

**THE IMPACT OF HIGHER EDUCATION FINANCING POLICIES ON
ACCESS TO INSTITUTIONS AND STUDENT AID PROGRAMS IN CHILE
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Abstract

By analyzing the access of different socio-economic groups to post-secondary institutions and access to various student aid programs by SES quintile, this paper examines the impact produced by higher education financing policies in Chile during the Pinochet (1973-1990), the Aylwin (1990-1994) and the Frei (1994-2000) administrations. To this purpose, CASEN databases and semi-structured interviews conducted with former and current government officials as well as higher education administrators provide valuable information to measure the impact that higher education financing policies had on different socio-economic groups. While access to post-secondary institutions is seen in relation to two aspects: enrollment rates and access by family per capita income level, access to student aid (university loans and scholarships) is sketched through some screening indicators, such as percentage of students enrolled in publicly funded universities from families of different SES quintiles who were or were not granted university loans and percentage of enrollees who did and did not receive scholarships by SES quintile. Major conclusions include: a) Despite increased participation across all socio-economic groups within the post secondary system, upper and upper-middle income students gain access to higher education disproportionately compared to lower, lower-middle, and middle income groups; b) the proportion of loan recipients among 18-24 year olds from all socio-economic groups, particularly those from the lowest SES groups, decreased dramatically in the period 1987-1996; and c) while students from lower-middle, middle and upper-middle income groups increased their receipt of Mineduc scholarships, economically disadvantaged students have been the main recipients of other tuition scholarships during the 1990s.

THE IMPACT OF HIGHER EDUCATION FINANCING POLICIES ON ACCESS TO INSTITUTIONS AND STUDENT AID PROGRAMS IN CHILE*¹

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1. Introduction

By analyzing the access of different socio-economic groups to post-secondary institutions and access to various student aid programs by SES quintile, this paper examines the impact produced by higher education financing policies. From a critical theory perspective, the main purpose of this study is to determine through descriptive and inferential statistical analyses the equity/equality consequences of higher education financing policies in Chile during the Pinochet (1973-1990), the Aylwin (1990-1994) and the Frei (1994-2000) administrations. Access to post-secondary institutions is seen in relation to two facets: enrolment rates and access by family per capita income level. First, enrolment rates are discussed with regard to two aspects: enrolment growth rates at the undergraduate level and enrolment gross ratios (18-24 year-old group) in the higher education system. Second, access to higher education by SES quintile is analyzed with reference to three variables: percentage of youth (18-24 year-old group) from families in each SES quintile who attended at least some higher education, percentage of youth (18-24 year-old group) from families in each SES quintile attending higher education institutions when CASEN surveys were conducted, and socio-economic composition of students (18-24 year-old group) attending higher education by type of institution and sector.

Concerning access to student aid (university loans and scholarships) the following screening indicators are considered: percentage of students enrolled in publicly funded universities from families of different SES quintiles who were or were not granted university loans, percentage of higher education enrolees who did and did not receive scholarships by SES quintile, percentage of students enrolled in post-secondary institutions who did and did not receive loans and scholarships by family per capita income level, and percentage of freshmen enrolled in publicly funded universities who were awarded student aid (loan and/or scholarship) by family per capita income.

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Additionally, drawing upon personal semi-structured interviews conducted with former and current government officials as well as higher education administrators, this paper reports key actors' perceptions and explanations of the impact that higher education financing policies had on different socio-economic groups.

The following research questions will frame the analysis in this study:

1. How do changes in enrolment growth affect coverage and equity of access in the higher education system?
2. How and why has demand for higher education changed across socio-economic groups during the implementation of adjustment and post-adjustment policies?
3. What appear to be the consequences of the Chilean governments' policies in terms of access to higher education for different socio-economic groups?
4. What have been the consequences of higher education financing policies implemented by the Pinochet, the Aylwin and the Frei administrations with regard to equity of access to different student aid programs?
5. How do former and current government officials and higher education administrators describe and explain the consequences that policies have had on different socio-economic groups?

2. Enrollment in higher education institutions, 1980-1998

The 1981 reform allowed for significant enrollment growth in higher education, most notably in privately controlled and funded institutions.² This enrollment growth, particularly that caused by the creation of new private institutions, did not promote equitable access to the system. Because of the high tuition cost in private institutions, access was extended disproportionately to the high school graduates coming from upper-middle and upper income families (Ministerio de Planificación y Cooperación, 1996).³

² The expansion of enrollments was not backed by sufficient resources to maintain per-pupil expenditures in such relevant areas as books, equipment, and teachers. Decreasing expenditures often resulted in decreasing teaching quality (Fried & Abuhadba, 1991). Also, as a result of the high cost of different programs offered by post-secondary institutions, access has increasingly depended on socio-economic background (students' family income levels) more so than merit. An important percentage of high school graduates from low-income families do not pursue post-secondary studies for two reasons: a) they enter the labor market early to support their families economically and b) students from low-income families are more reluctant to finance higher education studies through loans than students from high-income families.

³ It has been argued that in the case of Chile the 1981 reform transformed the tertiary educational system into a mass system dominated by private institutions which strengthened the "elitization" of higher education (Briones, 1984). In line with this argument, for example, a large percentage of high-income students became enrolled in expensive programs offered by privately funded universities because they could not gain access to the most prestigious universities (Universidad de Chile and Pontificia Universidad Católica de Chile) or other of their choice. For example, in 1990 72.1 percent of youth enrolled in private

From 1980 to 1998, higher education enrolment increased by more than 274,000 students, equivalent to a growth rate of 230.0 percent. In general terms, enrolment rose from 118,978 undergraduate students at all levels to 393,466 (see Table 1).⁴ Between 1990 and 1998 there was an increase in university enrolment of nearly 115.0 percent, from 127,628 students enrolled in 1990 to 274,583 in 1998.⁵ While in 1990 the percentage of students attending private universities without direct public funding represented 18.0 percent of university enrolments, in 1998 this proportion increased up to 45.0 percent. Within traditional publicly funded universities enrolment rose from 118,978 to 188,522 undergraduate students between 1980 and 1998, a growth rate of 58.0 percent (see Table 1).⁶ For non-university institutions, all of which are privately controlled and

universities without public funding belonged to the fifth quintile, while in 1996 61.2 percent of students attending new private universities represented the fifth quintile. In contrast, the proportion of students from quintile 1 and 2 represented 4.2 and 6.5 percent in 1990 and 1996, respectively (Larrañaga, 1992, 1999).

⁴ Enrolment patterns in other post-secondary systems in the Latin American region were also similar to that of Chile (see Table 1A in Appendix 1). For example, in Colombia, private institutions increased their enrolment in relation to total enrolment in the whole system from 40.0 to 59.3 between 1959 and 1988, and to 64.1 percent in 1993. Conversely, public post-secondary institutions decreased their proportionate enrollment significantly falling from 60.0 percent in 1959 to 40.7 percent in 1988 and 35.9 percent in 1993. In the late-1960s, post-secondary education in Mexico was highly concentrated in very few large public universities. However, since 1970 enrolments in private higher education institutions have grown rapidly. Indeed, while in 1970, 13.3 percent of students enrolled were in private institutions and 86.7 percent in public ones, in 1994 private institutions enrolled 25.2 percent of students and public institutions 74.8 percent. While the enrolment rate within the private sector grew more than ten times between 1970 and 1994, increasing from 28,215 to 329,047 students, enrolment in public higher education institutions quintupled between 1970 and 1994, moving from 184,666 students to 975,100 students. In the case of Brazil, in 1968, 55.0 percent of students enrolled in higher education were in public institutions and 45.0 percent in private ones. This enrolment pattern was modified since 1970 when private institutions enrolled for the first time more students than public entities. In fact, in 1970, out of a total enrolment of 456,134 students, 47.2 percent were in public institutions and 52.8 percent in private ones. In the 1970s and 1980s enrolment continued growing dramatically, particularly within private institutions, which by 1986 enrolled 59.3 percent out of a total enrolment of 1,418,196 students. In 1994, approximately the same enrolment distribution existed, with private institutions enrolling 58.4 percent of the total enrolment (1,661,034). Finally, in Argentina, enrolment in higher education institutions rose rapidly in the 1980s and early-1990s, moving from 580,626 students enrolled in 1983 to 1,054,145 students in 1994. While public post-secondary institutions increased their enrolment by about 5.0 percent in that period (from 75.6 percent to 80.0 percent of total enrolment), private higher education institutions decreased their enrolment from 24.4 to 20.0 percent (see Table 1A in Appendix 1).

⁵ Annually, in Chile approximately 140,000 students graduate from secondary schools. Of this total, 43,000 are admitted to the twenty-five publicly funded universities (Universidad de Chile, 1997), based on two indicators: a) their performance in a national “achievement” test (*PAA*), which measure abilities in areas such as mathematics, verbal (language, analogies, etc), history, social sciences, and geography, and b) their performance (grades) in high school. While the national test is counted in terms of admission decisions between 70.0 and 90.0 percent, depending upon the university, the high school performance is considered in a range between 10.0 and 30.0 percent. Within this segment it is possible to find students coming from every social strata with higher “abilities” in the different disciplines. Likewise, 80,000 high school graduates are admitted yearly in private higher education institutions without public support. In most cases, the ability to pay tuition in this kind of institution is the most important factor to obtain access. Therefore, with the exception of few new private universities, academic requirements (e.g., *PAA* score) are not required or are very flexible.

⁶ Enrolment growth within public universities generated a higher demand for student loans and scholarships (see Espinoza, 2002, Chapter 7). Based on this reality, the *Consejo de Rectores* has been continuously demanding that the Ministry of Education increase the proportion of resources oriented to satisfying the growing demand for student aid (see, for example, Consejo de Rectores, 1993).

funded, enrolment increased from zero in 1980 to 117,780 in 1990 and 118,883 in 1998. Thus, by 1998, 52.1 percent of all higher education enrolments were in privately controlled and funded institutions, up from zero percent in 1980.

Enrolment growth within professional institutes had a significant expansion, though less significant than in the university system, going from no student enrolled in 1980 to 40,006 in 1990 and 64,593 in 1998, which represents a growth rate of 61.0 percent between 1990 and 1998.⁷ Similarly, in the 1980s enrolment grew rapidly at technical training centers moving from zero in 1980 to 77,774 in 1990. But, during the 1990s technical training centers experienced a tremendous decline in their enrolments. As a result of this decline, technical training centers enrolled 54,290 students in 1998, which represents a reduction of more than 23,000 students or 30.0 percent compared to that of 1990 (see Table 1). The decline may be explained by three facts: a) high school students prefer to get credentials from universities or professional institutes, which provide a higher social status; b) high school students wishing to attend technical training centers are not eligible for tuition scholarships⁸ and c) students enrolled in this kind of institution do not have access to loans supplied via higher education budget.

Like enrollment figures, gross enrollment ratios⁹ for the population between 18 and 24 year-olds also grew in the Chilean higher education system during the 1980s and 1990s. Indeed, within the 18-24 age group, gross enrollment rose from 7.5 to 23.5 percent in the period 1980-1998. In other words, gross enrollment ratio in higher education tripled in less than twenty years (see Table 2).

Table 1. Number and percentage of undergraduate students enrolled in higher education institutions by type of institution and sector, 1980-1998

Institution	1980	1985	1990	1994	1998

⁷ Professional institutes' enrollment growth during the last decade has been basically concentrated in two institutions: *DUOC* (a professional institute for training in computers, engineering, and other technology areas) and *INACAP* (National Training Institute) (González, 1998). The rest of the professional institutes (sixty-seven institutions) must compete in disadvantageous conditions with the two institutes above mentioned and with the universities that can offer similar programs, and the advantage of having a higher status.

⁸ In the 1990s there was a heated debate in Chile among government representatives, scholars and student organizations with regard to the possibility of providing scholarships for students already enrolled or planning to attend technical training centers. As a result, in the year 2000 the Ministry of Education created a new Scholarship Program called Millennium oriented to provide scholarships to economically disadvantaged students expecting to attend private technical training centers. Students enrolled in technical careers either in professional institutes or traditional universities are also eligible (interviews with Pilar Alamos, December 2000; María Elvira Cornejo, December 2000; and Carlos Velasco, November 2000).

⁹ The gross enrollment ratio is the total enrollment at a given educational level, regardless of age, divided by the population of the age group that typically attends that level of education. The specification of age groups varies by country, based on different national education systems and the duration of schooling at the first and second levels. For tertiary education the ratio is expressed as a percentage of the population in the 5-year age group following the official secondary school leaving age. Gross enrollment ratios may exceed 100.0 percent if individuals outside the age cohort corresponding to a particular educational level are enrolled in that level (Task Force on Higher Education and Society, 2000).

Universities	118,978 (100.0%)	113,625 (57.9%)	127,628 (52.0%)	205,738 (64.0%)	274,583 (69.8%)
Universities with Public Funding	118,978	108,674	108,119	145,744	188,522
New Private Universities without Public Funding	0	4,951	19,509	59,994	86,061
Professional Institutes	0	32,233 (16.4)	40,006 (16.3%)	38,252 (11.9%)	64,593 (16.4%)
Professional Institutes with Public Funding	0	17,668	6,472	0	0
New Private Professional Institutes, no Public Funding	0	14,565	33,534	38,252	64,593
Technical Training Centers	0	50,425 (25.7)	77,774 (31.7%)	77,258 (24.1%)	54,290 (13.8%)
Technical Training Centers with Public Funding	0	0	0	0	0
New Private Technical Training Centers without Public Funding	0	50,425	77,774	77,258	54,290
Total	118,978 (100%)	196,283 (100.0%)	245,408 (100.0%)	321,248 (100.0%)	393,466 (100.0%)

Source: Cox & Jara (1989); Ministerio de Educación (1999a).

In Chile as well as in other Latin American countries (e.g., Brazil, El Salvador, and Venezuela) expansion of private higher education (Eisemon & Salmi, 1995; Winkler, 1990; Wolff & Albrecht, 1997) is producing a double injustice. On the one hand, the most privileged high school graduates move from the top secondary schools generally private) into free (and high quality) public higher education and, on the other hand, less privileged students pay for the inferior education provided by private higher education institutions (Levy, 1991).

Table 2. Gross enrollment ratios (1) in the higher education system (18-24 year-old group), 1980-1998 (Percentages)

1980	1985	1990	1994	1998
7.5	11.2	14.2	18.9	23.5

(1) Ratio of total enrolled -regardless of age- to the total population of the 18-24 age cohort.

Source: Personal elaboration based on enrollment data from Cox & Jara (1989) and Ministerio de Educación (1999a). Population data from INE (1990).

3. Access to higher education institutions by SES quintile

From an equity point of view¹⁰ the expansion of enrollment does not say anything by itself. To examine issues of equity we need to analyze access by SES quintile to determine how higher education financing policies have affected students' access from different socio-economic groups in the context of adjustment and post-adjustment policies implemented by the Chilean government at the macro-economic level.¹¹ In this regard, for example, in the early-1990s it was broadly recognized by government representatives, *rectors* of universities and scholars, in general, that in terms of "equity of access," the Chilean higher education system was still biased towards upper income

¹⁰ On this point see Espinoza (2006).

¹¹ For this purpose, the main source to be used will be the *CASEN* household survey. Statistics on the level of access to higher education by socio-economic group were not available before 1987 because *CASEN* databases started recording these data beginning that year. Unfortunately, there are no other instruments or studies which provide that kind of information. *CASEN* is a national household survey conducted by the Ministry of Planning every two years. The *CASEN* survey is a sample geographically stratified by conglomerates, polietapic and probabilistic. The 1987 *CASEN* survey contains a total of 22,729 households (16,465 urban and 6,264 rural) and 97,044 cases. Once the 18-24 year-old group is filtered out we have 13,939 cases. Of this total, 1,190 persons declared that they were enrolled in higher education institutions when the *CASEN* survey was conducted. The 1990 *CASEN* survey contains a total of 25,793 households (18,549 urban and 7,244 rural) and 105,189 cases. Once the 18-24 year-old group is filtered out we have 13,848 cases. Of this total, 1,285 youth declared that they were enrolled in post-secondary institutions when the *CASEN* survey was conducted. The 1992 *CASEN* survey contains a total of 35,948 households (23,778 urban and 12,170 rural) and 143,459 cases. Once the 18-24 year-old group is filtered out we have 18,311 cases. Of this total, 1,648 youth declared that they were enrolled in higher education institutions when the *CASEN* survey was conducted. The 1994 *CASEN* survey contains a total of 45,319 households (28,375 urban and 17,004 rural) and 178,057 cases. Once the 18-24 year-old group is filtered out we have 21,370 cases. Of this total, 2,327 youth declared that they were enrolled in higher education institutions when the *CASEN* survey was conducted. The 1996 *CASEN* survey contains a total of 33,636 households (24,862 urban and 8,774 rural) and 134,262 cases. Once the 18-24 year-old group is filtered out we have 16,298 cases. Of this total, 2,370 youth declared that they were enrolled in post-secondary institutions when the *CASEN* survey was conducted. The 1998 *CASEN* survey contains a total of 48,107 households (33,714 urban and 14,393 rural) and 188,360 cases. Once the 18-24 year-old group is filtered out we have 22,011 cases. Of this total, 3,109 youth declared that they were enrolled in post-secondary institutions when the *CASEN* survey was conducted.

students, but less so than other university systems in Latin America (Carlson, 1992).¹² Indeed,

the student driven model, with high tuition fees, partial vouchers and loans, has resulted in difficulties for lower income students in meeting the private costs of education. Chile has experimented with a student loan program, but this has not resolved equity problems since many students who are interested in studying in fields with low private returns are effectively denied access. (Covarrubias & González, 1991. Cited in Albrecht & Ziderman, 1992b: 48)¹³

In this paper section I will look at equity of access by using different approaches including percentage of youth (18-24 age cohort) from families in each SES quintile who attended at least some higher education, percentage of youth (18-24 year-old group) from families in each SES quintile attending higher education institutions by SES, and socio-economic background of 18-24 year olds attending higher education by type of institution and sector.

Table 3 contains the proportion of youth (18-24 year-old group) who had attended at least some higher education when the *CASEN* survey was conducted. Data reveal that the proportion of youth who attended some higher education across all quintiles grew, although to somewhat varying degrees. Indeed, while youth belonging to the top quintiles (4 & 5) were overrepresented (above 20.0 percent of higher education population) in the post-secondary system in the 1987-1998 period, youth from the low and middle income families were underrepresented, if we assume that to obtain perfect “equality” across all socio-economic groups each quintile should represent 20.0 percent of the higher education population.

By observing Table 3 it is feasible to conclude that youth across all socio-economic groups experienced a higher proportional participation in higher education in the 1987-1998 period, though the increase in percentage of youth participating in higher education was greater for the more economically advantaged groups. That is, during this

¹² Interviews with former government officials Raúl Allard (November 2000), Luis Eduardo González (December 2000) and current government official Carlos Velasco (November 2000). See also Osvaldo Larrañaga (1992, 1999) and Patricio Arriagada (1993).

¹³ For example, various former and current government officials and administrators of higher education institutions agree that the student loan scheme should have been open, from the beginning, to all students attending post-secondary institutions (universities, professional institutes and technical training centers). The student loan scheme, however, has always been reserved for those students enrolled in traditional publicly funded universities. Therefore, high school graduates from low or middle-income families wishing to attend technical training centers or professional institutes have found serious financial restrictions to enrollment (interviews with Eugenio Cáceres, November 2000; María Elvira Cornejo, December 2000; Rubén Covarrubias, November, 2000; Luis Eduardo González, December 2000; Luis Penna, November 2000; Joaquín Pernroz, November 2000); and Carlos Velasco, November 2000. In 1996 some technical training centers grouped in *CONIFOS* set up institutional student loans with similar characteristics to the university loan system (interview with Luis Penna, November 2000). One year later, in 1997, the Chilean government launched the *CORFO* loan system as an alternative financial mechanism to support students attending at the non-university level.

period, while the percentage of youth from low (quintile 1) and lower-middle (quintile 2) income families, having at least some higher education, moved up from 3.7 to 6.1 percent and from 5.5 to 11.5 percent, respectively, youth from middle income families (quintile 3) and upper-middle income families (quintile 4) increased their participation in higher education to a greater extent, going from 9.2 to 17.0 percent and from 20.0 to 31.5 percent, respectively. However, the largest increase in higher education participation was experienced by youth from upper income families, going from 44.6 to 58.8 percent in the period 1987-1998.

Table 3. Percentage of youth (18-24 year-old group) from families in each SES quintile who attended at least some higher education (but were out of the system), 1987-1998*

SES Quintile	Year					
	1987	1990	1992	1994	1996	1998
I	3.7	4.0	4.8	5.1	6.7	6.1
II	5.5	7.4	7.4	7.1	10.9	11.5
III	9.2	12.2	11.5	14.9	17.5	17.0
IV	20.0	22.1	21.3	28.2	31.7	31.5
V	44.6	41.5	40.3	51.2	57.7	58.8

* There are no data available before 1987.

Methodological explanation: This table was constructed using one of the components (youth between 18 and 24 years-old who were not attending higher education institutions when the survey was conducted) of the access variable found in Table 2A in Appendix 1.

Source: Personal elaboration based on *CASEN* household survey years 1987, 1990, 1992, 1994, 1996, and 1998.

Table 4 displays the level of current higher education attendance among youth (18-24 year-old group) by SES quintile. Data demonstrate that regardless of the higher education financing policies (improvement of criteria to allocate student loans and creation of new scholarship programs) implemented during the Aylwin and Frei administrations, strong inequalities prevailed in access to the higher education system by SES. In fact, while in the 1987-1998 period students from lower income families (quintile 1) increased their participation in the post-secondary system from 2.6 to 4.4, the proportion of students from wealthiest families (quintile 5) increased from 27.6 to 45.0,

respectively.¹⁴ This means that the proportion of higher education attendees by SES grew at different rates among students from poor and rich families. Similarly, between 1987 and 1998 students from lower-middle (quintile 2) and middle income (quintile 3) families increased their participation in the higher education system from 3.5 to 7.6 and 6.6 to 12.6, respectively.

Table 4. Percentage of 18-24 year olds from families in each SES quintile attending higher education institutions, 1987-1998*

SES Quintile	Year					
	1987	1990	1992	1994	1996	1998
I	2.6	3.0	3.6	3.9	5.1	4.4
II	3.5	5.0	4.7	4.9	8.0	7.6
III	6.6	8.2	7.7	10	12.4	12.6
IV	13.1	13.4	14.3	18.4	22.0	22.9
V	27.6	25.3	26.6	35.8	43.5	45.0

* There are no data available before 1987.

Methodological explanation: This table was constructed using one of the components (youth between 18 and 24 years-old who were attending higher education institutions when the survey was conducted) found in Table 2A in Appendix 1.

Source: Personal elaboration based on *CASEN* household survey years 1987, 1990, 1992, 1994, 1996, and 1998.

¹⁴ This unequal growth among socio-economic groups could be explained in part because most developing countries, including Chile, subsidize students from all socio-economic status. The result is that a large share of the benefits from such subsidy schemes tends to accrue to high-income families (see Jiménez, 1987). Colclough (1996), for instance, shows that in the late-1970s and early-1980s at the higher education level in almost all the countries analyzed (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Uruguay, Indonesia, and Malaysia) the richest groups (quintile 5) captured a disproportionate share of the subsidies varying between 34.0 percent in Uruguay to 83.0 percent in Indonesia, while the poorest 40.0 percent (quintile 1 & 2) of the population received only 2.0 percent in the case of Dominican Republic and 17.0 percent in the case of Argentina. In the case of Chile in the late-1980s the top 20.0 percent income group obtained 53.0 percent of public subsidies, while the bottom 20.0 percent only received 6.0 percent (Ministerio de Educación, 1998a).

Table 5 shows the distribution of students attending two types of higher education institutions by SES quintile. Most students from the upper-middle and upper income families are enrolled in universities. Even though the proportion of youth from richest families (quintile 4 and 5, constituting 40.0 percent of the population generally) enrolled in post-secondary institutions decreased slightly from 70.5 to 64.0 percent (mostly explained by the decline observed in quintile 5) in the period 1987-1998, these socio-economic groups remained overrepresented in the higher education population in comparison to those students belonging to the first three quintiles. In turn, students from low and lower-middle income families (quintile 1 and 2, representing 40.0 percent of the population generally) attending universities represented 13.7 and 19.0 percent of total enrollment in 1987 (during structural adjustment) and in 1998 (after adjustment), respectively.¹⁵ Nevertheless, the highest attendance of the poorest at the university level took place in 1996 when students coming from quintile 1 and 2 represented 19.5 percent of enrollment. Table 5 also demonstrates that attendance of middle class students (quintile 3, representing 20.0 percent of the population generally) increased to some extent between 1987 and 1998, moving from 15.8 to 17.0 percent, with the highest attendance taking place in 1990 when students from quintile 3 represented 17.9 percent of total enrollment at the university level.

At the non-university level (professional institutes and technical training centers) there were changes in the socio-economic distribution of students (18-24 year-old group) enrolled in the 1980s and 1990s. While the percentage of students in professional institutes and technical training centers¹⁶ from the poorest families (quintile 1 & 2) increased from 18.7 to 27.1 percent between 1987 and 1998, the percentage of these institutions' students from middle income (quintile 3) families also increased in the 1987-1998 period, moving from 19.3 to 24.4 percent. In contrast, the proportion of students attending professional institutes and technical training centers who were from the wealthiest (quintile 4 & 5) families declined from 62.0 to 48.5 percent in the 1987-1998 period (see Table 5).¹⁷

¹⁵ However, the proportion of students from low (quintile 1) and lower-middle (quintile 2) income families enrolled in various regional, publicly funded universities (e.g., Universidad Católica del Maule) approached 40.0 percent in the late-1990s (interview with María Elvira Cornejo, December, 2000).

¹⁶ A large percentage of students enrolled in technical training centers are workers who take classes in the evening after business hours (interview with Luis Penna, November 2000).

¹⁷ Even though former and current government officials had positive balances (not based in empirical data) about access by SES quintile at the non-university level with regard to those youth belonging to low and middle income families, these data confirm what they pointed out in the interviews in the sense that a higher proportion of working and middle class students were attending non-university institutions compared to the university level (interviews with Luis Eduardo González, December 2000; José León, November 2000; and Carlos Velasco, November, 2000).

Table 5. Socio-economic composition of students (18-24 year-old group) attending higher education by type of institution, 1987-1998 (Percentages)*

Type of Institution	Year	Quintile					Total**
		I	II	III	IV	V	
University	1987	6.1	7.6	15.8	26.5	44.0	100.0 (641)
	1990	6.9	11.7	17.9	23.0	40.4	100.0 (648)
	1992	8.3	11.3	15.1	25.6	39.7	100.0 (931)
	1994	7.7	10.5	16.7	25.4	39.7	100.0 (1,356)
	1996	7.6	11.9	17.0	24.9	38.6	100.0 (1,557)
	1998	7.2	11.8	17.0	26.4	37.6	100.0 (2,100)
Professional Institute & Technical Training Center	1987	6.5	12.2	19.3	33.0	29.0	100.0 (549)
	1990	6.3	14.7	24.8	27.8	26.4	100.0 (637)
	1992	11.3	15.1	24.1	29.3	20.2	100.0 (717)
	1994	12.5	13.6	22.9	28.0	23.0	100.0 (971)
	1996***	10.4	17.1	21.3	29.8	21.4	100.0 (813)
	1998***	9.0	18.1	24.4	29.0	19.5	100.0 (1,009)

* There are no data available before 1987.

** The total number of cases recorded in each *CASEN* survey is placed between parentheses in the last column.

*** In years 1996 and 1998 the Department of Evaluation and Monitoring at the Higher Education Division, Ministry of Education conducted a survey among students enrolled in technical training to determine the socio-economic condition of each. The results obtained in those surveys differ slightly from those presented in Table 8.5. In fact, surveys conducted by the Ministry of Education reveal that in the period 1996-1998 the proportion of low-income students (quintile 1 & 2) enrolled in this kind of institution represented 20.5 and 28.4 percent, respectively, while students belonging to upper-middle and upper income families (quintile 4 & 5) enrolled in technical training centers represented 60.5 and 49.8 percent of

enrollment at this sub-level (Ministerio de Educación, 1999b). These results differ to some extent from what I got through the analysis of *CASEN* surveys although showing a similar trend.

Methodological procedure: To make this table the 18-24 age group was filtered out in all *CASEN* databases used. Then databases were filtered out again by students who declared attendance at higher education institutions when the survey was conducted.

Source: Personal elaboration based on *CASEN* household survey years 1987, 1990, 1992, 1994, 1996, and 1998.

But how can we interpret these changes? The positive change in the socio-economic composition of youth attending higher education among students from low and middle income families can be explained by the implementation of higher education financing policies associated with student aid programs promoted by the Aylwin and Frei administrations. In this respect, new tuition scholarship programs, such as the Mineduc, the Repair and the Juan Gómez Millas Scholarship programs appear to have increased the access of economically disadvantaged and talented students to the higher education system. Certainly, thanks to the growing volume of resources allocated for tuition and non-tuition scholarship programs (see Espinoza 2002), poor students (quintile 1 & 2) have been encouraged to pursue higher education studies, especially during the 1990s.¹⁸ In addition, the changing socio-economic composition across all types of institutions has been facilitated by the expansion of the system dating from the 1981 reform. Indeed, the reform of 1981 has allowed both institutional and enrollment growth at the university and at the non-university level. Consequently, high school graduates across all socio-economic groups have had more chances to gain access to the post-secondary system, especially during the post-adjustment period.

Table 6 illustrates the socio-economic distribution of students (18-24 year-old group) pursuing higher education by kind of institution and sector in the 1990s. Data presented in Table 6 allows us to draw one general conclusion: the proportion of students enrolled in publicly and privately funded higher education institutions across all socio-economic groups did change, but not radically, in the 1990s. Indeed, the proportion of students attending publicly funded higher education institutions who were from the bottom quintiles (1 & 2) increased slightly from 19.3 percent in 1990 to 23.4 percent in 1996 and then declined to 22.3 percent in 1998. Conversely, the proportion of students attending publicly funded universities who were from the top quintiles (4 & 5) decreased from 60.9 percent in 1990 to 57.3 percent in 1996 and then rose to 59.1 percent in 1998 (see Table 6).

¹⁸ Although we do not have data before 1987 we can speculate that the low proportion of poor students (quintile 1 & 2) enrolled in universities, professional institutes and technical training centers in 1987 compared to that of subsequent years might be associated with three possible explanations: a) the negative effects caused by structural adjustment programs implemented in the 1980s in terms of income distribution, which mostly affected low and middle-income families; b) the non existence of tuition scholarships oriented towards these socio-economic groups; and c) programs offered in professional institutes and technical training centers were of low quality and unattractive.

The socio-economic composition of students attending privately funded higher education institutions (universities, professional institutes and technical training centers) also changed during the 1990s. As Table 6 portrays, students from the bottom quintiles (1 & 2) gradually increased their participation in privately funded post-secondary institutions, moving up from 18.8 to 19.9 percent between 1990 and 1996 and then to 20.8 percent in 1998. In contrast, the participation of students from the wealthiest families (quintile 4 & 5) in privately funded institutions decreased overall in the 1990-1996 period (from 59.3 to 58.9 percent), although in 1996 there was a temporary increase (62.9 percent) in the participation of these socio-economic groups.

4. Access to student aid programs: Loans and scholarships

In the debate over higher education financing policy in developing countries, the “equity” goal is frequently mentioned. To pursue this goal, governments intervene to improve “equity of access” to financial aid because students from low-income families do not have money to pay the full cost of higher education. Moreover, even if they were able to, low-income families tend to be more reluctant than high-income families to take the risk associated with financing post-secondary studies for their children. In the absence of offsetting government policy, there would be a strong tendency for personal/family (versus government) expenditure in both public and private higher education to be more common among children from high-income families.¹⁹

Table 6. Socio-economic composition of students (18-24 year-old group) attending higher education by type of institution and sector, 1990-1998 (Percentages)*

Type of Institution	Year	Quintile					Total**
		I	II	III	IV	V	
Publicly funded higher education institutions (Traditional universities)	1990	7.4	11.9	19.8	24.6	36.3	100.0 (595)

¹⁹ In this regard, country case studies (see, for example, Fried & Abuhadba, 1991, Fuentes, 1998, and Larrañaga, 1992, for Chile; Navarro, 1991 for Venezuela; James, 1991, for Philippines; de Mello e Souza, 1991 for Brazil) provide strong evidence for the fact that many developing countries through public funding of higher education facilitate the access to post-secondary institutions for students from high-income families (quintile 4 & 5) who are disproportionately represented in the tertiary educational level given their percentage in the overall population and their representativeness among secondary school graduates.

Privately funded higher education institutions (Universities, professional institutes and technical training centers)		5.6	13.2	21.9	26.6	32.7	100.0 (608)
Publicly funded higher education institutions (Traditional universities)	1996	9.2	14.2	19.3	24.1	33.2	100.0 (1,172)
Privately funded higher education institutions (Universities, professional institutes and technical training centers)		7.8	12.1	17.2	29.4	33.5	100.0 (1,073)
Publicly funded higher education institutions (Traditional universities)	1998	8.4	13.9	18.6	28.1	31.0	100.0 (1,512)
Privately funded higher education institutions (Universities, professional institutes and technical training centers)		7.1	13.7	20.3	26.2	32.7	100.0 (1,567)

* There are no data available before 1990. *CASEN* surveys conducted in year 1992 and 1994 did not record this information.

** The total number of cases recorded in each *CASEN* survey is placed between parentheses in the last column.

Source: Personal elaboration based on *CASEN* surveys year 1990, 1996, and 1998.

In 1998 the Chilean government negotiated a loan agreement with the World Bank to implement the Higher Education Improvement Project (*Mejoramiento de la Calidad y Equidad de la Educación Superior, MECESUP*).²⁰ In the proposal submitted to the Bank by the Chilean government, the Ministerio de Educación (1998a: 5) recognized that the lack of efficient mechanisms to support academically qualified but financially needy students is producing inequitable access to the higher education system across socio-economic groups. For instance, in the late-1990s, although 45.0 percent of students received financial aid, 55.0 percent of those receiving aid were from families in the upper (third and fourth quintile of income distribution). However, World Bank's experts along with Chilean government officials have predicted that as a result of the implementation of the *MECESUP* project the number of students from families in quintiles 1-3 receiving

²⁰ The *MECESUP* (1998-2003) is a five-year project co-funded by the World Bank and the Chilean government.

financial assistance will increase from 58,000 (in 1997) to 69,000 (in 2000) and to 76,000 (in 2003) (Ministerio de Educación, 1998a: 17).

In the following part of the paper we attempt to evaluate the impact that higher education financing policies implemented in Chile by the Pinochet, Aylwin and Frei administrations had in terms of access to financial aid. To this end, attention will be given to access of different socio-economic groups to various student aid programs.²¹ Specifically, the analysis will focus on the university loan program, the Mineduc Scholarship Program and other tuition and non-tuition scholarship programs. These student aid programs have been selected for two reasons: a) they have more tradition (oldest programs) and b) there are more comprehensive data to analyse them compared to other student aid programs launched in the late-1990s.

4.1 Loan recipients enrolled in publicly funded universities by family per capita income, 1987-1996²²

There are two facts associated with the higher education policies enacted and implemented in the Pinochet, Aylwin and Frei administrations that need to be considered when analyzing the changes observed in the socio-economic composition of students granted and not granted university loans. First, the student loan scheme was legally reformed in 1987 and 1994. With the first modification made to the University Loan System in 1987 the Pinochet government tried to improve loan recovery among graduates which was below government expectations. With the second modification introduced to the student loan scheme in 1994 the Frei administration attempted to correct deficiencies observed in the allocation of university loans across socio-economic groups. The new funding mechanism, called *Fondo Solidario de Crédito Universitario*, started operating in 1995. The main purpose of the new university loan scheme would be to allocate resources based on stricter socio-economic criteria in order to benefit economically disadvantaged students wishing to pursue higher education studies.²³ Second, the

²¹ After the 1981 reform, university loans and most of the scholarships granted by the Ministry of Education of Chile (e.g., the Mineduc Scholarship Program started in 1991 by the Aylwin administration; the Juan Gómez Millas Scholarship Program started in 1998 under the auspices of the Frei government; and the Repair Program created in 1992, which is a social equity program that awards fellowships for children of the victims of human rights violations) and the Ministry of Governance (i.e., the President of the Republic Scholarship Program awarded since 1981) have allowed students across socio-economic groups pursuing higher education studies to finance totally or partially the costs of their programs, including tuition costs and enrollment fees.

²² Data on access to university loans by SES quintile was restricted to the 1987-1996 period since *CASEN* databases for 1985 and 1998 did not record these data.

²³ From an equity point of view allocation of university loans has been strongly criticized in Chile because university administrators do not adopt rigorous socio-economic criteria when allocating this financial aid (interview with Luz Muñoz and María Elvira Cornejo, December 2000). Luz Muñoz, for example, argues that many university students take 7, 8 or more years to graduate when their career programs should take on average 5 years. Consequently, granting aid to students who spend excessive time in obtaining a degree would go against “efficiency” and “equity” principles (interview with Luz Muñoz, December 2000). However, Muñoz ignores the fact that students who spend more time completing their programs are often youth with serious economic restrictions.

proportion of students receiving and not receiving university loans was also affected by the creation of new tuition scholarship programs during the 1990s (e.g., Mineduc, Repair, Indigenous, Teacher Education, and Juan Gómez Millas scholarship programs).

As Table 7 illustrates, in the 1987-1996 period for all socio-economic quintiles (except quintile 5) there was a similar decline (approximately 40.0 percent) in the percentage of students enrolled in traditional publicly funded universities receiving loans.²⁴ Specifically, data reveal that between 1987 and 1996 the percentage of students receiving university loans by SES quintile decreased from 84.6 to 39.8 (for quintile 1), from 81.6 to 38.4 (for quintile 2), from 83.1 to 33.6 (for quintile 3), from 68.2 to 27.8 (for quintile 4), and from 38.3 to 13.6 (for quintile 5).²⁵ In other words, students from all socio-economic groups lost access to university loans in the 1987-1996 period. Even though the difference of loan recipients across all social groups has been reduced, policies have been regressive, in part, because the proportion of students from the fifth quintile who received loans did not change too much during the 1990s.²⁶

²⁴ Regardless of the Frei administration's efforts to increase the level of resources allocated to the Student Loan Program in the late-1990s, there have been numerous conflicts between the Ministry of Education and students enrolled in traditional universities because available funds for university loans have been insufficient to satisfy the growing demand. In 1992, 72.8 percent of the students requesting a university loan received it (Cáceres & Chávez, 1995). Six years later, in 1998, 47.4 percent of students enrolled in traditional universities were studying with university loans (Ministerio de Educación, 1998c). Moreover, the proportion of tuition costs covered by university loans decreased dramatically between 1986 and 1992. Indeed, while in 1986 35.2 percent of loan recipients could cover 100.0 percent of tuition costs and 18.4 percent of loan recipients were able to cover less than 50.0 percent of tuition costs, in 1992 just 11.7 percent of recipients could pay the whole cost of tuition (100.0 percent) thanks to the student loan fund and 32.4 percent of recipients could pay less than 50.0 percent of the cost of tuition (Fried & Abuhadba, 1991; Salamanca, 1999). This decrease in the proportion of tuition costs covered by university loans must be associated with the new student aid policy promoted by the Aylwin administration which involved the creation of new scholarship programs. As a result, part of the resources allocated towards the university loan fund was reallocated into the new scholarship programs, and particularly, in the Mineduc Scholarship Program. Additionally, it has been recognized that various regional publicly funded universities (e.g., Universidad Católica del Maule), due to the lack of resources available, usually grant student loans covering up to 80.0 percent of tuition costs (interview with María Elvira Cornejo, December 2000).

²⁵ There is consensus among former and current government officials as well as university administrators that, in the mid- and late-1990s as a result of the implementation of the unique socio-economic accreditation application form (*Formulario Unico de Acreditación Socio-Económica, FUAS*), student loans were granted in a more appropriate way among middle and working class students (interviews with Raúl Allard, November, 2000; Alfonso Muga, December 2000; Luz Muñoz, December 2000). Nevertheless, according to various interviewees, middle income students have had serious restrictions to obtaining loans because the new student loan scheme set up as of 1995 (*Fondos Solidarios de Crédito Universitario*) has been mostly targeted towards low-income students attending traditional publicly funded universities (interviews with Raúl Allard, November 2000; María Elvira Cornejo, December 2000; Luis Eduardo González, December 2000; Alfonso Muga, December, 2000; Luz Muñoz, December 2000).

²⁶ The high proportion of upper-middle (quintile 4) and upper income (quintile 5) students receiving loans in the period 1987-1996 could be explained because most of them were probably attending the most prestigious traditional publicly funded universities and within this kind of institution they were enrolled in liberal careers (e.g., Medicine, Law and Engineering). It is well known that liberal careers have high private rates of return, which give more guarantees to administrators in terms of loan recovery. Given this, university administrators use to grant loans to students from the top quintiles (4 & 5) enrolled in liberal careers because in this way they might easily recover the funds and then reallocate those resources to new students requesting financial aid.

Table 7. Proportion of students (18-24 year-old group) enrolled in traditional publicly funded universities from families of different SES quintiles who were granted or were not granted student loans, 1987-1996*

Year		Quintile				
		I	II	III	IV	V
1987	Not recipients	12.8	14.3	14.9	31.2	59.6
	Recipients	84.6	81.6	83.1	68.2	38.3
	N/A	2.6	4.1	2.0	0.6	2.1
	Total**	100.0 (39)	100.0 (49)	100.0 (101)	100.0 (170)	100.0 (282)
1990	Not recipients	11.4	20.5	21.6	29.8	46.7
	Recipients	77.3	67.1	54.1	52.5	28.6
	N/A	11.4	12.4	24.3	17.7	24.8
	Total**	100.0 (44)	100.0 (73)	100 (111)	100.0 (141)	100.0 (210)
1992	Not recipients	44.2	35.2	51.8	58.4	81.9
	Recipients	53.2	64.8	48.2	41.6	17.6
	N/A	2.6	0.0	0.0	0.0	0.5
	Total**	100.0 (77)	100.0 (105)	100.0 (141)	100.0 (238)	100.0 (370)
1994	Not recipients	50.5	45.8	46.5	60.5	85.0
	Recipients	49.5	53.5	53.5	39.5	15.0
	N/A	0.0	0.7	0.0	0.0	0.0
	Total**	100.0 (105)	100.0 (142)	100.0 (226)	100.0 (344)	100.0 (539)

1996	Not recipients	60.1	61.6	66.4	72.1	86.4
	Recipients	39.8	38.4	33.6	27.8	13.6
	N/A	0.1	0.0	0.0	0.1	0.0
	Total**	100.0 (116)	100.0 (185)	100.0 (265)	100.0 (388)	100.0 (601)

N/A = Not available because youth surveyed did not answer the survey question. Some caution should be considered in comparing data for 1990 with other years given that the high proportion of youth surveyed who did not answer the survey question affects the recipients and not recipients' percentages.

* There are no data available before 1987 and after 1996.

** Total contains percentages and number of cases recorded in each *CASEN* survey.

Source: Personal elaboration based on *CASEN* household survey years 1987, 1990, 1992, 1994, and 1996.

A general explanation of the above trends can be stated. A growing number of poor students who did not obtain university loans after 1990 may have received tuition and/or non-tuition scholarships. In effect, as a result of the new student aid policy promoted and implemented during the Aylwin and Frei administrations, new scholarship programs created after 1991 helped to favor access of talented, but economically disadvantaged students (see evidence in Tables 9 and 10).²⁷

4.2 Scholarship recipients enrolled in higher education institutions by SES quintile, 1992-1997²⁸

Table 8 shows the percentage of students of different socio-economic groups who received or did not receive tuition and non-tuition scholarships. A quick look at Table 8 allows us to conclude that there have been relatively small changes in different directions in the distribution of Mineduc scholarships (among youth between 18 and 24 years old)²⁹

²⁷ Aylwin's and Frei's agenda gave priority to new scholarship programs and to that purpose those administrations allocated resources preferentially to this instrument instead of increasing resource allocation to strengthen the university loan fund (see Espinoza, 2002).

²⁸ Data on access to scholarship programs by SES quintile was available for the 1992-1997 period. Unfortunately, there are no data either in primary or secondary sources to determine students' access to tuition and non-tuition scholarships by SES quintile before 1992 and after 1997.

²⁹ Created in 1991 the Mineduc Scholarship Program was supposed to finance at the beginning roughly 4,000 students a year at nearly US\$1,000 per student with the idea to increase the number of students granted to about 20,000 per year by 1995 (Albrecht & Ziderman, 1992b). In 1998, 19,729 students enrolled in traditional publicly funded universities were awarded with the Mineduc scholarship out of a total of 37,000 applicants (Ministerio de Educación, 1998c). Thanks to the Mineduc scholarship 32.6 percent of

across socio-economic groups during the 1990s. On the one hand, the socio-economic composition of the poorest (quintile 1) and richest students (quintile 5) attending traditional universities who received Mineduc scholarships presents an overall decrease, declining from 11.7 to 9.3 percent and from 1.6 to 1.0 percent, respectively, in the 1992-1996 period. In contrast, between 1992 and 1996 the percentage of students from lower-middle (quintile 2) and middle (quintile 3) income families who received Mineduc scholarships increased from 5.7 to 9.7 percent and from 3.5 to 6.8 percent, respectively. The percentage of students from upper-middle income (quintile 4) families who received Mineduc scholarships also increased between 1992 and 1996 (from 3.8 to 4.6 percent), even though this merit-based scholarship was supposed to help needy students with academic merit.³⁰ In other words, unlike what happened with the poorest (quintile 1) and richest (quintile 5) students, in the 1992-1996 period there was an overall slight increase in the percentage of students belonging to quintile 2, 3, and 4 receiving Mineduc scholarships.

Table 8 also contains data about the percentage of students from different socio-economic groups who received other tuition (Repair Program, Indigenous Program) and non-tuition (President of the Republic³¹) scholarships. In contrast to the case of the Mineduc Scholarship Program, these other tuition and non-tuition scholarship programs served a growing percentage of needy students during the 1990s.³² Data reveal that

students from families in quintiles 1, 2 and 3 were somewhat more likely to receive other

awardees in 1998 could cover between 80.0 and 100.0 percent of tuition costs and 17.7 percent of awardees could cover less than 40.0 percent of tuition costs (Ministerio de Hacienda, 1999a).

³⁰ But access to any kind of tuition scholarship does not guarantee perseverance or in the best case getting a degree in higher education. As Cáceres and Chávez (1995) highlight, based on the analysis of nine traditional universities, in the case of the Mineduc Scholarship Program about 50.0 percent of recipients lost this award after holding it one year. Certainly, this phenomenon would suggest three things: a) high school graduates (from low-income families) attending traditional universities are not well prepared to respond to the academic requirements imposed by higher education institutions; b) the Mineduc scholarship would not guarantee perseverance since poorest students receiving this award do not have money to cover minimum needs, such as transportation, meals, photocopies and books; and c) academic indicators (e.g., *PAA* scores and higher education grades) used to award the Mineduc scholarship would not be good parameters to allocate this financial aid. Therefore, merit and need should be considered when allocating this financial aid.

³¹ This non-tuition scholarship program represents a valuable source for poor talented students wishing to attend any kind of higher education institution (e.g., university, professional institute or technical training center), while the Mineduc Scholarship Program and the University Loan Program require being accepted or enrolled in one of the twenty-five traditional publicly funded universities to be eligible. Therefore, students wishing to attend professional institutes and or technical training centers are not eligible to apply for the Mineduc scholarship and or university loans.

³² In the 1995-1998 period the President of the Republic Scholarship Program was awarded to around 6,000 students a year. While in 1995 the President of the Republic Scholarship Program was awarded to 43.0 percent of applicants, in 1998 65.0 percent of applicants got this non-tuition scholarship. While in 1995 76.1 percent of recipients was enrolled in universities, 4.0 percent in professional institutes and 19.9 percent in technical training centers, in 1998 the proportion of recipients enrolled in post-secondary institutions was 76.1 percent in universities, 5.9 percent in professional institutes and 17.9 percent in technical training centers (Ministerio de Hacienda, 1999b). By processing and analyzing the 1996 *CASEN* database it is feasible to conclude that in 1996, 11.7 and 7.1 percent of students enrolled in post-secondary institutions having the President of the Republic Scholarship came from quintile 1 and 2, while 1.4 and 1.3 percent belonged to quintile 4 and 5, respectively.

Table 8. Percentage of higher education attendees (18-24 year-old group) who received or did not receive scholarships by SES quintile, 1992-1997*

Scholarship Program	Year		Quintile				
			I	II	III	IV	V
Mineduc	1992	Not recipients	85.7	94.3	96.5	96.2	98.1
		Recipients	11.7	5.7	3.5	3.8	1.6
		N/A	2.6	0.0	0.0	0.0	0.3
		Total**	100.0 (77)	100.0 (105)	100.0 (141)	100.0 (238)	100.0 (370)
	1994	Not recipients	97.1	90.1	95.6	95.9	98.7
		Recipients	2.9*****	9.2	4.4	4.1	1.3
		N/A	0.0	0.7	0.0	0.0	0.0
		Total**	100.0 (105)	100.0 (142)	100.0 (226)	100.0 (344)	100.0 (539)
	1996	Not recipients	90.7	90.3	93.2	95.4	99.0
		Recipients	9.3	9.7	6.8	4.6	1.0
		N/A	0.0	0.0	0.0	0.0	0.0
		Total**	100.0 (118)	100.0 (185)	100.0 (265)	100.0 (388)	100.0 (601)
	1994	Not recipients	85.4	90.5	91.7	91.4	95.8

Other scholarships ***		Recipients	14.6	9.1	8.3	8.6	4.2
		N/A	0.0	0.4	0.0	0.0	0.0
		Total**	100.0 (226)	100.0 (274)	100.0 (448)	100.0 (617)	(100.0) 762
	1996	Not recipients	80.8	88.3	89.5	94.0	96.2
		Recipients	18.7	11.7	10.5	5.7	3.8
		N/A	0.5	0.0	0.0	0.3	0.0
		Total**	100.0 (203)	100.0 (324)	100.0 (438)	100.0 (630)	100.0 (775)

N/A = Not available because youth surveyed did not answer the survey question.

* There are no data available before 1992 and after 1997. Data for the 1992-1996 period are based on *CASEN* databases.

** The total number of cases recorded in each *CASEN* survey is highlighted between parentheses in the last row of each year.

*** Includes President of the Republic Scholarships, Scholarships for youth with indigenous background, Compensation scholarships for youth whose parents were victims of human rights violations and youth who were sanctioned or expelled from higher education institutions during the Pinochet administration.

**** Probably an error in the data contained in the database originated this result for quintile 1 in 1994 which is not reliable.

Source: Personal elaboration based on *CASEN* surveys years 1992, 1994, and 1996.

tuition and non-tuition scholarships in 1996 than in 1994.³³ In turn, the percentage of students in quintiles 4 and 5 who received other tuition and non-tuition scholarships decreased between 1994 and 1996 (Table 8). This modest change in the socio-economic composition of students awarded tuition and non-tuition scholarship programs demonstrates although not very strongly the Aylwin and Frei governments' stated

³³ We must be cautious with data from 1994 because the *CASEN* survey contains aggregate information regarding access to the President of the Republic Scholarship, the Repair Program and Scholarships for youth with indigenous backgrounds. Although for the year 1994 there is no possibility of determining the precise proportion of youth being awarded the President of the Republic Scholarship by socio-economic status, given that the other two programs are much less relevant in terms of resource allocation and number of scholarships awarded every year, it is assumed that data for 1994 is reliable enough to interpret it as part of the analysis.

intention of awarding talented students with financial problems. However, data also allow us to conclude that there was misallocation of resources given that a significant percentage of students from upper-middle and upper income families received scholarships even though this aid was supposed to be granted to talented but economically disadvantaged students.

4.3 Recipients of loans and scholarships enrolled in higher education institutions by family per capita income, 1992-1996

Table 9 presents the percentage of students from families of different SES levels enrolled in higher education institutions who received loans and scholarships. We can observe that access to student loans and scholarships changed significantly among low and middle-income students enrolled in post-secondary institutions during the 1990s. The percentage of students who were granted loans and/or scholarships increased between 1992 and 1996 from 32.3 to 47.8 (for quintile 1), from 38.1 to 39.2 (for quintile 2), and from 24.8 to 34.9 (for quintile 3). In contrast, the proportion of students from high-income families receiving loans decreased slightly from 26.1 to 26.0 (for quintile 4) and from 15.4 to 15.2 (for quintile 5).

Certainly, during the 1990s important progress was made in providing access to loans and scholarships. But, evidence also demonstrates that a high percentage of higher education attendants from the low, lower-middle, and middle-income families still do not receive loans and/or scholarships. Indeed, the percentage of students who did not receive loans and/or scholarships decreased between 1992 and 1996 from 67.7 to 52.2 (for quintile 1), from 62.0 to 60.8 (for quintile 2), and from 75.2 to 65.1 (for quintile 3), but increased from 73.9 to 74.0 (for quintile 4), and from 84.6 to 84.8 (for quintile 5) during the same period. Thus, data illustrate that a substantial proportion (more than 50.0 percent) of students from the poorest groups (quintile 1 and 2) and from middle class (quintile 3) could not obtain loans and/or scholarships either in 1992 or in 1996. Data also reveal that a significant proportion of students from wealthiest families (quintiles 4 and 5) continued receiving loans and/or scholarships, even though rhetorically stated policy goals in this regard were aimed at allocating resources to other socio-economic groups (see Table 9).

In addition to the above-reported analyses of the *CASEN* databases, another useful source to analyze access to financial aid (loans and scholarships) by students from different socio-economic groups in the 1996-1998 period comes from the Ministry of Education.³⁴ Table 10 displays the percentage of freshmen students from different SES quintiles who received student aid (loans and/or scholarships).³⁵ Between 1996 and 1998 there was a positive change in the proportion of recipients of university loans and/or scholarships by SES quintile, especially among students representing the poorest groups

³⁴ Databases managed by the Ministry of Education of Chile contain data for all freshmen students enrolled in publicly funded universities having university loan and/or scholarship by socio-economic group.

³⁵ Approximately 50.0 percent of freshmen students enrolled in publicly funded universities obtained student aid (loans and/or scholarships) between 1996 and 1998 (Salamanca, 1999).

(quintile 1 and 2). Indeed, the percentage of freshmen students who received financial aid (loans and/or scholarships) increased between 1996 and 1998 from 12.7 to 26.3 (for quintile 1) and from 21.6 to 26.9 (for quintile 2). In contrast, the percentage of freshmen from middle (quintile 3), upper-middle (quintile 4) and upper (quintile 5) income family groups who received financial aid decreased between 1996 and 1998 from 28.3 to 27.4, from 28.9 to 17.2, and from 8.5 to 2.2, respectively (see Table 10).

Table 9. Percentage of students enrolled in higher education institutions who received loans and scholarships by family per capita income, 1992-1996*

Year	Student aid	Quintile				
		I	II	III	IV	V
1992	Loans	18.4	25.4	19.1	19.8	11.7
	Scholarships**	13.9	12.7	5.7	6.3	3.7
	Without student aid	67.7	62.0	75.2	73.9	84.6
	Total***	100.0 (158)	100.0 (213)	100.0 (314)	100.0 (448)	100.0 (515)
1994	Loans	16.8	20.8	21.7	18.2	9.3
	Scholarships**	16.4	14.2	10.5	10.5	5.0
	Without student aid	66.8	65.0	67.8	71.3	85.7
	Total***	100.0 (226)	100.0 (274)	100.0 (448)	100.0 (617)	100.0 (762)
1996	Loans	23.2	21.9	20.3	17.1	10.6
	Scholarships**	24.6	17.3	14.6	8.9	4.6
	Without student aid	52.2	60.8	65.1	74.0	84.8

	Total***	100.0 (203)	100.0 (324)	100.0 (438)	100.0 (630)	100.0 (775)
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* There are no data available before 1992 and after 1996.

** Includes the following scholarship programs: Mineduc, President of the Republic, Repair, and Indigenous.

*** The total number of cases recorded in each *CASEN* survey is highlighted between parentheses in the last row of each year.

Source: Personal elaboration based on *CASEN* surveys years 1992, 1994, and 1996.

The above-observed changes in the socio-economic composition of freshmen students accessing financial aid in the 1990s suggests some progress as a consequence of the Aylwin and Frei governments' efforts to reallocate resources towards needy students requesting aid. This change might also be associated with the new student loan scheme (*Fondos Solidarios de Crédito Universitario*), which was legally set up by the Frei government in 1994 and put into effect in 1995, and with the new scholarship programs created in 1998 (the Juan Gómez Millas and the Teacher Education Scholarship Programs). These changes could also be associated with enrollment increases and with the percentage of students in each quintile receiving financial aid.

Table 10. Percentage of freshmen enrolled in publicly funded universities who received student aid (loan and/or scholarship) by family per capita income, 1996-1998

Year	Quintile					Total*
	I	II	III	IV	V	
1996	12.7	21.6	28.3	28.9	8.5	100.0 (19,207)
1997	15.2	24.7	29.1	25.7	5.3	100.0 (19,150)
1998	26.3	26.9	27.4	17.2	2.2	100.0 (20,674)

* The total number of cases recorded in each database of the Ministry of Education is placed between parentheses in the last column.

Source: Ministerio de Educación, División de Educación Superior (1996, 1998d, 1999c).

Finally, we would like to highlight that even though the proportion of freshmen students obtaining access to financial aid grew among students from the bottom quintiles (1 & 2) during the 1990s, resources allocated to student loan and scholarship programs were not sufficient to grant aid to all economically disadvantaged students (quintile 1 & 2) who requested this aid and were attending traditional universities. In effect, while 783 applicants from quintiles 1 and 2 (equivalent to 9.1 percent of applicants) out of a total of 8,430 freshmen enrolled in publicly funded universities asking for student aid (loans and/or scholarships) did not receive student aid in 1997, 1,053 applicants from quintiles 1 and 2 (equivalent to 8.7 percent of applicants) out of a total of 12,059 applicants demanding financial aid did not receive it in 1998 (Ministerio de Educación, 1998d, 1999c).

5. Final Remarks

In this paper we have examined how higher education financing policies implemented by the Pinochet, the Aylwin and the Frei administration have affected both access to the post-secondary institutions and access to financial aid (loans and/or scholarships) by socio-economic group. Regarding access to the post-secondary system, we might conclude that as a direct consequence of the 1981 reform there was an important enrollment growth in the higher education system (at the university and at the non-university level), especially in privately controlled and funded institutions during the 1980s and 1990s. Equally, gross enrollment (within the 18-24 age cohort) at the higher education level tripled in the 1980-1998 period. However, while the proportions of students from all socio-economic backgrounds attending higher education institutions gradually increased between 1987 and 1998, students enrolled in post-secondary institutions from quintile 4 and 5 remain definitely over-represented in comparison to those youth from quintile 1, 2 and 3. Consequently, data reflect that strong social inequalities across socio-economic groups still persist in access to post-secondary education despite increased participation observed across all socio-economic groups and regardless of student aid policies promoted by the Aylwin and Frei administrations in the 1990s.

If we analyze the socio-economic composition of students attending higher education by type of institution (universities v/s professional institutes and technical training centers), then we could draw two general conclusions. First, universities enrolled a growing proportion (slight increase) of students representing the first three quintiles in the late-1990s compared to that of 1987, when structural adjustment was still being carried out, while students from upper-income families (quintile 5) decreased their participation in this type of institutions during the 1990s. Second, the proportion of 18-24 year olds from upper-middle and upper income families attending non-university institutions (professional institutes and technical training centers) decreased substantially during the 1987-1998 period, while youth from the first two quintiles gradually increased their participation in professional institutes and technical training centers in the 1987-1998 period.

But if our analysis considers access to higher education by type of institution and sector, then we might be able to conclude that the socio-economic composition of students attending publicly and privately funded post-secondary institutions (universities and professional institutes/technical training centers) did change, but not significantly, between 1990 and 1998. While the proportion of students from quintiles 1, 2 & 4 increased slightly in publicly funded universities between 1990 and 1998, students from quintiles 3 and 5 decreased to some extent their participation in this type of institutions. In the case of students attending privately funded and controlled institutions (universities, professional institutes and technical training centers) we conclude that between 1990 and 1998 the proportion of students from the poorest families (quintile 1 & 2) increased their attendance in these types of institutions, while students from quintiles 3 and 4 decreased somewhat their participation. The proportion of youth from the wealthiest families (quintile 5) who attended private post-secondary institutions did not change at all between 1990 and 1998.

Regarding access to student aid programs (university loans and/or scholarships) by different socio-economic groups there were important changes that took place between the late-1980s and mid-1990s, when adjustment and post-adjustment programs were put into effect. For example, the proportion of loan recipients among 18-24 year olds attending publicly funded universities from all socio-economic groups, particularly those from the first four quintiles, decreased dramatically in the period 1987-1996. This resulted at least in part because the Aylwin and Frei administrations decided to shift part of the resources allocated to student aid programs from the student loan fund to the new scholarship programs launched in the 1990s. But if our analysis considers the proportion of all students enrolled in publicly and privately funded higher education institutions who received loans and/or scholarships then we would be able to conclude that access to this financial aid has been improving among needy students (quintile 1-3) during the 1992-1996 period. Nevertheless, since student loans are supposed to be granted to students with financial problems, data reflect that loan distribution (including mechanisms and procedures of selection) still do not achieve the stated policy goal sought by the Chilean government through this kind of financial scheme.

The proportion of students by SES getting access to tuition and non-tuition scholarships also changed during the 1990s. For example, when evaluating access to the Mineduc Scholarship Program by poorest students (quintile 1) data show an overall decrease in the percentage of recipients in the 1992-1996 period. In contrast, students from lower-middle (quintile 2), middle (quintile 3) and upper-middle (quintile 4) income families became more likely to receive Mineduc scholarships in the mid-1990s, although middle class students (quintile 3) experienced the most important growth in 1996 compared to that of 1992.

Access to other scholarship programs (President of the Republic, Repair and Indigenous) has been definitely more beneficial for poor and middle class students than the Mineduc Scholarship Program. Indeed, such other scholarship programs have awarded a growing percentage of economically disadvantaged students (quintile 1, 2 and 3) between 1994 and 1996.

More generally, even though funding for the poorer students through substantially expanded and more flexible loan schemes and scholarships has been one of the main targets of the Aylwin and the Frei governments' policies for higher education, there still remain strong inequalities in access to student aid, especially with regard to university loans and the Mineduc Scholarship Program. In effect, there is still a large number of students from quintile 1, 2 and 3, either in university or non-university institutions of higher education, who are supposed to be potential recipients of student aid in any targeted policy/program seeking to promote equity of access, but who do not have access to financial aid.³⁶ In the final chapter we will draw this study's main conclusions as well as some policy implications and policy recommendations derived from the findings.

³⁶ The *MECESUP* project, for example, recognizes that students from low-income families often attend the lower tier (technical training centers) at relatively high costs, given that these institutions do not receive public funding (Ministerio de Educación, 1998a). Therefore, the Chilean government assumed in the late-1990s a new commitment to this socio-economic segment of the higher education population which became reality with the creation of the Millennium Scholarship Program in year 2000.

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APPENDIX 1

Table 1A. Enrollment growth in higher education in various Latin American countries

Country	Enrollment in public higher education institutions	Enrollment in private higher education institutions	Total enrollment in higher education institutions
Argentina			
1983	439,195 (75.6%)	141,431 (24.4%)	580,626 (100.0%)
1994	840,241 (80.0%)	213,904 (20.0%)	1,054.145 (100.0%)
Brazil			
1970	215,077 (47.2%)	241,057 (52.8%)	456,134 (100.0%)
1986	577,632 (40.7%)	840,564 (59.3%)	1,418.196 (100.0%)
1994	690.432 (41.6%)	970,602 (58.4%)	1,661.034 (100.0%)
Colombia			
1959	12,317 (60.0%)	8,217 (40.0%)	20,534 (100.0%)
1988	186,483 (40.7%)	271,351 (59.3%)	457,834 (100.0%)
1993	201,232 (35.9%)	359,991 (64.1%)	561,223 (100.0%)
Mexico			
1970	184,666 (86.7%)	28,215 (13.3%)	212,881 (100.0%)
1980	633,987 (86.7%)	97,304 (13.3%)	731,291 (100.0%)
1994	975,100 (74.8%)	329,047 (25.2%)	1,304.147 (100.0%)

Source: Personal elaboration based on Boaventura (1981), Cano (1985), Franco (1991), García (1997), Gusso (1990) and Kent (1993).

Table 2A. Access to higher education (18-24 year-old group) by SES quintile,
1987-1998 (Percentages)

Year	Access	Quintile				
		I	II	III	IV	V
1987	1) No attending higher education	96.3	94.5	90.8	80.0	55.4
	2) Attending higher education	2.6	3.5	6.6	13.1	27.6
	3) Graduated from higher education	0.4	0.6	1.2	2.4	7.8
	4) Drop-out from higher education	0.7	1.4	1.4	4.5	9.2
	Total	100.0	100.0	100.0	100.0	100.0
1990	1) No attending higher education	96.0	92.6	87.8	77.9	58.5
	2) Attending higher education	3.0	5.0	8.2	13.4	25.3
	3) Graduated from higher education	0.5	1.5	2.6	5.6	10.9
	4) Drop-out from higher education	0.5	0.9	1.4	3.1	5.3
	Total	100.0	100.0	100.0	100.0	100.0
1992	1) No attending higher education	95.2	92.7	88.5	78.7	59.7
	2) Attending higher education	3.6	4.7	7.7	14.3	26.6
	3) Graduated from higher education	0.5	1.5	2.2	4.7	9.5
	4) Drop-out from higher education	0.7	1.1	1.6	2.3	4.2
	Total	100.0	100.0	100.0	100.0	100.0
1994	1) No attending higher education	95.0	92.9	85.2	71.8	48.8
	2) Attending higher education	3.9	4.9	10.0	18.4	35.8

	3) Graduated from higher education	0.6	1.3	2.8	6.5	11.1
	4) Drop-out from higher education	0.5	0.9	2.0	3.3	4.3
	Total	100.0	100.0	100.0	100.0	100.0
1996	1) No attending higher education	93.3	89.1	82.4	68.3	42.3
	2) Attending higher education	5.1	8.0	12.4	22.2	43.5
	3) Graduated from higher education	0.8	1.5	3.0	5.6	9.2
	4) Drop-out from higher education	0.8	1.4	2.2	3.9	5.0
	Total	100.0	100.0	100.0	100.0	100.0
1998	1) No attending higher education	94.0	89.5	83.0	68.5	41.2
	2) Attending higher education	4.4	7.6	12.6	22.9	45.0
	3) Graduated from higher education	0.9	1.6	2.7	5.1	9.5
	4) Drop-out from higher education	0.7	1.3	1.7	3.5	4.3
	Total	100.0	100.0	100.0	100.0	100.0

Methodological explanation: Even though the variable "access" does not exist in the *CASEN* databases this proxy variable was created on the basis of information provided by *CASEN* databases. The variable "access" includes four categories: (1) Youth between 18 and 24 year-old attending higher education institutions at the moment the survey was being carried out; (2) youth between 18 and 24 year-old who were no attending higher education institutions at the moment the survey was being carried out; (3) youth between 18 and 24 year-old graduated from higher education institutions; and (4) drop-out from the higher education system. Therefore, it is assumed that "access" involves current educational experience (attendance to some higher education institution) and highest level of educational attainment which implies to quantify the proportion of youth having some higher education studies, the proportion of youth having higher education degrees, and the proportion of youth without higher education training.

Source: Personal elaboration based on *CASEN* household survey years 1987, 1990, 1992, 1994, 1996 and 1998.

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