Table 5. 1990 Counterfactual 2

Group	*Share of sample*	*Average ACS labor income (incl. zeros)*	*Group-specific GDP (in trillions)*
Non-Hispanic white	0.62	$38,548	$3.1
Non-Hispanic Black	0.12	$26,617	$0.4
Hispanic	0.17	$25,144	$0.5
Other	0.09	$33,925	$0.4
Total ACS labor income			$4.4

Source: Author's calculations.
Note: Table shows the simple counterfactual of assuming that the 1990 population shares were the same as the population shares in 2017–2019.

by about $1 trillion per year (or by 12 percent) if we equated the average incomes of Black and Hispanic individuals to the average income levels of whites individuals. Second, the authors claim that the aggregate gains have been increasing over time. But the increasing gains are solely the result of group population shares shifting over time, as I document in table 5. The income gaps across groups have been relatively constant since 1990. However, the share of Hispanic workers has been rising relative to White workers over this period. It is not that the differences in relative income are growing over time, it is just that the share of the population groups with lower income is rising.

With respect to the first takeaway, I return to my simple illustrative example at the start of my comments. The aggregate income gains from equating incomes across groups hinges critically on whether the current incomes of white individuals are a good counterfactual for Black and Hispanic individuals if group-specific barriers were removed and on how one thinks about the costs of removing such barriers. I am not sure if the counterfactual that the authors focus on is the correct one. As a result, I am not sure how seriously we should take their numbers.

Having said that, I do think that barriers to the allocation of talent across racial and ethnic groups have aggregate consequences. I believe it is good for the economics profession to have more work done exploring how large those aggregate consequences might be.

GENERAL DISCUSSION In response to the comment by Erik Hurst, Laurence Meyer argued that as the proportion of unskilled workers in the economy declines and that of skilled workers increases, the relative price of the products produced by each group will change accordingly. Low-skilled workers are likely to see their wages rise, and vice versa, he continued, and he noted that this shift in the skill of the labor force raises allocation issues, especially related to low-skilled production and what that will look like going forward with less demand for those workers as technology changes.

Mary Daly responded by pointing out that goods and services are provided to us by the lower end of the skill distribution in other countries and that services are already increasingly automated. She concluded that the economy is very dynamic and would be able to accommodate increased educational attainment and better jobs.

In response to Hurst's comment, Caroline Hoxby noted that while there are increases in productivity following the reallocation of talent to jobs, this does not mean that there isn't also redistribution of income following decreases in discrimination, which reveals the latent distribution of productivity—an underappreciated point made by Charles Murray in *The Bell Curve*, which he primarily authored.[1] Hoxby also highlighted that we often overestimate the extent to which educational attainment has changed. Such changes have been concentrated in nonselective universities, where ethnic minorities are overrepresented, and equating these groups with the educational attainment of white workers will almost certainly overestimate what equalization would achieve because the quality of education is different, she concluded.

Daly acknowledged the redistribution issues raised by the two comments but noted that the redistribution discussed in the current paper on equalizing gaps looks at a growing pie, not a constant pie, because equalizing gaps would lead to an increase in aggregate output. She explained that while there would be a relative rewards shift, an absolute rewards shift is less likely. She argued that even if we uncover the latent distribution, it wouldn't result in nominal income cuts if the pie is increasing, but rather it is much more likely we would get a relative rebalancing. In response to the comment by Hurst, Daly agrees that change would be hard and likely be constrained by resistance to changes in the current pecking order.

Steven Davis asked why the average outcome of white individuals was the benchmark used in the paper and suggested this might need further explanation. He pointed out that there seems to be a presumption by the authors that average differences across groups are a result only of current or past discrimination when, in reality, there are other explanations as well.

1. R. J. Herrnstein and C. A. Murray, *The Bell Curve: Intelligence and Class Structure in American Life* (New York: Free Press, 1994).

He brought up research by Raquel Fernández and Alessandra Fogli which argues that cultural differences are transmitted intergenerationally and affect labor supply and human capital investment decisions, as well as fertility preferences.[2] Davis noted that the quality-quantity trade-off in the latter has implications for human capital investment in children. Davis contends that whether such cultural differences are also a result of discrimination and barriers is an open question.

Austan Goolsbee remarked that the paper starts from the identifying assumption that if talent is equally distributed, then everybody should be able to match the distribution of white workers, which in turn would expand national income. He agrees with Hurst and Davis that taking the resulting number at face value comes with caveats and asks whether the benchmark used is the relevant one. He further notes that income increases can occur through a number of different channels, including changes in education or industry, or through the skill mix of workers—all of which would also result in a rebalancing of the general equilibrium, and, he argues, as a result some people's incomes would go down. Goolsbee then ponders whether the benchmark used in the paper is the relevant one and probes the authors for their thoughts on this.

Daly responded that the choice to use the white population was largely because it is the majority part of the population and would likely represent nondiscriminatory wages. She concedes that they could have spent more time explaining this in the paper. She pointed out that she's concerned about the cultural aspect raised by Davis and argued that it is too easy to simply accept the world today as a result of people's active choice, as opposed to acknowledging historical barriers that have been passed on intergenerationally and that ultimately become costly. Daly explained that while there may be a redistribution loss for the majority group, the point of the paper is to highlight that as the share of the population who are Hispanic increases and the share who are Black stay the same, if we don't resolve some of the current inequities, we are going to have a shrinking pie or one that grows slower as a result of fewer taxpayers and more people needing public benefits. She concluded that the point of the paper is not to leave the reader with a number but to recognize that we are essentially operating under constrained optimization where we have sidelined a lot of people in an economy which

2. Raquel Fernández and Alessandra Fogli, "Culture: An Empirical Investigation of Beliefs, Work, and Fertility," *American Economic Journal: Macroeconomics* 1, no. 1 (2009): 146–77; Raquel Fernández, "Does Culture Matter?" in *Handbook of Social Economics*, eds. Jess Benhabib, Alberto Bisin, and Matthew O. Jackson (Amsterdam: North-Holland, 2011).

has a lower labor force participation rate than most industrialized nations.[3] Daly mentioned what she called an instrumental paper in this respect by Hsieh and others on talent allocation.[4]

Davis agreed that the reason average outcomes differ by ethnic and racial groups and between men and women is important. He said that his concern is the presumption that between-group differences are entirely due to discrimination and barriers. Without understanding what underlies those differences in their full complexity, we are unlikely to develop policies that respond effectively to them.

In the virtual conferencing chat, Hoxby noted that while it is true that the pie can increase, it is important to estimate rather than assume that all groups discriminated against could attain the benchmark.

A group of participants discussed the potential interpretation of the exercise carried out in the paper as an upper bound, with Henry Aaron arguing that the paper has as a hypothesis that white men have not drawn benefits from historical discrimination against women and Black people, which he finds absurd. Marianne Bertrand added that it may not be an upper bound if diversity in the labor force and in workplaces fosters more innovative ideas, which could effectively extend the frontier. Michael Kiley noted that, related to the potential productivity effects that greater equality could bring about, there is research suggesting that higher incomes are associated with a greater propensity to innovate.[5] Aaron suggested that while there is no doubt that removing barriers to the expression of talent would bring enormous economic, social, and political gains, the measure in the paper, which uses the earnings of white men with the legacies of discrimination that have led to the current conditions, is not a good guide to the actual magnitude of potential gains.

Kiley mentioned future infrastructure investments and suggested a role for the reallocation of resources, including jobs, rather than more resources. He pointed to the importance of the macroeconomic backdrop for structural reallocation.

3. Mary C. Daly, Joseph H. Pedtke, Nicholas Petrosky-Nadeau, and Annemarie Schweinert, "Why Aren't U.S. Workers Working?," *FRBSF Economic Letter*, November 13, 2018, https://www.frbsf.org/economic-research/publications/economic-letter/2018/november/why-are-us-workers-not-participating/.

4. Chang-Tai Hsieh, Erik Hurst, Charles I. Jones, and Peter J. Klenow, "The Allocation of Talent and U.S. Economic Growth," *Econometrica* 87, no. 5 (2019): 1439–74.

5. Alex Bell, Raj Chetty, Xavier Jaravel, Neviana Petkova, and John Van Reenen, "Who Becomes an Inventor in America? The Importance of Exposure to Innovation," *Quarterly Journal of Economics* 134, no. 2 (2019): 647–713.

Harry Holzer asked how much the gap would increase if one could take into account the underrepresentation of Black men in the CPS data, mostly due to incarceration and other undercounting issues.

Ricardo Reis brought up a paper by Michael Clemens that describes a similar exercise to the current paper and finds a gain equal to 50–150 percent of GDP resulting from the average immigrant being able to move without barriers to rich countries like the United States—which would benefit world equity enormously.[6]

Robert Gordon commented that if we raise the average income for Black people by having more Black CEOs, there would be fewer white CEOs, reducing the benchmark average white income. He suggested that the difference between Black male and female employment rates is partly due to Black male incarceration and that the paper needs to indicate whether all Black prisoners are to be released and how to deal with the employment stigma of those with felony convictions. Stating that only about one-quarter of Black students in central city high school districts pass reading and math tests at the eleventh-grade level, Gordon concluded that this has many consequences: high school dropouts, more Black students in community colleges than in four-year colleges, and more in low-quality, nonselective four-year colleges, ultimately making it unrealistic to expect Black workers to achieve equal earnings with white workers.

Luigi Zingales pointed out that if we look back at projections economists did in the past, starting with Malthus, about the future path of the economy, we can get a good sense of the true uncertainty about our forecasts—a humbling exercise.

6. Michael A. Clemens, "Economics and Emigration: Trillion-Dollar Bills on the Sidewalk?," *Journal of Economic Perspectives* 25, no. 3 (2011): 83–106.