

The Economic Benefits of Online Lending to Small Businesses and the U.S. Economy

Nam D. Pham, Ph.D.
Alex J. Triantis, Ph.D.
Mary Donovan

May 2018

The Economic Benefits of Online Lending to Small Businesses and the U.S. Economy

Nam D. Pham, Alex J. Triantis, and Mary Donovan¹

Highlights of the Report

Small businesses are vital for America. However, these businesses routinely lack access to necessary capital to maintain and expand operations. Online lending fills this critical gap for small businesses. Indeed, the innovation of online lending products serves to complement, rather than replace, traditional funding sources. Online lenders fund small and short-term loans to business owners very quickly, providing an important financing option for small businesses.

Importantly, the economic impact of this lending activity is substantial. Access to capital allows small businesses to purchase inventory, cover operational costs, or provide capital to expand. In turn, these businesses stimulate additional economic activity and create jobs in their communities.

Three key highlights of the report are:

- From 2015 to 2017, the five major online lenders participating in this study funded nearly \$10 billion to approximately 180,000 small businesses in urban and rural communities across America. During this period, these lenders lent an average of \$55,498 to a small business borrower. About one-quarter of borrowers were microbusinesses with annual sales of less than \$100,000. Nearly one-third of these loans went to small businesses and microbusinesses in lower-income communities (those below the national median income).
- The \$10.0 billion in loans funded to small businesses between 2015 and 2017 directly generated \$23.0 billion in sales for the business borrowers. The additional sales of these small businesses in turn generated \$37.7 billion in gross output and created 358,911 jobs with \$12.6 billion wages in the local economies of the small business borrowers.
- The economic benefits of online lending vary across industries and states. For every one dollar in lending to small businesses, sales of small business borrowers increased between \$1.05 and \$2.84 (with an average of \$2.31). That one dollar in lending created between \$2.01 and \$5.59 (with an average of \$3.79) in gross output in the local communities of the small business borrowers.

¹ Nam D. Pham is Managing Partner, Alex J. Triantis is Senior Advisor, and Mary Donovan is Principal at ndp | analytics. Gabriela Irizarry and Benjamin Yoxall provided analytical assistance. We would like to thank the Electronic Transactions Association (ETA) and the Innovative Lending Platform Association (ILPA) for their financial support to conduct this study. The opinions and views expressed in this report are solely those of the authors.

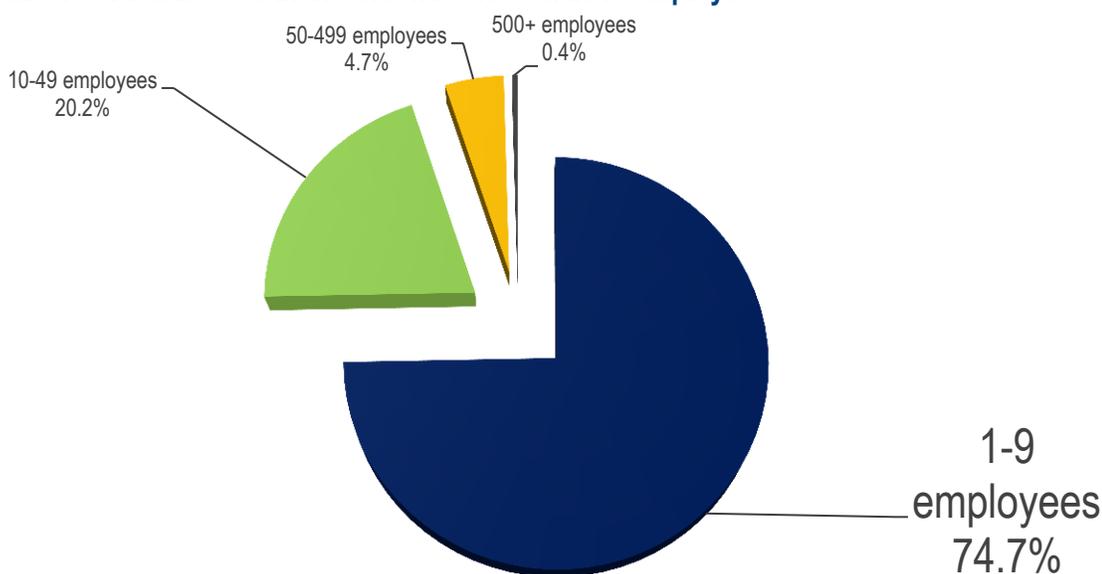
Small Businesses Are Vital to the U.S. Economy

Small businesses are the backbone of the U.S. economy. They are local restaurants, coffee shops, dry cleaners, home builders, auto shops, accountants, doctors, computer shops, and small manufacturers. They provide everyday goods and services for people who live in big cities and small rural communities across the country.

Small businesses account for more than 99% of all U.S. firms and employ over half of all workers.² More than half of American businesses have fewer than 5 employees and nearly three-quarters have fewer than 10 employees. Small businesses, especially younger firms, are the main sources of new job creation for Americans. Since 1995, small businesses have created two out of every three net new jobs for the U.S. economy.³ (Figure 1)

Figure 1.

Three-quarters of businesses in the U.S. have less than 10 employees⁴



Small Businesses Seek Small-Dollar Financing to Start, Maintain, and Expand Operations

The vitality of small businesses relies heavily on access to capital. Nearly three-quarters of small business owners seek small loans to start, operate, or expand their businesses.⁵ The financing needs and intended purposes vary greatly among small businesses. According to the Federal Reserve’s 2017 Small Business

² U.S. Bureau of Labor Statistics. 2017. “Business Employment Dynamics.” U.S. Department of Labor. https://www.bls.gov/web/cewbd/table_g.txt (accessed April 2018).

³ White House National Economic Council. 2012. “Moving America’s Small Business and Entrepreneurs Forward: Creating an Economy Built to Last.” May.

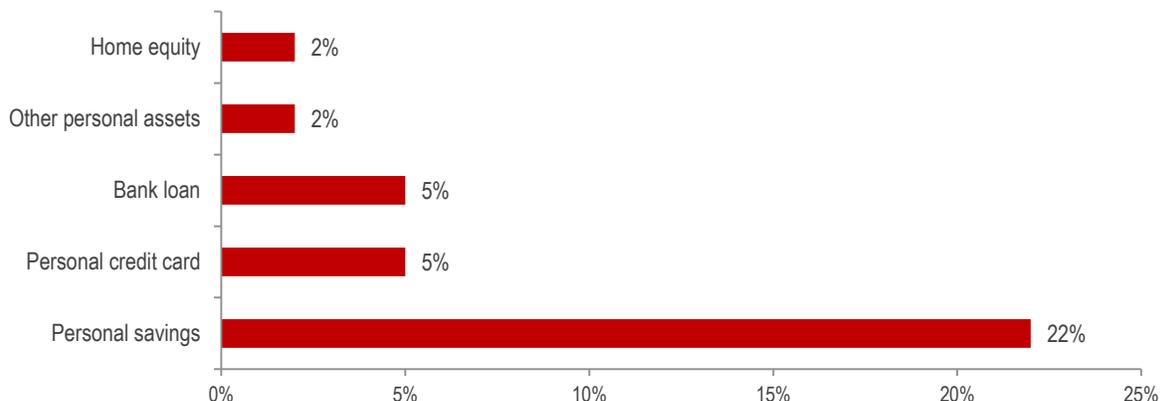
⁴ U.S. Bureau of Labor Statistics. 2017. “Business Employment Dynamics.” U.S. Department of Labor. https://www.bls.gov/web/cewbd/table_g.txt (accessed April 2018).

⁵ National Small Business Association. 2018. “NSBA 2017 Year-End Economic Report.”

Credit Survey, 64% of applicants sought funds for expansion and 55% of applicants sought \$100,000 or less.⁶ Historically, the most common source of financing for small businesses is personal and family savings. About 22% of small businesses use personal savings to expand their business, while 5% draw on personal credit cards and another 5% use bank loans for business expansion. (Figure 2)

Figure 2.

Personal savings are the most common source to fund business expansion⁷



Small Businesses Face Financing Gaps

The credit gap is one of the top challenges for small businesses, especially those with less than \$1 million in annual revenue. While large business lending is growing, small-business loans have been declining since 1995, when such loans made up nearly half of all bank loans.⁸ The ability to obtain funding is more challenging for small businesses during economic downturns, when external funding is often needed most. The search costs to obtain funding from traditional lenders can be high for small businesses. The Federal Reserve Bank of New York found that small business borrowers on average spend 26 hours to search and apply for credit at three separate financial institutions.⁹ Lending decisions, and the subsequent disbursement of loan proceeds, can take longer at traditional financial institutions than at online lenders.

Small business lending can be less attractive for traditional large financial lenders due to high risk and high search and transaction costs. The transaction cost to process a loan of \$100,000 or less is comparable to a \$1 million loan or larger. Compared to larger companies, small businesses have higher failure rates and are

Top Financial Challenges

For Small Businesses

44% *Credit availability to expand*

36% *Paying operating expenses*

25% *Making payments on debt*

17% *Purchasing inventory or supplies*

⁶ The Federal Reserve System. 2017. "2016 Small Business Credit Survey: Report on Employer Firms." April.

⁷ U.S. Small Business Administration Office of Advocacy. 2016. "Small Business Finance: Frequently Asked Questions." July.

⁸ Mills, Karen Gordon and Brayden McCarthy. 2014. "The State of Small Business Lending: Credit Access During the Recovery and How Technology May Change the Game." Working Paper 15-004. Harvard Business School.

⁹ Federal Reserve Bank of New York. 2014. "Small Business Credit Survey, Fall 2013."

more economically vulnerable. For traditional financial institutions, it has been a challenge to collect adequate financial and business information of small businesses to assess risk.

According to a Federal Reserve survey, 61% of small businesses faced financial challenges in 2016, especially firms with less than \$1 million annual revenue. Common financial challenges faced by small businesses are credit availability for expansion (44%), paying operating expenses (36%), making payments on debt (25%), and purchasing inventory or supplies to fulfill contracts (17%).¹⁰

The effects of capital constraints on small businesses are significant. Only half of small employer firms received the full amount of financing requested.¹¹ About 31% are unable to grow their business or expand operations, 14% are unable to finance increased sales, 13% cut employment, and 9% are unable to increase inventory to meet demand.

Online Lending Fills the Financing Gap for Small Businesses

Online lending has become a popular financing source for small businesses across industries. Traditional financial institutions and online small business lenders are partnering to offer smaller loan amounts and shorter-term loans to business owners. While some borrowers can obtain funding from traditional banks, many online lending customers do not have access to such traditional loans because of low personal credit scores and/or a lack of collateral assets. Although the associated costs of borrowing can be higher with online lenders, small business borrowers may be willing to pay a higher price in exchange for an easy application process, a quick decision, and rapid availability of funds, or because they have no alternative sources of borrowing.¹²

The products offered to small businesses by online lenders are similar to traditional institutions but typically allow for smaller amounts and shorter borrowing periods. Online lenders offer a variety of financing options, including term loans, lines of credit, and equipment financing loans. A 2017 Federal Reserve survey showed that 62% of online lending applicants were approved for loans or lines of credit, compared to 54% of applicants at large banks and 46% at credit unions. For applicants with more than \$1 million annual revenue, the approval rate by online lenders increased to 84%, the highest approval rate among all business lenders.¹³

Generally speaking, five distinguishing characteristics of online lenders are: (1) they provide credit to borrowers very quickly, sometimes within hours; (2) they offer smaller loans with shorter terms; (3) they use automated online loan applications and have no retail branches; (4) they rely on a variety of funding sources including institutional investors, hedge funds, individual investors, venture capital, and depository institutions; and (5) they use electronic data sources and technology-enabled underwriting models to automate processes and credit risk assessment.¹⁴

¹⁰ The Federal Reserve System. 2016. "Small Business Credit Survey 2015: Report on Employer Firms." March.

¹¹ The Federal Reserve System. 2016. "Small Business Credit Survey 2015: Report on Employer Firms." March.

¹² Brainard, Lael. 2015. "Community Banks, Small Business Credit, and Online Lending." Speech of Governor Lael Brainard at the Community Banking in the 21st Century, the Third Annual Community Banking Research and Policy Conference, on September 30, 2015.

¹³ Federal Reserve System. 2017. "2016 Small Business Credit Survey: Report on Employer Firms." April.

¹⁴ U.S. Department of Treasury. 2016. "Opportunities and Challenges in Online Marketplace Lending." May.

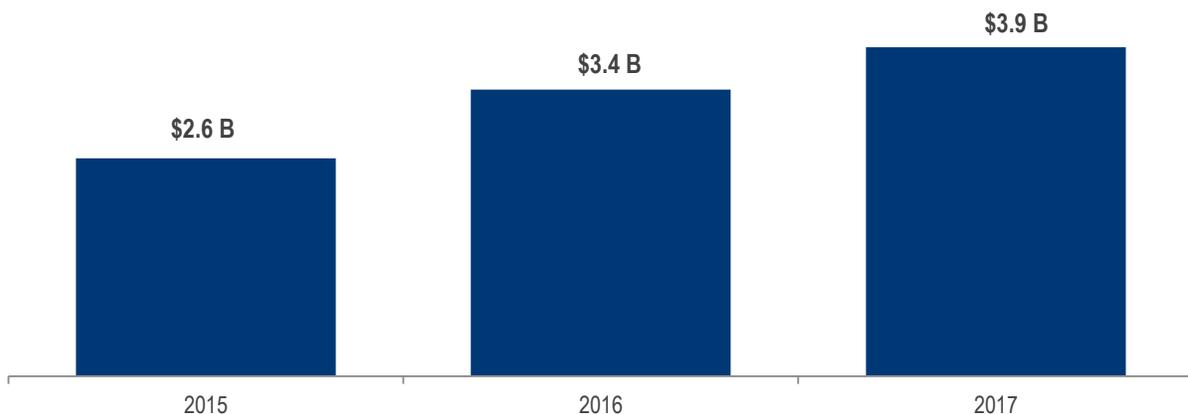
The Economic Benefits of Online Lending to Small Businesses Are Substantial

The economic benefits of online lending to American small businesses are substantial. For every one dollar in lending to small businesses from 2015 to 2017, sales of the small business borrowers increased between \$1.05 and \$2.84 (with an average of \$2.31). That one dollar in lending also created between \$2.01 and \$5.59 (with an average of \$3.79) in gross output in the local communities of the small business borrowers.

To estimate total economic impact, we collected data on loans offered to small businesses in the U.S. from 2015 to 2017 from five large online lenders who offer a variety of small businesses loan products. Then, we used aggregate industry-level data to calculate the direct business impact of loans to sales for the borrowing businesses. Finally, we applied the official economic multipliers estimated and published by the Bureau of Economic Analysis to calculate the indirect and induced effects of the loans to local economies.

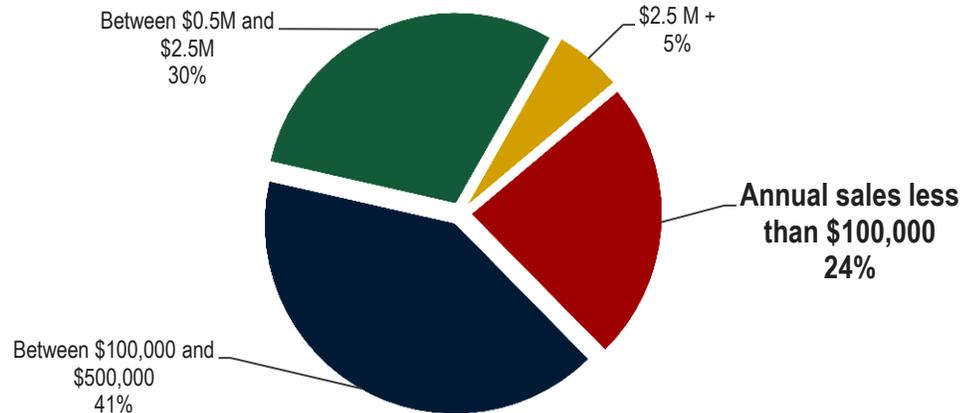
Online lenders provide loans to small businesses in manufacturing and services industries in both urban and rural communities across the country. Our dataset includes 179,505 business borrowers and nearly \$10 billion small business loans originated between 2015 and 2017 by the five participating online lenders. The dollar amount of online loans to small businesses increased 50% from \$2.6 billion in 2015 to \$3.9 billion in 2017. From 2015 to 2017, the average online loan to a small business borrower was \$55,498. (Figure 3)

Figure 3.
Amount of online loans to small businesses increased by 50% from 2015 to 2017



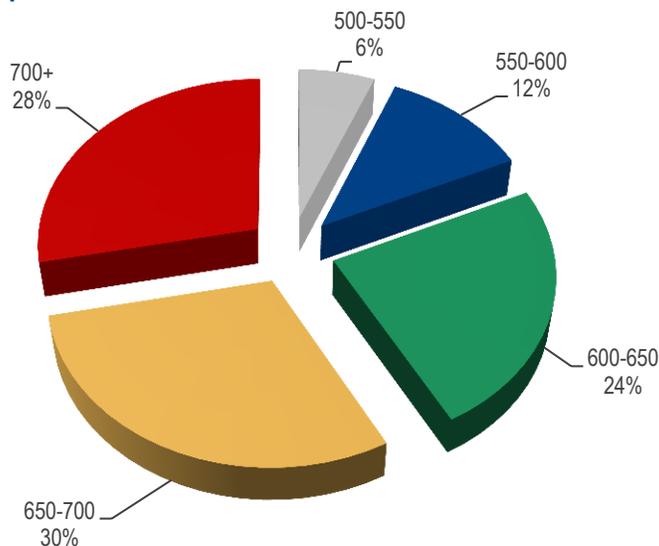
About 24% of online lending borrowers were microbusinesses with less than \$100,000 annual sales and two-thirds had less than \$500,000 annual sales. Only 5% of borrowers had more than \$2.5 million annual sales. (Figure 4)

Figure 4.
About one-quarter of borrowers are microbusinesses with less than \$100,000 in annual sales



Many online lenders have their own proprietary small business credit scoring systems to assess creditworthiness. The personal credit score (FICO®) of the principal owner of the borrowing business is among many other data elements in the online lending score system. More than 28% of principal business owners have FICO scores of 700 or higher. About 18% of principal business owners have FICO scores of less than 600. (Figure 5)

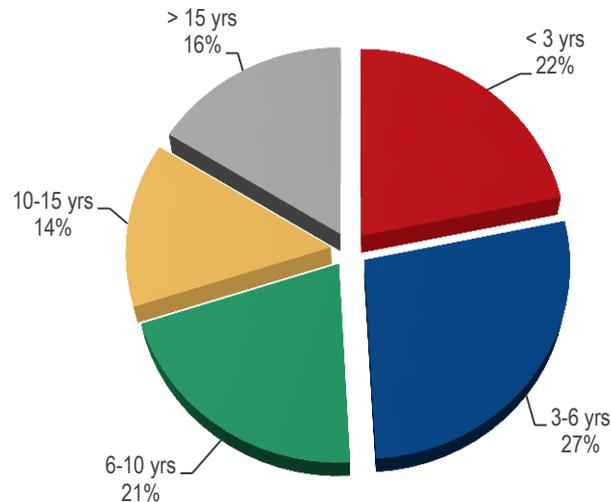
Figure 5.
More than 28% of principal business owners have FICO scores above 700



Online lenders offer loans to companies in all stages of their life cycle. The distribution of company age is relatively uniform. About 22% of borrowers have less than 3 years in business, 27% between 3 and 6 years, 21% between 6 and 10 years, 14% between 10 and 15 years, and 16% have more than 15 years. (Figure 6)

Figure 6.

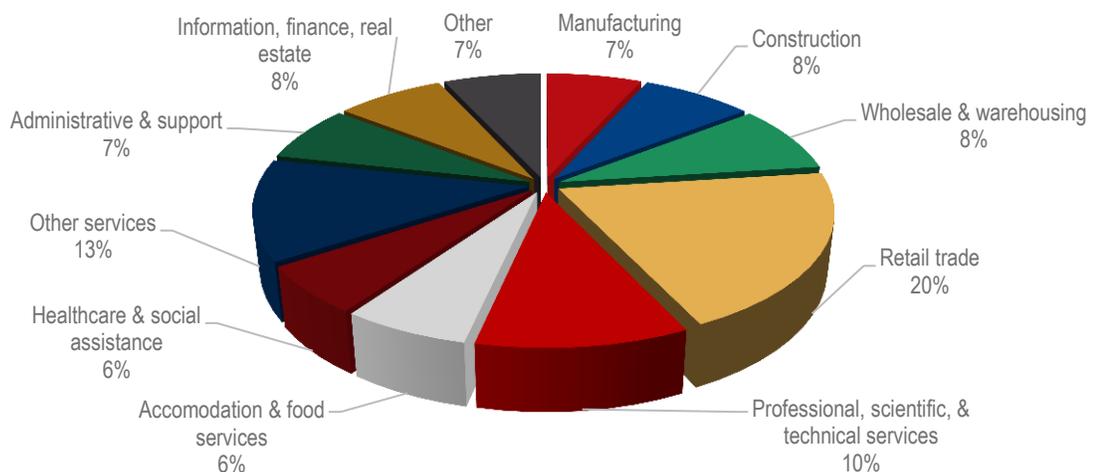
Both young and old small businesses obtained funding from online lenders



Small business borrowers are also spread across different industries. About 20% of small business borrowers were in the retail trade industry and 10% were in the professional, scientific, and technical services industry. (Figure 7)

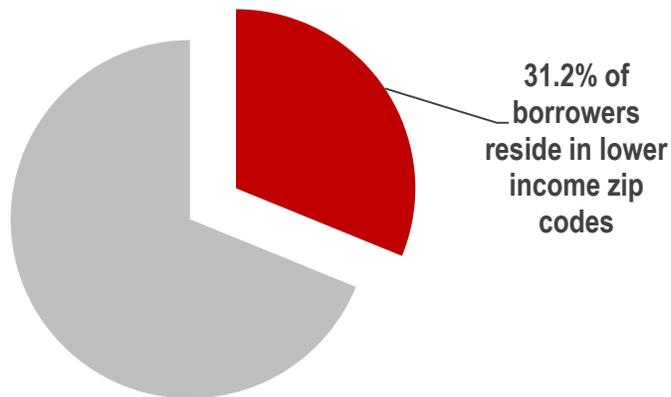
Figure 7.

Small business borrowers spread across all industries



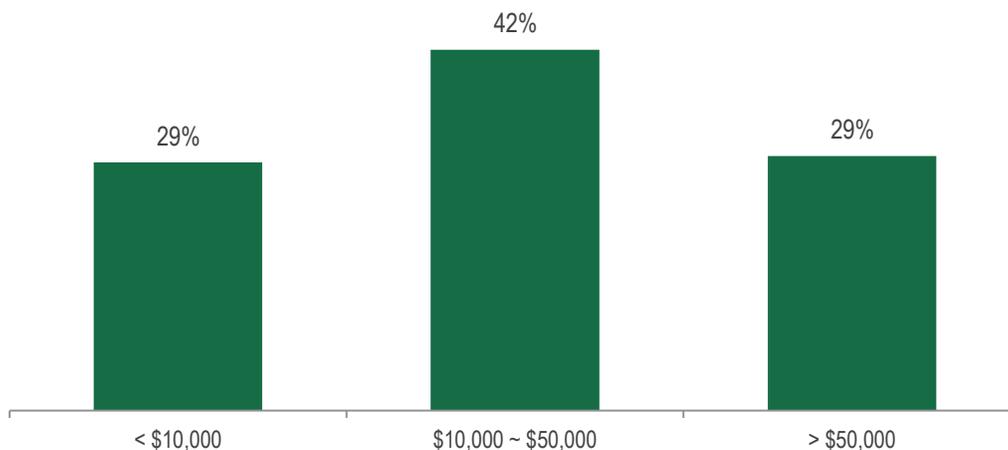
Online lenders serve small businesses in both urban and rural areas. Borrowers resided in 19,000 different zip codes, accounting for nearly half of all zip codes in the U.S., and covering 85% of all counties. About one-third of business borrowers are located in lower income areas (those with median incomes below the national household median income). (Figure 8)

Figure 8.
Over 31% of online loans went to communities that have lower than national median income



From 2015 to 2017, about 42% of businesses borrowed between \$10,000 and \$50,000 from online lenders. Nearly 29% of businesses borrowed less than \$10,000 and another 29% of businesses borrowed more than \$50,000. (Figure 9)

Figure 9.
About 42% of businesses borrow between \$10,000 and \$50,000 from online lenders



Small businesses need funding to maintain and expand their operations. They borrow money to pay for employees, supplies, rentals, marketing, and all other operating expenses. With higher working capital, businesses expect to have higher sales. Between 2015 and 2017, the participating online lenders funded nearly \$10 billion of loans to small businesses. We used the most recent average sales-to-capital ratio of each individual industry to estimate the direct business impact of loans on sales for small businesses. For example, the national average sales-to-capital ratio of the homebuilding industry in the U.S. in 2016-17 was 1.21. We applied this ratio to \$1.046 billion of loans that were provided to small construction companies and we derived \$1.267 billion additional sales for these borrowing construction companies. Overall, we estimated \$10 billion of loans that were originated between 2015 and 2017 created \$23 billion of sales for the small business borrowers. (Table 1)

Table 1.
\$10 billion in small business lending from 2015 to 2017 created over \$23 billion sales for borrowers

Industry	Loan Amounts	Sales	Loan-to-Sales Ratio
Agriculture, mining, utilities	\$50,811,268	\$68,683,127	1.4
Construction	\$1,046,824,747	\$1,266,657,943	1.2
Manufacturing	\$713,203,006	\$1,252,452,269	1.8
Retail & wholesales trade, warehousing	\$2,843,768,831	\$8,063,040,185	2.8
Information, finance, insurance, real estate	\$499,362,331	\$523,066,909	1.0
Professional & business services	\$1,723,706,213	\$4,551,928,416	2.6
Education, healthcare, other services	\$3,084,549,580	\$7,285,653,695	2.4
Total	\$9,962,225,976	\$23,011,482,545	2.3

The economic impact of online lending extends beyond the funding used by small businesses to maintain or expand operations. For example, a small construction company borrows money to buy supplies from a local vendor. The purchase raises sales and profits for the local vendor. Both the contractor and the local vendor have higher income and will, in turn, spend more on other activities in the local communities. The indirect effects of the loan are activities generated along the supply chain, such as the increased sales for the local vendor. The induced effects of the loan are activities generated from the new personal income that resulted from the additional direct and indirect activities, such as the new spending by the contractor and the local vendor as a result of higher personal income.

We applied the official economic multipliers estimated and published by the Bureau of Economic Analysis to calculate the indirect and induced economic impacts of online lending activities on gross output, jobs, and earnings in local communities. We calculated \$10 billion of loans that were originated between 2015 and 2017 generated \$37.7 billion in gross output and created 358,911 jobs with \$12.6 billion in earnings. (Table 2)

Table 2.

\$10 billion in small business lending created over \$37.7 billion in gross output and nearly 359,000 jobs

Industry	Gross Output	Jobs Created	Earnings
Agriculture, mining, utilities	\$141,080,388	1,047	\$29,270,895
Construction	\$2,848,423,975	24,339	\$918,860,312
Manufacturing	\$2,618,189,152	15,697	\$661,560,395
Retail & wholesales trade, warehousing	\$5,802,469,102	54,866	\$1,801,488,900
Information, finance, insurance, real estate	\$1,002,759,795	6,353	\$263,416,482
Professional & business services	\$9,632,897,116	101,991	\$3,471,700,332
Education, healthcare, other services	\$15,703,069,686	154,619	\$5,428,677,079
Total	\$37,748,889,215	358,911	\$12,574,974,396

Final Remarks

The economic benefits of online lending are far-reaching. Advanced technology enables online lenders to gather information and to assess credit risks quickly to provide loans to a broader group of borrowers. Online lending complements, rather than replaces, traditional funding sources.

The economic impact of online lending varies by industry and state. Overall, for every one dollar in lending to small businesses between 2015 and 2017, sales of small business borrowers increased between \$1.05 and \$2.84 (with an average of \$2.31). That one dollar in lending also created between \$2.01 and \$5.59 (with an average of \$3.79) in gross output in the local communities of the small business borrowers.

In sum, online lending fills a critical gap in funding for small businesses. Through increased access to capital, small businesses across America are able to grow. As these businesses succeed, so do those around them. As such, American communities across the U.S. have realized the positive economic impact of online lending.

References

- Brainard, Lael. 2015. "Community Banks, Small Business Credit, and Online Lending." Speech of Governor Lael Brainard at the Community Banking in the 21st Century, the Third Annual Community Banking Research and Policy Conference, on September 30, 2015.
https://fraser.stlouisfed.org/content/?filepath=/files/docs/historical/federal%20reserve%20history/bog_members_statements/brainard_20150930.pdf&item_id=521757.
- Federal Reserve Bank of New York. 2014. "Small Business Credit Survey, Fall 2013."
<https://www.newyorkfed.org/medialibrary/interactives/fall2013/fall2013/files/full-report.pdf>.
- Federal Reserve System. 2017. "2016 Small Business Credit Survey: Report on Employer Firms." April.
<https://www.newyorkfed.org/medialibrary/media/smallbusiness/2016/SBCS-Report-EmployerFirms-2016.pdf>.
- _____. 2016. "Small Business Credit Survey 2015: Report on Employer Firms." March.
<https://www.newyorkfed.org/medialibrary/media/smallbusiness/2015/Report-SBCS-2015.pdf>.
- Mills, Karen Gordon and Brayden McCarthy. 2014. "The State of Small Business Lending: Credit Access During the Recovery and How Technology May Change the Game." Working Paper 15-004. Harvard Business School. https://www.hbs.edu/faculty/Publication%20Files/15-004_09b1bf8b-eb2a-4e63-9c4e-0374f770856f.pdf.
- National Small Business Association. 2018. "NSBA 2017 Year-End Economic Report." <http://nsba.biz/wp-content/uploads/2018/02/Year-End-Economic-Report-2017.pdf>.
- U.S. Small Business Administration Office of Advocacy. 2016. "Small Business Finance: Frequently Asked Questions." July. https://www.sba.gov/sites/default/files/Finance-FAQ-2016_WEB.pdf.
- U.S. Bureau of Labor Statistics. 2017. "Business Employment Dynamics." U.S. Department of Labor. https://www.bls.gov/web/cewbd/table_g.txt (accessed April 2018).
- U.S. Department of Treasury. 2016. "Opportunities and Challenges in Online Marketplace Lending." May. 10. https://www.treasury.gov/connect/blog/Documents/Opportunities_and_Challenges_in_Online_Marketplace_Lending_white_paper.pdf.
- White House National Economic Council. 2012. "Moving America's Small Business and Entrepreneurs Forward: Creating an Economy Built to Last."
https://www.sba.gov/sites/default/files/files/small_business_report_final.pdf.

About the Authors

Nam D. Pham, Ph.D.

Managing Partner

Nam D. Pham is Managing Partner of ndp | analytics, a strategic research firm that specializes in economic analysis of public policy and legal issues. Prior to founding ndp | analytics in 2000, Dr. Pham was Vice President at Scudder Kemper Investments in Boston. Before that he was Chief Economist of the Asia Region for Standard & Poor's DRI; an economist at the World Bank; and a consultant to both the Department of Commerce and the Federal Trade Commission. Dr. Pham is an adjunct professor at the George Washington University. Dr. Pham holds a Ph.D. in economics from the George Washington University, an M.A. from Georgetown University; and a B.A. from the University of Maryland. He is a former member of the board of advisors to the Dingman Center for Entrepreneurship at the University of Maryland, Smith School of Business and the Food Recovery Network.

Alex J. Triantis, Ph.D.

Senior Advisor

Dean, Professor of Finance, Robert H. Smith Business School, University of Maryland

Alex J. Triantis is Dean and Professor of Finance at the University of Maryland and an expert on corporate finance, investment, and risk management. His work has been published in leading academic journals, practitioner publications, and mainstream periodicals. Triantis has consulted and provided executive training in the areas of corporate finance and valuation for corporate clients. He serves on the Editorial Advisory Board of the *Journal of Applied Corporate Finance*, and previously served two terms as Editor of *Financial Management*, and was an Associate Editor of *Management Science*. His research has been featured in *Businessweek*, *CFO magazine*, *Financial Times*, *New York Times*, *Wall Street Journal*, and numerous other publications. Dr. Triantis holds a Ph.D. and M.S. from Stanford University, and an M.Eng. and B.A.Sc. from University of Toronto.

Mary Donovan

Principal

Mary is a Principal at ndp | analytics. She serves dual roles of economist and communications manager. Her responsibilities include client research and analysis, as well as public relations. Before joining ndp | analytics, Mary was an Account Executive at the Kellen Company where she provided full service management, including government affairs work and strategic consulting, to trade associations in the payments and food-business industries. Mary holds a Master's in Applied Economics from the University of Maryland and a Bachelor's in International Relations and French from State University of New York (SUNY) Geneseo.

About Us

ndp | analytics is a strategic research firm that specializes in economic analysis of public policy and legal issues. Our services include economic studies, impact analyses, cost-benefit analyses, statistics, and data construction. Our analytical frameworks are data-driven and are robust, transparent, and supported by economic fundamentals. We excel in supporting organizations on advocacy, government and industry relations, public affairs campaigns, and strategic initiatives. Clients of ndp | analytics include trade associations, coalitions, financial institutions, law firms, U.S. and foreign corporations, and multinational organizations. Our work has been prominently cited in the Economic Report of the President to Congress, the media, reports from government agencies, Congressional testimonies, and by Congressional leaders.