

NBER WORKING PAPER SERIES

IMPACT INVESTING IN DISADVANTAGED URBAN AREAS

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Working Paper 30551
<http://www.nber.org/papers/w30551>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
October 2022

We are grateful to Bruno Cassiman, Alfonso Gambardella, Anthony Gibbs, Aleksandra Kacperczyk, Nalin Kulatilaka, Siobhan O'Mahony, Nina Mazar, Carey Morewedge, Michelle Rogan, Yuan Shi, Stephan Siegel, Giovanni Valentini, Eric Zhao (discussant), Rosemarie Ziedonis, as well as seminar participants at Bocconi University, Boston University, Central European University, Columbia University, Cornell University, École Polytechnique, Emlyon Business School, Imperial College, Purdue University, Universidad de Montevideo, Universidad EAFIT, University of Birmingham, University of Colorado Boulder, University of Massachusetts Lowell, University of Miami, University of Pittsburgh, University of Washington, as well as the Academy of Management, the Bocconi Assembly for Innovation and Cooperation (BAIC), the Global Research Alliance for Sustainable Finance (GRASFI) Conference, the Social Entrepreneurship Conference, and the Strategic Management Society Annual Conference for helpful comments and suggestions. We thank the Society and Organizations Institute at HEC Paris for their help in accessing the data of Public Bank. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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NBER Working Paper No. 30551
October 2022
JEL No. G3,R0,R3

ABSTRACT

We examine whether impact investing is more effective in fostering business venture success and social impact when investments are directed toward ventures located in disadvantaged urban areas compared to similar investments directed toward ventures located outside these areas. We explore this question in the context of loans made to business ventures in French "banlieues" vs. "non-banlieues." We find that loans issued to 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 gender-equitable jobs. These results suggest that impact investors are able to contract with ventures of greater unrealized potential in banlieues, as banlieue ventures tend to be discriminated on the traditional loan market. This is corroborated in a controlled lab experiment in which participants--working professionals who are asked to act as loan officers--are randomly assigned to identical business ventures that only differ in their geographic location. We find that participants are indeed less likely to grant loans to banlieue ventures compared to non-banlieue ventures, despite the ventures being identical.

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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).

Firm location—a key strategic decision of any venture—is important not only for economic but also for societal reasons. A long-standing literature in strategy studies the former and highlights the importance of geographic (co-)location for business venture success. This literature focuses primarily on business hotspots that offer *locational advantages* (e.g., Alcacer & Delgado, 2018; Chatterji, Glaeser, & Kerr, 2014; De Figueiredo, Meyer-Doyle, & Rawley, 2013; Sorenson & Audia, 2000; Stuart & Sorenson, 2003). These locational advantages come in many flavors—including better access to capital (e.g., Zhang, 2007), customers (e.g., Fabrizio & Thomas, 2012; McCann & Vroom, 2010), suppliers (e.g., McCann & Folta, 2008), and knowledge (e.g., Feldman, 2000; Gilbert, McDougall, & Audretsch, 2008), among others—and have been shown to contribute to firms' success and survival (e.g., Delgado, Porter, & Stern, 2010, 2014).¹

¹ Similarly, work in urban economics highlights the importance of agglomeration externalities for regional growth (e.g., Ellison, Glaeser, & Kerr, 2010; Greenstone, Hornbeck, & Moretti, 2010).

While the location of business ventures in advantageous areas—such as city centers, high-tech clusters, and areas with abundant resources—is likely to contribute to the ventures’ economic gains, these ventures may create less social value than ventures located in disadvantaged areas, where there is a greater need for jobs and the positive externalities of business activity. However, for this social value creation to materialize, funding needs to be channeled toward ventures in these areas in order to allow them to grow and achieve their potential. This in turn could prove challenging, as market frictions—such as spatial discrimination—may prevent ventures in disadvantaged areas to access traditional sources of capital (e.g., Bates, 2010; Bates & Robb, 2014). That access to capital is of foremost importance for ventures’ strategic decisions is well documented in the literature (e.g., Chatterji & Seamans, 2012; Kerr & Nanda, 2011; Samila & Sorenson, 2011). Accordingly, ensuring access to capital for ventures in disadvantaged areas is likely to play a disproportionate role in allowing them to grow and create social value.

More broadly, while the extant literature highlights the importance of location for business venture success and firm strategy, little is known about firms that are located in disadvantaged areas. These firms face *locational disadvantages* and hence a very different business environment to begin with. This is underscored in a nascent literature that examines how firms adapt their strategies when targeting customers in disadvantaged urban areas. In particular, Durand and Huysentruyt (2022) explore the communication strategies that firms can deploy to reach disadvantaged customers in French banlieues through corporate social initiatives. Relatedly, Pongeluppe (2022) studies the distinct strategies that E-commerce firms use in and outside Brazilian favelas.

Our study contributes to this nascent literature by exploring how better access to capital can help business ventures in disadvantaged urban areas grow and unleash their potential, thereby fostering the social inclusion of disadvantaged communities and the development of sustainable cities.² Specifically, we turn our attention to investors who aim to finance business ventures that are both economically viable and have

² 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 and religion), and minority neighborhoods are largely economically distressed (see, e.g., Bates & Robb, 2014; Porter, 1995, 2016).

a positive social impact. In practice, these investors are known as “impact investors”.³ From an impact investor’s perspective, the relevant question is *which* investments have most impact in terms of both business venture success and social outcomes. To shed light on this question, we study whether investments in business ventures located in disadvantaged urban areas make a positive difference—in terms of both financial performance and social impact—using as benchmark investments directed toward observationally similar business ventures located in the same city but outside these areas. Arguably, by alleviating a potentially severe market friction (namely, access to capital), impact investors can contract with ventures of greater unrealized potential in disadvantaged urban areas. As a result, and despite the adverse conditions of the local 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 comparable business venture located in the same city but outside such area.

Furthermore, expanding access to finance might yield greater social impact when targeted toward business ventures in disadvantaged urban areas. First, given their greater unrealized potential, 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, such 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.

³ The two primary instruments of impact investing are private equity and private debt, with private debt being the most commonly used (Global Impact Investing Network, 2018). Our study focuses on private debt. See Sections 2.2 and 3.2 for details.

To explore these questions empirically, we study a large sample of loans made to business ventures located in French “banlieues” vs. “non-banlieues” within the same city.⁴ Specifically, we use data from a financial institution (referred to as “Public Bank” for confidentiality reasons) that provides loans to business ventures located in both banlieue and non-banlieue areas, with the explicit mandate not to discriminate between ventures based on their location. We merge the Public Bank data with micro data on business ventures from the French National Institute of Statistics and Economic Studies (in French, the Institut National de la Statistique et des Études Économiques, henceforth INSEE). We then study the evolution of business venture outcomes following the loan issuance, comparing banlieue vs. non-banlieue ventures that receive similar loans from Public Bank. For the comparison to be informative, 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 and operate in the same industry.

We find that the issuance of loans to banlieue ventures yields a significantly higher increase in financial performance. Compared to similar non-banlieue ventures from the same city, 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.

While these results are consistent with our proposed argument—that is, impact investing helps improve banlieue ventures’ access to capital and thereby unleash their unrealized potential—the analysis does not provide direct evidence on this rationale. To obtain such evidence, we supplement our analysis

⁴ 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 challenges. See Section 3.1 for details.

with a controlled lab experiment, in which we randomly assign participants (working professionals who are asked to act as loan officers) to business ventures that only differ based on whether they are located in a banlieue or not. We find that participants are less likely to grant loans to banlieue ventures compared to non-banlieue ventures, despite the ventures being identical. Moreover, in a variant of the experiment, we find that banlieue ventures of regular potential face similar odds of receiving a loan compared to non-banlieue ventures of lower potential. These findings point toward discriminatory practices against banlieue ventures in the traditional loan market and hence a potentially important market failure. As banlieue ventures tend to be left out of the traditional loan market, impact investors can contract with ventures of greater unrealized potential in banlieues. This, in turn, is consistent with our finding that impact investing yields higher financial returns and greater social impact when directed toward business ventures located in banlieues vs. comparable business ventures located in non-banlieue neighborhoods of the same city.

Taken together, the findings of this study suggest that impact investors—and investors more generally—can benefit from investing in ventures located in disadvantaged urban areas as their investments help these ventures overcome spatial discrimination in their access to capital and hereby unleash their unrealized potential. More broadly, our findings highlight the importance of channeling capital to firms located in disadvantaged urban areas to allow them to grow and create social value. In this regard, they add to our understanding of the role of geographic location for firm performance, the presence of spatial discrimination in the access to capital, and the role of impact investing in addressing this market failure and contributing to the revitalization of disadvantaged urban areas.

2. THE FOSTERING OF BUSINESS ACTIVITY IN DISADVANTAGED URBAN AREAS

2.1 The limited access to finance in disadvantaged urban areas—survey evidence

Previous work indicates that business ventures in disadvantaged urban areas face major hurdles in accessing capital (e.g., Bates, 2010; Bates & Robb, 2013, 2014, 2016). To substantiate this point in our specific context, we provide survey evidence on how banlieue and non-banlieue ventures differ in the way they finance their investments.

Specifically, Public Bank granted us access to their survey of French small and medium-sized enterprises (SMEs) that they conduct on an annual basis since 2000. Every year, the survey is sent to a random sample of French SMEs with less than 250 employees and revenues between €750,000 and €50M. The survey asks a set of questions related to the type of investment made by these SMEs and how they financed these investments (e.g., through bank loans, self-funding, etc.). To distinguish between banlieue and non-banlieue ventures, we match each respondent to the INSEE micro data that contain geo codes for each business venture.⁵ The matched sample consists of 17,572 business ventures from 2000-2015, out of which 1,022 are banlieue ventures and 16,550 are non-banlieue ventures, respectively.

Table A1 reports the average reliance on the different sources of financing across all ventures, and separately for banlieue and non-banlieue ventures. Across all ventures, the main sources of financing are self-financing (34.9%) and medium-term loans from traditional banks (33.1%).

When we distinguish between banlieue and non-banlieue ventures, we observe important differences. In particular, banlieue ventures are less likely to finance their investments through medium-term bank loans (28.7%) compared to non-banlieue ventures (33.4%). The difference is significant at all conventional levels (p -value = 0.000). Similarly, banlieue ventures are less likely to rely on long-term bank loans (4.4% for banlieue ventures compared to 5.8% for non-banlieue ventures, p -value = 0.035). Conversely, the reliance on self-financing is more pronounced among banlieue ventures (40.3% for banlieue ventures compared to 34.5% for non-banlieue ventures, p -value = 0.000). We do not observe significant differences among the other means of financing. Overall, this descriptive analysis indicates that banlieue ventures are less able to access traditional loans; instead, their owners need to bring in more of their own money to begin with. This evidence is consistent with banlieue ventures being at a disadvantage in accessing traditional sources of capital.

These insights are further confirmed in two independent surveys of banlieue ventures' owners

⁵ We describe the INSEE data in Section 3.3. Note that we restrict the sample to single-establishment firms—that is, firms that only operate at one location—as those can be unambiguously qualified as banlieue vs. non-banlieue ventures.

conducted by the professional association ADIVE (2010) and the think tank Terra Nova (2016). In both surveys, the majority of respondents identified access to financing as the number one obstacle faced by banlieue ventures (ADIVE, 2010, p. 25; Terra Nova, 2016, p. 44).⁶

2.2 Impact investing

As discussed above, business ventures in disadvantaged urban areas face major challenges in accessing capital. Accordingly, a potentially important lever to revitalize disadvantaged urban areas is the easing of financing constraints.⁷ 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—can play an important role in addressing this market failure and contributing to the revitalization of these neighborhoods.

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 3,800 signatories representing more than \$120 trillion in assets under management.⁸ Overall, responsible investing corresponds to more than 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 Impact Investing Network, 2018).⁹ While all impact investors intend to generate positive social and environmental impact alongside financial returns, investors differ in the weighting of these objectives and

⁶ The ADIVE (Agence pour la Diversité Entrepreneuriale) survey was conducted in 2010 and sampled 404 banlieue ventures; the Terra Nova survey was conducted between 2010 and 2016, and sampled 400 banlieue ventures.

⁷ Other levers include government interventions (such as corporate tax relief programs) that aim to stimulate business growth in disadvantaged urban areas (e.g., Briant, Lafourcade, & Schmutz, 2015; Gobillon, Magnac, & Selod, 2012; Neumark & Simpson, 2015).

⁸ See <https://www.unpri.org/pri/about-the-pri>.

⁹ In this study, we focus on private debt (see Section 3.2).

their willingness to potentially forgo (higher) financial returns (see, e.g., Barber, Morse, & Yasuda, 2021; Geczy et al., 2021).^{10,11}

That access to capital matters for business ventures' location choice and their growth is by now well established in the literature (e.g., Chatterji & Seamans, 2012; Kerr & Nanda, 2011; Samila & Sorenson, 2011). From the perspective of impact investors, an important question is *which* investments have more impact in terms of both business venture success and social impact. In the following, we explore whether impact investing yields greater improvements in financial performance and social impact when directed toward business ventures located in vs. outside disadvantaged urban areas.

2.3 Impact investing in vs. outside disadvantaged urban areas

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, business ventures in disadvantaged urban areas are likely to suffer from a locational disadvantage.¹² 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.

This locational disadvantage is reflected in the difficulty to access capital. As mentioned above, prior work documents that businesses located in disadvantaged areas, as well as minority-owned businesses

¹⁰ In the case of private equity, Barber, Morse, and Yasuda (2021) estimate that investors are willing to accept lower ex ante returns by 2.5 to 3.7 percentage points for impact funds.

¹¹ 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 the 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).

¹² This is in sharp contrast to business ventures located in business hotspots that benefit from various locational advantages, such as better access to capital, high-skilled employees, suppliers, and customers, among others. These benefits have been extensively studied in the literature (e.g., Alcacer & Delgado, 2018; Chatterji, Glaeser, & Kerr, 2014; De Figueiredo, Meyer-Doyle, & Rawley, 2013; Delgado, Porter, & Stern, 2010, 2014; Sorenson & Audia, 2000; Stuart & Sorenson, 2003).

(that are more prevalent in disadvantaged areas), face more severe financing constraints (e.g., Bates, 2010; Bates, Bradford, & Jackson, 2018; Bates, Bradford, & Seamans, 2018; Bates & Robb, 2013, 2014, 2016; Blanchflower, Levine, & Zimmerman, 2003; Chatterji & Seamans, 2012; Fairlie, Robb & Robinson, 2022; Younkin & 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. This was corroborated by our survey results (Section 2.1), which revealed that business ventures in French banlieues are at a disadvantage in accessing capital.¹³

The higher financing constraints faced by business ventures in disadvantaged urban areas have two direct implications. First, they limit the ventures' ability to grow and invest in key strategic resources—such as the hiring of qualified employees (e.g., Campbell, Coff, & Kryscynski, 2012)—that would contribute to value creation and help them achieve a sustainable competitive advantage. Second, they limit the ventures' ability to invest in promising projects. Rather, they may have no choice but to invest in smaller, less ambitious projects that are easier to finance in the first place. As a result, for a given financing instrument and contract terms, investors might be able to contract with business ventures of greater unrealized potential in disadvantaged urban areas compared to outside these areas.

The unrealized potential of banlieue ventures, along with the roadblocks they face in accessing capital, are often highlighted by practitioners. As an illustration, let us consider the example of Impact Partners, a French impact investing fund that invests in French banlieues.¹⁴ In an interview we conducted

¹³ Note that racial and spatial discrimination are likely to be intertwined. Indeed, race-based minorities are more prevalent in banlieues (Onzus, 2011), and race-based discrimination has been shown to affect French entrepreneurs' access to business loans. Specifically, a 2017 report conducted by ISM Corum (Inter Service Migrants Centre d'Observation et de Recherche sur l'Urbain et ses Mutations) on behalf of the French city of Villeurbanne examined the real-world access to business loans for entrepreneurs with a minority background across 12 different traditional banks and 63 of their branches. The report found that entrepreneurs with a perceived minority background were discriminated by loan officers in terms of i) the rate of direct responses, ii) the times available for setting up an appointment, and iii) the access to the financial information related to the loan. In particular, entrepreneurs with a perceived minority background did not receive information about how much they could borrow, the timeline for the loan, or the expected interest rate—information that were made immediately available to other entrepreneurs. Finally, those entrepreneurs with a perceived minority background had to meet more conditions than other entrepreneurs to have access to the same loan, such as being already a client of the bank and having all their business accounts within the same branch (ISM Corum, 2017).

¹⁴ In 2021, Impact Partners became the number one European investment platform dedicated to impact investing with €340M under management and 180+ investments made so far (<https://www.impact-partners.com>).

with the managing team of Impact Partners, the CEO emphasized that a major obstacle for investing in banlieues was the lack of a proper registry that facilitates the identification of promising business ventures.¹⁵ Instead, Impact Partners had to develop their own capabilities to locate, identify, and assess potential candidates for funding. In this regard, the CEO stated that “surprisingly enough, we always find new sources of deal flow, we consistently identify new companies” adding that “it’s like an oil field: the more one drills, the more one finds good investment opportunities.” This statement was echoed in another interview we conducted with the founder and CEO of a venture located in a disadvantaged urban area in Paris, who stated that “ultimately, what matters is to show that it is doable and we need to establish confidence [...] we have to show to potential partners and investors that this kind of investments [in banlieues] is far less risky than what they think *ex ante*.”

More broadly, these anecdotal accounts are confirmed in the aforementioned study by Terra Nova (2016). In describing the banlieue ventures, the study notes that many have good fundamentals that “reflect good financial health and do not justify the difficulty in accessing financing” (p. 45), and further comments on the need to connect them to investors to “grow in scale, create jobs, and unleash their entrepreneurial potential” (p. 87, authors’ translation).

Accordingly, despite the adverse conditions of the local business environment, investments may yield greater performance improvements for business ventures located in disadvantaged urban areas, compared to the performance improvements that the same investment would achieve if directed toward similar business ventures outside 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 & 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

¹⁵ The transcripts of the interviews featured in this section are available from the authors upon request.

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.¹⁶

In what follows, we take these questions 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 (Sections 3-5). Moreover, we supplement this analysis with a controlled lab experiment that sheds light on the market frictions that prevent banlieue ventures from obtaining financing on the traditional loan market (Section 6).

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.¹⁷ 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—as an illustration 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).

¹⁶ 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 (2021) 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 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.

¹⁷ 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/>.

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. Public Bank is active throughout the French territory, including regions that tend to be overlooked by traditional banks (such as banlieues). 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) $\log(\text{loan amount})$, 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 INSEE.¹⁸ For each establishment, the database provides a 14-digit identifier—the SIRET code (“Système

¹⁸ 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 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).

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.

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 to non-banlieue firms that are located in the same cities as the banlieue firms.

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.¹⁹ 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 information, the database also provides the *age* of the firm, as well as industry identifiers based on 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

¹⁹ The FICUS (“Fichier de comptabilité unifié dans SUSE (Système unifié de statistiques d’entreprises)”) and FARE (“Fichier approche des résultats d’ESANE (Élaboration 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.

employees, along with their gender and qualifications.²⁰ 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. 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, the number of female vs. male employees is the only available metric that speaks to the employment of “minorities” more broadly.

The variables we construct from the DADS database are as follows. *Employees* is the total number of 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”).²¹ Finally, we compute *wages per employee* as the ratio of payroll divided by the number of employees.

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 & Kramarz, 2003; Cahuc, Malherbet, & Trapp, 2019).²²

²⁰ 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.

²¹ For ease of exposition, we refer to the first three groups as “blue-collar workers” (broadly defined).

²² 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.

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 “banlieue group” (i.e., banlieue firms that receive a loan from Public Bank) and 5,237 firms in the “non-banlieue 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 therefore 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).²³ All variables are recorded in the year that precedes the loan issuance ($t - 1$), except for the loan characteristics that, by construction, refer to the year of the loan issuance (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 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 a comparison of banlieue vs. non-banlieue ventures can be informative. To mitigate this issue, in one set of analyses, we use a propensity score matching. Specifically, for each banlieue firm, we match a non-banlieue firm that operates in the same city, industry, and year, and is similar to the banlieue firm based on a large set of ex ante characteristics. We describe this matching approach in Section 4.2.

²³ Table A2 in the appendix provides additional summary statistics on the firm’s industries. The main industries of the banlieue firms are services (30.9% of the banlieue firms), wholesale trade (25.9%), and construction (15.9%). The main industries of the non-banlieue firms are manufacturing (24.8% of the non-banlieue firms), services (21.0%), and wholesale trade (18.3%).

4. METHODOLOGY

Our methodology compares banlieue vs. non-banlieue firms that receive funding from Public Bank in the same year. The requirement that both groups receive funding from Public Bank ensures that our estimates capture the difference between banlieue loans vs. non-banlieue loans.²⁴

In the analysis, we use two different specifications, depending on how the comparison group—that is, the non-banlieue group—is constructed. In the first specification, we use the full non-banlieue 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 non-banlieue group obtained from a propensity score matching. In the following, we describe both specifications.

4.1 Specification using the full sample

For each firm and each outcome variable y , we compute the within-firm difference from $t - 1$ (the year before the firm receives the loan from Public Bank) until $t + 3$ (three years after receiving funding), which we denote by $\Delta y_{t-1,t+3}$.²⁵ For ROA, Δy represents the level change; for employment, Δy represents the percentage change.²⁶ We then estimate the following specification:

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

where i indexes firms, t years, c cities, and j industries (partitioned according to SIC divisions); α_t , α_c , and α_j are year, city, and industry fixed effects, respectively; *banlieue* is a binary variable equal to one for banlieue firms and zero otherwise; \mathbf{X} is the vector of control variables; and ε is the error term. \mathbf{X} includes three types of controls: i) ex ante characteristics measured at $t - 1$ (*age*, *size*, *ROA*, *leverage*, and *cash*); ii) ex ante changes in these characteristics from $t - 2$ to $t - 1$ (that is, pre-trends); and iii) loan characteristics

²⁴ In Section 5.3, we consider an alternative setup in which we compare banlieue firms that receive a loan from Public Bank vs. banlieue firms that do not. This specification allows us to quantify the overall benefits from granting vs. not granting a loan to banlieue firms.

²⁵ In auxiliary analyses, we provide a finer-grained characterization of the dynamics from $t - 3$ until $t + 5$ on a year-by-year basis.

²⁶ Formally, $\Delta \text{ROA}_{t-1,t+3} = \text{ROA}_{t+3} - \text{ROA}_{t-1}$; $\Delta \text{employees}_{t-1,t+3} = (\text{employees}_{t+3} - \text{employees}_{t-1}) / \text{employees}_{t-1}$. 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.

(*loan amount* and *repayable*).²⁷ Standard errors are clustered at the firm level (that is, at the loan assignment level).²⁸ The coefficient of interest is β , which captures the differential response of banlieue vs. non-banlieue firms after receiving funding from Public Bank.

Note that, while equation (1) is a standard difference-in-differences specification, we caution that the events (that is, the granting of loans by Public Bank) are not quasi-random. While Public Bank has an explicit mandate to *not* discriminate between ventures based on their location, the loan-granting decision could still reflect unobservables that differ in banlieue vs. non-banlieue neighborhoods. To mitigate this challenge, we proceed in two ways.

First, the inclusion of controls and fixed effects in regression (1) helps tighten the inference. In particular, the controls account for ex ante differences between banlieue and non-banlieue firms in terms of their profitability (*ROA*), financing policies (*leverage*), internal resources (*cash*), scale (*size*), and maturity (*age*), as well as differences in the amount (*loan amount*) and type of loan (*repayable*) they receive. Moreover, the inclusion of city, industry, and year fixed effects ensures 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.

Second, to further improve the comparability of banlieue vs. non-banlieue ventures, we use a propensity score matching. We describe this approach in the next subsection.

4.2 Propensity score matching

For the analysis to be informative, the non-banlieue firms need to be sufficiently comparable to the banlieue firms. As discussed above, in regression (1), we account for differences between the two groups through the inclusion of controls and fixed effects. As an alternative, we use a matching methodology—that is, for each banlieue firm, we match a non-banlieue firm that is comparable ex ante based on observables.

²⁷ *Age* is not included as pre-trend since, by construction, the change is equal to one for all firms.

²⁸ This follows Bertrand, Duflo, and Mullainathan's (2004) recommendation to cluster standard errors at the treatment assignment level in difference-in-differences designs. Note that we obtain similar results if we instead cluster standard errors at the city or industry level.

The matching is done as follows. First, for each banlieue firm that receives a loan from Public Bank in year t , we consider the set of non-banlieue firms that also receive 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 non-banlieue firms receive 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” non-banlieue firm based on a set of ten covariates. These covariates include the ex-ante variables described above (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 non-banlieue firms are observationally similar to the banlieue firms ex ante (i.e., prior to receiving funding from Public Bank). Table A3 confirms the close similarity between the two groups. For each of the characteristics listed above, as well as a set of non-matching characteristics, the table reports sample means for the 365 banlieue firms and the 365 matched non-banlieue firms, respectively.²⁹ In the last two columns, the table reports the difference-in-means test. As is shown, the two groups 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 confirm that the matched non-banlieue firms are very similar to the banlieue firms ex ante.

In addition, in Figure A1, we plot the distribution of the propensity scores before and after the matching. As can be seen, while we observe important pre-matching differences (left-hand panel), the matching is effective in producing two groups of firms with almost identical distributions (right-hand panel).

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

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

This specification is run in a sample of 365 banlieue and 365 matched non-banlieue firms (i.e., 730 firms

²⁹ The number of banlieue firms is smaller in Table A3 (compared to Table 1) due to the tight matching requirements.

in total). Note that equation (2) does not include controls nor fixed effects. By construction, those are orthogonal to the banlieue indicator, 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 2. The dependent variable is the change in ROA from $t - 1$ until $t + 3$ ($\Delta ROA_{t-1,t+3}$), where t is the year in which the Public Bank funding is granted. In column (1), we use the specification with the full non-banlieue 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), referred to as “full sample” in the table); in column (2), we use the specification with the matched non-banlieue group obtained from the propensity score matching (equation (2), “matched sample”).

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

As can be seen, the coefficient of the banlieue indicator 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 yields 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

In Figure 1, we provide a characterization of the dynamics. Specifically, we plot the average ROA in the banlieue group (black solid line) and the matched non-banlieue group (gray dashed line) on a year-by-year basis from $t - 3$ until $t + 5$. As can be seen, we find no evidence for pre-trends. Following the loan issuance, banlieue firms tend to perform better than the matched non-banlieue firms, consistent with the evidence

from Table 2. We further observe that the performance differential remains somewhat stable as of $t + 3$ and is not reversed in the longer run.³⁰

-----Insert Figure 1 about here-----

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

Employment growth

In Table 3, we turn to employment growth. The dependent variable is the percentage change in the number of employees from $t - 1$ to $t + 3$ ($\% \Delta \text{employees}_{t-1,t+3}$). We again report estimates from both the full-sample (column (1)) and PSM (column (2)) specifications.³¹

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

As can be seen, we find evidence for higher employment growth at banlieue vs. non-banlieue ventures following the loan issuance. The point estimates are 0.065 (full sample) and 0.092 (PSM), implying a 6.5% to 9.2% higher employment growth for banlieue ventures compared to non-banlieue ventures. These coefficients are statistically significant at conventional levels, with p -values of 0.053 and 0.018, respectively.

In Figure 2, we characterize the dynamics of employment growth in the banlieue group (black solid line) and the matched non-banlieue group (gray dashed line). As is shown, we find no evidence for pre-trends. Moreover, the gap between banlieue and non-banlieue ventures widens after the loan issuance and is not reversed in the longer run.

-----Insert Figure 2 about here-----

Differential employment growth by job type

In Table 4, we estimate variants of the regressions from Table 3, decomposing the number of employees

³⁰ Note that the downward trend in ROA that is observed among both banlieues and non-banlieues firms is consistent with the nationwide decrease in profitability observed in France during our sample period. Specifically, Aghion et al. (2011, p. 40) report that the profitability of the French corporate sector—which they compute as the ratio of net income to equity—dropped from about 8% in 2001 down to about 3-4% in 2008.

³¹ The number of observations in Tables 3-5 is lower than in Table 2 due to the availability of the employment data in the DADS database.

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)).³²

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

As is shown, the higher job creation at banlieue (compared to non-banlieue) ventures is found across all four job types. However, the point estimates are largest and only significant for white-collar jobs—the corresponding coefficients are 0.023 (p -value = 0.012, full sample) and 0.031 (p -value = 0.003, PSM), respectively, which accounts for 34% and 35%, respectively, of the composite estimates reported in Table 3. 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.

Our finding of a larger increase in white-collar workers suggests that banlieue ventures were understaffed in skilled workers prior to receiving the loan. Arguably, as the loan enables banlieue ventures to unleash their unrealized potential, doing so requires the hiring of high-skilled employees that banlieue ventures could not afford prior to receiving the loan.

In Table A4, we reproduce the results from Table 4 but using a longer-term horizon (five years after the loan issuance). We find that the increase in white-collar workers is not reversed in the longer run. That is, the increase in white-collar workers is not a short-term attempt to professionalize the venture. Rather, this evidence suggests that the loan not only helps banlieue ventures professionalize their workforce, but also helps them maintain this more qualified workforce over time.³³

Differential employment growth by gender

In Table 5, we estimate further variants of the regressions from Table 3, decomposing the number of

³² To obtain a decomposition of $\% \Delta \text{employees}_{t-1,t+3}$ 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 quantify how much of the composite estimate in Table 3 is due to each job type.

³³ A limitation of the analysis presented in this section is that, since we do not have individual-level data, we cannot characterize the previous job status of the newly hired white-collar workers. That being said, based on nationwide statistics, it is plausible that banlieue ventures recruit this more qualified workforce directly from the banlieues, as unemployment among individuals with at least 2 years of education is about 3 times higher in banlieues vs. non-banlieues. (Within the same city, 16.3% of people with at least 2 years of college education living in a banlieue are unemployed, compared to 5.7% outside banlieues—see Observatoire des Inégalités, 2021.)

employees into female (columns (1) and (2)) and male employees (columns (3) and (4)).

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

As can be seen, the additional job creation at banlieue ventures is found among *both* female and male employees. For female employees, the point estimates are 0.017 (p -value = 0.130, full sample) and 0.024 (p -value = 0.060, PSM), respectively; for male employees, they are 0.042 (p -value = 0.147, full sample) and 0.065 (p -value = 0.048, PSM), respectively.³⁴ This indicates that the higher job creation in banlieue ventures (compared to non-banlieue ventures) benefits both male and female employees.

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).

While the employment increase does not seem to be discriminatory, it could still be that the “better” jobs (that is, the white-collar jobs) are staffed primarily with male employees, while the less attractive jobs are staffed with female employees. To examine whether this is the case, we re-estimate the regressions in Table 5 by job types. The results are provided in Tables A5 (female employees), A6 (male employees), and A7 (female-to-male ratio). As can be seen, we find no significant difference between female and male employees. This suggests that female and male employees benefit similarly from the additional job creation at banlieue ventures regardless of the specific type of job.

5.3 Robustness and alternative interpretations

In Appendix A (and Tables A8-A14), we present several additional tests that confirm the robustness of our findings and help rule out alternative interpretations. Specifically, we show that our results are robust if we i) account for the risk of banlieue vs. non-banlieue ventures; ii) account for survivorship; iii) account for differences in competition in banlieue vs. non-banlieue neighborhoods; iv) account for tax incentives; v)

³⁴ The null of identical coefficients for female and male employees cannot be rejected with p -values of 0.420 (full sample) and 0.248 (PSM), respectively.

use a coarsened exact matching (in lieu of a propensity score matching) to construct the matched group of non-banlieue ventures; and vi) use as alternative comparison group banlieue ventures that do not receive a loan from Public Bank.

6. EXPERIMENTAL EVIDENCE

The results presented in Section 5 are consistent with our main argument—that is, impact investors contract with business ventures of greater unrealized potential in banlieues, as banlieue ventures tend to be left out of the traditional loan market.

To provide direct evidence on this argument, we supplement our analysis with a vignette experiment conducted in a controlled lab environment.³⁵ In the experiment, participants are asked to act as loan officers of a traditional bank and evaluate whether or not to grant a loan to a business venture. The business venture is the same for all participants, except for the venture’s address, which is randomized as either a banlieue or a very close (few streets apart) non-banlieue address in Paris. If participants are more reluctant to grant a loan to the banlieue venture (despite the ventures being identical), this would point toward discriminatory practices against banlieue ventures in the traditional loan market. In addition, we conduct a version of the experiment where we not only randomize the banlieue vs. non-banlieue dimension, but also the business venture’s potential (compared to the industry average). In the absence of market frictions, the loan granting decision should only depend on the venture’s potential.³⁶ In the presence of market frictions (due to location), banlieue ventures of regular potential may have similar odds of receiving the loan compared to lower-potential ventures in non-banlieue neighborhoods. If so, this would indicate a market failure, with many promising ventures being left out of the traditional loan market in banlieues; by filling this segment, impact investors would be able to contract with ventures of greater unrealized potential in banlieues.

³⁵ Following common practice, we preregistered the lab experiment. The preregistration form can be accessed at https://aspredicted.org/Y5T_LCJ.

³⁶ More precisely, in the language of capital budgeting, the decision should only depend on the net present value (NPV) of the expected future cash flows generated by the venture.

To conduct the experiment, we recruited participants in partnership with an established behavioral lab located in the center of Paris. We chose this specific lab as it is well positioned to sample participants in the Paris area with good knowledge of Paris and its different neighborhoods. Participants were French-speaking working professionals. They were remunerated in accordance with the lab standards.

6.1 Setup and manipulations

Participants were asked to read the description of a fictitious firm that specializes in the installation of adhesive films, tarpaulins, and signage for retail distribution networks in France. We chose a firm that operates in the service sector as this is the most prevalent industry sector among the banlieue firms in our sample (see Table A2). In addition, participants were told that the firm was founded 18 years ago and has a total of 43 employees, out of which 28% are female and 85% are blue-collar workers. These attributes correspond to the average firm in our sample (see Table 1). The full description of this firm, as provided to the participants, is reproduced in Appendix B (translated from French to English).³⁷

Banlieue vs. non-banlieue

To manipulate the firm's location, we randomize the firm's address using three different pairs of addresses (each pair consists of a banlieue and non-banlieue address within the same arrondissement of Paris). The use of three different pairs ensures that our results are not driven by any specific pair.

The first pair we selected is in the 18th arrondissement of Paris: Boulevard Barbès in La Goutte d'Or (banlieue) and Place du Tertre in Montmartre (non-banlieue). Note that this pair of addresses has been used in prior research (Petit et al., 2016) to investigate the discriminatory practices faced by job applicants living in banlieue vs. non-banlieue neighborhoods. To mitigate the possibility that our results could be driven by this particular pair, we selected a second pair of addresses from the same arrondissement:

³⁷ In an earlier version of the experiment, we featured a firm that operates in the manufacturing sector, which is the most prevalent industry sector across all firms that receive funding from Public Bank (see Table A2). The results were very similar to the ones documented in this section. Note that we used this earlier version of the experiment as a pre-test to conduct a power analysis in order to determine a suitable sample size for the experiment. With a significance level of 5% and a power of 95%, the number of participants needed to be at least 222. In keeping with this requirement, the experiment presented in this section has 227 participants (see Section 6.3).

Boulevard Ney between Porte de la Chapelle and Porte d'Aubervilliers (banlieue) and Rue des Abbesses in Montmartre (non-banlieue). Finally, to alleviate the possibility that our results could be driven by a particular arrondissement of Paris, the third pair of addresses was selected from the 19th arrondissement: Rue Riquet in Cité Riquet-Stalingrad (banlieue) and Butte Bergeyre in les Buttes-Chaumont (non-banlieue).

Note that, in the experiment, we did not explicitly use the word “banlieue” (nor “ZUS”), in order not to influence participants through the use of negatively connotated language. Instead, we only specified the address of the firm, relying on the participants’ knowledge of Paris’ neighborhoods.

Accordingly, in manipulation 1 (banlieue) and manipulation 2 (non-banlieue), the only difference in the description of the firm is the firm’s address, which we randomize across participants. The script used for both manipulations (as well as manipulation 3, which is described below) is reproduced in Appendix B.

Average vs. below-average growth potential

In manipulations 1 and 2, the firm under consideration is exactly the same except for the firm’s address. In the description of the firm, participants are told that the firm’s growth potential is comparable to that of other firms in the same industry (“Industry experts expect the growth potential of this firm to be comparable to the industry average”).

In manipulation 3, we consider a variant of manipulation 2 (pertaining to the non-banlieue firm), in which we state that the firm has a lower growth potential compared to other firms in the industry (“Industry experts expect the growth potential of this firm to be below the industry average”). As discussed above, the rationale behind this manipulation is that, by comparing manipulation 1 vs. manipulation 3, we can assess whether non-banlieue firms of lower potential (manipulation 3) have similar odds of receiving a loan compared to banlieue firms of average potential (manipulation 1).

6.2 Direct and indirect questioning

After reading the description of the firm, participants were asked whether or not they would grant a loan to the firm. (“The firm is applying for a loan at the current market conditions. Note that the loan is substantial, accounting for about 10% of the firm’s asset size. Representing a traditional and established bank, you are

the loan officer in charge of the decision. Would you grant the loan?”).

A potential concern with this form of questioning is that it might be prone to social desirability bias, that is, the tendency of participants to present themselves in a socially acceptable way (Edwards, 1957). In our case, social desirability bias may induce respondents not to express negative opinions toward banlieue ventures. To mitigate this concern, we also adopted the technique of indirect questioning, which has been shown to reduce social desirability bias (e.g., Fisher, 1993). That is, in addition to asking participants about their own behavior (“Would you grant the loan?”, direct questioning), we also asked them what they would expect other banks to decide (“Do you think another bank would grant the loan?”, indirect questioning).

6.3 Knowledge and attention checks

As mentioned above, all participants are French-speaking working professionals. Participants were filtered out if they did not pass a series of attention and knowledge checks. Note that all these checks were conducted after the respondents answered the main questions, in order not to influence them in their responses to our main questions.

Our knowledge check filtered out participants who could not distinguish between banlieue and non-banlieue neighborhoods. Specifically, we first asked respondents to indicate whether the postal address of the firm they evaluated was located in a banlieue or not.³⁸ In addition, we asked them to indicate whether a second postal address—namely, the other address in the respective pair (e.g., if a respondent was assigned to the banlieue firm in the 19th arrondissement, the second postal address was the one of the non-banlieue firm in the 19th arrondissement)—was located in a banlieue or not. Respondents who incorrectly answered either of these questions were filtered out. The rationale was to have participants with a similar degree of knowledge about Parisian neighborhoods regardless of whether they were assigned to a banlieue or non-banlieue firm. This filter is important, as our experiment relies on participants being able to distinguish

³⁸ More precisely, we asked: “Do you think that the firm is located in what can be referred to as a ‘disadvantaged urban area,’ that is, an area where the levels of education and employment are low, and the level of crime is high?”

between banlieue and non-banlieue neighborhoods from postal addresses.

In addition, we conducted an attention check by asking participants to report the growth potential of the firm they assessed.³⁹ We filtered out participants who failed this attention check.

After applying these filters, we ended up with a sample of 227 participants that comprises 78 participants in manipulation 1 (banlieue and average growth potential), 79 participants in manipulation 2 (non-banlieue and average growth potential), and 70 participants in manipulation 3 (non-banlieue and below-average growth potential).⁴⁰ At the end of the experiment, we further collected information about the age and business experience of the respondents. In our final sample of 227 respondents, the average age is 24.6 years (SD = 4.3), and the average professional experience 4.6 years (SD = 5.8). Importantly, when using these characteristics to assess the covariate balance across the three manipulations, we find no significant difference across them. The p -value of the test of equal means is 0.845 for age, and 0.925 for business experience.

6.4 Results

Acceptance rates

The results from the vignette experiment are provided in Table 6. Panel (a) reports the results pertaining to the direct questioning (“Would you grant the loan?”), while panel (b) reports those pertaining to the indirect questioning (“Do you think another bank would grant the loan?”).

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

When comparing manipulation 1 (banlieue venture) vs. manipulation 2 (non-banlieue venture), we find that the acceptance rate is lower for banlieue ventures. In panel (a), the acceptance rate is 88.6% for

³⁹ We asked: “For the firm you assessed, what is the growth potential that industry experts expect?” We provided four possible answers: “above the industry average,” “comparable to the industry average,” “below the industry average,” and “there is not enough information to answer this question.”

⁴⁰ In Table A15, we report how the different filters led to our final sample. The initial sample consisted of 464 respondents, out of which 38% failed the knowledge check and 13% failed the attention check. The table further reports the number of respondents in each manipulation (initially and after each filter), along with the chi-squared test of uniform distribution across all three manipulations. As is shown, the null of uniform distribution cannot be rejected with p -values ranging from 0.725 to 0.985.

non-banlieue ventures, compared to only 80.8% for banlieue ventures. While the difference is large in economic terms (7.8 percentage points), it is of low statistical significance (p -value = 0.175). In panel (b), when using the indirect questioning—which mitigates the possibility of social desirability bias in the respondents’ answers—we find that the difference widens substantially. The acceptance rate is 82.3% for non-banlieue ventures compared to only 41.0% for banlieue ventures. The difference (41.3 percentage points) is statistically significant at all conventional levels (p -value = 0.000). Overall, these results point toward discriminatory practices against banlieue ventures, as the ventures considered in manipulations 1 and 2 are identical except for their geographic location.

When comparing manipulation 2 (non-banlieue venture with average growth potential) vs. manipulation 3 (non-banlieue venture with below-average growth potential), we find that the venture’s growth potential is an important determinant of the loan granting decision. Specifically, we find that the acceptance rate is significantly higher for the non-banlieue venture with average growth potential compared to the non-banlieue venture with below-average growth potential. In panel (a), the corresponding acceptance rates are 88.6% vs. 71.4% (p -value = 0.008); in panel (b), they are 82.3% vs. 41.4% (p -value = 0.000).

However, a different pattern emerges when comparing manipulation 1 (banlieue venture with average growth potential) vs. manipulation 3 (non-banlieue venture with below-average growth potential). In both panels, we find no significant difference between the acceptance rates. In panel (a), the corresponding acceptance rates are 80.8% vs. 71.4% (p -value = 0.184); in panel (b), they are 41.0% vs. 41.4% (p -value = 0.961). The indirect questioning results in panel (b) are especially striking, indicating that the difference in the acceptance rate is essentially zero.

Overall, these results indicate that banlieue ventures of regular potential face similar odds of receiving a loan compared to non-banlieue ventures of *lower* potential. This suggests that a possibly large number of promising ventures are left out of the traditional loan market in banlieues. Accordingly, impact investors might be able to contract with business ventures of greater unrealized potential in banlieues. This is in line with our findings from Section 5, showing that impact investors tend to achieve higher financial

returns and greater social impact when directing their investments toward banlieue ventures (compared to non-banlieue ventures).⁴¹

Exploring the determinants of the loan rejection

After answering the yes/no question pertaining to the granting of the loan, participants were asked to justify their decision by assessing potential rationales on a 6-point Likert scale (ranging from “strongly disagree” to “strongly agree”).

In Table 7, we explore the rationales pertaining to the rejection of the loan, that is, we restrict the sample to participants who answered “no” to the binary question. To mitigate potential concerns of social desirability, we conduct this analysis for the indirect questioning mode.

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

In panel (a), we compare manipulation 1 (banlieue venture) vs. manipulation 2 (non-banlieue venture). The first two columns report the average assessment on the 1-6 Likert scale across all participants in their respective manipulation. (The neutral mid-point is 3.5; values higher than 3.5 represent agreement, with 6 being the strongest form of agreement; values below 3.5 represent disagreement, with 1 being the strongest form of disagreement.) The last two columns report the difference in means test pertaining to the difference between the two groups. As can be seen, this analysis confirms that “location” is the main rationale for the decision to reject the loan application of banlieue vs. non-banlieue ventures (p -value = 0.001). The other rationales play less of a role in explaining the respondents’ decision; if at all, rationales such as “managerial abilities” and “ability to hire qualified employees” seem to be less of a concern for banlieue than non-banlieue firms.

In panel (b), we compare manipulation 2 (non-banlieue venture with average growth potential) vs.

⁴¹ In Table A16, we provide several robustness checks that are variants of the analysis presented in panel (b) of Table 6. In panels (a), (b), and (c), we decompose the sample according to the three pairs of banlieue and non-banlieue addresses. As can be seen, the results are similar across all three pairs. In panel (d), we find that our results continue to hold if we restrict the sample to participants whose professional experience (in years) is above the median across all participants, that is, participants who are likely better informed when assessing loan applicants. We also obtained similar results when restricting the sample to those participants with a college degree in business administration.

manipulation 3 (non-banlieue venture with below-average growth potential). Not surprisingly, we find that “growth potential” is a key determinant of the decision to reject the loan (p -value = 0.009). Finally, in panel (c), when comparing manipulation 1 (banlieue venture with average growth potential) vs. manipulation 3 (non-banlieue venture with below-average growth potential), we find that a mix of “location” (p -value = 0.000) and “growth potential” (p -value = 0.000) are the main rationales underlying the decision to reject the loan application.

Overall, the evidence from Table 7 reinforces our previous finding that banlieue ventures, including those of higher potential, tend to be discriminated against on the traditional loan market. This, in turn, is consistent with our finding from Section 5 that impact investors are able to achieve higher financial returns and greater social impact when contracting with banlieue vs. non-banlieue ventures.

Finally, note that the results presented in this section are likely conservative, as we only manipulate the banlieue dimension through the firm’s postal address. In reality, the effect of location is likely to be compounded by other factors that we do not directly measure in our study. In particular, ethnic and racial minorities are more prevalent in French banlieues.⁴² As such, banlieue ventures could face additional discrimination along these dimensions. In this spirit, Zenou and Boccoard (2000) show that racial and spatial discrimination are often intertwined.

7. DISCUSSION AND CONCLUSION

Not all firms are born equal. Firms located in disadvantaged urban areas face spatial discrimination in their access to capital from traditional banks, which limits their ability to grow and achieve their potential. Hence, a critical question is how to improve the funding opportunities of these ventures in order to unleash their potential and create social value? This question is important, not only for the business ventures themselves and their investors, but also for the development of sustainable cities and the achievement of the United

⁴² A 2011 report of the Observatoire National des Zones Urbaines Sensibles (Onzus) estimates that 52.6% of the people of age 18-50 living in banlieues have an immigrant background compared to 19.5% outside banlieues (Onzus, 2011, p. 78). In banlieues, about 53.5% of this population is from the Maghreb and 25.2% from sub-Saharan Africa (p. 77).

Nations' SDGs. In other words, understanding how to improve funding opportunities for ventures located in disadvantaged urban areas is important from an economic, societal, and managerial perspective.

In this study, we turn our attention to impact investors who aim to finance business ventures that are both economically viable and have a positive social impact. From an impact investor's perspective, the relevant question is *where* the investment has most impact in terms of both business venture success and social outcomes. We explore this question in the context of loans made to business ventures located in French banlieues vs. 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 gender-equitable jobs.

We find that loans issued to business ventures located in banlieues yield greater improvements in financial performance, as well as greater social impact in terms of the creation of local employment opportunities, quality jobs, and gender-equitable jobs, compared to loans issued to observationally similar business ventures that are located in non-banlieue neighborhoods (within the same cities). Overall, our findings suggest that impact investing is 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.

To examine the underlying rationale, we supplement this analysis with a controlled lab experiment, in which we randomly assign participants—working professionals who are asked to act as loan officers—to business ventures that only differ based on whether they are located in a banlieue or not. We find that the respondents are less likely to grant loans to banlieue ventures compared to non-banlieue ventures, despite the ventures being identical. Moreover, we find that banlieue ventures of regular potential face similar odds of receiving a loan compared to non-banlieue ventures of lower potential. These findings point toward discriminatory practices on the traditional loan market against banlieue ventures. As banlieue ventures tend to be left out of the traditional loan market, impact investors can contract with ventures of

greater unrealized potential in banlieues. This, in turn, is consistent with our finding that impact investing yields higher financial returns and greater social impact when directed toward business ventures located in banlieue vs. non-banlieue neighborhoods.

This study makes several contributions to the literature. First, it contributes to the vibrant literature that studies the role of geographic (co-)location for business venture success (e.g., Alcacer & Delgado, 2018; Chatterji, Glaeser, & Kerr, 2014; De Figueiredo, Meyer-Doyle, & Rawley, 2013; Delgado, Porter, & Stern, 2010, 2014; Sorenson & Audia, 2000; Stuart & 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. Alongside recent work in strategy research (Durand and Huysentruyt, 2022; Pongeluppe, 2022), our study complements this body of work by offering a fundamentally distinct perspective: we examine how ventures' access to capital can be improved in *disadvantaged* urban areas, and in turn how this can help them grow and create social value.

Second, our findings indicate that the easing of financing constraints is particularly effective for ventures located in disadvantaged urban areas, as these ventures face discriminatory practices in accessing traditional sources of financing. In this regard, our study provides evidence that impact investing can serve as an important lever to remedy discriminatory practices, yielding improvements in both the ventures' financial performance and their social impact. As such, impact investing can serve as a complement to public policies—such as “enterprise zone” programs that provide corporate tax relief (Boarnet & Bogard, 1996; Briant et al., 2015; Gobillon et al., 2012; Neumark & 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 role in improving the ventures' financial performance and social impact, our study contributes to the literature on impact investing (e.g., Barber, Morse, & Yasuda, 2021; Chowdhry, Davies, & Waters, 2019; Flammer, 2020, 2021; Geczy et al., 2021; Lee, Adbi, & 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). Notably, we study the financial and social

performance implications of private debt—the primary instrument used in impact investing (Global Impact Investing Network, 2018).

Debt financing plays a critical role not only for impact investing, but also for the funding of privately-owned firms more generally (Badertscher et al., 2018; Hochberg, Serrano, & Ziedonis, 2018; De Rassenfosse & Fischer, 2016). Despite its importance, debt financing has received relatively little attention in strategy research compared to equity financing.⁴³ Nevertheless, the corresponding literature, albeit scarce, finds that debt financing affects a wide range of firm strategies such as innovation (Atanassov, 2016), diversification (Kochar and Hitt, 1998), and the firms’ investments in human, physical, and intangible capital (Flammer and Ioannou, 2021). Our study complements this literature by studying the role of private debt for firms located in disadvantaged urban areas, and how access to private debt contributes to their growth and their ability to create social value.

Finally, by studying whether impact investing induces the creation of local employment opportunities, quality jobs, and gender-equitable jobs in disadvantaged urban areas—all of which foster the social inclusion of disadvantaged communities—this paper contributes to the literature on the social inclusion of marginalized communities (e.g., Hwang & Phillips, 2020; Mair, Marti, & Ventresca, 2012; Rocha & Kacperczyk, 2021; Samila & Sorenson, 2017), the development of sustainable cities (e.g., Bates & Robb, 2014; Porter, 1995, 2016), and the tackling of societal grand challenges (e.g., Berrone et al., 2016; George et al., 2016; Fangwa et al., 2022; Vakili & McGahan, 2016).

Our study is not exempt of limitations. In particular, we caution that the loans are not randomly assigned to business ventures. As such, our regression results are correlational in nature and need not warrant a causal interpretation. That being said, an appealing feature of our setup is that, among all French banks, Public Bank is the one whose explicit mandate is to *not* discriminate between ventures based on their location. This helps alleviate the potential endogeneity of the loan-granting decision in banlieue vs. non-banlieue neighborhoods. Moreover, we believe that, collectively, the tight matching used in the empirical

⁴³ A search in the *Strategic Management Journal* over the last twenty years for articles containing “equity” or “debt” in their title gives a ratio of about 20:1 in favor of equity.

analysis, along with the additional evidence from the survey and the lab experiment, paint an overall picture that is consistent with our main argument. That is, due to market frictions, banlieue ventures tend to be left out of the traditional loan market. By providing funding to these ventures, impact investors can then contract with firms of greater unrealized potential, which translates into greater improvements in financial and social performance.

Another potential limitation is the external validity of our findings. In this regard, we caution that our results are specific to the French context and a “passive” form of impact investing. As such, our results need not generalize to a more “active” form of impact investing, in which the investing entity not only provides funding to the ventures, but also a broad range of services (e.g., mentoring, advice, and access to experts). Arguably—and this is of course speculative—the provision of such services could translate into even larger benefits compared to those documented in our study. Indeed, business ventures in disadvantaged urban area are likely to not only lack capital but also proper training and expertise. Addressing the latter could yield large benefits as well. Shedding light on this question is an interesting avenue for future research.⁴⁴

More broadly, our study calls for future work in several directions. First, disadvantaged communities are especially vulnerable to the ongoing global crises (such as the Covid-19 pandemic, social injustice, and the climate crisis). In this regard, understanding how impact investors—and the business world more generally—can facilitate the social inclusion of these communities and help them become more resilient is an important direction for future research. Second, another promising avenue 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

⁴⁴ Another interesting dimension that is not considered in our study is the possibility that, in anticipation of being discriminated on the traditional loan market, banlieue ventures might be less willing to apply for loans in the first place. Studying this dimension would require data on the thought-process of entrepreneurs prior to seeking capital. In the context of race-based discrimination, Fairlie et al. (2022) provide evidence along these lines. Using confidential data from the Kauffman Firm Survey, they document that Black entrepreneurs apply for loans less often than White entrepreneurs largely because they expect to be denied credit, even when they have a good credit history to begin with.

predominantly minority neighborhoods in terms of, e.g., race, nationality, and religion (e.g., Bates & Robb, 2014; Porter, 1995, 2016), it is crucial 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 wish to explore whether and how impact investing affects minorities in other countries. Doing so would help 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.

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. Yet, it is a particularly important and challenging question when it comes to disadvantaged urban areas, as these areas face higher poverty, unemployment, illiteracy, and crime, among others. The findings of this study imply that impact investing is an effective tool—and, in fact, it appears to be 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 gender-equitable jobs.

In this regard, our findings indicate that impact investing can help business ventures located in disadvantaged urban areas overcome an important market friction—their limited access to traditional sources of financing. 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 unleash these ventures' unrealized potential.

Lastly, our findings suggest that impact investing is a potentially important instrument—in addition to 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).

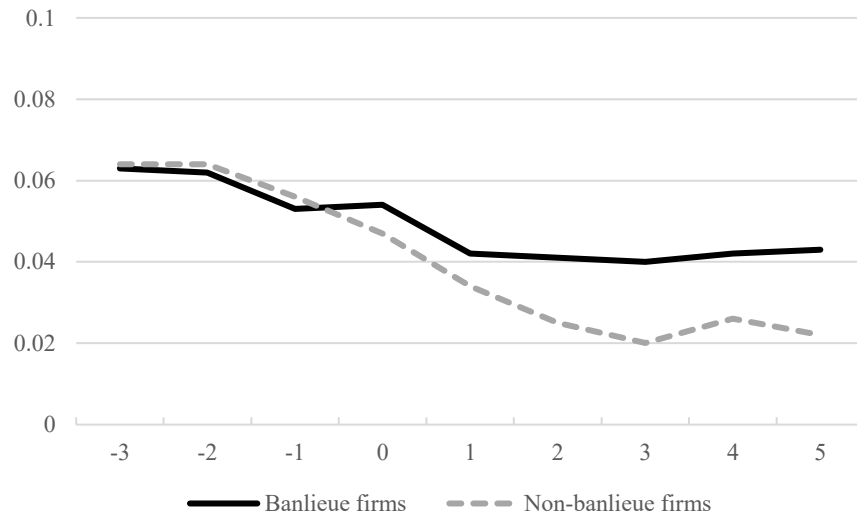
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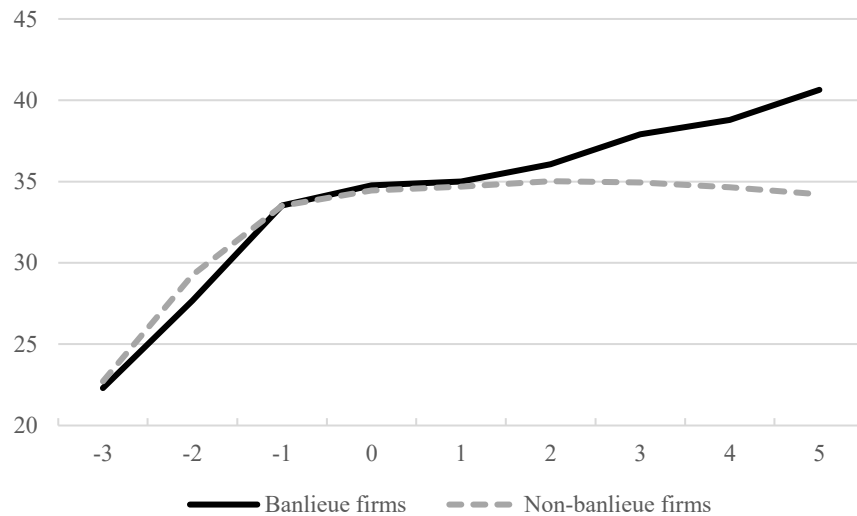
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Figure 1. Evolution of ROA before and after the loan issuance



Notes. This graph plots the average ROA in the banlieue group (black solid line) and the matched non-banlieue group (gray dashed line) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by Public Bank.

Figure 2. Evolution of employment before and after the loan issuance



Notes. This graph plots the average number of employees in the banlieue group (black solid line) and the matched non-banlieue group (gray dashed line) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by Public Bank.

Table 1. Summary statistics

	All firms			Banlieue firms			Non-banlieue firms		
	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 ($t - 1$), except for the loan characteristics that refer to the year of the loan (t).

Table 2. Financial performance following the issuance of banlieue vs. non-banlieue loans

	$\Delta ROA_{t-1,t+3}$	
	Full sample	Matched sample
	(1)	(2)
Banlieue	0.023 (0.006)	0.030 (0.008)
Controls		
a. Pre-issuance 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.

Table 3. Firm employment following the issuance of banlieue vs. non-banlieue loans

	%Δ Employees _{<i>t-1,t+3</i>}	
	Full sample	Matched sample
	(1)	(2)
Banlieue	0.065 (0.033)	0.092 (0.039)
Controls		
a. Pre-issuance characteristics		
Age _{<i>t-1</i>}	-0.002 (0.000)	
Size _{<i>t-1</i>}	0.006 (0.009)	
Leverage _{<i>t-1</i>}	-0.099 (0.045)	
Cash _{<i>t-1</i>}	0.265 (0.089)	
ROA _{<i>t-1</i>}	0.249 (0.076)	
b. Pre-trends		
Δ Size _{<i>t-2,t-1</i>}	-1.877 (0.517)	
Δ Leverage _{<i>t-2,t-1</i>}	0.026 (0.021)	
Δ Cash _{<i>t-2,t-1</i>}	-0.000 (0.000)	
Δ ROA _{<i>t-2,t-1</i>}	0.000 (0.000)	
c. Loan characteristics		
Log(Loan amount) _{<i>t</i>}	0.004 (0.007)	
Repayable loan _{<i>t</i>}	-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.

Table 4. Changes in employment by job type

	Blue-collar employees						White-collar employees	
	%Δ Manual workers _{<i>t-1, t+3</i>}		%Δ Clerical workers _{<i>t-1, t+3</i>}		%Δ Intermediate workers _{<i>t-1, t+3</i>}		%Δ White-collar workers _{<i>t-1, t+3</i>}	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)
Banlieue	0.021 (0.016)	0.023 (0.018)	0.004 (0.008)	0.003 (0.010)	0.000 (0.012)	0.018 (0.013)	0.023 (0.009)	0.031 (0.010)
Controls								
Pre-issuance 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.

Table 5. 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 sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)
Banlieue	0.017 (0.011)	0.024 (0.013)	0.042 (0.029)	0.065 (0.033)	0.003 (0.014)	0.002 (0.018)
Controls						
Pre-issuance 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.

Table 6. Willingness to grant a loan to banlieue vs. non-banlieue ventures

a. Direct questioning

	N	Acceptance rate (percent of 'yes' answers)
Would you grant the loan?		
(1) Banlieue venture	78	80.77%
(2) Non-banlieue venture	79	88.61%
(3) Non-banlieue venture (below-average growth potential)	70	71.43%
<hr/>		
<i>p</i> -value (1) vs. (2): 0.175		
<i>p</i> -value (1) vs. (3): 0.184		
<i>p</i> -value (2) vs. (3): 0.008		

b. Indirect questioning

	N	Acceptance rate (percent of 'yes' answers)
Do you think another bank would grant the loan?		
(1) Banlieue venture	78	41.03%
(2) Non-banlieue venture	79	82.28%
(3) Non-banlieue venture (below-average growth potential)	70	41.43%
<hr/>		
<i>p</i> -value (1) vs. (2): 0.000		
<i>p</i> -value (1) vs. (3): 0.961		
<i>p</i> -value (2) vs. (3): 0.000		

Table 7. Determinants of not granting the loan

a. Banlieue venture vs. non-banlieue venture

	Means		Difference in means	
	(1) Banlieue (N = 46)	(2) Non-banlieue (N = 14)	<i>t</i> -test	<i>p</i> -value
Rationales for declining the loan ...				
... location	4.17	2.57	3.47	0.001
... financial performance	3.63	3.85	0.65	0.514
... growth potential	3.65	4.00	0.90	0.370
... managerial abilities	2.95	3.78	2.62	0.011
... ability to hire qualified employees	3.09	4.00	2.73	0.008
... capacity to create value	3.67	3.78	0.31	0.757

b. Non-banlieue venture (average growth potential) vs. non-banlieue venture (below-average growth potential)

	Means		Difference in means	
	(2) Non-banlieue average growth potential (N = 14)	(3) Non-banlieue below-average growth potential (N = 41)	<i>t</i> -test	<i>p</i> -value
Rationales for declining the loan ...				
... location	2.57	2.68	0.26	0.796
... financial performance	3.85	4.26	1.05	0.295
... growth potential	4.00	4.95	2.72	0.009
... managerial abilities	3.78	3.07	1.84	0.072
... ability to hire qualified employees	4.00	2.95	2.83	0.007
... capacity to create value	3.78	4.17	0.91	0.365

c. Banlieue venture (average growth potential) vs. non-banlieue venture (below-average growth potential)

	Means		Difference in means	
	(1) Banlieue average growth potential (N = 46)	(3) Non-banlieue below-average growth potential (N = 41)	<i>t</i> -test	<i>p</i> -value
Rationales for declining the loan ...				
... location	4.17	2.68	4.72	0.000
... financial performance	3.63	4.26	2.47	0.015
... growth potential	3.65	4.95	5.17	0.000
... managerial abilities	2.95	3.07	0.50	0.619
... ability to hire qualified employees	3.09	2.95	0.52	0.604
... capacity to create value	3.67	4.17	1.87	0.064

Notes. The sample includes participants who answered “no” to the question of whether they thought that another bank would grant a loan (indirect questioning). The first two columns report the average assessment on a 1-6 Likert scale. The neutral mid-point is 3.5; values higher (lower) than 3.5 represent agreement (disagreement).

ONLINE APPENDIX FOR

IMPACT INVESTING IN DISADVANTAGED URBAN AREAS

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Appendix A. Robustness and alternative interpretations

In this appendix, we present several 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 Table A8, we examine this alternative interpretation. Specifically, we re-estimate our baseline specifications from Tables 2 and 3, but controlling for risk in the full-sample specification, and using risk as additional matching variable in the PSM specification, respectively. To measure risk, we compute the standard deviation of ROA in the four years that precede the loan issuance ($ROA\ volatility_{t-4,t-1}$).⁴⁵ As can be seen, our results are robust to accounting for risk.

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 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 Table A9. Specifically, the INSEE database includes a variable that records whether the firm ceases 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 Tables 2 and 3, expanding the sample to also

⁴⁵ We obtain similar results if sales volatility is used in lieu of ROA volatility.

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).⁴⁶ Overall, we find no evidence suggesting that the survival of banlieue vs. non-banlieue firms might confound our results.

Competition in banlieue vs. non-banlieue neighborhoods

Another potential confound is local competition, as weaker competition in disadvantaged neighborhoods could explain why banlieue ventures perform better than non-banlieue ventures following the loan issuance. We examine this alternative interpretation in Table A10, where we re-estimate our baseline specifications from Tables 2 and 3, but controlling for local competition in the full-sample specification, and using local competition as additional matching variable in the PSM specification, respectively.

To measure local competition, we use data on the population of French establishments from the INSEE database. For each industry and neighborhood (i.e., banlieues and non-banlieues), we then compute the Herfindahl-Hirschman Index (HHI) of industry concentration in the year prior to the loan issuance ($t - 1$).⁴⁷ As is shown, our results continue to hold after accounting for local competition.

Tax incentives

In order to foster entrepreneurship in banlieues, several tax incentives programs (primarily in the form of tax exemptions) have been implemented by the French government over the years. If the banlieue firms in

⁴⁶ The marginal effects pertaining to the coefficient of the banlieue 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.

⁴⁷ The HHI is computed as the sum of the squared market shares (based on sales). It is well-grounded in industrial organization theory (see Tirole, 1988).

our sample enjoy a favorable tax treatment, this could explain their higher operating performance (and higher employment growth) following the loan issue.

The banlieue tax incentives 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 Table A11, we re-estimate our baseline specifications from Tables 2 and 3, 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.

Alternative matching methodology

In Table A12, we re-estimate our main regressions using a coarsened exact matching (CEM) in lieu of the propensity score matching (PSM) described in Section 4.2.⁴⁸ In applying the CEM, we use the same set of covariates as in the PSM, and the same requirements that the matched non-banlieue ventures be located in the same city, operate in the same industry, and receive a loan from Public Bank in the same year as the respective banlieue venture.⁴⁹

As can be seen, we obtain similar estimates when using the CEM. For ROA (column (1)), the coefficient of the banlieue indicator is 0.027 (p -value = 0.014), which is very close to what we reported in Table 2. Similarly, for employment growth (column (2)), the coefficient is 0.142 (p -value = 0.048), which is again in the ballpark of what we reported in Table 3. Overall, these findings indicate that our results are not sensitive to the choice of the matching procedure.

Alternative comparison group

In our baseline analysis, we used as comparison group—and hence as counterfactual—non-banlieue

⁴⁸ For a description of the CEM methodology, see Iacus, King, and Porro (2012).

⁴⁹ In Table A13, we verify that the matched non-banlieue firms obtained from the CEM are very similar to the banlieue firms on the basis of both the matching (panels (a)-(c)) and a set of non-matching (panel (d)) characteristics. We find no significant difference along all these characteristics, with p -values ranging from 0.161 to 0.905.

ventures that also receive a loan from Public Bank and are similar *ex ante* based on observables.

Another way to assess the financial returns and social impact of loans issued to banlieue ventures is by using as counterfactual banlieue ventures that do not receive a loan from Public Bank. This comparison would provide an estimate of the overall benefits from granting vs. not granting a loan to banlieue firms.

We conduct this analysis in panel (a) of Table A14. Specifically, we estimate variants of our baseline specifications, using as comparison group banlieue ventures that do not receive a loan from Public Bank, but are located in the same banlieues as the banlieue ventures that do. (Similarly, for the PSM specification, we require that each matched banlieue venture be located in the same banlieue as the respective banlieue venture that receives the Public Bank loan.) As can be seen, we continue to find that ROA and employment increase substantially in the three years that follow the loan issue. In columns (1) and (2), the point estimates imply that ROA increases by 1.3 and 2.2 percentage points, with *p*-values of 0.002 and 0.001, respectively; in columns (3) and (4), we find that employment increases by 7% and 13%, with *p*-values of 0.008 and 0.001, respectively.

As a comparison, panel (b) of Table A14 repeats the analysis from panel (a), but comparing non-banlieue ventures that receive a loan from Public Bank vs. non-banlieue ventures that do not. We require that both sets of firms be located in non-banlieue areas of the same city. As can be seen, the granting of a Public Bank loan barely affects non-banlieue ventures. The point estimates are all small in economic terms and not significantly different from zero in columns (2)-(4). In column (1), the point estimate is significant at conventional levels, but remains small in economic terms and has a negative sign.

Overall, the evidence from Table A14 confirms that impact investing—in the form of loans issued by Public Bank—yields large improvements at banlieue ventures, but barely moves the needle at non-banlieue ventures. This is consistent with what we found in our baseline analysis when comparing banlieue vs. non-banlieue ventures that receive a loan from Public Bank.

Appendix B. Vignette experiment

Manipulation (1): banlieue and average growth potential

The firm specializes in the installation of adhesive films, tarpaulins, and signage for retail distribution networks in France.

Some background information:

- The firm was founded 18 years ago.
- It has a total of 43 employees (12 female, 31 male employees) and roughly 85% of them are blue-collar workers.
- Over the past years, the performance of this firm has been comparable to the performance of other firms in the same industry.
- Industry experts expect the growth potential of this firm to be comparable to the industry average.
- It is located near Boulevard Barbès in the neighborhood of La Goutte d'Or [OR Boulevard Ney between Porte de la Chapelle and Porte d'Aubervilliers] [OR Rue Riquet in Cité Riquet-Stalingrad] in Paris (18th arrondissement [OR 19th arrondissement]) and operates across France.

Manipulation (2): non-banlieue and average growth potential

The firm specializes in the installation of adhesive films, tarpaulins, and signage for retail distribution networks in France.

Some background information:

- The firm was founded 18 years ago.
- It has a total of 43 employees (12 female, 31 male employees) and roughly 85% of them are blue-collar workers.
- Over the past years, the performance of this firm has been comparable to the performance of other firms in the same industry.
- Industry experts expect the growth potential of this firm to be comparable to the industry average.
- It is located near Place du Tertre in the neighborhood of Montmartre [OR Rue des Abbesses in the neighborhood of Montmartre] [OR Butte Bergeyre in the neighborhood of Buttes-Chaumont] in Paris (18th arrondissement [OR 19th arrondissement]) and operates across France.

Manipulation (3): non-banlieue and below-average growth potential

The firm specializes in the installation of adhesive films, tarpaulins, and signage for retail distribution networks in France.

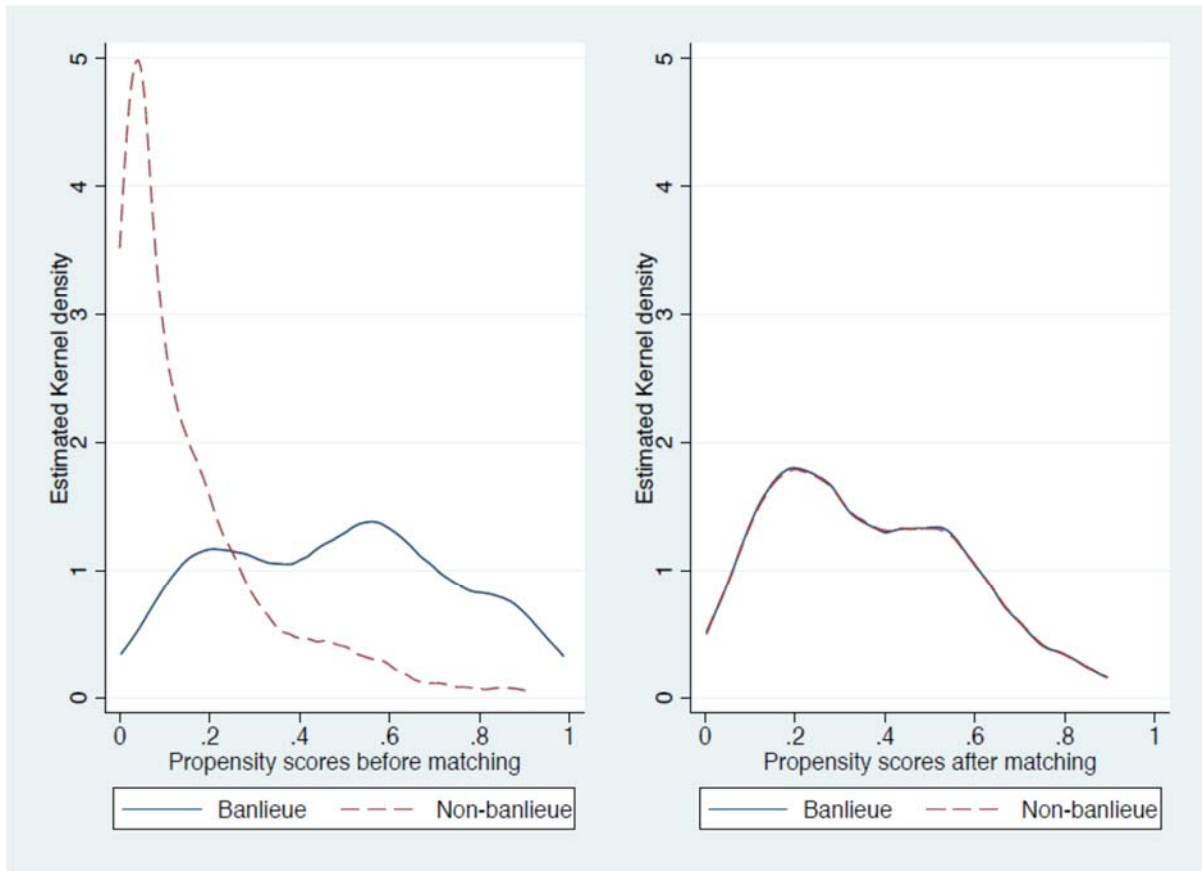
Some background information:

- The firm was founded 18 years ago.
- It has a total of 43 employees (12 female, 31 male employees) and roughly 85% of them are blue-collar workers.
- Over the past years, the performance of this firm has been comparable to the performance of other firms in the same industry.
- Industry experts expect the growth potential of this firm to be below the industry average.
- It is located near Place du Tertre in the neighborhood of Montmartre [OR Rue des Abbesses in the neighborhood of Montmartre] [OR Butte Bergeyre in the neighborhood of Buttes-Chaumont] in Paris (18th arrondissement [OR 19th arrondissement]) and operates across France.

References in online appendix

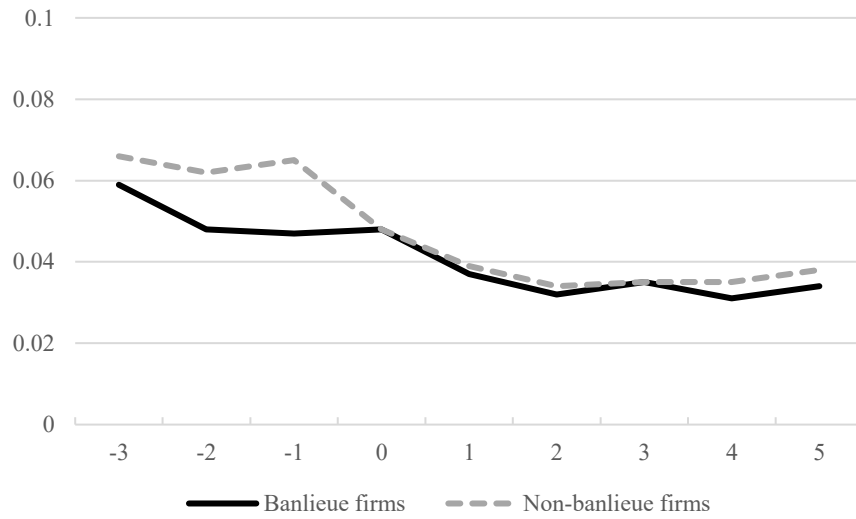
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Figure A1. Distribution of propensity scores before and after the matching



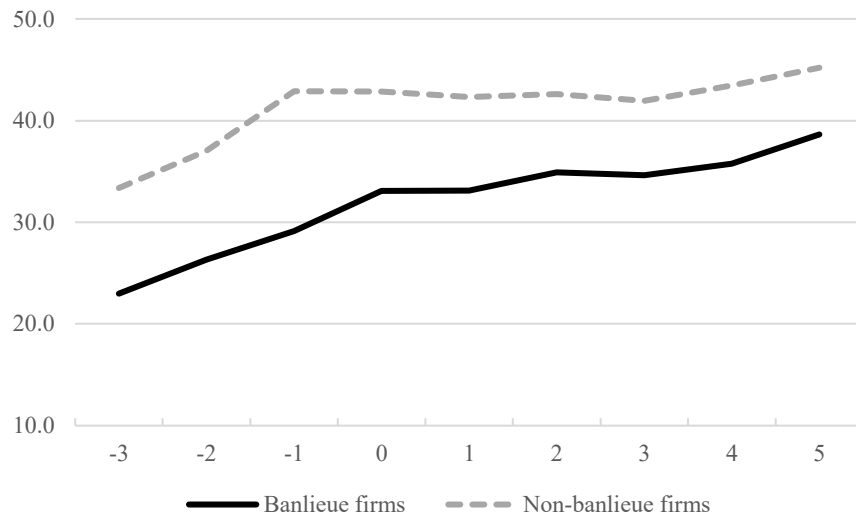
Notes. This figure plots the kernel density of the propensity scores of the banlieue (blue solid line) and non-banlieue firms (red dashed line) before (left-hand panel) and after (right-hand panel) the matching.

Figure A2. Evolution of ROA before and after the loan issuance (before matching)



Notes. This graph plots the average ROA among the banlieue firms (black solid line) and the non-banlieue firms (gray dashed line) in the full sample (that is, prior to the matching) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by Public Bank.

Figure A3. Evolution of employment before and after the loan issuance (before matching)



Notes. This graph plots the average number of employees among the banlieue firms (black solid line) and the non-banlieue firms (gray dashed line) in the full sample (that is, prior to the matching) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by Public Bank.

Table A1. Survey evidence on the sources of financing for banlieue vs. non-banlieue ventures

	All firms (N = 17,572)		Banlieue firms (N = 1,022)		Non-banlieue firms (N = 16,550)		Difference in means	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	<i>t</i> -test	<i>p</i> -value
Self-financing	34.9%	39.9%	40.3%	1.3%	34.5%	39.8%	4.47	0.000
Contributions from partners	2.1%	11.8%	2.3%	11.9%	2.1%	11.8%	0.42	0.674
Long-term bank loans (8+ years)	5.7%	19.7%	4.4%	17.3%	5.8%	19.8%	2.11	0.035
Medium-term bank loans (2 to 7 years)	33.1%	38.9%	28.7%	37.3%	33.4%	39.0%	3.76	0.000
Equipment leasing	21.4%	34.8%	21.4%	34.4%	21.4%	34.8%	0.02	0.988
Real estate leasing	1.6%	10.3%	1.5%	9.8%	1.6%	10.3%	0.42	0.671
Other (e.g., subsidies)	1.2%	6.8%	1.5%	8.2%	1.2%	6.7%	1.32	0.187

Notes. The sample consists of French business ventures surveyed by Public Bank between 2000 and 2015. The table reports the means and standard deviations of the sources of financing (in percent) used by the respondents to finance their investments. The last two columns report the difference in means test (*t*-test) comparing banlieue vs. non-banlieue ventures.

Table A2. 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.

Table A3. Propensity score matching—covariate balance

	Means		Difference in means	
	Banlieue ventures (N = 365)	Matched non-banlieue ventures (N = 365)	<i>t</i> -test	<i>p</i> -value
a. Pre-issuance characteristics				
Age _{<i>t</i>-1}	17.304	17.984	-0.79	0.431
Size _{<i>t</i>-1}	7.514	7.507	0.09	0.930
Leverage _{<i>t</i>-1}	0.589	0.581	0.56	0.578
Cash _{<i>t</i>-1}	0.072	0.074	-0.40	0.689
ROA _{<i>t</i>-1}	0.053	0.056	-0.40	0.689
b. Pre-trends				
Δ Size _{<i>t</i>-2, <i>t</i>-1}	0.006	0.006	-0.64	0.521
Δ Leverage _{<i>t</i>-2, <i>t</i>-1}	0.045	0.063	-0.87	0.385
Δ Cash _{<i>t</i>-2, <i>t</i>-1}	0.027	0.037	-0.80	0.427
Δ ROA _{<i>t</i>-2, <i>t</i>-1}	-0.009	-0.008	-0.09	0.928
c. Loan characteristic				
Log(loop amount) _{<i>t</i>}	5.478	5.451	-0.79	0.431
d. Non-matching characteristics				
Employees _{<i>t</i>-1}	36.78	42.45	-1.29	0.197
Wages per employees _{<i>t</i>-1}	34,013	35,570	-1.44	0.151
%Δ Employees _{<i>t</i>-2, <i>t</i>-1}	0.133	0.088	0.83	0.407
%Δ Wages per employees _{<i>t</i>-2, <i>t</i>-1}	0.086	0.125	-1.29	0.198

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

Table A4. Longer-term changes in employment by job type

	Blue-collar employees						White-collar employees	
	%Δ Manual workers _{<i>t-1, t+5</i>}		%Δ Clerical workers _{<i>t-1, t+5</i>}		%Δ Intermediate workers _{<i>t-1, t+5</i>}		%Δ White-collar workers _{<i>t-1, t+5</i>}	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)
Banlieue	0.016	0.016	0.000	0.005	-0.017	0.008	0.032	0.050
	(0.021)	(0.022)	(0.013)	(0.016)	(0.016)	(0.017)	(0.013)	(0.013)
Controls								
Pre-issuance 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	0.179	0.001	0.277	0.000	0.162	0.000	0.168	0.027
Observations	3,437	466	3,437	466	3,437	466	3,437	466

Notes. Standard errors (reported in parentheses) are clustered at the firm level.

Table A5. Changes in employment by job type—female employees

	Blue-collar employees						White-collar employees	
	%Δ Manual workers _{<i>t-1, t+3</i>}		%Δ Clerical workers _{<i>t-1, t+3</i>}		%Δ Intermediate workers _{<i>t-1, t+3</i>}		%Δ White-collar workers _{<i>t-1, t+3</i>}	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)
Banlieue	-0.001 (0.001)	-0.002 (0.002)	0.004 (0.005)	-0.002 (0.006)	0.002 (0.004)	0.003 (0.004)	0.008 (0.002)	0.006 (0.003)
Controls								
Pre-issuance 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	0.148	0.001	0.123	0.000	0.126	0.001	0.152	0.008
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.

Table A6. Changes in employment by job type—male employees

	Blue-collar employees						White-collar employees	
	%Δ Manual workers _{<i>t-1, t+3</i>}		%Δ Clerical workers _{<i>t-1, t+3</i>}		%Δ Intermediate workers _{<i>t-1, t+3</i>}		%Δ White-collar workers _{<i>t-1, t+3</i>}	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)
Banlieue	0.021	0.021	0.000	0.000	0.001	0.012	0.009	0.019
	(0.015)	(0.017)	(0.003)	(0.004)	(0.008)	(0.010)	(0.007)	(0.007)
Controls								
Pre-issuance 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	0.136	0.002	0.165	0.000	0.094	0.002	0.105	0.010
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.

Table A7. Changes in employment by job type—female-to-male ratio

	Blue-collar employees						White-collar employees	
	Δ Female-to-male ratio _{<i>t-1,t+3</i>} (manual workers)		Δ Female-to-male ratio _{<i>t-1,t+3</i>} (clerical workers)		Δ Female-to-male ratio _{<i>t-1,t+3</i>} (intermediate workers)		Δ Female-to-male ratio _{<i>t-1,t+3</i>} (white-collar workers)	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
(1)	(2)	(3)	(4)	(5)	(6)	(9)	(10)	
Banlieue	-0.001 (0.005)	0.004 (0.005)	0.158 (0.174)	0.110 (0.234)	-0.021 (0.033)	0.019 (0.033)	0.070 (0.060)	0.002 (0.078)
Controls								
Pre-issuance 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	0.151	0.001	0.284	0.002	0.119	0.001	0.180	0.000
Observations	3,857	616	1,375	140	3,911	582	3,666	508

Notes. Standard errors (reported in parentheses) are clustered at the firm level.

Table A8. Robustness—accounting for risk

	$\Delta ROA_{t-1, t+3}$		$\% \Delta \text{Employees}_{t-1, t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.024 (0.006)	0.025 (0.007)	0.070 (0.041)	0.114 (0.048)
Controls				
a. Pre-issuance characteristics				
Age _{t-1}	0.000 (0.000)		-0.003 (0.000)	
Size _{t-1}	0.006 (0.002)		0.006 (0.010)	
Leverage _{t-1}	-0.016 (0.013)		-0.086 (0.057)	
Cash _{t-1}	-0.037 (0.028)		0.281 (0.112)	
ROA _{t-1}	-0.342 (0.047)		0.332 (0.094)	
b. Pre-trends				
$\Delta \text{Size}_{t-2, t-1}$	0.051 (0.107)		-1.706 (0.651)	
$\Delta \text{Leverage}_{t-2, t-1}$	0.002 (0.009)		0.027 (0.034)	
$\Delta \text{Cash}_{t-2, t-1}$	0.000 (0.000)		-0.000 (0.000)	
$\Delta \text{ROA}_{t-2, t-1}$	-0.000 (0.000)		0.000 (0.000)	
c. Loan characteristics				
Log(Loan amount) _t	-0.004 (0.001)		0.006 (0.008)	
Repayable loan _t	0.002 (0.003)		-0.025 (0.021)	
d. Risk				
ROA volatility _{t-4, t-1}	-0.073 (0.039)		0.141 (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.

Table A9. Firm failure

	Firm failure _{<i>t-1,t+3</i>}			
	Linear probability model (OLS)		Logit specification	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.003 (0.003)	-0.000 (0.005)	0.654 (0.533)	-0.000 (0.709)
Controls				
a. Pre-issuance characteristics				
Age _{<i>t-1</i>}	-0.000 (0.000)		-0.002 (0.016)	
Size _{<i>t-1</i>}	-0.003 (0.001)		-0.660 (0.197)	
Leverage _{<i>t-1</i>}	0.005 (0.005)		0.289 (0.699)	
Cash _{<i>t-1</i>}	-0.015 (0.009)		-2.420 (1.796)	
ROA _{<i>t-1</i>}	-0.002 (0.007)		-0.510 (1.198)	
b. Pre-trends				
Δ Size _{<i>t-2,t-1</i>}	0.007 (0.027)		-2.538 (6.398)	
Δ Leverage _{<i>t-2,t-1</i>}	0.000 (0.001)		0.326 (0.623)	
Δ Cash _{<i>t-2,t-1</i>}	-0.000 (0.000)		-0.007 (0.018)	
Δ ROA _{<i>t-2,t-1</i>}	0.000 (0.000)		-0.004 (0.021)	
c. Loan characteristics				
Log(Loan amount) _{<i>t</i>}	0.000 (0.001)		-0.102 (0.144)	
Repayable loan _{<i>t</i>}	-0.007 (0.003)		-0.917 (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.

Table A10. Robustness—accounting for local competition

	$\Delta ROA_{t-1,t+3}$		$\% \Delta \text{Employees}_{t-1,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.024 (0.006)	0.020 (0.008)	0.071 (0.040)	0.134 (0.049)
Controls				
a. Pre-issuance characteristics				
Age _{t-1}	0.000 (0.000)		-0.003 (0.001)	
Size _{t-1}	0.006 (0.002)		0.003 (0.010)	
Leverage _{t-1}	-0.012 (0.013)		-0.086 (0.055)	
Cash _{t-1}	-0.036 (0.026)		0.297 (0.110)	
ROA _{t-1}	-0.317 (0.039)		0.299 (0.088)	
b. Pre-trends				
$\Delta \text{Size}_{t-2,t-1}$	0.069 (0.044)		-1.743 (0.633)	
$\Delta \text{Leverage}_{t-2,t-1}$	0.003 (0.004)		0.030 (0.024)	
$\Delta \text{Cash}_{t-2,t-1}$	0.000 (0.000)		-0.000 (0.000)	
$\Delta \text{ROA}_{t-2,t-1}$	-0.000 (0.000)		0.000 (0.000)	
c. Loan characteristics				
Log(Loan amount) _t	-0.004 (0.001)		0.008 (0.009)	
Repayable loan _t	0.004 (0.000)		-0.013 (0.018)	
d. Competition				
Herfindahl-Hirschman index _{t-1}	-0.011 (0.006)		-0.034 (0.038)	
Industry fixed effects	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted R-squared	0.242	0.009	0.147	0.012
Observations	5,871	744	5,504	608

Notes. Standard errors (reported in parentheses) are clustered at the firm level.

Table A11. Robustness—excluding firms of less than 15 years of age

	$\Delta ROA_{t-1,t+3}$		$\% \Delta \text{Employees}_{t-1,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.023 (0.008)	0.030 (0.010)	0.085 (0.052)	0.154 (0.058)
Controls				
a. Pre-issuance characteristics				
Size _{<i>t-1</i>}	0.005 (0.002)		0.031 (0.017)	
Leverage _{<i>t-1</i>}	-0.015 (0.013)		-0.009 (0.075)	
Cash _{<i>t-1</i>}	0.004 (0.028)		0.183 (0.141)	
ROA _{<i>t-1</i>}	-0.487 (0.030)		0.510 (0.167)	
b. Pre-trends				
$\Delta \text{Size}_{t-2,t-1}$	-1.281 (0.989)		10.729 (6.760)	
$\Delta \text{Leverage}_{t-2,t-1}$	0.013 (0.007)		-0.050 (0.054)	
$\Delta \text{Cash}_{t-2,t-1}$	0.000 (0.000)		-0.000 (0.000)	
$\Delta \text{ROA}_{t-2,t-1}$	-0.000 (0.000)		0.001 (0.000)	
c. Loan characteristics				
Log(Loan amount) _{<i>t</i>}	-0.002 (0.002)		0.014 (0.011)	
Repayable loan _{<i>t</i>}	0.000 (0.004)		-0.032 (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.

Table A12. Robustness—coarsened exact matching

	Matched sample	
	$\Delta \text{ROA}_{t-1, t+3}$	$\% \Delta \text{Employees}_{t-1, t+3}$
	(1)	(2)
Banlieue	0.027	0.142
	(0.010)	(0.071)
Controls		
Pre-issuance characteristics	–	–
Pre-trends	–	–
Fixed effects		
Industry fixed effects	–	–
Banlieue fixed effects	–	–
Year fixed effects	–	–
Adjusted R-squared	0.011	0.010
Observations	536	400

Notes. Standard errors (reported in parentheses) are clustered at the firm level.

Table A13. Coarsened exact matching—covariate balance

	Means		Difference in means	
	Banlieue ventures (N = 268)	Matched non-banlieue ventures (N = 268)	<i>t</i> -test	<i>p</i> -value
a. Pre-issuance characteristics				
Age _{<i>t</i>-1}	16.324	16.946	-0.57	0.566
Size _{<i>t</i>-1}	7.482	7.500	-0.27	0.791
Leverage _{<i>t</i>-1}	0.617	0.597	1.07	0.286
Cash _{<i>t</i>-1}	0.074	0.065	1.10	0.270
ROA _{<i>t</i>-1}	0.054	0.058	-0.98	0.324
b. Pre-trends				
Δ Size _{<i>t</i>-2, <i>t</i>-1}	0.005	0.005	-0.23	0.815
Δ Leverage _{<i>t</i>-2, <i>t</i>-1}	0.051	0.021	1.16	0.243
Δ Cash _{<i>t</i>-2, <i>t</i>-1}	0.032	0.044	-0.12	0.905
Δ ROA _{<i>t</i>-2, <i>t</i>-1}	-0.009	-0.005	0.44	0.664
c. Loan characteristic				
Log(loop amount) _{<i>t</i>}	5.418	5.544	-1.40	0.161
d. Non-matching characteristics				
Employees _{<i>t</i>-1}	31.69	33.02	-0.33	0.745
Wages per employees _{<i>t</i>-1}	34,932	36,233	-1.10	0.270
%Δ Employees _{<i>t</i>-2, <i>t</i>-1}	0.164	0.100	0.40	0.684
%Δ Wages per employees _{<i>t</i>-2, <i>t</i>-1}	0.062	0.038	0.46	0.641

Notes. In panel (d), the sample consists of N = 253 banlieue firms and N = 237 non-banlieue firms, due to the more restrictive coverage of the employee data in the DADS database.

Table A14. Robustness—alternative counterfactuals

a. Comparison of banlieue ventures that receive a loan vs. banlieue ventures that do not receive a loan

	$\Delta ROA_{t-1,t+3}$		$\% \Delta \text{Employees}_{t-1,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.013 (0.005)	0.022 (0.007)	0.067 (0.025)	0.130 (0.040)
Controls				
Pre-issuance characteristics	Yes	–	Yes	–
Pre-trends	Yes	–	Yes	–
Fixed effects				
Industry fixed effects	Yes	–	Yes	–
Banlieue fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted R-squared	0.108	0.011	0.185	0.017
Observations	35,803	822	28,475	564

b. Comparison of non-banlieue ventures that receive a loan vs. non-banlieue ventures that do not receive a loan

	$\Delta ROA_{t-1,t+3}$		$\% \Delta \text{Employees}_{t-1,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	-0.007 (0.002)	-0.003 (0.003)	-0.010 (0.011)	-0.016 (0.018)
Controls				
Pre-issuance characteristics	Yes	–	Yes	–
Pre-trends	Yes	–	Yes	–
Fixed effects				
Industry fixed effects	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted R-squared	0.205	0.000	0.175	0.000
Observations	16,910	3,734	12,421	2,044

Notes. Standard errors (reported in parentheses) are clustered at the firm level.

Table A15. Sample used in the vignette experiment

	All	Condition (1) Banlieue venture average growth potential	Condition (2) Non-banlieue venture average growth potential	Condition (3) Non-banlieue venture below-average growth potential	Chi-squared test of uniform distribution (<i>p</i> -value)
Full sample	464	156	153	155	0.985
After knowledge check	286	92	97	97	0.916
After knowledge check and attention check	227	78	79	70	0.725

Table A16. Robustness—vignette experiment

a. Ventures in the 18th arrondissement (Boulevard Barbès vs. Place du Tertre, N = 76)

	N	Acceptance rate (percent of 'yes' answers)
Do you think another bank would grant the loan?		
(1) Banlieue venture	27	40.74%
(2) Non-banlieue venture	23	95.65%
(3) Non-banlieue venture (below-average growth potential)	26	53.85%

p-value (1) vs. (2): 0.000

p-value (1) vs. (3): 0.349

p-value (2) vs. (3): 0.001

b. Ventures in the 18th arrondissement (Boulevard Ney vs. Rue des Abbesses, N = 75)

	N	Acceptance rate (percent of 'yes' answers)
Do you think another bank would grant the loan?		
(1) Banlieue venture	27	44.44%
(2) Non-banlieue venture	28	82.14%
(3) Non-banlieue venture (below-average growth potential)	20	35.00%

p-value (1) vs. (2): 0.003

p-value (1) vs. (3): 0.525

p-value (2) vs. (3): 0.001

Table A16 (continued)c. Ventures in the 19th arrondissement (Rue Riquet vs. Butte Bergeyre, N = 76)

	N	Acceptance rate (percent of 'yes' answers)
Do you think another bank would grant the loan?		
(1) Banlieue venture	24	37.50%
(2) Non-banlieue venture	28	71.43%
(3) Non-banlieue venture (below-average growth potential)	24	33.33%

p-value (1) vs. (2): 0.014*p*-value (1) vs. (3): 0.769*p*-value (2) vs. (3): 0.005

d. Respondents with above-median professional experience (N = 107)

	N	Acceptance rate (percent of 'yes' answers)
Do you think another bank would grant the loan?		
(1) Banlieue venture	36	27.78%
(2) Non-banlieue venture	32	78.13%
(3) Non-banlieue venture (below-average growth potential)	39	41.03%

p-value (1) vs. (2): 0.000*p*-value (1) vs. (3): 0.234*p*-value (2) vs. (3): 0.001

Notes. This table reports variants of the analysis in panel (b) of Table 6. In panels (a), (b), and (c), the sample is decomposed according to the three pairs of banlieue and non-banlieue addresses described in Section 6.1. In panel (d), the sample is restricted to respondents with above-median professional experience.