

RESEARCH BRIEF • OCTOBER 2023

Dictatorship, Higher Education and Social Mobility

Higher Education and Mortality: Legacies of an Authoritarian College Contraction

The Intergenerational Transmission of Higher Education: Evidence from the 1973 Coup in Chile

Based on BFI Working Paper No. 2023-121, “[Dictatorship, Higher Education and Social Mobility](#),” by Maria Angélica Bautista, Felipe González, Luis R. Martínez, Pablo Muñoz, and Mounu Prem; BFI Working Paper No. 2023-120, “[Higher Education and Mortality: Legacies of an Authoritarian College Contraction](#),” by González, Martínez, Muñoz, and Prem; and BFI Working Paper No. 2023-122, “[The Intergenerational Transmission of Higher Education: Evidence from the 1973 Coup in Chile](#),” by Bautista, González, Martínez, Muñoz, and Prem

Following the coup of 1973 that brought military dictatorship to Chile under Augusto Pinochet’s rule, enrollment in higher education fell (owing to reduced government spending), with negative effects on those missing out; Broadly, those who were affected experienced an increase in mortality rates, worse labor market outcomes, lower consumption of health services, and were more likely dependent on public health services. Decades later, the children of those who were denied a college education were also less likely to attend college.

After its successful military coup in Chile in 1973, the dictatorial regime of Augusto Pinochet assumed control of all universities and steadily reduced public subsidies to higher education, which led to a reduction in the number of openings offered to incoming students. Enrollment plummeted, owing entirely to supply-side factors. Demand for higher ed, though, remained strong as secondary completion rates held steady, while the number of college applicants greatly exceeded openings.

Researchers have long investigated the link between political regimes and social mobility, or the effects on a person’s socio-economic condition and/or on their heirs’ condition, as well as the link between

education and mortality. However, research gaps remain, in particular on the effect of political regimes that limit or otherwise reduce enrollment in higher education. Also, while the link between K-12 education and mortality rates is well documented (and mostly null), little is known about the relationship between higher education and mortality. These three papers, which take as their historical marker the 1973 Chilean regime change, offer new insights into these and related questions. This research brief will summarize key findings for each paper. Readers are encouraged to explore the full papers as they offer a rich description of the events surrounding the coup, as well as more details on the authors’ methodology and findings.

Figure 1 - Positive Correlation Between Autocracy and Inequality in Chile



Note: This figure shows a positive correlation between autocracy and inequality in Chile. Panel A shows the share of income going to the top 20% of earners, middle 60% and bottom 20%. Panel B shows the Gini coefficient (own calculations). The Gini coefficient measures the extent to which the distribution of income or consumption among individuals or households within an economy deviates from a perfectly equal distribution. A Gini coefficient of 0 represents perfect equality, while an index of 1 implies perfect inequality. Source: EOD survey for Santiago metropolitan area. Vertical lines indicate the year of the military coup (1973) and the return to democracy (1990).

DICTATORSHIP, HIGHER EDUCATION AND SOCIAL MOBILITY

While much is known about the relationship between democracy and redistribution via social spending, especially on primary education, little is known about the relationship between political regimes—whether democratic or autocratic—and higher education. In this work, the authors study the impact of Chile’s Pinochet dictatorship on higher education and its distributional consequences. As noted above, the turn to a right-wing, military regime in Chile in 1973 resulted in decreased funding for higher education and a sharp decline in college attendance. What was the effect on social mobility?

- Using survey data spanning more than 50 years, the authors find that the share of income accruing to the middle-class correlates positively with democratic rule in the periods before, during, and after Pinochet. These changes came at the expense of the rich with no change for

the poor, lending support to the hypothesis that regime change mostly affects the middle class.

- The authors then explore the role of access to higher education, showing first that the share of individuals with any college education drops sharply for birth cohorts that reached college age in the years immediately after the coup. Moreover, those affected mostly came from less-affluent backgrounds, whose test scores were close to the cut-off determining admission.
- Combining census and survey data, the authors further show that individuals in the affected cohorts also experience sharp declines in labor force participation, occupational status, and income, arguably as a result of their reduced access to higher education.

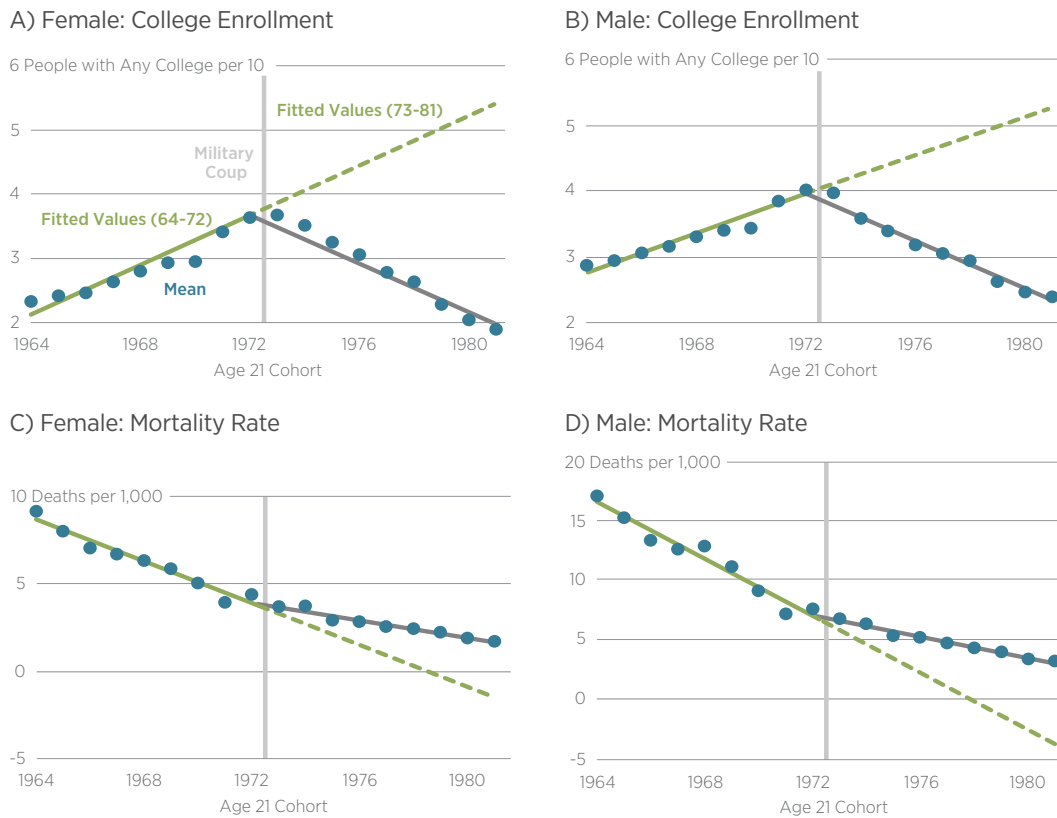
Bottom line: Higher education impacts social mobility, and political regimes can have an outsized effect on supplying higher education, especially for the middle class. In the case of Chile, individuals who reached college age shortly after the military coup experienced a sharp decline in college enrollment, had worse economic outcomes throughout the life cycle, and struggled to reach the top of the socioeconomic ladder.

HIGHER EDUCATION AND MORTALITY: LEGACIES OF AN AUTHORITARIAN COLLEGE CONTRACTION

As noted above, the Pinochet regime quickly assumed control of all universities and steadily reduced public subsidies to higher education, which led to a sharp reduction in the number of openings offered to incoming students. The authors take advantage of this natural experiment as a source of plausibly exogenous variation in college enrollment among cohorts reaching college age in a narrow window around the coup. Their empirical analysis uses individual-level records from the 1992 population census and vital statistics between 1994-2017 to calculate yearly mortality rates by cohort, gender, and region of residence. The authors’ baseline sample includes nearly 1 million individuals, who they observe between ages 34-74. They find the following:

- Before 1973, college enrollment was rising by close to 2 percentage points (pp) per cohort. This trend breaks after the coup and enrollment begins to decrease by 2 pp per cohort, equivalent to a 6% drop relative to the sample mean.

Figure 2 · College Enrollment and Mortality



Note: Panels A and B show the share per cohort with any college education, among people with complete secondary education in the 1992 census. Panels C and D show the average yearly number of deaths (per 1,000) between 1994 and 2017 (ages 34-74), among individuals with complete secondary education. Mortality rate is adjusted for previous deaths before averaging across years. Solid green line corresponds to the line of best fit for cohorts reaching age 21 before 1973, which we extrapolate for later cohorts (dashed line). Grey line corresponds to line of best fit for cohorts reaching age 21 in 1973 or afterwards.

- Accounting for region-by-year and age fixed effects, yearly deaths per 1,000 increase by 0.11 for each additional female cohort reaching college age after 1973. For men, mortality increases by 0.31 deaths per 1,000 for each post-coup cohort. These effects are equivalent to 2.9% and 4.4% of the respective sample means. These effects are largely driven by deaths from cancer and diseases of the circulatory or digestive systems.
- Using the kink in college enrollment as an excluded instrument, the authors further estimate that college enrollment reduces yearly age-specific mortality by 0.27 pp for women and by 0.92 pp for men.
- As shown above, lower college enrollment decreases labor force participation, the quality of occupation, and monthly income. Additionally, fewer college opportunities also increase reliance on the more congested public health system and lead to lower consumption of health services, including visits to primary care physicians or specialists, and preventive care procedures.

Bottom line: Reduced access to higher education has life-changing socioeconomic consequences. This work extends existing research by revealing new

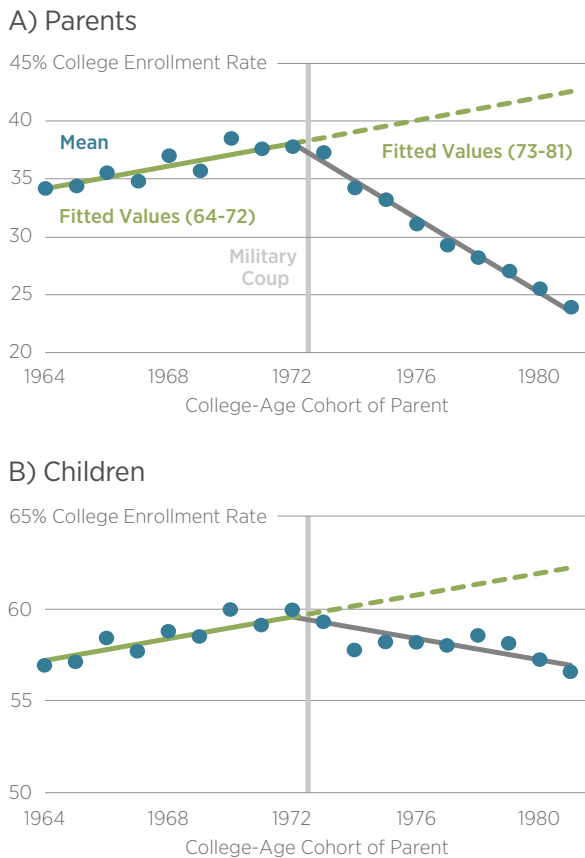
insights on the non-pecuniary effects of education, revealing a sizable health return to college. These key findings stand in contrast to previous work that has largely missed this connection.

THE INTERGENERATIONAL TRANSMISSION OF HIGHER EDUCATION: EVIDENCE FROM THE 1973 COUP IN CHILE

Intergenerational mobility is central to understanding the economic development of countries; likewise, understanding the role of policy in affecting mobility is essential. Of the factors influencing intergenerational mobility, education has proven key, with research showing a positive relation between parents' and children's education. However, most studies focus on primary and secondary education in contemporary developed countries, leaving a gap in our understanding of the role of college education historically, and also among developing countries.

This work addresses that gap by examining intergenerational college attendance in Chile during the time surrounding the 1973 coup, after which government funding for college education was cut severely, limiting the number of students, especially those from less wealthy households.

Figure 3 • Changes in College Enrollment Across Generations



Note: Panel A displays the share of parents per college age cohort (x-axis, 1964-1981) who reported at least one year of higher education in the 2017 census. Panel B reports the same number but among children with a parent in the corresponding cohort. The red vertical line indicates the year of the military coup. The solid green line corresponds to the best linear fit for cohorts reaching college age before 1973. The dashed green line shows the linear extrapolation for subsequent cohorts. The solid grey line corresponds to the best linear fit for cohorts reaching college age in 1973 or afterward.

The contribution of this paper is to estimate the intergenerational effects of this policy. The authors use census data and econometric analysis focusing on individuals who reached college age between 1964 and 1981 (thus including pre- and post-coup effects). The authors build a sample with more than

230,000 parent-child observations from the 2017 census and exploit the exposure of parental cohorts to different college opportunities in the 1964-1981 period, to find the following:

- Individuals with parents directly exposed to fewer college opportunities are less likely to have enrolled in college by 2017, thirty years after Chile’s return to democracy.
- When parents were exposed to 30 percent fewer college openings, their children have three percentage points lower probability of enrolling in college from a base of 58 percent.

These findings are supported by null results among individuals with parents who drop out of high school and were thus ineligible for college enrollment. Additional results show that reduced college access for parents has a meaningful impact on family composition, which could be an important underlying mechanism. In particular, parents in the cohorts affected by the college contraction are less likely to have a spouse and, if they do have one, the spouse is less likely to have any college education. In the case of women, reduced access to college is associated with a larger number of children and an earlier age at the time when the first child is born.

Bottom line: Enrollment in higher education has intergenerational effects, and the impact of this contraction is large and persists even after critical junctures such as—in the case of Chile—a country’s democratization. Further, this work suggests that the returns to college expansions might be significantly larger than previously thought. Importantly, even temporary restrictions in access to higher education can be more costly than current estimates suggest, including effects on marriage matching and fertility.

READ THE WORKING PAPERS

NO. 2023-121 · SEPTEMBER 2023

Dictatorship, Higher Education and Social Mobility

bfi.uchicago.edu/working-paper/2023-121

NO. 2023-120 · SEPTEMBER 2023

Higher Education and Mortality: Legacies of an Authoritarian College Contraction

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