

# THE BIG PICTURE

**A LARGER VIEW OF THE  
SMALL BUSINESS MARKET**

Tapping the Power of Big Data Analytics

## SMALL BUSINESS SNAPSHOT



**"They know nothing is handed to them."**

*Bobby A., Sarasota, Florida*

Bobby A. has been a small business owner for more than 25 years. Her current business—an online virtual home makeover tool—is her second company, and her second success. The company has nine employees and generates \$157,000 in annual revenues.

If there is one thing that Bobby has learned in her career, it's that owning a small business can be as challenging for the business owner's family as it is for the business owner herself. If you're really passionate about your business, she says, you can disconnect from life. "Your life is just business. You eat, sleep, and drink it."

When Bobby started her first business, she realized that it was going to be hard for her young son and daughter to understand what she was trying to do as a business owner. And so she decided to involve them in the business at a young age. She kept a fish bowl on the kitchen table, wrote the titles of different officers of the company—president, chief financial officer, vice president of sales, and so on—on pieces of paper, and put them in the bowl. Then each day, she asked the kids to pull one of the pieces of paper from the bowl, pretend to be that officer, and solve a problem for the company.

The process not only helped Bobby's kids become a part of the business and understand the challenges their mom was facing but also helped them find a direction in life. Today, they're both successful entrepreneurs. "They watched the sacrifices," Bobby says. "They're both so successful. They know nothing is handed to them."

Patricia became a small business owner in 2007, when the owner of the express shipping company in Brooklyn where she had worked for 15 years decided to sell the company. Realizing that she no longer wanted to work for someone else, she persuaded the owner to sell the company to her.

Although Patricia thought that working for so long at the company had prepared her for her new role, she soon discovered that there were some aspects of the business that the previous owner had never explained to her. Getting financing proved especially challenging. In the beginning, she used her personal savings to finance the business, and when she later approached some banks for a business loan, they wouldn't lend to her. Eventually, she was able to secure not one but two loans from a local CDFI.

Today, Patricia's company employs eight and earns annual revenues of nearly \$1 million. Although she acknowledges that she has hit some bumps along the way, she has found running her own business to be very rewarding. "From where I came from," she says, "I am blessed."



**"I am blessed."**

*Patricia W., Brooklyn, New York*

When Roxana C. decided to open a day care center, she wanted it to be different. As a bilingual elementary school teacher, she was aware that dual language programs—in which non-English speaking students and non-Spanish speaking students share the same classroom and receive instruction in both languages—are on the rise in public schools, and she decided to use the same approach at her day care center.

In December 2015, with a loan from a local CDFI, Roxana purchased an existing day care center in a predominantly Hispanic neighborhood in Houston. Her biggest challenge has been re-training her staff of 14 in the philosophy of dual language education. Today, the staff is on board and the school's enrollment has grown from 53 to 80. "Parents are letting me know that they're loving the fact that their kids are becoming bilingual and biliterate," she says.

Roxana continues to teach elementary school while operating the day care center, and is exploring the possibility of opening another center. She is gratified by the impact that her business is having in the community. "As a business owner, as a woman, and more than anything a Mexican immigrant...that's the one thing that I pride myself in—that we have made an impact and we are going to be making a bigger impact on our children."



**"We have made an impact."**

*Roxana C., Houston, Texas*

# Tapping the Power of Big Data Analytics to Examine – for the First Time – the Size and Structure of a Critical But Underserved Market: Small Business in Low-Income Communities

## Executive Summary

Main Street is a critical engine of the American economy. Small businesses create jobs and wealth, and are sources of social and cultural capital—all of which are imperative for thriving, equitable communities and sustained economic development. When business owners in low-income and distressed communities are shut out of the American Dream, they aren't the only ones who suffer; so do their communities and the broader economy.

Despite the importance of Main Street businesses to dynamic neighborhoods and community revitalization across the United States, no one has had a clear picture of the universe of small businesses in low-income communities and the economic potential it represents. This lack of understanding has serious consequences. When the lens through which needs, opportunities, and risks are identified does not include the “big picture” of a broad national context, opportunities for investment are missed, and opportunities for innovation and more effective allocation of resources can be overlooked.

In 2014, the Association for Economic Opportunity, with generous contributions of talent and resources from IBM and Dun & Bradstreet, undertook the first of its kind “Big Data” analysis of the size and structure of the universe of small businesses in low-income communities. The analysis yielded seven key insights:

## Implications for the Community Development Sector

This paper represents an important first step in understanding this critical market sector, demonstrating that Big Data analytics can play an important role in advancing the understanding of small businesses in low-income communities. The data can support the efforts of investors, community development organizations, and policy makers to foster financial inclusion and distributed economic opportunity. Specifically, we see three main opportunities:

1. Small businesses in low-income communities are a powerful economic force, generating \$1.87 trillion in annual revenue.
2. At a time when banks are pulling back from lending in low-income communities, community development practitioners must develop a deeper understanding of the needs of small business owners for capital and support services, and of the experiences of the 2.2 million small businesses that attempt to gain access to capital and services each year.
3. This data, and future big data analytics, can be used by investors, policymakers and community development practitioners to not just advance the understanding of small businesses in low-income communities but also support the efforts to foster financial inclusion.

Small businesses play a critical role in the economic development of low-income communities. Because they tend to hire locally, they create a ripple effect of economic growth that is especially important in low-income communities. They create new jobs, help business owners and their employees build wealth, and provide much-needed services to the community while ensuring that its money stays in the community and supports the local economy.

Moving forward, AEO will work with partners to explore ways to use this data to develop deeper understanding of the market as well as to identify policy proposals to promote increased financial inclusion.

## PART 1

# Small businesses in low-income communities: A critical but under-examined market

### Limited understanding, limited data

Main Street businesses tend to be overlooked as the powerful economic force they can be, because there is a limited understanding of the size and structure of the universe of small businesses in low-income communities. This limited understanding is largely the product of the limited availability of data.

The most comprehensive and robust datasets on small businesses belong to commercial sources. These databases are proprietary, and when they are commercially available, they are expensive. Customers who are willing and able to pay for the data are typically focused on the most lucrative segments of the market rather than on low-income communities where the potential returns may be great but harder to capture. Nonprofits that seek market data about businesses in low-income communities would find that the cost of the data might far exceed their annual operating budgets.

Government agencies, such as the U.S. Census Bureau, are another source of data on small businesses. However, although this data is readily available and valuable, it typically does not include sufficiently granular information at the business level to yield the kind of actionable market insights that proprietary commercial data can generate.

Even data from government agencies that focus on small businesses in low-income communities has limited value. The data from these sources is fragmented and inconsistent, and thus is difficult to aggregate up into a meaningful national picture with confidence.

### The consequences of not knowing

The limited availability of data has significant consequences. It means that community development practitioners, policymakers, philanthropists, investors, and other stakeholders lack a “big picture” view of the market; they understand the needs of small businesses in their own communities but are less aware of trends and innovations in the broader market.

The result of this lack of understanding is that investment that could flow to low-income communities typically does not, and that the scarce resources that are available to these communities are not being allocated as effectively as they could be. Ultimately, this means that small businesses are not getting the capital and business support services they urgently need to grow and hire.

In short, the lack of understanding undermines efforts to foster financial inclusion.

## PART 2

### Seven Key Insights: What the Analysis Revealed

In 2014, the Association for Enterprise Opportunity, with generous contributions of talent and resources from IBM and Dun & Bradstreet, undertook the first of its kind “Big Data” analysis of the size and structure of the universe of small businesses in low-income communities. The analysis yielded seven key insights...

#### **1** Small businesses in low-income communities are numerous.

##### **43% of Small Businesses are located in low-income communities.**

Our analysis found that there are 11.2 million small businesses in the nation’s low-income communities. This means that more than 40 percent of all small businesses in the United States are located in low-income communities. (In fact, the figure may actually be higher, because our analysis focused only on small businesses that were formal enough to have a D-U-N-S number, and so it likely underestimated the number of individuals generating income from self-employment.)

#### **2** The vast majority of small businesses in low-income communities are microbusinesses.

**Of the 11.2 Million Small Businesses in Low-Income Communities...**

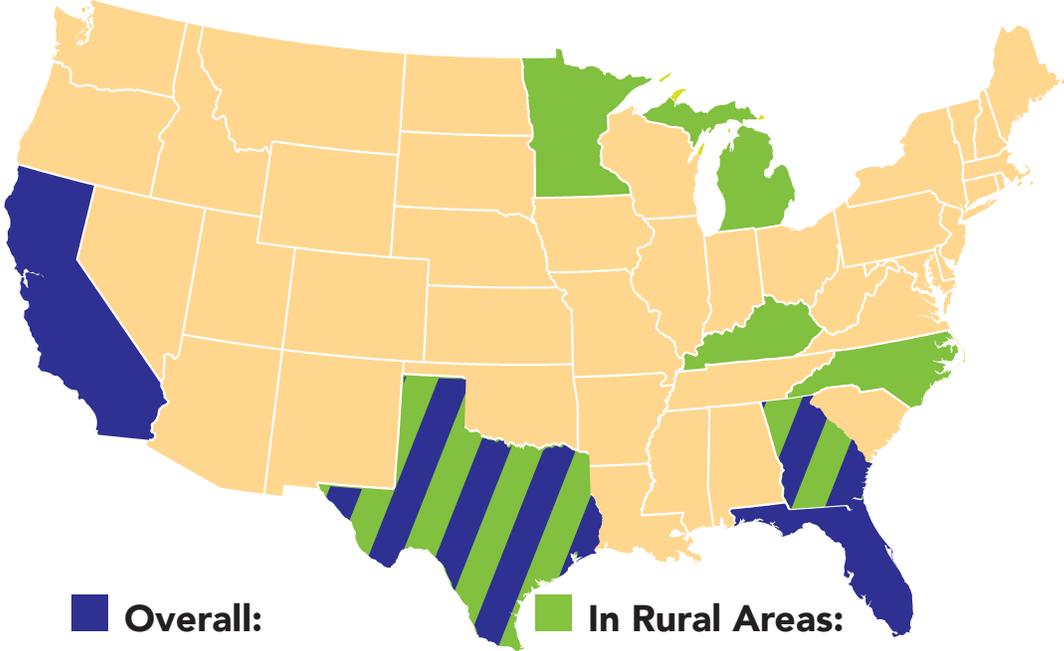
**90%** are **Micro-Businesses**  
*(fewer than 5 employees, including the owner)*

**30%** are **Sole Proprietorships**

# 3

## Small businesses in low-income communities are broadly distributed throughout the nation.

### States with the Highest Concentration of Small Businesses in Low-Income Communities...



**Overall:**

California	13%
Texas	9%
Florida	9%
Georgia	4%

**In Rural Areas:**

Texas	6%
North Carolina	5%
Minnesota	4%
Michigan	4%
Kentucky	4%
Georgia	4%

### Of Small Businesses in Low-Income Communities...

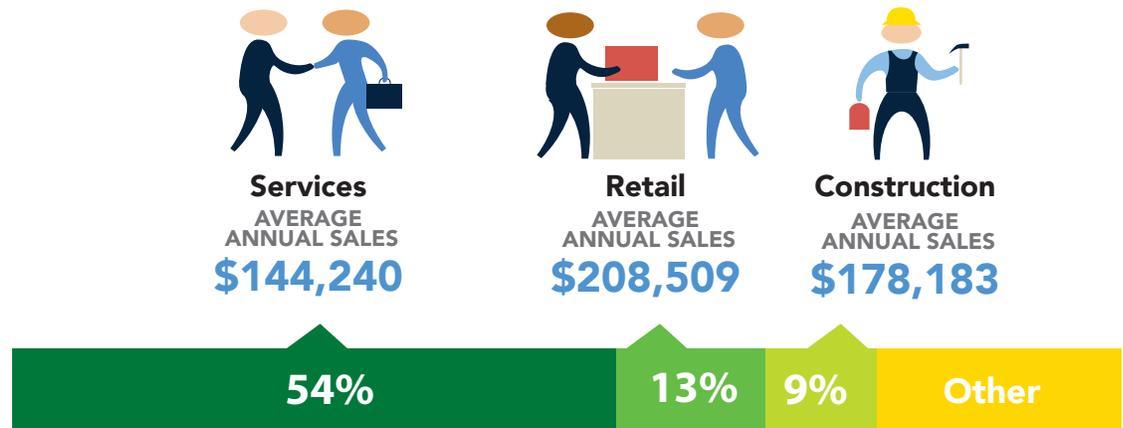
URBAN	RURAL
<b>85%</b> are located in Metropolitan Areas	<b>15%</b> are located in Rural Areas
<b>30%</b> are Sole Proprietorships	<b>34%</b> are Sole Proprietorships
Average Revenue* <b>\$213,215</b>	Average Revenue* <b>\$199,683</b>

## 4 Small businesses in low-income communities are relatively young.

**33%** OF SMALL BUSINESSES IN LOW-INCOME COMMUNITIES ARE **5 YEARS OLD AND UNDER**

## 5 Small businesses in low-income communities are concentrated in capital-light industries with low barriers to entry.

The majority of small businesses in low-income communities are concentrated in three industries:



### By Comparison with Other Professions...



**A CLOSER LOOK - SERVICE BUSINESSES:**

<b>66%</b> HAVE EMPLOYEES	<b>VS</b>	<b>34%</b> SOLE PROPRIETORSHIPS
AVERAGE ANNUAL REVENUE		AVERAGE ANNUAL REVENUE
<b>\$184,900</b>		<b>\$62,463</b>

6

Small businesses in low-income communities are a powerful economic force.

THESE BUSINESSES GENERATE  
**\$1.87 TRILLION**  
IN ANNUAL REVENUE

MICROBUSINESSES WITH LESS THAN 5 EMPLOYEES ARE RESPONSIBLE FOR GENERATING **72%** OF THIS AMOUNT (THAT'S \$1.34 TRILLION), WITH A MEDIAN ANNUAL REVENUE OF APPROXIMATELY \$110,000.

7

More than 2 million small businesses in low-income communities seek credit each year.



After completing our analysis of the Dun & Bradstreet data, we took one more important step to demonstrate another way the data can be used to understand the market. Our goal was to assess the demand for credit among small businesses in low-income communities. To that end, we took the universe of small businesses we had identified in our data analysis, and we applied to that universe the credit application rate of small businesses in comparable locations, as identified in the Federal Reserve Bank of New York's 2014 Joint Small Business Credit Survey. Using this methodology, we concluded that, of the 11.2 million small businesses in low-income communities, 2.2 million are active in the credit market annually.

## PART 3

### Next Steps: Developing a Deeper Understanding

AEO recognizes that this report is far from being the last word on the state of small businesses in low-income communities. Indeed, we offer it as a first step towards the development of a clearer understanding of the market, and we can envision a variety of ways that it can be used by investors, policymakers and community development practitioners.

CDFIs and other lenders might use the data to benchmark the performance of their small business clients, to set expectations for entrepreneurs entering a market, and to provide a reality check on revenue projections in business plans. (For example, if the data shows that a typical service business in a low-income area in California generates \$X in annual revenues, is it reasonable for a comparable business to project revenues four or five times higher?) Policymakers and investors might use it to gain a perspective on opportunities to target resources to various sectors of the market or on new ways to meet the needs of these business owners and communities.

We also can envision a variety of next steps, including:

- Doing deeper dives into the data set, including regional snapshots of small businesses, detailed analyses of specific industries, and comparisons of growth and performance of small businesses in low-income communities and small businesses in more affluent communities.
- Conducting qualitative companion research to examine the unmet needs of small business owners in the various segments of the data set.
- Use the framework we have developed in conjunction with other data sets to further assess the size of the market and to evaluate gaps in lending and support services, as AEO has done using the framework in conjunction with the Federal Reserve's survey of small businesses.
- Use this project as a model for collaborations with other partners on questions at the intersection of Big Data analytics and financial inclusion—for example, a comparison of the financial health of small business owners' households and non-business owners' households.

Again, we believe this paper is simply a first step, and we invite the community development sector to examine the issues we have raised here and to begin an in-depth discussion of ways to increase financial inclusion by increasing understanding of the small business market.

We encourage you to examine the issues and join the conversation!

## PART 4

# Background & Methodology

### AEO's Big Data Analysis: The First Attempt to See the Big Picture

As the national trade association for U.S. microfinance and Main Street businesses, the Association for Enterprise Opportunity recognized the need for a deeper understanding of the small business market. In 2014, we decided to explore the potential of Big Data analytics to advance that understanding, and we launched an innovative collaboration to undertake the first-ever data analysis of the universe of small businesses in low-income communities.

Our objective was to answer five fundamental questions:

1. How big is the market of small businesses in low-income communities?
2. Where are these businesses located?
3. In which industries do these businesses work?
4. What are the common characteristics of these businesses?
5. What do these businesses need to be able to grow and hire?

Our ultimate goal was to advance financial inclusion. We believed that Big Data analytics could provide a better understanding of the size and structure of the universe of small businesses in low-income communities, which in turn could help the community development sector better understand the needs of small businesses, the gaps in funding flows, and the opportunities for investment and innovation, and ensure that it is deploying its resources effectively.

### A productive collaboration

To undertake the project, AEO needed robust data, as well as sophisticated software and capabilities for data analysis. Generous contributions from IBM as well as Dun & Bradstreet provided the talent and resources we required.

In July 2014, we received a data analytics consulting grant through IBM's Impact Grants program. The purpose of the program is to provide software and consulting services to schools and nonprofits that want to use data analytics to examine a specific issue in order to improve their decision-making and performance.

We also approached Dun & Bradstreet to ask for access to their vast database of small businesses. They appreciated the objectives and significance of our analysis, and agreed to provide data on small businesses in the United States that, as of 2014, met three criteria: 1) had a D&B D-U-N-S Number, 2) were located in low-income census tract zip codes, and 3) had less than \$1 million in annual revenues.

Over a period of four weeks, a joint team of AEO staff and IBM consultants worked intensively to refine the criteria for the analysis and to develop a framework for sizing and segmenting the universe of small businesses in low-income communities. Once we had established that framework, IBM performed sophisticated segmentation and clustering analyses using Dun & Bradstreet's data set to examine the number, location, and defining characteristics of the smallest businesses in low-income communities.

## SMALL BUSINESS SNAPSHOT



**"I got so many no's."**

*Willie C., Dunwoody, Georgia*

Willie C. had always wanted to own a sports bar. He was aware that becoming a small business owner would be a huge gamble, but he knew that it was something he really wanted to try.

His first step was to take part in a program for entrepreneurs that helped him develop a business plan. But when he approached banks for a loan, he got a lesson in real world economics. The banks, he says, were far less interested in what he planned to do with his business than in how he was going to pay back his loan.

"I got so many no's," Willie says. Even the bank where he had been a longtime customer turned him down. Finally, the man who helped Willie write his business plan referred him to a CDFI in Georgia, which gave him a \$50,000 loan when he agreed to put up his home as collateral. In 2015, Willie quit his job of 15 years at a national hotel chain and bought a sports bar in Dunwoody.

Willie's advice to prospective business owners is simple: "Be persistent." He says that when all the banks turned him down, he thought, "this is what I want to do, and I'm gonna find a way."

For Tennille C., the question was never if she would become a business owner but when. So, in 2007, when she was experiencing some frustration in her current job, she simply asked herself what she really wanted to do and immediately came up with the answer: start a bookkeeping business. After doing research for about seven months, she says, "I just decided to start."

Today, Tennille is the proud owner of a successful small business. Through its main office in Villa Rica and a virtual office in Atlanta, her company provides a full range of bookkeeping and payroll services to businesses throughout the area. Tennille has two employees, and her company's annual revenues total \$141,000. A local CDFI provided two microloans to help her launch her business, as well as financing to enable her to purchase the small office building where its main office is located.

Tennille is the primary breadwinner in her family and especially appreciates that owning her own business allows her more opportunities to spend time with her two children. "I have control, I have freedom of my schedule," she says. "When my daughter gets off the bus, I'm there."



**"I just decided to start."**

*Tennille C., Villa Rica, Georgia*

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## About AEO

The Association for Enterprise Opportunity (AEO) is the leading voice of innovation in microfinance and microbusiness in the United States. For twenty-five years, AEO and its more than 450 member organizations have helped millions of entrepreneurs contribute to economic growth while supporting themselves, their families and their communities. AEO members and partners include a broad range of organizations that provide capital and services to assist underserved entrepreneurs in starting, stabilizing and expanding their businesses. Together, we are working to change the way that capital and services flow to underserved entrepreneurs so that they can create jobs and opportunities for all.

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