



# **Platform-Enabled Small Business Formation as a Counterweight Against Forces of Economic Concentration**

Further Evidence of More Geographically Balanced and Inclusive New  
Enterprise Growth on eBay than in the Traditional Economy

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# Introduction

Since 2011, the eBay Public Policy Lab and a team of economists at Sidley Austin LLP (Sidley) have worked together to examine how technology-based commerce platforms empower Micro, Small and Medium-sized Enterprises (MSMEs)<sup>1</sup> and promote a more inclusive and robust economy.

We have studied the patterns and growth of enterprises using the eBay Marketplace. Irrespective of where in the world we have looked, we have found micro and small businesses leveraging the online commerce platform model to engage in expansive commerce, often on a global scale. Across more than 50 countries we have studied so far, spanning the Americas, Africa, Asia and Europe, technology is empowering small firms to build operations that serve consumers across an unprecedented number of countries.

This report presents new findings coming out of this collaboration and explores evidence of entrepreneurship and new enterprise formation in the context of concerns regarding an increasing divergence of economic opportunity available to Americans living in more or less advantaged regions of the country. Building on an innovative methodology for ranking U.S. counties along an index of social and economic variables developed by the Economic Innovation Group (EIG)<sup>2</sup>, we studied the geographic dispersion of net enterprise formation in the U.S. economy in comparison to the eBay Marketplace. We analyze the results in the context of geographic balance and inclusion and report findings that indicate meaningfully more balanced and inclusive growth on the eBay Marketplace than in the overall U.S. economy.

The econometric and statistical analysis carried out by Sidley for this report is based on eBay datasets covering transactions of U.S.-based small online businesses from 2011 to 2015 and U.S. Census Bureau datasets regarding the geographic distribution of businesses enterprises over that same time-period. To ensure that the community of small commercial enterprises on eBay was properly captured, Sidley limited the data to transactions by eBay sellers with \$10,000 USD or more in sales annually on the eBay Marketplace. We refer to this community as “Commercial Sellers” and “eBay-enabled MSMEs” throughout this report.

We would like to thank the Economic Innovation Group for presenting a new model of distinguishing the state of economic and social well-being among U.S. counties. This report built on their work and allowed the eBay Public Policy Lab to identify evidence that global commerce platform opportunities are yielding results that push back against the tide of heightened imbalance in the U.S. economy.

## About the eBay Public Policy Lab

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The eBay Public Policy Lab seeks to address the public policy challenges that lie at the nexus of technology, commerce and inclusive economic opportunities.

We conduct innovative research using unique data analytics methodologies and creative insights. We seek to inspire debate at the highest levels of public policy discourse about the future of commerce and how technology can be leveraged to achieve the best possible outcomes for all.

We invite you to explore our full catalogue of research at: [www.ebaymainstreet.com/lab](http://www.ebaymainstreet.com/lab)

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This report uses eBay’s own proprietary data to build on the EIG’s proprietary analysis of publicly available data provided by the U.S. Census Bureau. This report is the sole product of eBay and is not produced in partnership with the EIG.

# Declining Dynamism and Entrepreneurial Activity in the United States: Evidence Both Broad Based and Geographically Concentrated

There has been widespread empirical study and analysis related to what is often described as the declining dynamism of the U.S. economy. Factors that are commonly considered in the context of economic dynamism are new business formation, the failure rate of firms and the resulting “churn” that is reflected by comparative rates of new firms and failing firms, the survival rate of new firms, and the average age of firms. The decline in the rate of new enterprise formation or start-ups, in particular as revealed by U.S. Census Bureau data, has been identified as a key factor in the perceived reduction in dynamism. Papers by Pugsley and Sahin (2014)<sup>3</sup>, Decker, Haltiwanger, Jarmin and Miranda (2014)<sup>4</sup>, Hathaway and Litan (2014)<sup>5</sup>, Gourio, Messer and Siemer (2014)<sup>6</sup> and Karahan, Pugsley and Sahin (2015)<sup>7</sup> all point to this phenomenon as widespread both regionally and across industry sectors. As noted in the “2016 Economic Report of the President,” declining rates of new enterprise formation and a relatively steady rate of business failures has resulted in lower rates of churn and an increasing average age of firms.<sup>8</sup>

The apparent decades-long decline in dynamism and new business formation has led to various demographic-based analyses of the phenomenon. Karahim, Pugsley and Sahin (2015)<sup>9</sup> show that declines in the growth rate of the labor force underway since the 1970’s and other demographic shifts underway in the U.S. since the 1980’s could explain the gradual decline in the rate of new enterprise formation. Wilmoth (2016) reports that “Millennials” appear to have a meaningfully lower rate of self-employment than Generation X or Baby Boomers, reporting that just 2 percent of Millennials reported self-employment in 2014, compared with 7.6 percent for Generation X and 8.3 percent for Baby Boomers.<sup>10</sup> At age 30, less than 4 percent of Millennials reported self-employment as their primary job, compared to 5.4 percent at that age for Generation Xers and 6.7 percent for Baby Boomers.<sup>11</sup> Similarly, a Wall Street Journal analysis of Federal Reserve data found that the share of households headed by someone under 30 with a stake in or ownership of a private business has fallen from over 10 percent in 1989 to 3.6 percent in 2013.<sup>12</sup>

Along with evidence of a generalized decline in dynamism and new enterprise formation across the United States, there has been increased concern with imbalances between economic hotspots and lagging regions. There has been considerable research focused on the lack of inclusive and balanced growth during the current economic recovery. Analysis conducted by Manyika, Pinkus, Ramaswamy, Woetzel, Nyquist and Sohoni (2016)<sup>13</sup>, Sommeiller, Price and Wazeter (2016)<sup>14</sup>, Saez, (2016)<sup>15</sup>, and Kochhar and Cilluffo (2017)<sup>16</sup> attribute this to mainly accelerated levels of income and wealth inequality, but also the drop in labor participation, increased costs of a middle class lifestyle, and a lack of economic

mobility. Saez (2016)<sup>17</sup> reports that incomes for the top 1 percent of families grew 37 percent from 2009-2015, but only 7.6 percent for the remainder of the population over the same time-period. Kochhar and Cillufo (2017)<sup>18</sup> note that in 2016, median wealth of middle income families was 33 percent lower than in 2007, but upper income families' median wealth increased by 10 percent. Shearer and Berube (2017)<sup>19</sup> point out that numerous large metro areas in the U.S. that increased their productivity, average wages, and standard of living from 2010-2015 failed to achieve inclusive growth when measured by improving the employment rate, median earnings, and relative poverty. There are concerns that this trend will continue to restrict economic opportunities and advancement, potentially damage social cohesion, and concentrate wealth into fewer and fewer communities.

Stark evidence of disparate levels of economic dynamism and highly concentrated entrepreneurial activity was revealed by a geographic analysis of new establishment formation by the EIG in a 2016 report, [“The New Map of Economic Growth and Recovery.”](#)<sup>20</sup> The EIG examined U.S. Census Bureau data on the net growth of business establishments over three recovery periods in the past 25 years and revealed that the geographic distribution of new firm growth became increasingly concentrated in a smaller number of more populous counties. The most stark findings were that half of the net business establishment growth in America from 2010 to 2014 was concentrated in just 20 U.S. mega-counties located in just seven states, and there was zero net enterprise growth among all the U.S. counties that were home to 100,000 or fewer residents, most of which are rural counties.

The eBay Public Policy Lab published a 2017 report, [“Platform-Enabled Small Businesses and the Geography of Recovery”](#)<sup>21</sup>, which looked at the county-level geographic dispersion of new enterprise formation on eBay compared to findings reported by the EIG. The eBay results provided an initial insight into the prospect that entrepreneurship and new enterprise formation on a global commerce platform was occurring in a more balanced and inclusive way. Rather than half of net enterprise growth being limited to just 20 counties in seven states, the equivalent eBay Commercial Seller growth was distributed across 75 counties in 24 states. In addition, 12 percent of eBay Commercial Seller growth came from the collection of often rural and remote smaller counties, compared to zero net firm growth in the overall economy. It is worth noting that concerns with inclusive economic opportunity and unbalanced growth is a global concern, and we have studied the phenomenon in the UK and Germany, reporting similar findings showing more balanced enterprise formation on eBay than in the overall economy.<sup>22</sup>

# Global Commerce Platforms Expand Business Opportunities Beyond Local Markets

Traditional forms of commerce over distance carry meaningful costs related to transportation and logistics chains, regulatory and administrative red tape, adaptation to different legal systems, communication and marketing, uneven access to information, difficulties in matching supply and demand, trust, and enforcement. Economists have found that these costs increase as distance increases. The further away market participants are from each other, the less likely they are to engage in commerce with each other.<sup>23</sup>

These costs of doing business over distance have tended to limit the economic reach of most small enterprises to a limited area, such as the size of a city or the distance that a consumer would be willing to travel to the enterprise's place of business. In a nation as geographically large as the United States, this kept most small enterprises using traditional business models limited to their local market. Furthermore, few small businesses were able to export their products or services to consumers in other countries. Even today, 67.1 percent<sup>24</sup> of U.S. exports come from the largest one percent of businesses.<sup>25</sup>

When smaller firms have successfully reached beyond their local market and become exporters, they have often done so as a participant in a Global Value Chain (GVC) of large Multinational Enterprises (MNEs)<sup>26</sup>. For example, Slaughter (2013) finds that the typical U.S. MNE buys more than \$3 billion USD in inputs from more than 6,000 U.S. SMEs.<sup>27</sup> However, even with the emergence and evolution of GVCs, the share of traditional businesses, in particular small businesses, that export, has remained very small.<sup>28</sup> The Internet, global commerce platforms and efficient package logistics have dramatically reduced the costs of doing business over distance and fostered a new model of exporting available to far more independent small and mid-size businesses. Entrepreneurs located just about anywhere can connect with consumers in global markets, establish trust across national and cultural borders, and engage in commerce on their own, unaffiliated with a large company or value chain.<sup>29</sup>

## Figure 1.0: Most Trade Costs Matter More Offline Than Online<sup>30</sup>

Figure 1.0, which was developed by Olarreaga (2012) as part of an initial study of the trade activity of eBay Commercial Sellers, represents the various factors studied as part of a distance analysis of trade on the eBay platform. The transaction costs studied included traditional trade costs such as shipping costs and absence of a common language, as well as a range of traditional institutional differences between countries. The analysis determined that all the traditional trade costs and institutional factors, with the two exceptions of shipping costs and no common language, matter less for eBay-based trade than they do for offline trade. However, shipping costs and the lack of common language between buyer and seller are two barriers to cross border commerce impacting online businesses, especially small online businesses, to a greater degree than giant traditional exporters.



As reported in the eBay Public Policy Lab’s [“United States Small Online Business Growth Report”](#) (2018)<sup>31</sup>, an incredible 96 percent of eBay Commercial Sellers based in the United States export - far higher than businesses that have not embraced online tools - and they reach on average 17 different countries annually, a significantly greater reach than traditional exporters. eBay Commercial Sellers across America are effectively Small Global Traders. Thanks to technology, small businesses do not need to be located in a national, regional or state economic hot spot to sell across the country and around the world.

It is important to note that while the online commerce platform model enables small firms to overcome distance and serve customers in remote markets in a manner far exceeding traditional business models, there is still great value in having a local presence in commerce.<sup>32</sup> This is why large merchants complement their online strategy with local facilities in key economic areas. Independent small retailers cannot avail themselves of such a strategy and platform-enabled commerce is their way of reaching customers in the most vibrant economic hubs. Raising the costs of remote commerce, such as through increased parcel delivery fees or the application of traditionally local retail sales taxes to remote small businesses, will undermine the opportunities afforded by technology to allow independent small and micro enterprises to reach beyond their local market.

# Indexing U.S. Counties Based on Economic and Social Well-Being

The EIG, through their report [“The 2017 Distressed Communities Index”](#), has proposed a methodology to measure and rank the economic vitality of U.S. geographies relative to their peers.<sup>33</sup> The Distressed Communities Index (DCI) is an index composed of seven component metrics from the U.S. Census Bureau (2011-2015). These include: (1) High school diploma rate; (2) Housing vacancy rate; (3) Adults not working; (4) Poverty rate; (5) Median income ratio; (6) Change in employment; and (7) Change in business establishments. According to the EIG, “Distress scores are calculated by ranking counties on each of the seven metrics, taking the average of those ranks, and then normalizing the average to be equivalent to a percentile.”<sup>34</sup> Using these scores, the EIG divides 3126 U.S. counties into quintiles of well-being, the top performing in the **Prosperous** tier followed by **Comfortable**, **Mid-Tier**, **At Risk**, and **Distressed** tiers, each made up of progressively worse performers.

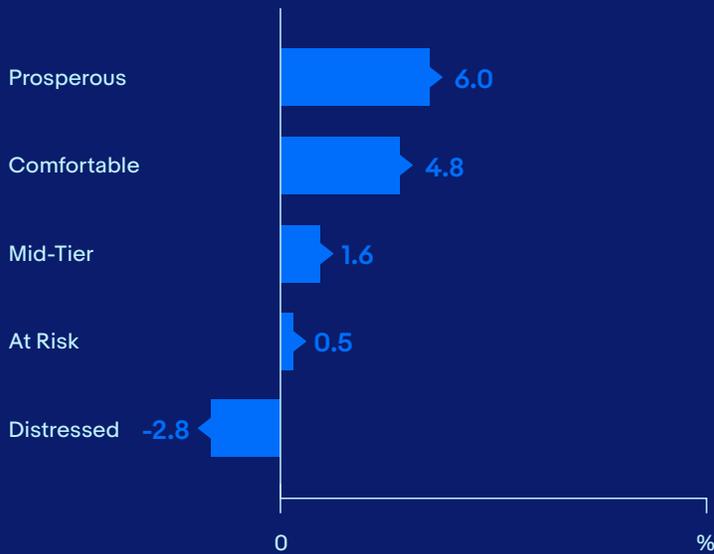
The quintiles each represent one-fifth of the nation’s counties, unrelated to population. In fact, as one considers the collection of counties in each of the quintiles, from **Prosperous** to **Distressed**, there are fewer people living in the collection of counties as the level of well-being falls, indicating less populace and likely more remote counties suffering from greater challenges. The 625 **Prosperous** counties are home to 117,860,842 people (37.2 percent of the national population), 625 **Comfortable** counties are home to 99,540,412 (31.5 percent), 626 **Mid-Tier** counties are home to 46,224,467 (14.6 percent), 625 **At Risk** counties are home to 35,645,155 (11.3 percent) and the 625 **Distressed** counties are home to 17,202,175 Americans (5.4 percent).

The 2017 Distressed Communities Index report from the EIG follows on their 2016 report, “The New Map of Economic Growth and Recovery” and reinforces the evidence that the geography of economic growth and dynamism in the U.S. economy is increasingly concentrated and the divergence between the communities at the opposite ends of the well-being spectrum appear to be accelerating. The EIG states that the growth gap between prosperous and distressed areas could be the starkest feature of the index.<sup>35</sup>



FIGURE 2.0

### Nationwide Net Rate of Growth in Number of Business Establishments by County Well-Being Quintile<sup>36</sup>



The next section of this report will compare and contrast the rate of new firm growth in each DCI quintile in the overall economy and on eBay. Along with comparing absolute net enterprise growth rates, we will also look to measures of inclusive growth and balanced growth. In fact, the most relevant findings in the context of the significant disparities in economic dynamism and opportunities for growth in the traditional economy will be the comparative levels of balance and evidence of inclusive economic opportunity.

## Comparing Net Enterprise Growth in the Traditional Economy and on eBay

The rate of growth in the net number of business establishments in the United States from 2011 to 2015 was 4.1 percent. The rate of growth in the net number of eBay-enabled MSMEs over the same period was 21.8 percent. Net enterprise growth was 5 times more robust on eBay than in the overall economy. Lower costs of doing business over distance and access to global consumer markets for even very small enterprises appears to have resulted in a much more robust rate of enterprise creation than exhibited in the traditional economy.



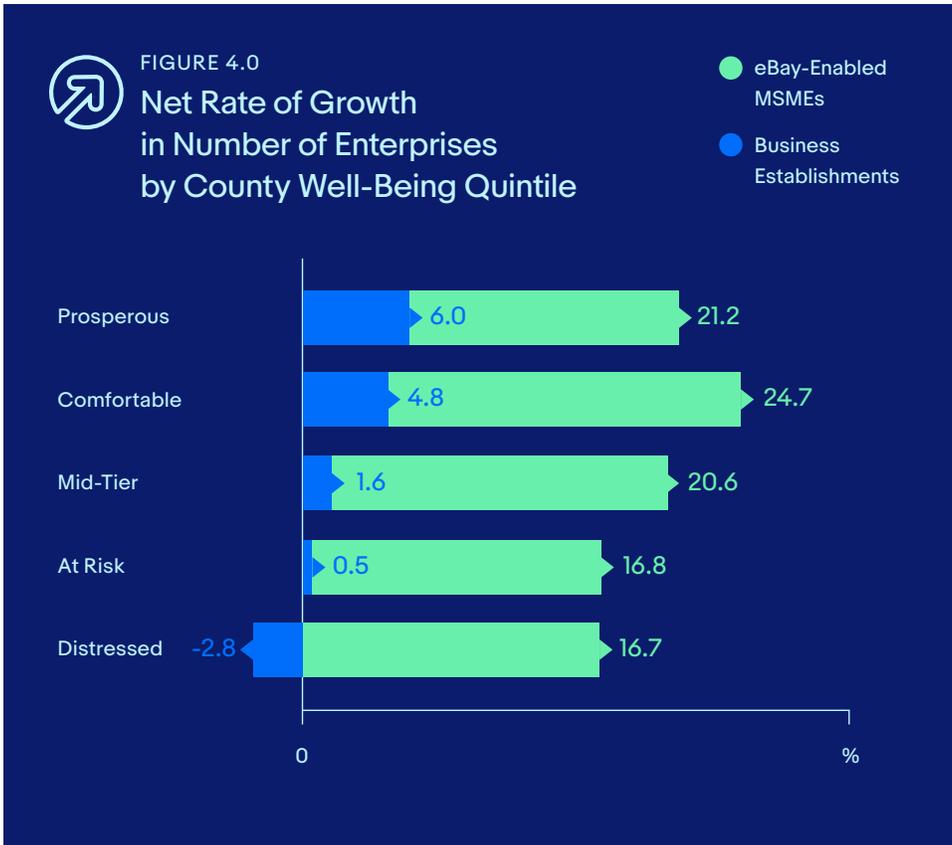
Although the more robust growth in the net number of enterprises on eBay compared to the overall economy is noteworthy on its own, the focus on this section is the comparative levels of geographic balance and inclusion represented by the respective enterprise growth.

**Balanced Growth**

For the purpose of this section, balance is the idea that in a perfectly balanced economy every county would enjoy the same level of economic and enterprise growth. This would mean that every citizen would enjoy a relatively equal opportunity to benefit from economic growth. On the other hand, an economy that is not balanced would exhibit widely divergent levels of growth. In that case, some people benefit from having a very robust local economy and strong growth opportunities while others suffer from locally depressed economic conditions and few opportunities to advance their economic well-being.

Of course, there have always been, and likely will always be, meaningful differences in economic growth and opportunity at regional and local levels. However, given concerns with increasingly divergent opportunities between Have and Have Nots in the U.S. economy, looking at the differences in enterprise growth rates in the overall economy and the eBay Marketplace can provide insight into whether global commerce marketplaces are contributing to a more balanced, or less balanced, economy.

The EIG 2017 Distressed Communities Index will be used to provide a framework to compare the level of balance in enterprise growth between counties along the well-being spectrum. The average rate of growth in the net number of business establishments in the United States from 2011 to 2015, and the comparable average rate of growth in the net number of eBay-enabled MSMEs over the same period, is presented for the counties in each of the five DCI well-being quintiles.



As noted, a perfectly balanced economy would show the same rate of net enterprise growth in each quintile, which would be the same as the national average. Therefore, the rate of growth in business establishments in each well-being quintile would be 4.1 percent. Likewise, the level of net eBay-enabled MSME growth would be 21.8 percent. Of course, no economy is perfectly balanced and therefore the growth rates diverge from absolute balance. But, which is more unbalanced?

A casual review of the data reveals that net enterprise growth in the overall economy is meaningfully unbalanced between the well-being quintiles, and the less well-off county quintiles have exhibited meaningfully less-robust net enterprise growth. While the net eBay-enabled MSME growth rates also diverge from the national average of 21.8 percent, the level of divergence is significantly less.

To compare the relative levels of economic balance, we calculated the square of the deviation from the national average for each well-being quintile. The overall level of imbalance is determined by taking the square root of the sum of the squares of the deviations. A larger number reflects a greater degree of imbalance in net enterprise growth between the quintiles.

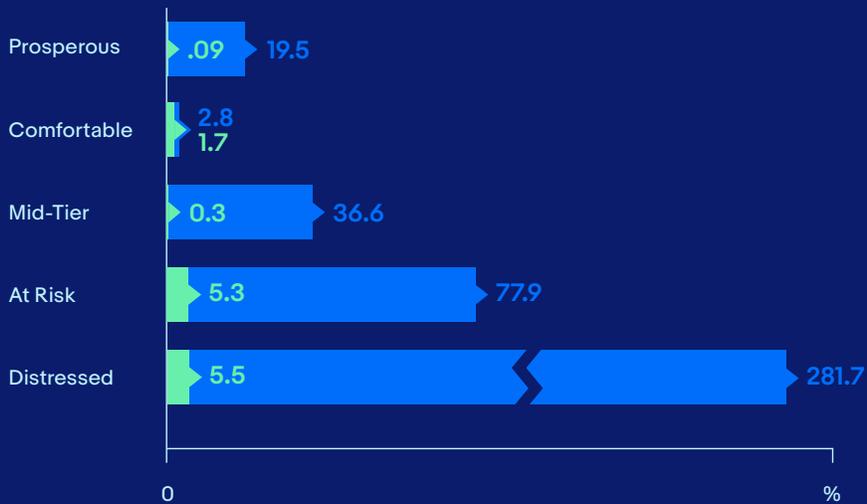


FIGURE 5.0

## Comparing Net Enterprise Growth “Balance”

Deviation from the Average Growth Rate

- eBay-Enabled MSMEs
- Business Establishments



**From 2011 to 2015, eBay-enabled MSME growth was 5.7 times more balanced than net establishment growth in the overall economy.<sup>37</sup>** The ability to access national and global consumer markets on the eBay Marketplace provided a significantly more balanced means of new enterprise formation than occurred in the overall economy.

### Inclusive Growth

Balanced growth is the idea that all communities across the nation share as equally as possible in the benefits of economic growth and opportunity. The concept of inclusion goes a step beyond balance and focuses on the share of growth and opportunity for those who enjoy less-advantaged and less-fortunate conditions. In short, is the economy “inclusive” in providing opportunities to those who are less fortunate?

As noted in the introduction of the EIG Distressed Communities Index quintiles, each of the five quintiles has approximately the same number of counties (four have 625 counties, one has 626 counties) but the counties do not have the same number of inhabitants. Instead, the total population of the counties in each quintile vary widely, from over 117 million in the cohort of Prosperous counties to 17 million in the Distressed counties. However, it turns out that combining the bottom three quintiles, Mid-Tier, At Risk and Distressed together results in a combined population of 99,091,797, which is nearly identical to the population of the Comfortable counties (99,540,412) and 84 percent of the population of the Prosperous counties.

Our test of inclusiveness focuses on the aggregate results in the bottom three quintiles, which accounts for nearly 100 million Americans. Figure 6.0 reveals the aggregate net enterprise growth rate for the bottom three quintiles. In the traditional economy, the figure is nearly flat, just .55 percent for the period 2011 – 2015. The corresponding rate of net enterprise growth on eBay during that time was 19.3 percent. Not only is that a robust growth rate in a collection of counties home to nearly one-third of Americans where the traditional economy created almost no net firm growth, but at 19.3 percent it was 89 percent of the national average on eBay.

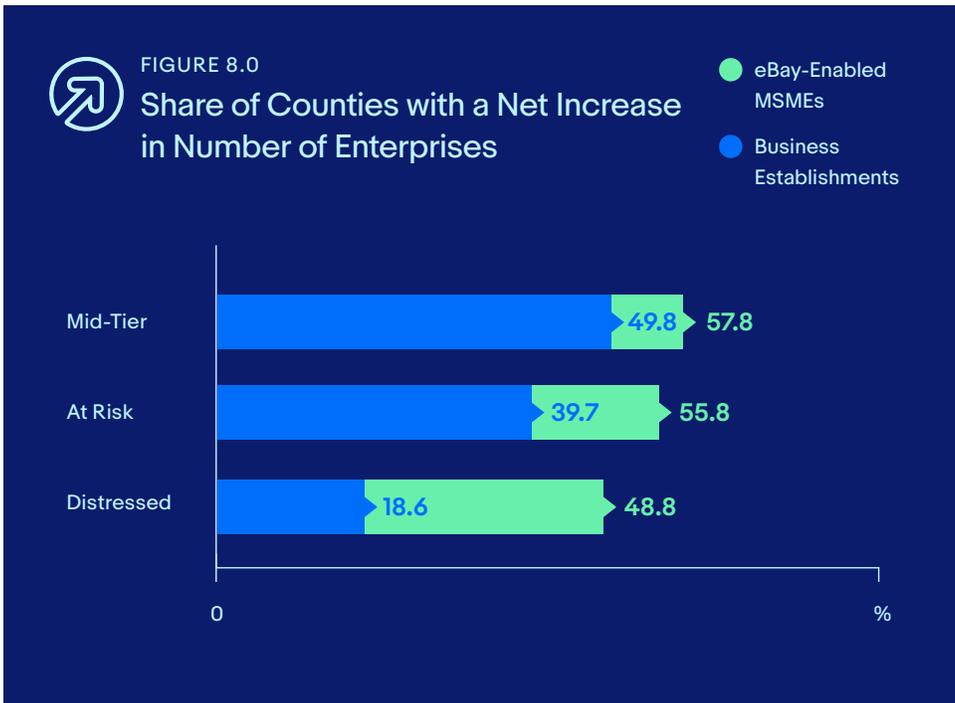


Another measure of inclusiveness is to look at the contribution to overall enterprise growth made by the bottom three county quintiles. On eBay, the bottom three quintiles accounted for 20 percent on the total net enterprise growth. Meanwhile, the contribution of the same quintiles to the overall net number of traditional firms during the same 2011-2015 period was only about 4 percent. An astounding 96 percent of net enterprise growth in the overall U.S. economy occurred in the Prosperous and Comfortable counties.



Based on the method of comparing net enterprise growth on eBay compared to the overall economy, **the eBay-enabled MSME growth was 5.6 times more inclusive than net establishment growth in the overall economy.**<sup>38</sup>

A last method of inclusive growth at the county level is to identify the share of counties that had some growth in net enterprises. In other words, are there more firms at the end of the time-period than at the beginning of the time-period? In this case, the numbers again reveal that a significantly higher share of counties in each of the bottom three quintiles had some growth in eBay-enabled MSMEs than had some growth in business enterprises in the overall economy.



# Conclusion

Concerns with the twin economic challenges of slow growth and an increasing divergence in opportunities available in advantaged economic hotspots and communities being left behind are widespread and backed up by data. Entrepreneurial dynamism reflected in new enterprise formation appears depressed in the traditional economy, and delving into the rates of enterprise growth using a geographic lens differentiating U.S. counties based on a community well-being index developed by the Economic Innovation Group (EIG) reveals that the 60 percent of least-well-off counties, which are home to 30 percent of U.S. citizens, enjoyed almost no net enterprise growth from 2011 to 2015. The most distressed counties suffered a meaningful loss of business enterprises.

Rates of net eBay-enabled MSME growth and overall net enterprise growth in the EIG county well-being quintiles were compared to determine if economic opportunities created by the eBay commerce platform appeared to impact positively or negatively the disturbing overall trends. The results were clear and positive pointing to heightened dynamism and greater rates of new enterprise formation on eBay. Most striking was the meaningfully more **Balanced** and more **Inclusive** distribution of net enterprise formation on eBay compared to net enterprise growth in the overall economy.

We consider a Balanced economy to be one where every citizen enjoys a relatively equal opportunity to benefit from economic growth regardless of where they live, rather than one where some benefit significantly from having a very robust local economy while others suffer limited opportunities due to locally depressed economic conditions. From 2011 to 2015, eBay-enabled MSME growth was 5.7 times more balanced than net establishment growth in the overall economy. The ability to access national and global consumer markets on the eBay Marketplace provided a significantly more balanced means of new enterprise formation than occurred in the overall economy.

**Inclusive** opportunity is related to a balanced economy, but is more focused on those who are least advantaged. In this case we looked at a measurement of “Geographic Inclusion”, namely the share of the overall growth coming from outside the top two county quintiles based on well-being. Again, the net enterprise growth on eBay was not just more robust than in the overall economy; the eBay-enabled MSME growth was 5.6 times more inclusive than net establishment growth in the overall economy.

In an economy marked by sluggish growth, the perception of depressed entrepreneurial activity, and heightened divergence in the economic opportunities available between advantaged and distressed regions, ecommerce platforms enabling national and global opportunities for independent small and midsize businesses appear to provide positive counterweights and could be worth further exploration by public policy officials looking to turn the tide on these negative trends.

# Resources

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<sup>23</sup> Examples from economic literature on this are: “The Puzzling Persistence of the Distance Effect on Bilateral Trade” (2008), by Anne-Celia Disdier and Keith Head, in Review of Economics and Statistics 90(1), 37-48; “The Gravity Equation in International Trade: an Explanation” (2011), by Thomas Chaney; and “Information Frictions in Trade” (2011), by Treb Allen, Job-Market paper, Yale University.

<sup>24</sup> U.S. Census Bureau (2017) A Profile of U.S. Importing and Exporting Companies, 2014–2015. Available at <https://www.census.gov/foreign-trade/Press-Release/edb/2015/edbre1.pdf>

<sup>25</sup> World Economic Forum (2015) “What Companies Want from the World Trading System, SMEs in International Trade: The View from Developing Countries.” Available at: [http://www3.weforum.org/docs/WEF\\_GAC\\_Trade\\_II\\_2015.pdf](http://www3.weforum.org/docs/WEF_GAC_Trade_II_2015.pdf)

<sup>26</sup> Gereffi, G., J. Humphrey, and T. Sturgeon (2005) “The Governance of Global Value Chains.” Review of International Political Economy 12 (1): 78–104. Available at: [http://www.fao.org/fileadmin/user\\_upload/fisheries/docs/GVC\\_Governance.pdf](http://www.fao.org/fileadmin/user_upload/fisheries/docs/GVC_Governance.pdf)

<sup>27</sup> Slaughter, Matthew J (2013) “American Companies and Global Supply Networks - Driving U.S. Economic Growth and Jobs by Connecting with the World.” Available at: <http://businessroundtable.org/sites/default/files/BRT-SlaughterPaper-singles-Dec21.pdf>

<sup>28</sup> Source for total number of companies that have at least one employee in addition to the owner (2013): US Census Bureau, Business Dynamics Statistics, Longitudinal Business Database 1977-2013

[https://www.census.gov/ces/dataproducts/bds/data\\_firm.html](https://www.census.gov/ces/dataproducts/bds/data_firm.html)

[http://www2.census.gov/ces/bds/firm/bds\\_f\\_st\\_release.xlsx](http://www2.census.gov/ces/bds/firm/bds_f_st_release.xlsx)

Source for total number of companies that have no employees (2013): US Census Bureau, Nonemployer Statistics,

<https://www.census.gov/econ/nonemployer/index.html>

Source for total number of exporting companies (2013) US Census Exporter database

<http://tse.export.gov/EDB/SelectReports.aspx?DATA=ExporterDB>

Share = (total number of exporters)/((number of employing companies)+(number of non-employing companies))

Note that “offline” figures are not fully comparable across countries due to different methodologies and coverage of firms.”

<sup>29</sup> Meltzer, Joshua (2014) “Supporting the Internet as a Platform for International Trade.” The Brookings Institute. Available at: [http://www.brookings.edu/~media/Research/Files/Papers/2014/02/internet-international-trademeltzer/02-international-trade-version-2\\_REVISSED.pdf?la=en](http://www.brookings.edu/~media/Research/Files/Papers/2014/02/internet-international-trademeltzer/02-international-trade-version-2_REVISSED.pdf?la=en)

<sup>30</sup> Olarreaga, Marcelo, and Sidley Austin LLP (2012) “Enabling Traders to Enter and Grow on the Global Stage.” [See page 12] Available at: [http://www.ebaymainstreet.com/sites/default/files/eBay\\_Enabling-Traders-to-Enter-and-Grow-on-the-Global-Stage.pdf](http://www.ebaymainstreet.com/sites/default/files/eBay_Enabling-Traders-to-Enter-and-Grow-on-the-Global-Stage.pdf)

<sup>31</sup> eBay (2018) “United States Small Online Business Growth Report.” Available at: <https://www.ebaymainstreet.com/policy-papers/united-states-small-online-business-growth-report>

<sup>32</sup> Brannon, I., M. Hanlon, and E. Miller (March 15, 2018) “Internet Sales Taxes and the Discriminatory Burden on Remote Retailers – An Economic Analysis.” SSRN. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3140948](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3140948)

<sup>33</sup> Economic Innovation Group (2017) “The 2017 Distressed Communities Index.” Available at: <http://eig.org/dci>

<sup>34</sup> Economic Innovation Group (2017) “The 2017 Distressed Communities Index.” Available at: <http://eig.org/dci>

<sup>35</sup> Economic Innovation Group (2017) “The 2017 Distressed Communities Index.” [See page 15] Available at: <http://eig.org/dci>

<sup>36</sup> U.S. Census Bureau (April 20, 2017) County Business Patterns: 2015. Available at: <https://www.census.gov/data/datasets/2015/econ/cbp/2015-cbp.html>

U.S. Census Bureau (April 20, 2017) County Business Patterns: 2011. Available at: <https://www.census.gov/data/datasets/2011/econ/cbp/2011-cbp.html>

To determine the net businesses establishment growth rate by county well-being quintile, we separated counties into their corresponding well-being quintiles and then performed the following calculation for each quintile: [(total number of 2015 business establishments) – (total number of 2011 business establishments)] / (total number of 2011 business establishments).

<sup>37</sup> Our definition of “balanced growth” is the level of dispersion (or “variance”) of growth rates regarding the number of business establishments that county quintiles display around the overall average (or “mean”) growth across the U.S. To contrast the degree to which eBay-enabled MSMEs achieve of “balanced growth” vis-à-vis the county-level number of net business establishments, we calculate the ratio of dispersion levels between eBay and business establishments. We start with the calculation of “balanced growth” for eBay-enabled MSMEs. This requires the following steps: First, we quantify the overall growth rate in the number of eBay-enabled MSMEs per county between 2011 and 2015, which was 21.8 percent during that period. Second, we calculate the growth rate in the number of eBay-enabled MSMEs between 2011 and 2015 in each of the county quintiles. Third, we calculate the dispersion of county quintile growth rates relative to the average growth rate across the U.S. To do so, we proceed as follows:

- a) Calculate the difference (in percent) between growth rates of eBay-enabled MSMEs between 2011 and 2015 in each of the county quintiles on the one hand, and overall U.S. growth rate on the other hand.
- b) Square each of these five differences and add them up.
- c) Take square root of b), above, to yield the overall dispersion rate, or variance, around the mean.

Applying these steps yields a dispersion rate of eBay growth across quintiles of 35.95 percent. We repeat the same exercise for the calculation of “balanced growth” for business establishments using county level U.S. Census Bureau data (<https://www.census.gov/data/datasets/2011/econ/cbp/2011-cbp.html> and <https://www.census.gov/data/datasets/2015/econ/cbp/2015-cbp.html>) reporting the number of businesses establishments for 2011 and 2015. We find that dispersion of growth rates across county quintiles for U.S. business establishments during the 2011-2015 period was about 204.58 percent. The ratio of the dispersion of growth rates across county quintiles for business establishments (204.58 percent) to eBay (35.95 percent) is roughly 5.7. This suggests that the growth in number of eBay-enabled MSME across county quintiles is 5.7 times less dispersed, i.e., more balanced, than growth experienced by business establishment growth rates for the same quintiles.

<sup>38</sup> Our definition of “inclusiveness” is the contribution that the bottom three county quintiles (counties marked as “Mid-Tier”, “At Risk”, and “Distressed”) make to overall enterprise growth in numbers. To contrast the level of “inclusiveness” of eBay-enabled MSMEs and business establishments, we compare the levels of “inclusiveness” between eBay and business establishments. We start with the calculation of “inclusiveness” for eBay-enabled MSMEs. This requires the following steps: First, we quantify the overall (U.S.-wide) growth rate in the number of eBay-enabled MSMEs between 2011 and 2015, which was 21.8 percent during that period. Second, we establish the contribution of each of the county quintiles to the overall U.S. growth in number of firms. To do so, we proceed as follows:

- a) Calculate the growth rates of eBay-enabled MSMEs between 2011 and 2015 in each of the county quintiles;
- b) Calculate the share of each county quintile as a percentage of overall eBay-enabled MSMEs in 2011 (the shares add up to 100 per cent).
- c) Multiply a) and b), above, to determine the absolute growth rates in each of the county quintiles (the individual absolute growth rates add up to the overall U.S. growth rate of 21.8 percent).
- d) Divide each county quintile’s result for c), above, by the overall U.S. growth rate (21.8 percent) to determine the contribution of each of the county quintiles to overall U.S. growth rate.
- e) The contribution levels derived in d), above, add up to 100 percent.

Third, we added the contributions of bottom three county quintiles of, i.e., “Mid-Tier”, “At Risk”, and “Distressed” quintiles. Their contribution to overall U.S. eBay-enabled MSME growth was 20.04 percent. We repeat the same exercise for the calculation of “inclusiveness” for business establishments using U.S. Census data reporting the number of businesses establishments for [2011](#) and [2015](#). We find that the contribution of the bottom three county quintiles to the overall U.S. growth in number of business establishments during the 2011-2015 period was 3.57 percent. The ratio of eBay inclusiveness (20.04 per cent) to business establishment inclusiveness (3.57 percent) is 5.6. In other words, the rate of growth in number of eBay-enabled MSMEs was 5.6 times more inclusive than net establishment growth.

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