BIAS DATA CAN MAKE THE GOOD LOOK BAD

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Since 1989, lending institutions have been required to keep records reflecting the race of applicants for home mortgages, and in recent months these records have provided the raw data for a number of studies of racial disparities in home lending. The studies have invariably shown that mortgage applications of minorities are rejected at much higher rates than applications of whites, even when the studies have attempted to control for income level of the applicants. Given these disparities in loan rejection rates, there have even been efforts to rank particular lending institutions according to the degree of perceived discrimination against black and other minority applicants.

A Guide for Borrowers

Whether or not any legal action is taken against the banks deemed to be the most discriminatory, one might think that such studies can at least offer guidance as to where minorities seeking mortgages might avoid wasting their time. That could be a serious mistake, however. Banks deemed to be the most discriminatory often may be precisely the places where the minority borrowers have not only the best chance of being treated fairly, but the best chance of securing credit.

I do not mean to attack the general validity of these studies, though certainly there is much that the studies do not take into account that would tend to explain away some or all of the identified disparities. For example, in any broad income category, the group with lower average income will comprise a larger proportion of persons in the lower part of the category than person in the upper part of the category. And, of course, the disparity in wealth between blacks and whites earning the same income has been well documented.

Broad Application

But my point is a mathematical one, and it bears on a wide range of issues where social scientists and commentators utterly misinterpret statistical information. Imagine two demographic groups, each composed of 10 persons. With respect to a particular criterion or condition that is associated with socioeconomic status - test scores, for example - let us divide Group A (the advantaged group) into three categories, with three persons in the high, four in the middle, and three in the low. Assuming that Group B (the disadvantaged group) has lower average test scores than Group A, we would expect to find members of Group B distributed among the three categories something like this: two in the high, three in the middle, and five in the low.

Misleading Numbers

Suppose we set the cutoff score at a point at which only the high category passes. The pass rate of Group B (20%) would be 67% of the pass rate of Group A (30%), and the failure rate of

Group B (80%) would be 1.14 times the rate of Group A (70%). If we reduce the cutoff score to the point where only persons in the low category will fail the test, Group B's pass rate (50%) rises to 71% of the pass rate of Group A (70%). The ratio of Group B's failure rate (50%) to that of Group A (30%) also increases, rising from 1.14 to 1.67.

Ordinarily, when courts consider whether a test unfairly discriminates against minorities, they look to disparities in pass rates. And one way to lessen a discriminatory effect is to lower the cutoff score, thereby reducing the disparity in pass rates, even though doing so increases the disparity in failure rates.

A bank's lending practices exactly like tests. At banks that have relatively lenient lending criteria, the black approval rate will be closer to the white approval rate than at other banks, while the disparity in rejection rates will be greater than at other banks.

Thus, so long as the focus is on disparities in rejection rates, the banks whose credit tests would be deemed to have the least discriminatory effect, as that concept usually is understood, instead will be deemed to have the most discriminatory practices. In any event, the banks deemed to have the most discriminatory practices will tend to be those at which blacks, like whites, are most likely to get loans.

The tendency is illustrated by the Home Mortgage Disclosure Act data first released by the in October 1991. Among applicants for conventional mortgages, the higher the income grouping, the greater was the acceptance rate, and the closer was the black acceptance rate to the white acceptance rate. At the same time, the higher the income, the greater was the racial disparity in rejection rates.

Does this always happen? Of course not. Other factors, including such discrimination as a particular institution actually may engage in, often outweigh the mathematical tendencies. But the mathematical tendencies are essential parts of the picture. Without understanding them, no one can make heads or tails out of the data.