The U.S. Place Based Policy Supply Chain*

Gordon Hanson, Harvard University and NBER

Dani Rodrik, Harvard University and NBER

Rohan Sandhu, Harvard University

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Abstract. Place-based policy in the United States comprises a wide range of government programs that are spread across federal, state, and local agencies and that rely on public, private, and nonprofit organizations for policy design and implementation. We document how loosely connected vertical policy supply chains distribute resources from federal and state governments to recipients at the local level. The apparatus is the product of 150 years of policy innovation, both from the top down, with the federal government periodically launching major initiatives whose place-based impacts tend to be long-lived (even if the specific policies are not), and from the bottom up, with state and local actors engineering their own policy solutions, many of which have endured and now constitute modern policy practice. That practice includes not just tax incentives for business investment, the subject of most economic research on place-based policy, but support for community redevelopment, workforce development, small business promotion, technological innovation, and regional planning and strategy. Intermediary organizations that connect government agencies to local recipients are central to resource delivery. Because they tend to be created, funded, and (or) run by non-state actors, there appears to be wide geographic variation in organizational capacity for place-based policy. Understanding the causes and consequences of that variation is needed for a full accounting of how place-based policy works.

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I. Introduction

The United States has rediscovered a passion for place-based and industrial policy. During his presidency, Joe Biden authorized approximately $84 billion (see Table 1) for initiatives that either explicitly targeted economically distressed places (e.g., the Build Back Better Regional Challenge, Coal Communities Commitment, Recompete Pilot Program) or targeted investments in sectors that are highly geographically concentrated (e.g., electric vehicle production under the Inflation Reduction Act, semiconductor manufacturing under the CHIPS and Science Act). In scale and scope, Bidenomics, by which the policies came to be known, may seem like it was a sharp departure from past practice (whether or not it survives changing priorities following the election of Donald J. Trump in 2024). But industrial policy has a long history in the U.S. Indeed, much of recent U.S. policy either builds on an apparatus that developed over multiple decades or has strong historical antecedents in earlier policy experiments. The apparatus, though long-lived, defies easy characterization, let alone analysis. It comprises a wide range of government programs that are spread across federal, state, and local agencies and that rely on quasi-public, private, and non-profit organizations for policy design and implementation.[1] Where Bidenomics was distinctive was in its explicit adoption of the language of industrial and place-based policy and self-conscious reliance on (as well as expansion of) this apparatus in pursuit of novel goals such as the green transition and supply chain resilience.

Table 1: Recent Congressional Legislation Authorizing Funding to Place-based Federal Programs

Legislation	Total Authorized Funding	Place-based Funding
American Rescue Plan of 2021	$1.9 trillion	$2 billion
Infrastructure and Jobs Act of 2021	$550 billion	$18 billion
CHIPS and Science Act of 2022	$280 billion	$60 billion
Inflation Reduction Act of 2022	$500 billion	$4 billion

This complexity may explain why a broad range of industrial policy practices in which various levels of the U.S. government have long been engaged has remained largely hidden from the sights of economists. And it may account for why other government policies to alleviate economic distress, such as social transfer programs, have attracted much more research. Even when economists examine specific place-based policies, such as business tax incentives, enterprise zones, and worker training, they tend to

[1] The decentralized structure of U.S. place-based policy stands in contrast to the centralized policy process of the European Union, discussed in this volume by Berkowitz , Storper and Herbertson (2024) . See also Ehrlich and Overman (2020).

focus on individual interventions and often overlook the broader organizational context within which they operate and which may play a significant role in their execution and performance.

In this paper, we seek to bring some order to our understanding of how place-based policies in the U.S. work. We document the operation of what we call policy supply chains that distribute resources from federal and state governments to recipients at the local level. We use the concept of a supply chain because it aptly characterizes many features of a process that combines horizontally-differentiated policy actions that are designed, funded, and implemented within vertically structured policy domains. Federal and state agencies (like corporate headquarters) receive financial and other resources from their respective legislatures (akin to financial markets) and allocate these resources to intermediary organizations (equivalent to local subsidiaries), which in turn transform the resources into assistance for local recipients (the final consumers). In the U.S., there is not a single place-based supply chain but rather multiple chains that operate in parallel and that are organized around the policy domains (the counterpart to product lines) that comprise the practice of local economic development.[2]

By place-based policy, we mean initiatives intended to create jobs, raise productivity and wages, foster new industries and otherwise upgrade the economic structure of specific regions.[3] In focusing on intent and productive transformation to define which policies are place-based, we follow the approach of Juhasz et al. (2023) and Juhász, Lane, and Rodrik (2024) on industrial policy. Business recruitment is one of best known place-based policies in the U.S., and dates to incentive programs developed in the 1930s to promote industrialization of the South (Cobb 1993; Freedman 2017). Economists commonly equate place-based policy with this specific domain (often including enterprise zones, a close cousin). But modern practice involves an expansive policy portfolio that also includes workforce development, community redevelopment, small business promotion, and technological innovation.[4]

Figure 1 summarizes spending associated with major place-based programs in the U.S. over the last two decades. By our accounting, placed-based funding was substantial, amounting to around $100 billion

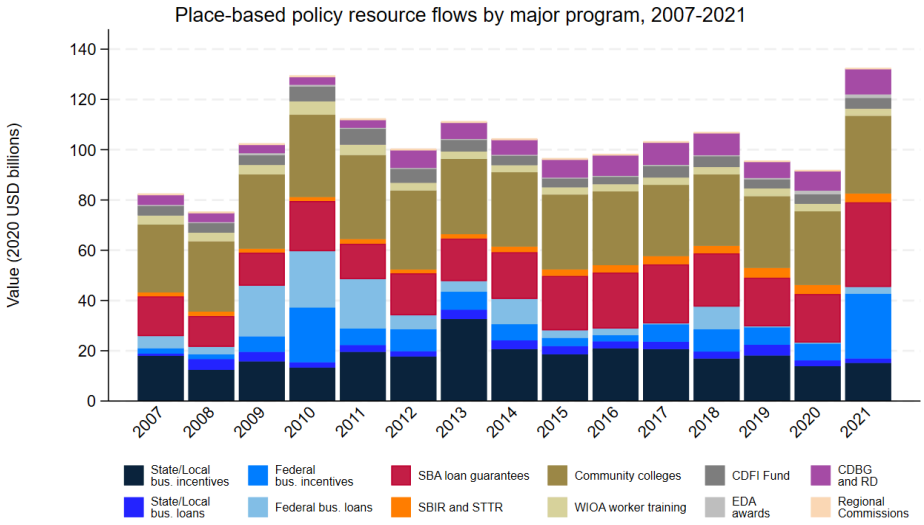
[2] Whereas social scientists refer to these policy domains as place-based, policy makers may more likely refer to them as comprising local economic development and the practitioners who undertake them as economic developers (not to be confused with development economists, who study the economies of lower income countries).

[3] According to Google Ngram, use of the phrase "place-based policy" was scant before the year 2000.

[4] Although housing and transportation policies often play a major role in regional economic development, they tend to be implemented nationally or state-wide, without targeting specific localities. We mention housing and infrastructure initiatives that do target regions based on their economic state and can be considered place-based. Economic developers often claim responsibility for other actions, including entrepreneurial development, industry cluster development, manufacturing and other sector strategies, and recovery and resilience. These easily fit within the domains we delineate.

annually, even prior to the spending jump associated with Bidenomics.[5] The supply chains for each of these streams have emerged through decades of policy experimentation and institutional innovation.

Figure 1:



Notes: SBA is value of loans guaranteed by the U.S. Small Business Administration, SBIR is Small Business Innovation Research grants, STTR is Small Business Technology Transfer grants, EDA is Economic Development Administration grants, WIOA is Workforce Innovation and Opportunity Act worker training funding, CDFI is the Community Development Financial Institutions Fund, CDBG is Community Development Block Grants (excluding housing), RD is the Dept. of Agriculture Rural Development program (excluding housing), Regional Commissions is appropriations to federal regional commissions, Federal and State/Local business incentives and loans is government spending on such, and Community Colleges is estimated government funding of career and technical education in public two-year colleges. See the Appendix for details. Values are 2020 USD.

Historically, the lack of industrial development in a region was a primary motivation for policy makers to undertake place-based interventions. Promoting industrial growth was partly behind the creation of the land-grant college system to serve the U.S. hinterland after the Civil War (Moretti 2004) and the Tennessee Valley Authority (Kline and Moretti 2014) to combat endemic poverty in Appalachia during the Great Depression. Modern initiatives, such as the European Union Cohesion Fund (Ehrlich and Overman 2020) and much of Bidenomics, target already industrialized regions that have suffered significant job loss due to globalization (Autor, Dorn, and Hanson 2013, 2022), technological change (Acemoglu and Restrepo 2020), and other forces (Charles, Hurst, and Schwartz 2019).[6] The

[5] Our measure of annual expenditures excludes many small programs (e.g., federal workforce training initiatives funded outside of the U.S. Department of Labor totaled $7 billion in 2017; (Government Accountability Office 2019)) and misses tax expenditures on investment incentives in which businesses receive transfers in the form of tax credits on their federal or state tax forms, as occurs with the federal Opportunity Zone program (see Corinth et al. 2024 in this volume).

[6] Bidenomics explicitly targeted "left behind" regions in which globalization and technological change caused widespread job loss. See *Remarks by National Economic Advisor Lael Brainard on Place-Based Growth* (The White House 2024)

objectives of place-based interventions have since proliferated to include technological innovation (Saxenian 1991; Scott and Storper 2015), business ownership among historically disadvantaged groups (Parilla, Donahue, and Martinez 2022), and the energy transition from fossil fuels to renewable sources (Gazmararian and Tingley 2023; Hanson 2023). The branching of targets may represent a form of mission creep, which is common in government agencies, or may reflect a change in beliefs among policy makers regarding the economic distortions that justify place-based interventions.

Place-based policies differ from other government policies that may also have differentiated local effects—such as macroeconomic policies or social safety nets—in that they explicitly target structural transformation in the productive sphere. Many government programs redistribute resources to distressed places incidentally but not intentionally. Foremost among these are social transfers, which produce place-based redistribution as a consequence of the poor households eligible for transfers being overrepresented in specific localities (Fikri, Eckhardt, and Glasner 2024) while the high-income households and corporations paying most federal income taxes are overrepresented elsewhere (Fajgelbaum et al. 2019; Colas and Hutchinson 2021).[7] Distinguishing people-based and place-based policies connects our discussion to larger debates about the effectiveness of alternative methods of policy targeting (Dixit 1985; Glaeser and Gottlieb 2008; Austin, Glaeser, and Summers 2018) .

The policy domains we study vary from those in which a single federal agency dominates a supply chain (as with the Small Business Administration for small business promotion) to those in which myriad decentralized actors operate in tandem or in competition with each other at each stage of the chain (as with business recruitment). They also vary in the form and function of the policy intermediaries that connect government agencies to program recipients. These intermediaries may be wholly public-sector agencies, quasi-public operations with partial independence from state legislatures, or non-profit organizations funded by public-private partnerships. Besides serving as middlemen, these often function as direct service providers, helping recipients solicit funds and allocate resources. For instance, local economic development organizations, which help broker incentive deals that bring private-sector investment to a region, also help businesses select production sites, navigate state or local regulatory processes, and address other needs (Francis 2016). Policy intermediaries have been studied primarily by social scientists outside of economics.[8] They feature

[7] Other policies that are place-based in their realization if not in their design include the building of transportation infrastructure (Ramey 2020), military bases (Zou 2018), federal and state prisons (Chirakijja 2022), and broadband internet access. Discussion of these policies is beyond the scope of our chapter. On how state and federal taxes induce place-based redistribution, see Fajgelbaum et al.(2015) and Holland and Schumacher (2024).

[8] See, e.g., Storper et al. (2015), Clayton, Feldman, and Lowe (2018), Feldman and Lowe (2018), Rodríguez-Pose (2018, 2020), and Ternullo (2024). Some intermediary organizations have ties to older membership associations, which proliferated in the United States around the turn of the 20th century (Cobb 1993; Safford 2009) and were active in civil society and the creation of social capital (Gamm and Putnam 1999; Putnam 2000; Skocpol, Ganz, and Munson 2000).

prominently in our discussion because their essential role in policy delivery demonstrates that the organizational capacity of places to create intermediaries matters for how place-based resources are allocated and utilized.

A supply chain perspective, although novel in discussing place-based policy, is useful for documenting and comparing across policy domains (a) the actors involved in designing and delivering policy resources, (b) the institutional mechanisms that have been created to rationalize the supply of resources provided by government agencies with the demand for resources from recipients at the local level, (c) the requirements in terms of local organizational capacity for obtaining government resources, and (d) how these features have evolved over time due to policy innovation at the federal, state, and local levels. Our descriptive analysis aims to deepen our sense of how policies are defined and implemented and the features of the process that may create disconnects between policy intent and policy action.

We begin in section II by tracing the evolution of place-based policy over time. We highlight major developments in policy tools and policy organizations.[9] In the 1860s, the federal government began subsidizing scientific and technical training to speed the adoption of new farming and industrial technologies. In the 1930s and 1940s, the government subsidized investments in public infrastructure and private industry, first to combat the Great Depression and then to support the U.S. role in World War II. In the 1960s, President Kennedy's race to the moon and President Johnson's War on Poverty directed place-based resources to scientific research labs (Kantor and Whalley 2023) and poor urban neighborhoods (Wilson 1987). In later decades, practitioners developed new approaches, such as using enterprise zones to attract private investment to low-income areas (Papke 1993), promoting high-tech industry clusters (M. Porter 1990; 1998a; 2000; Duranton 2011; Chatterji, Glaeser, and Kerr 2014), and expanding sector-based worker training (Schaberg 2020). Important organizational developments occurred alongside the formulation of new policies. Over the last 60 years, a site-selection consulting industry emerged to assist firms in negotiating deals with governments (Industrial Development 1956), new types of economic development organizations arose to orchestrate regional strategies, and the practice of local economic development coalesced into a formal profession based on a well-defined set of policy practices. These innovations give the practice of place-based policy its modern form.

In section III we examine in detail six place-based policy domains: regional planning and strategy, business recruitment, community redevelopment, small business promotion, workforce development, and technology promotion. For each, we identify (a) the government entities that supply funding, (b) the policy objectives, target recipients, and policy tools of these entities, (c) the organizations that intermediate the flow of resources from agencies at the top of a supply chain to local recipients at the bottom of a chain, and (d) the institutional constraints policy actors face.

[9] On the diffusion of public policies across U.S. states, see DellaVigna and Kim (2022).

Many federal place-based agencies were created by Congress in response to a perceived crisis of some kind. Although the crisis moments passed, the agencies have often survived. Among federal agencies currently responsible for place-based policy, the Small Business Administration was created in 1953, the Appalachian Regional Commission and the Economic Development Administration (EDA) were created in 1965, and the Employment and Training Administration (ETA) was created in 1973. All are active today; the first three featured prominently in President Biden's place-based initiatives. Yet the role of these agencies in the policy process has not remained static. Since the 1970s, programs across the federal government have faced pressure to devolve decision-making to the local level (Conlan 1984; Nathan 2006), which in the realm of place-based policy has given state and local actors a major role in how resources are distributed. For programs managed at the federal level, funding tends to be allocated to local intermediaries via proposal-based competitions or other rules-based mechanisms. State and local governments, by contrast, often allow for more discretion in how funds are allocated.[10] Despite its formulaic nature, federal place-based funding tends to be volatile, with long periods of flat spending punctuated by short-lived spending bursts, as occurred during the Great Recession and following the Covid-19 pandemic. Perhaps in response to federal spending patterns, private philanthropy has recently assumed a significant role in funding and disseminating innovations in place-based policy.[11]

Across decades of evolution in policy tools, strategies, and institutional actors, one feature of federal place-based policy appears to have remained stable: a lack of coordination by government actors across policy domains (GAO 2011; Choi and Moynihan 2019). Federal government agencies and programs, and many of their state government counterparts, tend to be organized as vertical silos. For instance, the EDA is authorized to integrate economic development efforts across federal agencies and departments. But in practice this integration appears to happen rarely. The EDA lacks a functional mechanism to coordinate its decisions with the ETA, the lead federal agency on worker training, or the Small Business Administration, which like the EDA is housed inside the U.S. Department of Commerce.

The absence of horizontal policy coordination among government actors is perhaps why quasi-public and nonprofit local economic development organizations play such a large role in the policy process. The role of these intermediaries highlights the imperative of local organization capacity for effective policy delivery and may explain why there appears to be wide regional variation in the conduct of place-based policy. Throughout the section, we give examples of such organizations.

[10] Discretion over policy choices may free public officials to pursue electoral or other objectives (Slattery 2024).

[11] Acs (2013) describes philanthropy as working alongside federal efforts to boost economic growth through supplying public goods and encouraging research and innovation.

We conclude in section IV with a discussion of directions for future research and of opportunities for constructive engagement between economists, other social scientists, and policy practitioners.

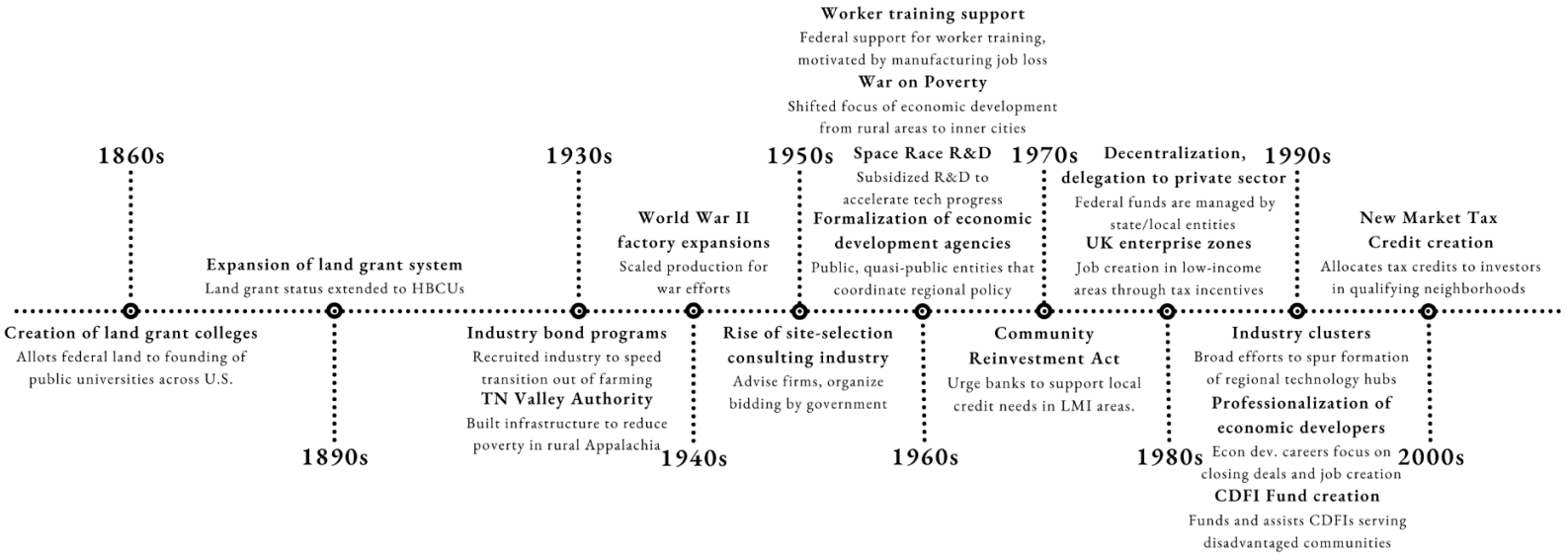
II. The Evolution of Place-Based Policy and Place-Based Actors

The tools of place-based policy and the organizational structures responsible for implementing them emerged in fits and starts over the last century and a half. One set of innovations occurred from the top down, as the federal government developed new programs to address acute national challenges. Some initiatives were not explicitly place-based but nonetheless had impacts on employment in affected regions that lasted for decades. As discussed by Garin (2024) in this volume, recent academic literature sees these experiments as revealing how spillovers cause economic activity to agglomerate spatially, such that localized shocks, be they due to policy or other sources, may realign regional employment and industrial specialization. Yet, federal policymakers appear to have internalized such lessons and incorporated them into later practice at best unevenly. Whereas many federal interventions tied to higher education are ongoing, those related to building productive capacity in specific sectors or expanding infrastructure in specific regions tend to have had shorter lifespans.

Another set of innovations occurred from the bottom up, as state and local actors created new policy instruments and engineered solutions for designing, resourcing, and implementing them. Bottom-up innovations have had enduring impacts on policy practice, perhaps more so than those that emanated from the top down. In this section, we highlight significant place-based (and related) innovations, which sets the stage for our discussion of modern policy domains in the following section.

The culmination of these innovations is policy practice in its modern form, the primary features of which are vertical silos structured around well-defined policy domains in which resources flow from lead federal and state agencies through intermediary organizations to local beneficiaries (Figure 2). Two features of how U.S. policy has evolved stand out. First, most place-based strategies in active use today have their antecedents in practices developed before World War II, even in the case of technology hubs. Second, federal policy tends to follow a cycle in which an approach is discovered, applied, abandoned or substantially defunded, and then rediscovered often much later. Latent memory about policy practice is strong (feature one), even though explicit memory is weak (feature two).

Figure 2. Timeline of Major Innovations in Place-based Policy



Land Grant Colleges. Prior to the Civil War, most U.S. universities were private institutions located in northeastern cities that primarily educated students from affluent families (Thelin and Gasman 2003). The federal land-grant college system, the first major U.S. place-based policy, changed that reality. The Morrill Act of 1862 granted 30,000 acres of federal land for the "the endowment, support, and maintenance of at least one college [in each state] where the leading object shall be . . . to teach such branches of learning as are related to agriculture and the mechanic arts" ("7 U.S. Code § 304 - Investment of Proceeds of Sale of Land or Scrip" 2025). Because few states had technical colleges at the time, the 57 educational institutions that were created expanded access to scientific knowledge across the U.S. Land-grant colleges were in effect the first technology hubs created by the federal government.

Access to land-grant colleges was by no means equal, as minority groups were often excluded. The Morrill Act of 1890, which required states benefiting from the land-grant system either to admit Black students or to create institutions specifically for them, extended land-grant status to 19 historically black colleges and universities (Lawrence 2022). A century later, the Tribal Colleges and Universities Land-Grant Act of 1994 further extended land-grant status to 35 tribal colleges and universities.

Land-grant institution status brings access to federal research grants, federal funds for agricultural research and extension services, and matching funds from state governments. Economists have documented a robust positive correlation between the presence of a university in a region and subsequent economic growth (e.g., Valero and Van Reenen 2019). In the case of land-grant colleges, causal evidence indicates that the cities in which they were located had differentially more college graduates and higher earnings among all types of workers up to a century after their creation (Moretti 2004). Also, the agriculture research stations they established helped raise local agricultural productivity over the medium to long run (Kantor and Whalley 2019).[12] The federal government has since expanded support for higher education in myriad ways, much of which has a place-based flavor given the location of many universities outside of major cities.

Infrastructure for Development. New approaches to place-based policy emerged in the 1930s in response to the Great Depression. The landmark Tennessee Valley Authority (TVA) was a multi-decade effort by the federal government that funded hydroelectric dams, navigation canals, roads, schools, and flood control systems across 163 counties in Appalachia. Begun in 1933, most TVA investments occurred between 1940 and 1958. At its peak, TVA annual spending equaled nearly 10

[12] See also Currie and Moretti (2002). Related work finds that the local presence of a regional public college or university (non-research-intensive institutions which are primarily financed by state governments and which award around two-fifths of U.S. B.A. degrees) improves intergenerational mobility (Howard and Weinstein 2022) and resilience to manufacturing job loss (Howard, Weinstein, and Yang 2024; Gagliardi, Moretti, and Serafinelli 2023). Over the last century, counties that were chosen for new research universities produced substantially more patents than runner-up counties (Andrews 2023).

percent of regional household income. The goal of the program was to alleviate entrenched rural poverty via region-wide investments in infrastructure that would precipitate industrial development. Kline and Moretti (2014) find the TVA had positive impacts on manufacturing employment in affected counties (relative to counties outside the treatment area), which persisted until the year 2000. When in 1965 the federal government created the Appalachian Regional Commission (ARC), to fund highway construction and other projects over a now larger 381-county area (Jaworski and Kitchens 2019), and the Economic Development Administration (EDA) to fund public works in distressed areas throughout the country, it appeared to be enshrining a TVA-style approach to federal place-based policy that would promote industrial development via major regional investments in power and transportation.[13] Yet, that future did not materialize. In the time since, the EDA and the ARC have rarely accounted for more than a small fraction of national place-based spending (see Figure 1). After spending decades building a TVA model for place-based policy, the government largely left it aside.

Industry Attraction. Another policy innovation of the 1930s proved to be more enduring. In 1936, the state of Mississippi launched Balancing Agriculture with Industry (BAWI), a program that permitted cities and counties to issue bonds to buy land on which they would build factories for lease to private companies at subsidized rates (Freedman 2017). The state was aiming to recruit manufacturing firms from Northern cities to expand manufacturing employment and counter a collapse in agricultural production.[14] Over the next two decades, the use of industrial bonds and tax breaks to attract business investment spread throughout the United States (Cobb 1993).[15] By 1962, nine Southern and 12 non-southern states had programs similar to Mississippi's BAWI. Like the TVA, the goal of business incentive programs was to promote the expansion of local industry. But unlike the TVA, most financing was state or local and much of the work (of recruiting businesses) was handled by local intermediary organizations, many of which were chapters of the U.S. Chamber of Commerce.[16] Recruiting business remains a core part of place-based policy in the United States. A large literature finds mixed evidence on the success of business recruitment in promoting local economic development (Greenstone, Hornbeck, and Moretti 2010; Bartik 2020; Slattery and Zidar 2020).

[13] The federal government later expanded the use of regional commissions to promote local economic development, along the lines of the ARC model, creating the Denali Commission in 1998, the Delta Regional Authority in 2000, the Northern Great Plains Regional Authority in 2002, and the Northern Border Regional Commission, Southwest Border Regional Commission, and Southeast Crescent Regional Commission in 2008. None of these commissions has received substantial funding, with no commission obtaining more than $35 million (2020 dollars) in any one year (Lawhorn 2024b).

[14] Most of the companies that arrived were textile producers. Counties that received investments had higher literacy and labor-force participation rates (relative to nearby counties) for decades into the future (Freedman 2017).

[15] The attraction of the South to Northern manufacturing may have been enhanced by rapid unionization in the North after passage of the National Labor Relations Act in 1935 (Farber et al. 2021).

[16] By 1966, 1,811 Southern communities had at least one economic development organization; approximately 80 percent were run by the local Chamber of Commerce and the rest were run by local development corporations (Cobb 1993).

Site-Selection Consulting. As states and localities began to compete in attracting investment, a consulting industry emerged to help companies find production sites and negotiate with governments. The Fantus Factory Location Service appears to have been the first site-selection consultancy in the U.S. (Shapiro 2011). Felix Fantus moved his furniture factory from Chicago, Illinois to Monticello, Indiana in 1919, in part to avoid the growing power of labor unions in Chicago. He branched into business consulting in the 1920s and launched his site-selection consultancy in the 1940s, which remained a major player in the industry until the 1990s (Leroy 2005, 200; Phelps and Wood 2023).

The success Fantus enjoyed was due in part to a detailed knowledge of potential production sites throughout the United States, which remains a core competence of modern site-selection consultancies (e.g., Global Location Strategies, the Site Selection Group, and Forsythe & Associates). In the 1980s and 1990s, accounting firms, real estate brokerages, and management consultancies developed site-selection businesses of their own. As of 2019, the United States had over 500 site-selection consultancies, with the largest firms overseeing 50 or more projects a year. Site-selection consultants are often criticized for promoting bidding wars among local governments in attracting companies. Slattery (2024) finds that government competition to attract large private sector investment projects tends to result in businesses capturing most of the rents associated with their decision to invest in a given location, while Mast (2020) documents intense competition for investment among neighboring local Industrial Development Authorities in the State of New York.

Professionalization of Economic Development. Just as site selectors arose to advise firms in their location decisions, professional economic developers emerged to staff the organizations whose job it was to recruit business. Many early economic developers—or "boosters" as Sinclair Lewis memorably referred to them in his 1922 novel *Babbit* about life in Midwestern industrial cities—worked in a local Chamber of Commerce. U.S. Chambers, which formed in the late 18th century to address the interests of merchants and traders, evolved to represent U.S. business more broadly (Gilles 2023; A. Katz 2015). They were natural leaders in state and local efforts to promote industrial development.

Many local Chambers of Commerce created their own industrial bureaus to manage the task. In 1930, Chamber employees who served as industrial bureau managers formed the American Industrial Development Council, with the goal of standardizing and legitimizing their profession by adopting a shared definition of industrial development (Denn and Webb 2000). In 1967, a parallel organization, the Helping Urban Business Council, was formed by those leading community efforts to retain businesses in cities beset by deindustrialization, urban poverty, and the flight of middle class families to the suburbs (Garmise, Nourick, and Thorstensen 2008). In 2001, the two organizations (since renamed) merged to form the International Economic Development Council (IEDC), the largest association of economic developers in the United States. The IEDC offers training and accreditation

programs and organizes conferences for economic development professionals (IEDC 2024). As of 2024, it had graduated 1,200 certified economic developers, had accredited 68 public and non-profit economic development organizations, and was serving approximately 4,500 individual members.

War-time Production. If one lesson of the TVA was that concentrated regional investments can generate long-lasting gains in manufacturing employment, the federal government would learn it anew during World War II, this time not in poor rural counties but in cities. After entering the war, the U.S. government needed to rapidly expand production of military equipment, which required factories to produce at much higher volume than they had in the past. Speed and scale necessitated government financing, both to build new factories and to expand existing ones. For strategic reasons, the government chose to place most new facilities in dispersed locations far from sea coasts. The War Production Board and the Defense Plant Corporation oversaw the creation of 366 government-owned and contractor-operated factories across 147 counties (Garin and Rothbaum 2024).[17]

The investments were massive. New industrial capital installed during the war equaled half of the book value of U.S. manufacturing capital in 1939. After the war, most of the newly constructed facilities were privatized and converted to civilian use and their government overseers were disbanded. Relative to others, counties that gained war-time factories experienced a jump in population, manufacturing jobs, and median family income that persisted for at least four decades.[18] Spatially concentrated investments in physical capital (plus worker training and experience acquired during war-time production) appear to have altered long-run regional comparative advantage. Whether or not this lesson was apparent to policy makers at the time, it did not appear to carry over into how the federal government subsequently conducted place-based policy.

Investing in R&D. War and national security have also inspired major federal investments in R&D. During World War II, the U.S. Office of Scientific Research and Development (OSRD) funded 2,250 research projects by 460 industry and university contractors to develop new technologies for the Allied military effort, which led to such innovations as jet propulsion, mass-produced penicillin, radar, and radio communications (Gross and Sampat 2023). As the first instance of large-scale extramural R&D funding in the U.S., the OSRD helped lay the foundation for the national innovation ecosystem of university research centers, government laboratories, large private contractors, and technology startups that developed after the war. Although Congress shuttered the OSRD once the war ended, it created the National Science Foundation in 1950 to continue federal support for scientific research. Although

[17] Treated counties had larger pre-war populations than other counties, but conditional on size did not differ from other counties in terms of initial income or manufacturing employment.

[18] Also as part of the war mobilization, the U.S. government provided management training to around six thousand manufacturing operators (Bianchi and Giorcelli 2022). These establishments had higher sales and productivity for up to 10 years beyond the wartime interventions.

the OSRD did not have explicit regional goals, counties receiving R&D funding during World War II had differentially higher rates of patenting (in the industries originally targeted for contracts) that persisted until around 1980. Electronics and communications were among the most affected sectors.

The long-lived impacts of the OSRD contrast with the shorter-lived impacts of regional investments by the National Aeronautics and Space Administration (NASA) during its moonshot phase (Kantor and Whalley 2023). The U.S. government created NASA in 1958 in response to the successful launch of the Sputnik satellite by the Soviet Union in the previous year, giving it broad powers to develop, test, and operate space vehicles. When President John F. Kennedy announced plans in 1961 to send astronauts to the Moon by the end of the decade, NASA's budget mushroomed, reaching 0.6% of U.S. GDP by 1965. Because two-thirds of the 400,000 jobs NASA contracts supported were in just 10 private contractors, NASA's spending was highly regionally concentrated. Employment in space-related industries did expand by more in the counties in which NASA contractors were located, but the implied spending multipliers were small relative to those for other types of defense spending.[19] Whereas the OSRD was succeeded by the NSF and substantial federal support for scientific research across a wide range of disciplines, NASA's legacy is less clear. After the last U.S. moon landing in 1972, the agency's funding declined sharply, both as a share of the federal budget and of U.S. R&D outlays.[20]

The War on Poverty. Concomitant with NASA's moonshot, President Lyndon B. Johnson expanded large-scale, means-tested federal government transfers as part of his Great Society initiative. Eligibility for newly created programs, including Food Stamps, Head Start, Medicaid, and Medicare, depended on the age, income, and (or) household composition of potential recipients (Burkhauser et al. 2024). The government was seeking to combat poverty by improving the access of poor households to education, health care, and nutrition. By targeting poor individuals rather than poor regions, the federal government elevated people-based over place-based approaches in combating economic distress. Federal anti-poverty spending priorities that target individuals or households remain in place today. As seen in Figures 1 and A1, in recent decades funding for government transfer programs—even excluding Medicaid, Medicare, and Social Security—has been three to four times that for place-based programs.

One place-based component of the War on Poverty was the Model Cities program, which was authorized under the Demonstration Cities and Metropolitan Development Act of 1966. Around that time, urban planners had begun to call for more holistic approaches to address the challenges faced by poor neighborhoods, beyond the construction of housing and commercial buildings which had been the primary feature of earlier efforts at urban renewal (Williams 2011). Model Cities combined

[19] For evidence on local R&D spillovers from spending by the U.S. Department of Energy, see Myers and Lanahan (2022).
[20] See "Historical Tables | OMB," The White House, accessed January 17, 2025, https://www.whitehouse.gov/omb/budget/historical-tables/.

standard components of urban renewal—new housing, redevelopment of buildings, community centers—with expanded healthcare, education, and minority and citizen-led local economic development councils. Over its eight-year lifespan, the program funded over 150 multi-year local experiments (Weber and Wallace 2012). In 1974, Model Cities and several related programs also administered by the Department of Housing and Urban Development were folded into the Community Development Block Grant program, which continues to fund physical development (housing, neighborhood improvements) and social services (childcare, health, education) in lower income neighborhoods. The creation of the CDBG decentralized decision-making to municipal authorities and gave cities more control over projects in their jurisdictions (Kettl 1979).

Decentralized Decision Making. From the New Deal through to the Great Society, power over public policy was centralized in the federal government. Beginning in the late 1960s, there was renewed interest in decentralizing government decision making. The ensuing decentralization push has elevated the role of state governments in policy design and execution (Grumbach 2022). Embracing a "new federalism," President Richard Nixon devolved power to states through block grants and general revenue sharing, which gave states more flexibility in their use of federal funds (Conlan 1984). The trend accelerated under President Ronald Reagan in the 1980s; he reduced federal involvement in domestic programs and encouraged states to manage welfare and social services themselves (Nathan 2006). After the large-scale reform of federal welfare programs by President Bill Clinton in 1996, decentralization advanced further (Nathan 2006). The Clinton years gave a fillip to federal place-based policy, with the creation of Empowerment Zones, the launch of Community Development Financial Institutions and New Market Tax Credits, the reauthorization of the Economic Development Administration, and the passage of the Workforce Investment Act. While these programs expanded federal role in defining place-based policy, they relied heavily on state and local intermediaries to target recipients, disseminate funds, and implement interventions.

Reinvesting in Low-Income Communities. Promoting investment in low-income neighborhoods was not a central feature of President Johnson's War on Poverty. In the decade following the launch of the Great Society, the loss of manufacturing jobs and the exodus of higher-income households from the urban core of many cities helped create concentrated pockets of urban poverty, which disproportionately affected minority populations (Bluestone and Harrison 1982; Wilson 1987). The federal government faced pressure to address low levels of bank lending to and business investment in poor urban neighborhoods (Getter 2020). Congress passed the Community Reinvestment Act (CRA) in 1977 to "encourage certain insured depository institutions to help meet the credit needs of the communities in which they are chartered, including low- and moderate-income (LMI) neighborhoods,

consistent with the safe and sound operation of such institutions."[21] It was the fourth in a series of bills intended to end racial discrimination in housing and finance.[22] Under the CRA, federal banking regulators periodically evaluate all federally insured lenders on their lending to LMI communities. Regulators weigh bank CRA scores when deciding whether to approve bank mergers and acquisitions.

There is little evidence that passage of the CRA materially changed lending to low-income neighborhoods.[23] Perhaps because of this record, the federal government has since experimented with other approaches to raising investment in low-income neighborhoods. In 1994, the Riegle Community Development and Regulatory Improvement Act created the Community Development Financial Institution (CDFI) Fund, which gives financial and technical assistance to local non-profit financial institutions—CDFIs—that specialize in providing loans, making equity investments, and offering other financial services to economically disadvantaged communities. And in 2000, the federal government established the New Market Tax Credit, which the CDFI Fund allocates to investors providing capital to businesses in qualifying neighborhoods. Between the enactment of the CRA and the creation of the New Market Tax Credit, the federal government evolved from relying on across-the-board pressure on financial institutions to invest in low-income areas to supporting institutions whose sole function is such investing.

Enterprise Zones. The New Market Tax Credit is a variant of an enterprise zone program, which emerged in the 1980s and has become among the most commonly used instruments in place-based policy. In 1978, U.K. parliament member Geoffrey Howe proposed that the government provide tax relief for businesses investing in areas with high poverty and high unemployment. The idea appealed to Margaret Thatcher when she was elected Prime Minister the following year. Conservative politicians in the United Kingdom and the United States had been searching for market-oriented approaches to deal with economic distress, following the rapid expansion of government transfer programs in the 1960s and 1970s. Between 1981 and 1984, the U.K. government established 23 enterprise zones.[24]

Although Congress failed to pass legislation to create enterprise zones in 1980 and 1992,[25] the concept was soon applied across the United States. The federal government created the temporary

[21] See "Community Reinvestment Act (CRA)," OCC.gov, July 23, 2022, https://www.occ.gov/topics/consumers-and-communities/cra/index-cra.html.

[22] The Fair Housing Act (1968), the Equal Credit Opportunity Act (1974), and the Home Mortgage Disclosure Act (1975) were passed with the aim of increasing access to affordable housing and financial credit by minority households.

[23] See Board of Governors of the Federal Reserve System (2000) and Getter (2020).

[24] Early research on EZs found that although tax incentives increased local investment and employment, the gains may have come at the expense of nearby regions (Bromley and Morgan 1985; B. M. Rubin and Wilder 1989; Papke 1993).

[25] This includes the 1980 Urban Jobs and Enterprise Zone Act (sponsored by GOP Rep. Jack Kemp) and the 1992 Tax Fairness and Economic Growth Act (GAO 2010).

Empowerment Zone program in 1994, and then institutionalized the approach in the New Market Tax Credit program in 2000. In 2017, President Trump created an alternative program, Opportunity Zones, but did not phase out the NMTC (Corinth et al. 2024). State and local governments have been active in the EZ space. As Freedman and Neumark (2024) discuss in this volume, over 40 U.S. states have EZ programs. These programs have emerged as a counter to traditional business recruitment. Whereas it is common in business recruitment deals for the investing firm to drive site selection and to negotiate with state and local governments over the magnitude of incentives, EZs tend to remove such discretion. Business incentives are pre-specified by statute, as are the geographic areas that qualify for them. There is, however, wide variation in how zones are administered, as we discuss in the next section, and as Freedman and Neumark (2024) explain in detail.

Industry Clusters. One can see the funding of the land-grant college system in the late 19th century, OSPD during World War II, NASA during the race to the moon, and NSF in the decades since as examples of government support for clusters of innovative agents in high-tech industries (where some initiatives have had an explicit geographic dimension, and others have not). Although industry clusters as a term of art in economic development was little used before 1990 (Sternberg 1991), the federal government appears to have found reasons to support technology hubs again and again over the last 150 years. Interest intensified in the 1980s, when the clustering of high-tech firms in California's Silicon Valley and along Route 128 in Massachusetts redrew attention to the spatial agglomeration of innovative activities (Saxenian 1991). Drawing inspiration from Alfred Marshall's (1890) analysis of the Lancashire cotton textile industry a century before, Michael Porter (1990; 1998a) helped popularize the idea that regions or countries could reshape their comparative advantage by helping industry clusters prosper. Early adopters included the State of Massachusetts, which promoted a biotechnology cluster around MIT (Nelsen 2005), the Research Triangle around Chapel Hill and Raleigh-Durham, North Carolina (M. E. Porter 2001; Cummings 2017), and Southwestern Pennsylvania, which developed a robotics cluster in and around Pittsburgh (M. Porter 1998b; Lopp, 2024).[26] Support for industry clusters is now a commonly used instrument by place-based practitioners, although there is skepticism among economists regarding its effectiveness (Duranton 2011; Glaeser and Hausman 2020).

Sectoral Worker Training. Federal government support for workforce development, a mainstay of place-based policy practice, has changed dramatically over the last 50 years. The first major federal legislation to fund the training of economically dislocated workers was the Manpower Development Training Act (1962), which was motivated in part by concerns that automation would soon cause

[26] The European Union launched the Cohesion Fund in 1994, out of concern that industry clustering in the E.U.'s richer center would pull activity out of the poorer periphery (Berkowitz, Storper, and Herbertson 2024).

manufacturing employment to decline (Barnow 1993). The focus on manufacturing job loss did not last long. During the War on Poverty, the government refocused training to target the economically disadvantaged and those receiving federal government transfers.

In the 1970s, as decentralization gained favor, the government devolved training to private contractors. When unemployment rose in the late 1970s, and private sector jobs were difficult to find, most training funds went to subsidize employment in the public sector.[27] In the 1980s, with renewed interest in finding market solutions to social problems, the government curtailed subsidies for public sector employment and gave local advisory boards—first Private Industry Councils and later Workforce Development Boards—the authority to administer training funds with guidance from the private sector. And in the 1990s (with mild updates in the 2010s), a now firmly decentralized training system under local control became demand driven. Today, individuals obtain federally funded employment services and vouchers for training (from vendors approved by local Workforce Development Boards) in one-stop centers located in community colleges, public universities, or other local hubs.

Government training programs have had mixed results in improving outcomes for disadvantaged adults and dislocated workers (Stanley, Katz, and Krueger 1998; Greenberg, Michalopoulos, and Robins 2003; Card, Kluve, and Weber 2018; Naidu and Sojourner 2020). Pessimism over federal training has motivated experimentation, especially by non-profit organizations (Cass 2019). Perhaps the most promising approaches to emerge are those that combine training in hard skills required by specific sectors (e.g., construction, health care, IT, manufacturing), often in consultation with local employers, and in soft skills needed in the workplace (e.g., career counseling, job search, work readiness). Many programs screen participants (e.g., for drug use and math and reading comprehension) to determine suitability for training. Sectoral training programs were developed by community-based organizations in the 1980s and 1990s (Mangat 2007). There is credible evidence that they increase individual employment and earnings from quasi-experimental research (Card et al. 2018) and randomized control trials (L. F. Katz et al. 2022a). Yet, there have been challenges in replicating and scaling successful approaches, possibly related to organizational complexities in implementing them or challenges many target participants face in meeting screening requirements (Schaberg 2020).

Government Transparency. Information on who receives funding from federal place-based programs is widely publicly available (with notable exceptions including Workforce Development Boards and Opportunity Zones). State and local governments, by contrast, are less consistent in their reporting practices. Concern that governments may use programs to help special interests has led to pressure from civil society organizations to enhance the transparency of government spending. In 1984, the

[27] In 1978, federal training funds supported the employment of around 800,000 workers in the public sector (Holzer 2009).

National League of Cities, the National Conference of State Legislatures, and other actors came together to create the Governmental Accounting Standards Board (GASB), a private body that sets financial reporting standards for U.S. state and local governments. GASB is modeled on the Generally Accepted Accounting Principles (GAAP), created by the Securities and Exchange Commission in the 1930s. Since its creation, GASB has issued 94 rule changes. Perhaps the most consequential for place-based policy is GASB Statement 77, which was introduced in 2015 and which requires that state and local governments disclose spending on business tax incentives in their annual reports.[28] Abiding by GASB rules is voluntary for state and local governments, although non-compliance could affect ratings on government bonds and therefore borrowing costs. To date, GASB 77 appears to have had little impact on the use of tax incentives by local governments (Thrall and Jensen 2024). [29]

Summary. There has been continuous and wide-ranging experimentation in place-based policy over the last century and a half. Most federal policy experiments were motivated by crises that galvanized public support for public action. In some instances, experimentation directly informed policy adoption, such as the through line from the OSPD to the NSF, and the enactment of the New Market Tax Credit following the piloting of Empowerment Zones. In other instances, the lessons of experimentation appear to have been lost, only to be rediscovered later, as with sectoral worker retraining to address manufacturing job loss. Federal policy has thus evolved in fits and starts, and with major swings in funding from one presidential administration to the next. State and local experimentation in place-based policy appears to have been more generative. Policies have been refined through decades of iterative experimentation, with philanthropic and private sector support playing a significant role in funding and diffusing policy innovations. A note of caution is that rising ideological polarization may be upending state and local policy innovation (Grumbach 2022). Although local economic development has historically been among the less politicized areas of government policy (A. Jensen et al. 2021), the intense polarization of the last two decades may be changing that reality (Ternullo 2024).

III. Place-Based Policy Domains

The culmination of the policy innovations discussed in Section II is an institutional setting in which place-based policy in the United States operates as a loosely connected set of vertical supply chains (see

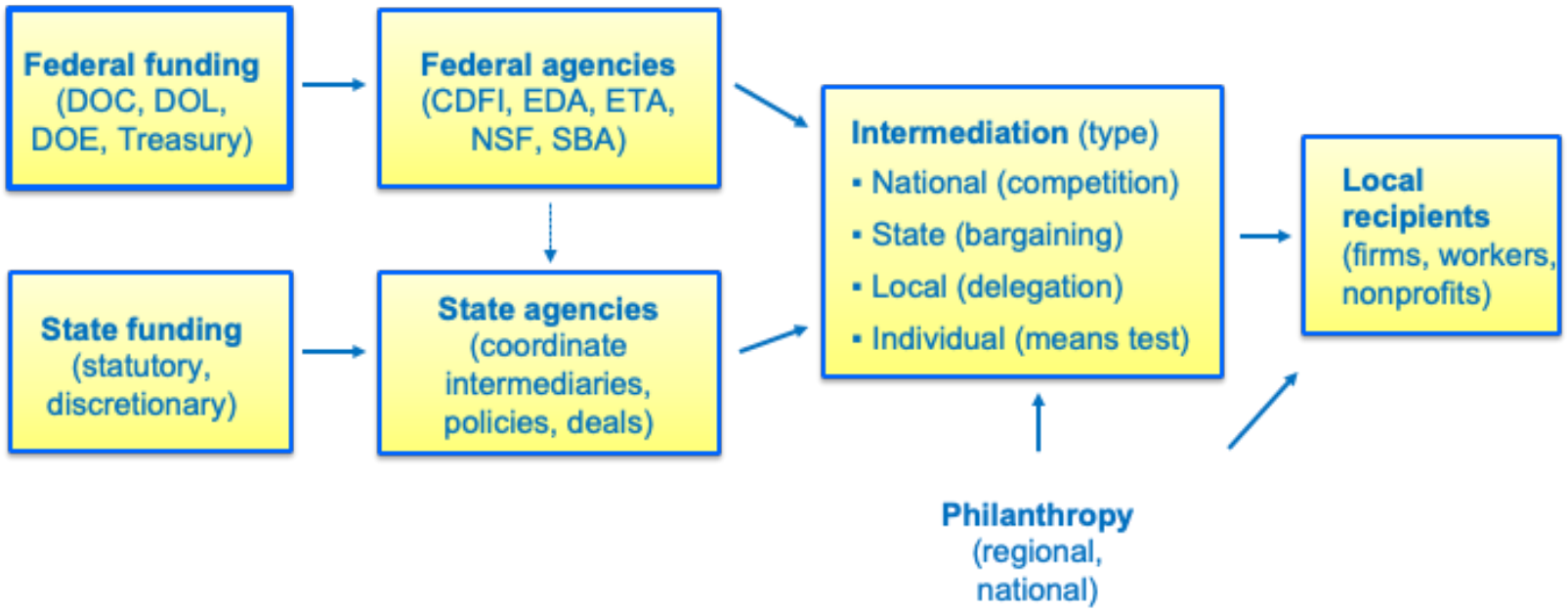
[28] Specifically, GASB 77 requires governments to disclose the gross dollar amount of taxes forgone, provide descriptive details on incentives, and supply related non-tax commitments contained in tax abatement agreements.

[29] Other innovations related to place-based policy include efforts to integrate decision-making across federal agencies, such as President Clinton's experiments with EZs and moves by the federal government to favor funding of large consortia rather than individual organizations (e.g., Build Back Better Regional Challenge, Pilot Recompete Program).

Figure 3). The legislative branches of federal and state governments appropriate funds to executive branch departments, which then make allocations to specialized public agencies. Agencies choose which types of policies and programs merit financial support, which types of recipients are eligible for funding, and the mechanisms through which funding will be delivered.

In this section, we describe the operation of place-based policy across six domains. While not exhaustive, these domains appear to account for most place-based spending. For each, we describe the government agencies and programs that comprise the domain, government funding sources, and the policy instruments that comprise modern practice. While some domains correspond to a specific federal agency, others are governed by legislation and policies that have been layered on top of each other over time. We provide an overview of the institutional apparatus established by various domain-specific federal policies and agencies, but also go beyond these to explain other phenomena that affect program implementation at the local level. These include local organizational capacity constraints, the interaction of current and previous programs, and non-government solutions to local needs. The resulting supply chain for each domain is thus a product of federal policies and local solutions, by both governmental and non-government actors.

Figure 3. The Place-based Policy Supply Chain



Intermediary Organizations. Before we delve into policy domains, it is helpful to consider in more detail the role of local intermediary organizations in place-based policy. The progressive decentralization of government decision-making authority has vested much control over policy design and selection of program beneficiaries in these entities. In some policy domains, the federal government funds a state entity which then funds local entities (as in the interplay between state and local Workforce Development Boards which collectively oversee federally subsidized worker training under the U.S. Department of Labor). In other domains, support flows directly from the federal to the local level (as in the case of the financial institutions that provide access to loan guarantees from the Small Business Administration to local business). For many policies and programs, having functional and proficient intermediaries at the local level appears to be a necessary condition for a region to obtain government support. Although higher level government bodies may mandate that local intermediaries deliver or oversee delivery of program benefits, they typically do not cover intermediaries' operational costs. Intermediaries must then seek budgetary support from other sources, including local government, philanthropy, and the private sector. Consequently, these intermediaries may predominate in places that are larger, richer, or blessed with stronger civil society institutions, which is suggestive of potentially large regional disparities in place-based administrative capacity.

Although philanthropy and the private sector often provide additional funds for place-based policy, they tend to do so at much lower levels than federal and state sources. Philanthropy often supports testing of experimental policy approaches, rather than their large-scale delivery, as in the case of sectoral worker training programs. The private sector may partner with state or local governments to fund the local economic development organizations (EDOs) that help coordinate and orchestrate regional development strategies. Just as in the 1940s and 1950s the local Chambers of Commerce that helped pioneer business recruitment were funded by local businesses, modern EDOs are often sustained by public-private partnerships. Other nonprofit EDOs, which predominate in smaller communities, typically fund their core operations with philanthropic support. Table 2 highlights the wide array of the local intermediaries that help deliver federal place-based policies. Throughout our discussion of place-based policy domains, we refer back to these actors.

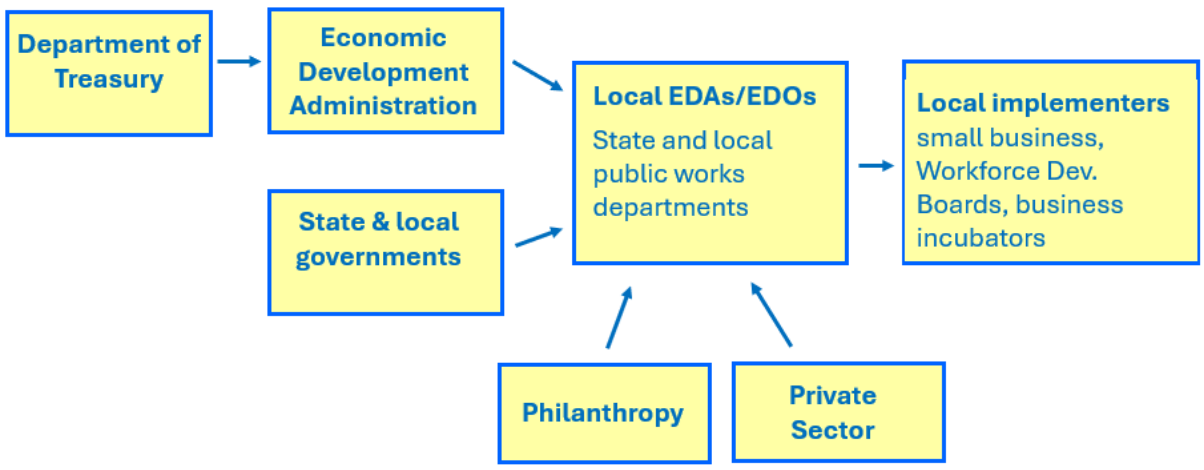
Table 2. Intermediating Entities for Place-Based Policy Domains

Domain	Local Intermediary	Main Activities	Type	Funding Source
Strategy and planning	Economic Development Organizations	Planning, strategy, bus. development	Non-profit	Private and nonprofit sources
	Economic Development Agencies	Planning, strategy, bus. development	Public, quasi-public	State and local governments, EDA
	Industrial Development Corporations	Business, property development	Public, quasi-public	State and local governments
	Economic Development Districts	Planning, strategy	Public	State and local governments, EDA
Community redevelopment	Community Development Financial Institutions	Financial assistance, technical assistance	Non-profit, for-profit	Dept. of Treasury, private sources
	Community Dev. Entities (CDE)	Investment tax credits	Non-profit, for-profit	Dept. of Treasury, private sources
Small business promotion	Certified Development Company (CDC)	Credit provision	Non-profit	Private sources, SBA service fees *(the SBA provides loan guarantees and covers some administrative costs such as litigating debt repayment)*
	SBA Premier Certified Lenders (PCLP)	Credit provision	For-profit, non-profit	
	SBA Preferred Lenders (PLP)	Credit provision	For-profit, non-profit	
	Small Business Development Centers	Business training, counseling	Non-profit	SBA, EDA, private sources
Workforce development	Workforce Development Boards	Training subsidies	Non-profit, public	Dept. of Labor
	Public Two-year Colleges	Career and technical education	Public	Federal, state, and local governments
Technological Innovation	Federal Laboratories	Research	Non-profit, for-profit	Various federal agencies

A. Economic Development Administration: Regional Planning and Strategy

Overview. We fittingly begin our discussion of place-based policy domains with the Economic Development Administration (EDA), which characterizes itself as the sole federal government agency with domestic economic development as its exclusive mission (EDA 2024). The EDA was established in 1965 via the Public Works and Economic Development Act with a vision to "create and retain jobs and to help stimulate industrial and commercial growth in distressed rural and urban communities across the nation" (History of EDA 2016). Its formation stemmed from three earlier pieces of legislation, which were intended to address the rural unemployment and economic distress that had intensified after the 1960-1961 recession (Lake, Leichenko, and Glasmeier 2004). Today, the EDA allocates most of its budget via competitive grants for public works (e.g., communication and transportation infrastructure, business incubator facilities) and economic adjustment assistance (e.g., market studies, revolving loans funds for small businesses).

Figure 4. Supply Chain of the Economic Development Administration



As seen in Figure 4, the Department of the Treasury allocates Congressional appropriations to the EDA, which is housed within the Department of Commerce. The EDA then funds local intermediaries through competitive grants. Intermediaries include local EDOs and state and local public works departments. Intermediaries then distribute EDA funds to local implementers, such as small businesses, Workforce Development Boards, local colleges and universities, and business incubators. EDA operations are supported by the agency's six regional offices, which review and process grant applications, monitor projects approved for funding, and may provide other forms of assistance to grantees, including connecting them to other federal resources (Lawhorn 2024b; Theodos et al. 2021). The EDA typically applies a matching-funds requirement, such that applicants must raise

a certain portion of funds from non-federal sources (Lawhorn 2024b), including state and local governments, philanthropy, and the private sector.

Institutional structures. To be eligible for EDA funding, a region must be part of an Economic Development District (EDD). EDDs date to the Appalachian Regional Development Act (1965), which created multi-county planning entities to help local governments identify development challenges in their communities. To obtain designation as an EDD, a region must have at least one geographical area within its boundaries that meets the EDA's regional distress criteria (13 CFR § 304.1).[30] The U.S. currently has over 400 EDDs, each of which is represented by a district organization, which may be public or non-profit.[31] An EDD must also have an EDA-approved Comprehensive Economic Development Strategy (CEDS), which serves as a mechanism for local planning and coordination. The CEDS, which an EDD must produce every five years, is intended to guide regional goals and priorities, must be created in consultation with local public and private sector actors, and must focus on local economic resilience. The EDA's planning program provides grants to municipal agencies representing EDDs to create and implement their CEDS. In practice, it is unclear whether the CEDS is a meaningful vehicle for regional planning or simply a bureaucratic hurdle to qualify for EDA funding (Reese and Fasenfest 2003; Erickcek et al. 2012).

Rise of non-profit EDOs. The status of the EDA within the federal government has risen and fallen over time. Its mandate expanded in the 1970s, when its ambit grew to include urban areas and it was enlisted to help counter adverse economic shocks and aid in recovery to natural disasters through the newly created Economic Adjustment Assistance and Trade Adjustment Assistance programs (Lawhorn 2024a). In the 1980s, President Reagan sharply cut the EDA's budget and threatened to eliminate the agency entirely (Lake, Leichenko, and Glasmeier 2004). Because of the loss of federal funding, the locus of action in economic development shifted to the state and local level (Fainstein and Fainstein 1989). Even when the agency was reauthorized in 1998, its funding did not recover, and its staffing has since remained uneven (Theodos et al. 2021).

One consequence of the EDA's tumultuous history has been the proliferation of non-profit EDOs, which expanded in the 1980s and which are distinct from public sector economic development agencies under executive branch control (Sullivan 1998). Nonprofit EDOs tend to receive both public and private funds (Humphrey and Erickson 1997), which helps them insulate their operations from

[30] Distress is defined as having (i) an unemployment rate at least one percentage point greater than the national average rate, (ii) a per capita income of 80 percent of the national average or less, or (iii) a Special Need, as determined by the EDA.

[31] Since EDDs are multijurisdictional units, the district organization representing them may be created through "an inter-governmental agreement providing for the joint exercise of local government powers" or be instituted by state legislation to represent a multijurisdictional region (13 CFR § 304.2).

political cycles (Hatcher and Hammond 2018), maintain flexibility in programing (Feiock and Andrew 2006), and facilitate collaboration and coordination among a broad set of local stakeholders, including the business community (Sullivan 2004; Stokes, Mandarano, and Dilworth 2014). Hatcher and Hammond (2018) find that communities in which non-profit EDOs (as opposed to public sector agencies) manage local economic development tend to prioritize the funding of infrastructure, workforce development, housing, and partnerships with the private sector.

Perhaps not surprisingly, non-profit EDOs are more prevalent in larger urban areas than in smaller towns and rural communities (Pender 2015), suggesting that the latter may face capacity constraints in designing projects, applying for funding, and (or) complying with federal funding requirements.[32] Although EDDs support grant-making activities in disadvantaged communities, in which they are often the only planning agency present (Erickcek et al. 2012; Schwartz 2024), the EDA's requirements for matching funds appears to be onerous. At the time of its founding, the EDA was restricted to fund 50 to 80 percent of project costs, depending on project characteristics. These restrictions have since been modified but remain broadly in place. Requirements for matching funds appear to be especially problematic for smaller communities and rural areas.[33]

Classifying EDOs. The rise of nonprofit EDOs means that there is now a wide range of public, quasi-public, and private organizations working on local economic development. These organizations operate at multiple levels, representing states or sub-state jurisdictions, including cities, counties, EDDs, and groups of neighboring towns and counties. States and regions often have their own operating models, which reflect varying cultures of public-private collaboration. This complicates the nomenclature used to define this array of organizations. We have alluded to this group of organizations throughout this paper, and provide a classification in Table 3.

In terms of their function, Francis (2016) describes the work of EDOs as including marketing states or regions to business, attracting new business investment, retaining and expanding existing businesses, supporting entrepreneurship, and coordinating across local stakeholders involved in the economic development process. A subset of EDOs are Industrial Development Corporations, which have investment portfolios of real estate and financial instruments. EDOs are multi-purpose in that they undertake a wide range of activities, depending on regional needs. They serve as connectors and

[32] See, e.g., Headwater Economics' Rural Capacity Map: "A Rural Capacity Map - Headwaters Economics," accessed January 17, 2025, https://headwaterseconomics.org/equity/rural-capacity-map/.

[33] Amendments in 2004 allowed the EDA to waive the matching fund requirements for Indian tribes and for certain states, local governments, and nonprofit organizations if the agency determined that an entity had exhausted its taxing or borrowing capacity. Yet, applications with more matching funds are often deemed to be more competitive (Lawhorn 2024a). The Recompete Pilot Program (2023) targeting distressed communities eliminated matching entirely.

conveners across place-based domains, distinct from single-purpose organizations that focus on a specific domain, such as workforce development or small business development.

Public EDOs, such as state or city-level Economic Development Agencies or Departments of Economic Development, operate within the executive branch of their respective governments, and are therefore bound by the executive's regulatory requirements and processes. Private EDOs operate outside the government apparatus, but often work in collaboration with government departments and agencies. Quasi-public agencies operate along the public-private spectrum—their membership and boards are appointed by governors or mayors, but their location outside the executive apparatus and their status as non-profits allows them greater autonomy.[34]

The history of two organizations helps illustrate differences among public, quasi-public, and nonprofit EDOs. The Detroit Economic Growth Corporation (DEGC) was created in 1978 by Mayor Coleman Young, to "speed up development by removing some layers of inertia and bureaucracy that came with doing things inside city government."[35] It was seen as an extension of the mayor's office, with the mayor appointing the DEGC's leadership and serving as an *ex officio* director on its board. The DEGC's autonomy has since fluctuated across mayoral administrations. While in the mid-2000s the DEGC operated with considerable independence, in the 2010s a new mayor reimposed direct control over the organization. By contrast, JobsOhio, a non-profit EDO in the state of Ohio, was founded in 2011 when the state government chose to convert its state Economic Development Agency to a nonprofit organization. The intent was to allow for greater flexibility and efficiency and to avoid being subject to the executive branch's transparency and ethics protocols (Francis 2016).

[34] Both private and public-private EDOs tend to registered under Section 501(c)(3) of the Internal Revenue Service, which can make it hard to distinguish between them.

[35] See John Gallagher, "A Sudden Exit Spells Trouble for the Detroit Economic Growth Corp," *Detroit Free Press* (2017) .

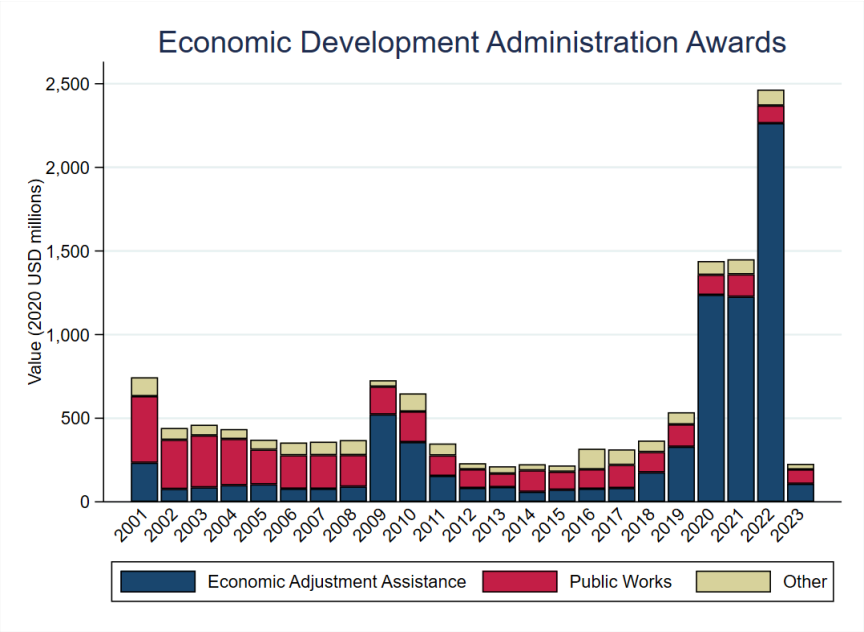
Table 3: Classification of Regional Economic Development Organizations

Type of Organization	Description	Examples
Economic Development Agency or Department of Economic Development	Public entity that operates within the state, city, or municipal government's apparatus	Allentown Department of Community and Economic Development, City of Birmingham Department of Innovation and Economic Opportunity
Economic Development Corporation	Quasi-public agency, appointed by the Governor or Mayor but operating with greater independence and flexibility	Michigan Economic Development Corporation, Wyoming Business Council, Detroit Economic Growth Corporation
Non-profit Economic Development Organization	Private entity that operates independently of the government, often funded by philanthropy. These may operate at various levels, but are frequently multijurisdictional, representing more than one county	JobsOhio, Greater Rochester Enterprise, The Right Place (Greater Grand Rapids, Michigan)
Economic Development District Organization	Public or private organization representing an EDA-designated Economic Development District	Central Texas Council of Governments, West Alabama Regional Commission, Ohio Valley Regional Development Commission
Industrial Development Corporation	Specialized entities with an investment portfolio like real estate or industrial development bonds to finance projects	Philadelphia Industrial Development Corporation, Bexar County Industrial Development Corporation (Texas)

Recent growth of the EDA. In recent years, the federal EDA has been authorized to implement programs directed at entrepreneurship, technical innovation, and enhancing national competitiveness. Starting in 2015, the EDA began to administer the Build to Scale (B2S) program. Since 2021, it has managed the American Rescue Plan Act's Build Back Better Regional Challenge and the CHIPS and

Science Act's Tech Hubs and Recompete Pilot Programs. This new activity occurred alongside a sharp but temporary increase in EDA appropriations from under $300 million annually for most of the 2010s to $3 billion in 2021 (see Figure 5). While "place" remains its focus, the EDA now defines its mission in broader terms: "To lead the federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy" (EDA 2024). The EDA defines innovation and regional collaboration as its two key economic drivers. "Regional collaboration is essential for economic recovery because regions are the centers of competition in the new global economy and those that work together to leverage resources and use their strengths to overcome weaknesses will fare better than those that do not" (EDA 2024). It is unclear whether President Trump will support the EDA's recently expanded mission.

Figure 5:



Notes: This plot shows EDA awards in 2020 USD by year and type. The Economic Adjustment Assistance program gives funds to areas undergoing adverse economic transitions; the Public Works program helps distressed communities improve their infrastructure. The Other category comprises Technical Assistance and Research and Evaluation awards given to national and local organizations. Data source is USAspending.gov.

B. Business Recruitment and Retention

Overview. Business recruitment and retention are the most visible forms of place-based policy in the United States. In section II, we described the origin of financial incentives used by state and local governments to attract business investment. Here, we discuss how incentives are delivered presently.

In its modern constitution, two types of intermediary organizations help broker deals between government (the source of funds) and business (the recipients of funds). Site-selection consultants represent businesses, and are paid to do so; economic developers—whether employed in public, private, or public-private entities—represent the interest of a state or locality. Economic developers perform many jobs, from marketing a region to prospective investors to orchestrating regional economic development strategies to complementing the role of site-selectors in negotiating investment deals with official government entities. Their job performance is commonly evaluated based on a concept of gross jobs created or gross investment attracted which are attributable to their recruitment efforts.[36]

State and local incentives. The primary instruments for business recruitment are investment incentives.[37] These include tax credits, tax abatements, land-price write-downs, industrial revenue bonds, discounted utility rates, cash grants, and loan subsidies (Good Jobs First 2021). The application of these instruments often results from deals negotiated between governments and private firms.[38] The recruitments that command most attention are "megadeals," which we define (somewhat arbitrarily) as those with total incentives exceeding $50 million.[39] Megadeals typically involve subsidies from both state and local governments. Federal incentive packages, by contrast, tend not to involve state or local government participation. As seen in Figure 6, megadeals account for just 0.2% of the number of deals, but 57% percent of deals by incentive value. The top three states in terms of megadeals, both in number and value, are Louisiana, Michigan, and New York.

All levels of government—federal, state, and local—are involved in business recruitment efforts. Since 2020, the federal government has played a disproportionately large role in offering business subsidies, due in large part to the Department of Energy's R&D subsidies authorized by the Infrastructure Investment and Jobs Act[40] (Figure 7a, Figure 7b), as well as incentives authorized under the CHIPS and Science Act and Inflation Reduction Act. Historically, the majority of subsidies to induce business investment have been provided by state and local governments. One way to measure business tax incentives is the value of investment deals reported in the press or in government reports. Good Jobs First collects and verifies data on business incentive deals in its Subsidy Tracker database, as used by Slattery and Zidar (2020) and Slattery (2024). Because many state and local governments do not follow

[36] Rubin (1988) memorably describes economic developers as seeking to "shoot anything that flies, and claim anything that falls," suggesting they interpret their job as maximizing deal flow.

[37] We use tax incentives and subsidies interchangeably to refer to incentives used to recruit businesses. Other mechanisms include loans provided to firms at subsidized interest rates and loan guarantees provided by government actors.

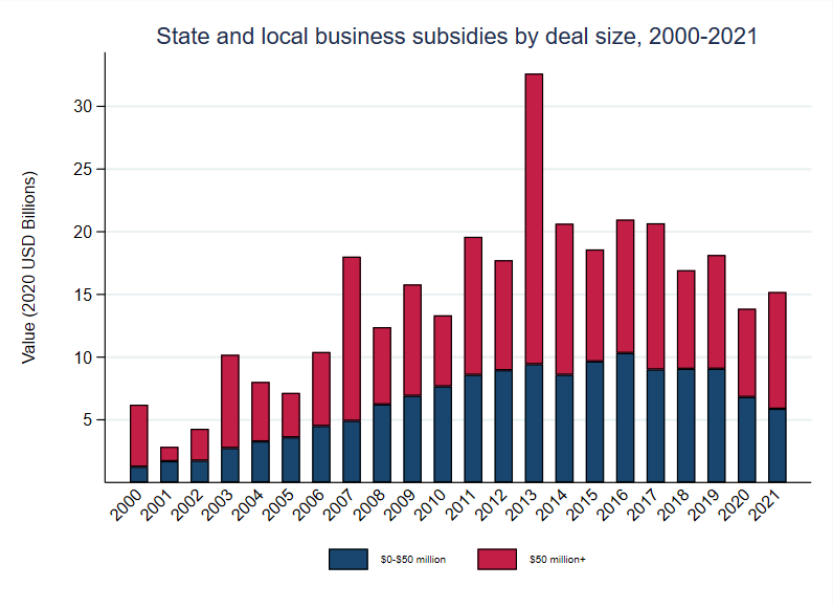
[38] A deal is defined as a transaction between a firm and a set of government entities in a specific year.

[39] Megadeals is a term coined by Good Jobs First to refer to deals in which the total subsidy value exceeds $50 million.

[40] Laura Benshoff, "Nuclear Power Is Gaining Support after Years of Decline. But Old Hurdles Remain," National Public Radio, June 30, 2022.

GASB 77, the stated value of verifiable business incentive packages may be less than their true value. Data from the Good Jobs First Subsidy Tracker indicate that state and local governments across the U.S. gave out business subsidies amounting to $19.5 billion annually between 2011 and 2021, compared to $9.8 billion per year between 2000 and 2010 (Figure 5.).[41] But reporting on business incentive deals is uneven across states. Nevada, Connecticut, and Illinois provide the most transparent disclosures, while New Hampshire, Maine, North Dakota, Alabama, and Georgia provide the least transparent reporting (Tarczynska, Wen, and Furtado 2022). An alternate mechanism to estimate the value of subsidies is the rule-based approach followed by Bartik (2020), who uses data on realized investments by industry and state, and then applies statutory rules of state governments regarding the incentives for which these investments would be eligible (based on investment value, industry, and geography). He finds that in 2015, state and local incentives totaled $47.1 billion, while incentives provided by the federal government totaled $5.4 billion. He also finds that such incentives have been gaining in popularity, with their monetary value tripling between 1990 and 2015.

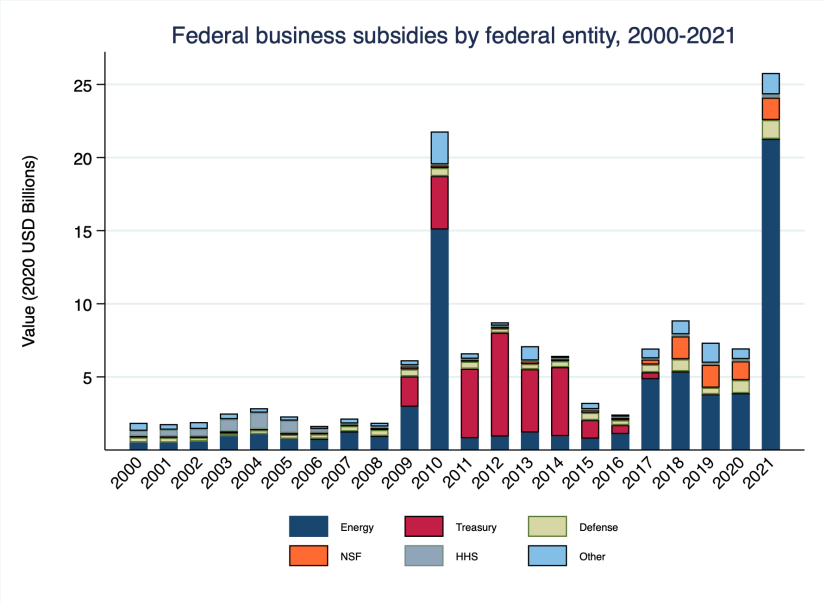
Figure 6:



Notes: State and local subsidies include tax abatements, tax credits, and tax rebates; other incentives include tax exemptions, training and cost reimbursements, enterprise-zone supports, grants, and tax increment financing. The figure excludes post-9/11 recovery grants in New York. Source: Good Jobs First Subsidy Tracker.

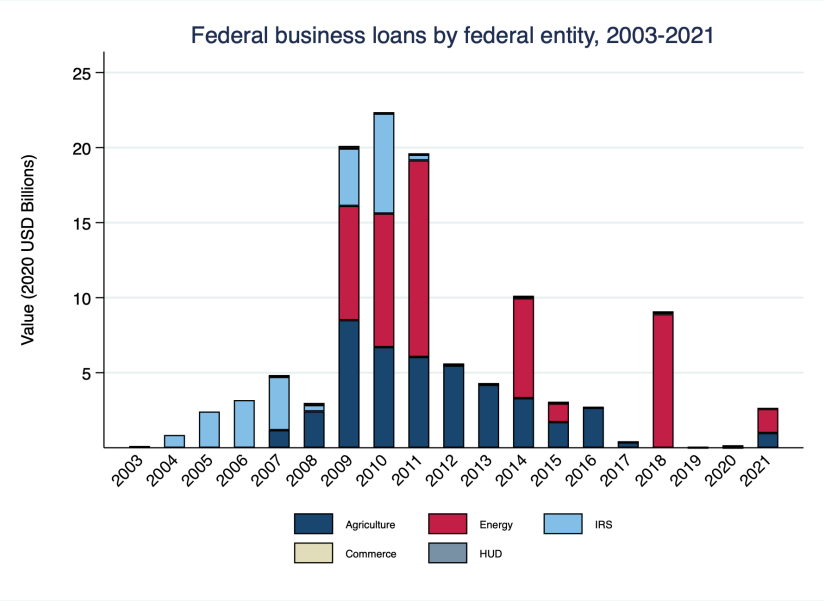
[41] These figures indicate average annual subsidies given out by all U.S. state and local governments between 2000 and 2010, and 2011 and 2021. All figures in 2020 USD.

Figure 7a:



Notes: This plot shows federal tax credits and grants provided to businesses by federal department, excluding relief to the financial sector after the Great Recession and Covid-19 payroll protection measures. Other includes Commerce, NASA, Agriculture, Homeland Security, Justice, Interior, Transportation, and HUD. Most Dept. of Treasury Dept. funding is Section 1603 tax credits for energy projects, while most Dept. of Energy funding is for R&D grants. Source: Good Jobs First Subsidy Tracker.

Figure 7b:



Notes: This plot shows federal business loans, loan guarantees, and tax-exempt bonds by federal department, excluding loans from the Small Business Administration, the International Development Finance Corporation, and the Export-Import Bank, Great Recession financial sector relief measures, and Covid-19 payroll protection measures. Most Dept. of Energy loans are for the Advanced Technology Vehicles Manufacturing Loan Program, Section 1705 Loans, and the Innovative Energy Technologies Program. Source: Good Jobs First Subsidy Tracker.

Statutory versus Discretionary Incentives. Incentives offered by state and local governments may be either statutory and discretionary in nature. Statutory incentives are rules-based and conditioned on firms meeting specific performance requirements, such as meeting minimum investment, employment, or pay thresholds (Rendziperis 2020). An example is the City of Philadelphia's Job Creation Tax Credit program, which any business may apply for when filing its Business Income and Receipts Tax form. It requires that a firm has either created at least 25 new jobs or increased employment by at least 20 percent within a five-year period. Meeting the threshold entitles a firm to tax credits equal either to $5,000 per new job created or 2 percent of annual wages paid for each new job, whichever is larger.[42] Discretionary incentives, as the name suggests, are customized, firm-specific tax incentives awarded to a business based on a bespoke deal negotiated with a state or local government. Per Walmart Corporation's Site Selection Guide for U.S. manufacturers, these often entail a "material factor," implying "the company is required to demonstrate that its proposed project involving new capital investment and/or the retention/creation of jobs would not occur 'but-for' the availability of incentives."[43] Site selection consultancies report that discretionary packages are the most common type of incentives provided at the state and local level.[44] Slattery and Zidar (2020) document that larger firms are more likely to receive discretionary incentives—more than 30 percent of establishments with over 1,000 employees report receiving discretionary subsidies, compared to just 0.2 percent of establishments with fewer than 250 workers. Jensen and Malesky (2018) suggest that the "ribbon-cutting" events for large deals receive substantial attention in the media and yield electoral gains for politicians. Incumbent governors eligible for reelection are more likely to announce large incentive deals in election years than at other times during their tenure (Slattery and Zidar 2020).

One example of a discretionary incentive deal is the $471 million incentive package that the Northrop Grumman Corporation received for expanding an aerospace production facility in Brevard County, Florida in 2014 and 2015. The package included a $21 million grant from the Florida's Quick Action Closing Fund, 50 years of exemptions from local property taxes worth an estimated $450 million, and a $205,000 grant to cover impact fees. In addition, Space Florida—the state's aerospace economic development agency—promised to build and equip an industrial complex for Northop Grumman to lease; and the Melbourne County Council agreed not to challenge the company's pursuit of a full tax exemption for new and renovated buildings, parking, and personal property.[45] Local business media described this process as involving a "creative use of tax incentives," reporting that the firm's "executives

[42]City of Philadelphia, "Job Creation Tax Credit | Services," City of Philadelphia, January 19, 2023, https://www.phila.gov/services/payments-assistance-taxes/taxes/tax-credits/business-tax-credits/job-creation-tax-credit/.
[43]Walmart, "Site Selection Guide," Site Selection Guide, accessed January 9, 2025, https://corporate.walmart.com/suppliers/investing-in-american-jobs/manufacturing-resources/site-selection-guide.
[44] One should recognize that site selection companies have a financial incentive to make such a claim.
[45]Good Jobs First Subsidy Tracker dataset: https://subsidytracker.goodjobsfirst.org/subsidy-tracker/fl-northrop-grumman.

were looking for ways to cut the company's potential costs. They wanted more than standard incentives."[46] Space Florida helped Northop Grumman negotiate with a range of stakeholders, including the Melbourne Airport Authority and the Brevard County Property Appraiser's office.

Orchestration and Marketing. Local economic development organizations (EDOs), which we describe in detail in the previous section, often play a key coordinating role in negotiating incentive packages for firms. In Columbus, Ohio the local EDO is One Columbus, a non-profit that describes its role as enabling firms to obtain financial incentives: "For qualifying companies, the One Columbus team will help navigate funding sources and incentive programs—including identifying, evaluating, and procuring the appropriate programming."[47] EDOs may orchestrate incentives across a wide range of government agencies. JobsOhio, the non-profit EDO for the state of Ohio, describes its role as follows: "We understand that companies looking to locate or expand in Ohio have unique needs and requirements that drive critical decisions. That's why JobsOhio partners with state, regional, local, county, and others to offer customized incentive packages with performance-based eligibility metrics."

One concern about discretionary incentives is that they may induce a "race to the bottom" as states compete to outdo each other in lowering taxes, thereby reducing funding for government services (Mast 2020). Wang (2018) studies economic development incentives for 48 states between 2007 and 2012 and finds that states interact with each other strategically on incentive deals, increasing their spending in response to actions of neighboring states. Among the more egregious examples of such competition is the Kansas-Missouri border war. Between 2011 and 2019, the states of Kansas and Missouri induced 116 companies to move their operations across state lines within the Kansas City metropolitan region. Total incentives amounted to $335 million[48] and were a net drain on the Kansas City economy (Kim 2023). Inter-state competition for business investment is also evident in North Carolina's $87 million incentive package to Honeywell in 2018 to move its headquarters to Charlotte.[49] The state tripled the value of incentives it typically offers, raising the cap of $6,500 in annual tax breaks per job created to $16,000 per job. North Carolina was competing with Florida, Georgia, South Carolina, and Texas to attract Honeywell. During the negotiation of the deal, Honeywell's General Counsel stated that, "Should the state and local incentives not be awarded, we

[46]Jason Garcia, "Space Florida's Rocket Science Financing," *Florida Trend*, August 26, 2019.
[47] The Columbus Region, "Incentives + Programs," The Columbus Region, 2023, https://columbusregion.com/doing-business/incentives-programs/.
[48] Shayndi Raice, "Tired of Fighting for Business, Missouri and Kansas Near Cease-Fire Over Incentives," *Wall Street Journal*, June 25, 2019.
[49] The state of North Carolina provided $42.5 million, Mecklenburg County offered $28 million, and the City of Charlotte gave $17 million.

would not commit to go to Charlotte and would instead plan to pivot to our down-selected second or third choice locations, both of which remain viable and attractive choices."[50]

Ecosystem Approaches. Some regions have moved away from a business-recruitment-at-all-costs approach to more holistic place-based interventions. Lowe and Freyer (2015) document novel industrial recruitment approaches in North Carolina's life science industry and Northeast Mississippi's biomanufacturing industry. In both cases, a central orchestrating entity conducted pre-recruitment planning to target firms based on the region's assets, development goals, and industrial mix; engaged firms and local stakeholders, including those involved with workforce development; and implemented strategies to anchor the firm to the region. Firms sometimes take a broader view while choosing to move to a region. When Lowe's received incentives of $72 million to build a technology hub in Charlotte in 2019 (Good Jobs First Subsidy Tracker), its CEO attributed the firm's decision to Charlotte's abundance of skilled workers and the proximity of the city to Lowe's headquarters in Mooresville, North Carolina. Many economic developers proclaim a similarly expansive understanding of their role. In promoting local economic development, the Greater Rochester Enterprise (GRE), a non-profit EDO serving Rochester, New York, touts the region's skilled workforce, low real estate costs and utility rates, abundant supply of fresh water, and well-developed innovation ecosystem.[51] Matt Hurlbutt, the CEO of the GRE, describes his role as "connecting the dots" between a firm's needs and the region's infrastructure, including "the technical capabilities of our colleges and universities, both from a workforce supply standpoint as well as research and development capabilities."[52]

Business recruitment is somewhat misleading as a term of art because those leading business recruitment also work on retaining business present in a region and strengthening local entrepreneurship. For Birgit Klohs, who founded and led The Right Place—a non-profit EDO in Grand Rapids, Michigan—three-quarters of her role was about supporting local companies. She describes this as an iterative and wide-ranging process: "The [Right Place] team calls on companies all over the region. They make over several hundred calls a year. We sit down with the owner or the CEO or the CFO, to say, 'we are here to help you. What do you need?' It could be anything from an expansion to how can you help us with local government or state government. But also it could be a question of looking for new talent, and connecting to [local stakeholders such as] Hello West Michigan. Or can you come and help me out with a program through the government that we manage,

[50] Ashley Fahey, "Newly Released Records Reveal NC Legislation Boosted Honeywell Incentives Package by up to $10M," *Triad Business Journal*, January 10, 2019, https://www.bizjournals.com/triad/news/2019/01/10/newly-released-records-reveal-nc-legislation.html.

[51] Greater Rochester Enterprise: https://rochesterbiz.com/

[52] Policy Works Podcast, Reimagining the Economy, Harvard Kennedy School, October 2022 https://www.hks.harvard.edu/centers/wiener/programs/economy/podcast/episode2-hurlbutt

the Michigan Manufacturing Technology Extension Program?"[53] This approach is in line with the concept of economic gardening, which focuses on supporting entrepreneurs rather than on chasing mega deals.[54] Such programming includes business incubators, accelerators, and start-up grant challenges, although there is mainly anecdotal evidence on the extent and scope of these programs.

C. Community Redevelopment

Overview. Whereas business recruitment targets firms for incentives without necessarily restricting where firms locate their operations within a given jurisdiction, community redevelopment efforts condition incentives on investments occurring in specifically designated low-income communities. The strategy of giving tax breaks to businesses that invest in such communities has become a centerpiece of federal and state place-based policy. In this volume, Freedman and Neumark (2024) discuss state-level enterprise zones in the United States, while Corinth, Coyne, Feldman, and Johnson (2024) compare how zones are designated in two large federal programs, Opportunity Zones and the New Market Tax Credit. Here, we examine the genesis of federal programs that use an enterprise zone model and consider how these programs relate to other aspects of place-based policy.

Enterprise zones are based on the premise that reducing urban poverty requires creating new jobs in the communities in which poor households live. The premise itself has found support from both right-leaning politicians, such as Congressional Rep. Jack Kemp, and left-leaning academics, such as William Julius Wilson (1987, 1996). The theory of change appears to be that because many low-income households are clustered in low-income neighborhoods and have limited access to well-paying employment elsewhere in a region, job-creating investments in those neighborhoods would raise the income of newly employed workers, expand local demand for non-traded goods and services, and initiate a virtuous cycle of subsequent investments in business formation, land redevelopment, and labor skills. Although such a theory of change would be easiest to justify when the funded investments target production for export outside of a local labor market, federal programs tend to place loose restrictions on *what* investments can be used for and tight restrictions on *where* they occur.

Empowerment Zones. Between 1993 and 2000, the federal government designated 184 Empowerment Zones (EZs), Enterprise Communities (ECs), and Renewal Communities (RCs) throughout the United States under the Omnibus Budget Reconciliation Act of 1993 and the Empowerment Zones and Enterprise Communities Act of 1993 (Marples 2011). The EZs, by which we refer to the three programs collectively, received a total of $1.8 billion over a twelve-year period. To be eligible, an EZ had

[53] Policy Works Podcast, Reimagining the Economy, Harvard Kennedy School, October 2022: https://www.hks.harvard.edu/centers/wiener/programs/economy/podcast/episode1-klohs

[54] See the National Center for Economic Gardening: https://economicgardening.org/about-economic-gardening/

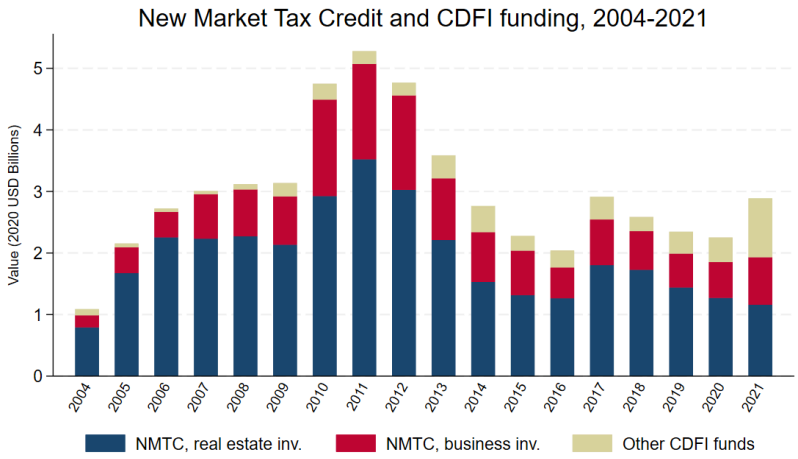
to be a set of contiguous census tracts with high poverty rates, high unemployment rates, and whose population was under 200,000 residents for zones in urban areas and 30,000 residents for zones in rural areas. A zone had to be nominated by the state or states in which it was located or by a state-chartered economic development corporation. Candidate zones were selected by a committee of the U.S. Departments of Agriculture, Health and Human Services, and Housing and Urban Development, in consultation with other federal agencies. There were four criteria for designation as an EZ: economic opportunity, sustainable community development, community-based partnerships, and strategic vision for change (Liebschutz 1995). The EZ program modified previous approaches by creating a tiered approach of incentives and support and providing direct federal aid to communities in addition to tax incentives (M. M. Rubin 1994). Employers in designated EZs were eligible for tax benefits in the form of wage credits (tax credits per employee living and working in a zone), deductions of expenses for purchasing or leasing equipment, tax-exempt financing, and other incentives.

As seen in Figure A.2, most states received at least one EZ and the zones overall appear to have been roughly uniformly distributed across the United States. With the exception of tribal areas in Northeastern Arizona and the Mississippi Delta, they were not clustered in regions with high joblessness. Given the EZ program involved a small amount of funding delivered over an extended time period and across geographically dispersed populations, it was designed more for demonstration value than for its aggregate economic impacts. Using rejected and future applicants to the EZ program as controls, (Busso, Gregory, and Kline 2013) find that EZ designation increased employment and earnings in zone neighborhoods without affecting local population sizes or living costs.

New Market Tax Credit. Following the perceived success of Empowerment Zones, the federal government used the New Market Tax Credit (NMTC) to make targeted investing in low-income areas a permanent policy. The program was established as a part of the Community Renewal Tax Relief Act of 2000. Between 2003 and 2021, the federal government allocated $71 billion to New Market Tax Credits (CDFI Fund 2023), as seen in Figure 8. The NMTC program is jointly administered by the U.S. Internal Revenue Service and the U.S. Department of Treasury's Community Development Financial Institution (CDFI) Fund. The CDFI Fund uses a competition-based program to allocate tax credits to qualifying financial institutions—known as Community Development Entities (CDEs)—to pursue a specific investment strategy. A CDE is a corporation or partnership that intermediates loans, investment funding, or financial counseling in low-income communities. To become a CDE, an organization must demonstrate that it has a primary mission of serving a specific low-income community and is accountable to the residents of that community. Qualifying low-income communities include census tracts that (a) have a poverty rate of at least 20%, (b) are located in a metropolitan area and has a median family income below 80% of the greater of the statewide or

metropolitan area median family income, or (c) are located outside a metropolitan area and have a median family income below 80% of the median statewide family income (Marples 2022).

Figure 8:



Notes: Figure shows funding for New Market Tax Credit and other CDFI activities over time. Real estate includes tax credits for investments in residential or commercial real estate through a developer and business real estate expenses, such as a business purchasing space for its own use. Data source is the Treasury Department CDFI Fund.

NMTC applications are evaluated based on a CDE's strategy to invest in low-income communities, capitalization plans to raise equity from private investors, management capacity, and expected impact on jobs and economic growth in the communities where investments will be made. CDEs that have a track record of serving disadvantaged businesses and disadvantaged communities are prioritized (Marples 2022). Applications are scored and ranked according to perceived community development impacts; tax credit allocations are awarded based on these rankings. Once a CDE receives NMTC allocations, it makes these credits available to private investors who invest in the CDE. The CDE then makes Qualifying Low-Income Community Investments (QLICIs) in one or more Qualified Active Low-Income Community Businesses (QALIBs),[55] and may provide financial counseling or other services to businesses and residents in their communities (including other CDEs).[56] Private investors receive tax credits equivalent to 39% of the original investment over a seven-year period.

Several modifications have widened the ambit of the NMTC program over the years. The American Jobs Creation Act of 2004 expanded the authority of the Secretary of the Treasury to treat certain

[55] To classify as a QALICB, a business must satisfy requirements regarding its presence in low-income communities (at least 50 percent of gross income, 40 percent of tangible property, and 40 percent of employees) (CDFI Fund 2021).

[56] Between 2001 and 2017, the NMTC supported 5,756 projects, mostly in manufacturing, retail, healthcare services, education and childcare, and professional services (Theodos et al, 2021b). Some activities are prohibited from receiving NMTCs, including residential rental property, golf courses, casinos, and massage parlors (CDFI Fund 2020).

other tracts and targeted populations as low-income communities; in 2005, the NMTC was allocated an additional $1 billion to provide tax relief to businesses and individuals affected by Hurricanes Katrina, Wilma, and Rita; and starting 2008, the NMTC established a benchmark of 20% allocation of QLICIs in non-metropolitan counties. There is strong overlap between the NMTC program and other tax credits and government subsidies. A GAO survey (White 2014) of CDEs revealed that 62% of NMTC projects received other federal, state, or local assistance between 2010 and 2012, with investors earning returns that were significantly higher than market rates.

Opportunity Zones. Opportunity Zones were created by the 2017 Tax Cuts and Jobs Act, to promote "economic growth and job creation in low-income communities while providing tax benefits to investors" (IRS 2024). This program operates on the principle of deferring or waiving capital gains taxes on investments in designated economically distressed regions. States have significant autonomy to designate OZs, which are then certified by the Department of the Treasury and the IRS. The only criteria is that they must be low-income census tracts, and the state may not designate more than 25% of eligible tracts as OZs. OZ investments are intermediated by Qualified Opportunity Funds, which receive and distribute private funds to OZs for economic development activities. To qualify, a partnership or trust must file for this status to the IRS and invest at least 90% of its funds in OZs; they need not be physically headquartered in the OZ. Private investments in Opportunity Funds enjoy deferred capital gains taxes, reduced tax liabilities, waivers of tax liability for capital gains, and waived depreciation capture for the sale of Opportunity Fund properties..

Currently, there are 8,764 Opportunity Zones across the country. Coyne and Johnson (2023) estimate $48 billion worth of OZ investments made between 2018 and 2020. In general, OZs follow a similar implementation structure to NMTCs, with an intermediary receiving and investing private dollars in a low-income community. However, unlike the NMTC, there is not a centralized allocation of credits or evaluation of strategies. Opportunity Zones are characterized as not being a top-down government program from Washington. But this also means there is limited data to evaluate the impacts of this program. IRS forms that govern Opportunity Zones (Forms 8996 and 8997) do not record detailed data about the use of funds. Initial research finds that investments are more likely to flow to urban OZs with better baseline economic conditions and trends, such as high and rising median household incomes and housing values, lower employment and poverty rates, and higher educational attainment (Coyne and Johnson 2023; Kennedy and Wheeler 2021). More than two-thirds of OZ investments accrue to real estate, rental, and leasing (Coyne and Johnson 2023).

D. Small Business Promotion

Overview. Because government support for small business uses firm size as a condition for the receipt of public resources, it may not seem like a place-based policy. In practice, however, local economic developers typically consider small business promotion to be an important element of their policy tool kit. Young, small firms account for most net job growth, making them a natural target for efforts to replace jobs lost to adverse shocks (e.g., Decker et al. 2020). Many such firms appear to be credit constrained (Greenstone et al. 2020), and such constraints appear to be tighter during local economic downturns (Davis and Haltiwanger 2024), which may account for the popularity of programs that subsidize lending to small business and why such programs are viewed as having a regional economic dimension. Many U.S. programs that promote small business either have a current place-based motivation or were created with place-based goals in mind.

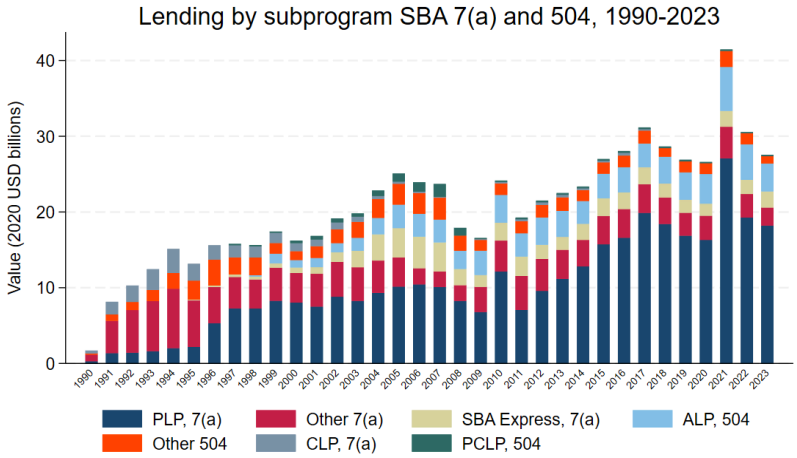
The primary source of government support for small business in the United States is the Small Business Administration (SBA), which defines its goal as igniting "change and spark[ing] action so small businesses can confidently start, grow, expand, or recover" (SBA). The SBA was established by the Small Business Act of 1953, with a mission to support and protect small businesses. Through much of its history it has had a place-based dimension to its activities. The SBA's progenitor agency was the Reconstruction Finance Corporation (RFC), which was established in 1932 to increase market liquidity by providing loans to troubled financial institutions in the context of the Great Depression (Calomiris et al. 2013). When banks stopped lending after 1929, the RFC stepped in to make loans directly to businesses. Allegations of corruption and a prevailing belief that the agency was unnecessary and discriminatory led to its abolition by President Dwight D. Eisenhower ("RFC Act Amendments of 1951, Hearing on Bills to Amend the Reconstruction Finance Corporation Act" 1951; "Influence in Government Procurement" 1951). However, support for an agency that aided small businesses in Congress remained high (Bean 2014). In 1953, Pres. Eisenhower signed the Small Business Act, which authorized the creation of the SBA. The SBA's mission has since been to provide firms with access to capital, management counseling, and government contracts.

Capital. The SBA makes capital available to small businesses by guaranteeing loans made by private lenders. Although the SBA still provides direct loans following natural disasters, it abandoned most other direct lending in 1998.[57] The 7(a) Loan Program, which has existed since the SBA's inception, guarantees loans by private lenders to qualifying small businesses of up to $5 million and with a maturity of up to 10 years. Loans may be used for a wide variety of purposes, including real estate and buildings, machinery and equipment, working capital, and refinancing current debt. The primary

[57] The SBA subsidy for its direct lending appears to have been 10 to 15 times larger than that for its loan guarantees (Dilger and Cilluffo 2022). The SBA continues to run a Microloan Program, which provides loans to businesses of up to $50,000.

intermediary for the 7(a) program is the lender, usually a commercial bank. The SBA requires lenders to conduct a "credit-elsewhere test" for each prospective borrower, in which lenders must establish that the business was unable to secure credit from other sources at a reasonable cost. For approved loans, the SBA guarantees between 50% and 90% of the loan amount. Most 7(a) loans are made by banks that are part of the SBA's Preferred Lender Program (PLP), as seen in Figure 9, which enables them to make loans without prior SBA approval (Theodos et al. 2024).

Figure 9:



Notes: The plot shows SBA 7(a) and 504 non-agricultural loan volumes in billions of 2020 USD. The Preferred Lending Program (PLP) and the Certified Lending Program (CLP) are certifications of 7(a) lenders that allow them to make loans without SBA approval; the Premier Certified Lenders Program (PCLP) and Accredited Lenders Program (ALP) are similar certifications for 504 lenders. Source: SBA Office of Capital Access.

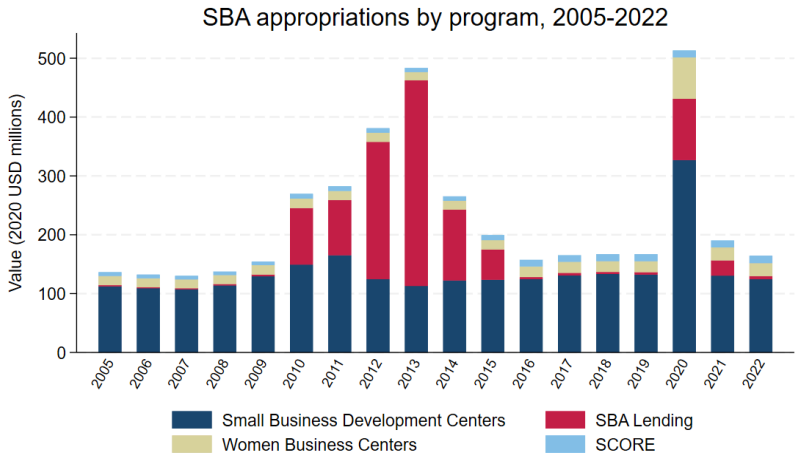
The 504 Loan Program was established in 1958, and provides fixed-rate, long-term loans (up to 25 years) for major fixed assets such as real estate, structures, and machinery. Loan values may not exceed $5.5 million. Loans are intermediated by a Certified Development Company (CDC), a nonprofit corporation with the mission of promoting economic development in the communities it serves,[58] and one or more commercial lenders. The borrower is required to contribute at least 10% of project financing, the CDC provides up to 40% of financing, and the commercial lender provides up to 50% of financing. The loan guarantee applies only to the lending of the CDC. The 504 program requires that loan financing creates at least one job per $75,000 of debt (or one job per $120,000 for a small manufacturer), within two years of the project's completion.[59]

[58] Certification as a CDC requires the lender to operate within a designated Area of Operations approved by SBA.

[59] These requirements may be relaxed if the borrower meets specified community development goals (e.g., diversifying the economy, stimulating business development, or assisting manufacturing firms), public policy goals (e.g., increasing rural development, reducing unemployment in labor surplus areas, and so on), or energy reduction goals (e.g., reducing energy consumption by 10% or increasing the use of sustainable designs).

To ensure its loan programs are revenue neutral, the SBA charges intermediary organizations an upfront loan guarantee fee. For the 7(a) program, fees typically range between 2% and 3.5% of the SBA-guaranteed portion of the loan amount; for the 504 program, CDCs are charged a one-time guarantee fee of 0.5% of the debenture, an annual servicing fee, a funding fee, an annual development company fee, and a one-time participation fee. Revenue neutrality is relaxed during crisis periods, such as the Great Recession and the Covid-19 pandemic, when the SBA is authorized to expand lending to the point that it is providing positive subsidies on net. Recent empirical literature casts doubt on the effectiveness of SBA lending programs (Greenstone, Mas, and Nguyen 2020).

Figure 10:



Notes: This plot shows SBA budget appropriations for its lending programs, Small Business Development Centers (SBDCs), SCORE mentoring program, and Women Business Centers (WBCs). Lending appropriations include 7(a), 504, and microloan programs. Source: Congressional Research Service.

Counseling. The SBA provides technical assistance and support to small businesses through a range of programs, the largest being those for Small Business Development Centers (SBDCs) and Women Business Centers (see Figure 10). The SBDC technical assistance program was established by the Small Business Development Center Act of 1980 and built on an earlier University Business Development Center pilot program from 1976. Most SBDCs are affiliated or co-located with a university or community college. SBDCs are eligible for grants from the SBA and are required to obtain matching funds from non-federal sources (Blackford 2023). The SBDC network includes 62 lead SBDC centers and approximately 900 outreach centers across the country. These centers offer one-on-one counseling, training and workshops, and access to market research, industry reports, and business tools. The SBDC network appears to be disjointed. Scott and Wial (2022) find that the quality of small business technical assistance is uneven across regions, with large gaps in service, especially in rural and under-resourced communities. There has been little empirical analysis of SBA technical assistance

programs, despite their similarities to programs implemented successfully in developing countries (Bloom et al. 2020).

Contracting. A 1988 amendment to the Small Business Act requires that 23% of small business-eligible federal government prime contracts go to small businesses (R. Dilger and Blackford 2022). Government agencies are required to work with the SBA to meet small business contracting goals. The SBA provides technical assistance and certification to qualifying small businesses through its 8(a) Program and the Historically Underutilized Business Zone Program (HUBZones). The 8(a) Program supports firms owned by individuals from socially and economically disadvantaged groups. Firms certified as 8(a) participants have access to training and capacity support and are allowed to compete in the federal contracting marketplace. The HUBZones Program was established in 1997; it provides contracting assistance to small businesses located in "historically underutilized business zones in an effort to increase employment opportunities, investment, and economic development in such areas" (CFR 1998). To be eligible for HUBZone certification, firms must maintain a principal office in a HUBZone, and ensure that at least 35 percent of its workforce resides in a HUBZone during the performance of any HUBZone contract (R. J. Dilger and Blackford 2022). Certified firms are eligible for federal contracting preferences and receive a 10% price evaluation preference in full and open contract evaluations. The federal government has a 3% procurement goal for HUBZone-certified small businesses, which it fails to meet in most years.[60] Difficulties with the program include risk of fraud, a lengthy application process, and the stringency of the HUBZone residency requirement. There has been little empirical analysis of SBA contracting programs, despite their apparent large scale.

E. Workforce Development

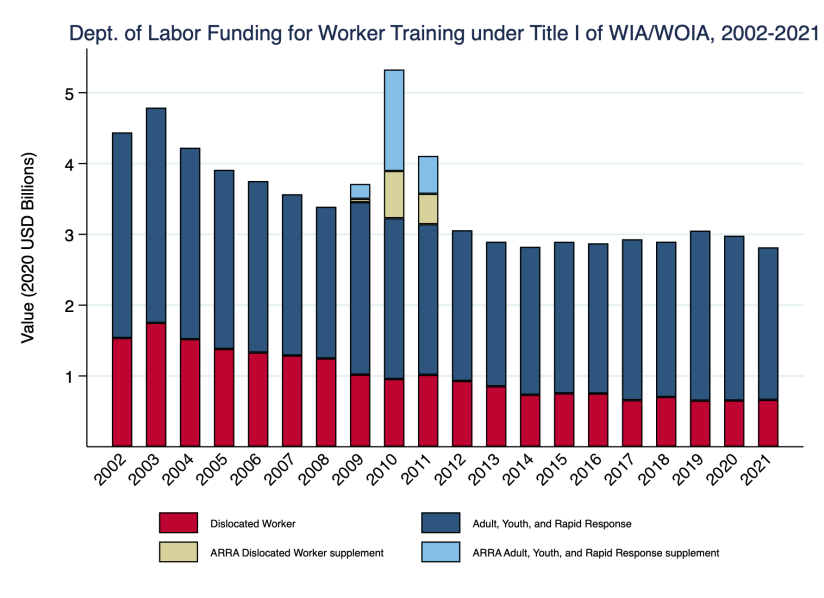
Overview. Workforce development serves two roles in place-based policy: to train the workers a region needs to attract new investment, and to retrain workers who have lost their jobs due to adverse economic shocks. The federal government established its modern approach to worker training in the 1960s out of concern automation would cause widespread job loss in manufacturing and concentrated hardship in industrial regions. While present-day training programs still target displaced workers, they have broadened to target individuals who are economically disadvantaged, whatever the cause.

Federal government support for worker training is based on the Workforce Investment Act (WIA) of 1998 and its updates in the Workforce Innovation and Opportunity Act (WIOA) of 2014. WIA and WIOA have made training available to a wide range of individuals, diluting the focus on displaced workers and worker retraining (see Figure 11). WIOA provides job training and job search assistance to

[60] Between 2005 and 2022, the federal government met its 5% procurement goal for Women-Owned Small Businesses only twice (Dilger and Blackford 2022b).

low-income adults, dislocated workers, disadvantaged youth, the disabled, veterans, the formerly incarcerated, members of indigenous communities, and other groups deemed worthy of support. Job training and search assistance includes core services (job placement, career counseling, information about market conditions), intensive services (comprehensive assessments, short courses in social skills, other employment related activities); and training, which includes the provision of Individual Training Account (ITA) vouchers for training from vendors approved by local Workforce Development Boards.

Figure 11:



Notes: This plot shows funding for the dislocated worker, adult, youth, and rapid response programs under the 1998 Workforce Investment Act (WIA) and 2014 Workforce Innovation and Opportunity Act (WIOA) by fiscal year. The American Recovery & Reinvestment Act (ARRA) allotted extra funding to WIA Title I over 2009 to 2011. Source: Department of Labor 9130 forms.

Institutional structures. WIA and WIOA decentralized the management of worker training. Today, the Department of Labor allocates training funds to states, based on the size of the state labor force and the number of unemployed workers in the state. State-level Workforce Development Boards create and oversee state plans for workforce development and designate local workforce areas within the state.[61] Of workforce funds disbursed by the DOL, governors may keep up to 15 percent for discretionary use and must allocate the remainder to local Workforce Development Boards for distribution at the local level. Services are demand-driven, with workers selecting into training and other services (rather than being recruited into training). There are approximately 700 local Workforce Development Boards across the country, whose members are appointed by the chief local elected official (e.g., mayor or county

[61] State workforce boards are required to have 33 members, drawn from business (17), state and local government (5), workers (7), and providers of core programs (4).

supervisors).[62] Local workforce boards designate One-Stop Centers for job assistance, approve training providers eligible to receive ITA training vouchers, and are responsible for forming partnerships with local employers. The approximately 3,000 One-Stop Centers located across the United States provide workers access to Unemployment Insurance benefits, ITA training vouchers, and other services related to worker training and employment assistance (Collins, Shohfi, and Edgerton 2022).[63] Although evidence on the performance of local Workforce Development Boards is limited, they appear to vary widely in their capabilities. Boards appear to be lax in approving training vendors eligible to receive ITA training vouchers. Deming et al. (2023) find that over 70,000 vendors have been approved to receive federal training vouchers, which raises questions about variability in program quality and effective oversight of so many dispersed actors. Recent evidence suggests that the benefits of WIA and WIOA funded training programs for workers are negligible.[64]

Community Colleges and Career and Technical Education. Given low levels of WIOA funding for worker training, the primary source of government support for workforce development is subsidies to career and technical education (CTE) in public two-year community colleges,[65] which sit alongside the federal workforce training system.[66] CTE programs in community colleges tend to favor careers in healthcare, manufacturing, construction trades, trucking, and IT services. Most CTE by community colleges takes the form of certificate programs, which are typically 12 to 24 months in length, and which target skills tied to specific occupations (and are often designed with input from or the active engagement of local employers).[67] In addition to CTE certificates, community colleges offer associate (AA) degrees, which may be terminal academic degrees or a step toward a four-year college or university degree. CTE certificates account for just under 40 percent of degrees awarded by community colleges, AA degrees account for just under 60 percent, and non-CTE certificates make up the

[62] Each local board is to have 19 members, from business (10), workers (4), training vendors (2), and local government or economic development agencies (3).

[63] Although other federal agencies support worker training, their scale appears to be small. In 2019, the GAO identified 43 federal employment and training programs, which have substantial overlap in their target populations.

[64] Among dislocated workers who entered the WIA system, those who received training vouchers had no gain in earnings relative to those who did not receive vouchers (Heinrich et al. 2013, 2; Andersson et al. 2024). This has been attributed to the poor delivery of job search services in One Stop Centers and the low quality of approved training vendors.

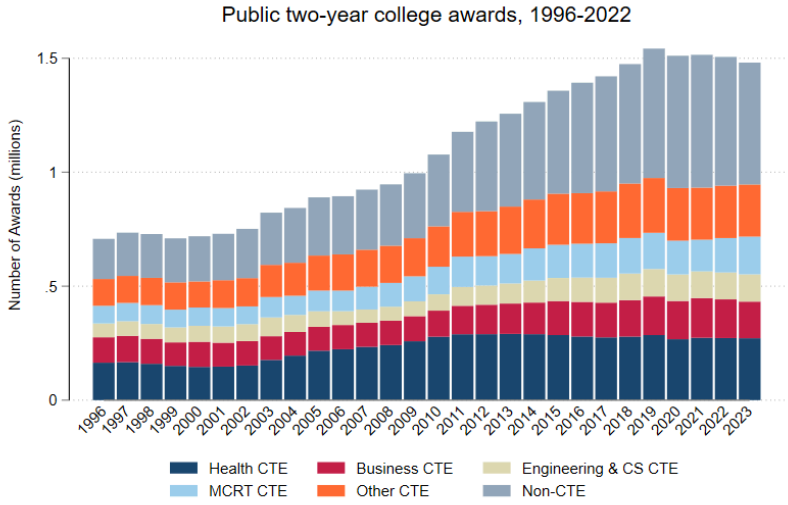
[65] The National Center for Education Statistics defines Career and Technical Education (CTE) as programs that focus on the skills and knowledge required for specific jobs or fields of work. The occupational fields included in this definition are: agriculture and natural resources; business support, management, and finance; communications; computer and information sciences; construction; consumer services; education; engineering and architecture; health sciences; manufacturing; marketing; public, social, and protective services; repair; and transportation. (NCES 2024)

[66] In addition to community colleges, CTE is also provided by for-profit colleges and a small number of nonprofit colleges (which are primarily run by religious institutions). Public two-year colleges account for approximately 80 percent of CTE certificates awarded in the United States, with for-profit schools making up most of the remaining 20 percent.

[67] Individuals receiving CTE certificates tend to see substantial increases in their earnings rise (Jepsen et al. 2021), with gains to high-wage occupations (such as registered nursing) being even larger (Foote and Grosz 2020).

remainder (see Figure 12). CTE certificate programs often compete with associate degree programs for funds (community college leaders may view the latter as being more prestigious than the former, as two-year AA degrees are a stepping stone to four-year colleges and universities). Public community colleges rely heavily on state and federal governments for financial support—receiving about one-third of their revenues from their respective state governments, one-fifth each from federal and local governments, and only about 15 percent of revenues from tuition (see Figure 13).

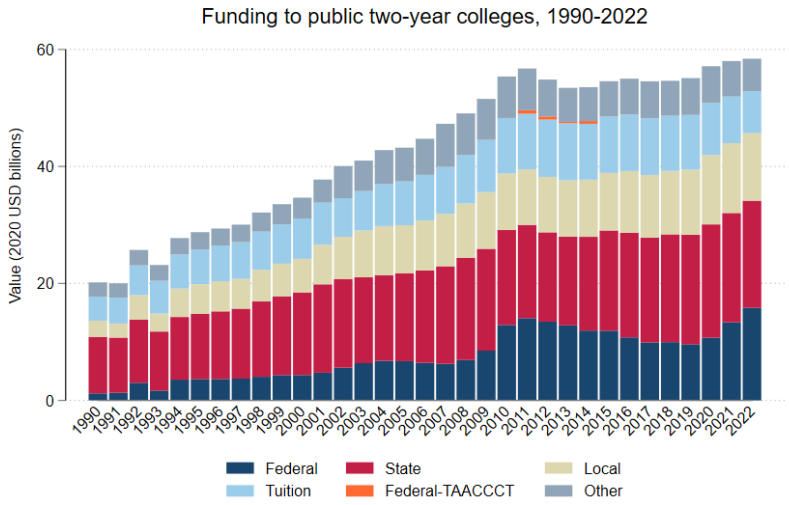
Figure 12:



Notes: This plot shows completions at public two-year colleges from 1996 to 2022 by major field. Awards include AA degrees and certificates. We define career and technical (CTE) at the two-digit CIP code level using a crosswalk from the NCES. The sample is all community colleges in IPEDS in a given year. Source: NCES IPEDS database.

Following adverse economic shocks, community college CTE programs are often the primary source of retraining available in local labor markets. During the Great Recession, more generous state unemployment insurance made individuals more likely to enroll in community colleges (Barr and Turner 2015) and state reemployment programs reduced unemployment duration (Michaelides and Mueser 2020). Certificate completion tends to rise in regions that have experienced mass layoffs, especially among recent high-school graduates (Acton 2021). Yet, only a small share of displaced workers appear to turn to CTE programs after job loss. In a recent analysis of CTE programs in Michigan, for every 100 workers who were displaced from their jobs, only 2 to 3 enrolled in career and technical education (Foote and Grosz 2020). There is little evidence on the role of CTE supplied by community colleges in helping workers adjust to recent adverse local labor demand shifts, including the China trade shock, industrial automation, and related events.

Figure 13:



Notes: This plot shows funding in 2020 USD to public two-year colleges from 1990 to 2022 by funding source. Funding totals include grants and appropriations. The sample includes all community colleges in the Integrated Postsecondary Education Data System (IPEDS) with at least one completion in each year from 1990 to 2022. Source: the National Center for Education Statistics IPEDS database.

Active Labor Market Programs. Pessimism about the effectiveness of WIOA funded federal training programs has helped spur interventions by non-profit organizations. Active labor market programs tend to provide substantial gains to workers in terms of sustained increases in post-training earnings (L. F. Katz et al. 2022b).[68] These programs tend to have three components: (a) worker screening in the form basic math and reading competence and a drug test, (b) sector-specific training (typically in IT, health care, manufacturing, and transportation), with local employers approving of training, and (c) wrap-around services in the form of career counseling, job placement, and post-employment services. Despite their success in controlled experiments, these programs appear to face challenges in replication by other organizations and scaling beyond modest size (Schaberg 2020), indicating there may be obstacles to expanding them to reach large numbers of workers.

F. Technological Innovation

Overview. Like support for small business, efforts to promote technological innovation may seem a form of industrial policy. Yet, because R&D and highly innovative firms tend to be spatially agglomerated (Moretti 2012), innovation policy is frequently blended with place-based policy (Porter 1990), especially regarding investments in technology hubs (Gruber and Johnson 2019).

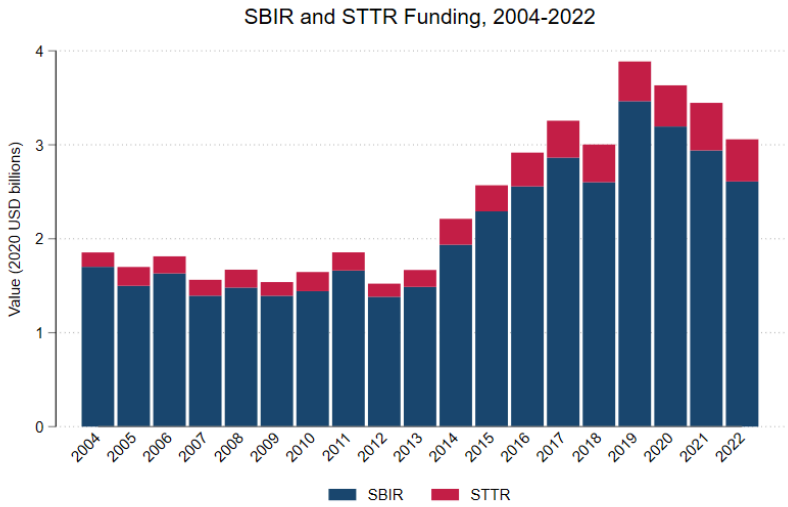
[68] Individuals participating in these programs saw an average increase in hourly wages of 10 percent to 20 percent up to 6 years after program completion, relative to workers in a control group.

The federal government's approach to technological innovation has been influenced by the lessons and repercussions of its support for R&D during World War II (Gross and Sampat 2023). The government laboratories and university research centers created during and after the war went on to form the core of U.S. R&D infrastructure and continue to receive expansive federal support (Gallo 2021). The research centers, which came to be known as Federally Funded Research and Development Centers (FFRDCs), are housed in universities, non-profit organizations, and industrial firms. They developed long-term research capabilities specific to individual federal agencies. As the Cold War began, the government formalized the FFRDC model through Project RAND, which supported the development of defense strategies beyond the confines of official government agencies. During the Cold War and the Space Race, FFRDCs expanded their operations, as their number increased from 23 in 1951 to 74 in 1969 (U.S. Congress, Office of Technology Assessment, 1995). In 1984, new federal guidelines restricted the operations of FFRDCs to public-interest research so as to avoid competition with private industry. Today, FFRDCs maintain long-term relationships with federal agencies, and benefit from access to restricted data. Because FFRDCs are dispersed regionally across the United States, they are often seen as forming an integral part of federal placed-based policy.

Commercialization of Technology. By the late 1970s, there was concern that U.S. innovation was lagging. Federal laboratories performed substantial basic research but did not commercialize many of their innovations (Adams, Chiang, and Jensen 2003). In 1980, less than 5 percent of federally owned patents had been licensed by the private sector (Heisey et al. 2006). In that year, Congress passed the Stevenson-Wydler Technology Innovation Act and the Patent and Trademark Law Amendments Act (popularly known as the Bayh-Dole Act) to allow universities, small businesses, and non-profit organizations to own the title to patents on inventions stemming from government funded research and to license the rights to those inventions to industry. Hausman (2022) finds positive impacts of the Bayh-Dole Act on intellectual property interventions, including increased university connectedness to local industry and growth in employment, payroll, and establishment size in counties near universities that received more pre-Bayh-Dole federal funding. Later legislation expanded Stevenson-Wydler and Bayh-Dole by creating Cooperative Research and Development Agreements (CRADAs), which can be used to establish partnerships for technology transfer between federal laboratories and private individuals, firms, and state and local governments. CRADAs appear to have facilitated increases in laboratory-industry partnerships and firm-sponsored R&D (Adams, Chiang, and Jensen 2003).

Small Business Innovation. Small businesses have benefited directly from government efforts to commercialize federally funded innovations in technology. The Small Business Innovation Research (SBIR) Program was established by the Small Business Innovation Development Act of 1982, with the goal of strengthening the role of small, innovative firms in federally funded R&D and to utilize federal

Figure 14.



Notes: This plot shows total annual funding through SBIR and STTR programs from 2004 to 2022. Award amounts are adjusted to 2020 dollars using the PCE Price Index. Data includes county-level aggregations of SBIR and STTR awards. Data source is the U.S. Small Business Administration.

research as a base for technological innovation (see Figure 14).[69] The SBIR program requires federal agencies with annual R&D budgets above $100 million to allocate 3.2% of their funding to small businesses. Funds are allocated through a competitive, multi-phase process that involves feasibility studies, development and prototyping, and commercialization. A related program, Small Business Technology Transfer (STTR), was established in 1992 to foster collaboration between small businesses and nonprofit research institutions to transfer technology from research institutions to the marketplace. The STTR program mandates that a percentage of revenues for federal agencies with R&D budgets greater than $1 billion go to small businesses engaged in cooperative research with research institutions. This cooperative research process has three phases, similar to the SBIR program, with an additional requirement that small businesses collaborate with a research institution, such as a university or FFRDC. In both the SBIR and STTR programs, local intermediaries, including Small Business Development Centers (SBDCs) and Procurement Technical Assistance Centers (PTACs), help small businesses navigate the application and approval process. Gallo (2022) finds significant geographical concentration in award allocations, consistent with the overall agglomeration of innovation. For the SBIR, between 2015 and 2019, the top ten states absorbed more than two-thirds of funding, while the bottom ten states received less than 1% of the total. Similarly, for the STTR, the

[69] The Act recognized that "while small business is the principal source of innovations, the vast majority of federal research and development is conducted by large businesses, universities, and Government laboratories" (*Public Law 97-129* 1982).

top ten states accounted for 62% of total funding (with California, Massachusetts, and Texas alone absorbing 30%), while the bottom ten states took in less than 1% of award allocations.

Technology clusters. Gross and Sampat (2023) find that OSRD funding during the Second World War had long-term effects on regional technology clusters, enabling not only greater patent production in treated clusters but also self-sustaining agglomeration. Examples of clusters that developed due to OSRD funding include the Route 128 Technology Hub in Boston (Dorfman 1983; Saxenian 1996) and Silicon Valley (Lécuyer 2007; Saxenian 1983). Apart from OSRD-supported clusters, there are other examples of post-war regional innovation clusters—particularly those that grew out of the commercialization-oriented reforms of the 1980s—such as North Carolina's life sciences cluster, which witnessed rapid growth in the 1980s and 1990s. Haskins and Parilla (2024) suggest the following elements enabled this cluster to gain momentum. First was the presence of major research universities,[70] which constituted the Research Triangle Park in 1958. Later, the Bayh-Dole Act enabled these universities to patent innovations and transfer technology to the private sector. Second was the creation of a state-funded local research translator in the form of North Carolina Biotech, which orchestrates the commercialization of patents, supported start-ups, and recruited new business. Third was multi-decade state investments in developing its life sciences workforce. Feldman and Francis (2003) study the evolution of Maryland's biotechnology cluster and document a similar dynamic at work. Maryland leveraged opportunities to commercialize technology because of its large number of scientists and engineers, proximity to federal government laboratories, and the presence of top tier research universities (Johns Hopkins and the University of Maryland). These advantages were reinforced by regional strategy, like business incubators and incentives to attract firms.

In federal policy, regional innovation clusters became prominent in President Obama's 2009 Strategy for American Innovation, which emphasized the role of technological innovation for the country's growth. The strategy presented clusters as sources of entrepreneurship, innovation, and high quality jobs, and signaled the administration's intent to make large investments to promote regional innovation clusters by bringing together industry, university, and government funding (National Economic Council and Office of Science and Technology Policy 2011). The EDA's Regional Innovation Program (now called Build to Scale), the USDA's Agricultural Technology Innovation Partnership, and the Department of Energy's Energy Innovation Hubs, are all products of that moment. Recent programs under the Biden administration—including the Build Back Better Regional Challenge and the CHIPS and Science Act's Technological Hubs and NSF Engines—also

[70] These include Duke University, North Carolina State University, and the University of North Carolina at Chapel Hill. The initial goals of the Research Triangle Park were to attract R&D jobs—as opposed to entrepreneurship—which resulted in large investments in the three universities (Cooke 2004).

follow this logic, focusing on place-based consortia and coalitions. The Build to Scale (B2S) Program is administered by the EDA. It was established in 2010 to encourage regional innovation strategies, including regional innovation clusters and research and science parks, and authorized the EDA to provide competitive grants for the development of innovation clusters. Grants could be used for planning, technical assistance, cluster coordination and governance issues, and market development and commercialization of products and services developed by the clusters. In its early years, the B2S/RIS program did not require applicants to meet the EDA's regional distress criteria. Changes in 2015 and 2023 expanded targeting of rural areas and underserved communities.

IV. Final Discussion

The approach of the U.S. government to place-based policy has evolved over the last century and a half. It represents the accumulation of myriad innovations in policies and programs at the federal, state, and local levels. Many programs were born in response to a specific economic or geopolitical crisis and later adapted to the priorities of subsequent presidential administrations. The agencies themselves tend to be long-lived, which has created institutional continuity in place-based policy. But federal funding tends to vary substantially over time, in line with shifting presidential priorities, which has required state and local actors to insulate themselves against such variability and search for robust regional solutions to regional problems. Reinforcing the importance of action at the local level is five decades of decentralization of federal authority over policy implementation to state and local entities. The prominent role of local intermediary organizations in place-based policy is the combined result of the long history of bottom-up policy innovations and the devolution of control (and often financing obligations) from Washington, D.C. to states, counties, and cities.

A vibrant literature, discussed by the chapters in this volume, analyzes specific types of place-based interventions. What the literature tends to miss is that although some government actors may conceive of policy as being enacted in vertical silos, which motivates analyzing them as such, other actors do not. At the local level, enacting place-based policy means integrating efforts to recruit business, invest in low-income communities, support small business, develop the workforce, and promote innovation in a manner that achieves broader regional aims. An intervention-based approach to studying place-based policy is helpful (if not essential) for causal identification of program impacts. Yet it risks mischaracterizing the full scale of place-based policies in operation. And it may miss the larger regional impacts of the full complement of policies that economic developers and other local actors collectively orchestrate. In this paper, we sought to draw attention to these collective efforts and the institutional environment in which they are undertaken. We close with reflections on where economic research on

place-based policy might head if we hope to improve our understanding of the impact of place-based policy on overall regional economic activity.

One important area for new work is on the causes and consequences of local variation in administrative and organizational capacity to deliver place-based policy. If high-capacity places tend to be richer places, capacity constraints may blunt the distributional goals of place-based policy. Our discussion of regional technology clusters highlights that federal policy—during World War II and the Cold War, as well as the regulatory changes in the 1980s—has been critical for converting public investment in R&D into actions that enhance regional economic development. The regions able to take advantage of these policies and programs mostly had strong research universities to begin with, suggesting that technology and innovation-oriented programs may inevitably favor regions with better baseline educational institutions. Such favoritism may not be surprising when it comes to technology policy. Yet it also arises in other policy domains. Participating in community redevelopment programs, such as Opportunity Zones and the New Market Tax Credit (NMTC), typically requires the presence of sophisticated local financial institutions, which may account for why program benefits flow disproportionately to low-income neighborhoods located in higher-income regions (Corinth et al. 2024).

Another area worthy of attention is the origin of and potential solutions to the absence of coordination across the federal agencies that instigate place-based policy. The Economic Development Administration (Commerce), the Employment and Training Administration (Labor), the Small Business Administration (Commerce), and the agencies that fund the Small Business Innovation Research and and Small Business Technology Transfer Programs (e.g., Energy) work together as a matter of exception rather than as a rule. The consequence is that when we look across policy domains we see a patchwork of intermediary organizations at the local level that are obligated to respond to the specific rules and requirements of their domain. Attempts to improve federal coordination have been short-lived. For example, the Empowerment Zones program of President Clinton created an inter-department group to prioritize and coordinate federal investments in regions designated as EZs. However, the successors to the EZ program—the NMTC and Opportunity Zones—did not create comparable coordination mechanisms (perhaps contributing to their poor targeting of poor local labor markets). In 2011, the EDA established an Economic Development Integration function to lead coordination among federal agencies involved in place-based policy. Although the EDA's mission and scope expanded, its funding did not, which is perhaps why lasting coordination did not occur. More recently, the majority of President Biden's place-based programs were orchestrated out of the Department of Commerce, with limited evidence of inter-departmental coordination and perhaps low prospects for continuation under President Trump.

Policy coordination is also a challenge at the local level. The Economic Development Organizations we discuss in section III can be seen as local solutions to policy coordination problems. Successful EDOs—which may predominate in high-capacity regions—appear to work across policy domains to improve prospects for local employment and wage growth. Perhaps ironically, the federal government actively encourages policy coordination at the local level. Since its inception, the EDA has relied on multi-county Economic Development Districts and required them to produce a Comprehensive Economic Development Strategy (CEDS) as a mechanism to promote regional policy coordination. As of yet, we do not have systematic evidence on whether the CEDS process meaningfully improves regional planning and strategy regarding place-based policy or whether local EDOs participate in and benefit from it. Another federal effort to promote local coordination is to predicate funding on local actors forming consortia across policy domains, a tactic employed heavily by President Biden (e.g., in the Build Back Better Regional Challenge, the CHIPS & Science Act's Technology Hubs and Recompete Pilot Programs, and the SBA's Regional Innovation Clusters). We do not know how consortium mandates align with the successful operation of EDOs.

Related to local coordination, the federal government empowers very different types of intermediary organizations in different policy domains. In some domains, the federal government relies on public sector actors, as in the case of subsidies for career and technical education which are mostly administered by public two-year community colleges. In other domains, the government delegates authority to private-sector actors, as in the case of SBA loan guarantees, most of which are provided by private-sector financial institutions. And in yet other domains, the government relies on nonprofit actors, such as the NMTC which are allocated by Community Development Entities. In principle, the incentives, capabilities, and willingness to work with other policy organizations may vary widely across these three types of intermediaries. Yet, we have little systematic evidence on this issue. For instance, in designing career and technical education community colleges commonly collaborate with local employers, who presumably are well informed about occupational skills in high local demand. Federal policy gives community colleges such discretion. Similarly, the financial institutions that allocate most SBA loan guarantees have substantial discretion over which business they lend to. One might imagine that public community colleges and private banks utilize discretion in very different ways, such that one or the other may be better aligned with the objectives of place-based policy.

A final area worthy of study regards the vicissitudes of federal policy making. These are not unique to place-based policy but are nonetheless abundantly evident. One challenge is so-called "pig in the python funding cycles" in which the federal government alternates between steep increases and steep decreases in available resources. For instance, while the EDA saw significant increases in its mandate through the 1960s and 1970s, it was nearly closed in the 1980s and was not formally reauthorized until

1998. It later saw a ten-fold increase in its budget in the early 2020s. The downstream effects of this precarity on local institutions may be long lasting. Regional disparities in organizational capacity in place-based policy, for instance, may be exacerbated by the high variability of federal funding. A related challenge is mission creep in which agencies undergo a dilution of their objectives. For instance, over time, federal worker training programs have come to target broad swathes of the labor force, thereby reducing the initial emphasis on displaced industrial workers. To the extent local objectives do not always align with shifting federal government objectives, local actors may face uncertainty over how long present federal interest in a policy area will endure.

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Data Appendix

Small Business Administration

The Small Business Administration (SBA) loan guarantee data are administrative records that the SBA collects from lenders. Our data cover the period 1991 to 2022 and include the names and locations of the lending institution and loan recipient, loan approval date, loan disbursement date, loan amount, guaranteed loan amount, and current loan status. The SBA updates the data regularly, replacing the recorded lender with the entity that has acquired the original lender if a merger or acquisition has occurred. The lender is thus the current holder of the loan, which may not be the original lender. Relevant definitions:

- A **Certified Development Company (CDC)** is a financial entity approved by the SBA to issue 504 loans and to receive loans guarantees from the SBA.
- A **7(a) lender** is a financial institution approved to issue 7(a) loans and to receive loans guaranteed from the SBA.
- Subprograms of the 7(a) and 504 programs certify lenders, which may expedite the process for approval of loans guarantees by the SBA. The major subprograms are:
  - ALP: Accredited Lenders Program, lower tier of certification given to CDCs.
  - PCLP: Premier Certified Lenders Program, top tier of certification given to CDCs.
  - CLP: Certified Lenders Program, lower tier of certification given to 7(a) lenders.
  - PLP: Preferred Lenders Program, top tier of certification for 7(a) lenders.

IPEDS

The Integrated Postsecondary Education Data System (IPEDS) is a system of surveys conducted by the National Center for Education Statistics (NCES) in the U.S. Department of Education. IPEDS track award completions and other characteristics for institutions of higher education in the United States. Our data cover the years 1980 to 2022 are limited to public two-year colleges. Awards include associates degrees and certificates. Career and Technical Education (CTE) refers to educational programs or pathways that prepare individuals for specific careers or industries. These are identified in IPEDS using NCES Classification of Instructional Program (CIP) codes. CIP codes tied to CTE include Agriculture and Natural Resources; Business and Marketing; Communication Technologies; Engineering and Architecture; Computer and Information Sciences; Construction, Manufacturing, and Repair; Culinary, Hospitality, and Tourism; Education and Human Services; Health Sciences; Law, Public Safety, and Security; and Transportation and Logistics. Spending on CTE is estimated as revenue of a public two-year college from federal, state, and local government sources $\times$ (number of CTE AA degrees and certificates/All AA degrees and certificates), summed over all public two-year colleges in a given year.

Good Jobs First's Subsidy Tracker

The Good Jobs First (GJF) Subsidy Tracker is a proprietary dataset. GJF collects information on tax incentives and subsidies that government agencies award to firms using official disclosure websites and reports, direct requests to agencies, news articles, and Freedom of Information Act filings. Our data cover the period 2001 to 2021. Each entry in the data represents an incentive provided by a government entity to a firm in a year as part of an official incentive program. The data report the year, awarding agency and program, receiving firm, firm location, incentive amount, type of incentive, and source from which GJF learned of the incentive. A business subsidy is a non-loan incentive, including tax credits, tax abatements, and tax rebates. A business loan is an incentive that comes in the form of a loan, loan guarantee, or bond financing. Data coverage in the GJF Subsidy Tracker depends on public disclosure of business incentive deals. Some deals have incomplete information (e.g., 10% of deals lack an award amount). Disclosure of deals involving the federal government has improved since the introduction of the Federal Funding Accountability and Transparency Act of 2006; disclosure of deals involving state and local governments appears to vary across states and over time.

Economic Development Administration

The Economic Development Administration (EDA) awards data are from the U.S. Department of the Treasury's Bureau of the Fiscal Service. EDA awards are made to regions, communities, and public and private organizations based on a competitive proposal process. Funding opportunities include the following categories: Economic Adjustment Assistance, Public Works, and Other (Planning, Technical Assistance, Research, and Build to Scale).

Rural Development

Rural Development investment data are from the U.S. Department of Agriculture (USDA) and cover the period 2012 to 2024. USDA Rural Development investments support low-income communities outside of urban centers by funding programs related to local business, community development, housing, and infrastructure. We exclude housing from the Rural Development investment totals we report.

Community Development Block Grants

Community Development Block Grant data are the U.S. Department of Housing and Urban Development (HUD) and cover the period 2001 to 2023. CDBG funds are intended to benefit low- and moderate-income persons in principal cities of Metropolitan Statistical Areas, other metropolitan cities with populations of at least 50,000, and qualifying urban counties with populations of at least 200,000. Funding targets the prevention or elimination of slums or blight and urgent needs without other available funding. Funding levels to states and communities are based on a formula that takes into account poverty rates, population, housing overcrowding, and age of the housing stock. We exclude CDBG funding related to housing, including construction, rehabilitation, and counseling services.