IMPACT INVESTING AND THE FOSTERING OF BUSINESS VENTURES' FINANCIAL PERFORMANCE AND SOCIAL IMPACT IN DISADVANTAGED URBAN AREAS

ROMAIN BOULONGNE
IESE Business School
rboulongne@iese.edu

RODOLPHE DURAND
HEC Paris
durand@hec.fr

CAROLINE FLAMMER
Boston University
cflammer@bu.edu

January 2021

ABSTRACT

We examine whether impact investing is more effective in fostering business venture success and social impact when directed toward ventures located in vs. outside disadvantaged urban areas (i.e., areas with high crime, unemployment, and poverty). We explore this question in the context of loans made to business ventures located in French "banlieues" vs. "non-banlieues." We find that loans issued to banlieue ventures, compared to non-banlieue ventures, yield greater improvements in financial performance, as well as greater social impact in terms of the creation of local employment opportunities, quality jobs, and jobs for minorities—all of which contribute to the social inclusion of marginalized communities and the development of sustainable cities.

Keywords: impact investing; social impact; disadvantaged urban areas; sustainable cities; Sustainable Development Goals (SDGs); business ventures.

*Author names listed in alphabetical order. We are grateful to Bruno Cassiman, Anthony Gibbs, Aleksandra Kacperczyk, Nalin Kulatilaka, Siobhan O'Mahony, Nina Mazar, Carey Morewedge, Michelle Rogan, Stephan Siegel, Giovanni Valentini, Eric Zhao (discussant), Rosemarie Ziedonis, as well as seminar participants at Boston University, École Polytechnique, Imperial, the University of Colorado Boulder, University of Massachusetts Lowell, University of Washington, as well as the Social Entrepreneurship Conference and the Strategic Management Society Annual Conference for helpful comments and suggestions.

1. Introduction

Many of the world's cities have neighborhoods characterized by high poverty, unemployment, illiteracy, and crime. While over the past decades the world economy has grown, the divide between the haves and have-nots has grown as well (World Bank 2020). Increased inequalities and the distress of disadvantaged urban areas are pressing issues that are challenging to address (Porter 2016). To mitigate these inequalities and contribute to the development of sustainable cities, it is crucial to understand how to improve the economic success of business ventures and their social impact (through, e.g., the creation of local employment opportunities, quality jobs, and jobs for minorities) in disadvantaged urban areas. Arguably, this question is not only vital for the social inclusion of disadvantaged communities and the development of cities but also for the broader economy and the achievement of the United Nations' Sustainable Development Goals (SDGs)—which include no poverty (SDG #1), decent work and economic growth (SDG #8), reduced inequalities (SDG #10), and the development of sustainable cities and communities (SDG #11).

Both the public and private sectors can play an important role in stimulating business growth and employment opportunities in these areas. In this regard, one potentially important lever is the easing of financing constraints, which are especially severe for businesses located in disadvantaged areas, as well as minority-owned businesses (Bates 1989, Bates, Bradford, and Seamans 2018, Chatterji and Seamans 2012, Kerr and Nanda 2011).[1] In this study, we turn our attention to investors who aim to finance business ventures that are both economically viable and have a positive social impact—through the creation of local employment opportunities, quality jobs, and jobs for minorities—thereby fostering the social inclusion of disadvantaged communities and the development of sustainable cities. In practice, these investors are known as "impact investors".[2] From an impact investor's perspective, the relevant question is *which*

[1] While distinct, terms such as "disadvantaged urban areas," "inner cities," and "minority neighborhoods" are often used interchangeably in the literature since disadvantaged urban areas (and inner cities, respectively) are overwhelmingly minority neighborhoods (e.g., in terms of race, religion, etc.), and minority neighborhoods are largely economically distressed (see, e.g., Bates and Robb 2014, Porter 1995, 2016).

[2] The two primary instruments of impact investing are private equity and private debt, with private debt being the most

investments have most impact in terms of both business venture success and social impact. To shed light on this question, we examine whether investments in business ventures yield greater improvements in the ventures' financial performance and social impact when directed toward ventures in disadvantaged urban areas compared to ventures outside these areas.

On one hand, one may expect the economic and social benefits to be stronger when investments are directed toward business ventures located in prosperous economic areas. In this vein, a strong rationale exists for investors to target ventures located in such areas. Going back to Marshall (1890), a long-standing and vibrant literature focuses on entrepreneurial ecosystems and the role of geographic (co-)location for business venture success (Alcacer and Delgado 2018, Chatterji, Glaeser, and Kerr 2014, De Figueiredo, Meyer-Doyle, and Rawley 2013, Delgado, Porter, and Stern 2010, 2014, Glaeser, Kerr, and Kerr 2009, Sorenson and Audia 2000, Stuart and Sorenson 2003). This literature examines the role of regional clusters—i.e., groups of closely-related industries operating within a geographic region (such as the high-tech industry in Silicon Valley)—and agglomeration economies. Collectively, this literature finds that geographic proximity benefits new and established ventures by enhancing operating efficiency (e.g., through lower transportation costs), increasing the transfer of knowledge and skills, and attracting a larger pool of customers, suppliers, as well as employees with specialized human capital (Ellison, Glaeser, and Kerr 2010, Sorenson and Audia 2000, Stuart and Sorenson 2003). Moreover, access to capital and the financial development of the area are important factors for the launch and growth of business ventures (Chatterji and Seamans 2012, Kerr and Nanda 2011, Samila and Sorenson 2011). Overall, this literature focuses on business hotspots that offer locational advantages, and highlights the importance of local conditions and positive spillovers from geographic proximity that contribute to business venture success. Therefore, investments in business ventures located in attractive business environments could capitalize on the aforementioned locational advantages and benefit from a virtuous cycle, i.e. generate greater impact in terms of business venture success and social impact through job creation.

commonly used (Global Impact Investing Network 2018). Our study focuses on private debt. See Sections 2.2 and 3.2 for details.

On the other hand, investments in business ventures might make a bigger difference when directed toward ventures located in disadvantaged urban areas. While business ventures in these areas are likely to face a locational disadvantage, investments in these ventures might help mitigate one of the key constraint they face when growing their business: access to finance. Indeed, business ventures that are located in disadvantaged areas (as well as minority-owned businesses) have been shown to face more severe financing constraints (Bates 1989, Bates and Robb 2013, Bates, Bradford, and Seamans 2018, Chatterji and Seamans 2012). Given the severity of financing constraints, impact investors might be able to contract with business ventures of comparatively higher quality—and hence unrealized potential—in disadvantaged urban areas. As a result, and despite the poor conditions of the business environment, one Euro invested in a business venture from a disadvantaged area might bring about higher improvements in the venture's financial performance compared to what would be achieved by investing the same amount in a similar business venture from an advantaged area.

Furthermore, expanding access to financing might be key not only for business growth and the (re)vitalization of business activity but also, and importantly, for the social inclusion of disadvantaged communities through, e.g., the creation of local employment opportunities, quality jobs, and jobs for minorities. First, given the greater unrealized potential of business ventures in disadvantaged urban areas, investments in these ventures are likely to yield a stronger impact in terms of job creation. This, in turn, increases the purchasing power of the newly hired employees, their demand for products and services, and ultimately their social inclusion in the economy. Second, the social inclusion of disadvantaged communities might be further improved if the jobs that are created are not merely "more jobs" but also "quality jobs"—such as high-skill ("white-collar") jobs, as opposed to low-skill ("blue-collar") jobs—and if these employment opportunities foster the inclusion of minorities. In sum, investments may not only lead to greater business venture success but also greater social impact when directed toward ventures that are located in (as opposed to outside) disadvantaged urban areas, thereby fostering the social inclusion of disadvantaged communities and the development of sustainable cities.

To explore these questions empirically, we study the differential impact of loans made to business ventures located in French "banlieues" vs. "non-banlieues".[3] Specifically, we use data from a financial institution (referred to as "Public Bank" for confidentiality reasons) that provides loans in segments and regions of the French economy that tend to be overlooked by traditional (for-profit) banks. We merge the Public Bank data with micro data on business ventures from the French National Institute of Statistics and Economic Studies, and examine how the loans issued to banlieue ventures affect banlieue ventures' outcomes compared to non-banlieue ventures that receive similar loans from Public Bank. To isolate the banlieue vs. non-banlieue dimension, we match the two types of ventures based on a large set of ex ante characteristics and require that they be located in the same city.

We find that the issuance of loans to banlieue ventures leads to a significantly higher increase in financial performance. Compared to non-banlieue ventures, banlieue ventures achieve an additional 2.3-3.0 percentage points increase in the return on assets (ROA) over the three years that follow the loan issuance. What is more, we find that the social impact of these investments is greater as well. Compared to non-banlieue ventures, banlieue ventures achieve higher employment growth by 6.5-9.2 percentage points in the three years following the loan issuance. This greater job creation at banlieue (compared to non-banlieue) ventures comes primarily from the creation of quality jobs such as white-collar jobs. Finally, we find that the newly created jobs benefit both female and male employees.

As discussed above, understanding how to improve the economic success of business ventures and their social impact in disadvantaged urban areas—and, more broadly, how to contribute to the development of sustainable cities—are important questions for academics and practitioners alike. In fact, addressing these questions has become a pressing concern, as disadvantaged communities are being hit the hardest by the recent global crises such as the current COVID-19 pandemic, social injustice, and the climate crisis.

[3] In French, the word "banlieue" refers to suburban areas and hence can relate to both disadvantaged and wealthy neighborhoods. In colloquial parlance, however, banlieue refers to disadvantaged areas, which is the terminology we use in this paper. Empirically, we code as banlieues the set of neighborhoods that have been identified by the French government as "zones urbaines sensibles" (ZUS), that is, deprived urban areas with clearly identified social and economic difficulties. See Section 3.1 for details.

Taken together, the findings of this study suggest that impact investing brings about stronger improvements in financial performance and social impact when directed toward business ventures located in disadvantaged urban areas. Accordingly, by investing in these neighborhoods, impact investors—and investors more generally—can achieve both greater business venture success and greater social impact, thereby contributing to the achievement of the United Nations' Sustainable Development Goals (SDGs).

The remainder of this paper is organized as follows. Section 2 provides the conceptual background; Section 3 describes the data; Section 4 describes the methodology; Section 5 presents the results; and Section 6 concludes.

2. The fostering of business activity in disadvantaged urban areas

2.1 Institutional context of disadvantaged urban areas

How can business activity be fostered in *disadvantaged urban areas*? This question is difficult to answer given the various challenges faced by these areas. Specifically, Porter (1995) highlights that disadvantaged urban areas suffer from a lack of businesses and jobs, which fuels the downward spiral of poverty and social problems (such as illiteracy, school dropouts, unemployment, drug abuse, and crime). Given these adverse local conditions—which severely differ from the context of business hotspots that have been the focus of the regional clusters and agglomeration literatures (e.g., Ellison, Glaeser, and Kerr 2010, Sorenson and Audia 2000, Stuart and Sorenson 2003)—business ventures located in disadvantaged urban neighborhoods are unlikely to benefit from locational advantages encountered elsewhere (such as knowledge spillovers, qualified suppliers, as well as other resources that are essential to the businesses' operations). As such, business ventures located in these areas are likely to suffer from a *locational disadvantage*.[4]

Fostering the (re-)vitalization of business activity in these areas is difficult. As Porter (1995) argues, efforts to revitalize disadvantaged urban areas are often driven by social programs aimed at meeting the needs of individuals, e.g., through the provision of income subsidies, food stamps, public housing, and the

[4] In this vein, Hiatt and Sine (2014) find that violence and civil unrest negatively affect business venture success and job growth, as such environment alters entrepreneurial risk perception, disrupts resource flows, and is detrimental to longer-term strategic planning.

support of (non-profit) organizations providing services to the community. While these programs play a critical role in addressing some of the most pressing social needs, Porter (1995, 1997) points out that these social models, by their very nature, are not based on an economic model that supports the creation and growth of local business ventures and employment opportunities, both of which are critical to mitigate the many social problems encountered in disadvantaged urban areas, and hence the development of sustainable cities and the broader economy.

Naturally, the public and private sectors can play a vital role in stimulating business growth and employment opportunities in disadvantaged neighborhoods.[5] Given that access to capital is a key challenge for businesses located in disadvantaged areas, one potential way to revitalize these neighborhoods is by easing financing constraints. In this context, impact investors—that is, investors who aim to finance business ventures that are both economically viable *and* have a positive social impact—could play an important role, and contribute to the revitalization of disadvantaged urban areas.

2.2 Impact investing

The practice of impact investing (and responsible investing more broadly) has experienced tremendous growth in the past years. For example, the United Nations' Principles for Responsible Investment (PRI)—the largest network of responsible investors—was launched in 2006 and nowadays counts over 3,000 signatories representing more than $100 trillion in assets under management.[6] Overall, responsible investing corresponds to over 25% of all professionally managed assets globally (Ceres 2018).

Impact investors aim to maximize the impact of their funds invested in terms of both business venture success and social impact. The two primary instruments used in impact investing are private debt and private equity, with private debt being the largest. More specifically, private debt accounts for 34% of impact investors' reported assets under management and private equity for 19%, respectively (Global

[5] For example, government interventions (e.g., corporate tax relief programs) aim to partially offset the disadvantaged urban areas' locational disadvantage (Briant, Lafourcade, and Schmutz 2015, Gobillon, Magnac, and Selod 2012, Neumark and Simpson 2015).
[6] See https://www.unpri.org/pri/about-the-pri.

Impact Investing Network 2018).[7] While all impact investors intend to generate positive social and environmental impact alongside financial returns, investors differ in the weighting of these objectives and their willingness to potentially forgo (higher) financial returns (see, e.g., Barber, Morse, and Yasuda 2020, Gesczy, Jeffers, Musto, and Tucker 2020).[8,9]

That access to capital matters for the growth of business ventures is by now well established in the literature (e.g., Bruhn and Love 2014, Chatterji and Seamans 2012, Kerr and Nanda 2011, Samila and Sorenson 2011). As such, the more relevant question from an impact investor's perspective is *which* investments have more impact in terms of both business venture success and social impact. In the following, we explore whether impact investing has a greater effect on business ventures located in disadvantaged urban areas (compared to business ventures located outside these areas) in terms of both their financial performance and social impact.

2.3 Impact investing in vs. outside disadvantaged urban areas

From a theoretical perspective, it is unclear whether investments in business ventures located in disadvantaged urban areas yield higher improvements in the ventures' financial performance and social impact, compared to the same investments in comparable business ventures located in advantaged urban areas. The directionality is ambiguous due to the following two countervailing forces.

On one hand, the existing literature (e.g., Ellison, Glaeser, and Kerr 2010, Sorenson and Audia 2000, Stuart and Sorenson 2003) highlights that business ventures located in attractive business environments benefit from numerous locational advantages, such as knowledge spillovers, access to highly-educated employees, well-funded local customers, among others—all of which contribute to business

[7] In this study, we focus on private debt (see Section 3.2).

[8] In the case of private equity, Barber, Morse, and Yasuda (2020) find that investors are willing to accept lower returns by 2.5 to 4.7 percentage points on average (i.e., the internal rate of return is lower than that of other investors for similar investments).

[9] In contrast to impact investors, microfinance institutions (MFIs)—which predominantly operate in developing countries and provide financial services to individuals and small businesses that lack access to conventional banking and related financial services—may not necessarily pursue both financial and social objectives. While MFIs often operate at the bottom-of-the-pyramid, some MFIs pursue merely financial objectives. For related literature on microfinance, see, e.g., Armendáriz and Morduch (2010), Canales and Greenberg (2016), Cobb, Wry, and Zhao (2016), and Zhao and Lounsbury (2016).

performance. In contrast, these locational advantages do not apply in disadvantaged neighborhoods where business ventures face a very different reality; a reality that is characterized by high unemployment, low purchasing power of local customers, poorly educated (or uneducated) employees, and high crime, among others. Moreover, infrastructure and public services are often substandard in disadvantaged urban areas, which may further hamper business performance. In sum, given the less favorable business environment in disadvantaged urban areas, one might expect investments undertaken in advantaged areas to yield greater improvements in financial performance. In addition, as business ventures grow, they are likely to hire more employees. If some of the new jobs are dedicated to minorities—who are underrepresented in many jobs, especially among higher-skilled jobs—this will also contribute to workplace diversity and social inclusion.[10] Hence, investments undertaken in advantaged areas may yield higher improvements in the business ventures' financial performance and social impact, compared to investments in similar business ventures located in disadvantaged areas.

On the other hand, however, the provision of funding helps ease financing constraints, which is one of the key constraints business ventures face as they aim to grow their business. As mentioned above, prior literature documents that businesses located in disadvantaged areas, as well as businesses that are minority-owned, face more severe financing constraints (e.g., Bates 1989, 2011, Bates and Robb 2013, 2016, Bates, Bradford, and Jackson 2018, Bates, Bradford, and Seamans 2018, Blanchflower, Levine, and Zimmerman 2003, Chatterji and Seamans 2012, Younkin and Kuppuswamy 2018). In particular, their loan applications are more often rejected, and when granted they tend to receive smaller loans, and at less attractive conditions. In the same spirit, two recent surveys conducted among entrepreneurs in French banlieues indicate that access to finance is the number one challenge faced by business ventures located in disadvantaged urban areas (ADIVE 2010, Terra Nova 2016).[11] The higher financing constraints faced by

[10] See, e.g., Bertrand and Mullainathan (2004), Pager and Shepherd (2008), and World Economic Forum (2017) for evidence that minorities face systematic discrimination on the labor market, including discriminatory hiring practices.
[11] The first survey was conducted by ADIVE (agence pour la diversité entrepreneuriale) in 2010 and sampled 404 banlieue entrepreneurs; the second survey was conducted by Terra Nova between 2010 and 2016, and sampled 400 banlieue entrepreneurs. In both surveys, the majority of respondents identified access to financing ("accès aux financements") as the main obstacle faced in banlieues (ADIVE 2010 p. 25, Terra Nova 2016 p. 44).

business ventures in disadvantaged areas have two direct implications. First, they limit the ventures' ability to grow and invest in key strategic resources—such as the hiring of high-skill employees (Barney 1991, Campbell, Coff, and Kryscynski 2012)—that would contribute to value creation and help them achieve a sustainable competitive advantage.[12] Second, due to the more severe financing constraints, the need for funding is likely higher in disadvantaged urban areas. As a result, for a given financing instrument and contract terms, investors will likely be able to contract with business ventures of comparatively higher quality—and hence of *unrealized potential*—in disadvantaged urban areas compared to outside these areas.[13] Accordingly, despite the poor conditions of the local business environment, investments may yield greater financial performance improvements for ventures located in disadvantaged urban areas (relative to the performance improvements that the same investment would achieve if directed toward similar ventures located in advantaged urban areas). This in turn may help (re-)vitalize business activity in these areas.

Moreover, for a given amount of funding received from investors, ventures in disadvantaged urban areas might create more jobs compared to ventures outside these areas. Since business ventures in disadvantaged areas are more likely to hire local residents from the disadvantaged area (Dahl and Sorenson 2012, ICIC 2010, Porter 2016), these new job opportunities are likely to contribute to the inclusion of disadvantaged communities in the economy. In this regard, their social inclusion is further enhanced if the jobs that are created are not merely more jobs but also quality jobs—such as high-skill (white-collar) jobs as opposed to low-skill (blue-collar) jobs—and if these employment opportunities foster the inclusion of minorities.[14]

---

[12] In line with this argument, high-skill ("white-collar") jobs tend to be less prevalent and underprovided in disadvantaged areas (Green 2020).

[13] This unrealized potential is highlighted in the aforementioned survey by Terra Nova (2016). In describing the banlieue ventures, the study notes that many of them have good fundamentals that "reflect good financial health and do not justify the difficulty in accessing financing" (p. 45), and further comment on the need to connect them to investors to "grow in scale, create jobs, and unleash their entrepreneurial potential" (p. 87, authors' translation).

[14] Arguably, through the creation of jobs, impact investing is likely to have positive spillovers on other dimensions of social impact (such as employees' health and education, or the local business environment). In this vein, Rocha and Kacperczyk (2019) find that increased business activity decreases crime rates in the local area. They further find that increased entrepreneurial activity helps individuals find a job who would otherwise be at risk of engaging in criminal activity. Their integration in the labor force, in turn, decreases their propensity and willingness to engage in crime. Similarly, Hwang and Phillips (2020) find that entrepreneurship can serve as a viable career choice for formerly

In sum, from a theoretical perspective, it is unclear which of the above forces dominates. We therefore take this question to the data, and explore empirically whether investments in business ventures yield stronger improvements in the ventures' financial performance and social impact when directed toward ventures located in (as opposed to outside) disadvantaged urban areas.

3. Data

3.1 Banlieues

To identify banlieue locations, we use the 751 areas that are officially classified as deprived urban zones—"zone urbaine sensible" (ZUS), colloquially referred to as "banlieues"—by the French government.[15] These 751 urban zones (i.e., neighborhoods in a given city) span 490 different cities, and are considered a high-priority target for city policy, because of their exceptionally low standards of living. Nearly five million people live in these areas that are plagued by many social issues, such as high unemployment, a low percentage of high-school graduates, and high crime rates. For example—to give a sense of the inequalities between banlieues and non-banlieues across the 490 cities that have at least one banlieue within their boundaries—unemployment was 24.2% in banlieues, compared to 9.9% for the other city neighborhoods in 2012 (Observatoire des Inégalités 2014).

3.2 Loan data

The loan data are obtained from the proprietary database of a major public investment bank, which we refer to as "Public Bank" for confidentiality reasons. Public Bank's objective is to support entrepreneurship and venture growth in France, with the ultimate goal to become the "one-stop shop" for French entrepreneurs.

incarcerated individuals—as they face discrimination on the regular labor market—reducing their likelihood of returning to prison. Overall, the insights of these studies suggest that fostering business activity in disadvantaged urban areas may contribute to the social inclusion of at-risk individuals, decrease crime, and ultimately improve the business environment of firms operating in the area. In turn, such positive spillovers can enhance the benefits brought about by the financing of business ventures in disadvantaged areas. While examining these spillover effects goes beyond the scope of our study, they offer exciting avenues for future research.

[15] Decree n°96-1156 (December 26, 1996) established the initial list of 750 ZUS. The 751st ZUS (Nouveau Mons in Mons-en-Baroeul) was added by Decree n°2000-796 (August 24, 2000). Decree n°2001-707 (July 31, 2001) modified the perimeter of Grigny's ZUS. The complete list of geo-codes with the ZUS boundaries can be obtained from https://sig.ville.gouv.fr/atlas/ZUS/.

Public Bank is active throughout the French territory, including regions that tend to be overlooked by traditional banks (such as banlieues). In fact, one of their stated objective is not to differentiate between disadvantaged areas and the rest of France.[16]

Public Bank provides funding to a wide range of businesses, primarily Small and Medium-sized Enterprises (SMEs). In 2016, Public Bank had total assets of approximately €35 billion, including €17 billion in loans, €10 billion in guarantees, and €8 billion in equity financing. Public Bank relies on a decentralized network of 43 regional offices throughout France.

We obtained access to all transactions of Public Bank with its customers from 2000-2014. For each transaction, the database includes the loan amount, and an indication of whether the loan is repayable (i.e., regular loan) or not (i.e., subvention). The bank usually invests in a 1:1 partnership with a private bank—that is, when a firm receives €1,000 from Public Bank, it also receives an additional €1,000 from a given private bank. From this database, we extract two variables: i) *log(loan amount)*, which is the logarithm of the loan amount granted to the firm by Public Bank; and ii) *repayable loan*, which is an indicator variable equal to one if the loan is repayable, and zero otherwise. Note that the database does not include information on the interest charged on the loan. Nevertheless, this dimension is of lesser relevance to our analysis since, for a given loan amount, Public Bank applies the same pricing criteria regardless of the business venture's location. This reflects Public Bank's policy not to discriminate between banlieue and non-banlieue areas.

3.3 Firm-level data

To distinguish between banlieue vs. non-banlieue ventures, we use establishment-level data from the French National Institute of Statistics and Economic Studies (INSEE, "Institut national de la statistique et des études économiques"). The INSEE database includes all business establishments that had at least one day of economic activity during the year.[17] For each establishment, the database provides a 14-digit identifier—

[16] Public Bank describes itself as "a financial institution, with private culture, serving the collective interest." This is in line with the dual nature of impact investing that aims to achieve social impact while sustaining a financial return.
[17] INSEE defines an establishment as "a production unit that is geographically individual but legally dependent on a legal unit. An establishment produces goods or services: it can be a factory, a bakery, a clothing store, one of the hotels

the SIRET code ("Système d'identification du répertoire des établissements")—that identifies the firm to which the establishment belongs and the establishment's physical location. (Note that, compared to the U.S., the INSEE data are the French equivalent of the establishment-level data maintained by the U.S. Census Bureau.)

We restrict the dataset to single-establishment firms, i.e., the establishment itself is the firm (Aghion et al. (2018) report that 94% of French firms are single-establishment firms). This allows us to unambiguously identify firms as banlieue vs. non-banlieue firms, depending on whether the establishment is located in one of the 751 banlieue areas. In contrast—and by construction—multi-establishment firms are larger firms that span multiple locations, and hence cannot be uniquely assigned to a given banlieue vs. non-banlieue location. Another benefit of focusing on single-establishment firms is that they are the key customers of Public Bank, whose lending is targeted at smaller firms.

We merge the Public Bank database to the INSEE data by firm and year. The merged dataset provides the basis for our analysis, in which we compare banlieue firms (treatment group) to non-banlieue firms that are located in the same cities as the banlieue firms (control group). See the methodology section for details.

Accounting data

We supplement the INSEE data with the FICUS-FARE database that contains detailed accounting information (balance sheet and income statement) for all French firms.[18] From this database, we extract several variables. *Return on assets (ROA)* is the ratio of operating income to the book value of total assets. *Size* is the logarithm of the book value of total assets. *Leverage* is the ratio of total debt to the book value of total assets. *Cash* is the ratio of total cash to the book value of total assets. In addition to the accounting

of a hotel chain, the 'shop' of a repairer of computer hardware [...] The establishment or production unit is the most suitable level for a geographical approach to the economy" (INSEE 2019).

[18] The FICUS ("Fichier de comptabilité unifié dans SUSE (Système unifié de statistiques d'entreprises)") and FARE ("Fichier approche des résultats d'ESANE (Elaboration des statistiques annuelles d'entreprises)") data are compiled by INSEE and the French Ministry of Finance from administrative records that cover the full universe of French firms. These records originate from the mandatory reporting of firms' accounting data to the French tax authorities.

information, the database also provides the *age* of the firm, as well as industry identifiers based on the NAF (Nomenclature d'activité française) codes, which we convert into SIC (Standard Industrial Classification) codes.

Employee data

To examine employment outcomes, we augment the INSEE data with the DADS ("Déclaration annuelle de données sociales") database that collects annual data on the number of employees, the gender of employees, and the employees' qualifications.[19]

In this regard, it is important to note that the challenges faced by minorities—and what a minority constitutes (e.g., based on gender, race, nationality, religion, or sexual orientation)—differ from country to country, as they are shaped by the country's social, political, historical, and economic context. In France, which is the context of our study, two elements induced us to focus on gender-based minorities. First, French women have been facing systematic discrimination on the labor market, including discriminatory hiring practices, lower pay, and fewer opportunities for promotion, among others (e.g., European Commission 2017, *Washington Post* 2012, World Economic Forum 2017). Second, except for gender, French law does not permit the collection of employee information on race, religion, and other minority-related status. Hence, female vs. male employees are the only available metrics that speak to the employment of "minorities" more broadly.

The variables we construct from the DADS database are as follows. *Employees* is the total number employees at the firm level. We further decompose the number of employees by gender (*female* and *male employees*) and by job type. In terms of the latter, we distinguish between *manual workers* ("ouvriers" in French), *clerical workers* ("employés"), *intermediate workers* ("professions intermédiaires," such as technicians), and *white-collar workers* ("cadres").[20] Finally, we compute *wages per employee* as the ratio of payroll divided by the number of employees.

[19] The DADS data are at the establishment level. Since our sample only consists of single-establishment firms, the distinction between "establishment" and "firm" is immaterial in our context.
[20] For ease of exposition, we refer to the first three groups as "blue-collar workers" (broadly defined).

In the analysis, we restrict the sample to firms with more than 10 employees. Firms below that threshold are subject to different legal requirements—e.g., in terms of social security obligations, supplemental labor costs, and labor protection—and hence cannot be compared to the broader universe of INSEE firms with respect to their profitability and hiring decisions (e.g., Abowd and Kramarz 2003, Cahuc, Malherbet, and Trapp 2019).[21]

3.4 Summary statistics

Our baseline sample consists of firms from the merged INSEE-FICUS-FARE-DADS dataset that receive a loan from Public Bank during the sample period (i.e., 2000-2014), have non-missing values for the relevant accounting variables, and are located in cities that have at least one banlieue within their boundaries. This yields a total of 634 firms in the "treatment" group (i.e., banlieue firms that receive a loan from Public Bank) and 5,237 firms in the "control" group (i.e., non-banlieue firms that receive a loan from Public Bank, and are located in the same cities as the banlieue firms). The baseline sample hence consists of a total of 5,871 firms.

Table 1 provides summary statistics for the variables described above, for all firms (left-hand panel) and separately for the banlieue and non-banlieue firms (right-hand panels).[22] All variables are recorded in the pre-treatment year (t – 1)—i.e., in the year that precedes the loan issuance—except for the loan characteristics that, by construction, refer to the treatment year (t).

-------Insert Table 1 about here-------

As can be seen, the average firm in our sample has 43 employees, and total assets in amount of €6M. The average loan amount is €535K, and the large majority of the loans (about 78%) are repayable. Importantly, there are non-trivial differences between banlieue and non-banlieue firms. Among other

[21] In particular, firms below the threshold may prefer not to expand to avoid crossing the 10-employee cutoff that would subject them to higher social security charges, higher supplemental labor costs (in terms of commuting and training costs), and less flexibility in the dismissal of employees. Nevertheless, we obtain similar results if we include these firms.

[22] Appendix Table A1 provides additional summary statistics on the firm's industries. The main industries represented in our sample are manufacturing (23.4% of the firms), services (22.1%), and wholesale trade (19.1%).

differences, banlieue firms are on average younger, smaller, and receive smaller loan amounts compared to non-banlieue firms. While these differences are intuitive, they do raise the concern of whether the control group (i.e., non-banlieue firms) provides a valid counterfactual of how banlieue firms would have fared had they not been located in banlieues. To mitigate this issue, we use a second specification, in which we use a refined control group that is obtained through a propensity score matching. Specifically, for each treated firm, we match a control firm that operates in the same city, industry, and year, and is as similar as possible to the treated firm based on a large number of pre-treatment characteristics. We describe this matching approach in detail in the methodology section.

4. Methodology

To examine how the "banlieue treatment" affects firm outcomes, we use a difference-in-differences specification that compares banlieue firms (treatment group) with non-banlieue firms (control group) that receive funding from Public Bank in the year of the treatment. The requirement that both groups receive funding ensures that we capture a "banlieue-loan effect" as opposed to a mere "loan effect."

In the analysis, we use two different specifications, depending on how the control group is constructed. In the first specification, we use the full control group described above (i.e., all non-banlieue firms located in the same cities as the banlieue firms). In the second specification, we use a matched control group obtained from a propensity score matching. In the following, we describe both specifications.

4.1 Difference-in-differences specification with full sample

For each firm and each outcome variable y, we compute the change from $t - 1$ (the year before the firm receives funding from Public Bank) until $t + 3$ (three years after receiving funding), which we denote by $\Delta y_{t\text{-}1,t+3}$.[23] For ROA, Δy represents the simple difference; for employment, Δy represents the percentage

[23] In auxiliary analyses, we examine the dynamics of the treatment. To do so, we compute Δy for increasing time intervals (i.e., $\Delta y_{t\text{-}1,t+1}$, $\Delta y_{t\text{-}1,t+2}$, $\Delta y_{t\text{-}1,t+3}$, $\Delta y_{t\text{-}1,t+4}$, and $\Delta y_{t\text{-}1,t+5}$).

change.[24] We then estimate the following difference-in-differences specification:

$$\Delta y_{it\text{-}1,t+3} = \alpha_t + \alpha_c + \alpha_j + \beta \times \text{treatment}_i + \boldsymbol{\gamma}'\mathbf{X}_i + \varepsilon_i\,, \qquad (1)$$

where i indexes firms, t years, c cities, and j industries (partitioned according to the SIC divisions); α_t, α_c, and α_j are year, city, and industry fixed effects, respectively; *treatment* is a binary variable equal to one for banlieue firms and zero otherwise; **X** is the vector of control variables; and ε is the error term. **X** includes three types of controls: i) pre-treatment characteristics measured at $t - 1$ (*age*, *size*, *ROA*, *leverage*, and *cash*); ii) pre-treatment changes in these characteristics from $t - 2$ to $t - 1$ (that is, "pre-trends"); and iii) loan characteristics (*loan amount* and *repayable*).[25] Standard errors are clustered at the dimension of the treatment (that is, at the firm level).[26] The coefficient of interest is β, which captures the "difference-in-differences," that is, the differential response of banlieue versus non-banlieue firms after receiving funding from Public Bank.

Naturally, an important caveat is that firms are not randomly assigned to banlieues. Consequently, banlieue firms may differ along several dimensions that could affect how they benefit from the Public Bank's funding, but are not about "being in a banlieue" per se. The inclusion of various controls and fixed effects helps mitigate this caveat. For example, it could be that larger firms benefit less from the loan in terms of future profitability and employment growth. If these firms are less prevalent in banlieues, this could explain our results. Controlling for pre-treatment size (and the pre-trend in size, respectively) rules out this potential confound. Similarly, the other controls alleviate concerns that our results are confounded by pre-treatment differences in profitability (*ROA*), financing policies (*leverage*), internal resources (*cash*), life-cycle considerations (*age*), and differences in the amount (*loan amount*) and type of loan (*repayable*) received by banlieue firms. Moreover, and importantly, the inclusion of city, industry, and year fixed effects

[24] Formally, $\Delta\text{ROA}_{t\text{-}1,t+3} = \text{ROA}_{t+3} - \text{ROA}_{t\text{-}1}$; $\Delta\text{employees}_{t\text{-}1,t+3} = (\text{employees}_{t+3} - \text{employees}_{t\text{-}1}) / \text{employees}_{t\text{-}1}$. To mitigate the impact of outliers, we winsorize all dependent variables at the 10% level. The results are very similar if we use less conservative cutoffs at the 5% and 1% level, respectively.

[25] *Age* is not included as pre-trend since, by construction, the change is equal to one for all firms.

[26] See Bertrand, Duflo, and Mullainathan (2004) for best practices in clustering standard errors. Note that we obtain similar results if we instead cluster standard errors at the city or industry level.

further tightens the identification by ensuring that banlieue firms are compared to non-banlieue firms that are located in the same city, operate in the same industry, and receive the Public Bank loan in the same year.

4.2 Difference-in-differences specification with matched control group

An alternative way to construct a counterfactual—and further address the potential endogeneity of firms establishing themselves in banlieues vs. non-banlieues—is to use a matching methodology. That is, for each treated firm, we match a control firm that provides the closest counterfactual of how the treated firm would have fared had it not been in a banlieue.

The matching is done as follows. First, for each treated firm (i.e., banlieue firm that receives a loan from Public Bank in year *t*), we consider the set of non-banlieue firms that also receives a loan from Public Bank in year *t*, are located in the same city, and operate in the same industry. We further require that the control firm receives the same type of loan (that is, whether the loan is repayable or not). Among the pool of remaining candidates, we use a propensity score matching (PSM) that assigns the "closest" firm based on a set of ten covariates. These covariates include the pre-treatment characteristics (i.e., age, size, ROA, leverage, and cash, in year $t - 1$), the pre-trends in these variables (i.e., the change in size, ROA, leverage, and cash, from year $t - 2$ to $t - 1$), and the loan amount.

This matching procedure ensures that the matched control firms are as similar as possible to the treated firms *ex ante* (i.e., prior to receiving funding from Public Bank). Table 2 confirms the close similarity between the two groups of firms. For each of the characteristics listed above, as well as a set of non-matching characteristics, the table reports sample means for the 365 treated firms and the 365 matched control firms, respectively.[27] In the last two columns, the table reports the difference-in-means test. As is shown, treated and matched control firms are very similar along all characteristics. In particular, the null of equal means cannot be rejected (with *p*-values ranging from 0.151 to 0.930). Overall, these statistics

[27] The number of treated firms is smaller in Table 2 (compared to Table 1) due to the tight matching requirements.

confirm that the matched control firms are very similar to the treated firms, and hence likely provide a reliable counterfactual of how banlieue firms would fare had they not been located in banlieues.

-------Insert Table 2 about here-------

We then use the matched control group (in lieu of the full control group) to estimate a variant of the difference-in-differences specification in equation (1):

$$\Delta y_{it\text{-}1,t+3} = a + b \times \text{treatment}_i + e_i \,. \quad (2)$$

This specification is run in a sample of 365 treated and 365 matched control firms (i.e., 730 firms in total). Note that equation (2) does not include controls nor fixed effects. By construction, those are orthogonal to the treatment, and hence immaterial for the analysis.

5. Results

5.1 Financial performance of banlieue vs. non-banlieue ventures following the loan issuance

Baseline specifications

The analysis of financial performance is presented in Table 3. The dependent variable is the change in ROA from $t - 1$ until $t + 3$ (Δ ROA$_{t\text{-}1,t+3}$), where t is the year in which the Public Bank funding is granted. In column (1), we use the difference-in-differences (DID) specification with the full control group—that is, all non-banlieue firms that receive Public Bank funding and are located in the same cities as the banlieue firms (equation (1)); in column (2), we use the DID specification with the matched control group obtained from the propensity score matching (PSM-DID, equation (2)).

-------Insert Table 3 about here-------

As can be seen, the treatment effect is similar in both specifications. The point estimate is 0.023 in column (1) and 0.030 in column (2). Both estimates are highly significant in statistical terms (p-value = 0.000 in both columns). They are economically significant as well—they imply that each euro invested in the firm's assets generates an additional 2.3-3.0 cents of profits for banlieue firms compared to non-banlieue

firms after receiving funding from Public Bank. Overall, these findings indicate that impact investing yields higher improvements in financial performance for business ventures located in disadvantaged urban areas.

Dynamics of the treatment

In Table 4, we estimate variants of the regressions presented in Table 3. Instead of considering changes in ROA three years after the treatment ($t + 3$), we examine changes in ROA for increasing time intervals after the treatment ($t + 1$, $t + 2$, …, $t + 5$). Columns (1)-(5) provides estimates from the DID specification; columns (6)-(10) from the PSM-DID specification. As is shown, the effect starts to materialize in the first year after the treatment, it peaks after about three years, and remains somewhat stable thereafter.[28] This suggests that the treatment has a long-lasting impact on banlieue ventures' performance.

-------Insert Table 4 about here-------

5.2 Employment of banlieue vs. non-banlieue ventures following the loan issuance

Employment growth

In Table 5, we examine how the banlieue treatment affects employment. The dependent variable is the percentage change in the number of employees from $t - 1$ to $t + 3$ ($\%\Delta$ employees$_{t-1,t+3}$). We again report estimates from both the DID (column (1)) and PSM-DID (column (2)) specifications.[29]

-------Insert Table 5 about here-------

As can be seen, we find that the banlieue treatment is conducive to higher employment growth. The point estimates are 0.065 (DID) and 0.092 (PSM-DID), implying a 6.5% to 9.2% higher employment growth for banlieue ventures compared to non-banlieue ventures. Since the average pre-treatment employment is 43 employees (Table 1), this implies that banlieue ventures create about 2.8 to 4.0 more jobs than non-banlieue ventures after receiving a loan from Public Bank. These coefficients are statistically

[28] In column (10), the estimate is marginally insignificant (p-value = 0.116), but remains large in economic terms. The lower significance reflects the lower power of the test, as the sample shrinks considerably due to the data requirements five years post-treatment and the conservative matching criteria.

[29] The number of observations in Tables 5-7 is lower than in Table 3 due to the availability of the employment data in the DADS database.

significant at conventional levels (*p*-values of 0.053 and 0.018, respectively).

Differential employment growth by job type

In Table 6, we estimate variants of the regressions from Table 5, decomposing the number of employees into manual workers (columns (1) and (2)), clerical workers (columns (3) and (4)), intermediate workers (columns (5)-(6)), and white-collar workers (columns (7)-(8)).[30]

-------Insert Table 6 about here-------

As is shown, we find that the banlieue treatment leads to higher job creation across all four job types. However, the treatment effect is largest and only significant for white-collar jobs—the corresponding coefficients are 0.023 (*p*-value = 0.012, DID) and 0.031 (*p*-value = 0.003, PSM-DID), respectively, which accounts for 34% and 35%, respectively, of the composite effect reported in Table 5. That is, about one third of the differential job creation in banlieue ventures (compared to non-banlieue ventures) is in the form of white-collar jobs.

Differential employment growth by gender

In Table 7, we estimate further variants of the regressions from Table 5, decomposing the number of employees into female (columns (1) and (2)) and male employees (columns (3) and (4)).

-------Insert Table 7 about here-------

We find that the banlieue treatment leads to increases in the number of *both* female and male employees. For female employees, the point estimates are 0.017 (*p*-value = 0.130, DID) and 0.024 (*p*-value = 0.060, PSM-DID), respectively; for male employees, they are 0.042 (*p*-value = 0.147, DID) and 0.065 (*p*-value = 0.048, PSM-DID), respectively. This indicates that the higher job creation in banlieue ventures (compared to non-banlieue ventures) benefits both male and female employees.

[30] To obtain a decomposition of $\%\Delta$ employees$_{t-1,t+3}$ by job type, we compute changes in the number of employees of a given type relative to the total number of employees. For example, the change in the number of white-collar workers is computed as $\%\Delta \text{White-collar workers}_{t-1,t+3} = (\text{White-collar workers}_{t+3} - \text{White-collar workers}_{t-1}) / \text{total employees}_{t-1}$. This decomposition allows us to quantity how much of the composite estimate in Table 5 is due to each job type.

In columns (5) and (6) we further examine the gender balance by using as dependent variable the change in the ratio of female-to-male employees. As is shown, there is no deterioration in the gender ratio. In fact, this ratio improves slightly, although the increase is not significant in statistical terms (*p*-values of 0.819 and 0.921, respectively).

Overall, the results provided in Tables 5-7 indicate that investments in disadvantaged urban areas achieve a higher social impact. For one euro invested in business ventures located in banlieues (compared to one euro invested in otherwise similar ventures located in non-banlieue areas of the same cities), we observe the creation of more jobs, more quality jobs, and more jobs for both female and male employees.

5.3 Robustness and alternative interpretations

In this section, we present several additional tests that confirm the robustness of our findings and help rule out alternative interpretations.

Riskiness of banlieue vs. non-banlieue ventures

Intuitively, one may expect banlieue firms to face higher risk, as they operate in less stable areas (e.g., due to the area's higher poverty and crime). As such, an additional Euro invested in banlieue ventures may be financing riskier projects. To the extent that riskier projects yield higher (average) returns—as the "high risk, high return" mantra would predict—this could explain the larger increase in operating performance we observe for banlieue ventures.

In Appendix Table A2, we examine this alternative interpretation. Specifically, we re-estimate our baseline specifications from Tables 3 and 5, but controlling for risk in the DID specification, and using risk as additional matching variable in the PSM-DID specification, respectively. To measure risk, we compute the standard deviation of ROA in the four years that precede the loan issuance (ROA volatility$_{t-1,t-4}$).[31] As can be seen, our results are robust to accounting for risk.

[31] We obtain similar results if sales volatility is used in lieu of ROA volatility.

Survivorship

A related concern is that the risk of failure might be higher in banlieues. If weaker ventures fail shortly after receiving the Public Bank's loan, while the stronger ones survive, this could mechanically explain our finding of higher financial performance (and ability to grow employment) among banlieue firms following the loan issuance.

To address this possibility, we examine firm failures in Appendix Table A3. Specifically, the INSEE database includes a variable that records whether the firm ceased to exist in a given year ("cessation d'activités"). To examine whether banlieue firms (compared to non-banlieue firms) were more likely to fail following the loan issuance, we re-estimate our baseline specifications from Table 3 and Table 5, expanding the sample to also include failed firms, and using as dependent variable an indicator variable equal to one if the firm failed within the three years that followed the loan issue (firm failure$_{t-1,t+3}$). In columns (1) and (2), we use a linear probability model (i.e., OLS). As is shown, we find that the probability of failure is essentially the same for banlieue and non-banlieue ventures following the loan issuance. The point estimates of 0.003 and -0.000 correspond to a differential failure probability of at most 0.3%, which is very small in economic terms, and not different from zero in statistical terms. In columns (3) and (4), we obtain similar results when using a logit regression (in lieu of OLS).[32] Overall, we find no evidence suggesting that the survival of banlieue vs. non-banlieue firms might confound our results.

Tax incentives

In order to foster entrepreneurship in banlieues, several tax incentive programs (primarily in the form of tax exemptions) have been implemented by the French government over the years. If the banlieue firms in our sample enjoy a favorable tax treatment, this could explain their higher operating performance (and higher employment growth) following the loan issue.

[32] The marginal effects pertaining to the coefficient of the treatment dummy are 0.000 and -0.000 (with standard errors of 0.032 and 0.005) in columns (3) and (4), respectively. That is, they are again very small in economic terms, and not different from zero in statistical terms.

The banlieue tax incentive programs are described in Briant et al. (2015). As they note, these programs are targeted toward new firms (that is, firms that are less than 5 years of age) and, in certain cases, can be extended up to 9 years beyond the 5-year threshold. To examine the potential confound of tax incentives, in Appendix Table A4, we re-estimate our baseline specifications from Table 3 and 5, restricting the sample to firms that are at least 15 years of age—that is, firms that are unambiguously ineligible for these programs. As is shown, we find that our results are robust to this exclusion. This indicates that tax considerations are unlikely to affect our results.

6. Discussion and conclusion

Is impact investing more effective in fostering business ventures' success and the social inclusion of marginalized communities when directed toward ventures located in vs. outside disadvantaged urban areas? This question is of foremost importance, not only for impact investors and the business ventures they finance, but also for the development of sustainable cities and the achievement of the United Nations' SDGs. In short, understanding *where* impact investing is most effective is important from both an economic and societal perspective.

We explore this question in the context of loans made to business ventures located in French "banlieues" and "non-banlieues." Specifically, we examine whether and how impact investing can help business ventures overcome the challenges of operating in a disadvantaged neighborhood and generate not only improvements in financial performance but also social impact by fostering the social inclusion of disadvantaged communities through the creation of local employment opportunities, quality jobs, and jobs for minorities.

We find that loans issued to business ventures located in banlieues yield higher improvements in financial performance compared to loans issued to otherwise similar business ventures that are located in non-banlieue areas (within the same cities). This finding indicates that impact investors are able to contract with ventures of relatively higher quality—and hence of unrealized potential—in banlieues vs. non-banlieues. Moreover, we find that loans issued to business ventures located in banlieues (compared to non-

banlieues) lead to the creation of more jobs, and especially more "quality" jobs. Finally, this higher job creation appears to benefit both female and male employees. Overall, our findings suggest that investments are more effective in increasing business ventures' financial performance and their social impact when directed toward ventures located in (as opposed to outside) disadvantaged urban areas.

This study makes several contributions to the literature. First, it contributes to the vibrant literature that studies entrepreneurial ecosystems and the role of geographic (co-)location for business venture success (e.g., Alcacer and Delgado 2018, Chatterji, Glaeser, and Kerr 2014, De Figueiredo, Meyer-Doyle, and Rawley 2013, Delgado, Porter, and Stern 2010, 2014, Ellison, Glaeser, and Kerr 2010, Glaeser, Kerr, and Kerr 2009, Sorenson and Audia 2000, Stuart and Sorenson 2003). This literature focuses on business hotspots that offer locational advantages, and highlights the importance of local conditions and positive spillovers from geographic proximity for business venture success. Our study complements this body of research by offering a fundamentally distinct perspective: we examine how business activity can be fostered in *disadvantaged* urban areas, and how the same investment in comparable firms leads to different economic and social impacts in disadvantaged vs. advantaged urban areas.

Second, our findings indicate that the easing of financing constraints is particularly effective for ventures located in disadvantaged urban areas—areas that are overwhelmingly minority neighborhoods (e.g., in terms of race, religion, etc.). By examining the role of geographic location, this study speaks to the extant literature that explores the role of ownership and finds that minority-owned ventures (compared to non-minority-owned ventures) tend to face higher financing constraints and discriminatory financing practices (e.g., Bates, Bradford, and Seamans 2018, Bates and Robb 2013, Blanchflower, Levine, and Zimmerman 2003, Chatterji and Seamans 2012). Our study provides evidence that impact investing can serve as an important lever to rebalance this unfavorable situation, yielding improvements in both ventures' financial performance and their social impact. Accordingly, impact investing can serve as a complement to public policies—such as "enterprise zone" programs that provide corporate tax relief (Boarnet and Bogard 1996, Briant et al. 2015, Gobillon et al. 2012, Neumark and Simpson 2015)—in stimulating business growth and employment opportunities in disadvantaged urban areas.

Third, by focusing on loans that are provided to business ventures in and outside banlieues, and examining their effectiveness in improving the ventures' financial performance and social impact, our study contributes to the literature on impact investing (e.g., Barber, Morse, and Yasuda 2020, Chowdhry, Davies, and Waters 2019, Flammer 2020a, 2020b, Geczy, Jeffers, Musto, and Tucker 2020, Lee, Adbi, and Singh 2019), which studies a relatively novel set of financial instruments that aim to generate "social and environmental impact alongside financial return" (Global Impact Investing Network 2018).

Finally, by studying whether impact investing induces the creation of local employment opportunities, quality jobs, and jobs for minorities in disadvantaged urban areas—all of which foster the social inclusion of disadvantaged communities—this paper contributes to distinct strands of literature on the social inclusion of marginalized communities (e.g., Hwang and Phillips 2020, Mair, Marti, and Ventresca 2012, Pongeluppe 2020, Rocha and Kacperczyk 2019, Samila and Sorenson 2017), the development of sustainable cities (e.g., Bates and Robb 2014, Porter 1995, 2016), and the tackling of societal grand challenges (e.g., Berrone et al. 2016, George et al. 2016, Vakili and McGahan 2016).

This study calls for future research. In particular, it is especially the disadvantaged communities that are hit the hardest by global crises such as the current pandemic, social injustice, and the climate crisis. Understanding how impact investors—and the business world more generally—can effectively facilitate the social inclusion of these communities and help them become more resilient is an important and fertile ground for future research. Another promising avenue for future research is to examine whether impact investing in disadvantaged urban areas holds promise to foster the social inclusion of race-, nationality-, and religion-based minorities. (In this study, we focused on gender-based minorities due to the specificity of the French context and data constraints.) Since disadvantaged urban areas are predominantly minority neighborhoods in terms of, e.g., race, nationality, and religion (e.g., Bates and Robb 2014, Porter 1995, 2016), it is important to understand whether impact investing enhances the social inclusion of these minorities. Relatedly, given that the challenges faced by minorities—and what a minority constitutes—is country-specific, future research may want to explore whether and how impact investing affects minorities in other countries. Doing so would help us obtain a more comprehensive understanding of the implications

of impact investing in (versus outside) disadvantaged urban areas for the social inclusion of minorities in the workforce and the development of sustainable cities.

Lastly, our findings have important implications for practice. In general, the question of how to spark business activity is important as it is key for the macroeconomic development of countries (e.g., Lucas 1988, Romer 1986). Yet, it is a particularly important and challenging question when it comes to disadvantaged urban areas—areas that are characterized by high poverty, unemployment, illiteracy, and crime, among others. The findings of this study imply that impact investing is an effective tool—and, in fact, it is more effective in than outside disadvantaged urban areas—to improve not only business venture success but also the social inclusion of marginalized communities through the creation of local employment opportunities, quality jobs, and jobs for minorities.

Importantly, these findings suggest that impact investing can help ventures located in disadvantaged areas overcome an important market friction—financing constraints. The reasons for this market friction can be manifold, including place-based stigmatization and blatant discrimination of these ventures by conventional banks and investors; unawareness, unfamiliarity, and difficulty of assessing potential business opportunities; unconscious biases; and other reasons (see, e.g., Bates, Bradford, and Jackson 2018; Bates, Bradford, and Seamans 2018, Blanchflower, Levine, and Zimmerman 2003, Chatterji and Seamans 2012, Younkin and Kuppuswamy 2018). Our findings suggest that this market friction hinders ventures' ability to grow and create value as they cannot undertake necessary investments in key strategic resources such as the hiring of high-skill personnel. Impact investing directed toward ventures located in disadvantaged urban areas helps overcome this market friction and realize these ventures' greater unrealized potential (compared to ventures outside these areas).

Finally, our findings suggest that impact investing is a potentially important instrument—in addition to potential public policies aimed at stimulating business activity in disadvantaged urban areas (e.g., corporate tax relief programs)—for the development of sustainable cities and the achievement of several of the United Nations' SDGs, namely no poverty (SDG #1), decent work and economic growth

(SDG #8), reduced inequalities (SDG #10), and the development of sustainable cities and communities (SDG #11).

References

Abowd JM, Kramarz F (2003) The costs of hiring and separations. *Labour Econom.* **10**(5): 499–530.

ADIVE (2010) Etude nationale sur les entrepreneurs dans les quartiers sensibles (Agence pour la diversité entrepreneuriale: Paris, France).

Aghion P, Bergeaud A, Boppart T, Bunel S (2018) Firm dynamics and growth measurement in France. *J. European Econom. Assoc.* **16**(4): 933–956.

Alcacer J, Delgado M (2018) Spatial organization of firms and location choices through the value chain. *Management Sci.* **2**(11): 3213–3234.

Armendáriz B, Morduch J (2010) The economics of microfinance (MIT Press: Cambridge, MA).

Barber BM, Morse A, Yasuda A (2020) Impact investing. *J. Financial Econom.*, forthcoming.

Bates T (1989) Small business viability in the urban ghetto. *J. Regional Sci.* **29**(4): 625–643.

Bates T (2011) Minority entrepreneurship. *Foundations and Trends in Entrepreneurship* **7**(3–4): 151–311.

Bates T, Robb A (2013) Greater access to capital is needed to unleash the local economic development potential of minority-owned businesses. *Econom. Dev. Quart*. **27**(3): 250–259.

Bates T, Robb AM (2014) Small-business viability in America's urban minority communities. *Urban Stud.* **51**(13): 2844–2862.

Bates T, Robb AM (2016) Impacts of owner race and geographic context on access to small-business financing. *Econom. Dev. Quart*. **30**(2): 159–170.

Bates T, Bradford WD, Jackson WE (2018) Are minority-owned businesses underserved by financial markets? Evidence from the private-equity industry. *Small Bus. Econom*. **50**(3): 445–461.

Bates T, Bradford WD, Seamans R (2018) Minority entrepreneurship in twenty-first century America. *Small Bus. Econom*. **50**(3): 415–427.

Berrone P, Gelabert L, Massa-Saluzzo F, Rousseau HE (2016) Understanding community dynamics in the study of grand challenges: How nonprofits, institutional actors, and the community fabric interact to influence income inequality. *Acad. Management J.* **59**(6):1940–1964.

Bertrand M, Duflo E, Mullainathan S (2004) How much should we trust differences-in-differences estimates? *Quart. J. Econom.* **119**(1): 249–275.

Bertrand M, Mullainathan S (2004) Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Econom. Rev.* **94**(4): 991–1013.

Blanchflower DG, Levine PB, Zimmerman DJ (2003) Discrimination in the small business credit market. *Rev. Econom. Statistics* **85**(4): 930–943.

Boarnet MG, Bogart WT (1996) Enterprise zones and employment: Evidence from New Jersey. *J Urban Econom*. **40**(2): 198–215.

Briant A, Lafourcade M, Schmutz B (2015) Can tax breaks beat geography? Lessons from the French enterprise zone experience. *American Econom. J.: Econom. Policy* **7**(2): 88–124.

Bruhn M, Love I (2014) Impact of improved access to finance: Evidence from Mexico. *J. Finance* **69**(3): 1347–1376.

Campbell BA, Coff R, Kryscynski D (2012) Rethinking sustained competitive advantage from human capital. *Acad. Management Rev.* **37**(3): 376–395.

Cahuc P, Malherbet F, Trapp J (2019) L'effet des coûts de licenciement sur la durée des emplois des travailleurs peu qualifiés en France. *Revue Française d'Economie* **34**(1): 15–43.

Canales R, Greenberg J (2016) A matter of (relational) style: Loan officer consistency and exchange continuity in microfinance. *Management Sci* **62**(4): 1202–1224.

Ceres (2018) Disclose what matters: bridging the gap between investor needs and company disclosures on sustainability (Ceres: Boston, MA).

Chatterji A, Glaeser E, Kerr W (2014) Clusters of entrepreneurship and innovation. *Innovation Policy and the Economy* **14**(1): 129–166.

Chatterji A, Seamans RC (2012) Entrepreneurial finance, credit cards, and race. *J Financial Econom*. **106**(1): 182–195.

Chowdhry B, Davies SW, Waters B (2019) Investing for impact. *Rev. Financial Stud*. **32**(3): 864–904.

Cobb JA, Wry T, Zhao EY (2016) Funding financial inclusion: institutional logics and the contextual contingency of funding for microfinance organizations. *Acad. Management J*. **59**(6): 2103–2131.

Dahl MS, Sorenson O (2012) Home sweet home: entrepreneurs' location choices and the performance of their ventures. *Management Sci*. **58**(6): 1059–1071.

De Figueiredo RJP, Meyer-Doyle P, Rawley E (2013) Inherited agglomeration effects in hedge fund spawns. *Strategic Management J*. **34**(7): 843–862.

Delgado M, Porter ME, Stern S (2010) Clusters and entrepreneurship. *J. Econom. Geography* **10**(4): 495–518.

Delgado M, Porter ME, Stern S (2014) Clusters, convergence, and economic performance. *Research Policy* **43**(10): 1785–1799.

Ellison G, Glaeser EL, Kerr WR (2010) What causes industry agglomeration? Evidence from coagglomeration patterns. *American Econom. Rev*. **100**(3): 1195–1213.

European Commission (2017) The gender pay gap in France (European Commission: Brussels, Belgium).

Flammer C (2020a) Corporate green bonds. *J. Financial Econom.*, forthcoming.

Flammer C (2020b) Green bonds: Effectiveness and implications for public policy. Kotchen M, Stock JH, Wolfram C, eds. *NBER Environmental and Energy Policy and the Economy* (University of Chicago Press: Chicago, IL), 95–128.

Geczy CC, Jeffers J, Musto DK, Tucker AM (2020) Contracts with benefits: The implementation of impact investing. *J. Financial Econom.*, forthcoming.

George G, Howard-Grenville J, Joshi A, Tihanyi L (2016) Understanding and tackling societal grand challenges through management research. *Acad. Management J.* **59**(6): 1880–1895.

Glaeser EL, Kallal HD, Scheinkman JA, Shleifer A (1992) Growth in cities. *J. Political Economy* **100**(6): 1126–1152.

Glaeser EL, Kerr SP, Kerr WR (2009) Entrepreneurship and urban growth: An empirical assessment with historical mines. *Rev. Econom. Statistics* **97**(2): 498–520.

Global Impact Investing Network (2018) Impact investing (Global Impact Investing Network: New York, NY).

Gobillon L, Magnac T, Selod H (2012) Do unemployed workers benefit from enterprise zones? The French experience. *J. Public Econom.* **96**(9-10): 881–892.

Green A (2020) Spatial inequalities in access to good work. Commissioned report, Lancaster University.

Hiatt SR, Sine WD (2014) Clear and present danger: planning and new venture survival amid political and civil violence. *Strategic Management J.* **35**(5): 773–785.

Hwang KJ, Phillips DJ (2020) Entrepreneurship as a response to labor market discrimination for formerly incarcerated people. Unpublished working paper, Columbia University.

ICIC (2010) The inner city 100: A ten-year perspective (Initiative for a Competitive City: Boston, MA).

INSEE (2019) Establishment (Institut national de la statistique et des études économiques: Paris, France).

Kerr WR, Nanda R (2011) Financing constraints and entrepreneurship. Audretsch D, Falck O, Heblich S, eds. *Handbook of Research on Innovation and Entrepreneurship* (Edward Elgar Publishing: Cheltenham, UK), 88–103.

Lee M, Adbi A, Singh J (2019) Categorical cognition and outcome efficiency in impact investing decisions. *J. Strategic Management* **41**(1): 86–107.

Lucas RE Jr (1988) On the mechanics of economic development. *J. Monetary Econom*. **22**(7): 3–42.

Mair J, Marti I, Ventresca MJ (2012) Building inclusive markets in rural Bangladesh: How intermediaries work institutional voids. *Acad. Management J.* **55**(4): 819–850.

Marshall A (1890) Principles of economics (MacMillan and Co: London, UK).

Neumark D, Simpson H (2015) Place-based policies. *Handbook of Regional and Urban Econom.* **5**: 1197–1287.

Observatoire des Inégalités (2014) Le chômage dans les zones urbaines sensibles (March 11).

Pager D, Shepherd H (2008) The sociology of discrimination: Racial discrimination in employment, housing, credit, and consumer markets. *Annu. Rev. Sociol.* **34**(1): 181–209.

Pongeluppe L (2020) The inclusion illusion: Firms' capabilities and their commitment to serve the poor. Unpublished working paper, University of Toronto.

Porter ME (1995) The competitive advantage of the inner city. *Harvard Business Rev*. **73**(3): 55–71.

Porter ME (2016) Inner-city economic development: Learnings from 20 years of research and practice. *Econom. Dev. Quart*. **30**(2): 105–116.

Rocha V, Kacperczyk A. 2019. The impact of entrepreneurship on community integration: Evidence from a quasi-natural experiment. Unpublished working paper, Copenhagen Business School.

Romer PM. Increasing returns and long-run growth. *J. Political Economy* **94**(5): 1002–1037.

Samila S, Sorenson O (2011) Venture capital, entrepreneurship, and economic growth. *Rev. Econom. Statistics* **93**(1): 338–349.

Samila S, Sorenson O (2017) Community and capital in entrepreneurship and economic growth. *American Sociol. Rev.* **82**(4): 770–795.

Sorenson O, Audia PG (2000) The social structure of entrepreneurial activity: Geographic concentration of footwear production in the United States, 1940–1989. *American J Sociol*. **106**(2): 424–462.

Stuart T, Sorenson O (2003) The geography of opportunity: Spatial heterogeneity in founding rates and the performance of biotechnology firms. *Research Policy* **32**(2): 229–253.

Terra Nova (2016) Entreprendre dans les quartiers: Les conditions de la réussite (Terra Nova: Paris, France).

Vakili K, McGahan AM (2016) Health care's grand challenge: stimulating basic science on diseases that primarily afflict the poor. *Acad. Management J.* **59**(6):1917–1939.

Washington Post (2012) Why French women have so little equality, a story in charts (October 25).

World Bank (2020) Poverty and inequality (World Bank: Washington, DC).

World Economic Forum (2020) Global gender gap report 2020 (World Economic Forum: Davos, Switzerland).

Younkin P, Kuppuswamy V (2018) The colorblind crowd? Founder race and performance in crowdfunding. *Management Sci.* **64**(7): 3269–3287.

Zhao EY, Lounsbury M (2016) An institutional logics approach to social entrepreneurship: Market logic, religious diversity, and resource acquisition by microfinance organizations. *J. Bus. Venturing* **31**(6): 643–662.

Table 1. Summary statistics

	All firms			Banlieue firms (treatment group)			Non-banlieue firms (control group)		
	N	Mean	Std. dev.	N	Mean	Std. dev.	N	Mean	Std. dev.
a. Performance									
ROA	5,871	0.065	0.131	634	0.047	0.086	5,237	0.067	0.135
b. Employment									
# Employees	5,504	42.89	57.01	566	32.25	29.14	4,938	44.11	59.25
# Female employees	5,504	11.84	29.35	566	7.36	12.18	4,938	12.36	30.67
# Male employees	5,504	31.05	41.19	566	24.89	25.21	4,938	31.75	42.59
# White-collar workers	5,504	5.93	10.77	566	4.87	9.09	4,938	6.05	10.94
# Intermediary workers	5,504	8.86	16.73	566	5.72	5.99	4,938	9.22	17.51
# Clerical workers	5,504	7.05	25.96	566	4.19	9.67	4,938	7.38	27.19
# Manual workers	5,504	21.05	36.42	566	17.47	27.63	4,938	21.46	37.28
Wages per employee	5,504	37,766	17,088	566	34,937	13,232	4,938	38,089	17,448
c. Firm characteristics									
Age (in years)	5,871	18.16	12.43	634	16.00	10.60	5,237	18.42	12.60
Total assets (in €1,000s)	5,871	6,054	19,542	634	3,001	4,489	5,237	6,424	20,602
Log(total assets)	5,871	7.799	1.180	634	7.496	0.948	5,237	7.835	1.200
Leverage	5,871	0.569	0.209	634	0.606	0.208	5,237	0.564	0.209
Cash	5,871	0.069	0.091	634	0.076	0.095	5,237	0.068	0.090
d. Loan characteristics									
Loan amount (in €1,000s)	5,871	535	1,248	634	423	640	5,237	549	1,302
Log(loan amount)	5,871	5.520	1.191	634	5.510	1.027	5,237	5.522	1.210
Repayable (1/0)	5,871	0.780	0.407	634	0.774	0.418	5,237	0.792	0.406

Notes. All variables are recorded in the year that precedes the provision of the Public Bank loan ($t - 1$), expect for the loan characteristics that refer to the year of the loan (t).

Table 2. Propensity score matching—covariate balance

	Means		Difference in means	
	Treated firms (N = 365)	Matched control firms (N = 365)	*t*-test	*p*-value
a. Pre-treatment characteristics				
Age_{t-1}	17.304	17.984	-0.79	0.431
$Size_{t-1}$	7.514	7.507	0.09	0.930
$Leverage_{t-1}$	0.589	0.581	0.56	0.578
$Cash_{t-1}$	0.072	0.074	-0.40	0.689
ROA_{t-1}	0.053	0.056	-0.40	0.689
b. Pre-trends				
$\Delta\ Size_{t-2,t-1}$	0.006	0.006	-0.64	0.521
$\Delta\ Leverage_{t-2,t-1}$	0.045	0.063	-0.87	0.385
$\Delta\ Cash_{t-2,t-1}$	0.027	0.037	-0.80	0.427
$\Delta\ ROA_{t-2,t-1}$	-0.009	-0.008	-0.09	0.928
c. Loan characteristic				
$Log(loan\ amount)_t$	5.478	5.451	-0.79	0.431
d. Non-matching characteristics				
$Employees_{t-1}$	36.78	42.45	-1.29	0.197
Wages per $employees_{t-1}$	34,013	35,570	-1.44	0.151
$\%\Delta\ Employees_{t-2,t-1}$	0.133	0.088	0.83	0.407
$\%\Delta$ Wages per $employees_{t-2,t-1}$	0.086	0.125	-1.29	0.198

Notes. In panel (d), the sample consists of N = 360 treated firms and N = 352 control firms, due to the more restrictive coverage of the employee data in the DADS database.

Table 3. Effect of the banlieue treatment on financial performance

	Δ ROA$_{t-1, t+3}$	
	Full sample	Matched control group
	(1)	(2)
Treatment$_t$	0.023***	0.030***
	(0.006)	(0.008)
Controls		
a. Pre-treatment characteristics		
Age$_{t-1}$	0.000	
	(0.000)	
Size$_{t-1}$	0.006***	
	(0.002)	
Leverage$_{t-1}$	-0.012	
	(0.013)	
Cash$_{t-1}$	-0.036	
	(0.026)	
ROA$_{t-1}$	-0.317***	
	(0.039)	
b. Pre-trends		
Δ Size$_{t-2, t-1}$	0.069	
	(0.044)	
Δ Leverage$_{t-2, t-1}$	0.003	
	(0.004)	
Δ Cash$_{t-2, t-1}$	0.000*	
	(0.000)	
Δ ROA$_{t-2, t-1}$	-0.000	
	(0.000)	
c. Loan characteristics		
Log(Loan amount)$_t$	-0.004***	
	(0.001)	
Repayable loan$_t$	0.004	
	(0.000)	
Industry fixed effects	Yes	–
City fixed effects	Yes	–
Year fixed effects	Yes	–
Adjusted R-squared	0.242	0.017
Observations	5,871	730

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.

Table 4. Dynamics

	Full sample					Matched control group				
	Δ ROA$_{t-1,t+1}$	Δ ROA$_{t-1,t+2}$	Δ ROA$_{t-1,t+3}$	Δ ROA$_{t-1,t+4}$	Δ ROA$_{t-1,t+5}$	Δ ROA$_{t-1,t+1}$	Δ ROA$_{t-1,t+2}$	Δ ROA$_{t-1,t+3}$	Δ ROA$_{t-1,t+4}$	Δ ROA$_{t-1,t+5}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treatment$_t$	0.007*	0.015***	0.023***	0.019***	0.019**	0.006	0.013**	0.030***	0.020**	0.015
	(0.004)	(0.005)	(0.006)	(0.007)	(0.008)	(0.005)	(0.006)	(0.008)	(0.010)	(0.010)
Controls										
Pre-treatment characteristics	Yes	Yes	Yes	Yes	Yes	–	–	–	–	–
Pre-trends	Yes	Yes	Yes	Yes	Yes	–	–	–	–	–
Loan characteristics	Yes	Yes	Yes	Yes	Yes	–	–	–	–	–
Fixed effects										
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	–	–	–	–	–
City fixed effects	Yes	Yes	Yes	Yes	Yes	–	–	–	–	–
Year fixed effects	Yes	Yes	Yes	Yes	Yes	–	–	–	–	–
Adjusted R-squared	0.159	0.208	0.242	0.264	0.318	0.0002	0.003	0.017	0.0066	0.003
Observations	9,900	7,682	5,871	4,719	3,952	1,652	1,126	730	530	480

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.

Table 5. Effect of the banlieue treatment on firm employment

	$\%\Delta$ Employees$_{t-1, t+3}$	
	Full sample	Matched control group
	(1)	(2)
Treatment$_t$	0.065*	0.092**
	(0.033)	(0.039)
Controls		
a. Pre-treatment characteristics		
Age$_{t-1}$	-0.002***	
	(0.000)	
Size$_{t-1}$	0.006	
	(0.009)	
Leverage$_{t-1}$	-0.099**	
	(0.045)	
Cash$_{t-1}$	0.265***	
	(0.089)	
ROA$_{t-1}$	0.249***	
	(0.076)	
b. Pre-trends		
Δ Size$_{t-2, t-1}$	-1.877***	
	(0.517)	
Δ Leverage$_{t-2, t-1}$	0.026	
	(0.021)	
Δ Cash$_{t-2, t-1}$	-0.000***	
	(0.000)	
Δ ROA$_{t-2, t-1}$	0.000	
	(0.000)	
c. Loan characteristics		
Log(Loan amount)$_t$	0.004	
	(0.007)	
Repayable loan$_t$	-0.013	
	(0.018)	
Industry fixed effects	Yes	–
City fixed effects	Yes	–
Year fixed effects	Yes	–
Adjusted R-squared	0.143	0.007
Observations	5,504	648

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.

Table 6. Changes in employment by job type

	Blue-collar employees						White-collar employees	
	%Δ Manual workers$_{t-1,t+3}$		%Δ Clerical workers$_{t-1,t+3}$		%Δ Intermediate workers$_{t-1,t+3}$		%Δ White-collar workers$_{t-1,t+3}$	
	Full sample	Matched control group	Full sample	Matched control group	Full sample	Matched control group	Full sample	Matched control group
	(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)
Treatment$_t$	0.021	0.023	0.004	0.003	0.000	0.018	0.023**	0.031***
	(0.016)	(0.018)	(0.008)	(0.010)	(0.012)	(0.013)	(0.009)	(0.010)
Controls								
Pre-treatment characteristics	Yes	–	Yes	–	Yes	–	Yes	–
Pre-trends	Yes	–	Yes	–	Yes	–	Yes	–
Loan characteristics	Yes	–	Yes	–	Yes	–	Yes	–
Fixed effects								
Industry fixed effects	Yes	–	Yes	–	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–	Yes	–	Yes	–
Adjusted R-squared	0.131	0.001	0.181	0.000	0.090	0.002	0.126	0.012
Observations	5,504	648	5,504	648	5,504	648	5,504	648

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.

Table 7. Changes in employment by gender

	%Δ Female employees$_{t-1,t+3}$		%Δ Male employees$_{t-1,t+3}$		Δ Female-to-male ratio$_{t-1,t+3}$	
	Full sample	Matched control group	Full sample	Matched control group	Full sample	Matched control group
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment$_t$	0.017	0.024*	0.042	0.065**	0.003	0.002
	(0.011)	(0.013)	(0.029)	(0.033)	(0.014)	(0.018)
Controls						
Pre-treatment characteristics	Yes	–	Yes	–	Yes	–
Pre-trends	Yes	–	Yes	–	Yes	–
Loan characteristics	Yes	–	Yes	–	Yes	–
Fixed effects						
Industry fixed effects	Yes	–	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–	Yes	–
Adjusted R-squared	0.155	0.004	0.139	0.005	0.107	0.000
Observations	5,504	648	5,504	648	4,969	564

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.

Appendix Table A1. Banlieue and non-banlieue firms by industry

	All firms (N = 5,871)	Banlieue firms (N = 634)	Non-banlieue firms (N = 5,237)
Manufacturing	23.39%	11.51%	24.82%
Services	22.10%	30.91%	21.03%
Wholesale trade	19.08%	25.87%	18.25%
Retail trade	14.44%	8.04%	15.22%
Construction	11.65%	15.93%	11.13%
Finance, insurance, and real estate	4.70%	4.26%	4.75%
Utilities	2.74%	1.42%	2.90%
Agriculture, forestry, and fishing	0.05%	0.00%	0.06%
Nonclassifiable	1.86%	2.05%	1.83%

Notes. Industries are partitioned according to SIC divisions.

Appendix Table A2. Robustness—accounting for risk

	Δ ROA$_{t-1, t+3}$		%Δ Employees$_{t-1, t+3}$	
	Full sample	Matched control group	Full sample	Matched control group
	(1)	(2)	(3)	(4)
Treatment$_t$	0.024***	0.025***	0.070*	0.114**
	(0.006)	(0.007)	(0.041)	(0.048)
Controls				
a. Pre-treatment characteristics				
Age$_{t-1}$	0.000		-0.003***	
	(0.000)		(0.000)	
Size$_{t-1}$	0.006***		0.006	
	(0.002)		(0.010)	
Leverage$_{t-1}$	-0.016		-0.086	
	(0.013)		(0.057)	
Cash$_{t-1}$	-0.037		0.281**	
	(0.028)		(0.112)	
ROA$_{t-1}$	-0.342***		0.332***	
	(0.047)		(0.094)	
b. Pre-trends				
Δ Size$_{t-2, t-1}$	0.051		-1.706***	
	(0.107)		(0.651)	
Δ Leverage$_{t-2, t-1}$	0.002		0.027	
	(0.009)		(0.034)	
Δ Cash$_{t-2, t-1}$	0.000**		-0.000***	
	(0.000)		(0.000)	
Δ ROA$_{t-2, t-1}$	-0.000		0.000	
	(0.000)		(0.000)	
c. Loan characteristics				
Log(Loan amount)$_t$	-0.004***		0.006	
	(0.001)		(0.008)	
Repayable loan$_t$	0.002		-0.025	
	(0.003)		(0.021)	
d. Risk				
ROA volatility$_{t-4, t-1}$	-0.073*		0.141	
	(0.039)		(0.245)	
Industry fixed effects	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted R-squared	0.242	0.013	0.151	0.007
Observations	5,627	766	5,326	618

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.

Appendix Table A3. Firm failure

	Firm failure$_{t-1, t+3}$			
	Linear probability model (OLS)		Logit specification	
	Full sample	Matched control group	Full sample	Matched control group
	(1)	(2)	(3)	(4)
Treatment$_t$	0.003	-0.000	0.654	-0.000
	(0.003)	(0.005)	(0.533)	(0.709)
Controls				
a. Pre-treatment characteristics				
Age$_{t-1}$	-0.000		-0.002	
	(0.000)		(0.016)	
Size$_{t-1}$	-0.003**		-0.660***	
	(0.001)		(0.197)	
Leverage$_{t-1}$	0.005		0.289	
	(0.005)		(0.699)	
Cash$_{t-1}$	-0.015		-2.420	
	(0.009)		(1.796)	
ROA$_{t-1}$	-0.002		-0.510	
	(0.007)		(1.198)	
b. Pre-trends				
Δ Size$_{t-2, t-1}$	0.007		-2.538	
	(0.027)		(6.398)	
Δ Leverage$_{t-2, t-1}$	0.000		0.326	
	(0.001)		(0.623)	
Δ Cash$_{t-2, t-1}$	-0.000		-0.007	
	(0.000)		(0.018)	
Δ ROA$_{t-2, t-1}$	0.000		-0.004	
	(0.000)		(0.021)	
c. Loan characteristics				
Log(Loan amount)$_t$	0.000		-0.102	
	(0.001)		(0.144)	
Repayable loan$_t$	-0.007**		-0.917**	
	(0.003)		(0.364)	
Industry fixed effects	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted/pseudo R-squared	0.047	0.000	0.403	0.000
Observations	8,083	1,240	8,083	1,240

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.

Appendix Table A4. Robustness—excluding firms of less than 15 years of age

	Δ ROA$_{t-1, t+3}$		%Δ Employees$_{t-1, t+3}$	
	Full sample	Matched control group	Full sample	Matched control group
	(1)	(2)	(3)	(4)
Treatment$_t$	0.023**	0.030**	0.085*	0.154**
	(0.008)	(0.010)	(0.052)	(0.058)
Controls				
a. Pre-treatment characteristics				
Size$_{t-1}$	0.005**		0.031*	
	(0.002)		(0.017)	
Leverage$_{t-1}$	-0.015		-0.009	
	(0.013)		(0.075)	
Cash$_{t-1}$	0.004		0.183	
	(0.028)		(0.141)	
ROA$_{t-1}$	-0.487***		0.510***	
	(0.030)		(0.167)	
b. Pre-trends				
Δ Size$_{t-2, t-1}$	-1.281		10.729	
	(0.989)		(6.760)	
Δ Leverage$_{t-2, t-1}$	0.013		-0.050	
	(0.007)		(0.054)	
Δ Cash$_{t-2, t-1}$	0.000**		-0.000**	
	(0.000)		(0.000)	
Δ ROA$_{t-2, t-1}$	-0.000		0.001*	
	(0.000)		(0.000)	
c. Loan characteristics				
Log(Loan amount)$_t$	-0.002		0.014	
	(0.002)		(0.011)	
Repayable loan$_t$	0.000		-0.032	
	(0.004)		(0.026)	
Industry fixed effects	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted R-squared	0.291	0.019	0.214	0.016
Observations	2,942	416	2,799	366

Notes. Standard errors (reported in parentheses) are clustered at the firm level. *, **, and *** denotes significance at the 10%, 5%, and 1% level, respectively.