



## Rising temps, heat shocks, influence job relocations

Climate-change risks are still less influential than labor and taxes for selecting an office location, but heat shocks appear to be prompting subtle labor force relocations.



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States like Arizona and Nevada might be notorious for sweltering heat shocks that can lead to increased illness, work absences, loss of productivity and even fatalities, but businesses appear unfazed -- at least on the surface. These states, among those with the highest heat-related death tolls, continue to see rapid expansion.

But a recent study, published by the National Bureau of Economic Research, sheds light on how companies quietly adapt to the rise in temperature. Heat shocks are prompting companies with multiple locations to shift operations to cooler areas. Heat shocks are periods of extreme temperatures severe enough to affect health, strain energy grids, stress plants and animals and increase fire risks.

Still, experts believe business climate factors, such as the labor pool, taxes and regulations, outweigh environmental climate risks.

In investigating the effect of heat shocks, researchers used a Dun & Bradstreet database that included details on company locations and employees, and data from the Spatial Hazard Events and Losses Database, which tracks natural disasters and associated losses in the U.S. They looked at data from some 50,000 companies between 2009 and 2020 and tracked the changes on a county level.

"What our analysis indicates is firms may act as climate insulators and relocate employment from more exposed to less exposed regions," said Abhishek Bhardwaj, an assistant professor of finance at the A. B. Freeman School of Business at Tulane University and one of the paper's authors.

To illustrate the economic impact, the researchers found that when a company with equal employment across two counties experiences a heat shock in one county, there is a subsequent 0.7% increase in employment growth in the unaffected county over a three-year horizon. The finding is significant, given that the mean employment growth for the sample of businesses in the study is 2.4%, the researchers reported.

## Implications increase

In their paper, the researchers said their results "have implications on how we should expect firms to adjust their operations if heat waves intensify in the future as a consequence of climate change."

The reality is that for many employers, climate risk, including excessive heat, has just become part of the set of risks they need to evaluate regularly. **Emily Rose McRae** Analyst, Gartner

Emily Rose McRae, a Gartner analyst, said companies are evaluating climate change risks and their potential to disrupt labor availability and supply chain operations. "The reality is that for many employers, climate risk, including excessive heat, has just become part of the set of risks they need to evaluate regularly," she said.

Still, evidence that excessive heat broadly affects business behavior is not readily apparent. The Phoenix area, for instance, is one of the fastest-growing areas in the nation in job and population growth and has become a focal point for chip manufacturing, but it's also seeing record numbers of heat-related deaths.

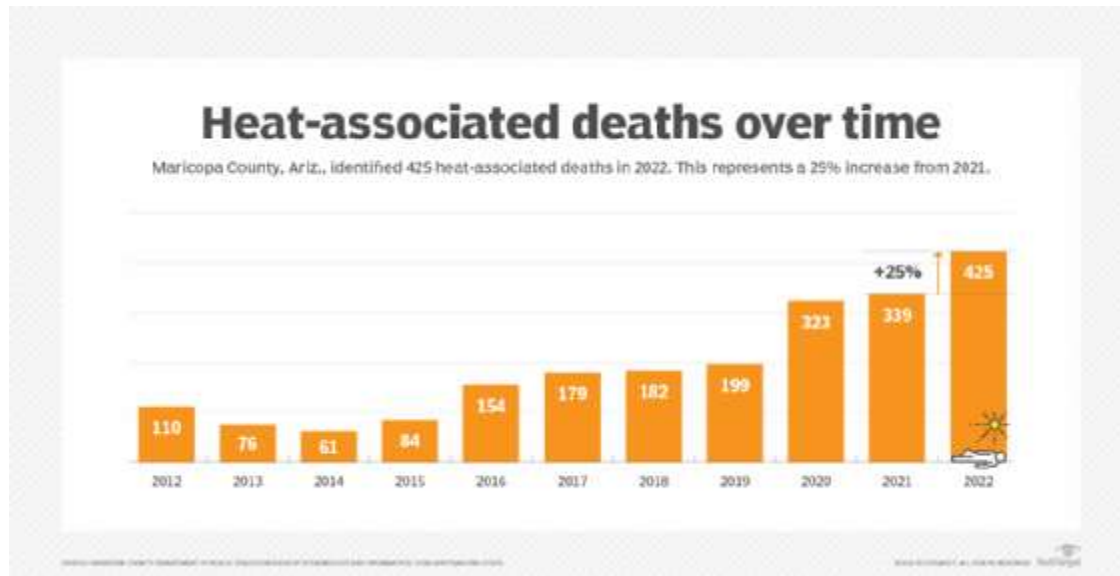
In 2022, Maricopa County, Ariz., which includes Phoenix, had the largest population gain in the U.S., adding nearly 57,000 residents, or an increase of 1.3% since 2021. It also added 90,000 jobs that year, for an annual job growth of 4.4%. But it had 425 heat associated deaths in 2022, a record and a similar number last year.

Nevada's Clark County, another fast-growing area that includes Las Vegas, reported 165 heat-related deaths in 2022. The Phoenix area's economy is booming, even as heat deaths rise.

## Record heat-related deaths

Heat-related deaths are on the rise in the U.S., with more than 1,700 in 2022, the highest since 2000. According to U.S. Environmental Protection Agency data, heat waves are increasing in frequency and duration.

But on a broad scale, climate change issues aren't affecting the selection of business site locations, said John Boyd, principal of The Boyd Co., a corporate site selection consulting firm in Boca Raton, Fla.



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States cited as vulnerable to climate change including Texas, Arizona and Florida are "the biggest winners for both jobs and people last year," said Boyd, who credits their business climate as the driver of this growth.

Boyd said issues such as "tolerance to crime and rising taxes and business regulations [are] routinely cited by our clients as reasons they are ditching states deemed as 'anti-business' for the previously mentioned high-growth states like Texas and Florida."

Boyd said it's impossible to know "how many companies confidentially eliminated a state vulnerable to climate change at the very outset of a site search." His consultancy also sees states such as Michigan, Kansas, Minnesota, Nebraska and Iowa that include "resilience to global warming" as part of their economic development pitch.