

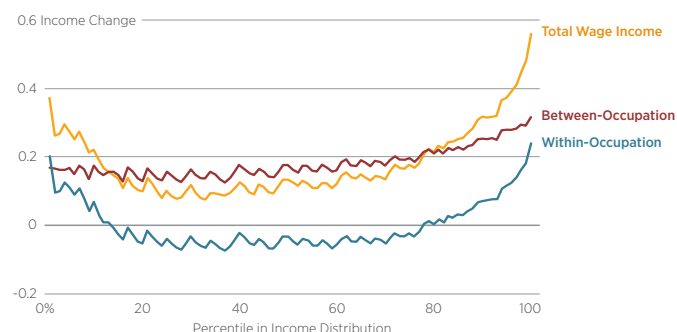
The Spillover Effects of Top Income Inequality

Based on BFI Working Paper No. 2023-83, [*"The Spillover Effects of Top Income Inequality,"*](#) by Joshua D. Gottlieb, Chicago Harris; David Hémous, University of Zurich; Jeffrey Hicks, University of Toronto; and Morten Olsen, University of Copenhagen

The authors present and empirically validate a theory where increases in top income inequality in one occupation can spill over through consumption to other occupations that provide non-divisible services directly to customers.

Despite the attention paid to some very successful occupations, such as CEOs, doctors, and bankers, most of the meteoric rise in income inequality over the last several decades has taken place within occupations. In other words, most high earners are pulling away from the rest of the workforce

Figure 1 • Changes in Income, Between and Within Occupations (1980 - 2012)



Note: This graph shows the change in wage income from 1980 to 2012 at each percentile of the income distribution. Wage change, shown on the vertical axis, is measured in log points. The yellow line shows the overall change along the income distribution, the red line shows the amount of that change that is attributable to widening gaps between workers in the same occupation, and the blue line shows the amount of the gap that is attributable to a widening gap between workers in different occupation. The figure lends several key insights. First, you can see that income growth during this period was largest for earners at the top of the income distribution. Second, most of this growth is owed to rising inequality within-occupations, not across occupations.

because they out-earn their own professional peers, not merely because they're entering highly paid professions. For example, a small group of highly paid doctors now earns much more than other doctors.

At first glance, this pattern suggests that any explanation for rising inequality—whether globalization, deregulation, changes to the tax structure or technology—would have to apply to occupations as diverse as bankers, doctors, and CEOs. In this paper, the authors offer an alternative view: Increases in income inequality originating within a few occupations, they posit, have “spilled over” into others through consumption.

To understand the authors' theory, consider a scenario where top income inequality rises in a given city. For instance, a boon to Boston's life sciences industry results in a new group of highly paid biomedical executives in town. The executives value their health highly and therefore seek out Boston's best doctors, who raise their prices in response. This increased willingness to pay for expensive doctors results in greater inequality among doctors in Boston.

More formally, the theory is as follows: An increase in one group's top income inequality increases top income inequality for certain service providers. This occurs when the services provided are heterogeneous in quality and non-divisible—i.e., consumers cannot substitute quality with quantity. These spillovers are geographically local when the services are non-tradable.

Using their new theory, the authors make a set of predictions about the spillover effects of top income inequality, which they test empirically using data on the labor market. They show the following:

- First, high-income patients are indeed treated by more expensive doctors. They also use a nationally representative survey combined with detailed medical claims data from one state to show that patients who earn 10% more tend to spend 4.4% more on medical care.
- An increase in general inequality in an area increases inequality among doctors in that area. The authors use data from the Census Bureau to measure top income inequality across labor markets in the United States. Using shocks to non-doctors' inequality, they estimate the effect of general inequality on inequality within specific occupations. They find that from 1980-2012, a 24% increase in general inequality led to a 34% increase in doctors' inequality.
- The theoretical results are robust to allowing for both occupational and geographical mobility of doctors; in both cases, increasing local income inequality increases local income inequality for doctors. In contrast, when they allow for trade in medical services, spillovers occur at the national level so that local top income inequality of doctors is independent of the local top income inequality.

- The authors document similar spillovers for dentists and real estate agents, both of which fit the model's requirements that services be heterogeneous in quality and non-divisible. They show that most of the increase in inequality for these occupations can be explained by increases in income inequality in other occupations. By contrast, the authors do not observe such spillovers for occupations that do not meet their model's requirements (such as engineers and financial managers).

The upshot is that the increase in top income inequality observed in the last 40 years across most occupations may not require a common explanation. Increases in inequality for bankers or CEOs due to deregulation or globalization may have spilled over to other high-earning occupations, increasing top income inequality broadly. In addition, the fact that higher-income consumers tend to purchase more expensive services implies that rising price inequality has a greater effect on nominal income inequality than on welfare inequality.

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