UNTRANSIT: REMOTE WORK AND THE TRANSFORMATION OF ZONING

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Remote work is poised to transform land use law by untethering labor from centralized workplaces and blurring the boundaries between work and home. Traditionally, land use law and local governments have focused on separating work from home through the conduit of transit. This Article argues that the division of work from home in land use law and the accompanying transit mindset have stunted the local role in remote work—or untransit—as well as scholarly attention to the implications of remote work. To remedy this gap, I advocate a shift from land use law's position of (at best) tolerating remote work toward policies to support remote work. For example, local government can espouse remote work via zoning reforms, amenities such as work centers, and, perhaps most impactfully, digital connectivity. The Article also considers concerns that may arise as remote work expands. I offer suggestions for localities to mitigate possible adverse effects on economic and racial equity and urge re-thinking the conventional concerns that remote work will harm labor productivity, gender parity in the workplace, or the vaunted position of cities.

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Introduction

Since the movement from an agrarian to an industrial economy, the separation of business from residential property has been a central aim of zoning laws, comprehensive plans, and nuisance law. Accordingly, land use policy and funding have focused heavily on transit as the conduit between work and home. Local, regional, state, and federal governments have planned and subsidized transportation networks that shuttle people between work and home, with laudable attention in recent years to the environmental benefits of lower-carbon mass

^{1.} See William A. Fischel, An Economic History of Zoning and a Cure for its Exclusionary Effects, 41 Urb. Stud. 317, 320-30 (2004).

transit.² In contrast, local government has played a minimal, and at times obstructive, role in planning, zoning, and providing amenities for remote work.³ Scholars have critiqued zoning prohibitions of home-based businesses and proposed less restrictive alternatives.⁴ However, there has not been an account of how transit-oriented land use law might *support* working from home, rather than merely tolerate it.⁵

From white collar professionals finishing work in the evenings to part-time sellers on eBay, it is increasingly uncommon for a household's paid work to be performed entirely at a centralized, commercial work site. Most workers do some work either from home or nearby (i.e., not at a job site) and a significant number work entirely from home.⁶ The most sought-after schedules for U.S. workers, and perhaps the most productive, are hybrid schedules that split the week between work at home and a centralized job site.⁷ The revolution in information and technology, as Ravi S. Gajendran and David A. Harrison observe, "has compelled firms to unbind time and task from place." Most recently, the coronavirus pandemic has dramatically increased the number of Americans working remotely and illuminated the astounding amount of work that can be performed from home.⁹

- 3. See infra Part I.A.
- 4. See Nicole Stelle Garnett, On Castles and Commerce: Zoning Law and the Home-Business Dilemma, 42 Wm. & MARY L. REV. 1191, 1236-44 (2001) (critiquing prohibitions on home businesses in residential zones); Patricia E. Salkin, Zoning for Home Occupations: Modernizing Zoning Codes to Accommodate Growth in Home-Based Businesses, 35 REAL EST. L.J. 181, 189-95 (2006) (offering a proposal for using performance zoning to regulate home-based businesses).
- 5. The closest existing scholarly accounts advocate for government subsidies of remote work centers. See W.C. Bunting, Unlocking the Housing-Related Benefits of Telework: A Case for Government Intervention, 46 REAL EST. L.J. 285, 286 (2017).
 - 6. See infra Part II.A.
- 7. See Anita Kamouri, Iometrics & Kate Lister, Glob. Workplace Analytics, Global Work-From-Home Experience Survey 29 (2020) (survey finding average preferred frequency of working from home in the U.S. was 2-3 days in a work week).
- 8. Ravi S. Gajendran & David A. Harrison, *The Good, the Bad, and the Unknown About Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences*, 92 J. APPLIED PSYCH. 1524, 1524 (2007).
- 9. See Alexander Bick, Adam Blandin & Karel Mertens, Work from Home After the COVID-19 Outbreak 2 (July 2020) (unpublished manuscript) (on file with Federal Reserve Bank of Dallas) https://perma.cc/ZF3W-52B2 (finding the percentage of Americans working entirely from home increased to 35.2% in May 2020, following the COVID outbreak, from 8.2% in February 2020).

^{2.} See Jonathan L. Gifford, Transportation Finance, in The Oxford Handbook of State and Local Government Finance 594, 595 (Robert D. Ebel & John E. Petersen eds., 2012) ("A unifying theme that is observed in all modes is the intergovernmental nature of transportation spending."); Juita-Elena (Wei) Yusuf, Lenahan O'Connell & Sawsan Abutabenjeh, Paying for Locally Owned Roads: A Crisis in Local Government Highway Finance, 16 Pub. Works Mgmt. & Pol'y 250, 252-57 (2011) (describing an increase in locally owned roads and devolution of highway financing responsibility from the states to the localities).

Despite the growing role of remote work in labor markets, localities have been slow to support it through zoning and local goods (*e.g.*, broadband, remote work centers). The sluggish response of local governments is not surprising in light of land use history and its effect on mindset and policy. Across the past century, the spatial division of work and home accomplished through zoning laws and transit has created a policy baseline that has constructed transit as the central work-related good provided by localities and truncated the local role in remote work.¹⁰ The tethering of labor to place has also propped up cities and municipal tax revenues, a reason why some cities oppose regional or state policies to expand remote work.¹¹

Remote work policy is needed—and inevitable—as localities confront growing numbers of remote workers. Already, "zoom towns" have arisen spontaneously in certain areas in response to influxes of remote workers. Localities, seeking to expand their tax bases and increase home values, will increasingly court remote workers. In addition to the growing demand for remote-work friendly localities, there are also a number of societal benefits to remote work. In particular, remote work is likely to improve average housing affordability by creating more housing options for workers who commute less frequently, or not at all, to centralized workplaces and decreasing housing prices in large cities. In addition, the untethering of work from centralized workplaces should spur welfare-enhancing gains to local efficiency as localities compete for increasingly mobile residents.

There are unique advantages to supporting remote work at the local level. Local governments typically have the power and proximity to zone land and tax residents to finance local-scale goods. ¹⁶ Compared to state or federal remote

^{10.} See Andre Sorensen, Taking Path Dependence Seriously: An Historical Institutional Research Agenda in Planning History, 30 PLAN. PERSP. 17, 21-25, 31-33 (2015) (describing scholarly history and research questions on path dependence in local land use law).

^{11.} See, e.g., Carly Graf, Mayor London Breed: We 'Cannot Support' MTC Telecommute Mandate, S.F. Exam'r (updated Oct. 14, 2020, 6:32 PM), https://perma.cc/7UGZ-KAUS. It is possible that some localities will shy away from promoting remote work to protect the higher tax revenues they receive from commercial compared to residential property. This seems unlikely, however, because increased restaurant and retail spaces and higher residential property tax revenues from an influx of remote work often offset or exceed losses.

^{12.} Greg Rosalsky, *Zoom Towns and the New Housing Market for the 2 Americas*, NPR (Sept. 8, 2020, 6:30 AM ET), https://perma.cc/8J5L-7V3T.

^{13.} Some localities, realizing the potential of remote workers to revitalize their communities, are beginning to experiment with incentives to attract them. *See*, *e.g.*, Sarah Holder, *Paying Remote Workers to Relocate Gets a Pandemic-Era Boost*, BLOOMBERG (June 23, 2020, 12:38 PM PDT), https://perma.cc/QN99-TXB2.

^{14.} See infra Part II.C.

^{15.} See infra Part II.B.

^{16.} See Euclid v. Amber Realty Co., 272 U.S. 365 (1926) (affirming constitutionality of zoning power delegated from the state of Ohio to the village of Euclid); WILLIAM A. FISCHEL, THE ECONOMICS OF ZONING LAWS: A PROPERTY RIGHTS APPROACH TO AMERICAN LAND USE CONTROLS 22 (1985) (finding that "[z]oning is one of the community's 'police powers,' pursuant to state enabling acts which delegate the zoning power to local government."); Charles

work laws, local action can respond, albeit imperfectly, to variability in the prevalence and type of remote workers and the differing needs of residents in various localities. Localities can also offer decentralized experimentation with remote work policies, an important point in light of uncertainties attending the shift to remote work. The localization of remote work policymaking envisioned in my account is robust, but not exclusive, and operates in parallel to remote work provision by private firms and other levels of government.

Local support for remote work can take a number of forms. Depending on resident needs and local resources, local governments' role in remote work could include zoning protection for remote work and home businesses, public and private remote work centers, and increased mixed-use zoning to provide proximate retail and dining amenities for home workers.¹⁷ Because local government typically lacks the nimbleness and efficiency of markets, reducing zoning and other local regulatory barriers for private providers of remote work amenities and real estate is important. Highly motivated localities, and in some cases states, are also experimenting with incentives to attract remote workers, particularly from the technology sector.¹⁸ Likely the most impactful change will be to increase local provision of internet connectivity and cyber-security, moves that dovetail with the growing interest in digitized "smart cities."¹⁹

Localities will face challenges to zoning and supporting remote work, including limited fiscal capacity to support remote work and opposition from interests that stand to lose from increased remote work.²⁰ In some cases, state or federal government may need to provide funding to incentivize localities to support remote work when local governments cannot capture the full benefit of their investments (*e.g.*, global carbon reduction from telecommuting). In other cases, regulatory backstops by state or federal government may be necessary to prevent extra-local harms from remote work, such as sprawl from the dispersal of remote workers to outlying metro or rural areas. In addition, the growth of remote work

- 17. See infra Part IV.B-D.
- 18. See infra Part IV.E.

M. Tiebout, A Pure Theory of Local Expenditures, 64 J. Pol. Econ. 416, 424 (1956) (contending that political decentralization to local-scale governments can increase economic efficiency).

^{19.} The "smart city" literature has a lesser focus on suburban and rural local governments, localities that I encompass in the call for greater support of remote work. For more detail on smart cities, see generally Stephen Goldsmith & Susan Crawford, The Responsive City (2014) (arguing that local governments can gather, analyze, and share data at an expanded scale; improve management of local employees; and optimize local infrastructure via technology); Anthony M. Townsend, Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia (2013) (describing the use of the smart city approach to improve local services and meet challenges of massive and increasingly interconnected metropolitan areas).

^{20.} See infra Part III.D (describing limited local fiscal capacity); Saul Levmore, Interest Groups and the Problem with Incrementalism, 158 U.P.A.L.REV. 815, 817 (2010) (describing how piecemeal changes in law can "rearrange[] the constellation of supporters and opponents of further moves and gives organized interest groups reason to realign themselves in response to incremental change.").

and local provision of remote work zoning and goods may exacerbate economic and racial inequities and weaken the position of some large cities.

This Article contends that land use policy has neglected remote work and advocates for expanding the local government role to include supporting remote work, rather than merely tolerating it. Part I describes the non-neutral baseline in land use law, which focuses on transit as the conduit between spatially separate workplaces and homes and affords little attention to zoning and providing local goods for remote work. This "transit mindset" arises from historical developments, such as the advent of the streetcar and the use of transit and zoning to impede suburban racial integration. Part II examines the rise of remote work and its inevitable impact on land use law, as well as the social benefits of remote work for housing affordability and local efficiency. Part III examines the case for "localizing" remote work and describes the advantages and challenges of local zoning and provision of goods for remote work. Part IV offers examples of zoning reforms, critical services, and desirable amenities that localities might provide for remote workers, with a particular focus on internet connectivity. Finally, Part V considers concerns and potential objections to promoting remote work at the local level, including equity, impacts on cities, and effects on labor productivity. Of note, throughout the Article, the terms work from home, telecommuting, and remote work refer interchangeably to individuals working regularly, though not necessarily exclusively, from their residences or private or public community spaces (e.g., remote work centers, coffee shops, and libraries).

I. PRIVILEGING TRANSIT OVER REMOTE WORK: MODERN DISPARITIES, HISTORIC ORIGINS

Despite the fact that remote work has increased dramatically across the past three decades, it remains outside the central purview of local government.²¹ While local governments and regional transit authorities invest mightily in roads, transit infrastructure, and mass transit, they generally fail to fund, plan, or zone for remote work. This orientation is the byproduct of not only current forces but historical ones. From its earliest inception, land use law served to enforce the separation of work from home created through the development of streetcars and eventually other forms of transit.²² This history has begot a plethora of zoning

^{21.} Notably, the increase in remote work appears to be a permanent one that localities will grapple with for the foreseeable future. For example, the current data indicate that increased remote work levels from COVID will not revert to their pre-pandemic baseline. See Jose Maria Barrero, Nicholas Bloom & Steven J. Davis, Why Working from Home Will Stick 16-22 (Nat'l Bureau of Econ. Rsch., Working Paper No. 28751, 2021). https://perma.cc/GV89-6Z59 (arguing that remote work will persist after pandemic based on survey finding that substantial number of employees plan to continue some remote work, access to technology had improved, and fears of virus exposure lingered).

^{22.} See FISCHEL, supra note 1, at 320-28; SAM BASS WARNER, JR., STREETCAR SUBURBS 72-75 (2d ed. 1978) (describing the role of railroads and streetcars in Boston in separating homes from work and upper-class homes from lower-income ones).

laws, policies, and subsidies that favor transit to work over remote work and created a non-neutral baseline—one that has propped up both cities and transit. As a result, land use law has lagged behind the shift toward remote work by offering scant support for working from home and in some cases maintaining zoning laws that actively forbid it.²³

A. Disparate Local Investment in Transit vs. Untransit

The funding and expertise devoted to transit dwarf the meager—and in many localities, non-existent—local role in remote work and reflect a strong local bias toward transit. Local governments, as well as state and federal governments, provide and subsidize transit and transit infrastructure. There are 3.2 million miles of locally owned roads nationwide.²⁴ In the face of declining federal and state funding, local governments provide forty-seven percent of transit funding through property and other local taxes as well as fares and user fees, transportation agency funds, and bond revenues.²⁵ Fares and tolls are not adequate to fund transportation costs, leaving localities and regional transit authorities with a heavy financial burden.²⁶ This burden does not end with construction. Nationwide, localities spend over nine billion annually operating transit systems.²⁷

In addition to constructing and operating transit, localities engage in extensive and ongoing planning for roads, bus routes, subway and light rail stops, bike paths, seaports, and airports, often in partnership with other localities or the state. New transportation requires congestion analysis, planning for infrastructure adjacent to or associated with transit, and rezoning or the creation of transit overlay zones.²⁸ Transit planning frequently entails oversight by federal, regional, or state authorities. For example, Oregon's Transportation Planning Rule requires

- 23. See Garnett, supra note 4.
- 24. See Adie Tomer & Joseph W. Kane, Localities Will Deliver the Next Wave of Transportation Investment: Federal and State Policymakers Can Do More to Support Local Efforts, BROOKINGS (Jan. 2018), https://perma.cc/47VW-CXCT.
- 25. See Am. Pub. Transp. Ass'n, 2019 Pub. Transp. Fact Book 24 (70th ed. 2019), https://perma.cc/6F22-T7FC [hereinafter Am. Pub. Transp. Ass'n 2019]. The trend is for fewer intergovernmental grants by federal and state governments to localities, particularly for highway funding. See Tomer & Kane, supra note 24.
- 26. AM. PUB. TRANSP. ASS'N, 2013 PUBLIC TRANSPORATION FACT BOOK 28 (64th ed., 2013), https://perma.cc/DCD2-Q6VR ("T]ransit operations are funded by passenger fares, other transit agency earnings, and financial assistance from state, local, and federal governments. . . Passenger fares and other agency earnings account for 38 percent of operating revenues.").
- 27. AM. PUB. TRANSP. ASS'N 2019, *supra* note 25, at 29 (citing 2011 data showing over 9 billion spent by localities, including local and transit authority funds from passenger fare revenues, parking revenues, advertising revenues, and bond revenues). Notably, most federal grants fund only construction, not operation or maintenance, of transit. *See* Tomer & Kane, *supra* note 24.
- 28. See Anastasia Loukaitou-Sideris, A New-Found Popularity for Transit-Oriented Developments? Lessons from Southern California, 15 J. URB. DESIGN 49, 65 (2010) (discussing utility of transit overlay zones).

localities to create a transportation system plan for future road and transit infrastructure.²⁹ Localities must also assess whether ordinance amendments or zoning changes will strain transportation capacity; if so, their plans must augment transportation or alter land uses to restore balance.³⁰

As part of transit planning, some state and local laws promote "transit-adjacent" and "transit-oriented development." Transit-adjacent development refers to placing residential spaces proximate to transit, particularly public transit.³¹ Transit-oriented development seeks to mix higher-density residential development and commercial spaces within walking distance of a transit stop.³² Localities have created transit-oriented and transit-adjacent development zones that provide incentives to developers by allowing higher density for new residential developments close to transit stops, reducing the minimum requirements for parking spots, decreasing the required amount of open space, and streamlining the development approval process.³³ States and localities have also increased the attractiveness of transit-oriented and transit-adjacent development projects via direct subsidies, as California has done with Proposition 1C, which funds loans for developers and grants for transit agencies to create infrastructure around transit stops.³⁴

In contrast to the expenditures and staff resources devoted to transit, localities rarely subsidize or plan for remote work. The vast majority of localities do not provide important remote work services (e.g., police trained for cybersecurity) or desirable amenities (e.g., workspaces), or offer incentives for private businesses supplying these goods. Only a small number of municipalities provide free municipal broadband, a key work from home service.³⁵ Rather than espousing remote work, some localities have created zoning ordinances that severely restrict home businesses.³⁶ Other localities have adopted vague or complex ordinances that leave opaque the legality of different kinds of home work.³⁷

^{29.} OR. ADMIN. R. 660-012-0015 (3)-(7) & 660-102-0000(1)(i) (2006).

^{30.} *Id*.

^{31.} See Joe Holmes & James van Hemert, Transit Oriented Development, Rsch. Monologue Series of Rocky Mountain Land Use Institute 4 (2008), https://perma.cc/G5XX-UW3B .

^{32.} See Mattias Qviström & Jens Bengtsson, What Kind of Transit-Oriented Development? Using Planning History to Differentiate a Model for Sustainable Development, 23 Eur. Plan. Stud. 2516, 2516-17 (2015) (reviewing definitions of transit-oriented development). Transit-oriented development is usually within a half-mile radius of a transit station. See Holmes & Van Hemert, supra note 31, at 4.

^{33.} See Holmes & Van Hemert, supra note 31, at 5, 7. For example, the city of San Jose, California requires that residential developments within 2,000 feet of transit stops must have twenty units per acre in suburban areas and forty-five units for acre in urban locations. See id. at 5.

^{34.} See Loukaitou-Sideris, supra note 28, at 61.

^{35.} See infra Part IV.A.1.

^{36.} See Garnett, supra note 4.

^{37.} See infra Part IV.B.

The neglect of remote work has occurred despite the fact that many localities and regional agencies employ a planning process called transit demand management (TDM) that explicitly recognizes remote work. TDM seeks to reduce peak period traffic and use of solo driver cars for transit and to provide information and incentives to use congestion-reducing alternatives.³⁸ TDM reports and guidance documents state that planners should consider remote work as a congestion-reduction strategy.³⁹ However, in practice TDM has focused on requiring businesses to support carpooling, van pools, or guaranteed ride home programs, or construct transit-oriented development in exchange for development approvals.⁴⁰ As a result, TDM planning and resources have been channeled toward congestion-relief initiatives that are unpopular with workers and employers, such as carpooling, at the expense of remote work options favored by workers.⁴¹

Notably, private real estate developers have been more responsive than local governments to remote work trends. Some new residential developments, often apartment buildings or condominiums, include resident business centers, reading rooms, or work/café spaces.⁴² These amenities are found most often in high-end or luxury residential developments that cater to professional residents, a group more likely to work at home than blue-collar workers.⁴³ Workers in more modest rentals, older condominiums, and single-family homes usually lack access to such amenities.

^{38.} See Genevieve Giuliano, Transportation Demand Management: Promise or Panacea?, 58 J. Am. Plan. Ass'n 327, 327 (1992).

^{39.} See Stephen Crim, Transportation Agencies: Focus Less on Telework, MOBILITY LAB (Nov. 24, 2014), https://perma.cc/ZTC8-ZM67.

^{40.} See Carolyn P. Flynn & Lawrence Jesse Glazer, Ten Cities' Strategies for Transportation Demand Management, 1212 Transp. Rsch. Rec. 11, 11-21 (2007) (reviewing TDM strategies in ten cities, all of which focused on transit, parking, and ride-sharing); Giuliano, supra note 38 (describing three case studies of TDM approaches focused on transit; SMART GROWTH AM., GRAND RAPIDS' MICHIGAN STREET TRANSPORTATION DEMAND MANAGEMENT STRATEGY 1-3 – 1-6 (2013) (providing examples and case studies of transit initiatives in TDM).

^{41.} *Cf.* Giuliano, *supra* note 38, at 327 (concluding that TDM "has had only a small impact on traffic, but has had a significant impact on workers and their households" with respect to time, convenience, childcare, and other factors). One TDM advocate has suggested that agencies not devote resources to promoting remote work because there is already support for remote work among employers and workers. While government should be leery of subsidizing innovations that will occur without subsidy, it makes little sense to create legal infrastructure for congestion and pollution reduction strategies that are strongly and organically unpopular with citizens. *See* Crim, *supra* note 39.

^{42.} See, e.g., Leading Developers Pile on High-End Amenities to Attract Tenants, Affordable Hous. Fin. (Jan. 1, 2011), https://perma.cc/JCS5-LGRF; see also John Caulfield, 5 Intriguing Trends to Track in the Multi-Family Housing Game, Bldg. Design+Construction. (Jan. 31, 2015), https://perma.cc/Y3H6-BMBN?type=image.

^{43.} See The Impact of Work-from-Home and Hybrid Offices on Real Estate Trends: For Many, the COVID Pandemic Was an Unprecedented Opportunity to Live Wherever They Wanted, JEFFERSON GRP., https://perma.cc/284E-E7G6 (archived Feb. 4, 2021) (describing trend toward luxury condominiums and apartments with zoom rooms, co-working rooms, and private office spaces).

B. The Historical Origins of Separating Work from Home Through Transit and Zoning

The separation between home and work in land use law is entrenched in the United States' history of industrialization—a history that has created suburbs, situated cities as economic centers, and privileged transit as the focus of local planning and subsidy.⁴⁴ As a result of this history, localities typically view transit as the major work-related amenity they provide to residents. A transit-oriented view of local government excludes other configurations of work, including remote work and gig work, that have boomed in the past three decades.⁴⁵ The bias toward a division between work, and the accompanying bias towards transit, has resulted in policy path dependence, distorting labor markets and likely depressing the number of remote workers.

Supporting working from home has not been the province of land use law for at least a century. Following the country's founding, the agrarian economy focused on farming, typically on large tracts of land where owners and workers both resided and labored. By the end of the nineteenth century, industrialization had begun to increase the size and density of commercial enterprises. Factories became more numerous and were in close proximity to residences, leading to dissatisfaction and conflicts. Cultural anxiety about these changes found expression in architectural and social movements that reinforced the separation of work and commerce from residential life. The City Beautiful Movement and the Chicago World's Fair touted the social and aesthetic harmony of carefully executed public spaces, situated away from factories, shipping yards, and other businesses. The control of the support of the suppor

While pollution, noise, and other disruptions created incentives to separate homes from factories, transportation innovations enabled this division by allowing residents to move out of the central city. In 1880, a technological innovation, the electrically-powered streetcar, allowed affluent residents to escape factories and other commercial enterprises. Whereas before people needed to live within walking distance of work or take slow-moving, horse-drawn streetcars, now they could commute from more distant residential enclaves by much faster electric

^{44.} See 2 Leah Boustan, Devin Bunten & Owen Hearey, Urbanization in American Economic History, 1800-2000, in The Oxford Handbook of American Economic History 75, 78, 84-85 (Louis P. Cain, Price V. Fishback & Paul Rhode eds., 2018); Jeremy Atack, Robert A. Margo & Paul W. Rhode, Industrialization and Urbanization in Nineteenth Century America 2, 6 (Nat'l Bureau of Econ. Rsch., Working Paper No. 28597, 2021).

^{45.} See infra Part II.A.

^{46.} See Elaine Lewinnek, The Working Man's Reward: Chicago's Early Suburbs and the Roots of American Sprawl 9 (2014).

^{47.} See Jon A. Peterson, The City Beautiful Movement: Forgotten Origins and Lost Meanings, 2 J. Urb. Hist. 415, 416-41, 430 (1976); Wiliam H. Wilson, J. Horace McFarland and the City Beautiful Movement, 7 J. Urb. Hist. 315, 318 (1981).

^{48.} See Fischel, supra note 1, at 320; cf. WARNER, supra note 22, at 26-56 (describing history of streetcar suburbs and the suburbanization of not only affluent, but more middle-income homebuyers, as transportation improved).

streetcars.⁴⁹ The bicycle gained popularity in the 1890s and provided another means of transport between the city and suburbs. Bicycle commuters would ride up to ten miles with briefcase attachments on their bikes and "trouser guards" to protect their work clothes.⁵⁰

In 1910, the development of freight-hauling trucks and passenger buses, and subsequently the automobile, threatened the division between urban work centers and suburbs. These vehicles enabled commercial uses and apartments to migrate to the suburbs by providing affordable, multi-directional transportation.⁵¹ William Fischel describes how prior to the advent of buses, trucks, and cars, a combination of informal norms, coordination by developers, nuisance law, and covenants were adequate to protect suburban property values and limit exposure to nuisance or noxious industry.⁵² After the development of trucks and buses, this was no longer the case.

In response, zoning arrived as a vehicle for "prevent[ing] the invasion of residential areas by commercial development." Commentators and early zoning advocates of the time argued that zoning would provide assurances that neighborhoods would not be "encroached upon by business" and the "character of districts" would be protected. Localities effectuated a division between work and home through zoning laws specifying the kinds of uses and structures allowed in different areas. By zoning land for residential use, industrial use, and other subtypes of commercial uses, localities could selectively allow businesses that created minimal impacts on residential life or generated tax benefits exceeding their costs. ⁵⁵

Importantly, zoning also enabled cities, and later suburbs, to maintain economic and racial segregation by reducing housing density (e.g., allowing only more costly single-family homes) and zoning higher-density and industrial uses around existing neighborhoods of color.⁵⁶ These forms of zoning increased after

^{49.} See Howard P. Chudacoff, Judith E. Smith & Peter C. Baldwin, The Evolution Of American Urban Society 87-90 (2014). The streetcars were so critical that real estate developers often subsidized or even built them in order to increase the market for their residential developments. Fischel, *supra* note 1, at 320.

^{50.} EVAN FRISS, THE CYCLING CITY: BICYCLES IN URBAN AMERICA IN THE 1890s 148-49 (2015). The number of bicycle commuters is not known, but Friss notes they "represented an important segment of the cycling population." *Id.* at 149.

^{51.} Fischel, *supra* note 1, at 321. In light of urban social unrest and contagious disease, industry businesses hoped moves to the suburbs would improve the situations of their workers.

^{52.} See id. at 320-21.

^{53.} JOHN M. LEVY, CONTEMPORARY URBAN PLANNING 40 (1994).

^{54.} Fischel, supra note 1, at 322.

^{55.} See id. at 328 ("To the extent that [business] paid local taxes in excess of the additional costs of local services it required, business was welcome in suburbs if its neighbourhood effects were not to noxious or it could be sequestered into a non-residential area of the town.")

^{56.} Allison Shertzer, Tate Twinam & Randall P. Walsh, *Zoning and Segregation in Urban Economic History* 14-15 (Nat'l Bureau of Econ. Rsch., Working Paper No. 28351, 2021) (explaining that in the 1920s cities zoned Black neighborhoods into districts that allowed higher density development and thus denied Black residents the housing investment gains that

the Supreme Court struck down explicit local segregation ordinances that forbid renting or selling to Black people on majority-white blocks in *Buchanan v. Warley*.⁵⁷ With segregation ordinances foreclosed, local governments turned to zoning (and private developers to racially restrictive covenants) in order to maintain racial segregation.⁵⁸

In addition to zoning laws, federal mortgage underwriting also reinforced the separation of work and home through transit. The government favored lending in the suburbs, where there were stricter divisions between commercial and residential zones and many residents commuted to cities.⁵⁹ The FHA even offered guidance to the suburbs on how to defend against commercial encroachment. In the 1930s and 1940s, the FHA Underwriting Manual contained explicit instructions that suburbs should promote the strict separation of land uses through features such as cul-de-sacs and winding avenues that were inimical to businesses.⁶⁰

There were racial motivations at play in the FHA's solicitude toward the suburbs as well. The FHA Underwriting Manual encouraged the use of racially restrictive covenants in suburbs, as well as majority-white urban neighborhoods, and decried the residential mixing of "incompatible racial and social groups." Accordingly, the FHA created mortgage risk ratings based on neighborhood racial composition that effectively funneled lending capital to homogenous white suburbs. Thus, the suburbs not only separated (white) homes from workplaces but also maintained racial segregation.

This history of land use law reverberates to the present day in local zoning and transit. The segregation of work from home via zoning has persisted, significantly enabled by transit from residential neighborhoods to urban and business centers. Only in recent years has the new urbanism movement's advocacy of mixed-use zoning made limited progress in lessening rigid zoning divisions and

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lower-density zoning produced for white owners); Andrew H. Whittemore, *Exclusionary Zoning: Origins, Open Suburbs, and Contemporary Debates*, 87 J. Am. PLAN. ASS'N 167, 168-70 (2021) (describing the historical origins of exclusionary zoning in urban and suburban areas).

^{57.} Buchanan v. Warley, 245 U.S. 60, 60 (1917); Werner Troesken & Randall Walsh, *Collective Action, White Flight, and the Origins of Racial Zoning Laws*, 35 J.L. Econ. & Org. 289, 292-95 (2019) (overview of racial segregation ordinances).

^{58.} See RICHARD W. BROOKS & CAROL M. ROSE, SAVING THE NEIGHBORHOOD: RACIALLY RESTRICTIVE COVENANTS, LAWS, AND SOCIAL NORMS 39-48 (2013); Shertzer, Twinam & Walsh, *supra* note 56, at 6-11 (describing the evolution of local laws and practices to enforce racial exclusion).

^{59.} See Tom Hanchett, The Other "Subsidized Housing": Federal Aid to Suburbanization, 1940s-1960s, in From Tenements to Taylor Homes: In Search of Urban Housing Policy in Twentieth Century America 163, 163-67 (John Bauman, Roger Biles & Kristin Szylvian eds., 2000).

^{60.} See id.

^{61.} Fed. Hous. Auth., 1938(a) Underwriting Manual §§ 934, 937, 980(1) (1938).

^{62.} See id., § 1032; John Kimble, Insuring Inequality: The Role of the Federal Housing Administration in the Urban Ghettoization of African Americans, 32 L. & Soc. Inquiry 399, 402-03, 405, 409-410 (2007).

intermingling retail and other amenities within residential neighborhoods.⁶³ Even when communities are receptive to mixed-use zoning, it is often cost-prohibitive to substantially retrofit an existing community to new urbanist design.⁶⁴

Historically rooted biases favoring the separation of work from home and transit are not the exclusive explanations for local governments' neglect of remote work. Geographic differences in the prevalence of remote workers and the availability of private support for remote work play roles as well, as I will discuss in Part III.⁶⁵ In some regions, there is limited demand for local government investments in remote work because employers provide adequate remote work support or residents are content to manage on their own (often subsidized by the federal home office interest tax deduction⁶⁶). It is also possible that working from home is less desirable to localities because commercial property typically generates higher tax revenue than residential property per square foot.⁶⁷ However, any loss to commercial tax revenues is likely offset by increases in real estate values, residential property tax revenues, and economic activity from remote workers migrating to a locality.

In summary, local governments have focused on providing roads and transit, and have eschewed similar facilitation of remote work. This observation is not meant to oppose transit investments, which have economic—and, in the case of mass transit, environmental benefits— but rather to note the disparity in local provision of transit versus remote work. As discussed above, this disparity is rooted in the historic separation of work from home through zoning. Over time, and without critical examination, land use law has significantly coalesced with the goal of providing transit and maintaining spatially distinct residences and workplaces. This does not mean that zoning and provision for remote work will never arise locally—to the contrary, zoning reforms and remote work support are slowly appearing in localities. Rather, it means that the local response has been more sluggish and less comprehensive than it would have been absent the historic separation of work from home and transit mindset.

^{63.} See generally Peter Katz, The New Urbanism: Toward an Architecture of Community (1994) (inception and progress of new urbanist movement).

^{64.} See ELLEN DUNHAM-JONES & JUNE WILLIAMSON, RETROFITTING SUBURBIA: URBAN DESIGN SOLUTIONS FOR REDESIGNING SUBURBS 75 (2009) (new urbanist redevelopment of existing suburbs is more difficult and expensive than new construction).

^{65.} See infra Part III.

^{66. 163} U.S.C. § 163(h)(3).

^{67.} See Richard M. Bird & Enid Slack, Introduction and Overview, in INTERNATIONAL HANDBOOK ON LAND AND PROPERTY TAXATION 1, 7 (Richard M. Bird & Enid Slack eds., 2004) (describing a multi-country investigation concluding that "property taxes are generally heavier on non-residential (and especially commercial) properties than on residential (single-family) homes.").

^{68.} See infra Part IV.

II. THE ADVANCE OF REMOTE WORK

Today, zoning laws, governmental focus on transit, and the failure of local government to support remote work clash with a workforce that is increasingly untethered from centralized workplaces.⁶⁹ As telecommuting and electronically mediated gig jobs proliferate, localities will face growing demand for zoning, connectivity, and remote work amenities from residents and homebuyers. Local governments will respond to local resident needs for remote work, as they did over a century ago to industrialization and the electric streetcar. The contention of this paper, that local land use law should recognize remote work within its purview, is inevitable, as well as beneficial in some respects. In addition to the growing demand for remote work, there are social benefits to supporting its expansion. Chief among these is the capacity of remote work to increase housing affordability and improve local efficiency by enabling discontented residents to vote with their feet through relocating.⁷⁰

A. The Rise of Remote Work

The economy and labor force have changed dramatically over the past century, and the infrastructure, local services, and zoning designed to serve resident-workers in the early twentieth century do not adequately meet the needs and desires of this new workforce. There has been an upsurge of jobs in technology, information, science, and business and a loss of manufacturing jobs. Innovations such as the internet and, more recently, remote conferencing technologies, have coalesced work and home just as the invention of the electric streetcar and automobile once separated them. Indeed, "Zoom," the first-generation remote conferencing platform, may be the modern equivalent of the streetcar—a technological advance that will profoundly alter land use, and land use law.

^{69.} See, e.g., Garnett, supra note 4, at 1192-93.

^{70.} See Matt Delventhal, Eunjee Kwon & Andrii Parkhomenko, JUE Insight: How Do Cities Change When We Work from Home?, J. URB. ECON. (forthcoming 2022), https://perma.cc/B8AS-NQPP (SSRN manuscript at 4-5) (modeling housing affordability under conditions of increased telecommuting).

^{71.} See e.g., Timothy F. Bresnahan, Erik Brynjolfsson & Lorin M. Hitt, Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence 2 (Nat'l Bureau of Econ. Rsch., Working Paper No. 7136, 1999), https://perma.cc/S2GP-YD8U (finding that firms' increasing use of IT and more sophisticated technology for customers have created demand for higher-skilled labor); Theodore M. Crone, Where Have All the Factory Jobs Gone—and Why?, Bus. Rev. Fed. Res. Bank of Phila., May/June 1997, at 1, 1 (noting a loss of 2% of manufacturing jobs per year in Pennsylvania, New Jersey, and Delaware).

^{72.} See, e.g., Rebecca Fannin, Zoom Aims to Be the Next Big Platform for Start-Ups to Build Billion-Dollar Businesses, CNBC (updated June 1, 2020, 3:28 PM EDT), https://perma.cc/YRK9-JNKV (describing increasing competition in remote conferencing and Zoom's recent efforts to innovate its platform).

The prevalence of remote work in labor markets is sizable, and rapidly growing. Recent research finds that eight percent of employed Americans work entirely from home, the most extreme of work from home arrangements. This finding pre-dates the COVID pandemic shutdowns, which dramatically increased the remote-only workforce. Because some studies designate only workers with a formal arrangement as working from home, there is underestimation of the prevalence of remote workers. Moreover, the potential for working entirely from home is much greater than its present level. A recent paper by Dingel and Neiman estimates that up to 37% of jobs can be performed entirely at home, representing 46% of all wages. Supporting this estimate, 35% of all employed Americans worked from home during spring 2020 due to the coronavirus pandemic. The pandemic is likely to accelerate the trend of fully remote employment. As Kate Lister notes, "the genie is out of the bottle"

Americans who work from home part-time are even more numerous. The 2018 American Time Use Survey found that 24% of employed workers did "some or all" of their work from home. A 2016 Gallup poll reported that 43% of employees spend at least some of their time working in a location different from their co-workers, with 31% of employees spending 80% or more of their time working remotely. This poll did not differentiate the location of the work; the data presumably encompasses work travel, working from alternate locations, and working from home. A survey following the coronavirus lockdown in the U.S. found that 89% of executives anticipate that more than 30% of office workers will continue remote work on a part-time basis and a majority of employees

^{73.} Bick, Blandin & Mertens, *supra* note 9, at 2 (finding 8.2 percent worked entirely from home in February 2020); *see also* Gajendran & Harrison, *supra* note 8, at 1526 (finding that fewer than 10% of telecommuting employees work remotely full-time).

^{74.} See Bick, Blandin & Mertens, supra note 9; Jonathan I. Dingel & Brent Neiman, How Many Jobs Can be Done at Home? 11-12 (Nat'l Bureau of Econ. Rsch., Working Paper, Paper No. 26948, 2020), https://perma.cc/EZ45-TTXR (reviewing studies of remote work prevalence during COVID).

^{75.} See Alexandre Mas & Amanda Pallais, *Alternative Work Arrangements*, 12 ANN. REV. ECON 631, 634 (2020) (data from the 2014 GSS Quality of Worklife Survey that 26% of respondents work from home frequently, but only 47% of these workers have a formalized work-from-home arrangement).

^{76.} Dingel & Neiman, supra note 74, at 10.

^{77.} Bick, Blandin & Mertens, supra note 9, at 2.

^{78.} Work-At-Home After Covid-19 – Our Forecast, GLOB. WORKPLACE ANALYTICS, https://perma.cc/UNN5-ZD47 (archived Feb. 5, 2022); see also Barrero, Bloom & Davis, supra note 21, at 2 (employees report that their employers plan to allow on average 21.3% of full workdays at home after the COVID pandemic is over).

^{79.} U.S. Bureau of Lab. Stat., American Time Use Survey Summary—2018 Results 1 (2019), https://perma.cc/G4KG-C9RL.

^{80.} Annamarie Mann & Amy Adkins, *America's Coming Workplace: Home Alone*, GALLUP: BUS. J.(March 15, 2017),https://perma.cc/AD6K-XFQP.

state they wish to continue working from home at least part-time.⁸¹ Telecommuting is now the most rapidly growing form of commuting.⁸²

There is also a growing gig economy, although measurement of its magnitude has proven difficult due to varying definitions of gig work and the fact that many workers have multiple jobs encompassing gig and non-gig employment. A 2017 study by the U.S. Bureau of Labor Statistics found that 1.6 million workers, constituting one percent of total workers, do electronically mediated gig work as a main job, second job, or additional sideline work for pay.⁸³ The study defined electronically mediated work as short jobs or tasks accessed via websites or mobile apps that connect workers to customers and transfer payment.⁸⁴

The frequency of working from home varies by occupation and tilts upward on the income scale. Workers with advanced degrees and in professional sector jobs are disproportionately represented, with 37% of those in management, business, and financial operations and 33% of workers categorized in professional and related occupations doing part or all of their work at home. The Small Business Administration reports that approximately 50% of companies are home-based businesses, meaning they operate primarily out of the home. This includes 70% of information-based businesses, 68% of construction firms, and 65% of professional, scientific, and technical services. Among federal employees, 22% perform work at an alternative site, typically their homes, for some portion of their work week (about half of the employees that are eligible to telework under individual agencies' guidelines). A federal statute, the Telework Enforcement Act, seeks to increase effective telework arrangements and promote employee work-life balance by requiring annual reports to Congress on telework programs and utilization for each executive agency.

^{81.} Lessons Learned from Remote Working During COVID-19: Can the Government Save Money Through Maximizing Efficient Use of Leased Space?: Hearing Before the S. Comm. on Env't & Pub. Works, 116th Cong. (2020) 15 (testimony of Kate Lister, President, Glob. Workplace Analytics) [hereinafter Testimony of Kate Lister].

^{82.} Katherine Guyot & Isabel V. Sawhill, *Telecommuting will Likely Continue long After the Pandemic*, BROOKINGS: UP FRONT (April 6, 2020), https://perma.cc/RPN4-356Q.

^{83.} U.S. Bureau of Lab. Stat., Electronically Mediated Work: New Questions in the Contingent Worker Supplement, MONTHLY LAB. REV. (Sept. 2018), https://perma.cc/7BTG-VU8C.

^{85.} Patrick Coate, Remote Work Before, During, and After the Pandemic: Quarterly Economics Briefing-Q4 2020, NCCI (Jan. 25, 2021), https://perma.cc/AA3R-CCCR.

^{86.} U.S. SMALL BUS. ADMIN., OFF. OF ADVOC., FREQUENTLY ASKED QUESTIONS ABOUT SMALL BUSINESS 3 (2019),https://perma.cc/83VR-LMMD.. For these statistics, home-based businesses "operated primarily out of one's home, but business activities may take place at other locations as well." *Id.* at 3.

^{87.} Id. at 3.

^{88.} U.S. Off. of Pers. Mgmt., Status of Telework in the Federal Government: Report to Congress Fiscal Year 2018, at 5 (2020), https://perma.cc/H8TR-PPBY.

^{89. 5} U.S.C. § 6506(b)(2)(F) & (b)(1).

Corporate interest in remote work is high at present, although the availability of remote work at major corporations has ebbed and flowed in the past. For jobs that workers can perform effectively at a distance, expanding to remote enables corporations to recruit the best talent nationally and, in some cases, to pay less (a practice termed pay localization). It can also dramatically reduce corporate real estate costs for offices and other workspaces. Some companies, including Facebook and Twitter, are shifting to a largely remote workforce, and many others allow remote work on an individual basis. There are exceptions, of course, with IBM, AT&T, and Yahoo ordering workers back to the office (pre-COVID) after long-term policies allowing remote work, citing loss of creativity and loyalty.

The increasing prevalence of remote work also reflects the overwhelming preference among the American workforce for a part-time or full-time schedule of working from home. A recent survey of 2,000 professional workers found that 82% wanted to work from home at least one day per week and 57% wanted to work from home three or more days per week. S A study of 7,000 applicants for interviewer jobs at a national call center found that applicants were willing to give up 8% of their wages on average for the option to work from home. Notably, 25% of the applicants were willing to sacrifice 14% of their wages to work from home, and only 20% opted to work exclusively on-site.

- 90. Remote work may not occur as often as is efficient because of a misalignment in the incentives of decision-makers. In some businesses, the middle managers who might propose work from home policies or allow individual employees to work from home are not paid based on productivity or profits and have incentives to minimize risks. In addition, employers may reject remote work because of unfamiliarity with needed technology or inability to fund its upfront costs. *See* Barrero, Bloom & Davis, *supra* note 21, at 211 (noting that a Chinese travel agency studied in an experiment had not previously implemented remote work policies because it believed it would pay the upfront costs of innovation but private benefits would be fleeting as competitors copied them and also because senior managers worried about advancement were reluctant to risk a failed remote work initiative).
- 91. See David Streitfeld, The Long, Unhappy History of Working From Home, N.Y. TIMES (updated Jan. 4, 2021), https://perma.cc/MA4W-FBUU (quoting management professor John Sullivan that "[w]hen you hire remotely, you can get the best talent around and not just the best talent that wants to live in California or New York."); see also Katherine Bindley, Remote Work Is Reshaping San Francisco, as Tech Workers Flee and Rents Fall, WALL St. J. (Aug. 14, 2020, 10:00 AM ET), https://perma.cc/BS24-L9LU.
- 92. Bindley, *supra* note 91; *see also* Testimony of Kate Lister, *supra* note 81, at 16, 20-22.
 - 93. Bindley, supra note 91, at 2.
- 94. Streitfeld, *supra* note 91; *cf*. Testimony of Kate Lister, *supra* note 81, at 25 (noting these companies were experiencing financial setbacks when they recalled telecommuters).
- 95. Abigail Johnson Hess, *People Who Work From Home Earn More than Those who Commute Here's Why*, CNBC (updated Oct. 13, 2019, 9:30 AM EDT), https://perma.cc/YD7K-ZQD3 (describing survey by LinkedIn).
- 96. Alexandre Mas & Amanda Pallais, *Valuing Alternative Work Arrangements*, 107 Am. Econ. Rev. 3722, 3725-26, 3742 (2017).
- 97. *Id.* at 3742. Interestingly, most workers did not value the ability to set the days/times of their work or the number of hours of work. *Id.* However, in another study of Chinese travel

The reasons that workers prefer remote work, especially hybrid remote/in-person work schedules, are not fully understood. Work-life balance and parenting needs appear to play a role in the demand for work from home flexibility. ⁹⁸ Commuting is also an undesirable activity for most workers. The average American worker spends 100 minutes per day commuting, an amount found to have substantial negative effects on happiness and well-being. ⁹⁹ In addition, cost savings may factor into preferences. It is possible for telecommuting families to save thousands of dollars annually on commuting costs, dining expenses, and clothing and dry-cleaning. ¹⁰⁰

Objectively, remote work appears to have either a positive or neutral effect on average employee well-being, although more research is necessary to draw firm conclusions. A 2007 meta-analysis of the research on the individual effects of remote work found that telecommuting increased employees' perceptions of their autonomy at work, reduced job stress and increased job satisfaction, decreased work-family conflict, and, surprisingly, improved employee-supervisor relationships. ¹⁰¹ The Federal Work-Life Survey and Federal Employee Viewpoint Survey report increased engagement and satisfaction among home-based federal employees. ¹⁰² However, these studies assess individuals who voluntarily chose remote work, and the findings may not apply to other groups (*e.g.*, employees required to work remotely or those in different occupations). In the only randomized study to date, researchers selected some telephone workers at a Chi-

agency workers, about half of the workers did not volunteer when given the option to work from home, citing a desire for greater social contact or career advancement. See Nicholas Bloom, James Liang, John Roberts & Zhichun Jenny Ying, *Does Working From Home Work? Evidence from a Chinese Experiment*, 130 Q.J. Econ. 165, 180 (2015).

- 98. See Garnett, supra note 4, at 1198.
- 99. See Nicholas Bloom, The Productivity Pitfalls of Working from Home in the Age of COVID, STAN. NEWS, (March 30, 2020), https://perma.cc/J6YS-N9ZR; OFF. FOR NAT'L STAT., COMMUTING AND PERSONAL WELL-BEING, 2014, at 1-2 (2014), (finding that commuters, especially those with commutes from 61-90 minutes, have lower happiness and life satisfaction and higher anxiety).
- 100. One study in Canada estimated over \$12,000 CAD savings on car commuting costs and the monetary value of time to rural telecommuting households in areas with publicly-funded ultra-high speed broadband. Helen Hambly & Jamie (Donghoon) Lee, *The Rural Telecommuter Surplus in Southwestern Ontario*, *Canada*, 43 TELECOMM. POL'Y 278, 283 (2019). Another research group estimated an average of \$4,000 in annual savings per worker on commuting costs, food, and clothes. Maddie Shepherd, 28 *Surprising Working from Home Statistics*, FUNDERA (updated Apr. 7, 2020), https://perma.cc/H548-8GSY.
- 101. Gajendran & Harrison, *supra* note 8, at 1532-35. The effects on job satisfaction were mediated, or due to, the increased in perceived self-autonomy. *Id.* at 1536.
- 102. See Testimony of Kate Lister, supra note 81, at 16. Several months into the coronavirus pandemic, workers who had switched to working from home reported an 86% satisfaction rate, citing lower stress, greater ability to take breaks, and more time spent outdoors. Anya Strzemien, Jessica Bennett, Tracy Ma & Eve Lyons, Out of Office: A Survey of Our New Work Lives, N.Y. TIMES (Aug. 20, 2020), https://perma.cc/RP5C-BMQB (reporting findings from survey by the Times and Morning Consult).

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nese travel agency to work remotely while others continued to work in the of-fice. The remote workers reported higher work satisfaction, more positive attitudes, and less work exhaustion than control subjects who remained in the of-fice. However, half of the remote workers opted to return to the workplace when given a choice nine months later, citing loneliness or disturbance to other household members from the remote work. This finding highlights the value of remote work centers or public spaces to facilitate remote work for workers, and suggests explanations for the preference among workers for hybrid in-of-fice/remote schedules (for more detail on remote work centers, see Part IV.C).

In light of the dramatic increase in remote work and the demand from workers for work-from-home flexibility, remote work will inevitably shape land use law and the provision of local goods. The rise of remote work in labor markets, and land use law, is unquestionably controversial, spurring concern about the future of cities and socio-economic and racial disparities for those who cannot work from home. Yet it is also inevitable. Local governments will respond to political demand from current residents, and market pressure from buyers, to accommodate remote work and offer services (e.g., connectivity and cybersecurity) and amenities (e.g., workspaces). In addition, there are social benefits to untethering labor from centralized workplaces. The following sections focus on the salutary effects of remote work on local efficiency and housing affordability, and briefly discuss other potential gains. Part V addresses potential costs and concerns about expanding and supporting remote work at the local level.

B. Inter-Local Competition: Resuscitating Tiebout

As localities compete for increasingly mobile residents, remote work should increase local government responsivity to resident and buyer preferences and decrease the cost of local goods provision (i.e., taxes). In a highly influential 1956 paper, Charles Tiebout described the residential mover as a "consumer-voter" who "pick[s] that community which best satisfies his preference pattern for public goods." As a result, local governments can more efficiently satisfy individual preferences than if the national government provided all public goods. In Tiebout's model, localities compete to attract residents by offering appealing mixes of services, taxes, and regulations. 109

^{103.} Bloom, et al., *supra* note 97, at 198-200. All workers in the study had indicated they were willing to work remotely for the study duration. *Id.* at 180.

^{104.} Id.

^{105.} Id. at 210-11.

^{106.} See infra Part V.B & D.

^{107.} See Tiebout, supra note 16, at 418.

^{108.} See id. at 416.

^{109.} See id. at 422.

In practice, the Tiebout hypothesis has suffered from a major barrier to the interlocal mobility necessary for competition: commute time. Lee Anne Fennell has described residential property choice as a "bundled decision" because the value of homes to individual buyers derives not only from the housing structure and price, but from its location, local and proximate non-local public goods, the actions of neighbors, and exclusionary zoning laws, among other attributes. Homebuyers purchase their commutes along with their homes, in the form of a set of commuting options to workplaces and other places of interest for household members. Pennell notes that, "The people in Tiebout's stylized model live off of dividend income and do not have workplaces to which they must commute, nor do they have any desire to consume extrajurisdictional amenities "113 School quality, social ties, and other local goods also restrict housing choice for residents and buyers. 114

Remote work relaxes the constraint of commute time because workers either do not commute to a centralized workplace or do so less frequently. Presumably, this should make the "market" for localities described by Tiebout more competitive in regions with high numbers of remote workers. Tiebout noted the importance of competition to his theory, writing, "[t]he greater the number of communities and the greater the variance among them, the closer the consumer will come to fully realizing his preference position." Notably, if remote work increases inter-local competition by expanding the number of viable localities for housing consumers, it should also hasten the local provision of remote work support as localities vie for residents who increasingly work from home. This will occur as a result of competitive pressures despite the fact that localities may prefer not to increase mobility or inter-local competition by promoting remote work.

While increased inter-local competition is salutary in many respects, a potential downside is that it may heighten the relative disadvantage faced by less affluent localities. These localities lack the fiscal capacity to successfully engage in Tiebout-style competition over local public goods. ¹¹⁷ On net, however, remote

^{110.} See Richard Briffault, Localism and Regionalism, 1 BUFF. L. REV. 1, 18-19 (2000). Tiebout perceived this issue and adopted as an assumption of his model that "Consumer-voters are fully mobile and will move to that community where their preference patterns, which are set, are best satisfied." Tiebout, supra note 16, at 421.

^{111.} Lee Anne Fennell, Exclusion's Attraction: Land Use Controls in Tieboutian Perspective, in The Tiebout Model at 50, at 163, 164-68 (William A. Fischel ed., 2006).

^{112.} See id. at 166.

^{113.} *Id*.

^{114.} See Abdul Rawoof Pinjari, Ram M. Pendyala, Chandra R. Bhat & Paul A. Waddell, Modeling Residential Sorting Effects to Understand the Impact of the Built Environment on Commute Time, 34 Transp. 557, 564, 571 (2007).

^{115.} Tiebout, *supra* note 16, at 419.

^{116.} For a more detailed discussion of local competition for remote workers, see Part III.A below.

^{117.} See Briffault, supra note 110, at 19 ("[T]he enormous disparities in tax bases and

work may still benefit at least some resource-poor communities if they are able to attract remote workers with lower housing prices, and thus expand their tax base (and their ability to compete for residents).

C. Housing Affordability via Dispersion

Housing affordability has loomed large in the past two decades as a deterrent to economic growth, household stability, and quality of life in the United States.¹¹⁸ The overriding focus of policymaking and research on housing affordability has been to increase residential housing density (i.e., supply) in metropolitan areas by reducing the stranglehold of single-family and other low-density zoning in favor of larger, multi-unit dwellings.¹¹⁹ Higher density and thinner zoning regulations increase supply and reduce construction costs compared to lower density, highly regulated construction.¹²⁰ In addition, higher density housing close to urban cores has other important benefits, such as reducing energy and land use and preserving ecosystem services.¹²¹

Remote work creates a second, parallel avenue for increasing housing affordability on the supply-side: enabling mobility to lower-cost areas or smaller cities. Research suggests that high levels of telecommuting increase housing affordability overall as workers relocate to cheaper outlying areas or more affordable cities. An econometric model by Matthew J. Delventhal, Eunjee Kwon, and Andrii Parkhomenko finds that if one-third of the labor force is fully remote, workers relocate from urban cores to more affordable outlying locations, while businesses move closer to the core to take advantage of dropping real estate prices in cities. High numbers of people working from home tend to lower prices in cities and increase real estate prices somewhat in the periphery. The net

spending among localities in a metropolitan area call into question the role of localism in promoting 'consumer choice.'").

- 118. In 2017, 23% of all homeowners and 47% of all renters spent more than 30% of their income on housing (30% or more of income spent on housing is a common metric demarcating cost-burdened residents). Sean Veal & Jonathan Spader, Joint Ctr. For Hous. Stud., Nearly a Third of American Households Were Cost-Burdened Last Year, Hous. Persp. (Dec. 7, 2018), https://perma.cc/J3X3-LUXR; see also Alex F. Schwartz, Housing Policy in the United States 34 (2015) (reporting similar findings).
- 119. See Edward Glaeser & Joseph Gyourko, Zoning's Steep Price, 25 REG. 24, 24-26 (2002-2003); cf. John M. Quigley & Larry A. Rosenthal, The Effect of Land Use Regulation on the Price of Housing: What Do We Know? What Can We Learn?, 8 CITYSCAPE 69 (2005) (reviewing research and suggesting research methods to establish a direct causal link between regulation and housing prices).
 - 120. See Briffault, supra note 110, at 18-19.
- 121. See Reid Ewing, Is Los Angeles Style Sprawl Desirable?, 63 J. Am. PLAN. Ass'n 107, 113-17 (1997) (describing impact of low-density housing sprawl on energy utilization and land resources).
- 122. See W.C. Bunting, supra note 5, at 298-303 (describing the public benefit of telecommuting to housing affordability); Delventhal, Kwon & Parkhomenko, supra note 70, at 3.
 - 123. Delventhal, Kwon & Parkhomenko, supra note 70, at 2-3.

effect of these changes is to increase overall housing affordability.¹²⁴ This prediction assumes that employers do not reduce employee wages for telecommuting; a decrease in wages could partially or fully offset the savings from housing.¹²⁵ While modeling remote work's effect on housing costs is promising, and the conclusions accord with the tenets of supply and demand, field research on the effects of remote work on housing prices is needed as well.¹²⁶

In addition to the overall effect of remote work on housing affordability, the distribution of housing cost benefits and burdens matters as well. While housing prices appear to be lower overall with remote work, savings may accrue primarily to middle-income and upper-income professional workers, who are more likely to telecommute. 127 Mitigating this concern, however, is evidence that high levels of remote work can reduce urban housing costs by reducing demand. 128 This could be a boon to urban residents, especially renters, regardless of whether they engage in remote work. Urban renters bear the highest burden of unaffordability and are more racially diverse than homeowners. 129 The potential housing losers from remote work appear to be the existing residents and prospective local buyers in areas with a substantial influx of higher-paid remote workers, as they will face increased housing prices and property taxes.

Importantly, remote work sidesteps—although it does not eliminate— the incentive problems that have plagued the local provision of housing. ¹³⁰ Driven

^{124.} In the model, with 33% of workers working from home, average housing prices fall by nearly 6%. *Id* at 3. Notably, this study does not address distributional effects based on income or occupation. *See id*. at 17-18.

^{125.} See William Larson & Weihua Zhao, Telework: Urban Form, Energy Consumption, and Greenhouse Gas Implications, 55 Econ. Inquiry 714, 732 (2016). For a current example, Facebook recently announced it had expanded its remote work policy and implemented controversial "pay localization." See Conor Sen, Why Is Facebook for Remote Work? It Wants Pay Cuts, BLOOMBERG (May 20, 2020, 8:30 AM), https://perma.cc/WE29-BJ27.

^{126.} In the past two years, there have been scores of news and blog accounts of remote workers leaving cities for suburbs and rural areas, but limited empirical research. This is in part due to the difficulty of isolating remote work's effect on housing prices from the current context of pandemic-related moves and surges in real estate prices related to government stimulus. More research on the impact of remote work on housing markets should occur to confirm, or disconfirm, the affordability effect I describe in this Article.

^{127.} Bick, Blandin & Mertens, *supra* note 9, at 10-11 (upper-income workers, as well as white, female, and highly-educated workers switched to remote work at higher rates during COVID pandemic); Neeta Kantemneni, *The Impact of the Covid-19 Pandemic on Marginalized Populations in the United States: A Research Agenda*, 119 J. VOCATIONAL BEHAV. 103439, 103440 (2020) (people of color disproportionately represented in labor forces for inperson work such as the restaurant, travel, entertainment, and personal services industries).

^{128.} See Delventhal, Kwon & Parkhomenko, supra note 70, at 2-3.

^{129.} See Joint Ctr. for Hous. Stud. of Harv. Univ., America's Rental Housing: Meeting Challenges, Building on Opportunities 16-17 (2011), https://perma.cc/LLU5-HOPK.

^{130.} As the contentious, decades-long litigation in *Mt. Laurel* over affordable housing illustrates, localities typically seek the opposite: to increase housing prices by constraining supply. *See* S. Burlington Cnty. NAACP v. Mount Laurel, 67 N.J. 151 (1975), *aff'd* 92 N.J. 158 (1983).

by the interests of current residents, localities typically inflate property values by constraining housing supply or, for the more equity-minded, providing a limited amount of affordable housing.¹³¹ By the same token, remote workers are attractive to local governments because an influx of residents increases property values and tax revenues. Regional and national gains in housing affordability are an unintentional, but beneficial, effect of increased remote work and local competition for remote workers.

D. Other Benefits

There are other benefits to remote work that support its expansion. First, as workers reduce their commute times, traffic congestion lessens due to fewer vehicle miles traveled and greater non-peak travel. Even if workers shift to less frequent but longer commutes that do not reduce net vehicle miles traveled, congestion may lessen if they commute from more dispersed locations and at more variable times. Recent research in California found a reduction in traffic volume of 20 to 55% (depending on the highway) during the state's coronavirus "shelter in place" order, when non-essential workers worked from home. During this time, traffic injuries and fatalities dropped by 6,000 per month, and the savings from reduced collisions across the state was approximately 40 million per day. Nationwide, commuting results in massive losses to productivity (by one estimate 78 billion per year), and over 35,000 deaths annually. In addition, widespread remote work also has a small but significant effect on carbon reduction,

- 131. See WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT 260-62 (2005) (arguing that homeowners press local government for zoning and services that they believe will increase their home values); Fennell, *supra* note 111, at 171-72 (finding that residents seek, and localities compete to provide, restrictive zoning that buoys home prices); Jenny Schuetz, Rachel Meltzer & Vicki Been, *Silver Bullet or Trojan Horse? The Effects of Inclusionary Zoning on Local Housing Markets in the United States*, 48 URB. STUD. 297, 313-22 (2011) (study of inclusionary zoning laws in San Francisco and Boston noting demand from local residents for inclusionary (affordable) housing and finding that inclusionary zoning did not have a large impact on real estate prices in these two cities).
- 132. See Ugo Lachapelle, Georges A. Tanquay & Léa Neumark-Gaudet, *Telecommuting and Sustainable Travel: Reduction of Overall Travel Time, Increases in Non-Motorised Travel and Congestion Relief?*, 55 URB. STUD. 2226, 2238-39, 2242 (2018) (entirely telecommuting workers reduced commute time by fourteen minutes on average and all telecommuters engaged in less mid-day and evening peak travel); *cf.* Patricia L. Mokhatarian, *Reducing Road Congestion: A Reality Check—A Comment*, 11 TRANSP. POL'Y 183, 183 (2004) (the magnitude of congestion reduction is less than proponents of telecommuting acknowledge).
- 133. Fraser Shilling & David Waetjen, Road Ecology Ctr., U.C. Davis, Special Report (Update): Impact of COVID19 Mitigation on Numbers and Costs of California Traffic Crashes 7 (2020).
 - 134. *Id*. at 3-4.
- 135. Costs and Benefits, GLOB. WORKPLACE ANALYTICS, https://perma.cc/WH5B-2LD9 (archived Feb. 6, 2022); Traffic Deaths Decreased in 2018, But Still 36,560 People Died: Percentage of Drunk Driving Deaths Lowest on Record, Pedestrian and Bicyclist Deaths Are Up, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., https://perma.cc/DTG5-NHCS (archived Feb.

as evidenced during the recent coronavirus pandemic.¹³⁶ The magnitude of energy reduction depends in part on the energy efficiency of homes compared to centralized workplaces¹³⁷ and the decrease in vehicle miles traveled.¹³⁸

Second, shifting from centralized workplaces increases national resilience by allowing some economic activity to continue following a natural disaster, security threat, or terrorist attack.¹³⁹ The capacity to work at home can blunt the effects of these economic shocks and prevent economic freefall. The federal government increasingly recognizes the importance of remote work to disaster resilience. For example, following the 9/11 terrorist attacks, Congress held a committee hearing on the "heightened need for telework opportunities in the Post-9/11 World." Congressman Tom Davis described telework as a "cornerstone of emergency preparedness." ¹⁴¹

In summary, despite the historical focus in land use law on transit and the separation of work from home, a growing local government role in zoning, planning, and providing support for remote work is inevitable. Just as developments

6, 2022). Other studies show even higher financial impact, such as a study by the Texas Transportation Institute of 85 metropolitan areas that found total losses of 160 billion from lost productivity and fuel use due to traffic jams. *See* Hambly & Lee, *supra* note 100, at 279. Recent research in California found a reduction in traffic volume of 20-55% (depending on the highway) and 6,000 fewer traffic fatalities per month during the state's recent coronavirus "shelter in place" order, during which non-essential workers worked from home. SHILLING & WAETJEN, *supra* note 133, at 3, 7.

136. See Piers Forster, COVID Paused Climate Emissions—But They're Rising Again, BBC (March 15, 2021), https://perma.cc/R3VJ-GKTS (finding that COVID reduced carbon emissions but not dramatically or permanently).

137. See William O'Brien & Fereshteh Yazdani Aliabadi, Does Telecommuting Save Energy? A Critical Review of Quantitative Studies and Their Research Methods, 225 ENERGY & BLDGS.,Oct. 15, 2020, at 1, 9-11.

138. Studies indicate that remote workers erode, but do not eliminate, the savings in vehicle miles traveled and emissions because they tend to live more distantly from centralized workplaces and drive more miles recreationally. See Lachapelle, Tanguay & Neumark-Gaudet, supra note 132, at 2242 (rebound affect in Canadians who worked fully from home did not outweigh reduced work-related travel); Patricia L. Mokhtarian, Gustavo O. Collantes & Carsten Gertz, Telecommuting, Residential Location, and Commute-Distance Traveled: Evidence from State of California Employees, 36 Env. & Plan. A: Econ. & Space 1877, 1877 (2004); Patricia Mokhtarian & Krishna Varma, The Tradeoff Between Trips and Distance Traveled in Analyzing the Emissions Impacts of Center-Based Telecommuting, 3 TRANSP. RSCH. PART D: TRANSP. & ENV. 419, 421-23 (1998); Seung-Nam Kim, Is Telecommuting Sustainable? An Alternative Approach to Estimating the Impact of Home-based Telecommuting on Household Travel, 11 INT'L J. SUSTAINABLE TRANSP. 72, 83-84 (2017) (study of Korean household travel). Also, countries with high numbers of electric or hybrid vehicles on the road realize fewer environmental benefits from telecommuting than countries that rely on fossil fuels. See Meredith Turits, Why Working from Home Might be Less Sustainable, BBC: WORKLIFE (Feb. 21, 2020), https://perma.cc/36XU-U983.

139. During the coronavirus pandemic, the nation averted an economic freefall when approximately one-third of all employed Americans, primarily white-collar workers, have worked from home. *See* Bick, Blandin & Mertens, *supra* note 9, at 9.

140. Guyot & Sawhill, supra note 82.

141. Id.

in transit shaped land use law over time, the explosive growth in remote work and the gig economy will alter the local government role. In addition, remote work has the promise to ameliorate two persistent challenges in land use: housing affordability and inefficiency in the local provision of public goods. Of course, there are also potential social costs to local support of remote work, such as increasing economic inequality between professional and in-person service workers. Part III & Part V consider the challenges and pitfalls of remote work and offer suggestions for mitigating potential negative effects.

III. BEYOND TRANSIT: LOCALIZING REMOTE WORK

This Part turns to the particular benefits of providing remote work zoning and support at the local level, as well as some of the challenges. I envision an important, but not exclusive, role for local government in remote work, one that is complementary to remote work provision by employers and policymaking at other levels of government. Compared to state and federal government and private employers, local governments have a number of institutional advantages, including the legal power to zone for remote work, a smaller scale to respond to geographic variability in needs and preferences, and the capacity for decentralized experimentation. However, localizing remote work also faces challenges that we should anticipate, and plan for, including political obstacles, fiscal constraints, and the potential for extra-local harms. At times, state and federal governments will need to fill these gaps or act as regulatory backstops.

A. Local Institutional Competence: Scale, Variability, and Experimentation

Remote work zoning and planning is within the established legal power of localities pursuant to state "home rule" acts that delegate power to local government to manage local affairs.¹⁴³ As a consequence, local governments possess the power to zone and regulate land uses within their jurisdictions (subject to occasional over-ride from state laws preempting local power).¹⁴⁴ Providing local goods that support remote work, zoning to allow home-based work, or increasing mixed-use neighborhoods with restaurants and retail for remote workers are within the well-established bounds of local power.¹⁴⁵ Local government also has

^{142.} While this increase in economic inequality is very concerning, it is preferable to achieving equality because all workers have experienced major income loss. In theory, the economic resilience of certain sectors of the economy can help to fund subsidies for harder-hit sectors.

^{143.} See Lynn A. Baker & Daniel B. Rodriguez, Constitutional Home Rule and Judicial Scrutiny, 86 Denv. U. L. Rev. 1337, 1357-58, 1374 (2009) (compiling state home rule statutes).

^{144.} For examples of state preemption statutes, see infra notes 249-50 & note 203.

^{145.} See Euclid, 272 U.S. at 389 (describing local zoning power); FISCHEL, *supra* note 16, at 22.

the legal power to zone private developments and contract with or permit businesses offering remote work services and amenities, which is often the most efficient way to provide remote work centers, connectivity, and cybersecurity. Because localities cannot directly provide all of the goods desired by residents (*e.g.*, housing, recreation, remote work amenities), local governments have evolved processes for contracting with private businesses and negotiating for development.¹⁴⁶

Situating remote work support within local government, as opposed to exclusively or primarily at the state or federal level, responds to the considerable geographic and socioeconomic variability in the prevalence of remote work and its costs and benefits. Subsidiarity refers to the principle that action should occur at the lowest level of government possible to achieve a particular objective.¹⁴⁷ One of the fundamental justifications for local government power is that local governments can match policies to distinctive local conditions, preferences, and needs more accurately and efficiently than state or federal policymakers.¹⁴⁸ Localities are able to tailor policymaking because local governments are geographically and politically proximate to their citizens and knowledgeable about local circumstances. With respect to remote work, dispersed local governments are well-situated to discern preferences and craft policies for varying resident-worker populations.¹⁴⁹

Localizing remote work also enables a natural sorting between workers and localities. Localities will be most interested in adopting remote work policies when they perceive benefits that they can capture from attracting or accommodating remote workers, such as increased tax revenues or satisfying resident demand. Just as localities have "an economic interest in using [their] planning and zoning powers to exclude new residents and activities that cost more in services than they contribute to the tax base," as Richard Briffault has observed, localities similarly have an economic interest in attracting residents likely to contribute more to the tax base than they cost. As another example, local road congestion may lead some localities to robustly support remote work, while other

^{146.} Private amenities are so dominant that local governments now increasingly zone and approve private neighborhoods, sometimes so many of them that it creates a de facto private city. *See generally* GEORG GLASZE, CHRIS WEBSTER, & KLAUS FRANTZ, PRIVATE CITES: GLOBAL AND LOCAL PERSPECTIVES (2006) (describing the proliferation of private communities globally).

^{147.} See George A. Bermann, Taking Subsidiarity Seriously: Federalism in the European Community and the United States, 94 COLUM. L. REV. 331, 338 (1994).

^{148.} See Tiebout, supra note 16, at 416-18; see also Alex Anas, The Costs and Benefits of Fragmented Governance and the New Regionalist Policies, 2 PLAN. & MKTS 10, 10-12 (1999).

^{149.} *Cf.* Robert E. Park, *The City as a Social Laboratory*, *in* CHICAGO: AN EXPERIMENT IN SOCIAL SCIENCE RESEARCH 1, 1-19 (T.V. Smith & Leonard D. White eds., 1929) (arguing for the value of local knowledge in other contexts).

^{150.} See, e.g., Graf, supra note 11 (noting that congestion benefits from remote work varies based on region, schedule (full-time vs. part-time), and the type of remote work).

^{151.} Briffault, *supra* note 110, at 8.

localities are indifferent.¹⁵² Congestion reduction is a minor or non-existent issue across most of Wyoming, for example, and a 10 hour per day crisis in cities such as Los Angeles or Seattle.¹⁵³ In other cases, localities may spurn remote work zoning and support altogether because attracting remote workers does not offer benefits in excess of costs or imposes localized harms.¹⁵⁴ For example, newly popular western "zoom towns" such as Aspen and Jackson Hole, have struggled to provide adequate infrastructure and maintain housing affordability following an influx of remote workers during the recent coronavirus pandemic.¹⁵⁵

Variability in the costs and benefits from remote work counsels in favor of local autonomy, and against state mandates that localities engage in local planning for remote work or provide certain zoning or remote work amenities. Remote work laws at the state level requiring local zoning or support for remote work would be blunt and overinclusive, potentially mistargeting localities with few remote workers and little to gain from endeavoring to attract them. Moreover, it does not appear that such a strong incursion into local power is necessary. An expansion of the local role to include remote work is occurring naturally, albeit more slowly in light of history and transit subsidy, as remote work expands and remote conferencing and other technologies advance.

In addition to responding to variability, local action may promote experimentation and innovation in remote work policy. Decentralized local experimentation, either autonomously or in collaboration with state government or regional authorities, enables policy testing and innovation. Local approaches to remote work will vary and not all localities will provide remote work amenities or zoning. The information gleaned from local experience and comparison aids local governments and planners as they adopt or revise policies (as well as state

^{152.} Congestion depends on population density, the spatial distribution and length of commutes, and the available modes of transit. *See* Mokhatarian, *supra* note 132, at 183.

^{153.} Even in congested cities and regions, the magnitude of improvement in congestion from remote work varies based on region, the frequency of full versus part-time remote work, and the type of remote work. See Raman Shabanpour, Nima Golshani, Mohammad Tayarani, Joshua Auld & Abolfazl (Kouros) Mohammadian, Analysis of Telecommuting Behavior and Impacts on Travel Demand and the Environment, Transp. Rsch. Part D 563, 574-78 (2018); see also Lachapelle, Tanquay & Neumark-Gaudet, supra note 132, at 2242 (rebound effect in Canadians who worked fully from home did not outweigh reduced work-related travel).

^{154.} *Compare supra* notes 150 and 152 (variability in benefits to individual localities), with Mary C. Noonan & Jennifer L. Glass, *The Hard Truth About Telecommuting*, MONTHLY LAB. REV. 37, 38 (2012) (feminist critique of remote work), and Crim, supra note 39 (telework is overrated in congestion management and sustainability).

^{155.} See Philip Stoker, Danya Rumore, Lindsey Romaniello & Zacharia Levine, *Planning and Development Challenges in Western Gateway Cities*, J. Am. PLAN. Ass'N 21, 21, 26-28 (2020).

^{156.} As Andrew Karvonen and Bas Van Heur write, "Experiments [in urban laboratories are] understood to be contingent and open-ended, carrying substantial risks as well as rewards.... founded on the idea that one is compelled to act despite uncertainties and gaps in knowledge." Andrew Karvonen & Bas Van Heur, *Urban Laboratories: Experiments in Reworking Cities*, 38 INT'L J. URB. & REG'L RSCH. 379, 389 (2014).

and federal governments contemplating remote work laws or funding).¹⁵⁷ Decentralization also responds to uncertainty about social outcomes from local and other governmental support of remote work by allowing incremental experimentation and revision as knowledge accrues.¹⁵⁸

Of course, the magnitude of innovation envisioned from cities as laboratories, or the corresponding notion of states as laboratories of democracy, can be overblown, suffering from vague parameters for what constitutes experimentation and tendencies for risk-averse, resource-constrained government units to copy rather than innovate.¹⁵⁹ Putting aside the more grandiose claims, however, there remains a useful core to the premise of decentralized experimentalism. There are over 89,000 localities in the United States, and growing interest among localities in attracting remote workers.¹⁶⁰ Even a fraction of localities implementing remote work policies is more likely to produce efficient or innovative approaches than a single policymaker.¹⁶¹ Local innovation also benefits from the private sector, and local government expertise working with private businesses and developers. Private businesses providing services and amenities typically iterate, and innovate, more frequently and rapidly than government bodies.¹⁶²

B. Public Funding of Private Business: The Local vs. Private Role

Should localities offer remote work services (*e.g.*, connectivity or cybersecurity) or amenities, at local taxpayer expense, that employers could provide or would be supplied more efficiently by the private market? First, localities are concerned about "over-providing" remote work goods that employers, or residents, are willing to supply. In some cases, employers offer employees remote work assistance, most commonly by providing computers or other needed equipment and less frequently reimbursement for internet costs.¹⁶³ In addition, many

^{157.} Planners and municipal employees, particularly in larger localities, typically have professional networks that include peers in other localities and often participate in regional or national groups.

^{158.} But see Levmore, supra note 20, at 817 (incrementalism can exacerbate interest group politics that stifle desirable changes and democratic process).

^{159.} See Karvonen & Van Heur, supra note 156, at 382; Park, supra note 149, at 1-19.

^{160.} Census Bureau Reports There are 89,004 Local Governments in the United States, U.S. CENSUS BUREAU (Aug. 30, 2012), https://perma.cc/AJL8-ST74; see infra Part IV.E.

^{161.} This premise also extends to "subunits" within local governments such as zoning commissions, school boards, and park commissions, that have discrete authority locally and may address remote work or connectivity policies differently. See Heather K. Gerken, Federalism All the Way Down, 124 HARV. L. REV. 6, 30 (2010) ("If you want to promote experimentation or choice, let the decentralized units decide.").

^{162.} Cf. Stephanie M. Stern, Outpsyched: Comparative Institutional Expertise and Psychologically-Informed Law, 57 JURIMETRICS 45, 45-55 (2016) (arguing for the superior competence of firms compared to government to iterate and innovate in order to evade laws intended to correct consumers' psychological biases).

^{163.} Cf. Yi Sun, Beverlee Anderson & Fang Fang, Does Location Matter? Impact of Local Government Policies and Incentives on Entrepreneurship, 85 INT'L PROC. ECON. DEV.

employees appear willing to provide their own office spaces and connectivity, at least among middle- and upper-income workers.¹⁶⁴

The important, and typically determinative, question for localities is not a normative sentiment about who "should" pay, but whether zoning and providing amenities for remote work will improve local revenues and economic conditions in excess of costs. In a similar vein, transportation planning and policymaking have focused on whether transit investments will satisfy the needs of local residents and spur economic growth, not on the expected contribution from private employers. Moreover, it is far easier for localities to evaluate whether remote work will yield net benefits to local revenue and growth than to discern the willingness of residents or their employers to provide remote amenities.

In addition, many workers lack employer support for their remote work. Some remote workers are self-employed as entrepreneurs, independent contractors, or gig workers. Localities may wish to provide remote work amenities to attract these solo remote workers or start-up business ventures. ¹⁶⁶ For employed remote workers, some of the amenities that remote workers desire cannot be provided by employers. For example, remote work centers in the community may not be cost-effective for individual employers to offer because their telecommuting employees are too geographically dispersed. Employers also lack the legal authority to zone. In addition, we cannot rely solely on the private market to provide remote work amenities to unemployed individuals seeking to obtain work or increase their gig work. ¹⁶⁷

Second, there is the question of the comparative efficiency of government versus private business at producing goods and services. In the context of land use law, however, the efficiency gap between local governments and markets is frequently a false dichotomy. A major role of local government is to coordinate with private developers and other stakeholders to produce local goods. It is often (not always) preferable for localities to produce local goods by reducing zoning barriers, providing incentives, or streamlining the private development process than for local governments to produce the goods themselves. Accordingly, this paper defines zoning and regulatory incentives for private interests as part of local government provision of remote work support. One limitation of the private market, however, is that it will only reach residents with the means to pay—an

[&]amp; RSCH. 1, 1-2, 4 (2015) (survey of local government incentives for remote workers in Southern California communities).

^{164.} See infra Part V.B for a discussion of remote work needs of low-income workers.

^{165.} Alan T. Murray, Rex Davis, Robert J. Stimson & Leuis Ferreira, *Public Transportation Access*, 3 TRANSP. RSCH. PART D 319, 319-20 (1998) (Because a transportation system has great influence on "development, economic viability, environmental impacts, and on maintaining socially acceptable levels of quality of life [i]t is not surprising to find that considerable resources continue to be expended by government agencies in the planning and development of more effective transportation services.").

^{166.} See Sun, Anderson & Fang, supra note 163.

^{167.} See infra Part IV.C.

obvious but frequently overlooked point. This suggests a larger role for government to provide or subsidize the private provision of remote work goods in poorer municipalities or neighborhoods, a point I return to in Part V.B. ¹⁶⁸

C. Public Choice Barriers

The continued expansion of remote work will create winners and losers, and accordingly conflicts. These political dynamics suggest that local remote work policies will not progress evenly, or rapidly, across the country. Public choice theory has described how interest groups often derail government regulation intended to correct market failures or produce other public benefits. ¹⁶⁹ In contrast to the organized interests that may oppose remote work support, such as stakeholders in large cities or trade associations, individual remote workers are dispersed and unorganized, and therefore realize high individual costs for advocacy. ¹⁷⁰ Even businesses employing remote workers will find it costly to press for local support as their employees disperse geographically, requiring them to lobby multiple localities, regional authorities, and states.

Interest groups that benefit from the centralization of work in expensive cities will oppose remote work policies if their city is at risk of losing population, tax revenues, and city-based businesses. For example, in San Francisco, the mayor has fought a proposal from the regional transit authority to require the city to mandate an increase in remote work for larger employers so that on an average day a majority of employees telecommute.¹⁷¹ States with higher taxes and housing costs will also frown on remote work policies that accelerate the loss of workers to states with lower costs. These states may enact state income tax laws and lobby the federal government for federal tax rules that favor their interests.

Established local businesses and trade associations may also oppose homebased work and seek heightened regulation of home-based competitors. For example, salons or repair shops may lobby for zoning and other regulation to restrict their home-based competitors. Such dynamics have a long history in land use regulation of home work. In the early 1900s, certain business interests supported reforms for tenements that housed poor immigrants, such as inspections

^{168.} See infra Part V.B.

^{169.} See generally JAMES M. BUCHANAN & GORDON TULLOCK, THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF CONSTITUTIONAL DEMOCRACY (1962) (seminal work in public choice theory applying economic framework to political behavior, interest groups, and political institutions).

^{170.} See Anthony downs, An economic theory of democracy 244 (1957) (noting that the tiny marginal impact of a single vote on an outcome creates little incentive for individual citizens to cast well-informed votes); see also Mancur Olson, The Logic of Collective Action 7-11 (2009) (analyzing incentives for individual action and the free rider dynamics that impede individual participation in group action).

^{171.} See Graf, supra note 11.

of tenement apartments and occupancy limits, in order to stifle competing home businesses that had arisen in the tenements.¹⁷²

Public choice pressures will create barriers for some remote work zoning and policies and slow the incorporation of remote work into land use law. However, political opposition is unlikely to prevent local remote work zoning and goods provision. The desire of many local governments to attract remote workers is a strong countervailing force. It is also possible that competition between localities for remote workers may lessen the hold of interest groups and the resulting public choice barriers. Public choice theorists have suggested that pushing action to the local level can ameliorate government failure from interest group capture because there is more competition between different local governments for residents and revenues.¹⁷³ Inter-local competition is particularly likely to be successful when local governments are not consolidated into regional authorities and local government action relies on local revenues and taxes.¹⁷⁴

D. State and Federal Role: Incentive Misalignments, Regulatory Backstops, and Funding

Localizing remote work at times will entail federal and state government to address incentive misalignments, act as a regulatory backstop, and provide funding. There is significant precedent in state and federal law for shared or cooperative agency between different levels of government.¹⁷⁵ For example, state governments routinely impose mandates that preempt local autonomy, set performance targets for localities for affordable housing, and require local planning.¹⁷⁶ The federal government has protected endangered species on private lands and funded local community development, mass transit, and climate adaptation measures.¹⁷⁷

First, state or federal government may need to nudge localities when remote work is socially beneficial but localities cannot capture its benefits, at least not

^{172.} See David T. Beito & Linda Royster Beito, The "Lodger Evil" and the Transformation of Progressive Housing Reform, 1890-1930, 20 INDEP. REV. 485, 490-91 (2016) (describing how tenement renters housed paying boarders); Mary Van Kleeck, Child Labor in New York City Tenements, 19 CHARITIES & THE COMMONS 1405, 1405-06 (1908) (describing child labor in tenements to perform contracted garment and artificial flower manufacturing).

^{173.} See George A. Boyne, Competition and Local Government: A Public Choice Perspective, 33 URB. STUD. 703, 708-18 (1996) (describing and refining theory of public choice dynamics in local government).

^{174.} See id. at 715-18.

^{175.} See, e.g., Mark D. Rosen, Interstate Immunity: On Fictive Settlements and Shared Agency 6-7 (Oct. 15, 2021) (unpublished manuscript) (on file with author) (describing shared agency across different institutions in the development of constitutional law).

^{176.} See John Infranca, The New State Zoning: Land Use Preemption Amid a Housing Crisis, 60 B.C. L. REV. 823, 841-42, 848-70, 875 (2019).

^{177.} See, e.g., Endangered Species Act, § 16 U.S.C. 1540 (2018); EPA Federal Funding and Technical Assistance for Climate Adaptation, CLIMATE CHANGE ADAPTATION RES. CTR. (ARC-X) (updated Sept. 1, 2021), https://perma.cc/9ZAR-SW4F; supra Part I.A.

in excess of their costs. The potential benefits of remote work to air quality offer a paradigm example. State laws might require localities to mitigate some of the pollution produced within their boundaries with remote work as a part of a state pollution control law. Local or regional programs supporting remote work could also play a larger role in mitigating air pollution for severe or serious non-attainment in State Implementation Plans (SIPs), as required under the Clean Air Act.¹⁷⁸ Alternatively, a state may adopt remote work policies and incentives to mitigate impacts from its own actions. For example, state Environmental Policy Acts, modeled on the National Environmental Policy Act (NEPA), require agencies to create a written plan assessing environmental impacts, alternatives, and mitigation strategies for actions with substantial environmental impacts.¹⁷⁹ A state agency could propose mitigating the environmental impact of a specific action, such as siting a state building in a city's periphery rather than its central hub, with remote work policies that offset the commuting increase that would otherwise occur.

Second, state governments may need to act to prevent extra-local harms, or externalities, from remote work itself. For example, attracting remote workers may benefit individual communities, but increase regional sprawl. A boom in remote work is likely to draw population to more distant suburbs, rural areas, and smaller, more affordable cities. Parawl refers to lower density housing that leapfrogs or spirals outward from greater metropolitan areas and other compact centers, in the absence of systematic regional land use planning. Parawl is difficult to quantify and its designation is often subjective (notably, remote work presents a conceptual challenge to sprawl, since sprawl assumes that there should be higher residential density close to in-person job centers).

^{178.} Clean Air Act, 42 U.S.C. § 7401 (2020).

^{179.} Patrick Marchman, "Little NEPAs": State Equivalents to the National Environmental Policy Act in Indiana, Minnesota, and Wisconsin 3-4 (Sept. 2012) (capstone paper, Duke University) (DukeSpace), https://perma.cc/3J9G-SLY5 (describing state "little NEPA" laws of varying stringency).

^{180.} *Cf.* Jan K. Brueckner, *Urban Sprawl: Diagnosis and Remedies*, 23 INT'L REG'L SCI. REV. 160, 161, 164-66 (2000) (noting that sprawl increases housing affordability and describing how failure to internalize the negative externalities of commuting makes sprawl an undesirable and inefficient form of growth).

^{181.} Lukas Althoff, Fabian Eckert, Sharat Ganapati & Conor Walsh, *The Geography of Remote Work* 5, 7-9 (Nat'l Bureau of Econ. Rsch., Working Paper No. 29181, 2020). The recent coronavirus pandemic has not produced a large migration out of most cities to date, with most movers citing their move was for other reasons. The exceptions to this appear to be New York City and San Francisco, although it is too early to know whether this is a long-term trend. *See* Marie Patino, *What We Actually Know About How Americans Are Moving During COVID*, BLOOMBERG: CITY LAB (Sept. 16, 2020, 8:10 AM PDT), https://perma.cc/VZG5-8PC3; *see also* Bindley, *supra* note 91.

^{182.} See ROBERT BRUEGMANN, SPRAWL: A COMPACT HISTORY 18 (2005); Robert W. Burchell & Naveed A. Shad, The Evolution of the Sprawl Debate in the United States, HASTINGS W. Nw. J. Env't. L. & Pol'y 137, 141 (1999).

^{183.} Peter Gordon and Harry Richardson have argued that sprawl is a value judgment rather than a land use ailment. See Peter Gordon & Harry W. Richardson, Are Compact Cities

citizens disfavor sprawl or it causes substantial environmental harm, states and regional authorities can provide regulatory backstops. For example, state governments may adopt urban growth boundaries that limit development in outlying areas or incentivize higher-density development.¹⁸⁴

Third, localizing remote work policy may require state and federal governments to provide local funding (as has occurred with mass transit) and share expertise. Funding remote work services and amenities, particularly internet connectivity and security, will be a challenge for many localities. Local governments, who increasingly provide an array of social services that were funded federally prior to the 1970s, are often cash-strapped and under-staffed.¹⁸⁵ Fiscal conditions and thin staffing constrain local support of remote work. For example, most municipal broadband installations would be infeasible absent collaborative funding with federal or state government.¹⁸⁶ State or federal government can also share resources and expertise with localities. For example, state and federal agencies have offered training and resources to assist local police and staff in cybersecurity and cyber-investigation, as discussed in Part IV.A.2.¹⁸⁷

To summarize, localities have the legal power to zone for remote work and the capacity to offer certain amenities and services that could not be efficiently provided at the state or federal level. Localizing remote work also responds to high geographic variability in the prevalence and type of remote work and enables experimentation with remote work policy among many, decentralized local governments. However, increasing the local government role in remote work will also confront a variety of challenges, including funding shortfalls and political resistance from interest groups who stand to lose from remote work. There are incentive misalignments and spillover harms, such as regional sprawl from remote work, that may require intervention from state or federal government.

IV. Untransit Policies: Options for Remote Work Zoning and Support

This Part offers illustrative examples of zoning reforms and land use tools to support remote work. I focus on public governance and do not address private

a Desirable Planning Goal?, 63 J. Am. Plan. Ass'n 95, 96-97 (1997).

^{184.} Urban growth boundaries demarcate an area where zoning, projects, and funding concentrate higher-density development inside the boundary, and situate conservation and rural uses in areas outside the growth boundary. David N. Bengston, Jennifer O. Fletcher & Kristen C. Nelson, *Public Policies for Managing Urban Growth and Protecting Open Space: Policy Instruments and Lessons Learned in the United States*, 69 LANDSCAPE & URB. PLAN. 271, 276 (2004). For a description of congestion tolling, *see* Brueckner, *supra* note 180, at 164-66.

^{185.} See Peter Eisinger, City Politics in an Era of Devolution, 33 URB. AFF. REV. 308, 309-310 (1998). Eisinger describes devolution and the resulting "New Federal Order" as the rearrangement of federal relationships that "began with President Richard Nixon's efforts to devolve authority from Washington to subnational governments through block grants and general revenue sharing." Id. at 309.

^{186.} See supra Part IV.A.1.

^{187.} See supra Part IV.A.2.

common interest communities (e.g., condominiums, homeowners' associations). The reforms discussed below situate remote work within local governments' purview by altering zoning and planning, incentivizing remote workspaces and in some cases remote workers, and increasing mixed-use zoning and access to retail and dining for home workers. Likely the most impactful change will be to "digitize" the role of local government to encompass internet connectivity and cyberpolicing, a shift that dovetails with the emerging movement toward technology-driven "smart cities." 188

A. Digitizing Local Land Use Law

Connectivity and cybersecurity are central to remote work, yet currently not provided by federal or state government, with the exception of prosecution of state or federal cybercrimes. Localities have a productive role to play in filling these gaps. Notably, the current movement toward "smart cities" is setting the stage for digital reforms that benefit remote work, among other local services. 189 Already, some fledging "smart cities" are extending connectivity city-wide and employing sensors and technology to manage infrastructure and services. 190 In the context of this trajectory, the reforms suggested below for remote workers are achievable, and even modest.

1. Broadband Quality and Access

Broadband access benefits a variety of workers, including low-income workers and job seekers, as well as residents in general. Currently, access to broadband is uneven in localities across the United States, and particularly lacking in rural areas and low-income urban neighborhoods. The Federal Communication Commission's 2020 Broadband report found that 18 million Americans, primarily in rural areas, lack broadband; a subsequent study concluded that the FCC

^{188.} See CRAWFORD, supra note 19, at 73-94, 119-38.

^{189.} See Amy Glasmeier & Susan Christopherson, Thinking About Smart Cities, 8 CAMBRIDGE J. REGIONS, ECON. & SOC'Y 3, 6 (2015) (describing evolving definition of a smart city); Anastasia Stratigea, Chrysaida-Aliki Papaopoulou & Maria Panagiotopoulou, Tools and Technologies for Planning the Development of Smart Cities, 22 J. URB. TECH. 43, 51-57 (2015) (planning framework for developing smart cities).

^{190.} See Vito Albino, Umberto Berardi & Rosa Maria Dangelico, Smart Cities: Definitions, Dimensions, Performance, and Initiatives, 22 J. URB. TECH. 3, 10, 16-18 (2015) (describing urban experiments and experiences with smart city technology). With respect to connectivity, Singapore's smart city "Master Plan iN 2015," for example, includes providing free mobile internet access anywhere in the city. See id. at 16.

had underestimated, and the number of unconnected citizens is over 30 million.¹⁹¹ In addition to lack of infrastructure, affordability threatens access. Approximately 14% of urban households in areas where broadband is available lack access because they can't afford it.¹⁹²

Publicly owned municipal broadband is slowly appearing in the United States, although federal or state universal broadband has been a political non-starter due to intense opposition from carriers.¹⁹³ Currently, there are 331 publicly owned municipal broadband networks across the United States, ranging from complete wired internet into residents' homes to public-private partnerships that lease municipal broadband to internet service providers.¹⁹⁴ For example, in 2010, Chattanooga, Tennessee created a fiber, ultra-high speed internet for its residents through its city electric utility (despite attempts by Comcast to block the network in court).¹⁹⁵ There are also some cooperatives for broadband and, in a few cases, locally coordinated broadband "sharing" from area homes and businesses.¹⁹⁶ Regional government bodies offer another option for coordinating connectivity.¹⁹⁷ There are no regional or metropolitan governments with autonomous lawmaking, taxing, and spending authority in the United States, but there are general purpose transit or water authorities that provide a template for regional internet.¹⁹⁸

^{191.} FCC, 2020 BROADBAND DEPLOYMENT REPORT 52 (2020); Tom Wheeler, 5 Steps to Get the Internet to All Americans—Covid-19 and the Importance of Universal Broadband, BROOKINGS REP. (May 27, 2020), https://perma.cc/3FW2-EBPL.

^{192.} Guyot & Sawhill, supra note 82.

^{193.} Parmy Olson, What Would Happen if America Got Free, 'Nationwide' Wifi? Google Wins, Carriers Lose, FORBES (Feb. 5, 2013, 12:51 AM EST), https://perma.cc/F5GR-BHWB. In contrast to U.S. federal inactivity, Finland has recently extended a right to broadband to its citizens and the UN has declared internet access a human right. See Finland Makes Broadband a 'Legal Right,' BBC: TECH (July 1, 2010), https://perma.cc/7ML2-9W9U; see also Catherine Howell & Darrell M. West, The Internet as a Human Right, BROOKINGS: TECHTANK (Nov. 7, 2016), https://perma.cc/8SDQ-48D7 (noting that Article 19 of the Universal Declaration of Human Rights includes the right to receive and impart information through any media and regardless of frontiers).

^{194.} See Kendra Chamberlain, Municipal Broadband is Roadblocked or Outlawed in 22 States, Broadband Now (updated Dec. 7, 2021), https://perma.cc/JVM3-NUW7 (number of municipal networks); ACLU, The Public Internet Option: How Local Governments Can Provide Network Neutrality, Privacy, and Access for All 10-11 (2018), https://perma.cc/YG2X-3398.

^{195.} Emily Stewart, *Give Everybody the Internet*, Vox (Sept. 20, 2020, 8:30 AM EDT), https://perma.cc/8MAZ-FCUD. Comcast subsequently sued successfully to limit the city's fiber network to its electrical network footprint.

^{196.} See id.; ACLU, supra note 194, at 13.

^{197.} See Kathryn A. Foster, Lincoln Inst. of Land Pol'y, Regionalism on Purpose 4 (2001), https://perma.cc/4765-PVRP.

^{198.} *See* Briffault, *supra* note 110, at 6. Researcher David Rusk has argued for their creation in light of inter-local failures to solve social problems such as segregation, poverty, and regional growth management; however, there has been no political momentum. DAVID RUSK, CITIES WITHOUT SUBURBS 3 (2d ed. 1950).

An alternative to public provision is for localities to contract for broadband with private providers or partner with state or other government bodies to implement private contracts. Contracting with private providers reduces the cost to localities as well as the expertise and staff required. One concern with these contracts, however, is that they are often long-term franchise agreements with noncompete clauses that can lock localities into unfavorable deals for many years. Competitive bidding is a partial ameliorative, but one that is constrained by the dearth of broadband providers and resulting lack of competition. Another challenge for private contracting by localities is to ensure sufficiently fast broadband.

Local and state governments can also decrease the costs of broadband by lowering regulatory costs. Statutes or ordinances reducing the costs of rights-of-way for infrastructure afford savings to companies that could be passed onto consumers, assuming a competitive market. Local ordinances exempting broadband or internet service providers' towers from height and design regulations (*e.g.*, lattice versus monopole) may also be helpful. ²⁰¹ Such laws have arisen at the local level, as well as through state preemption of local zoning power to restrict the location of towers. ²⁰²

In view of the range of options available to localities, why have so many taken a weak role, or no role at all, in broadband provision? State preemption of local broadband is a powerful constraint on local government action.²⁰³ Rather than taking the position that "the more resources the better," as former FCC Chairman Tom Wheeler advocates, approximately half of the states restrict municipalities from providing broadband either by imposing prohibitive costs and regulations on municipalities or prohibiting municipal broadband if there is a commercial provider in the area.²⁰⁴ The FCC found that these state laws were "largely sponsored and lobbied for by incumbent providers."²⁰⁵ Ten years ago, special interests including AT&T, T-Mobile, and Qualcomm similarly defeated proposals by the Federal Trade Commission for federal, nationwide internet access.²⁰⁶

^{199.} See Stewart, supra note 195.

^{200.} See id.

^{201.} For examples of these different legal approaches to tower zoning, *see*, *e.g.*, Oneida County Planning and Development Committee Meeting Minutes 3, Nov. 28, 2018, *available at* https://perma.cc/WN4H-KQUA (state preemption); Clarke Cnty., *Clarke Amends Ordinance to Allow Small-Scale Lattice Communications Towers*, NEWS LIST (Feb. 22, 2019), https://perma.cc/C3GQ-B8RZ (local ordinance).

^{202.} See id..

^{203.} See ACLU, supra note 194, at 6.

^{204.} Wheeler, *supra* note 191; Chamberlain, *supra* note 194 (restrictive laws include forcing "phantom costs" and additional taxes into municipal rates to make them less competitive, as well as restricting expansion of public networks, limiting public funds for broadband to public-private partnerships, and forcing municipalities to sell broadband wholesale only).

^{205.} Wheeler, supra note 191.

^{206.} Parmy Olson, *supra* note 193.

Eliminating state preemption laws restricting local broadband provision is a critically important reform.²⁰⁷ Removing this barrier would allow localities, among other players, to enter the broadband market, making it more competitive. A 2020 study found that consumers in states that do not restrict local broadband have 10% greater access to low-cost broadband (defined as a standalone internet plan of \$60 per month or less) than residents of states with restrictions.²⁰⁸ Restraints on competition also depress broadband speed, and some state and federal programs have paid private companies for broadband that was already outdated at the time it was built.²⁰⁹ In addition, state preemption laws reduce competition among localities, who might otherwise create more reliable, affordable broadband to attract residents.

2. Local Policing and Remote Work

Remote work will accelerate the movement of local crime to the virtual realm. Hackers interrupting remote online meetings with threats or hate speech have made headlines in recent months as schools and workplaces have moved online. In Winnetka, Illinois, hackers invaded a middle school class conducted via the online live conferencing platform "zoom" with racist and anti-Semitic speech, while at a nearby high school hackers displayed a swastika and pornographic images in a zoom for student athletes. Similar reports of "zoom bombing" and other types of hacking into remote meetings are occurring across the country. The move to remote work will further heighten demand from residents for local cybersecurity services. Currently, local governments are typically the victims of cyberattacks, rather than the investigators or security providers.

There is a growing role for local police to investigate and prosecute unauthorized entry into digital conferencing, threats, hacking, and other cybercrimes. Although police in recent years have gained significant experience with online crimes, particularly child solicitation and pornography, more personnel and different skills are necessary to address hacking and zoom bombing affecting re-

^{207.} Currently, only 38% of Americans have more than one broadband provider to choose from. ACLU, *supra* note 194, at 8-9; *cf.* Katie McAuliffe, *The False Promise of 'Municipal Broadband' Networks*, The Hill (June 21, 2017, 4:43 PM EDT), https://perma.cc/RC5A-V33C (criticizing municipal networks for "civic horror stories like the failed iProvo network" and limited capacity to update and rebuild).

^{208.} See Chamberlain, supra note 194.

^{209.} See Wheeler, supra note 191.

^{210.} See Karen Ann Culotta, Winnetka Schools Get 'Zoombombed' with Pornography, Racist Rants During Online Meetup with Students; Police Investigating, CHI. TRIB. (April 7, 2020, 6:45 AM), https://www.chicagotribune.com/coronavirus/ct-coronavirus-zoombombing-winnetka-schools-20200406-6uodnrw2nfajppquiolmk5wvpu-story.html.

^{211.} Local governments face hacking, phishing, data leaks, and a majority of the nation's known ransomware attacks. Jeni Bergal, *With Cybercriminals on the Attack, States Help Cities Punch Back*, STATELINE (Feb. 4, 2020), https://perma.cc/G9MD-43RB.

mote work. For example, cyber-security breaches of remote work may necessitate not only digital evidence collection, but data recovery and even restoring essential services such as online conferencing.²¹²

In lieu of utilizing police forces, localities can hire municipal cybersecurity staff or outsource cybersecurity. The chief information security officer (CISO), who oversees municipal cybersecurity as well as non-digital information (e.g., paper), is a relatively new local position that appears poised to grow, particularly in larger municipalities.²¹³ This position could be expanded, or augmented with other staff, to coordinate cyber-services for residents. At present, 62% of localities employ information technology staff or a CISO, but at concerning levels of comprehensiveness and quality.²¹⁴ A 2017 survey of 200 New Jersey localities found that 78% lacked an adequate password management policy, 97% didn't have a documented disaster recovery plan, 46% stored backup files onsite rather than in the cloud, and 90% didn't encrypt sensitive emails.²¹⁵ In order to expand cyber-services to residents, localities will need to boost internal staffing or outsource cybersecurity prevention and investigations to specialized firms.

For small and poorer localities that lack funds for CISOs or contracting with private security firms, inter-local collaboration or state and federal government assistance will be necessary to provide cybersecurity services. ²¹⁶ For example, a survey of 200 small local governments in Washington state found that a majority had no staff at all devoted to cybersecurity or information technology. ²¹⁷ In some cases, smaller localities have pooled resources to share a single chief information security officer for cybersecurity and safeguarding non-digital information. ²¹⁸

Local governments can also access state and federal assistance if they lack the resources to build out cybersecurity independently. Online basic training for police officers in cybercrime is free through the FBI LEEP portal and National White Collar Crime Center.²¹⁹ The Department of Homeland Security provides

^{212.} See Christian Quinn, The Emerging Cyberthreat: Cybersecurity for Law Enforcement, IACP POLICE CHIEF (Dec. 12, 2018), https://perma.cc/2RUB-T2AW.

^{213.} *See* Tod Newcombe, *Small Towns Confront Big Cyber-Risks*, Gov't Tech. (Sept. 28, 2017), https://perma.cc/B3XU-PAED [hereinafter *Small Towns*].

^{214.} See id.

^{215.} See id.

^{216.} See id.; Tod Newcombe, Hacking Pleasantville 52, GOVERNING: THE STATES & LOCALITIES (Dec. 2011), https://perma.cc/B6PV-HVE5.

^{217.} Newcombe, Small Towns, supra note 216.

^{218.} See id. Localities have also pooled resources by joining the non-profit Multi-State Information Sharing and Analysis Center, which provides incident reporting, services, and prevention assistance to members. See Multi-State Information Sharing & Analysis Center, CTR. FOR INTERNET SEC. (2021), https://perma.cc/BT3Y-82H4. The Department of Homeland Security supports this center. See Kyle Funk, Cooper Martin, Nicole DuPuis, Alana Shark & Dale Bowen, National League of Cities: Protecting Our Data What Cities Should Know About Cybersecurity 18 (2019), https://perma.cc/M5C2-7XP9.

^{219.} Quinn, supra note 212.

cyber-vulnerability assessment for local governments.²²⁰ At the state level, Georgia offers free cybersecurity consultations to all localities and contracts with municipalities to provide general cybersecurity assistance or respond to specific incidents, while Virginia has used the National Guard to perform vulnerability testing on local government networks.²²¹

B. Zoning Reforms for Remote Work

In many communities, residents lack certainty about whether they can legally work from home under their municipality's zoning laws. In some localities, zoning restrictions against home businesses or working from home remain on the books, but local government rarely enforces them. In other localities, the zoning ordinances are vague. For example, some land use ordinances allow only "customary" home work (often an unspecified range of professional work) that is incidental to primary residential usage. These ordinances have created confusion, decreased home businesses, and led residents to flout ordinances and hope their neighbors do not complain. Customary work ordinances are also biased against new or less established fields of work, and in practice, against lower-income home workers who are less likely to offer the kinds of professional services that usually qualify as customary work.

In the academic scholarship, Nicole Garnett has proposed liberalizing the zoning of home work in residential zones.²²⁵ Patricia Salkin has advocated "special exception zoning," a form of zoning where an ordinance specifies a use, such as home businesses, in a particular zone subject to conditions to minimize the impact on the area.²²⁶ If the applicant meets the conditions, the locality must grant the special exception permit.²²⁷ Unlike a variance, which requires the owner to

- 220. Id.
- 221. Funk et al., *supra* note 218, at 18.
- 222. AM. SOC'Y OF PLAN. OFF., *Information Report No. 54*, *Zoning Regulation of Home Occupations*, PLAN. ADVISORY SERV. (1953) (describing early approaches that focused on customary home work and incidental purpose).
- 223. See Garnett, supra note 4. Other localities offer bright-line, but restrictive rules, that only allow a specified list of professions to work from home. See Mark S. Dennison, Zoning: Validity of Home Occupation Accessory Use of Residential Property, 33 Am. Jur. Proof of Facts 3d 547 § 7 (2021).
- 224. Home sewing and similar home crafts are often permitted as customary work or in ordinances that list professions. Overall, however, the ordinances are biased toward professional work, and in particular desk or computer-based office work. *See* Dennison, *supra* note 223, at § 6 ("Home occupation provisions of residential zoning ordinances generally seek to accommodate professional business uses that are reasonably compatible with the residential districts in which they are located.").
 - 225. See Garnett, supra note 4.
- 226. Some localities already use special exception permits for home work. See Salkin, supra note 4, at 188. For example, Ames, Iowa allows home work so long as the applicant explains how the proposed remote work or home business meets local standards and regulation governing home occupations. Id.
 - 227. See, e.g., N. Shore Steak House, Inc. v. Bd. of Appeals, 282 N.E.2d 606, 649

show that "unnecessary hardship" will ensue if the locality does not authorize an exception to existing zoning, a lower threshold applies to owners seeking local approval under special exception zoning.²²⁸

This Article also supports zoning remote work and home businesses in residential zones, and further advocates an ideological shift from grudgingly allowing home work, to supporting it via zoning. The most remote work-friendly zoning reform is simply to reverse the current default tin order to allow home businesses and remote work in residential zones, subject to restrictions on spill-overs and nuisances. This change recognizes the coalescence of work and home and the reality that exclusive residential use of homes is now the exception, rather than the norm. Alternatively, we might consider state law provisions for "sunsetting" existing zoning prohibitions on home work unless local legislatures affirmatively renew them by a specified date. This would provide an opportunity for localities to reconsider outdated prohibitions or at least to update "customary work" ordinances lingering on the books.

Any zoning reform that expands the legality of work from home will require a system for regulating impacts on neighborhoods. Negative spillovers occur when events in one context, such as home-based work, have deleterious consequences in other contexts, such as the neighborhood or community.²³¹ For example, certain forms of home work, such as operating dance studios, hair salons, health or dental clinics; providing automotive repair; or manufacturing, may disturb neighbors and reduce property values. Rather than prohibiting home work entirely or by category (i.e., non-customary work), localities should regulate the spillovers themselves.²³² Nuisance law is one longstanding option for regulating impacts, but it suffers from vagueness and subjectivity in defining what constitutes a nuisance and often requires costly litigation to enforce.²³³

A more promising approach, which scholars have advocated and some localities have adopted, is to use performance zoning that allows home businesses subject to restrictions.²³⁴ Performance zoning regulates spillovers directly via ordinances that limit vehicle trips, deliveries, equipment use, increases in waste disposal or sewage use, noise, and the presence or size of commercial signs for

228. *Id.* ("The burden of proof of an applicant for a special exception permit is much lighter than that required for a hardship variance.").

- 229. See Garnett, supra note 4.
- 230. See supra Part II.A.
- 231. For a description of local property spillovers and an unconventional analysis of their resolution through covenanting, *see* Robert C. Ellickson, *Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls*, 40 U.CHI. L. REV. 681, 684-88 (1973) (describing spillovers as "impacts on nonconsenting outsiders.").
 - 232. See Garnett, supra note 4, at 1232-36.
- 233. See, e.g., Murray N. Rothbard, Law, Property Rights, and Air Pollution, 2 CATO J. 55, 83-84 (1982) (describing the difficulty in defining what constitutes excessive noise in noise nuisances).
- 234. Patricia Salkin has advocated a performance zoning approach. See Salkin, supra note 4, at 189-195.

^{(1972).}

home work in residential zones.²³⁵ This approach is more hospitable to low-income and less-educated home workers who are less likely to engage in "invisible" computer or desk work.

Importantly, municipalities are likely to have the technological capacity in the near future to measure the impacts of remote work (e.g., traffic to and from a home business, parking strain, noise, etc.) via sensors and cameras, rather than relying on regulation by proxy based on the type of home work. The reduction in monitoring costs from technology will enable localities to regulate impacts directly, rather than prohibiting home businesses wholesale (and will raise significant privacy issues for land use law).

As remote work continues to proliferate, rather than prohibiting home businesses and remote work, we may see localities planning for them as a component of comprehensive planning. Comprehensive planning refers to the local process of planning for a community's physical and economic development by describing existing zoning and infrastructure and offering plans for future uses, needed infrastructure, and a general vision for development.²³⁶ States authorize, and in some instances require, localities to engage in comprehensive planning.²³⁷ Localities will need to plan for population increases or decreases due to remote work, increasing internet connectivity needs, zoning for remote work, and, as discussed next, private or public provision of workspaces.

C. Incentive Zoning for Remote Work Centers

Remote work or "co-working" centers are spaces that home workers can use instead of their residences. These spaces are especially attractive to home workers with limited residential space or who prefer more social interaction.²³⁸ As a result of the increase in work from home, there has been a surge of businesses

^{235.} Unfortunately, some ordinances described as performance zoning nonetheless regulate features of remote work that do not necessarily impact neighbors or the community. For example, some localities forbid home work that exceeds a specified square footage of the home, regulate the number of employees working in the home, or limit the number of home occupations per dwelling unit in order to reduce the risk of externalities. In my view, this iteration of performance zoning, which targets categories of home work and often focuses on features inside the home, is less efficient and overly restrictive. It drifts back to early zoning approaches, such as allowing only customary home work, that regulate features of remote work at risk for externalities rather than the externalities themselves. *See* Dennison, *supra* note 223, at §§ 5-7.

^{236.} See ERIC DAMIAN KELLY, COMMUNITY PLANNING: AN INTRODUCTION TO THE COMPREHENSIVE PLAN 2-3 (2010). Notably, the digital needs of citizens and the swell in remote work may also accelerate the trend of shortening the window of time for comprehensive plans to favor near-range planning.

^{237.} Because it is difficult and imprecise to plan far into the future—a problem that worsens when planning includes internet and broadband connectivity—near-term planning will be more useful than creating comprehensive plans that forecast the next 10-15 years. See Edward J. Sullivan & Jennifer Brager, Recent Developments in Comprehensive Planning, 44 URB. LAW. 615, 615 n.4 (2012).

^{238.} See Bloom, supra note 99.

providing shared office and conference spaces.²³⁹ Some workspace suppliers have faltered under mismanagement, such as the high-profile troubles of flexible office space supplier WeWork.²⁴⁰ Overall, however, demand for remote workspaces appears to be growing.²⁴¹ Residential real estate developers have also responded to the trend of working from home and are increasingly developing shared work or multi-purpose spaces within high-end apartments and condominiums.²⁴²

Most often, private work centers arise as a result of market forces. However, in communities that lack these spaces, incentive zoning is a tool that can spark the interests of work center developers and operators. Incentive zoning offers a zoning exception to private developers that allows denser or more intrusive uses than otherwise would be permitted, fast tracks zoning and permitting approvals, reduces fees, or some combination.²⁴³ For example, pursuant to an incentive zoning ordinance, a zoning commission could approve a remote work center that exceeds the maximum footprint or height limit for the zone by a specified percentage or amount. Another form of incentive zoning is for localities to alter voting rules to make it easier for applicants to gain approval.²⁴⁴ For work center operators renting existing commercial real estate, localities might offer incentives in the form of exceptions from parking requirements or reduced fees or inspections.

The most extreme, and controversial, form of incentive zoning is for states to preempt local decision-making altogether and require the locality to approve a certain type of development or offer an incentive for it.²⁴⁵ For example, California sought to require localities to exempt "transit-rich housing projects" within a certain distance from major transit stops or bus corridors from density controls, minimum parking requirements, design standards, and height restrictions.²⁴⁶ Although this bill did not pass, more limited iterations of state

^{239.} The number of co-working spaces globally is projected to exceed 40,000 by 2024. *Global Coworking Growth Study* 2020, COWORKING RSCH. (July 3, 2020), https://perma.cc/Q2D6-S53X.

^{240.} See Dakin Campbell, How WeWork Spiraled From a \$47 Billion Valuation to Talk of Bankruptcy in Just 6 Weeks, Bus. Insider (Sept. 28, 2019, 7:19 AM), https://perma.cc/KJ6G-QVZK.

^{241.} See COWORKING RSCH., supra note 239.

^{242.} See id.

^{243.} See Marya Morris, Incentive Zoning: Meeting Urban Design and Affordable Housing Objectives 1, 7-8, 11-12 (2010).

^{244.} See, e.g., MASS. GEN. LAWS ANN. ch. 40A, § 5 (West 2021) (changing state law from local vote to approve to zoning of multi-family housing in eligible locations as of right); J. Spencer Clark, Rocking the Suburbs: Incentive Zoning as a Tool to Eliminate Sprawl, 22 BYU J. PUB. L. 255, 282 (2007) (example of incentive zoning ordinance that requires local approval in certain circumstances of "substitute improvements" by developers to qualify the development for a portion of the density bonuses provided in exchange for open space or recreation).

^{245.} See Infranca, supra note 176.

^{246.} S. 827, 2018 Leg., 2017-2018 Reg. Sess. (Cal. 2018).

preemption have been successful.²⁴⁷ One could imagine similar state legislation that requires localities to offer zoning exceptions or perks to remote work centers occurring in states where remote work is prevalent and of great importance to the state economy.

Another zoning option is for localities to include remote work centers as listed "special exceptions" that are allowed within zones, ideally including residential zones, subject to approval.²⁴⁸ For example, a special exception zoning ordinance could specify that remote work or co-working centers are permissible uses within a particular zone if approved by the zoning commission. To approve the special exception, the zoning commission must find that the use will not create a nuisance or other harm to neighbors. As discussed above in Part IV.B, special exception zoning is a well-established tool in land use law that balances the flexibility needed for beneficial use with the prevention of neighborhood harm or property value decline.²⁴⁹

There have also been calls for government provision of public remote work centers or subsidization of private ones. W.C. Bunting has advocated for government-subsidized telework centers to assure employers of worker productivity and to provide physical space and a psychological outlet for workers. ²⁵⁰ The federal government General Services Administration has provided remote telework centers for federal workers since 1993 and extended space on a fee basis to state and private workers since 1997. ²⁵¹ The most productive role for public or non-profit work centers is likely in economically depressed areas where private provision will not occur and residents frequently lack residential space, privacy, and quality broadband. As an alternative to building or renting dedicated work centers, localities could create or expand workspaces in libraries and other public buildings.

Localities might also—or instead—play a coordinating role among different employers who are seeking to share a remote work center. For example, a form of conditional contracting could be used where a locality contracts to build or lease a remote work center once a certain number of employers commit to a lease. When the threshold number of employers is met, the employers are obligated to the lease and the locality (typically through a private development partner) must provide the work center. A locality could play a similar role in aggregating and coordinating different employers to mutually commit to a private commercial lease or development.

^{247.} These bills and statutes illustrate a growing trend toward state preemption. *See* Infranca, *supra* note 176, at 824 ("[S]tates have grown increasingly willing to preempt local governments across a range of policy realms.").

^{248.} For an explanation of special exception zoning, see Part IV.B above.

^{249.} *Cf.* Salkin, *supra* note 4, at 188 (discussing the use of special exception permits to allow certain home professions or businesses in residential zones).

^{250.} See Bunting, supra note 5.

^{251.} See Omnibus Consolidated Appropriations Act of 1997, tit. IV, § 407(a), 40 U.S.C. § 587 (2000) (enacted as Pub. L. No. 104-208, 110 Stat. 3009 (1996)).

D. Mixed-Use Zoning

Remote work may also affect planning and zoning by increasing demand for retail, dining, and other amenities proximate to residences. Currently, single-use zoning that separates residential homes from retail, business, and other uses dominates suburbs and many exurbs.²⁵² A uniform subdivision of single-family homes with no amenities such as food or entertainment nearby may be undesirable for remote workers who miss the stimulation and amenities of centralized workplaces.

There are a variety of options for increasing the proximity of amenities to home workers. The new urbanism movement advocates communitywide mixed-use zoning that intermingles homes, recreation areas, certain businesses, and retail, and emphasizes walkability and shared neighborhood spaces. Complete retrofits to create new urbanist communities are generally cost-prohibitive in established suburbs and cities. More viable alternatives for localities with amenity-hungry remote workers include allowing more variances for non-residential uses in residential zones, creating limited mixed-use zones that provide retail, recreational, and dining spaces, relaxing regulations to allow food carts and trucks, and improving transit linkages or walking/bike paths to downtowns or other retail areas. As remote work expands, it is likely we will see more demand from residents for local governments to rezone and build in these ways.

E. Relocation Incentives for Remote Workers

If a locality wants to garner the benefits of remote work, the most direct route is to pay for remote workers. Historically, localities and states have courted corporations with cash grants, rebates, and tax credits to entice them to locate in certain areas, often cities.²⁵⁵ Now that many workers can opt for remote work and locate across the state or country, the returns on municipal or state investment in employers are less certain and localities may do better to woo workers.

A few cities have started to offer financial incentives for remote workers to relocate. For example, the Tulsa Remote program, a government-non-profit partnership, pays 250 remote workers \$10,000 each year to move to Tulsa and stay

^{252.} See The Movement, CONG. FOR THE NEW URBANISM, https://perma.cc/ZQX6-YQKJ (archived Feb. 6, 2022).

^{253.} See Brian W. Ohm & Robert J. Sitkowski, The Influence of New Urbanism on Local Ordinances: The Twilight of Zoning?, 35 URB. LAW. 783, 783-84, 788-93 (2003).

^{254.} *Cf.* Robert Steuteville, *Sprawl Repair Is Essential, Unavoidable*, BUILD A BETTER BURB, https://perma.cc/PH35-2R85 (archived Feb. 6, 2022) (describing the case against new urbanist retrofit and defending the need for sprawl repair).

^{255.} See Christian Gonzales, Rachel Schaff & Sarah Tucker Ray, How State and Local Governments Win at Attracting Companies, McKinsey & Co.: Pub. & Soc. Sector (Sept. 13, 2019), https://perma.cc/ZK46-DD9Y.

for at least a year.²⁵⁶ The program also offers co-working space and social events for the incoming remote workers, coordinated by a non-profit agency.²⁵⁷ Savannah, Georgia, pays technology workers with three years or more experience in a technology field \$2,000 toward moving expenses if they relocate.²⁵⁸ Vermont has made similar financial incentives available to workers who relocate.²⁵⁹ With the recent coronavirus pandemic and the resulting increase in remote work, other cities are eyeing pay-to-relocate incentive programs.²⁶⁰

Although incentive programs have successfully attracted remote workers, there are concerns about their efficiency. Because localities lack information about worker preferences and intentions, these programs may offer windfalls to workers who were planning to move to a particular city anyway. It is also possible that workers, particularly in the highly mobile demographic group of young professionals without children, will relocate but then leave in short order. Staggered, backloaded payment schedules or payback provisions may lessen strategic behavior of this sort. Alternatively, the target of relocation incentives may not be the remote workers themselves, but rather the signal such programs send and the national attention they garner. With remote or technology worker incentive programs, a locality is signaling that it welcomes remote workers, and that the city is more innovative than perhaps perceived.

Relocation incentive programs also carry the risk of exclusion or bias in the selection process. Tulsa Remote, for example, interviews applicants for the relocation bonus, a process reminiscent of the controversial resident selection process used by co-op residential apartments.²⁶¹ The program also excludes certain kinds of remote workers, such as electronically mediated workers (e.g., uber drivers).²⁶² Electronically mediated workers are more likely to be black and have lower incomes than technology workers.²⁶³ This rule illustrates how selection criteria, perhaps unintentionally, can maintain economic and racial segregation.

V. THE LOCAL ROLE IN REMOTE WORK: CONSEQUENCES AND CONCERNS

This Part considers the potential costs of expanding land use law to support remote work. I do not discuss every consequence of remote work, but rather focus on some key concerns. Specifically, I examine whether remote work will harm primary caregivers of children (who are most often women), low-income

^{256.} TULSA REMOTE (2022), https://perma.cc/M9W3-6L79 (to locate, scroll to 'Benefits').

^{257.} Id.

^{258.} Dyana Bagby, Savannah Wants to Pay Tech Workers to Move to their City, ATLANTA BUS. CHRON. (June 11, 2020, 5:00 EDT),.

^{259.} See Remote Worker Grant Program, VT. AGENCY OF COM. & CMTY. DEV., https://perma.cc/8GPJ-PG2R (archived Feb. 6, 2022), https://perma.cc/8GPJ-PG2R.

^{260.} See id.

^{261.} See Tulsa Remote, supra note 256.

^{262.} See id.

^{263.} See U.S. BUREAU OF LAB. STAT., supra note 79.

workers, labor productivity, and the flourishing of cities. Of these concerns, the potential for distributional harm to lower-income workers and residents is the most compelling; this Part also suggests ways to mitigate this potential impact. Of note, the issue of how to adapt place-based taxation to a mobile workforce is beyond the scope of this Article; however, it will become a point of contention in the near future.

A. Gender and Career Advancement

One concern is that remote work may hinder the professional advancement of primary caregivers of children, who are disproportionately women. Whether remote work is harmful to primary caregivers depends on whether one views the question through the lens of family harmony or professional advancement. The weight of the evidence finds that remote work decreases work-family conflicts, presumably by allowing workers greater flexibility in the timing of their work.²⁶⁴ Notably, remote workers do more domestic work when their paid work occurs at home.²⁶⁵ The evidence is equivocal on whether telecommuting depresses career success, often measured in studies by the telecommuter's salary, whether any promotions were received, and the strength of the telecommuter's relationships with supervisors...²⁶⁶ A 2020 study by Timothy D. Golden & Kimberley A. Eddleston found that the extent of telecommuting (measured by hours in versus out of a centralized workplace), how widespread or "normative" telecommuting is at the firm, the amount of face-to-face-contact with supervisors, and the degree to which the employee takes on supplemental work predict whether remote work depresses professional advancement.²⁶⁷

Limiting local government or other support for remote work in order to promote gender equity would infringe upon the decisional autonomy of women and

^{264.} See Gajendran & Harrison, supra note 8.

^{265.} See Mary C. Noonan, Sarah Beth Estes & Jennifer L. Glass, Do Workplace Flexibility Policies Influence Time Spent in Domestic Labor?, 28 J. FAM. POL'Y 263, 279-80 (2007). Telecommuting and other remote work can also create porous boundaries between work and personal time and promote increased hours. Noonan & Glass, supra note 154, at 45.

^{266.} See id. at 1535 (remote work positively correlated with quality of employee-supervisor relationship, although it is not clear if this is because employees with better relationships with supervisor are more often granted permission to work from home); Donna Weaver McCloskey & Magid Igbaria, Does "Out of Sight" Mean "Out of Mind"? An Empirical Investigation of the Career Advancement Prospects of Telecommuters, 16 INFO. RSCH. MGMT. J. 19, 27-28 (2003) (telecommuting did not negatively affect advancement prospects measured by supervisors or performance evaluations); but see N. Lamar Reinsch, Jr., Relationships Between Telecommuting Workers and Their Managers: An Exploratory Study, 34 J. Bus. COMM. 343, 358 (1997) (after initial "honeymoon period" of telecommuting, quality of manager-telecommuter relationship declined).

^{267.} Timothy D. Golden & Kimberly A. Eddleston, *Is There a Price Telecommuters Pay? Examining the Relationship Between Telecommuting and Objective Career Success*, 116 J. VOCATIONAL BEHAV. 103348, 103348 (2020) (comparison of matched sample of telecommuters with non-telecommuters found that telecommuters did not experience fewer promotions but did experience less salary growth).

other primary caregivers. If remote work disadvantages women, it appears a disadvantage that many are willing to shoulder. Women are slightly more likely than men to work from home, with 26% of women compared to 22% of men doing some or all of their work at home.²⁶⁸ Women with children under twelve years old and some college education are markedly more likely than their male counterparts to report a preference for a full, five day per week work-from-home schedule.²⁶⁹ With respect to willingness to pay for the ability to work from home, a recent study by Barrero, Bloom, and Davis found that women and people with children in their households valued remote work at a modestly higher percentage of salary compared to other groups.²⁷⁰ One might argue that the preferences of women regarding caretaking of children are socially constructed and thus should not be reified by employment practices.²⁷¹ However, declining to support worker preferences for flexible and remote work on this ground would replace a socially constructed role for women as primary caregivers with an equally constructed preference for privileging work advancement over family life.

If detrimental effects based on gender or caregiving do emerge, it is possible, though inadvisable, for laws to require employers to provide employees with the option of working in a centralized workplace. Such a rule would increase operating costs for businesses, possibly decrease employee pay, and distort the evolution of labor markets. Any attempt to mandate a centralized, non-residential workplace alternative would also dampen start-up businesses, approximately half of which operate from home according to a 2009 Small Business Administration study. Notably, women-owned start-up businesses are a rapidly growing sector of the start-up economy that would be disadvantaged by laws requiring non-remote options for employees, unless start-ups are exempted. On balance, requiring that employees retain the option to work in a centralized workplace, or, alternatively, imposing burdensome regulation on remote work in order to dampen it, is economically detrimental and misaligned with the preferences of parents, particularly women.

^{268.} U.S. BUREAU OF LAB. STAT., supra note 79, at 2.

^{269.} Barrero, Bloom & Davis, supra note 21, at 13.

^{270.} *Id.* at 24. In the study by Mas and Pallais of job applicants, women reported higher willingness to lose pay in order to work from home than men. Mas and Pallais, *Valuing Alternative Work Arrangements*, *supra* note 96, at 3752.

^{271.} I thank Kathy Baker for her thoughtful comments on this point.

^{272.} Ying Lowrey, Startup Business Characteristics and Dynamics: A Data Analysis of the Kauffman Firm Survey 5 (Aug. 15, 2009) ((SBA Off. of Advoc.), https://perma.cc/DTE9-NF41

^{273.} KATHERINE INMAN, WOMEN'S RESOURCES IN BUSINESS START-UP: A STUDY OF BLACK AND WHITE WOMEN ENTREPRENEURS 1, 1-4 (2000) (women's start-ups are the "fastest growing sector" of new business start-ups).

B. Equity Troubles: Subsidizing Remote Work Amenities

In an era of increasing remote work, lower-income and frontline workers may experience absolute welfare losses, as well as increased relative disadvantage compared to their higher-income counterparts. Supporting remote work locally may compound these effects, benefitting middle- and upper-income workers at the expense of lower-income workers and unemployed individuals.²⁷⁴ In addition to inequities based on income, there are racial and gender disparities in remote work trends. People of color and women are overrepresented in "front-line" industries that do not benefit from remote work and are vulnerable to harm from decreasing retail or restaurant work in cities as remote workers disperse.²⁷⁵

Distributional impacts from local support for remote work and from remote work itself can occur in a number of ways. First, in economically heterogenous localities, local provision of remote work amenities may funnel investment to more affluent residents and away from distressed communities or more pressing needs. For example, a small city that invests in remote work facilities and other amenities might shift funds to higher-income residents that could have been spent on social services or other local public goods to benefit low-income residents. Of course, this concern would not apply to the many localities in the United States that are segregated by income, as those localities will likely deliver work amenities, whether for transit, remote work, or gig work, targeted to their specific populations.²⁷⁶ However, it is possible that remote work amenities may further segregate residents economically by inducing sorting among professional workers seeking remote-work friendly localities and in-person workers interested in other amenities.

Second, a large-scale shift to remote work, aided by localities, could harm those whose employers offer remote work, but who lack the privilege of space in their homes to exercise that option.²⁷⁷ Remote workers based in their homes

^{274.} The equity calculus is nuanced with remote work benefiting some groups, such as the physically disabled and rural residents. *See* Sara Sutton Fell, *Connecting Rural Areas to Remote Work*, Gov1 (Nov. 8, 2017), https://perma.cc/X53T-JGGT. It is possible that remote work will benefit elderly individuals who work or wish to work but face mobility or driving challenges. However, it is not clear if elderly workers, on average, will find it more difficult to utilize the technologies common in remote work.

^{275.} HYE JIN RHO, HAYLEY BROWN & SHAWN FREMSTAD, CTR. FOR ECON. & POL'Y RSCH., A BASIC DEMOGRAPHIC PROFILE OF WORKERS IN FRONTLINE INDUSTRIES 1-3 (2020), https://perma.cc/26WY-4N2D (finding that 41.2% of frontline workers are Black, Hispanic, Asian-American/Pacific Islander, or another non-white category and 64.4% of frontline workers are women); see also Matt L. Huffman & Philip N. Cohen, Racial Wage Inequality: Job Segregation and Devaluation Across U.S. Labor Markets, 109 Am. J. Soc. 902, 924, 928-29 (2014) (discussing barriers to black entry into higher-paying jobs).

^{276.} See Ann Owens, Building Inequality: Housing Segregation and Income Segregation, 6 Soc. Sci. 497, 513-18 (2019) (lack of economic diversity in housing).

^{277.} See William C. Clark, Marinus C. Deurloo & Frans M. Dieleman, Housing Consumption and Residential Crowding in U.S. Housing Markets, 22 J. URB. AFF. 49, 53-54 (2000) (finding that almost 12% of households in the lowest income decile had a room shortage during the study period); Gary W. Evans, The Environment of Childhood Poverty, 59 AM.

benefit from, and in many cases require, private spaces and quiet.²⁷⁸ Low-income workers occupy homes with less square feet per occupant and often lack private rooms or home offices.²⁷⁹ A dearth of residential space may create barriers to working in industries that have shifted to remote or hybrid remote work. Notably, some of the reforms proposed in this Article, such as public work centers and spaces, could ameliorate the problem of disparate access to residential space for remote work.

Third, low-income individuals may be more likely to own or work for home-based businesses that generate neighborhood spillovers, such as noise or fumes from home workshops. As a result, lower-income people, and the neighborhoods in which they work from home, are likely to face more onerous regulation than higher-income residents who engage in computer-based remote work. For example, working-class Black women are disproportionately represented as hair stylists and hair salon owners, in some cases working out of their homes. Home-based hair salons increase parking and foot traffic and require chemical storage, subjecting owners to more local regulation. This disparity underscores the importance of the zoning reforms that regulate impacts from home businesses, rather than prohibiting or severely restricting certain types of home businesses (as discussed in Part IV.B above). Localities may also opt to absorb a greater degree of disturbance and spillovers from home businesses in order to mitigate the relative disadvantage faced by certain types of home workers.

Fourth, there are secondary effects on service jobs in offices and business districts from a steep rise in remote work. As professionals increasingly work from home, there is less commercial real estate and therefore fewer office jobs in reception, cleaning, security, food service, or city retail.²⁸¹ There may be an uptick in demand for work in private homes or suburban restaurants and retail, but it is not clear whether this will generate the same number and quality of jobs as centralized workplaces. It seems unlikely, however, that depressing the local role in remote work zoning and support will substantially improve this problem. The massive shift in labor markets toward remote work is the primary driver of

PSYCH. 77, 88 (2004) (The residences of the poor are "more crowded, noisier, and more physically deteriorated."); Dowell Myers, William C. Baer & Seong-Youn Choi, *The Changing Problem of Overcrowded Housing*, 62 J. Am. PLAN. Ass'N 66, 66 (1996) (U.S. Census data shows a strong inverse relationship between household income and the percentage of households living in homes with more than one person per room, a common measure of residential crowding).

^{278.} *Cf.* Bloom et al., *supra* note 97, at 180 (study that required remote workers in a randomized experiment to have independent workspaces because of the importance of dedicated space to work-from-home productivity).

^{279.} See Clark, Deurloo & Deileman, supra note 277, at 53-54; Myers, Baer, & Choi, supra note 277, at 66.

^{280.} Adia Harvey Wingfield, Doing Business with Beauty: Black Women, Hair Salons, and the Racial Enclave Economy 36-37, 64 (2008).

^{281.} See Barrero, Bloom & Davis, supra note 21, at 31 (estimating 5-10% or greater drop in consumer spending in Manhattan and San Francisco due to remote work).

shrinking service jobs in business districts, not local government zoning and provision of remote work amenities.

Rather than viewing local government support of remote work as solely disadvantaging low-income communities, we should also consider how remote work zoning and amenities could help disenfranchised neighborhoods. Some cities are now prioritizing socioeconomic and racial equity, as Chicago has in its recent "We Will Chicago" three-year plan.²⁸² In these municipalities, remote work policy at the local level might focus on free municipal internet access or public work centers. Low-income residents are likely to value these amenities more highly than affluent individuals who can afford to pay for them and who typically live in areas with better transit options.²⁸³ Another option is for localities to focus on services and amenities that benefit electronically mediated gig work, which tends to pay less than telecommuting and boasts a more diverse workforce.²⁸⁴ Funding also might be used to provide shared kitchen, workshop, and other spaces in economically depressed neighborhoods, and to offer remote work job training and placement.

C. Productivity

Another concern is that remote work, supported by the local policies I have suggested, will dampen worker productivity. The research does not substantiate a global drop in productivity, but rather finds that whether remote work increases or decreases worker output depends on the task and compensation model. Productivity increases when remote work entails discrete, easily measurable contributions and does not require group problem solving or high levels of worker coordination. For example, researcher Nicholas Bloom randomly assigned 249 Chinese call center workers at a travel agency to work either remotely or in the office for nine months, with a significant share of their compensation based on sales. The productivity of the remote workers jumped by 13% over the course

^{282.} WE WILL CHI., *Pillars, Themes & Principles* (last updated Sept. 20, 2021, 4:46 PM), https://perma.cc/A9B2-3JJ9.

^{283.} Of course, the same political forces that direct transportation routes to more affluent areas could do the same with work centers and other remote amenities. Political capture of remote work centers seems less likely to occur because such investments are both less valuable and more decentralized than mass transit routes, making the costs of political capture higher and its payoffs smaller.

^{284.} See U.S. BUREAU OF LAB. STAT., supra note 79.

^{285.} See, e.g., Bloom et al., supra note 97, at 169-170 (successful experiment in work from home for workers at a travel agency call center charged with bookings and similarly discrete tasks); COUNCIL OF ECON. ADVISORS, WORK-LIFE BALANCE AND THE ECONOMICS OF WORKPLACE FLEXIBILITY (2010); Jerry Useem, When Working From Home Doesn't Work, ATLANTIC (Nov. 2017), https://perma.cc/YYH3-BUSN. With the exception of the Bloom et al. experiment, these studies assessed workers who had self-selected into remote work and thus were more likely to have situations, jobs, or work styles conducive to remote work than the average worker.

^{286.} Bloom et al., *supra* note 97, at 168-69. The remote workers were also less likely to

of the experiment without a decrease in work quality, primarily due to logging in for a higher amount of time to take calls during their shifts.²⁸⁷ However, other research has found that productivity suffers when the remote work requires group collaboration to solve problems, because communication is typically slower, more burdensome, and confined to a smaller pool of co-workers than when collaborators are physically proximate.²⁸⁸ The effect of remote work on productivity also depends on whether employee compensation is via salary or performance pay, with the latter tending to boost home work productivity.²⁸⁹

Even if remote work decreases productivity in certain jobs, it is not evident why this should affect local government support for remote work unless the number of remote workers substantially declines as a result. Employers are highly motivated and optimally situated to engineer remote work policies that do not compromise productivity.²⁹⁰ In the event productivity lags, businesses can return workers to centralized workplaces. It seems unlikely, however, that widespread worker recall based on productivity losses will occur. The most recent research, a 2021 study by Barrero, Bloom, and Davis, estimates a 5% increase in productivity, including time savings from reduced commuting, based on survey responses from 30,000 workers about their work-from-home efficiency.²⁹¹ Many of the surveyed employees, especially educated and higher-income workers, reported that their employers planned to continue to allow remote work days even when the COVID pandemic ends.²⁹²

quit than their in-office counterparts. *Id.* at 192 (the quality measures in the study were the number of phone calls that culminated in travel orders and a sampling of telephone recordings rated for quality by external raters). In a second phase of the experiment, individuals who elected to remain working remotely after a nine-month initial period showed increased productivity of 22%, presumably because those who worked best at home chose to remain there. *Id.* at 170; *cf.* Ralph D. Westfall, *Does Telecommuting Really Increase Productivity?*, 47 COMM. ACM 93, 96 (2004) (non-empirical article concluding that if telecommuting increased productivity, "companies that employ large numbers of knowledge workers would have adopted telecommuting on a large scale a long time ago, on a mandatory basis where necessary, and would be continuing to promote it heavily.").

- 287. Bloom et al., supra note 97, at 169-70.
- 288. Longqui Yang et al., *The Effects of Remote Work on Collaboration Among Information Workers*, NATURE HUM. BEHAV., Sept. 9, 2021, at 43, 44 (remote workers communicated more by email than meetings, collaborated more with co-workers they had "strong ties" with as opposed to weak ties, and had patterns of communication that were more "siloed."); *see also* Useem, *supra* note 285.
 - 289. See Bloom et al., supra note 97, at 172.
- 290. *Cf*. Westfall, *supra* note 286 at 96 (describing the responsiveness of companies to boosting productivity).
- 291. Barrero, Bloom & Davis, *supra* note 21, at 27-30. The study included only participants aged 20-64 who earn at least \$20,000 per year from a broad range of occupations. *Id.* at 6.
- 292. *Id.* at 2 (survey asking employees how often their employers planned to allow them to work from home post-pandemic).

D. Undermining Cities?

Cities hold an exalted position in land use law, offering a heady mix of social and cultural vibrancy and agglomeration economics.²⁹³ For many, remote work poses an unwelcome threat to both the status and revenues of cities, particularly larger ones. Remote work may drain residents, decrease retail and other revenue as workers depart, and lead states to fund cities less generously.²⁹⁴ From this vantage point, if government cannot prevent the risk to cities by forestalling remote work, it at least should refrain from promoting remote work as this Article has proposed.

The argument against local zoning and support for remote work, or against remote work itself, on the basis of harm to cities has significant flaws. First, it is not clear that remote work will undermine cities on average, and quite unlikely that it will harm cities universally. Although trends and models suggest dispersion to outlying areas from remote work, some amenity-rich cities could experience population increases as untethered remote workers seek more diversity, cultural and arts activities, or walkability.²⁹⁵ In particular, it is likely that smaller or more affordable cities will *benefit* from remote work. The limited evidence to date indicates a growing movement of remote workers from larger, more costly cities to smaller, less expensive ones.²⁹⁶ Of course, cities will evolve in response to remote work, for example by downsizing central business districts, and specific cities may suffer declines in population and revenue. However, the evisceration of cities nationally from remote work is improbable.

Interestingly, the trend of increasing remote work may refine the agglomeration theory of cities toward a dialectic of concentration and dispersion. In agglomeration economics, the physical proximity of businesses reduces the cost of production through competition and specialization and facilitates the spread of information, strategies, and innovations.²⁹⁷ This clustering, or agglomeration, causes cities to prosper. Remote work may alter this model if workers and certain functions of businesses peel off from urban cores to dispersed locations. If remote work continues to proliferate, and does so successfully, agglomeration's concentrated network model may morph into a "hub and spoke" configuration. This configuration may retain a degree of physical clustering in urban cores, with offshoots of remote work made proximate, and agglomerative, via technology rather than physical proximity.

^{293.} See, e.g., Sheila L. Foster, The City as an Ecological Space: Social Capital and Urban Land Use, 82 Notre Dame L. Rev. 527, 527 (2006) (quoting Joel Kotkin, The City: A Global History xx (2005) ("cities represent the 'ultimate handiwork' of our imagination, generating most of our art, culture, commerce, and technology").

^{294.} But see Jon Marcus, Small Cities Are a Big Draw for Remote Workers During the Pandemic, NPR (Nov. 16, 2020, 5:00 AM ET), https://perma.cc/QX4J-KT5S.

^{295.} See id.

^{296.} Id.

^{297.} See Brendan O'Flaherty, City Economics 16-21 (2005).

Second, opposition to remote work on the basis of urban protectionism privileges cities over other residential locations, seemingly as a matter of natural right. The assumption, at least among urban devotees, is that cities are unique and have achieved their status on the basis of economic, cultural, and social virtues. Accordingly, cities possess the right to maintain, or improve, their status quo position, even as labor markets and technology change. A closer view of land use history indicates that the tethering of work to commercial workplaces significantly *constructed* cities, as discussed in Part I above. Rather than remote work threatening cities, it may be that the historic need for centralized workplaces and transit has artificially propped cities up.

In conclusion, the concerns examined in this Part, ranging from gender equity to the potential for urban decline, draw into focus two important points about localizing remote work support. First, the design of remote work policies must account for potential maldistributions, for example by including remote work amenities that benefit low-income residents. Local governments are increasingly grappling with issues of equity and distribution in a variety of local goods, including housing, siting of pollution-emitting facilities, and education.²⁹⁸ Remote work will require similar consideration. Second, some of the objections to supporting remote work emanate from assumptions and preferences rooted in the status quo and contestable cultural views. As discussed in this Part, it is not evident whether remote work undermines cities, or centralized work and transit privileged them.²⁹⁹ Similarly, it is dubious that concerns about the professional advancement of historically disadvantaged groups should override the desires of the members of those groups for work flexibility or work-life balance.

CONCLUSION

Land use law's separation of work from home, and the emphasis on transit to maintain this separation, seems increasingly antiquated in an era of rising demand for remote work. This orientation, grounded in the history of land use law, transportation advances, and racial segregation, has delayed and attenuated the local government role in remote work. This Article has examined local government as a productive, though not exclusive, institution for addressing the shifting needs of resident-workers who are increasingly untethered from centralized workplaces. Decentralized local remote work policies respond, albeit imperfectly, to variability in remote work's costs and benefits, differences in its prevalence geographically, and uncertainty about its social consequences. This Article advocates a next-generation approach that supports, rather than tolerates,

^{298.} See, e.g., WE WILL CHI., supra note 282 (prioritization of equity in city planning, development, and funding); CITY OF SAN ANTONIO, OFF. OF EQUITY, https://perma.cc/MY3E-UBAH (archived Feb. 9, 2022) (adopting an equity rapid response tool, racial equity indicators report, and equity matrix.").

^{299.} See, e.g., Atack, Margo, & Rhode, supra note 44 (critical role of transportation developments to the rise of cities).

remote work, situating zoning and local provision for remote work squarely within the purview of local land use law.