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The Benefits of Tech Need to Trickle-down

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City, state, and national governments invest considerable resources into attracting and developing high-tech industries. There are good reasons for this – the sector is highly productive and pays high wages, and some suggest that growth in tech is associated with increased employment in other local sectors. The superstar cities of the world economy, from San Francisco to London, tend to have a strong tech-economy.

Yet others have noticed a dark side to high-tech economic development. Tech-hubs tend to have high levels of inequality. Workers in tech industries such as ICT, biotechnology, or advanced manufacturing earn high wages, but the benefits do not seem to trickle down to the poorest residents. This raises the question: who gains from the growth of a city's tech sector?

In a [new study](#) with Professor Andrés Rodríguez-Pose of the LSE, we investigate this question using data on almost 300 US Cities (metropolitan statistical areas) and statistical analysis.

The basic idea behind many economic development strategies is that there are multiplier effects from one sector to the rest of the local economy: for every job created in a high value tradable sector like tech, others are created locally. This might be because workers spend money locally, in cafes and restaurants, or because tech firms use local companies as part of their supply chain. Since high-technology sectors can pay so well, multipliers from tech are often assumed to be unusually large.

Our conclusions are, in part, positive for tech. We find that less-well educated workers in the same city do benefit, as tech growth seems to increase their wages, and – although our results are less clear here – potentially increase employment. Strong local demand is likely to be raising wages for some local workers, either in associated employment in other sectors or in tech itself. This provides some justification for all the policy emphasis on the sector.

But our second finding is more concerning: these benefits are not enough to help those at the bottom of the income distribution. Once we control statistically for factors such as workforce skills, there is no relationship between growth in the tech sector and reductions in poverty. The benefits in terms of increased wages only kick in for families with incomes roughly double the poverty line.

Further, our research includes an important caveat: While workers may benefit from increased wages, we do not account for costs. Tech-hubs such as Silicon Valley are famously expensive, and any benefits we observe may be wiped out through a higher [cost of living](#).

What needs to happen the tech growth in city to trickle-down to those on very low incomes? Both the local governments and a tech sector have important roles to play. The tech sector is rapidly growing and often highly profitable—but clearly too little is being done to benefit those at risk of poverty.

Much more can be done to link disadvantaged residents to jobs in the tech-sector and beyond. In the UK, the [Tech City](#) digital business cluster in London's Shoreditch is a classic example. It is close to the financial services of the City of London, but residents of the area often fail to share in the benefits of this economic hub.

The problem isn't that there is a lack of demand for labor, but a lack of connections between low-income residents and jobs in the tech-economy. Initiatives such as [wearedotdot](#) are working to help link local residents to the Tech City digital cluster by providing information on training courses in digital technologies and job opportunities for local people. These jobs do not have to be in the tech sector itself, but can be in other parts of the local economy – such as security or cleaning – which are likely to grow as the tech sector does. The key thing is to

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make sure that new jobs pay decent wages and are a likely continued source of employment and opportunity in the years ahead.

City governments can also do far more on costs. Demand for housing in tech-hubs often [combines with an unwillingness from local residents](#) to tolerate new developments and higher density. The inevitable result is rising prices, squeezing the incomes of local residents and only benefiting landowners. Unless local areas can address this affordability problem, for many residents the costs tech-growth might outweigh any benefits.

Technology has become a central force in the 21st century economy, reshaping jobs and industries and transforming cities and neighborhoods. A fundamental challenge going forward is ensuring that these changes can be made to work for the benefit of society as a whole.

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