



## POLICY FORUM

### ECONOMICS AND PSYCHOLOGY

# Linking job loss, inequality, mental health, and education

## Job destruction knocks many youth off the path to college

By Elizabeth O. Ananat,<sup>1</sup> Anna Gassman-Pines,<sup>1</sup> Dania V. Francis,<sup>2</sup> Christina M. Gibson-Davis<sup>1</sup>

National politics in the United States, Great Britain, France, and elsewhere have focused attention on the struggles of people in regions where jobs have been destroyed by globalization and technology. Many residents of these areas report anger and frustration, whether or not they have actually suffered job loss, fearing that their children will not do as well as they have. When researchers began to identify these forces increasing economic inequality (1), labor economists argued that intergenerational upward mobility should increase hand-in-hand with increasing inequality. This claim was predicated on the notion that working-class youth, rather than following their parents' footsteps to the now-closed factory, would pursue higher education and join the "knowledge economy." Our work integrating economics and developmental psychology, however, suggests that local job losses can both worsen adolescent mental health and lower academic performance and, thus, can increase income inequality in college attendance, particularly among

African-American students and those from the poorest families.

Because employment and earnings benefits resulting from higher education rose rapidly over this period of deindustrialization and growing income disparities (1), the primary prescription of many academic and government economists has been increased public investment in and promotion of higher education. To examine the effects of job destruction on educational mobility in the United States (fig. S1), we use our well-validated method for identifying causal effects of local job losses (2–4). We combine this with the ground-breaking measures of educational mobility produced by Chetty *et al.* (5), reflecting the degree to which a child's attending college at age 19 is predicted by her parent's income, for cohorts born in each U.S. state between 1984 and 1993. Our analyses focus on statewide job losses, by using data from 1995 to 2011 across all 50 states (data and methods are available in supplementary materials).

A one-standard deviation increase in state-level job losses when a cohort is in adolescence (aged 12 through 17) leads to a 0.16-SD increase in the gap in college attendance between rich and poor youth, driven by falling attendance among youth from the lowest-income families and stable attendance among youth from the highest-income families. A cumulative state job loss during adolescence of 7%—experienced by the most-

A bus passes near a canal in El Centro, California, which has very high unemployment.

affected decile of American adolescents—leads to a 20% decline in the likelihood that the poorest youth attend college (fig. S1). Rather than clearing a path to new educational opportunities in deindustrializing areas, job destruction knocks many youth off the path to college (table S1).

Two standard economic explanations for the effect of statewide job losses on educational mobility, selective migration out of distressed areas, and loss of family income cannot fully account for these findings. There is no evidence that these results are driven by migration in response to job losses (table S11). Further, in response to a 1-SD increase in statewide job losses, median income declined <2% (table S3), which is not large enough to fully account for our macrolevel results. Moreover, our results show that the effect of job destruction on educational mobility does not vary by state college tuition levels, including when accounting for financial aid (table S2). Over this period, in fact, financial aid for postsecondary education expanded dramatically as part of policy efforts to help economically struggling families, and these efforts succeeded in lowering inequality in the share of family income paid for tuition (6). That is, the economic benefits of college increased at the same time affordability did, aligning incentives to attend college with financial access.

### COMMUNITY-LEVEL TRAUMA

We propose that worsened adolescent mental health and lower academic performance, both of which we show result directly from job losses, are overlooked mediators of the causal effect of macrolevel job losses on the decreased educational mobility we observe. In doing so, we integrate scholar-

<sup>1</sup>Duke University, Durham, NC 27708, USA. <sup>2</sup>University of Massachusetts—Amherst, Amherst, MA 01003, USA. Email: agassman.pines@duke.edu

ship across disciplines: economics—which has tended to focus on wage incentives and aptitude in explaining educational attainment and earnings, with less attention to the impacts of trauma—and developmental psychology—which has tended to focus on the family environment as the determinant of children’s life trajectories, with less attention to macrolevel factors.

In empirical tests of our theory (fig. S2, left, and table S4), we find that job losses to 1% of the working-age population in the previous year decrease eighth-grade math achievement test scores by 0.057 SD, a large population-level effect size commensurate with (although opposite in sign of) interventions that are designed to affect test scores. Although others (7, 8) have shown that parental job loss lowers academic performance, the macrolevel effect that we find in states is much too large to be accounted for by isolated responses among the 1.5% of students with at least one parent affected by a 1% job loss. Instead, it necessarily reflects a macrolevel effect that includes responses by the other 98.5% of children in the state. In our best estimate, this indirectly affected

group—in size, 65 times the directly affected group—experiences learning losses due to statewide job destruction that are about one-third the size of those experienced by children whose parents lose jobs.

Moreover, the effect of the previous year’s job losses on aggregate learning losses occurs simultaneously with those losses’ aggregate effects on youths’ mental health, specifically among African-American youth. It has long been known that the aggregate mental health of adults, including those who remain employed, declines during economic downturns (9, 10). We extend this work by demonstrating that aggregate mental health of youth in those communities is also affected, as measured using the best population surveillance data available on adolescents, the Youth Risk Behavior Surveillance Survey measure of suicidal ideation (4). Suicidal ideation increases by 2.33 percentage points among black youth in response to statewide job losses, and the responses are much too large to be driven only by youth who experience job loss within their own families (fig. S2, right, and table S4). Adolescent mental health may decline for a number of reasons, from anxiety about future job prospects, to responses to parent or teacher economic anxiety, to interactions with peers who experience parental job loss (11).

We argue, therefore, that macrolevel job losses are best conceptualized as community-level traumas that harm the mental health of both children and adults, and of both families who experience job loss and those who only witness it (11). Such traumas inhibit learning and leave youth unable to optimally respond to increased economic incentives to invest in education (12).

### POLICY TO REDUCE UNCERTAINTY

Currently, the main federal policy tool for addressing job losses due to globalization is Trade Adjustment Assistance (TAA), which provides extended unemployment insurance, health benefits, and retraining to workers who lost jobs. Although its effectiveness for treated workers is unknown, TAA may also be insufficient because it is narrowly targeted to workers who can demonstrate that they lost jobs due to trade. Thus, TAA ignores the majority of workers, most of whom have lost jobs due to technological change or other reasons. Nor does TAA consider effects on workers’ children or on others in the community; indeed, our work finds no significant difference by levels of TAA spending in the effects of statewide job losses during adolescence on educational mobility.

In other Western industrialized countries, such as Denmark, governments engage in intensive activities aimed at increasing workers’ skills and actively helping workers acquire new employment quickly. Services, including rigorous job training and active matching of worker skills to employer

needs, are available to all unemployed citizens and are required for those who are receiving unemployment compensation. Such active labor market policies appear to increase employment rates in countries that use them (13, 14). These policies can reduce popular resistance to high-growth, “creative destruction” economic programs, because the threat of job loss is not as distressing when supports for reemployment are provided. Our findings suggest that such a policy approach may not only directly assist those who have lost jobs but may also benefit the community more broadly, by reducing the uncertainty about reemployment prospects that accompanies job losses in the United States. Indeed, college attendance increases across the income distribution (albeit unevenly) in response to job loss in states where, due to low initial unemployment, finding a new job is easier (fig. S1, bottom). Similarly, test-score and mental-health declines after statewide job losses are smaller in contexts of low un-

employment (fig. S2 and table S4); this suggests that a given level of macro-employment instability is much less harmful to youths when reemployment prospects are better.

Future research should evaluate, likely at a state or local level, whether reemployment policies in the United States can moderate the effects of economic disruption on youth outcomes. Such evaluation efforts should gather information on youth mental health and educational outcomes at the individual and the population levels, in order to better understand the effects of job destruction on all youth in a community.

Many recent debates on economic policy have focused on the white working class. Our work, by contrast, consistently uncovers impacts of job destruction that are similar but larger for blacks than for whites (3, 4). Job losses in the typical area where an African-American lives increase inequality in college attendance by nearly twice as much as the average across the country (fig. S1, top, and table S1). Effects of job losses on our proposed mediators of college attendance, mental health, and academic achievement are also similar, but worse, among African-American youth (fig. S1 and table S4). To suggest that the experiences of displaced whites and blacks require different policy responses unnecessarily complicates the already challenging problem of creating economic opportunity for all and has created division where there is, in reality, great potential for unity of purpose. ■

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### SUPPLEMENTARY MATERIALS

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**“..macrolevel job losses are... community-level traumas [for those] who experience... and those who only witness [them].”**

# Science

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