
Innovation Enriches the 1%, While Increasing Social Mobility



By David Hemous , University of Zurich

The quickening pace of innovation has made life both sweeter and more unstable for the mega-rich, and given the poor a higher chance of reaching the top.

Going back at least as far as the days of Henry Ford, innovation has always been associated with great wealth. But we now know that it is also one of the major factors behind the recent economic rise of the “one percent”, relative to the rest of us.

Chief among the many developed economies that have seen rapid growth in top income inequality is the United States, where the richest one percent’s share of national income has more than doubled since 1979. Over the same period, American innovation, as measured by the number of patent applications filed, has skyrocketed. In the recent paper “[**Innovation and Top Income Inequality**](#)” (co-authored by Philippe Aghion from the Collège de France, Ufuk Akcigit from the University of Chicago, Antonin Bergeaud from LSE and Richard Blundell from UCL), we found that this is neither a coincidence nor a mere correlation.

We used quality-weighted patent data across all 50 U.S. states, as well as two additional indices of a state's innovativeness—the composition of the U.S. Senate appropriations committee (which allocates research funds to the states), and the network of “knowledge spillovers” as revealed by interstate patent citations—to establish that the surge in innovation was directly responsible for, on average, approximately 17 percent of the top income inequality increase in the U.S. between 1975 and 2010. In California, 22 percent of the increase was attributable to innovation. Keep in mind that this figure is likely an understatement, because it doesn't take into account that profits from a given innovation often travel across state lines.

A complicated picture

Looking beyond the richest one percent, however, we see that this is not a simple rich-get-richer scenario. When we analysed broader measures of income inequality such as top 10 percent income share and the Gini coefficient, innovativeness was seen to have no effect.

This apparent contradiction is partly resolved in another part of our study, which found that social mobility (here defined as the probability that someone whose parents belonged to the lowest income quintile will reach the highest quintile) tends to be higher in areas of the United States with above-average innovativeness. This lines up with common sense: In places where ingenuity runs high and barriers to entry are low, people have greater freedom to overcome humble circumstances.

But it turns out that not all innovativeness is created equal. Breaking the data down further, we saw that the effect on social mobility was entirely driven by new entrants and not by incumbents. In other words, innovation, taken as a whole, contributed to increasing the relative wealth of the one percent, but only innovation stemming from “creative destruction”—the disruptive impact of the upstarts—also increased social mobility.

The dampening effect

We hypothesized that in areas with a significant amount of lobbying activity, the mobility-enhancing effect of creative destruction would be muted. This is because lobbying is a chief method incumbents use to protect their market share against encroachment by upstart companies. There is no established way to measure local lobbying activity, so we used industry-specific national-level lobbying data coupled with U.S. Census Bureau employment data for

the 50 states. We found that in areas with higher-than-average lobbying spend, new entrants' innovativeness had much less positive impact on social mobility. In these areas, it seems that innovative startups are more often prevented from posing a genuine threat to the dominance of incumbents.

Tumult at the top

With all the data at our disposal, we can perhaps draw a few general conclusions. The first is that while innovation has certainly increased the relative income share of the richest one percent, it has not consistently done so at the expense of the poorest in society. Quite the opposite: Where innovation has been allowed to take its course, without being inhibited by lobbying and other barriers to entry, it has empowered those with working-class roots to climb the economic ladder at a rapid rate.

Rather, our analysis indicates that much of the wealth transfer to the one percent has been from the rungs immediately underneath. This means that innovation has helped lengthen the gap between the 90th and 99th income percentiles, presumably leading to more cutthroat competition among elites to reach the pinnacle and remain there.

One reason for this is that the value each innovation brings to the one percent is only temporary, our analysis suggests. After approximately six years, that value is diffused throughout society at large, as competitors learn to imitate and surpass yesterday's breakthroughs.

For policymakers

If innovation has helped make "one-percenter" status a loftier yet more precipitous perch, it has also made that status more attainable for talented strivers. This should be of interest to policymakers seeking to offset advancing income inequality. Our paper makes no specific policy recommendations, but the difference between entrant and incumbent innovation as regards social mobility could perhaps guide governments in the formulation of capital income tax policy. We have seen that taxation authorities in various countries are increasingly taking into account the size and age of innovative companies. Our study may provide a research basis for a more systematic application of these principles.

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