

OVERVIEW: A NEW MEASURE OF DIGITAL PARTICIPATION AND ITS IMPACT ON ECONOMIC OPPORTUNITY

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Key Findings and Summary

What is “Venture Forward”? GoDaddy and a team of academic researchers collaborated to explore whether ventures (domain name websites and their redirects) affect economic outcomes for communities. The company shared its de-identified data on ventures with the researchers and is making that data available now for use by policymakers, local governments, nonprofits, other researchers, and the public.

This dataset provides a new measure of digital activity at the grassroots that has been largely hidden from view, limiting our understanding of technology’s impact on communities. With data from 20 million ventures collected from May 2018 to May 2019, new research summarized here demonstrates that the density of this online activity in a community - this digital participation – creates benefits for local prosperity and economic opportunity.

Inequality, Technology and Community Development

Concerns about places and people left behind, and a shrinking middle class, are increasingly part of national debates. Inequality is rising across places in the U.S. and is a result of changes in the economy that developed over the past several decades and preceded the 2008 recession. Technological change has increased the return to education and human capital, concentrating activity along the coasts and in a few other metropolitan areas that attract an outsize proportion of technology investment. At the same time, many cities and towns as well as rural areas have lagged in economic growth and incomes.

Are there other paths offered by information technology? Are there ways to encourage local development, including the growth of new business activity in many different types of communities – whether large or small, urban or rural? Websites may provide such a platform for more inclusive economic activity that can occur in a variety of communities. Because they entail a level of creativity and skill, they may also reflect a form of human capital that builds local capacity for growth and opportunity.

Digital Community Participation

The ability of individuals to participate in society online requires both internet access and skill, and can be measured by online activities (Mossberger, Tolbert and McNeal 2008). Public policy assumes that internet use has spillover benefits for communities as well as for individuals (Federal Communications Commission 2010).

Yet, we have lacked the data to understand how people employ technology within communities. Government statistics have traditionally tracked the presence of broadband infrastructure, or more recently, the percentage of people who have broadband subscriptions. This tells us little about participation online at the local level. This new dataset provides a view of how technology is being **used** in communities. It captures the digital activity of micro-businesses and startups that are too small or too new to be counted by the Census, and other websites such as nonprofit ventures.

Data on domain name websites, presented here, are measures of technology use in communities, or digital community participation. They capture how broadband access, adoption and skills are translated into online activity at the community level.

Defining Ventures

The data used for this analysis are drawn from 20 million ventures in the United States from May 2018 to May 2019. A venture is the term used by GoDaddy to describe discrete domain name websites that are actively being used. Ventures include services attached to websites, (such as email, payments, and social media) and they vary in terms of these optional services. Ventures may be businesses, nonprofits, causes or ideas that owners put online.

This report uses the number of domain name websites per county or zip code divided by the population to create a density measure – ventures per 100 people. County-level and zip code level comparisons are often used for economic data reported by the Census.

Mapping Ventures: Diversity Beyond Tech Hubs

The maps below show the density of ventures by the approximately 3,000 counties and 30,000 zip codes in the United States. In Figure 1, counties with a higher density of ventures, in darker shades of blue, are visible across much of the nation’s interior as well as along the coasts. The heavy presence of ventures in parts of the West, Texas, mid-South, and Florida includes rural areas. The zip code map (Figure 2) reveals similar patterns, but for smaller geographies, and with somewhat more variation obscured by large counties in the west. Ventures are diffused around the country, with concentrations evident in some rural counties and in all types of cities and towns. Ventures serve diverse communities and are not confined to areas more traditionally associated with the digital economy, such as tech hubs.

Figure 1. Ventures by County

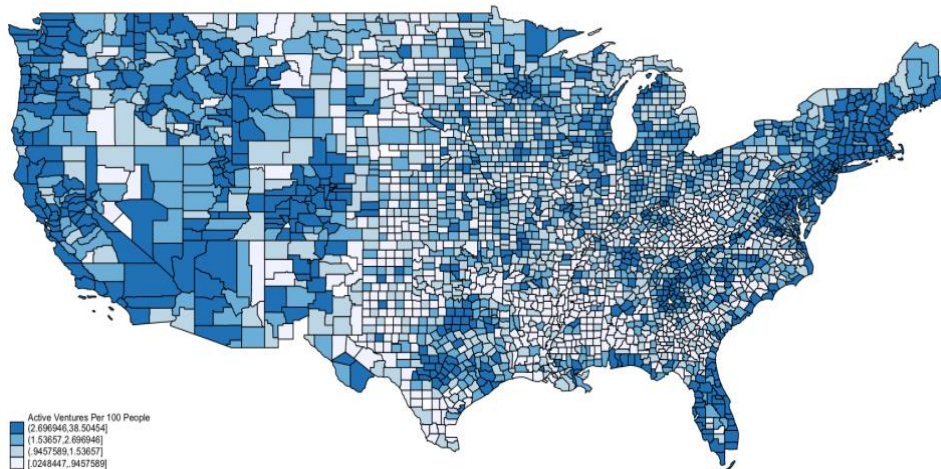
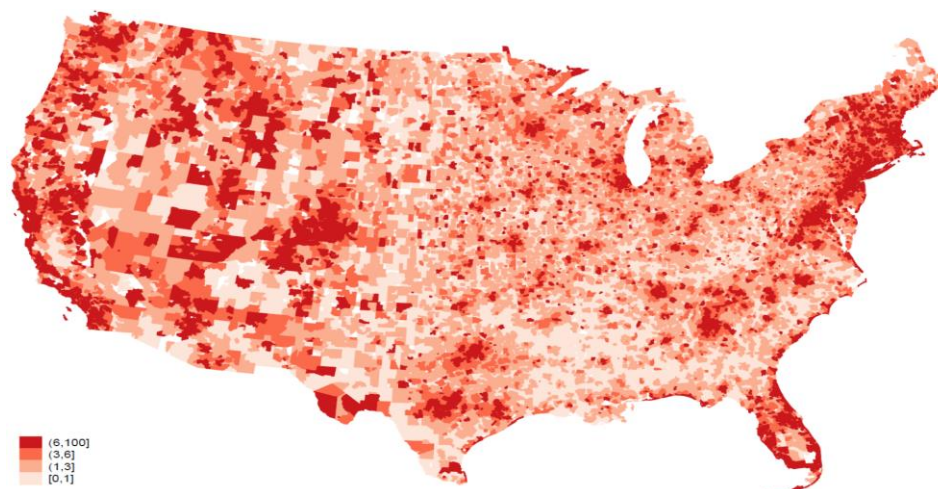


Figure 2. Ventures by Zip Code



Measuring Venture Activity

In addition to measuring the density of ventures, we differentiate their level of activity by how busy the venture is, how networked it is across the internet, and how built-out it is in terms of the services attached to it.

Ventures cluster into four groups, based on this activity. The majority – 2/3 of ventures - are described by the first two categories, with low to moderate levels of activity. In the analysis that follows, we often group together clusters 3 and 4, which represent the 1/3 of ventures that have the most activity. The geographic distribution of the clusters is similar to the geography for all ventures shown in the maps above.

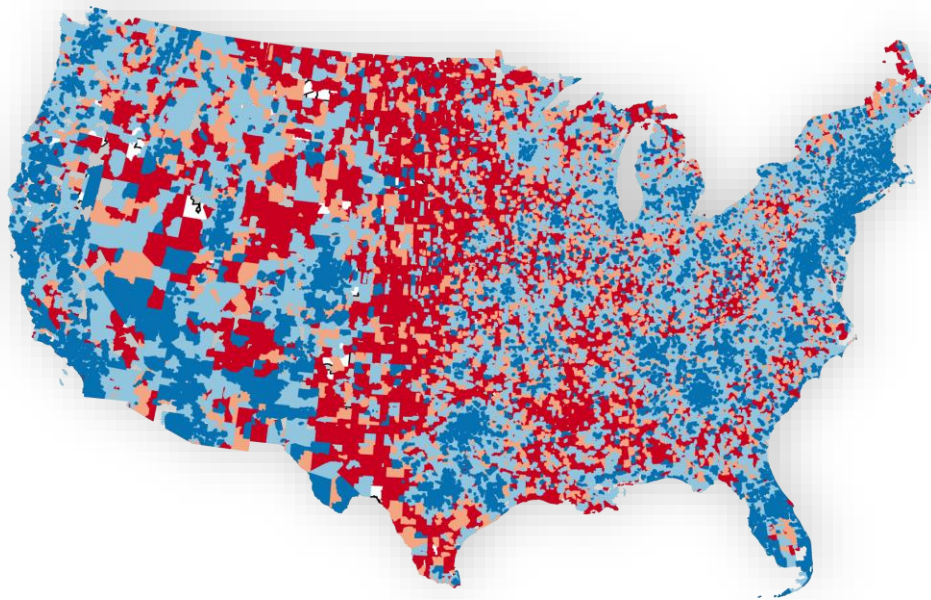
Comparing Ventures to Tech Firms and Small Business

To what extent are ventures describing something new? We compared the venture density data to IT employment, broadband subscriptions, and small businesses. There is a low correlation between active ventures (which represent all 4 clusters) and IT employment or broadband subscriptions in a county or zip code. These are quite different than traditional measures of the digital economy. While broadband enables the creation and use of websites, ventures measure participation online beyond broadband access and adoption.

There is a somewhat higher (moderate) correlation between small businesses and ventures, as would be expected, since many small businesses have websites. The correlations are still moderate whether small businesses are defined as having 100 employees or less, or 10 employees or less. The relationship to small business is moderate for more active ventures (clusters 3 and 4) as well as for all ventures. Despite some overlap, the measures here capture something other than the small businesses counted by the Census.

The map below (Figure 3) shows the ratio of ventures to small businesses and demonstrates that there are differences in the concentration of ventures and small businesses (with 100 or fewer employees). Areas shaded in blue have more ventures, while those in red have higher concentrations of small firms. Communities and regions with higher ratios of websites don't look like the traditional small business economy – they are more digitally enabled.

Figure 3. Ratio of Ventures to Small Businesses (more ventures in blue)



Ventures and Community Outcomes

We ask whether the density of ventures in a community (county or zip code) is related to: 1) economic prosperity; 2) change in prosperity/recovery from the recession; and 3) change in median income.

The relationships we investigate go beyond correlation and suggest that ventures are a cause of these outcomes.

- We use multivariate regression to control for other factors, including broadband subscriptions, demographic characteristics of the county or zip code, and occupations (including but not limited to IT).
- We use two-stage models that further distinguish the effects of ventures from small businesses, broadband and affluence in the community.
- Incorporating change in prosperity from two time periods (2007-2011 and 2012-2016) provides a further measure of change
- We examine change in median income from 2016-2017 and 2016-2018. This addresses whether it is only places already doing better in 2016 that are likely to have better outcomes.

The measure of prosperity that we use for comparing across communities and over time is a modification of the Distressed Communities Index constructed by the Economic Innovation Group (EIG).¹

The seven indicators that comprise the index are educational attainment, housing vacancy, population not in the workforce, poverty rate, median household income, change in the number of jobs, and change in business establishments. The EIG includes a measure of recovery from the recession that compares local performance on the seven metrics in 2007-2011 to 2012-2016. These represent outcomes across places and over time, for businesses and residents, and for the health of the local economy overall.

Findings

- The density of ventures predicts higher scores on the prosperity index, for counties and zip codes. The relationships are statistically significant, controlling for other factors.
- Ventures matter for prosperity, and highly active ventures (clusters 3 and 4) matter even more. Adding two highly active ventures in a county increases the prosperity score by nearly 3 percentage points. This is a substantively large effect in a local economy given a small change.
- Using two-stage causal models, we apply a stronger test, stripping out the factors that might influence the formation of ventures. Even so, ventures not only still predict community prosperity, but the effects are even larger. Adding 6 ventures increases prosperity scores by 8 percentage points on average. This is for all ventures, rather than only highly active ones.
- Additional analysis shows that counties with lower rates of broadband adoption (likely more rural and poor) experience the biggest boost in economic prosperity with increased presence of ventures. These are the places with the most to gain.
- Ventures are a factor predicting change in prosperity and contributing to the recovery from the recession. Highly active ventures (clusters 3 and 4) contribute even more to changes in prosperity and to recovery.
- Places with more ventures (with at least 2.5 ventures on average) experienced a greater increase in prosperity between 2007 and 2016, and recovered more fully from the recession.
- Ventures are also related to a higher rate of change in median income from 2016 to 2017, and from 2016 to 2018. For each highly active venture (clusters 3 and 4), median household income in a county rises by an average of \$331. This compares with an average rate of change of \$1700 for all counties, so the \$331 is a 19 percentage-point difference. For 2016-2018, each highly active venture is associated with a \$408 increase.

To summarize, ventures are significant predictors of community prosperity, controlling for other influences on local economies. This is true whether we examine change over time, two-stage causal

¹ They classify communities along a continuum ranging from “distressed” to “prosperous.” While we use the same measures (discussed above), we are more interested in what contributes to prosperity than distress, and so we have inverted the index. The distress scores presented by EIG range from zero to 100, with the average score for zip codes at 50. Our prosperity measure is 100 minus the distress score calculated by EIG.

models, or relationships for zip codes or counties. The analysis in this report suggests that ventures are, in fact, one of the causes contributing to community prosperity and economic opportunity today.

From Digital Participation to Inclusive Growth

Ventures supply a missing element in our knowledge of communities, for policy decisions as well as research. Current government data fails to fully capture the evolution of the economy, including microbusinesses and fledgling startups online, and the added value of having a digital presence for other small businesses, nonprofits or even larger establishments. Ventures offer a new measure of online participation in communities, beyond broadband connectivity, IT employment and traditional measures of business activity. Mapping shows their distribution differs significantly from tech hubs or even places where small businesses are concentrated – they are the footprint of a more digitally-enabled economy that has previously been difficult to track.

Drawing on the analysis of this data, we have new evidence that information technology use fosters economic opportunity for individuals and their communities. Venture density is a measure of use and digital participation in communities. In fact, it is a better measure of use and skill in a community than government data on broadband adoption. Individuals may gain when they develop a venture, but the results show there is a spillover effect, where places with more ventures and more highly active ventures experience greater prosperity.

Ventures make a difference in communities in the nation's heartland as well as along the coasts, in rural communities as well as tech hubs. In fact, lower-income and poorer communities may have the most to gain. This suggests that inclusive growth and development is possible in the digitally enabled economy, and that supporting online participation for businesses and residents is one strategy for promoting economic opportunity and thriving communities.