	47.5	279,456	58.0	42.0	48,125	79.3	20.6
1971	3,981,047	50.1	49.9	1,117,820	50.4	49.6	140,820	67.9	32.1
1981	6,232,165	50.7	49.3	2,811,728	48.4	51.5	530,627	55.9	44.1

Valecillos (1993, p.171).

As a continuation of this trend, the participation of women in higher education increased 5 times between 1971 and 1981 (from 45,221 to 233,985), while male participation increased 3 times (from 95,599 to 233,985), which contributed to reduce the unequal participation of these two groups. Today's participation of women in higher education is the effect of the socioeconomic trend started in the 1960s. Female access to higher education was particularly very pronounced during the first years of the democratic period. For example, the female enrollment in the Universidad Central de Venezuela (UCV), the largest public national university in the country, increased 11 times from 1956 to 1972. In the same period, the male enrollment in that institution increased 5 times (UNESCO and MEPM 1981).

While in 1960 the percentage of female students at UCV was 23%, in 1972 it was 45%. In addition to the growing tendency in the participation of women in majors where they were traditionally involved, such as Bioanalysis, Dentistry, Pharmacy and Nutrition, their enrollment in majors such as Medicine, which was traditionally considered a male profession, also increased. Women in the Medical School represented only 18% of the total enrollment in 1956, but in 1972 their enrollment in this school represented 50%. In fact some programs in the Department of Letters and Humanities became predominantly female dominated. In 1972, women constituted 68% of the students in the program of Humanities at UCV (UNESCO and MEPM 1981).

In the case of ULA, the evolution of women admitted as new students since 1975 is shown in Table 3, where the percentage of women admitted in some representative schools is also displayed.

The percentage of new female students that enter the programs of Business Administration, Economics and Accounting of FACES each year is about two thirds of the total of the new admitted students in

Table 3. Enrollment of new students in the Universidad de Los Andes at Mérida, 1975–1999

Year	ULA		Business/Economics/Accounting		Engineering		Humanities	
	Total	Women (%)	Total	Women (%)	Total	Women (%)	Total	Women (%)
1975	3084	62.5	645	76.7	519	21.4	206	62.6
1981	4604	52.1	540	61.1	839	29.1	548	49.2
1985	5270	56.5	878	59.8	841	22.7	685	72.4
1991	3266	59.9	534	68.3	455	31.6	334	72.1
1995	2357	57.3	405	62.7	508	32.7	290	72.4
1999	1909	62.8	338	63.6	283	45.2	277	67.1

Source: Oficina Central de Registros Estudiantiles, Universidad de Los Andes.

those programs. This situation has led to a ‘feminization’ of FACES, where currently 63% of all the students are women. A similar situation is observed in the School of Humanities. The percentage of new female students admitted to the School of Engineering was one fifth of the total of new students admitted in their school in 1975, but this percentage significantly raised to 45% in 1999.

The accelerated processes of democratization and modernization of the 1960s brought as a consequence that in just one generation new opportunities opened up that allowed women to go beyond their traditional female roles of mothers, nuns, and at most, school teachers. These changes were not a product of women’s political movements, as it happened in other countries, but a result of the whole transformation of the Venezuelan society. The Venezuelan case is similar to what happened in other Latin American countries. Bustillo (1993) assesses that the gains made by women in Latin America were outgrowths of the expansion of education opportunities and socioeconomic changes rather than gender-specific educational policies.

A transcendental demographic change that permitted women to play more diverse roles in Venezuela was the reduction of the birth rate. The birth rate in Venezuela dropped from 45 per thousand at the beginning of the 1960s to 28 per thousand in the 1980s (Bolívar 1994). The modification of the fertility rates in Venezuela was quite different from what happened in industrial societies. In those societies, women over 35 years old were the first in restricting their reproductive behavior. In contrast, women between 20 and 29 were those who more significantly restricted their fertility in Venezuela. The main changes in the reproductive

behavior of Venezuelan women from 1961 to 1981 were: (a) the concentration of the reproductive years in a shorter period (15–39 in 1961 to 20–29 in 1981); (b) the reduction of the number of births (5.75 in 1961 to 3.94 in 1981); and (c) longer intervals between births (Bolívar, 1994). This drop in the fertility rate was not due to public policies of birth control, which slowly started in the 1970s. As Bolívar (1994) points out, women's reproductive behavior was strongly influenced by the new expectations and needs created by the combined effect of urbanization, democratization and general access to education.

The expansion of women's roles has brought, among other changes, the phenomenon of student mothers that is being currently observed at Venezuelan public universities, and which is the object of the present study. However, as far as we know, there have been no previous systematic research on this phenomenon.

Research method

In this paper a quantitative analysis of data is carried out to characterize the academic performance of student mothers and to compare this performance with that of two other groups: women without children and men.⁴ Additionally, data are analyzed to determine how specific life circumstances of student mothers influence their academic performance. It might be expected that the conflicting role demands of being at the same time a mother and a university student negatively affect the academic performance of student mothers. Therefore we suppose that their performance is lower than those of women without children and men.

Data were gathered in two different moments: one in 1998 and the other in 2002. In 1998, three purposeful samples of students were constructed. The students were enrolled in the Departments of Accounting, Business Administration and Economics at FACES-ULA, all offering 5-year degree programs. Students from the Department of Statistics, also part of FACES, were not included. The academic year at ULA is constituted by two regular semesters per year. The students in the three samples were distributed through different semesters along the 5-year degree programs. The first sample was made of 108 student mothers. The second sample consisted of 200 women with children. The third sample was made up of 300 men.

The three samples provided information on the simple grade point average, $s(\text{GPA})$ of student mothers, women without children and men.

Additionally, student mothers filled out a questionnaire that gathered specific information on their life circumstances, mainly concerning to demographic, socioeconomic and academic conditions.

In 2002, the academic status of the students in the three samples of 1998 was analyzed in order to identify how many of them have graduated, how many were inactive and how many were still studying. Inactive students are those who were not registered in the year 2002, which did not necessarily mean that they have dropped out of the university since they could re-enter later. In addition, the academic records of student mother were analyzed and were related to their life circumstances. From the sample of student mothers, 13 women had graduated and 7 were inactive. The data on the academic performance and life circumstances of student mothers used in this research include graduates and non-graduates and therefore, it is based on 101 individuals from the original purposeful sample of 108.

Operational definition of academic performance

We quantify academic performance of a student by taking into account three separate variables: (i) grades, (ii) time, and (iii) annual approbation rate. Grades are measured by using the simple grade point average; time is defined as the number of years a student has been at ULA since he/she first registered; and annual approbation rate consists of the number of approved courses per year. These variables are discussed in the following.

The simple GPA is defined as

$$s(\text{GPA}) = (1/N)\sum g_i,$$

where g_i is the grade in the i th course, N the total number of courses that the student has taken, and the sum goes from $i = 1$ to N . The grading system in most Venezuelan universities, including ULA, ranges from 0 to 20 points. The minimum approbatory grade in a course is 10 points.

Academic performance is chosen as the main variable instead of academic achievement because it can be considered as a broader concept. Academic performance refers to the way in which a student performs at the university in terms of grades, time and rhythm, while academic achievement usually focuses only on grades. For instance, one definition of academic achievement of students at Venezuelan universities is provided by the referential study of the Universidad Simón Bolívar (USB 1978). This study operatively defines academic achievement as a product

of the weighted GPA times the rate of efficiency. This weighted GPA can be expressed as follows

$$w(\text{GPA}) = (1/N)\sum c_i g_i,$$

where c_i is the number of credits of the i th course, and g_i and N are the same as in $s(\text{GPA})$. Rate of efficiency is defined as the number of approved credits divided by the number of credits required by the program up to the semester in which the student is enrolled.

However, those measures of academic achievement ($s(\text{GPA})$, $w(\text{GPA})$ and rate of efficiency) do not reflect the amount of time that a student spends at the university completing his/her program. Time is an essential variable in order to assess the efficiency of most Venezuelan public universities, where regulations of permanence are not enforced. For instance, official norms of permanence at ULA establish the approval of 2 courses in 2 consecutive semesters as the minimum academic requirement for students to keep being enrolled at the university. Because of this, students can spend a large amount of time to complete their degrees. This requirement is independent of the number of courses in which the student is registered. The sanctions for breaking this rule are that the student can not register for one semester, if it is his/her first fault; for two semesters if it is his/her second fault; and for eight semesters if it is his/her third fault. Students can keep repeating a course until they approve it. Neither a minimum $s(\text{GPA})$ nor a maximum time are required to remain at ULA.

The expenses per year in higher education made by the federal state are reflected by the time to produce a graduate (Wolf and Brunner 1997).

In the present work, time is taken into account in two descriptors: (i) the number of years a student has been at the university since he/she student first entered the program at FACES, independent of whether he/she has registered every semester; and (ii) the annual approbation rate (AAR), which is expressed as the following ratio:

$$\text{AAR} = \frac{\text{accumulated number of approved courses}}{\text{number of years at the university}}.$$

Thus, the AAR is a measure of the rhythm or speed at which a student is advancing in his/her studies. The undergraduate programs of Business Administration, Accounting and Economics at FACES-ULA consist of 50 courses each and are planned to be completed in 5 years. We chose year as a the reference time interval instead of semester because the

student has also the opportunity to take some courses during the summer break, additionally to the two regular semesters per year.

The ideal AAR for a student at FACES is therefore 10 approved per year. An AAR equal to 5 shows that the student is advancing at half the rhythm of the ideal student and that he/she can effectively be considered as a 'part-time' student. However, official distinctions among part-time and full-time students do not exist at Venezuelan public universities. The AAR can also be used as a predictor of the time for obtaining the degree.

Specifically, the life circumstances of student mothers taken as independent variables are: age, number of children, age of the children, civil status, income and family help. Family help refers to the help provided by members of the student mother extended family in taking care of her children.

Academic performance of student mothers

Table 4 shows the mean $s(\text{GPA})$ of the three groups constructed in the first phase of the study in 1998, consisting of student mothers, women without children and men. The mean $s(\text{GPA})$ of each group is disaggregated by department in order to control possible effects due to differences in the programs.

The first thing to notice is that the mean $s(\text{GPA})$ of the three groups is low. Only women without children have a $s(\text{GPA})$ greater than 10, which is the minimum approbatory grade in a course. Even with a $s(\text{GPA})$ lower than 10, students can graduate. As it was mentioned, this is possible because there is no a minimum $s(\text{GPA})$ required to stay at ULA.

The mean $s(\text{GPA})$ of each group shows no statistically significant difference by program. However, the difference in the overall mean

Table 4. Mean $s(\text{GPA})$ of women without children, student mothers and men by Department in FACES-ULA, 1998

Department	Women without children	Student mothers	Men
Business	10.38	7.72	9.43
Accounting	10.97	9.11	9.52
Economics	10.00	8.71	8.49
Total	10.40	8.64	9.36

s(GPA) of student mothers, women without children and men is statistically significant (F ratio = 8.720, significant at $p < 0.01$). When intergroup differences are analyzed, using Scheffé test significant at $p < 0.05$, it is found that the s(GPA) of women without children is significantly different than that of both, student mothers and men; and that there is no statistically significant difference between the mean s(GPA) of student mothers and that of men. These results provide support to the hypothesis that student mothers have a lower academic performance than women without children, specifically in terms of grades.

The low GPA of the three groups actually reflects the overall low academic standards of the institution. However, inside these low standards there are fine structures that reveal differences among groups of students. The low academic standards constitute a two-sided problem. On one hand, these low academic standards allow the participation of social groups that would be excluded from higher academic standards university. On the other hand, low academic standards constitute a problem that should demand attention. In a developed country such as the US, the problem of low academic performance of students has been addressed by implementing remedial services at many colleges. The City University of New York is one example of the importance of such services when there is an open admissions policy (Lavin and Weininger 1999).

Our next step in the analysis of academic performance is the examination of the amount of time that each group remains at the university until earning their degree. Table 5 shows the status of the three groups in 2002, in terms of the percentage of students who had graduated, of those who had not graduated and those who were inactive.

We observe that the average time that graduates from the group of women without children spent at ULA (5.55 years) is similar to that of men (5.75 years). Both amounts of time are close to the expected time in

Table 5. Status of three groups of students at FACES-ULA in 2002

	Graduates		Non-graduates (%)	Inactive (%)
	(%)	Years*		
Women without children	55.3	5.55	33.0	9.5
Men	26.7	5.75	52.0	21.3
Student mothers	12.0	10.28	72.6	6.9

*Mean number of years that graduates have spent at ULA.

which an ideal regular student is supposed to finish his/her program (5 years). As it was pointed out, it is possible for students to take some summer courses offered by ULA, additionally to the two regular semesters per year, and this may shorten their graduation time.

From the students who were distributed along different semesters in their respective programs in 1998, 55% of the women without children had graduated by 2002, while 26% of men (about half of the graduated women without children) had earned their degree by that year. A sharp contrast appears when comparing the group of student mothers. The average time that the graduates from this group have spent at ULA (10.28 years) is about twice the time of the graduates from the other two groups. The percentage of student mother graduates (12%) was less than one fourth of the percentage of graduate women without children and about half of the percentage of graduate men. Men and women without children advance faster than student mothers in their studies.

Recall that when comparing the mean $s(\text{GPA})$ of student mothers and men, there was no statistically significant difference found between these two groups. Nevertheless, a notorious difference between these two groups arise when comparing the average time for graduation. This result indicates that time spent at the institution is an essential variable to characterize the academic performance of different groups of students at Venezuelan public universities.

The data from Table 5 yield further support to the hypothesis that student mothers have a lower academic performance than women without children, not only when comparing their mean $s(\text{GPA})$, but also, and more markedly, in terms of their time of permanence at the university. Student mothers register in about five courses every semester, but only approve an average of 2.2 courses per semester. They fail in 35% and withdraw from 13% of the courses in which they register (data provided by the Office of Student Records-FACES), and they require more than 10 years to complete a 5-year program. These findings reveal that student mothers are, in practical terms, part-time students, although this category is not officially recognized in ULA nor in most Venezuelan public universities. This situation is in contrast to the case of a developed country such as Norway, where special programs are designed for nontraditional students in public universities (Brandt 2002).

Note also that the percentage of inactive student mothers (6.9%) is lower than both that of men (21.3%) and that of women without children (9.5%). This suggests that student mothers are particularly persistent active students at ULA. This persistence is a rather complex

issue because it is a positive finding for the student mothers and for the retention data, although it may be not cost effective for the university.

Our findings contrast with those of Wolf and Brunner (1997), who state that it takes Venezuelan public universities about 16 years of schooling to produce a university graduate. This generalization does not correspond with the academic performance of the groups of men and women without children shown by our study. On the other hand, 12% of the student mothers graduate in 10 years, and although this is the double of the time required to complete a 5-year program, it is a very particular case.

In order to further investigate the role of the time that a student spends at the university, we have introduced the variable AAR, that shows the rhythm at which a student is advancing in his/her studies. We shall consider the AAR of student mothers in the next section, where we analyze in detail how the life circumstances of these women affect their academic performance, in terms of the $s(GPA)$, the years of study at ULA and the AAR.

Life circumstances of student mothers and their academic performance

The academic performance of student mothers is generally low. However, a distinction can be made between circumstances that aggravate this academic performance, and those that contribute to improve it. In the first case, we call those life circumstances 'aggravating' factors, and in the second case we refer to 'attenuating' factors. We focus on some demographic and socioeconomic variables such as age, income, number of children, civil status and family help. Family help means the help provided by the extended family of a student mother in taking care of her children. Civil status consists of two categories: married and non-married women. This last category includes women who have never been married and women who are separated or divorced.

Table 6 shows the general life circumstances of the group of student mothers from this study. About two thirds of the student mothers are over 25 years old, an age at which the ideal university student in Venezuela is expected to have finished his/her studies. The mean age of student mothers is 28.1 years; this is greater than the mean age of students at FACES-ULA, which is 24.3 years, according to data provided by the Office of Student Records of FACES-ULA.

As the student mothers become older, their average number of children increases from 1 to 2, which coincides with the current value of

Table 6. Life circumstances of student mothers by age group in 1998

Age group	(%)	Number of children (mean)	Civil status		Family help	Income
			Non-married (%)	Married (%)	Yes (%)	Less than 100,000 bolivars)* (%)
18–25	34.20	1.2	40.0	60.0	74.3	51.0
26–30	37.03	1.4	40.0	60.0	78.9	55.0
31–35	18.50	1.7	35.0	65.0	65.0	40.0
36+	10.20	1.8	45.5	54.5	62.0	27.3
Total	100.00	1.4	39.8	60.2	73.3	48.0

* The minimum wage was 100,000 bolivars = US\$177.15 in 1998.

the fertility rate of educated women in Venezuela (Bolívar 1994). Socioeconomic conditions are related to age. For instance, as the student mother gets older she receives less help from her extended family and her income becomes higher. The civil status of student mothers does not appreciably vary with age. Through the different age groups, almost 40% of student mothers are non-married.

When age is related to the four variables, civil status, number of children, income and family help, the four age groups of Table 6 can be clustered in two groups. One group can be made by aggregating the two age groups of 18–25 and 26–30, which behave in a very similar way in relation to the four variables. We call this group ‘young mothers’ (18–30). The other group can be made by joining the age group of 31–35 and that of 36 and over, which share analogous conditions in relation to income, family help, and number of children, but are not very similar in relation to civil status. We denote this group as ‘mature mothers’ (31 and over).

Table 7 shows how each life circumstance affects the academic performance of student mothers. We analyze each life circumstance in detail in the following.

Age

The age of the student mother does not affect their s(GPA) but it does influence their average time at ULA and their AAR. As the age of a student mother increases, she spends more years at ULA and, at the same time, her AAR decreases. The average AAR of student mothers is 3.37. This value shows that student mothers are advancing at one third of the rhythm of the ideal student. If the student mothers continue

Table 7. Life circumstances and academic performance of student mothers

	s(GPA)	Time at ULA (mean years)	AAR
<i>Age of student mothers</i>			
18–25	9.62	8.00	4.21
26–30	8.56	10.87	3.21
31–35	9.25	14.72	2.55
36+	7.87	14.00	2.46
<i>F ratio</i>	1.309	24.173*	4.501*
<i>Age of children</i>			
Under 2 (babies)	10.50	8.71	3.91
3–5 (pre-school)	8.73	10.32	3.22
6–12 (school)	8.03	11.94	3.33
Older than 12 (high school)	9.01	13.27	2.63
<i>F ratio</i>	3.408*	6.11*	1.058
<i>Number of children</i>			
1	9.32	9.90	3.61
2	8.63	12.15	3.09
3	7.13	14.2	2.14
<i>F ratio</i>	1.620	6.090*	1.881
<i>Civil status</i>			
Non-married	8.94	11.23	3.20
Married	9.01	10.65	3.46
<i>t</i>	-0.122	0.731	0.674
<i>Family help</i>			
Family help	9.35	10.79	3.45
No family help	8.03	10.96	3.12
<i>t</i>	1.981*	-0.192	0.736
<i>Income</i>			
Less than 100,000 bolivars**	9.10	10.42	3.42
More than 100,001 bolivars	8.77	11.65	3.27
<i>t</i>	0.539	-1.530	0.368
Total	8.98	10.87	3.36

* Significant at $p < 0.05$.

** 100.000 bolivars = US\$177.15.

advancing at this rhythm, it will take them about 15 years, in the average, to finish their studies.

These results imply that as a student mother becomes older, her academic performance becomes lower, mainly in terms of time. Therefore, age is an 'aggravating' factor of the academic performance of student mothers.

Our data yield that the average age at which student mothers enter FACES is 21.2. This means that they do not enter immediately after finishing high school, usually by the age of 18. As it was previously mentioned, the reproductive years of Venezuelan women are mainly concentrated between the ages of 20 and 29. Therefore, the reproductive years of women coincide with the expected age interval for pursuing a university degree. A path for a woman to have a university degree avoiding conflicting roles would be first to graduate and then to have children. On the other hand, in the Venezuelan culture it is socially expected that a woman should have children by the age of 28–29. Thus, it is possible that, when a woman enters the university at a late age, her chances to graduate at first and then have children may become more limited than those of a woman that enters at an earlier age.

The negative influence of a woman's age on her academic performance has also been reported in the context of developed countries. Jacobs and Berkowitz (2002), by means of a life-history analysis of US women aged 15–44, find that women over 25 years old are at disadvantage for completion of their college degrees. The effect mainly consists of low completion rates and it is attributed to their part-time enrollment. They specifically mention that "older women who are enrolled part-time, who delayed their entry into college, and who have being mothers are much less likely to complete their degrees than are younger women" (Jacobs and Berkowitz 2002, p. 222). The influence of age in the case of student mothers at FACES-ULA shows a pattern similar to that of USA in the sense that, as the student mother becomes older, she spends more time doing her studies. However, two important differences appear in the case of ULA: the percentage of student mothers who were inactive in 2002 is low (6.9%), and the majority of them will eventually graduate. They can register as many semesters as they need to complete their studies, mainly because tuition is free and, as it was already mentioned, there are no enforced regulations on time nor on a minimum s(GPA).

Number of children

Table 7 shows that, as the number of children of a student mother increases, her time at ULA also increases. The number of children is

then an aggravating factor on the academic performance of student mothers.

Age of children

The age of the children of student mothers affects their s(GPA) and their time at ULA, but it does not affect their AAR. Student mothers who have children under 2 years old exhibit a slightly higher s(GPA) and spend less time at ULA than student mothers who have older children.

Therefore, not only the number of children but also the age of these children negatively affect the academic performance of student mothers. Number and age of children are both 'aggravating' factors.

Civil status

Table 7 shows that civil status does not significantly affect the s(GPA), the time or the AAR. This means that the help that might be provided by the male partner makes no difference for the performance of a student mother at the university.

Family help

Student mothers who receive help from their extended family to take care of their children have a significant higher s(GPA) than those without family help. However, there is no difference between these two categories in relation to their time at ULA and their AAR. This means that a student mother with family help has higher grades than a student mother without family help, but both advance at the same rhythm. Therefore, family help can be considered is an 'attenuating' factor, particularly in relation to the s(GPA).

The s(GPA) of non-married student mothers without family help is the lowest. The difference in the s(GPA) between non-married student mothers with family help and non-married student mothers without family help is wider than that between married student mothers with family help and married student mothers without family help.

Family help is more important than being married for improving the academic performance of a student mother. This fact reflects cultural values of the Venezuelan society, where newly formed families usually

live close to their relatives and receive help from them in taking care of the children. As Table 6 shows, younger student mothers who have babies more likely receive help than student mothers with older children. Even though the Venezuelan state provides free child care facilities, the student mothers of this sample more frequently recur to the help provided by their families than to the daycare provided by the state. This is in contrast with the situation of a developed country such as USA, where on-site child care institutions have proven to be essential factors for the retention of student mothers in colleges (Gonchar 1995).

Income

Table 7 shows that the academic performance of student mothers is not significantly correlated to their income. These findings coincide with those reported in the study by the Universidad Simón Bolívar (1978), which establishes that there is no statistical relationship between the socioeconomic conditions of university students and their academic performance in the case of Venezuelan universities. Garnica et al. (1991) also observe an absence of correlation between income and academic achievement of university students in Venezuela.

A model of the academic performance of student mothers

Table 8 shows the Pearson's correlations between the three variables of academic performance of student mothers. The s(GPA) is directly correlated to the AAR and inversely correlated to the time at ULA. This is, as the s(GPA) of student mother becomes lower, their time spent at ULA increases and viceversa. Also, as the s(GPA) of student mother becomes lower, their AAR decreases and, when this happens, their time

Table 8. Pearson's correlation between the variables of academic performance

	s(GPA) AAR	Time at ULA
s(GPA)	0.561*	-0.377*
AAR		-0.618*
Time at ULA		

* Significant at $p < 0.05$.

at ULA increases. Therefore, the relationships between the three variables of the academic performance of student mothers creates a ‘vicious circle’.

Figure 1 portrays a model of the academic situation of student mothers at ULA. It illustrates how the different aggravating or attenuating factors enter into the cycle of low academic performance of student mothers. Arrows oriented downwards indicate aggravating factors and arrow pointing upwards represent attenuating factors. The aggravating factors affecting time have accumulative effects. As we saw in Table 3, being a mother negatively affects the academic performance of a woman, particularly in terms of lower s(GPA) and longer time spent at ULA. Next, the age of the mother aggravates her academic performance. As the student mother gets older, there are more probabilities for her to have another child. Subsequently, the number and

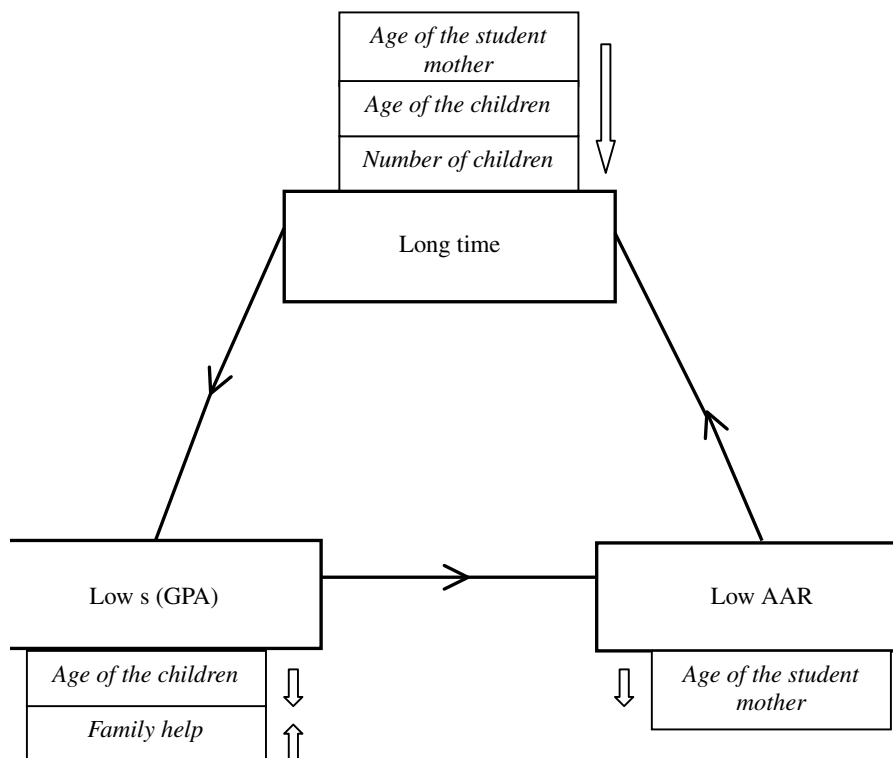


Figure 1. Model representing the cycle of low academic performance of student mothers. Arrows oriented downwards indicate aggravating factors and arrow pointing upwards represent attenuating factors.

the age of the children contribute to extend the time spent at the university. The main aggravating factor that affects the low s(GPA) of student mothers is the age of their children, while family help serves as an attenuating factor of the low s(GPA). On the other hand, low AAR is significantly affected by the age of the mother as an aggravating factor.

Our study reveals the relevant role that family help plays as the only attenuating factor of the low academic performance of student mothers. The help of the extended family in taking care of the student mothers' children is a cultural factor of the Venezuelan society. It is playing a similar function as the on-site child care institutions of developed countries. To take advantage of the educational opportunities opened to them, Venezuelan student mothers specifically need the support of their extended family. For student mothers, earning a degree becomes a matter of sustained perseverance because it translates into a long journey where the help of the family really matters. These findings show a similar pattern to that portrayed by Scott et al. (1998) in the context of a developed country. They point out that difficult life circumstances of student mothers make graduation more unlikely and lead to discontinuance. The main difference between the two cases of student mothers in a developed and a developing country is that in Venezuela, student mothers will eventually graduate, even spending more than 10 to complete their programs. The trend of the performance of student mothers in Venezuela is towards avoiding attrition.

When analyzing the median of life circumstances of the student mothers who have approved all their courses, we find that: (i) they belong to the age group 18–25, (ii) they have one child, (iii) their child is under 2 years old, and (iv) they receive family help. This profile of life circumstances agrees with our results that identify the age of the mother, the number of children and the age of the children as aggravating factors for academic performance of student mothers.

Conclusions

The case study of student mothers at ULA yields interesting findings in relation to the problem of institutional efficiency and social inclusion in Venezuelan public universities. First of all, the existence of this group in a public university is an example of the heterogeneity of the students population generated by the massification of higher education in

Venezuela, which has opened up opportunities for social groups traditionally absent from it.

Our work has shown that alternative concepts of academic achievement may be necessary to characterize the performance of specific groups of students. The distinction between time, GPA and AAR as separate variables for measuring academic achievement reveals a more comprehensive profile of the performance of student mothers, and could also be used to characterize other specific groups of students in situations similar to that of Venezuelan public universities where regulations of permanence are not enforced.

The data analysis has revealed that the way in which student mothers at ULA make use of their educational opportunity is by becoming, in practice, part-time students. Although such status is not officially recognized in most Venezuelan public universities, student mothers are de facto part-time students. The group of student mothers exhibits a low graduation rate (12%) and require more than 10 years to complete a 5-year program.

The rhythm at which the average student mother advances in her program is 33.7% of that of the ideal regular student, and therefore, her time spent at the university in order to complete a degree will be about three times longer. Nevertheless, student mothers persevere in their studies: the percentage of inactive students in this group is lower than those in the groups of women without children and men.

The uncovering of the actual part-time condition of recently included social groups, such as student mothers, provides a new insight into the current issue of the efficiency of Venezuelan public universities. The part-time condition is not officially recognized but it is tolerated by the alleged inefficiency of the university. Full-time and part-time students are not distinguished by the institution. If part-time students at ULA were officially recognized, special programs could be created for them and thus, their academic performance would not look very different from that of the other groups, women without children and men. The role of the university would not simply be to graduate people in a established number of years, but to develop some strategies to attend the needs of diverse clients of higher education, as it is being done in some public universities in developed countries (Brandt 2002; Woodley and Wilson 2002).

The case of student mothers illustrates two aspects of the problem of institutional efficiency and social inclusion. On one hand, the long time spent by student mothers at the university contributes to the perception of Venezuelan public universities as inefficient organizations. On the

other hand, the participation of student mothers in higher education can be seen as a form of social inclusion. Without this opportunity, women with children will be excluded from a mechanism of upward social mobility that has worked in the context of the democratization of Venezuela. This social dimension of Venezuelan public universities should be included in any discussion on their efficiency, which has been mainly portrayed in quantitative terms. One of the main deficiencies for a grounded discussion on the situation of Venezuelan public universities is the lack of availability of official data disaggregated by social groups. This is one of the main issues that contrasts with the situation in developed societies. For instance, in a developed society such as the US, official and reliable data of an institution that promotes social inclusion through open access, such as the City University of New York, allow to evaluate how its open admissions policy affects the life chances of racial and ethnic minorities, low income, and older students (Lavin and Hyllegard 1996).

A relevant issue in the dilemma of efficiency versus social inclusion still is how to improve the academic performance of the diverse groups of students actually participating in public universities. To do this, it is important to know their true situation according to their life circumstances.

In the case of student mothers, their life circumstances showed that the mere fact of having children affects negatively their academic performance. This is the first aggravating factor. Once a woman is in the condition of student mother, the other aggravating factors affecting her academic performance are her age, the number of children and age of her children. We have presented a model to illustrate how different life circumstances affect each variable of academic performance. The help provided by the extended family is the only factor that attenuates her low academic performance.

It is important to remark that, although family help contributes to improve the academic performance of student mothers, particularly in terms of grades, it is not enough to break the vicious circle of their low academic performance. Family help does not modify the time that student mothers spend doing their studies nor their AAR. As a consequence, it can be assessed that, if student mothers are able to participate in higher education, even as part-time students, it is mainly due to the fact that they receive help from their extended family in the care of their children. This is a distinctive cultural feature associated to this social group in the context of a developing country such as Venezuela.

Notes

1. 180,000 bolivars = US\$242 in 2001.
2. Personal conversations with professors currently working at the Universidad de Los Andes (public), Universidad Central de Venezuela (public), Universidad de Carabobo (public), Universidad Católica Andrés Bello (private), and Universidad Metropolitana (private).
3. In October 20, 2001, in a meeting of a group of 10 female professors who graduated from different public universities in the 1980s, only one manifested having met one student mother during her undergraduate program. The rest did not know any during their college years.
4. We do not distinguish between men with children and men without children because the care of the children has traditionally been a female role in the Venezuelan society.

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