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# Constitutional Reform and the Opportunity for Higher Education Access in Ecuador Since 1950

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**Abstract**: Ecuador's 2008 Constitution – and a subsequent law on higher education passed in its wake – effectively suspended student fees for public universities. The goal of this reform was to increase equality of opportunity. In this article I use newly-available individual-level retrospective information from the 2001 Census to explore gender and ethnic inequality in educational attainment since the 1950s. After establishing the long term historical tendencies, I discuss the politics and implementation of the Constitutional reform. Then, recent national survey data are analyzed to show the recent trends in access to universities depending on home language (Quichua versus Spanish), ethnicity, parental income, and whether or not the mother had received a poverty-alleviation welfare transfer. I find that, after the suspension of user fees, there was an increased gap in the probability and rates of public university access between the more-advantaged and the less-advantaged populations of Ecuador.
**Keywords**: user-fees; stratification; university access; household survey data; Ecuador.

**Reforma Constitucional y oportunidades de acceso a la Educación Superior en Ecuador desde 1950.**

**Resumen**: La Constitución del Ecuador del 2008 - y la ley sobre educación superior aprobada

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posteriormente - efectivamente suspendió el pago de cuotas para los estudiantes de universidades públicas. El objetivo de este reforma era aumentar la igualdad de oportunidades. En este artículo se utiliza información retrospectiva u disponible a nivel individual de el censo de 2001 para explorar desigualdad en los niveles educativos desde 1950 por género y étnia. Después de establecer las tendencias históricas de largo plazo, se analizan las políticas y la aplicación de la reforma Constitucional. Posteriormente, se analizan los datos de la última encuesta nacional para mostrar el resultado de las tendencias recientes en el acceso a universidades en función del idioma de origen (quichua o español), el origen étnico, los ingresos de los padres, y si la madre había recibido "ayuda de alivio de la pobreza". Se concluye que tras la suspensión de los pagos de cuotas por los usuarios, se produjo un aumento en la probabilidad de la brecha de acceso a la universidad pública entre las poblaciones más favorecidas y menos favorecidas de Ecuador.
**Palabras clave:** pago de cuotas por usuarios; estratificación; acceso universidad ; encuesta de hogares; Ecuador.

**A reforma constitucional e as oportunidades de acesso ao ensino superior no Equador desde 1950.**

**Resumo**: A Constituição do Equador em 2008 - e a lei sobre o ensino superior aprovada depois - efetivamente suspendeu o pagamento de mensalidades para estudantes de universidades pública. O objetivo desta reforma foi aumentar a igualdade de oportunidades. Este artigo utiliza os dados disponíveis a nível individual do censo de 2001 para explorar a desigualdade educativa, desde 1950, por sexo e etnia. Depois de estabeleceras tendências histórico de longo prazo, se analisam as políticas e implementação da reforma constitucional. Posteriormente, analisamos os dados do último censo nacional para mostrar as tendências recentes no acesso às universidades de acordo com o idioma de origem (quéchua ou espanhol), a etnia, a renda dos pais, e se a mãe tinha recebido uma bolsa "alívio da pobreza." Concluímos que, após a suspensão dos pagamentos das contribuições dos usuários, houve um aumento na probabilidade de incrementar a brecha no acesso à universidade pública entre as populações mais favorecidas e menos favorecidas do Equador.
**Palavras-chave**: mensalidades pagas pelos usuários; estratificação do acesso à universidade , censo domiciliar; Equador.

## Introduction

Today many national Constitutions commit their countries to providing equal opportunities for education, including opportunities for higher education. One of the most notable recent expressions of this worldwide tendency is seen in 2008 Ecuador's historic Constitutional Constituent Assembly, called by newly-elected President Rafael Correa. Ecuador's Constituent Assembly undertook an ambitious and audacious attempt to equalize postsecondary access to citizens. The Assembly wrote into the Constitution new provisions mandating that all levels of public education should be free of direct fees paid by students or families (see Appendix A). Beyond free public basic education, the suspension of fees was also to be applied to the first level of public postsecondary. Following the approval of the document in a national plebiscite, the right to "free" public higher education became codified in Ecuador's most basic legal code. And yet, notwithstanding this guarantee, Ecuador's experience illustrates the limits of any nation's ability to reduce differentiation along the lines of ethnicity, gender, family poverty, and geographic origin. The case of Ecuador raises a particularly acute question about the possible regressivity of complete university subsidies because the new policy has accelerated, as we will see, previous trends toward inequality. The main

beneficiaries of the Constitutional reform have been those who were most successful in secondary school. This includes the middle class and monolingual Spanish (as opposed to Quichua language) speakers. Families from these groups, as we will see from the evidence reported in this article, were the same beneficiaries of postsecondary expansion since the 1950s.

So far there have been few attempts to measure either Ecuador's current situation or its historical trajectory toward the ultimate ideal of equal access. The reason there is little documentation of Ecuadorian trends in the evolution of opportunity is because records on higher education access have been kept inconsistently over the past decades by various coordinating bodies, with limited cooperation. There has also been little past cooperation from Ecuador's public universities, which sometimes were known to inflate their numbers of students so as to garner greater funding allocations (Pareja, 1986; Pacheco, 1992). As a result, Ecuador lacks accurate and comparable information from universities about students who enroll and complete various programs of study, especially information that would be helpful for policies designed to compensate for poorer students' family resources and social origin.

Given this absence of direct information from Ecuadorian universities over a long period, my purpose is to illuminate discussions in Ecuador and elsewhere about the impact of user fees and the consequences of their suspension. To shed light on these discussions, I draw on indirect survey sources and national census information to discern the patterns of access to higher education and the distribution of educational opportunity over the past sixty years. To analyze the policy consequences of Ecuador's attempt to eliminate user fees in public higher education, it is first necessary to refer to some baseline past situation. In this article, I use the longer historical backdrop, since the 1950s, in order to illuminate the demographic patterns that the current policy and the Constitution were designed to change.

Despite the lack of official university admissions data over time, there are two reliable sources of information available for the creation of this historical baseline, and I access both for the purposes of this article. First, I analyze census data from 2001, using these data to create "artificial birth cohorts." That is, I retroactively estimate the educational attainments (including postsecondary attainment) of Ecuadorians who became 18-years-of-age from 1950 onwards (i.e. birth cohorts 1932 onwards). Although the household records of Ecuador's Census have never previously been used in education research, these data are a valuable source of information because they reveal the educational attainments of all Ecuadorians by ethnicity and gender across the years of their births (their "artificial birth cohorts," since the data are retrospective and not contemporary). These census data indirectly illustrate changes over time.

As a second and more recent source of information, I use annual national household surveys of employment since 1988. These data, though obviously based on a smaller sample than the complete population census, also permit us to document changes over time in the association between family background and access to education. The advantage of the employment survey is not only that they are more recent (including one year after the Constitutional reform). In addition, these employment surveys contain information about parents' income, home language, and whether they receive welfare assistance (the Bono de Desarrollo Humano, a summary indicator of family poverty). Both census and household survey information allow policy analysts to view the changing impact of gender, ethnicity, language, family income, and region. The information from this analysis, although indirect, can help to guide policy makers in Ecuador as they assess the impact of Ecuador's 2008 Constitution, which eliminated user fees for all students in public universities.

## Theoretical Framework

Higher education is a scarce public good with a well-known effect on the status and welfare of its recipients in all societies. In the early twentieth century Pitirim Sorokin (1927) identified education as only one of several important channels of upward mobility for individuals and for groups. The transmission of status and economic wellbeing from generation to generation – what Sorokin termed "social stratification" was relatively stable throughout history, he argued based on the historical records across centuries in various nations. However, the channels through which each generation passes on its advantages – or disadvantages - may change over time.

One of the most widely accepted conclusions of comparative cross-national and historical research is that the institution of education has become more important over the past hundred years as other channels of status attainment became less important (e.g., apprenticeships, the military, or the Church, three traditional channels of mobility identified by Sorokin). Schooling increased in its significance for adult status as other means of transmitting power and wealth lost their legitimacy (for example, land tenancy, race, or political party affiliation).

Raftery and Hout (1993) suggested conditions under which "maximally maintained inequality" was created in Ireland, Britain, and the U.S. They proposed that increased enrollments, for example in postsecondary education, will not necessarily change the statistical association between social origins and the odds of continuation from one level to the next. Raftery and Hout's view shares the pessimism of Sorokin's (1927) dark prediction of random, trendless change in the intensity and generalizability of social mobility. Raftery and Hout conjectured that when education opportunities expand faster than existing overall demand for those opportunities the impact of social origins will not diminish on the relative odds of progression through the school system unless the demand by more advantaged upper class families already is saturated – "maximized" – for a particular educational progression. Only in this case, they concluded, would the ratio of odds between privileged and disadvantaged groups decrease. Moreover, this decrease in relative advantage could be reversed. What accounts for the persistence in inequality, under this formulation, is that high status parents invariably find ways to maximize the educational opportunities of their children using public resources. When public resources are in short supply, these elites will exert political pressure on school systems to expand so as to accommodate (and give high-quality education) to their children. Indirectly, these advances can come only at the expense of less advantaged children, who usually lag in taking advantage of the same increases in supply (or quality) that were generated by political pressures of parents with higher status.

From the theoretical perspective of social stratification, postsecondary education has become increasingly important in Latin America. As access to basic primary and secondary schools expanded and became more universal, these levels of education lost their importance as stratifying institutions. One of the ways that governments affect social stratification is through universalizing families' access to basic education. However, when the minimal level of schooling for status mobility is guaranteed for all, then traditional sources of inequality, which were transmitted through unequal chances for basic educational attainment, will wane in importance. At the same time, unequal quality of education may increase at the basic education level. Wealthier families may begin to send their children to private schools. In addition, higher education access becomes more important when basic education is available for all. The cumulative findings from education research in the Philippines, Taiwan, the United States, Malaysia, Hong Kong, and many other societies agree that – without strong state action through subsidies or close state regulation of access – the consequence of universalizing basic education is increased stratification at the postsecondary level. As secondary

school access by low-income families increased in Ecuador and throughout the world, competition for university education would intensify without greater numbers of opportunities.

From the perspective of public policy, the real and imagined possibility for social engineering through higher education forms one of the most visible, contemporary rationales for state support of universities. In their assessment of the coming transition to mass higher education in the OECD countries, Cerych, Furth, and Papadopoulos (1974) noted the instrumental goals which had been assigned to schools during the 1960s, and which then fueled expansionary tendencies. "[M]odern systems of post-secondary education are required in particular... to play an important role in the general social objective of achieving greater equality of opportunity," they wrote (p. 23). The same pressures for social equity drive much of the publicly sponsored expansion of education in Ecuador and Latin America generally.

The case of Ecuador clearly shows that the State, while important, is not the *only* actor affecting systems of social stratification. Aside from planned, visible, and concerted state actions, many other factors influence the linkage between social origins and higher education opportunity in any particular society. These factors are equally important and may lie beyond state control. One such factor is the proliferation of private universities in Ecuador and Latin America generally. Another important factor, which may intensify or reduce the stratifying effect of higher education, is the distribution of opportunity for upward social mobility *outside* of the university through commercial enterprises, the military, migration, or other means. The distribution of income within any society provides one indication of its structure of opportunities. As income becomes more (or less) equally distributed within society, the mobility associated with higher education can be perceived as less (or more) crucial for those families that lack other, non-education based opportunities for advancement. The distribution of opportunities *outside* of schooling will affect how families perceive the relative opportunities for getting ahead *through* schooling. Notwithstanding the insights about persisting inequality that are apparent from previous research, there is less clarity about what social changes can be effected by governments. Because Ecuador was able only to change the fees set by public secondary and postsecondary institutions – and because Ecuador could not change the private fees or opportunities available to families – the net result of Constitutional reform could be different than expected.

## The Expansion of Education in Ecuador

A combination of increasing public demands over the latter twentieth century, together with expanded school construction, gradually increased both the numbers of Ecuadorians who completed primary schooling and initiated the secondary level. Increased numbers and percentages of Ecuadorians who actually completed secondary schooling happened even more slowly, since completion - even today - is not legally compulsory. Until the 1970s there was also a very gradual expansion in the numbers and percentages of secondary school graduates who initiated higher education. From the 1960s until the mid-1990s, the supply of postsecondary education did not keep pace with the increasing numbers of secondary school graduates. Authoritarian governments during the 1970s and 1980s acted to regulate the number of universities supported at public expense, and governments also had the power to deny official recognition and deny a legal charter to private universities. In the mid-1990s, however, there was an upsurge in the number of private universities, permitted by a weakened state regulatory apparatus. Nearly every university authorized by the National Council of University and Polytechnics after 1996 was private. By increasing the options for wealthier Ecuadoran, the upsurge in postsecondary options – seen clearly in Figure 1 - could

potentially have altered the association between student's home resources and their access to education.

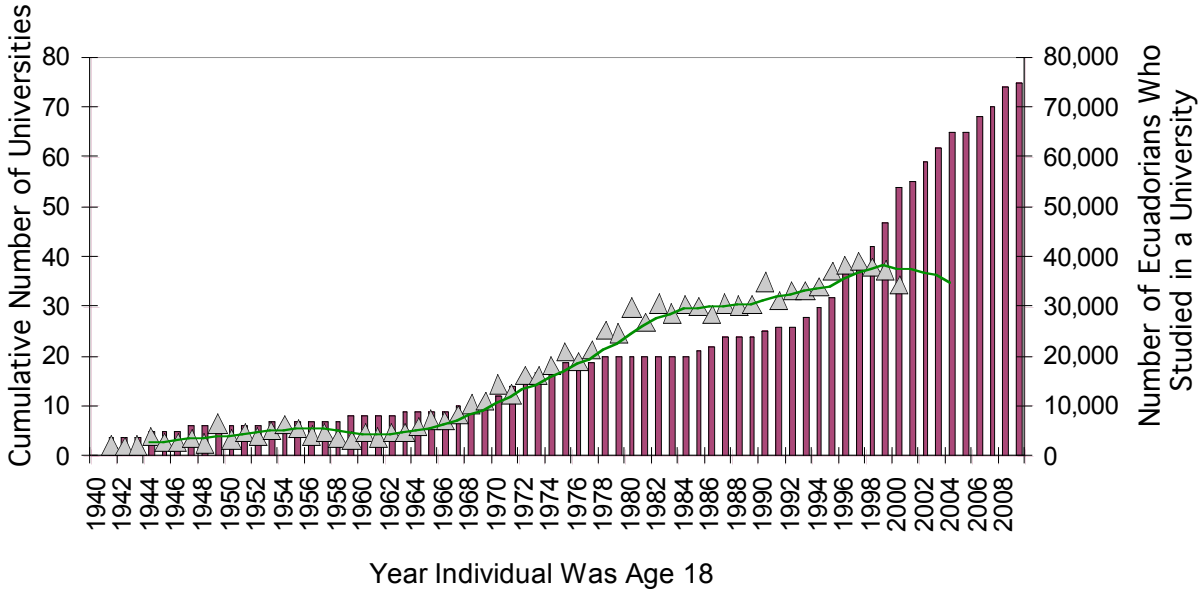


*Figure 1.* Historical Trends in University Creation and Student Demand in Ecuador

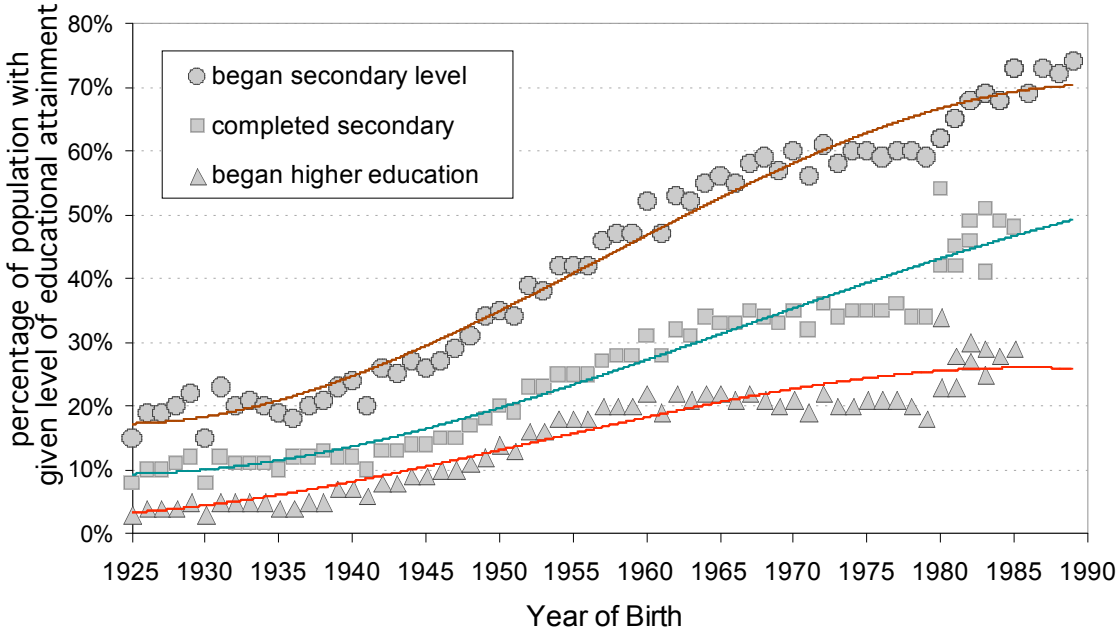


*Figure 2.* Rates of Educational Attainment in Ecuador, by Year of Birth. Sources: Attainments among birth cohorts from 1935– 1980 are tabulated from full 2001 Population Census. Later birth cohort attainment rates are estimates from weighted, randomly sampled households surveys of 2008. There are approximately 1,500 individuals represented in each birth year in the *Encuesta Nacional de Empleo.*

To estimate the rates of growth in educational attainment, it is possible to examine national census and survey data retrospectively. In 2001, the most recent national population census, each resident of Ecuador recorded basic demographic facts about themselves, including their gender, year of birth, and the last level of education they had attained, and the number of years of schooling they received at that level. They also defined their own ethnic identity. In 2001, individuals who were aged 21 – 66 would have been born in the years 1935 – 1980. With this basic information, we can roughly estimate the historic trends in the completion of basic education (i.e. 12 years) and the access to higher education. Because the number of individuals in each birth cohort are so large, there is a high reliability to these figures and a minimum of random variation, as can be seen in the pre-1980 birth cohorts depicted in Figure 2. For more recent birth cohorts, the 2008 National Employment survey similarly provides information on the highest level of education attained. Notice that there is greater variability for the cases of individuals in this sample. Nevertheless, considering all three sources of information together gives us a picture of the likely rates at which Ecuadorians managed to access three important levels of education, and also the periods during which these changes were most rapid. As compared with neighboring countries, the growth in educational participation has been relatively slow in Ecuador, especially in terms of completion of secondary education.

The data shown in Figure 2 reveal historical trends that help provide the backdrop for a discussion of the current Constitutional reform. One of the most noteworthy features of Ecuador's trends is that only a relatively small percentage of the population completes secondary school and continued to the postsecondary level. As we will see, those within this small percentage have relatively more advantaged family backgrounds.

How do Ecuador's trends in educational attainment look in terms of ethnic origin? Ecuador's diverse ethnic identities are reflected in the responses to the 2001 census, which asked each household resident "how do you consider yourself?" ("como se considera?") The major responses to this question were: white, mixed-indigenous, indigenous, black, and mixed-black ("blanco," "mestizo," "indígena," "mulato" and "negro"). In the cases of each of these responses, it is possible to estimate the percentages of individual who initiated higher education. These rates are presented by birth cohort in Figure 3a and Figure 3b. Figure 3a shows the net rate of university initiation for each group, and there are clearly very wide gaps between these ethnic groups. It is not possible from Figure 3a to know how much of the gap between these groups is a reflection specifically of unequal higher education access, as opposed to unequal access of education in general. For example, because Ecuador's indigenous population is predominantly rural, where there are few opportunities for secondary education, the fact that few indigenous children attained university is not surprising.

In order to disentangle the effects of basic education access from higher education access, Figure 3b. presents a different statistic: the rate of higher education only for persons with at least 12 years of completed schooling. Children who finished secondary education could, in principle, continue to higher education. Figure 3b. illustrates that, even among this relatively advantaged group of children with completed secondary, there are wide gaps between each group in terms of continuation to university. The recent decline among all groups does not mean a decline in the absolute number of university students. Rather, it means that the number of secondary school students is expanding at a greater rate than the expansion of university students. It may be worrisome to observe that the gap between groups has grown wider in recent years. Because these are bivariate analyses only, we cannot know whether the disadvantages of indigenous or black Ecuadorians are associated primarily with their ethnicity, with differences in their incomes, or with

their residence in rural areas. Further below, survey data from 2003 and 2008 will be used to confirm the growth of this gap, using multivariate analysis to pinpoint the role of ethnicity.

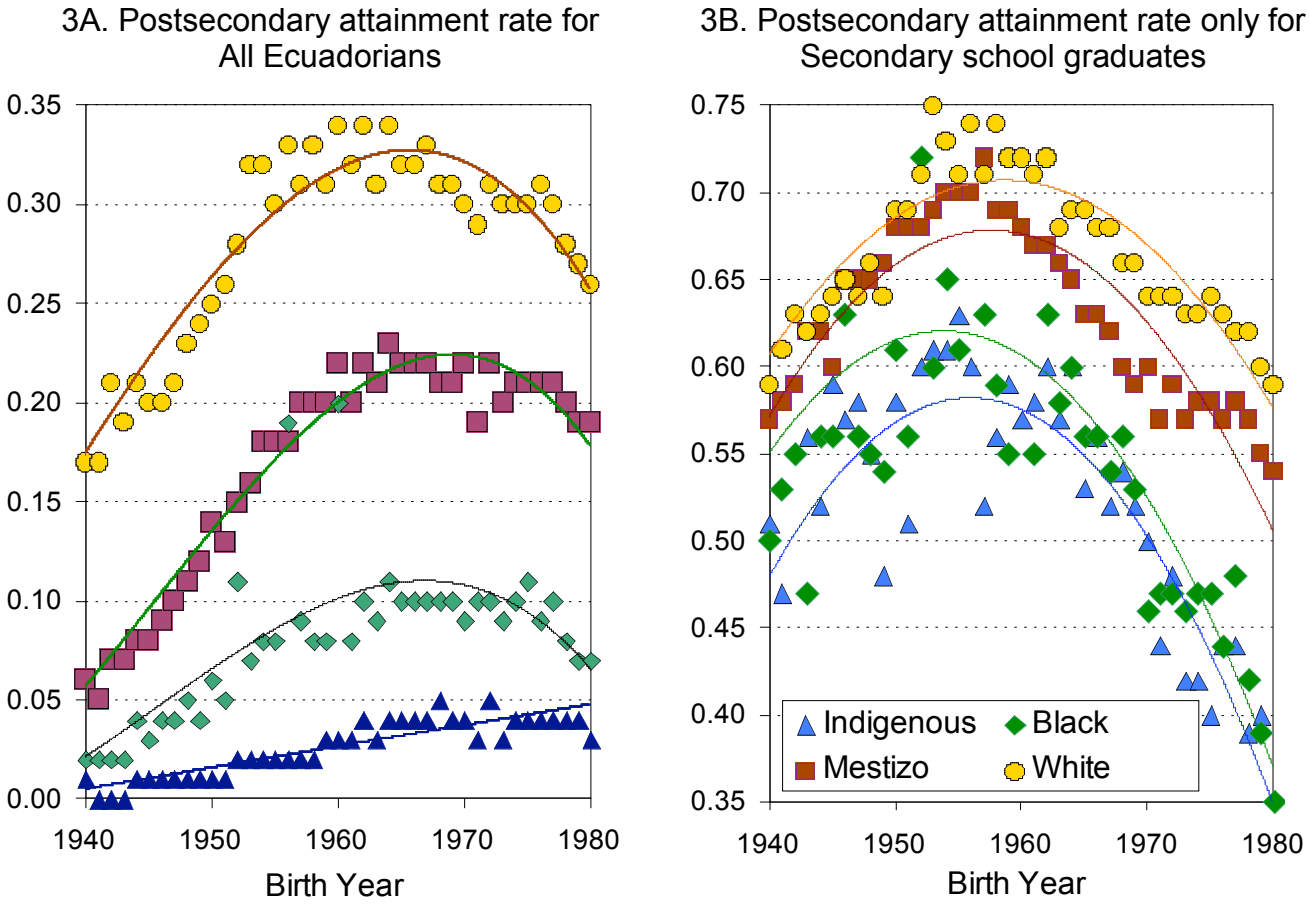


*Figure 3.* Rates of Postsecondary Attainment For Ecuadorians Born 1940-1980, by Ethnic Identity. Source: Population Census of 2001

There has been a remarkable transformation in the access of women to higher education in most regions of the world, and Ecuador is no exception. Figure 4 presents the changes over time in the numbers of women and men who completed secondary education and who initiated higher education in each birth cohort. We can observe that, for Ecuadorians born prior to about 1957, more men than women completed secondary school. Women born after this year were more likely to complete secondary. Similarly, for Ecuadorians born prior to about 1962, more men than women initiated higher education, but after that year women were more likely to begin university studies than men.

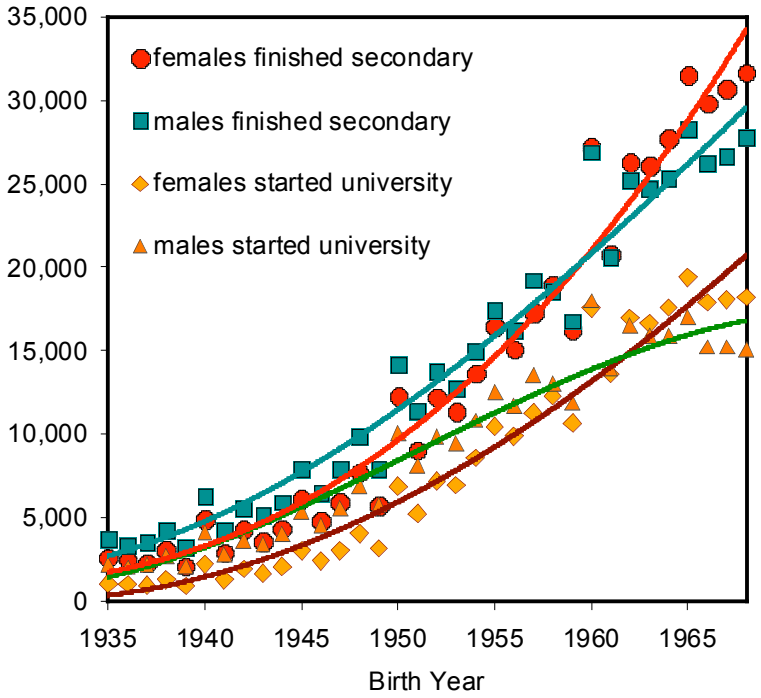


*Figure 4.* Women Overtaking Men in Secondary School Completion and Starting University: Numbers with Educational Attainment by Gender and Birth Year. Source: Census of 2001.

## Inequalities Pre-2008 in University Access by Fathers' Income

Household surveys, such as those used by Ecuador to assess employment and welfare trends, do not usually ask individuals for detailed information about their parents (Ecuador's question about parental language is an exception, discussed further below). However, although questions about parents are not asked to children; below a certain age most Ecuadorians live with at least one of their parents, who is usually designated as the head of the household ("jefe del hogar"). For example, in recent years about 70 percent of individuals who are age 20 are designated as the son or daughter of the household head (who is their parent). For these individuals, it is possible to ascertain the characteristics of their father and mother by joining information given by the household head (e.g. the parent's income) to the information provided by their children (e.g. whether the child attends university).

One important characteristic of the home, related to the child's ability to afford university, is the income of each parent. The surveys of employment gathered income information from various labor, and it is possible to aggregate these sources to create a summary measure of the total earnings of each parent. Comparing these sums over time can be problematic because of hyperinflation and because they also reflect the changing likelihood of women to work for pay. In order to make a more valid comparison over a longer historical period, it is useful to consider the only the broad income quintiles of the father's total income in each year. Figure 5 focuses on the trends in higher education access before the Constitutional mandate for free public higher education. Figure 5 indicates the percentages of young people, age 20, who attained higher education in urban areas of Ecuador from 1988 – 2007. In the 2007 survey, in addition, respondents were asked "que tipo de establecimiento" (what type of establishment) was the last level of schooling they attained. Using the

answers to this question, it is possible to determine the percentages of Ecuadorians who attended a state public or a private school. The results from the analysis shown in figure 5, although very approximate, suggest a trend over time. There clearly was an expansion in the percentages of 20-year-olds who have initiated some type of university. This expansion is attributable largely to the growing participation by the middle and upper income quintiles, not by the growth in the bottom 40 percent of the income distribution. This conclusion would be consistent with the fact that, despite the institution of free public university, the largest growth has occurred in private universities, which are often too expensive for students in the bottom quintiles. Figure 5 is able to present the trends from 1988 – 2007 in only urban areas, but a national level analysis is possible from 2001.

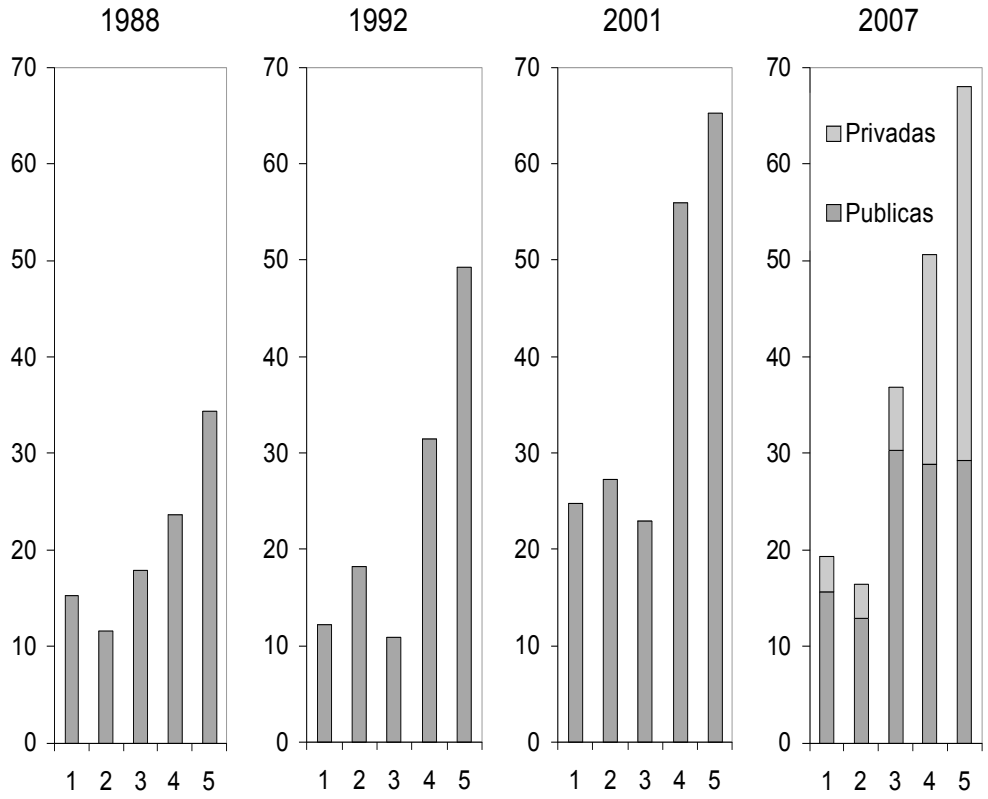


*Figure 5.* Percentages of university attendance by persons 20 years old living in urban areas of Ecuador, by quintiles of father's income (1 = poorest, 5 = richest).

## Multivariate Analysis of Attainment Before Constitutional Reform

The figures presented above are useful summaries of the net results of institutional and demographic forces that have led to wide and – quite possibly - growing gaps in the rates of university access for children from different income, different language heritages, and different ethnic identifications. At the same time, a different gap appears to have opened between women and men, with men falling behind women in terms of access. While these presentations are useful, bivariate analyses tell us little about the causes of such gaps. It is not possible, using secondary data sources such as the Encuesta Nacional de Empleo, to identify the root causes of these higher education inequalities, but it is possible to consider several competing explanations. The most obvious explanation for inequality in access specifically to higher education is that there is a more

general inequality in terms of access to basic education. In other words, because of the wide differences in the access of different groups to secondary education, relatively few indigenous-origin students complete secondary schools, and indigenous children are therefore much less eligible to progress to higher education. Perhaps, under this conjecture, if equal proportions of each ethnic group had finished secondary studies then there would also be equal proportions of each group attending universities.

A second possible explanation for the patterns seen in the preceding bivariate analysis is that access to universities – which are located primarily in Ecuador's cities – favors the children who live in urban areas. Because the language and ethnic groups are distributed unequally, and because most indigenous children grow up in rural areas, it is understandable that proportionally fewer indigenous children would have access to universities. Under this conjecture, if equal proportions of children from all social origins lived in rural and urban areas, then there would be equal proportions of indigenous and non-indigenous children who attend universities.

A third explanation for the inequality by ethnicity is that it is part of a wider disadvantage associated with social origin and family resources, which are known to determine educational attainment for all children (regardless of the child's ethnic identity). Schools cannot totally compensate for inequalities between families in the opportunities for children's development and access to skills of literacy, numeracy, and high culture. In addition to the different types of cultural capital that families offer children, family income matters, especially in Ecuador where high proportions of upper-income families send their children to expensive private schools. From an economic perspective, all families equally may want to invest in their children's education, but they are unequally able to do so. In this third explanation, the wide gaps seen in these figures might not be caused by ethnic or language differences. Instead, they could be caused by the unequal distribution of family resources between families. If these resources were distributed more equally – under this interpretation – then equal proportions of children from each group might have attended universities.

To distinguish the unique impact of family factors on the transition specifically between secondary and postsecondary education, researchers can use a sequential model of the discrete transitions by students though postsecondary school (Mare, 1980). This perspective allows us to disentangle the multiple factors that have produced the net inequality seen in the preceding figures, and to disentangle the three possible explanations that are discussed above. In sequential models, at the first stage we first consider the sample of all students, and we estimate the effects of independent variables on the probability that a child will have initiated secondary school. Then, in the second stage, we restrict the sample to only those children who have previously initiated secondary, and in this restricted sample we estimate the effects of these same variables on the probability that children have completed secondary. Finally, in the third stage, we consider only the sample of children who have completed secondary. Among these children, all of whom would be eligible to continue to university, what was the effect of the independent variables on the probability that they did, in fact, initiate university studies? We estimate the effects of the same independent variables on the probability that they continued their secondary school studies on to the next level.

The "DProbit" procedure from STATA makes it possible to gauge the relationships between several important variables, available in the 2003 and 2008 national employment surveys.[1]

[1] These two survey years were selected because they are the immediate past prior to the 2008 Constitutional reform. Before 2003, most of Ecuador's employment surveys were limited only to urban areas, and could not be compared with 2008 because they were not nationally representative and they excluded Ecuador's rural areas, where access to education is most problematic.

Based on previous research and on the bivariate presentations discussed above, I tested several key factors to uncover their association with educational attainment. These factors are: whether or not the child is a member of a rural household; whether the child is female (as opposed to male); whether the child identifies as "indigenous." In this analysis, it is possible to measure the impact of these factors only when the information is not missing from the survey results. All children have information about whether they are male or female, and all have information about whether their families are living in rural versus urban areas. However, a smaller number reported a self-identification, and for fewer children is there any information about father's earnings.[2] To ensure the maximum number of cases in the analysis, I therefore used an alternative indicator of family cultural and material resources: the total number of years of education completed by the mother. Fortunately, this information is available in nearly all cases of children who live with the mother and who are 20-23 years of age. The estimates of three probit models are presented in Table 1. Model A presents the estimates and standard errors for the changes in the probability of *beginning* secondary school. Model B next presents the estimated changes for *completing* secondary (given that the child had begun secondary). Finally, Model C presents the estimates of the impact of family factors on the probability of starting university, given the fact that the child had finished secondary school. I estimated coefficients for the 2003 and the 2008 census years in order to observe the possible changes in the intensity of the factors leading to successful completion of each of the three sequences of educational attainment in the period leading up to the Constitutional Reform of 2008.

As we can see from Table 1, living in a rural area has statistically significant negative effects on the probability that children would either start or finish secondary school. There is good news reported here, in that this negative effect on secondary education became less negative from 2003 to 2008 (notice the smaller coefficients for the 2008 year in Model A and Model B.). Another finding that is not surprising, because it confirms the trends in gender that we saw previously in Figure 3, is that girls became increasingly-likely (compared with boys) to finish secondary school and to start university (notice that the coefficents for being female became statistically significant in the 2008 survey). An additional finding that is unsurprising is the persisting influence of family cultural and material resources, which are measured in this analysis by the summary indicator of the mother's years of completed schooling. These coefficients remain significant in all three models and for both 2003 and 2008.

What can now be said about the role played by ethnic self-identification? The sequential models shown in Table 1 show that the problem is not only at the level of secondary school, but also at the point of selection from secondary to university. Notice that the effects of self-identity and mother's education are significant for the sub-sample of those with secondary education complete. The effect of these factors is not only the result of selection and elimination of students during the primary and secondary school years. Even among the relatively elite group of children who have finished secondary school, there are persisting effects of social origin.

[2] This lower percentage reporting fathers' earnings has several causes. First, there may not be a father present in the home. Some fathers were not currently employed. Others simply preferred not to report their earnings to the INEC.

Table 1.
*Effects of Ethnicity, Gender, Region of Residence, and Social Origin on Educational Transitions, 2003 and 2008*

| Independent Variables | Effects on having started secondary school | | | | Finished secondary, given having started secondary | | | | Continued to university, given finishing secondary | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2003 | | 2008 | | 2003 | | 2008 | | 2003 | | 2008 | |
| | Δ Prob | S.E. | Δ Prob | S.E. | Δ Prob | S.E. | Δ Prob | S.E. | Δ Prob | S.E. | Δ Prob | S.E. |
| Residence is rural (not urban) | -0.29* | 0.02 | -0.19* | 0.01 | -0.13* | 0.02 | -0.04* | 0.02 | -0.13* | 0.03 | -0.15* | 0.03 |
| Identifies as "mulato" (not mestizo) | -0.11 | 0.07 | -0.02 | 0.05 | -0.08 | 0.08 | -0.10 | 0.07 | -0.12 | 0.11 | -0.27* | 0.09 |
| Identifies as "black" (not mestizo) | -0.03 | 0.04 | -0.06 | 0.06 | -0.26* | 0.07 | -0.24* | 0.08 | -0.17 | 0.09 | -0.23* | 0.09 |
| Identifies as "white" (not mestizo) | 0.10* | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | -0.06 | 0.05 | -0.04 | 0.05 | -0.03 | 0.06 |
| Identifies "indigenous" (no mestizo) | -0.13* | 0.04 | -0.08* | 0.03 | -0.18* | 0.05 | -0.11* | 0.05 | -0.16* | 0.08 | -0.16* | 0.08 |
| Years of school finished by mother | 0.02* | 0.00 | 0.04* | 0.00 | 0.01* | 0.00 | 0.03* | 0.00 | 0.02* | 0.00 | 0.03* | 0.00 |
| Individual is female (not male) | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 0.02 | 0.05* | 0.02 | 0.03 | 0.03 | 0.09* | 0.03 |
| Net predicted probability | 0.72 | | 0.77 | | 0.69 | | 0.66 | | 0.50 | | 0.64 | |
| Number of cases (20-23 years old) | 5704 | | 4909 | | 3620 | | 3285 | | 2350 | | 2118 | |
| Pseudo R-square | 0.15 | | 0.21 | | 0.05 | | 0.07 | | 0.06 | | 0.11 | |

* $p \leq .05$
Sources: dprobit analysis of National Employment Surveys of 2003 and 2008, based on samples of individuals who were ages 20-23.

Among the others findings reported in Table 1, there are two that merit special attention. First, even after controlling for the effects of mothers' education and the place of residence, there is a persisting effect of ethnic self-identification. Children who self-report their identities as "white" or "mestizo" have clear advantages. Thus, the bivariate associations and the wide gaps that we saw in the previous figures are not mere by-products of differences in family resources or different distributions of the population between rural and urban areas. There are differences that cannot be explained on this basis alone. Second, comparing the results of 2008 and 2003, we can see that the negative impact of ethnicity on the probability of university study has either remained stable (among indigenous students) or even become more negative (among those reporting they are Black or Mulattos). Apparently, the expansion of higher education opportunities in the years leading up to Ecuador's 2008 Constitutional Reform was not benefiting these disadvantaged groups as much as it has the population identifying itself as "mestizo" or "white."

## Post-reform trends: a first look

It is still early to assess the impact of free public education after 2008, but the same national survey data used in the preceding analysis can give us some preliminary clues to what we might eventually find after the effects of suspending user fees are recognized by Ecuadorians. As a first insight to the direction of future changes, I used survey data from 2007, 2008, and 2009. With these data it is possible to get a preliminary look at the consequences of free higher education among disadvantaged groups. For indigenous status, I used a more accurate indicator of ethnic identity than the self-reports that are solicited by the survey questionnaire. Instead of using the question "how do you consider yourself," I focused on the question of language. In each year, children reported what languages their parents spoke. In these surveys, very few Ecuadorians report having monolingual indigenous language parents. But about 7.5 percent of Ecuadorians who are 20-23 years of age report that their parents can speak an indigenous language in addition to Spanish (usually Quichua, the language of the Inca empire that extended to Ecuador in the years prior to Spanish conquest). This is a more objective measure of indigenous roots than the fuzzier, and more subjective, question

regarding one's self-identity. Using the surveys from 2007, 2008, and 2009, we can ask how the net likelihood of attending university changed, following the Constitutional reform, for children depending on their parent's language ability.

Apart from the cultural dimension of access to higher education – indicated by indigenous status and the parents' use of indigenous language - poverty represents another key barrier to continued study. It was to overcome an obstacle to the poor that Ecuador's Constitutional Constituent assembly proposed suspending all user fees in public higher education. Theoretically, there could have been an immediate upsurge in the number of poorer Ecuadorian families who were able to enroll their children in public higher education. However, there are reasons to hypothesize the opposite result. As we saw previously, in Figure 2, only a small fraction of Ecuador's 18-year-old population completes secondary school and is, thus, eligible to continue to postsecondary education. The main barriers to persistence are not direct fees but the indirect opportunity costs. The pool of eligible low-income students is relatively small in Ecuador. Coupled with this is the fact that even middle-class families are sensitive to the cost of higher education. When the price goes down, their participation may be expected to increase as much if not more than among the poor.

Using Ecuador's National Employment survey from 2007, 2008, and 2009, I created an indicator of family poverty based on the government's own designation of whether or not the child's mother was eligible for the Bono de Desarollo Humano (BDH). The BDH is a sophisticated program that focuses on mothers living in poverty. Mothers of dependent children qualify through a series of mean-testing measures. It is a widely available program, and nearly half of all Ecuadorian children receive benefits from the program (which was equal to $35 per month). With both of these measures –the first cultural difference and the second indicating material poverty– it is possible to compare the percentages of children who studied in public universities over the past three years. The results of this analysis are presented in Figure 6.

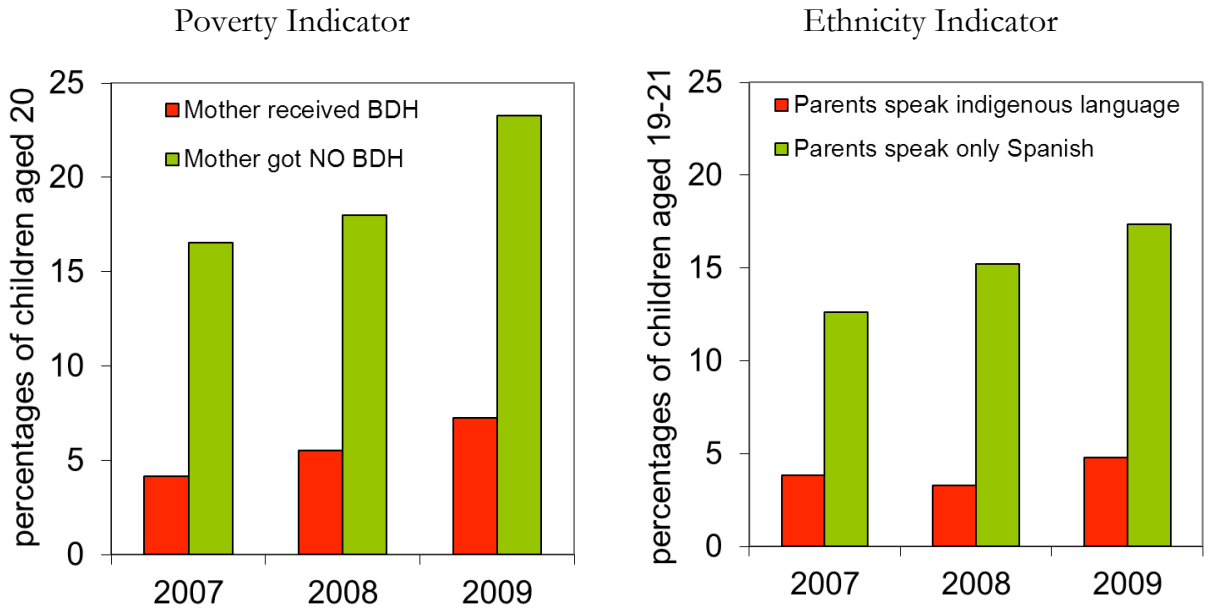


*Figure 6.* Percentages of Ecuadorians who entered public higher education 2007-2009, by maternal welfare status and by parents' language. Sources: analysis of national employment surveys provided by INEC. Note: parents who can speak Quichua or other indigenous languages may also be able to speak Spanish and are not necessarily monolingual.

As we can see from Figure 6, there has been a gradual increase in going to university among the sample of children whose mothers received the BDH, and were officially considered "poor." This is good news. But it is only half the story if we are concerned with educational equity, because the main beneficiaries after 2008 were not the poor. And there was an even *bigger* jump in attendance among children whose mothers did *not* receive the BDH. Consequently, the gap between poor and middle class children grew larger, which was surely not the intention of the Constitutional reform making public higher education "free." Although it is still early, the first signs should cause some concern among Ecuadorian policy makers who believed that suspending user fees would reduce the gap in access to public university by poverty level. A very similar tendency is found if we consider Ecuador's populations of children with indigenous roots. Disappointingly, among this group, there is no significant change in the percentages of children who attend public universities and whose parents could speak an indigenous language. Instead, the main beneficiaries of the free university – the main population of growth - were children of parents who did not speak an indigenous language. Again, the net pattern suggests a growing – not shrinking – gap between the advantaged and disadvantaged sectors of Ecuadorian society.

## Conclusion and Policy Implications

The late Mexican journalist Carlos Monsiváis, reporting on a February 1987 demonstration by students from Mexico's national university, noted a certain irony about those shouting populist slogans to eliminate all student fees:

¡La educación! ¡Primero, al hijo del obrero!
¡Le educación! ¡Después,al hijo del burgués!

[Education first to the child of the worker!
Education only second to the child of the bourgeoisie!]

Monsiváis reported that the demonstrators did not themselves come from the popular classes. They came from the children of Mexico's middle classes and the elite. In a sense, this is to be expected because, although university education is expensive, the biggest expense comes not from the comparatively small fees that are usually charged to families in most public universities of Latin America, including Ecuador before 2008. Instead, the biggest expense comes from the years of sacrifice by families when they encourage their children to study, and eventually to pass competitive entrance exams, as opposed to working to support the household economy. For this reason, in no country and at no time in history, has university education gone first to the children of the worker and only second to the middle class (the "hijo del burgués"). Partly for this reason, some economists have long advocated there should be partnership between the public and private spheres for the finance of higher education (Ziderman, 1995).

Loan programs, underwritten by government guarantees, are one solution to the universal regressivity of purely government sponsorship of universities (see Johnstone & Marcucci, 2010). Opponents of fees have come to view higher education as a public good and a human right. Two of the architects of Ecuador's new law regulating higher education take this position, and would prefer progressive tax policies over user fees or loans as a way to level the playing field (see Ramirez & Minteguiaga 2010, p. 150). In some countries with long traditions of progressive income taxation it may be possible to "level the playing field" and support scholarship and aid programs from the central government with high marginal tax rates for the wealthy. But in most of Latin America, tax codes are difficult to enforce, in part because a relatively small portion of income flows through

earnings in the formal wage economy. Value Added Taxes and fees – inherently regressive – therefore become a more important source for government finance.

The elimination of student fees at public universities in Ecuador expresses the ideals of equality that are enshrined in the Constitution. But the translation of good intentions in public policy is complicated, and ideals do not translate easily into reality. Instead, researchers often find that the best intentions can produce unexpected consequences that are the opposite of what was intended, what Raymond Boudon (1993) termed "perverse effects" in the case of French higher education reforms of the 1960s. Thus, it is necessary for advocates of equity in higher education to pay careful attention not only to ideals, but also to their consequences. Ecuador's census data, together with nationally representative household survey data since 2001, paint a stark picture of growing inequality. Over time, Ecuador has experienced exacerbated social stratification because the most likely students to complete secondary schooling are, increasingly, from advantaged backgrounds. Those most likely to forego employment and finish secondary are children whose parents do not speak indigenous languages, those who are mestizo or white, those with upper-income fathers, and those with highly educated mothers. For this reason, the beneficiaries of "free" university education increasingly come from the most advantaged populations of Ecuador and are ethnically mestizo or white, even after taking into account the fact that indigenous children live in rural areas. Surprisingly, in what might be considered a "perverse effect," the first evidence following Constitutional Reform suggests an acceleration of inequality in access to public higher education.

How could Ecuador level the playing field? Most important, Ecuador would need to invest greater resources to improve the quality of its basic education and to implement programs to keep all students in school until they are eligible to attend university. In fact, this is a possible outcome of Constitutional reform. If the government is able to improve the quality of primary and secondary education then more children from poor families and with indigenous roots will persist to graduation, and will be eligible for the benefits of free public higher education. But there is also a danger that, without greater public investment, the middle class will abandon public primary and secondary schools. Public school quality could deteriorate such that their graduates cannot gain access to university because they cannot pass the entrance exams. What is already clear is that the eliminating fees for all current university students (in the absence of mean-testing or financial aid for the neediest families), places an enormous new financial responsibility on the government and forces it to spend money for higher education that could have been used to improve basic education. Such would be another perverse consequence of a progressive Constitution.

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## Appendix: Higher Education Innovations of 2008 Constitution[3]

**Art. 350.-** El sistema de educación superior tiene como finalidad la formación académica y profesional con visión científica y humanista; la investigación científica y tecnológica; la innovación, promoción, desarrollo y difusión de los saberes y las culturas; la construcción de soluciones para los problemas del país, en relación con los objetivos del régimen de desarrollo.

**Art. 350.-** The system of higher education includes as its goals: academic and professional development with a vision that is both scientific and humanistic; innovation, promotion, development, and diffusion of types of knowledge and cultures; the construction of solutions to the country's problems that are linked to its development.

**Art. 351.-** El sistema de educación superior estará articulado al sistema nacional de educación y al Plan Nacional de Desarrollo; la ley establecerá los mecanismos de coordinación del sistema de educación superior con la Función Ejecutiva. Este sistema se regirá por los principios de autonomía responsable, cogobierno, igualdad de oportunidades, calidad, pertinencia, integralidad, autodeterminación para la producción del

[3] Unofficial translation by the author.

pensamiento y conocimiento, en el marco del diálogo de saberes, pensamiento universal y producción científica tecnológica global.

**Art. 351.-** The higher education system will be articulated with the national education system and the national development plan. The law will establish mechanisms to coordinate the higher education system with the government's executive branch. This system will turn on the principles of responsible autonomy, integration, self-determination for the production of thought and knowledge with in a framework of dialogue of different types of knowledge, universal thought and the global production of science and technology.

**Art. 352.-** El sistema de educación superior estará integrado por universidades y escuelas politécnicas; institutos superiores técnicos, tecnológicos y pedagógicos; y conservatorios de música y artes, debidamente acreditados y evaluados. Estas instituciones, sean públicas o particulares, no tendrán fines de lucro.

**Art. 352.-** The higher education system will comprise universities and polytechnics, technical and pedagogical institutes, conservatories of music and arts, duly accredited and evaluated. These institutions, be they public or private, will be non-profit.

**Art. 353.-** El sistema de educación superior se regirá por:

1. Un organismo público de planificación, regulación y coordinación interna del sistema y de la relación entre sus distintos actores con la Función Ejecutiva.

2. Un organismo público técnico de acreditación y aseguramiento de la calidad de instituciones, carreras y programas, que no podrá conformarse por representantes de las instituciones objeto de regulación.

**Art. 353.-** The higher education system will be coordinated by:

1. A public planning organization to regulate and coordinate, both internally and in relation with different actors in the executive branch.

2. A public technical organization of accreditation and quality assurance of institutions, professional courses, and academic programs that will not be composed of representatives from the institutions that [themselves] are the object of regulation.

**Art. 354.-** Las universidades y escuelas politécnicas, públicas y particulares, se crearán por ley, previo informe favorable vinculante del organismo encargado de la planificación, regulación y coordinación del sistema, que tendrá como base los informes previos favorables y obligatorios de la institución responsable del aseguramiento de la calidad y del organismo nacional de planificación. Los institutos superiores tecnológicos, técnicos y pedagógicos, y los conservatorios, se crearán por resolución del organismo encargado de la planificación, regulación y coordinación del sistema, previo informe favorable de la institución de aseguramiento de la calidad del sistema y del organismo nacional de planificación. La creación y financiamiento de nuevas casas de estudio y carreras universitarias públicas se supeditará a los requerimientos del desarrollo nacional. El organismo encargado de la planificación, regulación y coordinación del sistema y el organismo encargado para la acreditación y aseguramiento de la calidad podrán suspender, de acuerdo con la ley, a las universidades, escuelas politécnicas, institutos superiores, tecnológicos y pedagógicos, y conservatorios, así como solicitar la derogatoria de aquellas que se creen por ley.

**Art. 354.-** Universities and Polytechnics, both public and private, will be created by law, subject to a positive assessment by the organization charged with the planning, regulation, and coordination of the system, which will base its assessments on previous favorable and obligatory reports given to the organization charged with the responsibility of quality assurance and the organization of national planning. The higher technological

institutes, technical and pedagogical schools, and conservatories will be created by a resolution of the organization charged with the planning, regulation, and coordination of the system subject to a positive assessment by the organization charged with the planning, regulation, and coordination of the system, and based on favorable reports by the organizational charged with the responsibility of quality assurance and the organization of national planning. The creation and financing of new centers of study and an professional courses in public universities will be guided by the requirements of national development. The organizations charged with planning, regulation, and coordinating the system and the organization charged with accreditation and quality assurance will be able by law to suspend and sanction universities and polytechnics, technical and pedagogical institutes, conservatories of music and arts.

**Art. 355.-** El Estado reconocerá a las universidades y escuelas politécnicas autonomía académica, administrativa, financiera y orgánica, acorde con los objetivos del régimen de desarrollo y los principios establecidos en la Constitución. Se reconoce a las universidades y escuelas politécnicas el derecho a la autonomía, ejercida y comprendida de manera solidaria y responsable. Dicha autonomía garantiza el ejercicio de la libertad académica y el derecho a la búsqueda de la verdad, sin restricciones; el gobierno y gestión de sí mismas, en consonancia con los principios de alternancia, transparencia y los derechos políticos; y la producción de ciencia, tecnología, cultura y arte. Sus recintos son inviolables, no podrán ser allanados sino en los casos y términos en que pueda serlo el domicilio de una persona. La garantía del orden interno será competencia y responsabilidad de sus autoridades. Cuando se necesite el resguardo de la fuerza pública, la máxima autoridad de la entidad solicitará la asistencia pertinente. La autonomía no exime a las instituciones del sistema de ser fiscalizadas, de la responsabilidad social, rendición de cuentas y participación en la planificación nacional. La Función Ejecutiva no podrá privar de sus rentas o asignaciones presupuestarias, o retardar las transferencias a ninguna institución del sistema, ni clausurarlas o reorganizarlas de forma total o parcial.

**Art. 355.-** The State will recognize universities and polytechnic as autonomous academically, administratively, financially, and organically, in accordance with the objectives of the [national] development framework and the principles established under the Constitution. Universities and polytechnics are recognized as having the right of autonomy – exercised and understood in the manner of [social] solidarity and responsibility. This autonomy guarantees the exercise of academic freedom and the right to search for the truth, without restrictions… Autonomy does not exempt institutions of the system from being audited, from their social responsibility, from rendering accounts, or from participating in national planning. The [national] executive power cannot deprive an institution of the system of its income or budget allocations, or delay their transfers to them, or close or reorganize them in whole or in part.

**Art. 356.-** La educación superior pública será gratuita hasta el tercer nivel. El ingreso a las instituciones públicas de educación superior se regulará a través de un sistema de nivelación y admisión, definido en la ley. La gratuidad se vinculará a la responsabilidad académica de las estudiantes y los estudiantes. Con independencia de su carácter público o particular, se garantiza la igualdad de oportunidades en el acceso, en la permanencia, y en la movilidad y en el egreso, con excepción del cobro de aranceles en la educación particular. El cobro de aranceles en la educación superior particular contará con mecanismos tales como becas, créditos, cuotas de ingreso u otros que permitan la integración y equidad social en sus múltiples dimensiones.

**Art. 356.-** Public higher education will be free though the undergraduate level. Admission to public higher education institutions will be regulated through a system of evaluation defined under the law. Cost-free [education] will be linked to the academic responsibility of the students. Regardless of whether public or private, equality of opportunity in access is guaranteed, as well as equality in persistence, mobility, and exit, with the exception of the fees charged by private higher education. The charge of these fees in private higher education will cover such mechanisms as scholarships, loans, payments and means that permit integration and social equity in its many dimensions.

**Art. 357.-** El Estado garantizará el financiamiento de las instituciones públicas de educación superior. Las universidades y escuelas politécnicas públicas podrán crear fuentes complementarias de ingresos para mejorar su capacidad académica, invertir en la investigación y en el otorgamiento de becas y créditos, que no implicarán costo o gravamen alguno para quienes estudian en el tercer nivel. La distribución de estos recursos deberá basarse fundamentalmente en la calidad y otros criterios definidos en la ley. La ley regulará los servicios de asesoría técnica, consultoría y aquellos que involucren fuentes alternativas de ingresos para las universidades y escuelas politécnicas, públicas y particulares.

**Art. 357.-** The State will guarantee the finance of public higher education institutions. The universities and polytechnics will be able to create their own complementary sources of income to improve their academic capacity, invest in research, and offer scholarships and loans so long as these do not imply any cost or burden to those to those studying for their first degree. The distribution of these resources should be based fundamentally on quality and other criteria defined under the law. The law will regulate such services of technical assistance, consultancy, [and services] involving alternative sources of income for public and private universities and polytechnics.

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