The Small Bank Advantage: The Impact of Community Banks and Place-Based Policies on Small Business Development*

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Abstract

To assist policymakers and economic developers in measuring the effectiveness of using firm-specific incentives to attract large manufacturing investments and catalyze broader economic development, I study the role that access to community bank capital impacts spillovers from large manufacturing plants to small business development. I construct a novel dataset of large manufacturing plant openings between 2010 and 2018 and estimate the impact of these openings on small business lending, creation, and expansion in the local economy, using difference-in-differences designs with multiple control groups. The results suggest that community banks drive post-opening increases in small business lending, which translates to higher growth rates in small business creation and expansion. Small businesses in complementary industries experience the largest growth, while small businesses that may compete for labor and other resources do not. These findings will inform policymakers evaluating which places will benefit from place-based policies and financial regulators monitoring the consolidation of the banking industry.

1 Introduction

Policymakers at the local, state, and federal levels rely heavily on place-based policies to incentivize development in targeted communities. For example, states spent over $82 billion on firm-specific subsidies since 2002 (Slattery and Zidar, 2020) and federal lawmakers have provided over $50 billion in tax credits and incentives through the CHIPS Act and the Inflation Reduction Acts since 2022. Past research has studied the impact of large manufacturing investments on local economies, focusing both on direct employment gains and indirect spillovers to firms and workers in the region, finding that million-dollar plants ("MDPs")

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generate modest direct employment gains and small spillover effects to the local economy.[1] While the average MDP generates spillovers to the local economy, substantial heterogeneities are found with spillover effects ranging from significantly negative to positive (Monte et al., 2018; Greenstone et al., 2010). Despite evidence that incentivizing MDPs has failed to generate substantial spillovers for many communities, few papers have investigated the underlying mechanisms that drive successful MDP openings and subsequent economic growth, which is essential to inform economic developers and policymakers on whether their locality would benefit from a MDP investment.

This paper investigates one mechanism through which communities can capture spillover effects from MDP: access to financial capital from local banks. Access to financial capital is acutely important for small businesses, with over one third of small businesses applying for a loan or cash advance and almost three quarters holding outstanding debt during 2023 (Federal Reserve Banks, 2024). Small business creation and expansion is a primary driver of regional growth and entrepreneurship, and the spillover effects from MDPs to small businesses are motivated by numerous channels. These channels include income effects as higher wages and salaries increase demand for trade and consumer services provided by small businesses, supply-side effects increasing the demand for local suppliers, and knowledge spillovers that lead to entrepreneurial spawning (Neumark et al., 2011; Haltiwanger et al., 2013; Gompers et al., 2005). Local community banks are particularly important sources of small business credit; while institutional and regulatory constraints disincentivize large banks from engaging in small business lending, community banks leverage competitive advantages from flatter loan approval processes and soft information collection to provide higher acceptance rates and higher partial approval rates for small businesses (Berger and Udell, 1995, 2006; Federal Reserve Banks, 2024).

Building upon the MDP literature, this paper investigates the following research questions: a) do MDPs spur small business creation and expansion in the local economy, and b) what roles do community banks play in catalyzing spillovers to small businesses? The project offers three contributions to the literature. First, it builds upon recent works studying the effectiveness of place-based policy in the U.S. that incentivize investment by large manufacturers in targeted communities (Patrick and Partridge, 2022; Slattery and Zidar, 2020; Greenstone et al., 2010; Kim, 2020; Monte et al., 2018) by considering a refreshed dataset, relying on large plant openings between 2010 – 2018. Second, after replicating the results from previous papers studying employment and productivity spillovers, I evaluate a new outcome of MDP openings: small business creation and expansion, with careful consideration of the plausibly endogenous relationship between entrepreneurship

[1]The opening of MDPs are found to increase county-level employment by between 0% - 7.6%, generate 2-3% county-level wage growth, increase county-level manufacturing productivity by 0-9%, and increase incumbent firm productivity by 3 - 13% driven by spillovers to incumbents within the same industry as the MDP (Greenstone et al., 2010; Patrick, 2016; Patrick and Partridge, 2022; Bloom et al., 2019; Slattery and Zidar, 2020; Kim, 2020; Monte et al., 2018).

and bank/plant location choices. Third, it contributes to the literature on the role of financial intermediation in supporting small business development by studying the role of community banks in expanding small business development during periods of demand shocks (Neumark et al., 2011; Neumark and Simpson, 2015; Rupasingha and Wang, 2017).

The paper has important policy implications for economic developers and financial regulators. For economic developers, the analysis highlights the role of community banks in maximizing the benefits of MDP openings, where communities with fewer community banks may need additional financial support to sponsor small business development. For financial regulators, the paper raises awareness of the impact of accelerating bank consolidation and community bank branch closures on local economies.

2 Institutional Information and Data

2.1 Small Business, Debt Financing, and Community Banks

Small businesses rely on a variety of approaches to finance their operations, including using cash reserves, relying on owner personal funds, requesting informal loans from friends and family, applying for business or personal loans from financial institutions, or cutting costs by raising prices or downsizing (Federal Reserve Banks, 2025). The source of financing is impacted by factors such as a small business's credit score or industry, whether the firm is responding to specific financial challenges, and owner demographics.[2] Ultimately, small businesses consistently rely on external financing; over 50 percent use credit cards or loans on a regular basis, and 71 percent carry outstanding debt on their balance sheets—a statistic that has remained unchanged since 2016 (Federal Reserve Banks, 2025).

Within the competitive market of originating small business loans ("SBL"), banks have maintained strong market share, with over 80 percent of small businesses using banks as their primary financial services provider (Federal Reserve Banks, 2025). In contrast to lending to larger firms, small business lending has long been associated with relationship banking, where a lack of audited financial statements and other "hard information" available for lenders to evaluate the creditworthiness of small businesses increases the value of "soft information" which is predominantly acquired through direct communication between applicant and loan officer (Berger and Udell, 1995; Boot and Thakor, 2000). This contributes significantly to the bank SBL market share, with almost two-thirds of small business owners citing existing relationships with a lender

[2]Small businesses owned by individuals identifying as Asian, employing less than 50 people, operating in the leisure and hospitality industry, and operating with medium to high credit risk were more likely to use funds from the owner or family and friends, while businesses owned by individuals of Black race or less than 35 years of age, employing less than 5 people, or operating in the finance and insurance or professional services and real estate industries were less likely to have outstanding debt. When faced with financial challenges, such as increased costs or weak sales, small businesses are more likely to lean on personal funds and cash reserves. Source: Federal Reserve Banks (2025).

as the top reason for applying for SBLs at banks rather than online lenders or finance companies (Federal Reserve Banks, 2025).

Large banks face institutional and regulatory constraints, such as more layered loan review and approval processes and more rigorous regulatory examinations, that limit capacity to rely on relationship banking and soft information, which provides a competitive advantage in using soft information during loan review process to community banks (Berger and Udell, 1995; Berger and Black, 2011).[3] This is particularly evident in the loan review process, where 89 percent of decision makers at community banks meet with the applicant at some stage of the loan review process, compared to only 39 percent for noncommunity banks, providing opportunities for direct transmission of soft information (Federal Deposit Insurance Corporation, 2024). As such, community banks maintain significantly higher shares of SBLs in their loan portfolios and focus more heavily on larger working capital and commercial real estate loans compared to large banks, which often specialize in smaller loans or credit cards (Federal Deposit Insurance Corporation, 2018, 2024; Adams et al., 2023). Despite only representing around 12 percent of the banking industry by asset share, similar shares of small business owners applied for SBLs at large and small banks in 2016 and reported higher acceptance rates, partial approvals, and lender satisfaction rates with community banks (Jacewitz, 2022; Federal Reserve Banks, 2017). While the share of small businesses that applied to and relied primarily on community banks as a financial services provider decreased by 2025, the community bank market share for large ($> \$100,000$) SBLs remained constant (Federal Reserve Banks, 2025; Adams et al., 2023). Overall, community banks represent significant participants in the SBL market and have the flexibility and soft information gathering advantages to respond quickly to demand shocks in a local community.[4]

2.2 Data

I prepare a novel dataset of large manufacturing plant openings from 2010 - 2018 using the Conway Projects database.[5] Following the MDP literature, I focus on openings that substantially increase county-level pre-opening manufacturing labor force and exclude plants that do not increase the pre-opening manufacturing labor force by at least 15%.[6] The dataset is comprised of 77 large manufacturing plant openings

[3]Even as banks adopt financial technology ("FinTech") platforms to expedite the loan application, review, and approval processes for a variety of products and shifts competitive advantages to larger lenders, the diffusion of FinTech to small business lending has remained limited, with less than 10 percent of banks using it to receive, process, or approve SBL applications. Source: Federal Deposit Insurance Corporation (2024).

[4]As noted by former Chairman of the Federal Reserve Ben Bernanke, "Importantly, community banks are well positioned to go beyond the standardized credit models used by larger banks and consider a range of factors when making credit decisions. In particular, they often respond with greater agility to lending requests than their national competitors because of their detailed knowledge of the needs of their customers and their close ties to the communities they serve." Source: Speech at the Future of Community Banking Conference, February 16th, 2012.

[5]For each of the projects listed in the Conway Projects dataset, publicly available reporting and documentation was used to verify the number of jobs created by each plant and the operational status of the plant within 5 years of opening/expansion.

[6]The pre-opening manufacturing labor force threshold is applied to focus on places with the highest treatment intensity, thus increasing the statistical power in the analysis. Additional data collection efforts are ongoing to validate the opening and

that created an average of 815 direct jobs within 5 years, representing a 61 percent average increase in pre-opening manufacturing employment.

I collect small business lending data from the Community Reinvestment Act ("CRA"), which provides bank-county-year level data on the number and volume of loans originated to businesses with less than $1 million in annual revenue. The statutory filing threshold set by the CRA and federal regulators was approximately $1 billion in assets between 2005 and 2023, so SBLs originated by banks with less than $1 billion in assets over the period of analysis will be undersampled. The data is merged with Call Report data to identify which lenders are community banks (i.e., < 10 billion in total assets) and which are noncommunity banks. While both the number and dollar amount of lending can be used to measure volume of lending, the number of loans is the preferred measure given that the dollar amount can be underreported for lenders actively participating in the Small Business Association ("SBA") 7(a) program.[7]

I collect small business development data from the publicly available versions of the Census County Business Patterns ("CBP") and Business Dynamic Statistics ("BDS") datasets. The CBP is used to collect the number of small businesses (< 20 employees) in each industry at the 2-digit NAICS code level. The BDS provides data on the number of employees in small business establishments, the number of recently opened (≤ 12 months of operations) small businesses and the number of employees at the new firms, and the number of small businesses that closed in each year. Together, these measures will be used to measure small business creation and expansion.

3 Empirical Strategy

Large plant openings are not randomly assigned, with plant managers engaging in substantial site selection processes to identify the ideal location for investment. Prior literature uses several empirical designs to address this problem. Consistent with the literature, I construct three control groups that function as reasonable counterfactuals for the counties with MDP openings. First, I expand on the "runner-up" strategy adopted by previous authors by identifying the counties that were considered, but ultimately not selected, by the MDPs during the site selection process (Greenstone et al., 2010; Bloom et al., 2019; Kim, 2020; Monte et al., 2018). In addition to identifying the counties that were second or third options, I identify counties where initial investments were committed or announced, but exogenous shocks (such as sudden drop of commodity prices, concerns arising from deteriorating trade relations between U.S.-China, and

hiring status of all firms that announced the creation of at least 200 jobs. The results are robust to including plant openings that generate at least 10 percent increases in the pre-opening manufacturing labor force.

[7] Previous SBA analysis highlights that lenders originating SBA 7(a) loans (which are predominantly larger banks) likely underreport loans because only the unguaranteed portions of the SBA-guaranteed loans may be reported by the lending institutions. Smaller lenders, on the other hand, are more likely to hold the entire balance of SBLs on their balance sheets, even if the loan has an SBA loan guarantee attached (U.S. Small Business Administration, Office of Advocacy, 2022).

unexpected permitting issues) resulted in the cancellation of the project before opening. Second, I utilize matching techniques to identify three counties with similar socioeconomic levels and trends to the counties with plant openings pre-treatment.[8]. Finally, I implement recent advancements in synthetic difference-in-difference ("DiD") estimation to simulate a weighted-average counterfactual path for the treated counties (Arkhangelsky et al., 2021).

Given the staggered nature of large plant openings and the potential bias in staggered DiD models, I estimate weighted trimmed stacked DiD models which rely on carefully constructed stacks and saturated fixed effects to ensure clean controls (Goodman-Bacon, 2021; Wing et al., 2024) using the following equation:

$$Y_{cae} = \alpha_0 + \alpha_1 D_{ca} + \sum_{\substack{h=-\kappa_{pre} \\ h\neq -1}}^{\kappa_{post}} \lambda_h \mathbb{1}[e=h] + \sum_{\substack{h=-\kappa_{pre} \\ h\neq -1}}^{\kappa_{post}} \delta_h (D_{ca} \times \mathbb{1}[e=h]) + U_{cae} \tag{1}$$

where Y_{cae} is the outcome variable in county c in sub-experiment a in event time e; D_{ca} is an indicator for whether county c is treated in sub-experiment a (i.e., has a plant opening); κ_{pre} and κ_{post} are the number of pre and post periods, respectively, where a 5 year pre and post period is adopted in the analysis; $\mathbb{1}[e=h]$ is equal to 1 when the event time period is h periods from the plant opening O_c in sub-experiment a; and δ_h is the treatment effect in each event time period h. By including the saturated fixed effects for each event time period and building a stack for each sub-experiment, the model relies on comparisons between treated and control counties within each event time period, which mitigates bias from comparing treated units to control units in different event time periods with different compositions of treated and control units.

3.1 Results

First, I replicate the MDP literature using the DiD model outlined by Greenstone et al. (2010) and verify that the results are consistent with those found in previous analyses for the most frequently studied economic outcomes: productivity, total employment, and manufacturing employment at the county level. These findings confirm that the direct employment and spillover effects identified in previous papers are still present for MDP openings between 2010 - 2018.

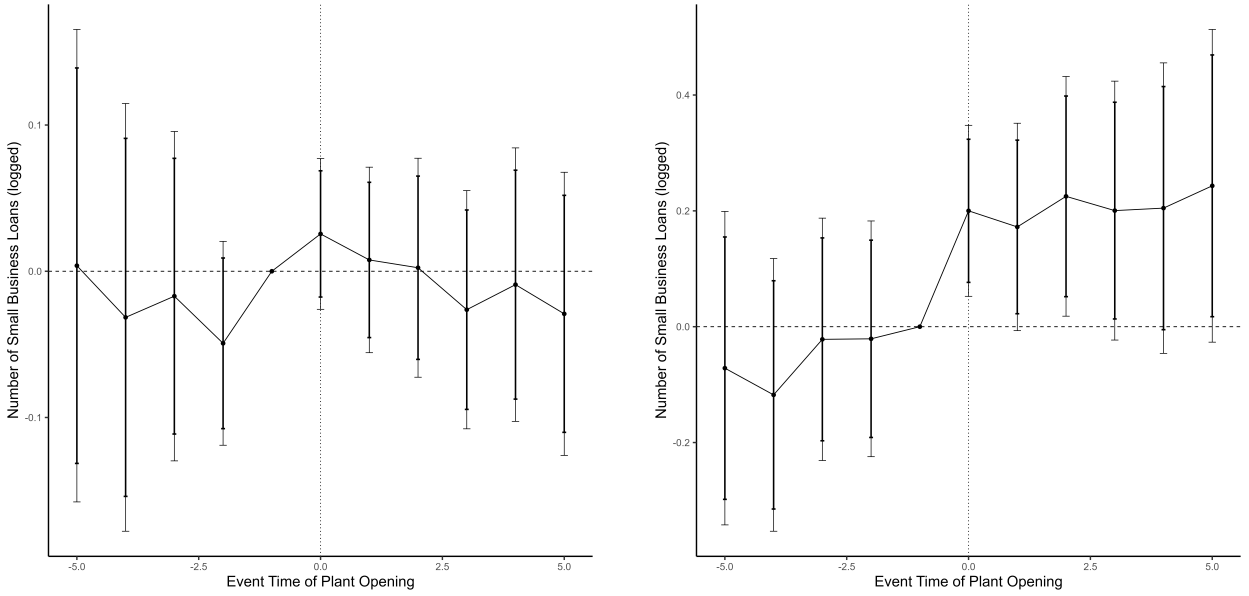
Next, I investigate the mechanism through which access to community banks increase spillovers from MDPs to small businesses: small business lending. The outcome variables of choice are the number of SBLs originated (logged) by (a) all banks, (b) noncommunity banks, and (c) community banks. The hypothesis is that while there may be increases in small business lending after large plant openings by the average bank, the flexibility and reliance on relationship banking offered by community banks will drive most of the

[8]Patrick (2016) provides an overview and supporting analysis to justify using matched controls over the runner-up approach.

increases in small business lending.

Figure 1 presents the event study estimated using the weighted trimmed stacked DiD model focusing on the number of SBLs originated by noncommunity banks (panel a) and by community banks (b) using the runner-up strategy, and Table 1 provides estimated ATT treatment effects for each of the three outcome variables using each of the three control groups/estimation strategies. The results provide strong evidence that community banks significantly increase SBL after the large plant opening, with community bank lending increasing by 21% during the five years after the opening, on average. Larger banks do not exhibit similar increases. These results are robust to both the matching and synthetic DiD methods and numerous adjustments made to address the imbalanced nature of the CRA panel.

Figure 1: Event Study Plots for SBL Originations (log) After Plant Opening for Community Banks (left) and Noncommunity Banks (right)



(a) Noncommunity Bank SBL Originations (log)

(b) Community Bank SBL Originations (log)

Note: Panel (a) presents the event study plot estimated using the runner-up/cancelled county control group with number of logged noncommunity bank SBLs originated. Panel (b) presents the event study plot estimated using the runner-up/cancelled county control group with number of logged community bank SBLs originated. The 95% confidence interval are represented by the thin bands, and the 90% confidence intervals are represented by the thicker bands. Standard errors are clustered at the county level. The event study estimations were performed using the weighted trimmed stacked DiD approach.

Finally, I study the impact of access to community bank capital on small business development. Driven by the increase in small business lending by community banks after MDP openings, I investigate whether counties with higher exposure to community banks experience higher magnitudes of spillover effects to small businesses. To identify counties with higher exposure to community banks, I calculate the total number of deposits at community banks in 2009 within 100 miles of the population-weighted county centroid and define

Table 1: Estimated Coefficients for Small Business Lending After Plant Openings

	(1) Runner-up/Canc.	(2) Matched	(3) Synth DiD
Panel A: All Banks			
Pretrends (Agg.)	-0.03	-0.04	–
	(0.05)	(0.04)	–
Post Opening ATT	0.03	0.03	0.07
	(0.03)	(0.03)	(0.06)
Observations	4,499	30,635	–
Panel B: Community Banks			
Pretrends (Agg.)	-0.06	0.02	–
	(0.10)	(0.09)	–
Post Opening ATT	0.21**	0.13*	0.16***
	(0.09)	(0.07)	(0.06)
Observations	4,412	28,921	–
Panel C: Large Banks			
Pretrends (Agg.)	-0.02	-0.04	–
	(0.05)	(0.04)	–
Post Opening ATT	-0.00	0.02	0.06
	(0.03)	(0.03)	(0.05)
Observations	4,499	30,635	–

Note: *Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*; the pretrends (agg.) estimated coefficients are the average of the event study coefficients for the 5 years before the MDP opening, with event time -1 as the reference group; the post opening ATT estimated coefficients are the average of the event study coefficients for the 5 years after the MDP opening; Panel A estimates the event study using all banks; Panel B estimates the event study using only community banks; Panel C estimates the event study using using only noncommunity banks. Standard errors are clustered at the county level.

the high-exposed counties as the top tercile of deposits.[9]

Table 2 presents the estimated coefficients for all treated counties (Panel A), high exposure treated counties (Panel B), and low exposure treated counties (Panel C) where the outcome variable is the number of small business establishments (logged). The results provide preliminary evidence that counties with higher access to community bank capital experience an increase in small business establishments after MDPs while counties with lower access to community banks do not. This finding supports the hypothesis that community banks are a critical channel through which MDPs generate positive spillovers to small businesses.

Preliminary heterogeneity analysis reveals that the increases in small business establishments in high community bank access counties after MDP openings is driven by firms in support industries, such as construction, wholesale trade, transportation and warehousing, and professional or support services, consistent

[9]Total deposits is the preferred measure of community bank intensity because community banks primarily fund their lending through deposits, and lenders with higher deposits will have more capacity to issue SBLs. Deposits in 2009 are selected because it is the year before the first large plant opening in the sample, and post-opening deposits may be endogenous to the plant opening. The results are robust to alternative measures of community bank market (e.g., 50 miles from the county centroid) and community bank intensity (e.g., using number of branches rather than deposits or top quartile rather than tercile.)

Figure 2: Estimated Coefficients for Small Business Growth After Plant Openings

	(1) Runner-up/Canc.	(2) Matched	(3) Synth DiD
Panel A: All Counties			
Pretrends	-0.00	-0.00	–
	(0.01)	(0.01)	–
Post ATT	0.00	0.01*	0.01
	(0.01)	(0.01)	(0.01)
Observations	4,488	30,822	–
Panel B: High Deposit Counties			
Pretrends	-0.01	-0.01	–
	(0.01)	(0.01)	–
Post ATT	0.02	0.03***	0.03***
	(0.01)	(0.01)	(0.01)
Observations	3,586	29,920	–
Panel C: Low Deposit Counties			
Pretrends	0.01	0.01	–
	(0.01)	(0.01)	–
Post ATT	-0.00	0.01	0.00
	(0.01)	(0.01)	(0.01)
Observations	3,443	29,777	–

Note: *Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*; the pretrends (agg.) estimated coefficients are the average of the event study coefficients for the 5 years before the MDP opening, with event time -1 as the reference group; the post opening ATT estimated coefficients are the average of the event study coefficients for the 5 years after the MDP opening; Panel A estimates the event study using all treated counties; Panel B estimates the event study using only the high-access treated counties; Panel C estimates the event study using the low-access treated counties. Standard errors are clustered at the county level.

with previous literature studying industry-specific spillover effects from MDPs (Greenstone et al., 2010; Bloom et al., 2019; Kim, 2020). In contrast, there is no evidence of increases in industries that compete for labor or resources with MDPs.

To address concerns that the community bank presence is non-random and correlated with local conditions that also shape post-opening growth, I use the number of banks at the county level in pre-Great Depression periods (1928) and the year of state-level branching deregulation to predict the number of community bank deposits in 2009 which represents a plausibly exogenous measure of community bank intensity. Using the predicted intensity measure, the results are consistent with the main analysis with increased statistical significance, providing further evidence that community bank presence is a key channel through which MDPs generate spillovers to small businesses.

4 Conclusion

This paper investigates the impact of large manufacturing plant openings on small business development and the role of community banks in facilitating spillovers to small business. The preliminary results support the hypotheses that community banks drive post-opening credit expansions, where counties with higher magnitudes of community bank deposits experience increases in small business establishments after MDP openings. Future versions of the paper will include additional measures of small business openings and expansions from the BDS, additional robustness checks, and a spatial general equilibrium model drawing on recent advancements by Monte et al. (2018) and Rothenberg et al. (2025) to validate the results from the empirical analysis and perform counterfactual analysis. Together, the empirical and structural analysis will inform economic developers and financial regulators alike on the role of small business capital on the effectiveness of place-based policies.

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