RESEARCH ARTICLE

SMS | Strategic Management Journal   WILEY

Impact investing in disadvantaged urban areas

Romain Boulongne[1] | **Rodolphe Durand**[2] |
Caroline Flammer[3,4,5]

[1]IESE Business School, Barcelona, Spain

[2]HEC Paris, Paris, France

[3]Columbia University, New York, New York, USA

[4]National Bureau of Economic Research (NBER), Cambridge, Massachusetts, USA

[5]European Corporate Governance Institute (ECGI), Brussels, Belgium

Correspondence
Caroline Flammer, Columbia University, New York, NY, USA.
Email: caroline.flammer@columbia.edu

Abstract

Research Summary: We examine whether impact investing is more effective in fostering business venture success and social impact when investments are directed toward ventures in disadvantaged urban areas compared to similar investments directed toward ventures outside these areas. We explore this question in the context of loans made to business ventures in French "banlieues" versus "non-banlieues." We find that, following the loan issuance, banlieue ventures achieve greater improvements in financial performance and greater social impact in terms of the creation of local employment opportunities, quality jobs, and gender-equitable jobs. This suggests 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. The latter is corroborated in a controlled lab experiment.

Managerial Summary: We shed light on the unrealized potential of business ventures in economically disadvantaged urban areas, known as "banlieues" in France. Our results show that, after receiving loans from an impact investor, banlieue ventures achieve greater financial performance compared to non-banlieue ventures. What is more, banlieue ventures achieve greater social impact by creating more jobs that benefit the local community. Why are traditional investors missing out on these opportunities? Our results point toward discrimination of banlieue ventures on the traditional loan market. This is confirmed in a controlled lab experiment, in

which participants are less likely to approve loans to banlieue ventures compared to identical non-banlieue ventures. These insights can guide managers and investors seeking sustainable, socially impactful, and financially viable investment opportunities.

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 et al., 2014; De Figueiredo et al., 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 et al., 2008), among others—and have been shown to contribute to firms' success and survival (e.g., Delgado et al., 2010, 2014).

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, much less 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.[1] Specifically, we turn our attention to investors who aim to finance business ventures that are both economically viable and have a positive social impact. In practice, these investors are known as "impact investors." 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.

---

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

—WILEY—

To explore these questions empirically, we study a large sample of loans made to business ventures located in French "banlieues" versus "non-banlieues" within the same city.[2] 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 versus 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, following the loan issuance, banlieue ventures achieve a significantly higher increase in financial performance. Specifically, compared to similar non-banlieue ventures from the same city, banlieue ventures achieve an additional 2.3–3.0 percentage points increase in their return on assets (ROA) over the 3 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 3 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 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 are able to contract with ventures of greater unrealized potential in banlieues. This, in turn, is consistent with our finding that impact investing is associated with higher financial returns and greater social impact when directed toward business ventures located in banlieues versus comparable business ventures 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

---

[2]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 article. 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.

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 and qualitative 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.[3] The matched sample consists of 17,572 business ventures from 2000 to 2015, out of which 1022 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 = .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 = .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 = .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 conducted by the professional association ADIVE (2010) and the think tank Terra Nova

---

[3]We describe the INSEE data in Section 3.3.

(2016).[4] 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). In this regard, the Terra Nova (2016) study notes that limited access to financing is an important obstacle that prevents banlieue ventures from unleashing their potential. Specifically, the study notes that many banlieue ventures 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).

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

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.[5] 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 counts over 4900 signatories representing more than \$120 trillion in assets under management by March 2022 (PRI, 2022). 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

---

[4]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.

[5]Other levers include government interventions (such as corporate tax relief programs) that aim to stimulate business growth in disadvantaged urban areas (e.g., Briant et al., 2015; Gobillon et al., 2012; Neumark & Simpson, 2015).

private equity for 19%, respectively (Global Impact Investing Network, 2018).[6] While all impact investors intend to generate positive social and environmental impact alongside financial returns, investors differ in the weighting of these objectives and their willingness to potentially forgo (higher) financial returns (e.g., Barber et al., 2021; Geczy et al., 2021).[7]

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 versus outside disadvantaged urban areas.

2.3 | Impact investing in versus 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.[8] 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 (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 et al., 2003; Chatterji & Seamans, 2012; Fairlie et al., 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.[9]

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 et al., 2012)—that would contribute to value creation and help them achieve a sustainable competitive advantage.

---

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

[7]In contrast to impact investors, microfinance institutions (MFIs)—which predominantly operate in developing countries and provide financial services to individuals and small businesses—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), and Cobb et al. (2016).

[8]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 et al., 2014; De Figueiredo et al., 2013; Delgado et al., 2010, 2014; Sorenson & Audia, 2000; Stuart & Sorenson, 2003).

[9]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 (ISM Corum, 2017).

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.

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 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.[10]

In what follows, we take these questions to the data, and explore empirically whether investments in business ventures are associated with 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.[11] 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).

---

[10]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. 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.

[11]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. Public Bank is active throughout the French territory, including areas that tend to be overlooked by traditional banks (such as banlieues). Public Bank provides funding to a wide range of businesses, primarily 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 to 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 €1000 from Public Bank, it also receives an additional €1000 from a given private bank. From this database, we extract two variables: (i) *log(loan amount)*, which is the logarithm of the loan amount granted to the firm by Public Bank; and (ii) *repayable loan*, which is an indicator variable equal to one if the loan is repayable, and zero otherwise. Note that the database does not include information on the interest charged on the loan. Nevertheless, this dimension is of lesser relevance to our analysis since, for a given loan amount, Public Bank applies the same pricing criteria regardless of the business venture's location. This reflects Public Bank's policy not to discriminate between banlieue and non-banlieue areas.

3.3 | Firm-level data

To distinguish between banlieue versus non-banlieue ventures, we use establishment-level data from INSEE.[12] For each establishment, the database provides a 14-digit identifier—the SIRET code ("Système d'identification du répertoire des établissements")—that identifies the firm to which the establishment belongs and the establishment's physical location. (Note that, compared to the United States, 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, that is, 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 versus 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 versus 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.

---

[12]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).

3.3.1 | 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.[13] From this database, we extract several variables. *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.

3.3.2 | Employee data

To examine employment outcomes, we augment the INSEE data with the DADS ("Déclaration annuelle de données sociales") database that collects annual data on the number of employees, along with their gender and qualifications.[14] 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, 2020). 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 versus 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").[15] 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—for example, 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 et al., 2019).[16]

---

[13]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.

[14]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.

[15]For ease of exposition, we refer to the first three groups as "blue-collar workers" (broadly defined).

[16]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. This yields a total of 634 firms in the "banlieue group" (i.e., banlieue firms that receive a loan from Public Bank) and 5237 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 5871 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).[17] 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).

As can be seen, the average firm in our sample has 43 employees, and total assets in amount of €6 M. The average loan amount is €535 K, 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 versus non-banlieue ventures can be informative. To mitigate this issue, in one set of analyses, we use a propensity score matching (PSM). 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.

4 | METHODOLOGY

Our methodology compares banlieue versus 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 versus non-banlieue loans.[18]

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 PSM. 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 $t+3$ (3 years after receiving

---

[17]Table A2 in the appendix provides additional summary statistics on the firms' 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%).

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

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	5871	0.065	0.131	634	0.047	0.086	5237	0.067	0.135
b. Employment									
# Employees	5504	42.89	57.01	566	32.25	29.14	4938	44.11	59.25
# Female employees	5504	11.84	29.35	566	7.36	12.18	4938	12.36	30.67
# Male employees	5504	31.05	41.19	566	24.89	25.21	4938	31.75	42.59
# White-collar workers	5504	5.93	10.77	566	4.87	9.09	4938	6.05	10.94
# Intermediary workers	5504	8.86	16.73	566	5.72	5.99	4938	9.22	17.51
# Clerical workers	5504	7.05	25.96	566	4.19	9.67	4938	7.38	27.19
# Manual workers	5504	21.05	36.42	566	17.47	27.63	4938	21.46	37.28
Wages per employee	5504	37,766	17,088	566	34,937	13,232	4938	38,089	17,448
c. Firm characteristics									
Age (in years)	5871	18.16	12.43	634	16.00	10.60	5237	18.42	12.60
Total assets (in €1000 s)	5871	6054	19,542	634	3001	4489	5237	6424	20,602
Log(total assets)	5871	7.799	1.180	634	7.496	0.948	5237	7.835	1.200
Leverage	5871	0.569	0.209	634	0.606	0.208	5237	0.564	0.209
Cash	5871	0.069	0.091	634	0.076	0.095	5237	0.068	0.090
d. Loan characteristics									
Loan amount (in €1000 s)	5871	535	1248	634	423	640	5237	549	1302
Log(loan amount)	5871	5.520	1.191	634	5.510	1.027	5237	5.522	1.210
Repayable (1/0)	5871	0.780	0.407	634	0.774	0.418	5237	0.792	0.406

Note: 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).

Abbreviation: ROA, return on assets.

funding), which we denote by $\Delta y_{t-1, t+3}$.[19] For ROA, Δy represents the level change; for employment, Δy represents the percentage change.[20] We then estimate the following specification:

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

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

[20]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.

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 $t - 1$ (i.e., pre-trends); and (iii) loan characteristics (*loan amount* and *repayable*).[21] Standard errors are clustered at the firm level (i.e., at the loan assignment level).[22] The coefficient of interest is β, which captures the differential response of banlieue versus 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 (i.e., 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 versus 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.[23] 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 versus non-banlieue ventures, we use a PSM. We describe this approach in the next section.

4.2 | Propensity score matching

To obtain of set of non-banlieue firms that provides a plausible counterfactual for the banlieue firms in our sample, 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.

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 (i.e., whether the loan is repayable or not). Among the pool of remaining candidates, we use a PSM that assigns the "closest" non-banlieue firm based on a set of 10 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).

---

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

[22]This follows Bertrand et al.'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 level.

[23]For example, controlling for leverage accounts for the possibility that banlieue ventures have a different reliance on external financing versus the owner's own money.

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. In the last two columns, the table reports the difference-in-means test. As is shown, the two groups are very similar ex ante along all characteristics. In particular, the null of equal means cannot be rejected, with p-values ranging from .151 to .930. 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):

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

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.[24]

5 | RESULTS

5.1 | Financial performance of banlieue versus non-banlieue ventures following the loan issuance

5.1.1 | Baseline specifications

The analysis of financial performance is presented in columns (1) and (2) of Table 2. The dependent variable is the change in ROA from $t-1$ until $t+3$ (Δ 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 PSM (Equation (2), "matched sample").

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 = .000 in both columns). They are economically significant as well—they imply that each Euro invested in the firm's assets earns 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, following the loan issuance, banlieue ventures achieve greater improvements in financial performance compared to non-banlieue ventures.

---

[24]Also, note that, although the matching provides us with two groups of firms that are comparable based on observables, they may still differ based on unobservables. As such, while the matching helps tighten the inference, it is not a substitute for an instrument or a source of quasi-exogenous variation.

TABLE 2 Financial performance and employment following the issuance of banlieue versus non-banlieue loans.

|	Δ ROA$_{t-1,\ t+3}$		%Δ Employees$_{t-1,\ t+3}$	
	Full sample (1)	Matched sample (2)	Full sample (3)	Matched sample (4)
Banlieue	0.023 (0.006)	0.030 (0.008)	0.065 (0.033)	0.092 (0.039)
Controls				
a. Pre-issuance characteristics				
Age$_{t-1}$	0.000 (0.000)		−0.002 (0.000)	
Size$_{t-1}$	0.006 (0.002)		0.006 (0.009)	
Leverage$_{t-1}$	−0.012 (0.013)		−0.099 (0.045)	
Cash$_{t-1}$	−0.036 (0.026)		0.265 (0.089)	
ROA$_{t-1}$	−0.317 (0.039)		0.249 (0.076)	
b. Pre-trends				
Δ Size$_{t-2,\ t-1}$	0.069 (0.044)		−1.877 (0.517)	
Δ Leverage$_{t-2,\ t-1}$	0.003 (0.004)		0.026 (0.021)	
Δ Cash$_{t-2,\ t-1}$	0.000 (0.000)		−0.000 (0.000)	
Δ ROA$_{t-2,\ t-1}$	−0.000 (0.000)		0.000 (0.000)	
c. Loan characteristics				
Log(Loan amount)$_t$	−0.004 (0.001)		0.004 (0.007)	
Repayable loan$_t$	0.004 (0.000)		−0.013 (0.018)	
Industry fixed effects	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted *R*-squared	.242	.017	.143	.007
Observations	5871	730	5504	648

Note: Standard errors (reported in parentheses) are clustered at the firm level.
Abbreviation: ROA, return on assets.

5.1.2 | 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.

Figure 1 also shows that, while both banlieue and non-banlieue ventures experience a decline in ROA, this decline is stronger for non-banlieue ventures. On average, ROA decreases by 1.2 percentage points among banlieue ventures versus 3.6 percentage points among non-banlieue ventures from $t-1$ until $t+3$. The fact that ROA is trending downward in both groups is consistent with the nationwide decrease in profitability observed in France during our sample period (Aghion et al., 2011, p. 40). Incidentally, since our sample coincides with a period
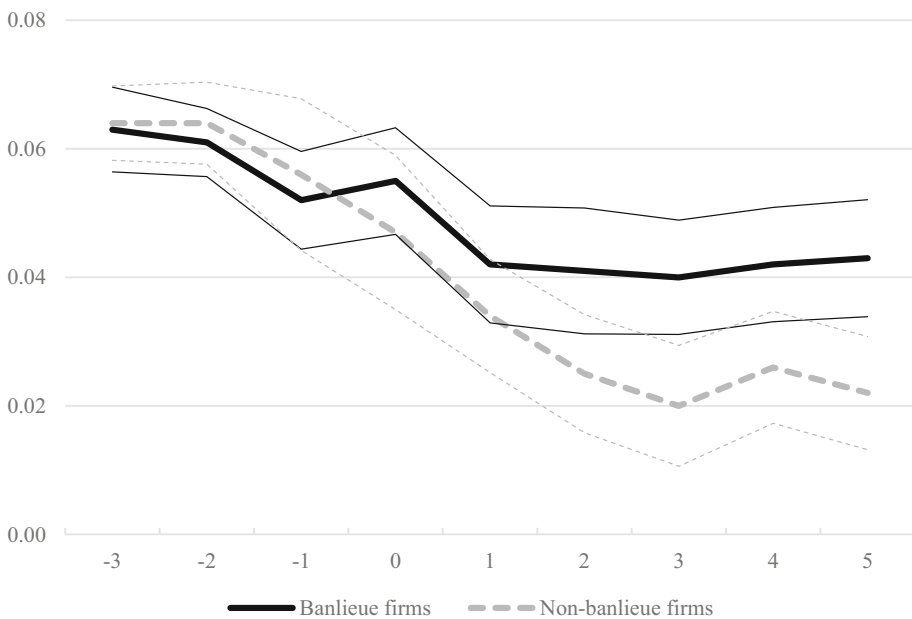
FIGURE 1 Evolution of return on assets (ROA) before and after the loan issuance. This graph plots the average ROA, along with the 90% confidence interval, in the banlieue group (black solid line) and the matched non-banlieue group (gray dashed line) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by Public Bank.

of nationwide decrease in profitability, our results may be contingent on times of deteriorating economic conditions. We explore this possibility in Appendix A. Specifically, we exploit regional heterogeneity in the trend in ROA to obtain variation in the extent to which firms operate in environments with deteriorating versus improving economic conditions. When splitting the sample in this fashion, we find that our results hold regardless of the underlying trend in profitability. This suggests that our results are unlikely to be contingent on times of deteriorating economic conditions.

5.2 | Employment of banlieue versus non-banlieue ventures following the loan issuance

5.2.1 | Employment growth

In columns (3) and (4) of Table 2, we turn to employment growth. The dependent variable is the percentage change in the number of employees from $t - 1$ to $t + 3$ (%Δ employees$_{t-1, \ t+3}$). We again report estimates from both the full sample (column [3]) and PSM (column [4]) specifications.[25]

As can be seen, we find evidence for higher employment growth at banlieue versus non-banlieue ventures following the loan issuance. The point estimates are 0.065 (full sample) and

---

[25]The number of observations in columns (3) and (4) of Table 2 is lower than in columns (1) and (2) due to the availability of the employment data in the DADS database.
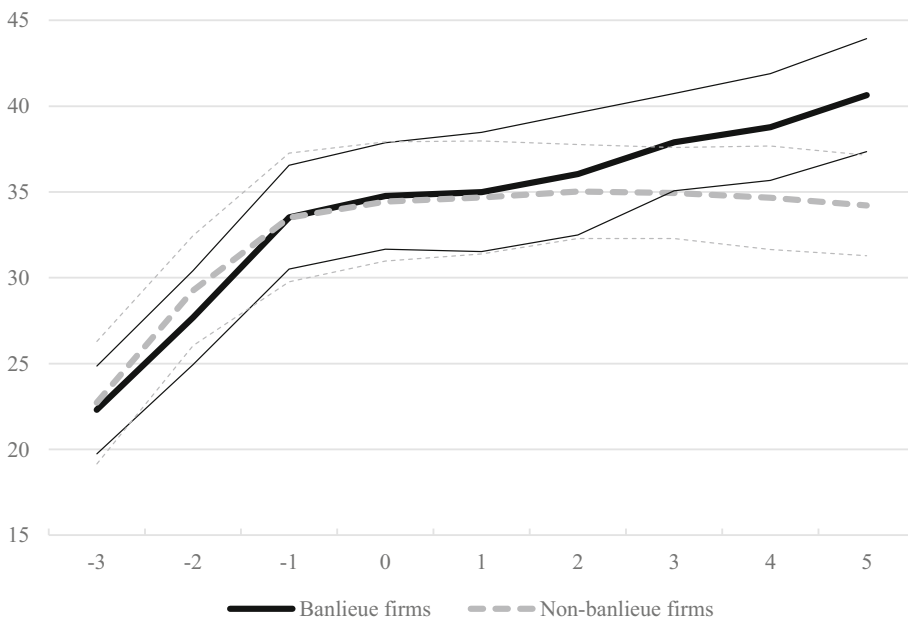
FIGURE 2 Evolution of employment before and after the loan issuance. This graph plots the average number of employees, along with the 90% confidence interval, in the banlieue group (black solid line) and the matched non-banlieue group (gray dashed line) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by Public Bank.

0.092 (PSM), implying a 6.5–9.2% higher employment growth for banlieue ventures compared to non-banlieue ventures. These coefficients are statistically significant at conventional levels, with p-values of .053 and .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.

5.2.2 | Differential employment growth by job type

In Table 3, we estimate variants of the regressions from Table 2, decomposing the number of employees into manual workers (columns [1] and [2]), clerical workers (columns [3] and [4]), intermediate workers (columns [5]–[6]), and white-collar workers (columns [7]–[8]).[26]

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 = .012, full sample) and

---

[26]To obtain a decomposition of %Δ 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 %Δ White-collar workers$_{t-1,t+3}$ = (White-collar workers$_{t+3}$ – White-collar workers$_{t-1}$) / total employees$_{t-1}$. This decomposition allows us to quantify how much of the composite estimate in Table 2 is due to each job type.

TABLE 3 Changes in employment by job type.

| | Blue-collar employees | | | | %Δ Intermediate workers$_{t-1, t+3}$ | | White-collar employees | |
| | %Δ Manual workers$_{t-1, t+3}$ | | %Δ Clerical workers$_{t-1, t+3}$ | | | | %Δ White-collar workers$_{t-1, t+3}$ | |
	Full sample (1)	Matched sample (2)	Full sample (3)	Matched sample (4)	Full sample (5)	Matched sample (6)	Full sample (7)	Matched sample (8)
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	.131	.001	.181	.000	.090	.002	.126	.012
Observations	5504	648	5504	648	5504	648	5504	648

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

0.031 (*p*-value = .003, PSM), respectively, which accounts for 34 and 35%, respectively, of the composite estimates reported in columns (3) and (4) of Table 2. 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 3 but using a longer-term horizon (5 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.[27]

5.2.3 | Differential employment growth by gender

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

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 = .130, full sample) and 0.024 (*p*-value = .060, PSM), respectively; for male employees, they are 0.042 (*p*-value = .147, full sample) and 0.065 (*p*-value = .048, PSM), respectively.[28] 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 .819 and .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 4 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.

---

[27]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 three times higher in banlieues versus 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.)

[28]The null of identical coefficients for female and male employees cannot be rejected with *p*-values of .420 (full sample) and .248 (PSM), respectively.

TABLE 4 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 (1)	Matched sample (2)	Full sample (3)	Matched sample (4)	Full sample (5)	Matched sample (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	.155	.004	.139	.005	.107	.000
Observations	5504	648	5504	648	4969	564

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

5.3 | Robustness and alternative interpretations

In Appendix A (and Tables A8–A17), 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 versus non-banlieue ventures; (ii) account for survivorship; (iii) account for differences in competition in banlieue versus non-banlieue neighborhoods; (iv) account for tax incentives; (v) use a coarsened exact matching (in lieu of a PSM) to construct the matched group of non-banlieue ventures; (vi) use as alternative comparison group banlieue ventures that do not receive a loan from Public Bank; (vii) cluster standard errors at the city level; (viii) include city by year and industry by year fixed effects; and (ix) distinguish between firms operating in geographical areas with deteriorating versus improving economic conditions.

In sum, the evidence presented in this section indicates that, following the loan issuance, banlieue ventures achieve greater improvements in financial performance and greater social impact compared to non-banlieue ventures. In the next section, we turn to the experimental evidence.

6 | EXPERIMENTAL EVIDENCE

The results presented in Section 5 are consistent with our main argument—that is, impact investors are able to 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.[29] 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 versus 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.[30] 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.

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).[31]

---

[29]We obtained IRB approval for conducting this experiment. Also, following common practice, we preregistered the experiment. The preregistration form can be accessed at https://aspredicted.org/Y5T_LCJ.

[30]More precisely, in the language of capital budgeting, the decision should only depend on the net present value of the expected future cash flows generated by the venture.

[31]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 pretest 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).

6.1.1 | Banlieue versus 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 versus 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: 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 connoted 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.

6.1.2 | Average versus 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 versus 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 higher 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.[32] 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 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.[33] 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 in manipulation 2 (non-banlieue and average growth potential), and 70 in manipulation 3 (non-banlieue and below-average growth potential).[34] 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

---

[32]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?"

[33]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."

[34]In Table A18, 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 .725 to .985.

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. The *p*-value of the test of equal means is .845 for age, and .925 for business experience.

6.4 | Results

6.4.1 | Acceptance rates

The results from the vignette experiment are provided in Table 5. 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?").

When comparing manipulation 1 (banlieue venture) versus 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 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 = .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

TABLE 5   Willingness to grant a loan to banlieue versus 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%
p-Value (1) vs. (2): .175		
p-Value (1) vs. (3): .184		
p-Value (2) vs. (3): .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%
p-Value (1) vs. (2): .000		
p-Value (1) vs. (3): .961		
p-Value (2) vs. (3): .000		

to only 41.0% for banlieue ventures. The difference (41.3 percentage points) is statistically significant at all conventional levels (p-value = .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) versus 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 acceptance rates are 88.6 versus 71.4% (p-value = .008); in panel (b), they are 82.3 versus 41.4% (p-value = .000).

However, a different pattern emerges when comparing manipulation 1 (banlieue venture with average growth potential) versus 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 versus 71.4% (p-value = .184); in panel (b), they are 41.0 versus 41.4% (p-value = .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).[35]

6.4.2 | 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 6, 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.

In panel (a), we compare manipulation 1 (banlieue venture) versus 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

---

[35]In Table A19, we provide several robustness checks that are variants of the analysis presented in panel (b) of Table 5. In panels (a–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.

TABLE 6 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)**	**t-Test**	**p-Value**
Rationales for declining the loan …				
… location	4.17	2.57	3.47	.001
… financial performance	3.63	3.85	0.65	.514
… growth potential	3.65	4.00	0.90	.370
… managerial abilities	2.95	3.78	2.62	.011
… ability to hire qualified employees	3.09	4.00	2.73	.008
… capacity to create value	3.67	3.78	0.31	.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)**	**t-Test**	**p-Value**
Rationales for declining the loan …				
… location	2.57	2.68	0.26	.796
… financial performance	3.85	4.26	1.05	.295
… growth potential	4.00	4.95	2.72	.009
… managerial abilities	3.78	3.07	1.84	.072
… ability to hire qualified employees	4.00	2.95	2.83	.007
… capacity to create value	3.78	4.17	0.91	.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)**	**t-Test**	**p-Value**
Rationales for declining the loan …				
… location	4.17	2.68	4.72	.000
… financial performance	3.63	4.26	2.47	.015
… growth potential	3.65	4.95	5.17	.000
… managerial abilities	2.95	3.07	0.50	.619

TABLE 6 (Continued)

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 ($N = 41$)**	**t-Test**	**p-Value**
... ability to hire qualified employees	3.09	2.95	0.52	.604
... capacity to create value	3.67	4.17	1.87	.064

Note: 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).

decision to reject the loan application of banlieue versus non-banlieue ventures (p-value = .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) versus 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 = .009). Finally, in panel (c), when comparing manipulation 1 (banlieue venture with average growth potential) versus manipulation 3 (non-banlieue venture with below-average growth potential), we find that a mix of "location" (p-value = .000) and "growth potential" (p-value = .000) are the main rationales underlying the decision to reject the loan application.

Overall, the evidence from Table 6 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 tend to achieve higher financial returns and greater social impact when contracting with banlieue versus non-banlieue ventures.[36]

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

---

[36]Note that the results presented in this section are likely conservative, as we only manipulate the banlieue dimension though 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 (Onzus, 2011). As such, banlieue ventures could face additional discrimination along these dimensions. In this spirit, Zenou and Boccard (2000) show that racial and spatial discrimination are often intertwined.

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 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.

Our findings indicate that impact investors can play an important role in helping these ventures unleash their potential. Specifically, our analysis shows that, after receiving loans from Public Bank, banlieue ventures achieve greater financial performance and greater social impact compared to non-banlieue ventures. 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.

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 et al., 2014; De Figueiredo et al., 2013; Delgado et al., 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 & 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 & Bogart, 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 et al., 2021; Chowdhry et al., 2019; Flammer, 2020, 2021; Flammer et al., 2023; Geczy et al., 2021; Lee et al., 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., 2019; De Rassenfosse & Fischer, 2016; Hochberg et al., 2018). Despite its importance, debt financing has received relatively little attention in strategy research compared to equity financing.[37] Nevertheless, the corresponding

---

[37]A search in the *Strategic Management Journal* over the past two decades (2002–2022) for articles containing "equity" or "debt" in their title gives a ratio of about 20:1 in favor of equity.

literature, albeit scarce, finds that debt financing affects a wide range of firm strategies such as innovation (Atanassov, 2016), diversification (Kochar & Hitt, 1998), and the firms' investments in human, physical, and intangible capital (Flammer & 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 the relationship between impact investing and 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 article contributes to the literature on the social inclusion of marginalized communities (e.g., Hwang & Phillips, 2020; Mair et al., 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; Fangwa et al., 2023; George et al., 2016; 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 versus non-banlieue neighborhoods. Moreover, we believe that, collectively, the tight matching used in the empirical 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 areas 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 work.

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 predominantly minority neighborhoods in terms of, for example, 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 suggest that impact investing can be a useful tool to improve not only the financial performance of business ventures in disadvantaged urban areas, 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.

Finally, 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).

ACKNOWLEDGMENTS

DATA AVAILABILITY STATEMENT

The data used in this study are proprietary to the French National Institute of Statistics and Economic Studies (INSEE) and cannot be posted. Access to the data can be obtained by submitting a proposal to INSEE.

ORCID

Romain Boulongne https://orcid.org/0000-0003-1199-7435
Rodolphe Durand https://orcid.org/0000-0003-4989-057X
Caroline Flammer https://orcid.org/0000-0001-6295-0915

REFERENCES

Abowd, J. M., & Kramarz, F. (2003). The costs of hiring and separations. _Labour Economics_, _10_(5), 499–530.

ADIVE. (2010). _Etude nationale sur les entrepreneurs dans les quartiers sensibles_. Agence pour la Diversité Entrepreneuriale.

Aghion, P., Bergeaud, A., Boppart, T., & Bunel, S. (2018). Firm dynamics and growth measurement in France. _Journal of the European Economic Association_, _16_(4), 933–956.

Aghion, P., Cette, G., Cohen, E., & Lemoine, M. (2011). _Crise et croissance: Une stratégie pour la France_. Conseil d'Analyse Économique.

Alcacer, J., & Delgado, M. (2018). Spatial organization of firms and location choices through the value chain. _Management Science_, _2_(11), 3213–3234.

Armendáriz, B., & Morduch, J. (2010). _The economics of microfinance_. MIT Press.

Atanassov, J. (2016). Arm's length financing and innovation: Evidence from publicly traded firms. _Management Science_, _62_(1), 128–155.

Badertscher, B. A., Givoly, D., Katz, S. P., & Leed, H. (2019). Private ownership and the cost of public debt: Evidence from the bond market. _Management Science_, _65_(1), 301–326.

Barber, B. M., Morse, A., & Yasuda, A. (2021). Impact investing. _Journal of Financial Economics_, _139_(1), 162–185.

Bates, T. (2010). Alleviating the financial capital barriers impeding business development in inner cities. _Journal of the American Planning Association_, _76_(3), 349–362.

Bates, T., Bradford, W. D., & Jackson, W. E. (2018). Are minority-owned businesses underserved by financial markets? Evidence from the private-equity industry. _Small Business Economics_, _50_(3), 445–461.

Bates, T., Bradford, W. D., & Seamans, R. (2018). Minority entrepreneurship in twenty-first century America. _Small Business Economics_, _50_(3), 415–427.

Bates, T., & Robb, A. (2013). Greater access to capital is needed to unleash the local economic development potential of minority-owned businesses. _Economic Development Quarterly_, _27_(3), 250–259.

Bates, T., & Robb, A. M. (2014). Small-business viability in America's urban minority communities. _Urban Studies_, _51_(13), 2844–2862.

Bates, T., & Robb, A. M. (2016). Impacts of owner race and geographic context on access to small-business financing. _Economic Development Quarterly_, _30_(2), 159–170.

Berrone, P., Gelabert, L., Massa-Saluzzo, F., & Rousseau, H. E. (2016). Understanding community dynamics in the study of grand challenges: How nonprofits, institutional actors, and the community fabric interact to influence income inequality. _Academy of Management Journal_, _59_(6), 1940–1964.

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? _Quarterly Journal of Economics_, _119_(1), 249–275.

Blanchflower, D. G., Levine, P. B., & Zimmerman, D. J. (2003). Discrimination in the small business credit market. _Review of Economics and Statistics_, _85_(4), 930–943.

Boarnet, M. G., & Bogart, W. T. (1996). Enterprise zones and employment: Evidence from New Jersey. _Journal of Urban Economics_, _40_(2), 198–215.

Briant, A., Lafourcade, M., & Schmutz, B. (2015). Can tax breaks beat geography? Lessons from the French enterprise zone experience. _American Economic Journal: Economic Policy_, _7_(2), 88–124.

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

Campbell, B. A., Coff, R., & Kryscynski, D. (2012). Rethinking sustained competitive advantage from human capital. *Academy of Management Review*, *37*(3), 376–395.

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

Ceres. (2018). *Disclose what matters: Bridging the gap between investor needs and company disclosures on sustainability*. Ceres.

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

Chatterji, A., & Seamans, R. C. (2012). Entrepreneurial finance, credit cards, and race. *Journal of Financial Economics*, *106*(1), 182–195.

Chowdhry, B., Davies, S. W., & Waters, B. (2019). Investing for impact. *Review of Financial Studies*, *32*(3), 864–904.

Cobb, J. A., Wry, T., & Zhao, E. Y. (2016). Funding financial inclusion: Institutional logics and the contextual contingency of funding for microfinance organizations. *Academy of Management Journal*, *59*(6), 2103–2131.

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

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

De Rassenfosse, G., & Fischer, T. (2016). Venture debt financing: Determinants of the lending decision. *Strategic Entrepreneurship Journal*, *10*(3), 235–256.

Delgado, M., Porter, M. E., & Stern, S. (2010). Clusters and entrepreneurship. *Journal of Economic Geography*, *10*(4), 495–518.

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

Durand, R., & Huysentruyt, M. (2022). Communication frames and beneficiary engagement in corporate social initiatives: Evidence from a randomized controlled trial in France. *Strategic Management Journal*, *43*(9), 1823–1853.

Edwards, A. (1957). *The social desirability variable in personality assessment and research*. Dryden.

European Commission. (2017). *The gender pay gap in France*. European Commission.

Fabrizio, K. R., & Thomas, L. G. (2012). The impact of local demand on innovation in a global industry. *Strategic Management Journal*, *33*(1), 42–64.

Fairlie, R., Robb, A., & Robinson, D. T. (2022). Black and white: Access to capital among minority-owned start-ups. *Management Science*, *68*(4), 2377–2400.

Fangwa, A., Flammer, C., Huysentruyt, M., & Quélin, B. (2023). The governance of non-profits and their social impact: Evidence from a randomized program in healthcare in the Democratic Republic of Congo. *Management Science* forthcoming.

Feldman, M. P. (2000). Location and innovation: The new economic geography of innovation, spillovers, and agglomeration. In G. L. Clark, M. P. Feldman, & M. S. Gertler (Eds.), *The Oxford handbook of economic geography* (pp. 373–394). Oxford University Press.

Fisher, R. J. (1993). Social desirability bias and the validity of indirect questioning. *Journal of Consumer Research*, *20*(2), 303–315.

Flammer, C. (2020). Green bonds: Effectiveness and implications for public policy. In M. Kotchen, J. H. Stock, & C. Wolfram (Eds.), *NBER environmental and energy policy and the economy* (Vol. 1, pp. 95–128). University of Chicago Press.

Flammer, C. (2021). Corporate green bonds. *Journal of Financial Economics*, *142*(2), 499–516.

Flammer, C., Giroux, T., & Heal, G. M. (2023). *Biodiversity finance. NBER working paper 31022*. National Bureau of Economic Research.

Flammer, C., & Ioannou, I. (2021). Strategic management during the financial crisis: How firms adjust their strategic investments in response to credit market disruptions. *Strategic Management Journal*, *42*(7), 1275–1298.

Geczy, C. C., Jeffers, J., Musto, D. K., & Tucker, A. M. (2021). Contracts with (social) benefits: The implementation of impact investing. *Journal of Financial Economics*, *142*(2), 697–718.

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

Gilbert, B. A., McDougall, P. P., & Audretsch, D. B. (2008). Clusters, knowledge spillovers and new venture performances: An empirical examination. *Journal of Business Venturing*, *23*(4), 405–422.

Global Impact Investing Network. (2018). *Impact investing*. Global Impact Investing Network.

Gobillon, L., Magnac, T., & Selod, H. (2012). Do unemployed workers benefit from enterprise zones? The French experience. *Journal of Public Economics*, *96*(9–10), 881–892.

Hiatt, S. R., & Sine, W. D. (2014). Clear and present danger: Planning and new venture survival amid political and civil violence. *Strategic Management Journal*, *35*(5), 773–785.

Hochberg, Y. V., Serrano, C. J., & Ziedonis, R. H. (2018). Patent collateral, investor commitment, and the market for venture lending. *Journal of Financial Economics*, *130*(1), 74–94.

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

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

INSEE. (2019). *Establishment*. Institut national de la statistique et des études économiques.

ISM Corum. (2017). *Testing au crédit bancaire (critère de l'origine supposée et du sexe), prêts immobiliers et prêts à la création d'entreprise*. ISM Corum.

Kerr, W. R., & Nanda, R. (2011). Financing constraints and entrepreneurship. In D. Audretsch, O. Falck, & S. Heblich (Eds.), *Handbook of research on innovation and entrepreneurship* (pp. 88–103). Edward Elgar Publishing.

Kochar, R., & Hitt, M. A. (1998). Linking corporate strategy to capital structure: Diversification strategy, type and source of financing. *Strategic Management Journal*, *19*(6), 601–610.

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

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

McCann, B. T., & Folta, T. B. (2008). Location matters: Where we have been and where we might go in agglomeration research. *Journal of Management*, *34*(3), 532–565.

McCann, B. T., & Vroom, G. (2010). Pricing response to entry and agglomeration effects. *Strategic Management Journal*, *31*(3), 284–305.

Neumark, D., & Simpson, H. (2015). Place-based policies. In G. Duranton, J. V. Henderson, & W. C. Strange (Eds.), *Handbook of regional and urban economic* (pp. 1197–1287). Elsevier.

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

Observatoire des Inégalités. (2021). Le sur-chômage des quartiers prioritaires (February 5).

Onzus. (2011). *Rapport 2011 de l'Observatoire National des Zones Urbaines Sensibles*. Onzus.

Petit, P., Bunel, M., Ene, E., & L'Horty, Y. (2016). Effets de quartier, effet de département: Discrimination liée au lieu de résidence et accès à l'emploi. *Revue Économique*, *67*(3), 525–550.

Pongeluppe, L. S. (2022). The favela effect: Spatial inequalities and firm strategies in disadvantaged urban communities. *Strategic Management Journal*, *43*(13), 2777–2808.

Porter, M. E. (1995). The competitive advantage of the inner city. *Harvard Business Review*, *73*(3), 55–71.

Porter, M. E. (2016). Inner-city economic development: Learnings from 20 years of research and practice. *Economic Development Quarterly*, *30*(2), 105–116.

PRI. (2022). *2021–2022 annual report*. London, UK.

Rocha, V., & Kacperczyk, A. (2021). Does more entrepreneurship benefit society? The effect on community crime using a quasi-natural experiment. Unpublished working paper, Copenhagen Business School.

Samila, S., & Sorenson, O. (2011). Venture capital, entrepreneurship, and economic growth. *Review of Economics and Statistics*, *93*(1), 338–349.

Samila, S., & Sorenson, O. (2017). Community and capital in entrepreneurship and economic growth. *American Sociological Review*, *82*(4), 770–795.

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

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

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

Vakili, K., & McGahan, A. M. (2016). Health care's grand challenge: Stimulating basic science on diseases that primarily afflict the poor. *Academy of Management Journal*, *59*(6), 1917–1939.

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

World Bank. (2020). *Poverty and inequality*. World Bank.

World Economic Forum. (2020). *Global gender gap report 2020*. World Economic Forum.

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

Zenou, Y., & Boccard, N. (2000). Racial discrimination and redlining in cities. *Journal of Urban Economics*, *48*(2), 260–285.

Zhang, J. (2007). Access to venture capital and the performance of venture-backed start-ups in Silicon Valley. *Economic Development Quarterly*, *21*(2), 124–147.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

ONLINE APPENDIX FOR

IMPACT INVESTING IN DISADVANTAGED URBAN AREAS

ROMAIN BOULONGNE
IESE Business School

RODOLPHE DURAND
HEC Paris

CAROLINE FLAMMER
Columbia University, NBER, and ECGI

CONTENTS

Appendix A. Robustness and alternative interpretations

Appendix B. Vignette experiment

Appendix figures and tables

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 Table 2, 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$_{t-4,t-1}$).[1] 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 Table 2, expanding the sample to also include

---

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

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 issuance (firm failure$_{t-1,t+3}$). In columns (1) and (2), we use a linear probability model (i.e., OLS). As is shown, following the loan issuance, we observe that the probability of failure is essentially the same for banlieue and non-banlieue ventures. 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).[2] 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 Table 2, 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 ($t - 1$).[3] 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

---

[2] 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.

[3] 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 Table 2, 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.[4] 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.[5]

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 column (2) of Table 2. Similarly, for employment growth (column (2)), the coefficient is 0.142 (p-value = 0.048), which is in the ballpark of what we reported in column (4) of Table 2. 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

---

[4] For a description of the CEM methodology, see Iacus, King, and Porro (2012).
[5] 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, we observe little improvement in ROA and employment growth following the granting of Public Bank loans to 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 indicates that the positive relationship between impact investing—in the form of loans issued by Public Bank—and firm outcomes (performance and employment growth) is large and significant among banlieue ventures, but not among 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.

Alternative clustering of standard errors

In our baseline analysis, we clustered standard errors at the firm level. This follows Bertrand, Duflo, and Mullainathan's (2004) recommendation to cluster standard errors at the treatment assignment level in difference-in-differences designs.

In Table A15, we re-estimate our baseline specifications, but clustering standard errors at the city level. This allows for dependence of the error terms within cities, which is potentially more conservative. As can be seen, we find that the significance of our estimates remains largely unchanged. In columns (1) and (2), the increase in ROA remains significant with a *p*-value of 0.000 in both columns. Similarly, in columns (3) and (4), the increase in employment remains significant at conventional levels with *p*-values of 0.063 (full sample) and 0.037 (PSM), respectively.

Alternative fixed effects

In Table A16, we augment our baseline specification by including industry × year and city × year fixed effects. Doing so allows us to account for industry- and city-specific time trends that could potentially confound our estimates. As can be seen, our estimates are robust to the inclusion of these finer-grained fixed effects. Specifically, the coefficient of the banlieue indicator is 0.027 (*p*-value = 0.003) in the ROA regression (column (1)) and 0.078 (*p*-value = 0.080) in the employment regression (column (2)).

Geographical areas with deteriorating vs. improving economic conditions

In Section 5.1, we documented a downward trend in ROA among both the banlieue and non-banlieue firms during our sample period. As we discussed, this trend is consistent with the nationwide decline in profitability observed in France during our sample period (e.g., Aghion et al., 2011).

Since our estimates are obtained during a period of declining profitability, our results may be contingent on times of deteriorating economic conditions. We examine this possibility in Table A17, where we exploit regional heterogeneity in the profitability trend to obtain variation in the extent to which firms operate in environments with deteriorating vs. improving economic conditions. Specifically, we partition

France into regions based on the French départements.[6] For each département, we compute the average change in ROA from $t-1$ until $t+3$ across all firms in that département. We then split our sample into two subsamples depending on whether the firm operates in a département with a positive and negative change in ROA, respectively, and re-estimate our baseline specifications in each of the two subsamples.

The results are presented in Table A17. As can be seen, our results hold regardless of the underlying trend in profitability. In columns (1) and (2), the coefficient of the banlieue indicator is 0.021 (p-value = 0.000) for firms operating in départements with downward-trending profitability, and 0.025 (p-value = 0.087) for firms operating in départements with upward-trending profitability.[7] Similarly, when using the PSM methodology in columns (3) and (4), the coefficient is 0.021 (p-value = 0.001) for firms operating in départements with downward-trending profitability, and 0.025 (p-value = 0.079) for firms operating in départements with upward-trending profitability. This indicates that our results are not contingent on the change in economic conditions in the firm's environment.

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.

---

[6] There is a total of 101 départements in France (e.g., Ardèche, Ardennes, Calvados, Cantal, Charente-Maritime).
[7] Note that the standard error is larger in the subsample with upward-trending profitability. This reflects the smaller number of départements with upward-trending profitability during our sample period, which reduces the precision of the estimates.

- 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

Aghion, P., Cette, G., Cohen, E., & Lemoine, M. (2011). Crise et croissance: Une stratégie pour la France (Conseil d'Analyse Économique: Paris, France).

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *Quarterly Journal of Economics, 119*(1), 249–275.

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

Iacus, S. M., King, G., Porro, G. (2012). Causal inference without balance checking: Coarsened exact matching. *Political Analysis*, *20*(1), 1–24.

Tirole, J. (1988). The theory of industrial organization (MIT Press: Cambridge, MA).

Figure A1. Distribution of propensity scores before and after the matching
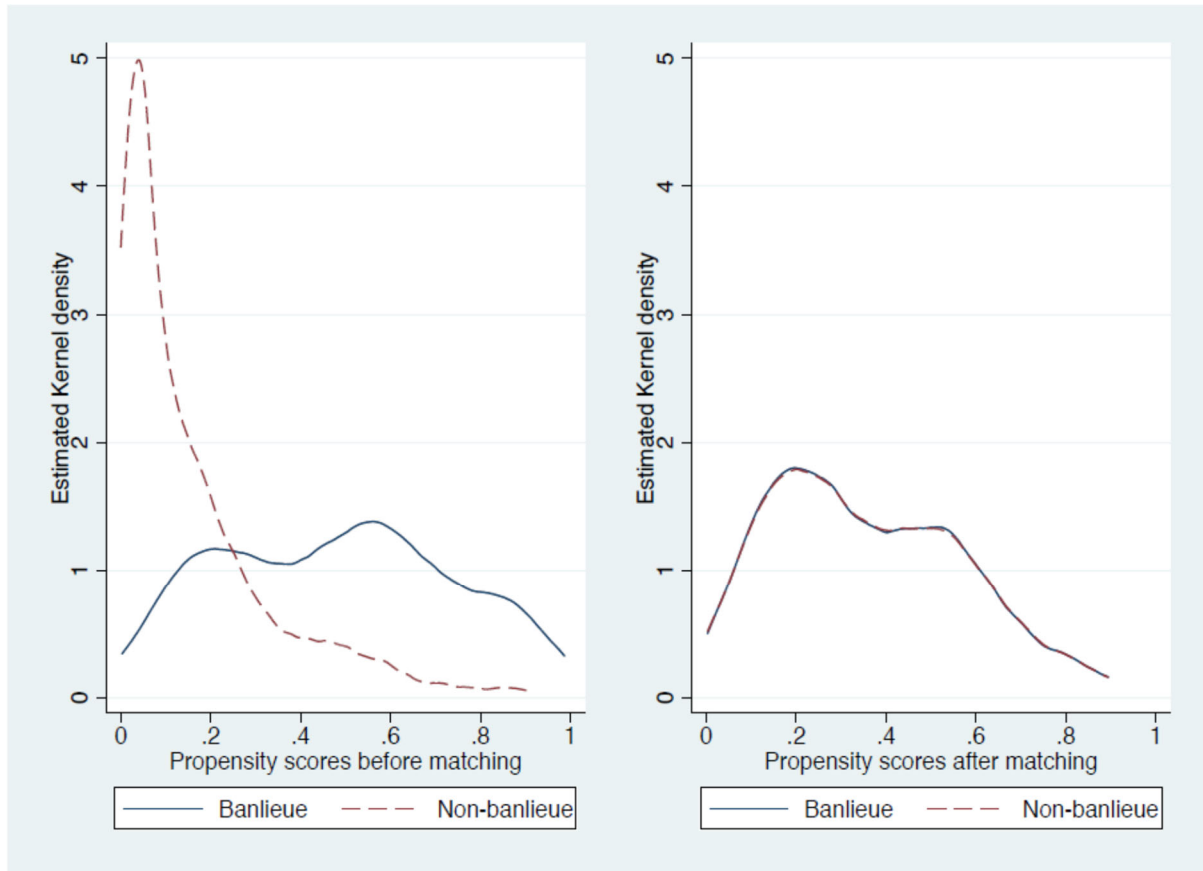
Notes. This figure plots the kernel density of the propensity scores of the banlieue (blue solid line) and non-banlieue firms (red dashed line) before (left-hand panel) and after (right-hand panel) the matching.

Figure A2. Evolution of ROA before and after the loan issuance (before matching)
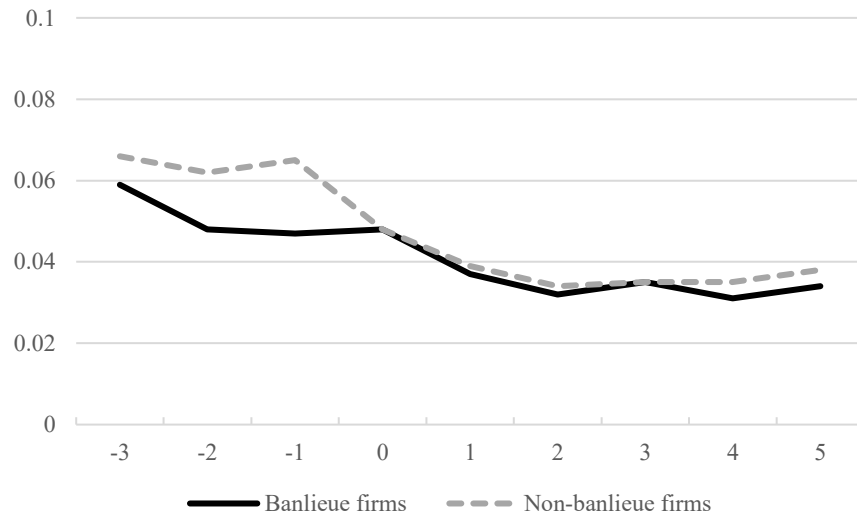
Notes. This graph plots the average ROA among the banlieue firms (black solid line) and the non-banlieue firms (gray dashed line) in the full sample (that is, prior to the matching) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by Public Bank.

Figure A3. Evolution of employment before and after the loan issuance (before matching)
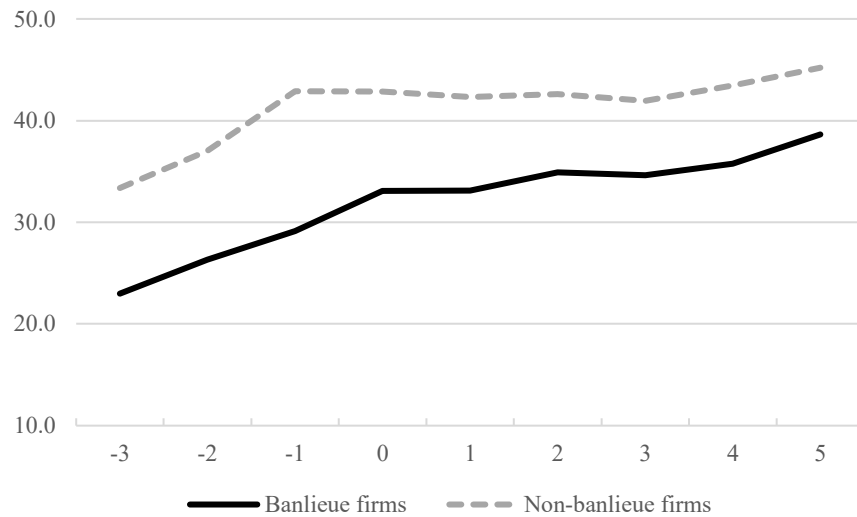
Notes. This graph plots the average number of employees among the banlieue firms (black solid line) and the non-banlieue firms (gray dashed line) in the full sample (that is, prior to the matching) on an annual basis from $t = -3$ until $t = 5$, where $t = 0$ refers to the year of the loan issuance by 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.	t-test	p-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	Matched non-banlieue ventures	t-test	p-value
	(N = 365)	(N = 365)		
a. Pre-issuance characteristics				
Age_{t-1}	17.304	17.984	-0.79	0.431
$Size_{t-1}$	7.514	7.507	0.09	0.930
$Leverage_{t-1}$	0.589	0.581	0.56	0.578
$Cash_{t-1}$	0.072	0.074	-0.40	0.689
ROA_{t-1}	0.053	0.056	-0.40	0.689
b. Pre-trends				
$\Delta\ Size_{t-2,\,t-1}$	0.006	0.006	-0.64	0.521
$\Delta\ Leverage_{t-2,\,t-1}$	0.045	0.063	-0.87	0.385
$\Delta\ Cash_{t-2,\,t-1}$	0.027	0.037	-0.80	0.427
$\Delta\ ROA_{t-2,\,t-1}$	-0.009	-0.008	-0.09	0.928
c. Loan characteristic				
$Log(loan\ amount)_t$	5.478	5.451	-0.79	0.431
d. Non-matching characteristics				
$Employees_{t-1}$	36.78	42.45	-1.29	0.197
$Wages\ per\ employees_{t-1}$	34,013	35,570	-1.44	0.151
$\%\Delta\ Employees_{t-2,\,t-1}$	0.133	0.088	0.83	0.407
$\%\Delta\ Wages\ per\ employees_{t-2,\,t-1}$	0.086	0.125	-1.29	0.198

Notes. In panel (d), the sample consists of N = 360 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$_{t-1,t+5}$		%Δ Clerical workers$_{t-1,t+5}$		%Δ Intermediate workers$_{t-1,t+5}$		%Δ White-collar workers$_{t-1,t+5}$	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
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$_{t-1,\,t+3}$		%Δ Clerical workers$_{t-1,\,t+3}$		%Δ Intermediate workers$_{t-1,\,t+3}$		%Δ White-collar workers$_{t-1,\,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Banlieue	-0.001	-0.002	0.004	-0.002	0.002	0.003	0.008	0.006
	(0.001)	(0.002)	(0.005)	(0.006)	(0.004)	(0.004)	(0.002)	(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$_{t-1,t+3}$		%Δ Clerical workers$_{t-1,t+3}$		%Δ Intermediate workers$_{t-1,t+3}$		%Δ White-collar workers$_{t-1,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
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$_{t-1,t+3}$ (manual workers)		Δ Female-to-male ratio$_{t-1,t+3}$ (clerical workers)		Δ Female-to-male ratio$_{t-1,t+3}$ (intermediate workers)		Δ Female-to-male ratio$_{t-1,t+3}$ (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)	(7)	(8)
Banlieue	-0.001	0.004	0.158	0.110	-0.021	0.019	0.070	0.002
	(0.005)	(0.005)	(0.174)	(0.234)	(0.033)	(0.033)	(0.060)	(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

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

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

Table A9. Firm failure

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

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

Table A10. Robustness—accounting for local competition

	$\Delta \text{ROA}_{t-1, t+3}$		$\%\Delta \text{Employees}_{t-1, t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.024	0.020	0.071	0.134
	(0.006)	(0.008)	(0.040)	(0.049)
Controls				
a. Pre-issuance characteristics				
Age_{t-1}	0.000		-0.003	
	(0.000)		(0.001)	
Size_{t-1}	0.006		0.003	
	(0.002)		(0.010)	
Leverage_{t-1}	-0.012		-0.086	
	(0.013)		(0.055)	
Cash_{t-1}	-0.036		0.297	
	(0.026)		(0.110)	
ROA_{t-1}	-0.317		0.299	
	(0.039)		(0.088)	
b. Pre-trends				
$\Delta \text{Size}_{t-2, t-1}$	0.069		-1.743	
	(0.044)		(0.633)	
$\Delta \text{Leverage}_{t-2, t-1}$	0.003		0.030	
	(0.004)		(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				
$\text{Log(Loan amount)}_t$	-0.004		0.008	
	(0.001)		(0.009)	
Repayable loan_t	0.004		-0.013	
	(0.000)		(0.018)	
d. Competition				
Herfindahl-Hirschman index_{t-1}	-0.011		-0.034	
	(0.006)		(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

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

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

Table A12. Robustness—coarsened exact matching

	Matched sample	
	Δ ROA$_{t\text{-}1,\,t+3}$	%Δ Employees$_{t\text{-}1,\,t+3}$
	(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	Matched non-banlieue ventures	t-test	p-value
	(N = 268)	(N = 268)		
a. Pre-issuance characteristics				
Age_{t-1}	16.324	16.946	-0.57	0.566
$Size_{t-1}$	7.482	7.500	-0.27	0.791
$Leverage_{t-1}$	0.617	0.597	1.07	0.286
$Cash_{t-1}$	0.074	0.065	1.10	0.270
ROA_{t-1}	0.054	0.058	-0.98	0.324
b. Pre-trends				
$\Delta\,Size_{t-2,\,t-1}$	0.005	0.005	-0.23	0.815
$\Delta\,Leverage_{t-2,\,t-1}$	0.051	0.021	1.16	0.243
$\Delta\,Cash_{t-2,\,t-1}$	0.032	0.044	-0.12	0.905
$\Delta\,ROA_{t-2,\,t-1}$	-0.009	-0.005	0.44	0.664
c. Loan characteristic				
$Log(loan\ amount)_t$	5.418	5.544	-1.40	0.161
d. Non-matching characteristics				
$Employees_{t-1}$	31.69	33.02	-0.33	0.745
$Wages\ per\ employees_{t-1}$	34,932	36,233	-1.10	0.270
$\%\Delta\ Employees_{t-2,\,t-1}$	0.164	0.100	0.40	0.684
$\%\Delta\ Wages\ per\ employees_{t-2,\,t-1}$	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

	$\Delta\ ROA_{t-1,\,t+3}$		$\%\Delta\ Employees_{t-1,\,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.013	0.022	0.067	0.130
	(0.005)	(0.007)	(0.025)	(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

	$\Delta\ ROA_{t-1,\,t+3}$		$\%\Delta\ Employees_{t-1,\,t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	-0.007	-0.003	-0.010	-0.016
	(0.002)	(0.003)	(0.011)	(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. Robustness—standard errors clustered at the city level

	Δ ROA$_{t-1, t+3}$		%Δ Employees$_{t-1, t+3}$	
	Full sample	Matched sample	Full sample	Matched sample
	(1)	(2)	(3)	(4)
Banlieue	0.023	0.030	0.065	0.092
	(0.006)	(0.010)	(0.035)	(0.044)
Controls				
a. Pre-issuance characteristics				
Age$_{t-1}$	0.000		-0.002	
	(0.000)		(0.001)	
Size$_{t-1}$	0.006		0.006	
	(0.001)		(0.010)	
Leverage$_{t-1}$	-0.012		-0.099	
	(0.012)		(0.055)	
Cash$_{t-1}$	-0.036		0.265	
	(0.027)		(0.108)	
ROA$_{t-1}$	-0.317		0.249	
	(0.043)		(0.102)	
b. Pre-trends				
Δ Size$_{t-2, t-1}$	0.069		-1.877	
	(0.047)		(0.698)	
Δ Leverage$_{t-2, t-1}$	0.003		0.026	
	(0.004)		(0.024)	
Δ Cash$_{t-2, t-1}$	0.000		-0.000	
	(0.000)		(0.000)	
Δ ROA$_{t-2, t-1}$	-0.000		0.000	
	(0.000)		(0.000)	
c. Loan characteristics				
Log(Loan amount)$_t$	-0.004		0.004	
	(0.001)		(0.009)	
Repayable loan$_t$	0.004		-0.013	
	(0.004)		(0.022)	
Industry fixed effects	Yes	–	Yes	–
City fixed effects	Yes	–	Yes	–
Year fixed effects	Yes	–	Yes	–
Adjusted R-squared	0.242	0.017	0.143	0.007
Observations	5,871	730	5,504	648

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

Table A16. Robustness—alternative fixed effects

	Δ ROA$_{t-1, t+3}$	%Δ Employees$_{t-1, t+3}$
	(1)	(2)
Banlieue	0.027	0.078
	(0.009)	(0.042)
Controls		
a. Pre-issuance characteristics		
Age$_{t-1}$	0.000	-0.003
	(0.000)	(0.001)
Size$_{t-1}$	0.004	0.002
	(0.002)	(0.010)
Leverage$_{t-1}$	-0.021	-0.106
	(0.017)	(0.054)
Cash$_{t-1}$	-0.036	0.297
	(0.041)	(0.108)
ROA$_{t-1}$	-0.310	0.297
	(0.054)	(0.102)
b. Pre-trends		
Δ Size$_{t-2, t-1}$	0.098	-1.739
	(0.051)	(0.698)
Δ Leverage$_{t-2, t-1}$	0.003	0.028
	(0.004)	(0.024)
Δ Cash$_{t-2, t-1}$	0.000	-0.000
	(0.000)	(0.000)
Δ ROA$_{t-2, t-1}$	-0.000	0.000
	(0.000)	(0.000)
c. Loan characteristics		
Log(Loan amount)$_t$	-0.002	0.008
	(0.002)	(0.009)
Repayable loan$_t$	0.004	-0.024
	(0.004)	(0.022)
Industry × year fixed effects	Yes	Yes
City × year fixed effects	Yes	Yes
Adjusted R-squared	0.257	0.159
Observations	5,871	5,504

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

Table A17. Geographical areas with deteriorating vs. improving economic conditions

	Δ ROA$_{t-1, t+3}$			
	Full sample		Matched sample	
	Firms in départements with negative trend in profitability	Firms in départements with positive trend in profitability	Firms in départements with negative trend in profitability	Firms in départements with positive trend in profitability
	(1)	(2)	(3)	(4)
Banlieue	0.021	0.025	0.029	0.035
	(0.006)	(0.015)	(0.009)	(0.020)
Controls				
a. Pre-issuance characteristics				
Age$_{t-1}$	0.000	-0.000		
	(0.000)	(0.000)		
Size$_{t-1}$	0.007	0.001		
	(0.002)	(0.004)		
Leverage$_{t-1}$	-0.001	-0.018		
	(0.010)	(0.022)		
Cash$_{t-1}$	-0.005	-0.104		
	(0.021)	(0.046)		
ROA$_{t-1}$	-0.194	-0.352		
	(0.056)	(0.032)		
b. Pre-trends				
Δ Size$_{t-2, t-1}$	0.132	0.057		
	(0.125)	(0.046)		
Δ Leverage$_{t-2, t-1}$	0.006	-0.007		
	(0.003)	(0.010)		
Δ Cash$_{t-2, t-1}$	0.000	0.000		
	(0.000)	(0.000)		
Δ ROA$_{t-2, t-1}$	-0.000	-0.000		
	(0.000)	(0.000)		
c. Loan characteristics				
Log(Loan amount)$_t$	-0.004	-0.002		
	(0.001)	(0.003)		
Repayable loan$_t$	0.007	0.005		
	(0.004)	(0.008)		
Industry fixed effects	Yes	Yes	–	–
City fixed effects	Yes	Yes	–	–
Year fixed effects	Yes	Yes	–	–
Adjusted R-squared	0.195	0.099	0.016	0.021
Observations	4,792	1,079	630	100

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

Table A18. Sample used in the vignette experiment

	All	Condition (1)	Condition (2)	Condition (3)	Chi-squared test of uniform distribution (p-value)
		Banlieue venture average growth potential	Non-banlieue venture average growth potential	Non-banlieue venture below-average growth potential	
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 A19. 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 A19 (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 5. 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.