

# Where the Jobs Are: Employer Access to Labor by Transit

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## Findings

An analysis of data from 371 transit providers in the nation's 100 largest metropolitan areas reveals that:

- **Over three-quarters of all jobs in the 100 largest metropolitan areas are in neighborhoods with transit service.** Western metro areas like Los Angeles and Seattle exhibit the highest coverage rates, while rates are lowest in Southern metro areas like Atlanta and Greenville. Regardless of region, city jobs across every metro area and industry category have better access to transit than their suburban counterparts.
- **The typical job is accessible to only about 27 percent of its metropolitan workforce by transit in 90 minutes or less.** Labor access varies considerably from a high of 64 percent in metropolitan Salt Lake City to a low of 6 percent in metropolitan Palm Bay, reflecting differences in both transit provision, job concentration, and land use patterns. City jobs are consistently accessible to larger shares of metropolitan labor pools than suburban jobs, reinforcing cities' geographic advantage relative to transit routing.

The suburbanization of jobs obstructs transit's ability to connect workers to opportunity and jobs to local labor pools. Fortunately, some metro areas exhibit near ubiquitous transit coverage rates and enable their jobs to access over half of their local labor pools, proving that expanded transit networks and integrated land use decisions can improve transit's utility to employers. As metro leaders continue to grapple with limited financial resources, it is critical for transit investment decisions to simultaneously address suburban coverage gaps as well as disconnected neighborhoods. Those decisions should be made in concert with actors from other public agencies and the private sector.

## Introduction

**T**hree years since the onset of the Great Recession, national and metropolitan labor markets continue to show signs of weakness. The national unemployment rate is still percentage points higher than pre-recession levels, while many metropolitan labor markets face unemployment rates above the national average, some beyond fifteen percent.<sup>1</sup> Worryingly, economists admit the most commonly cited unemployment rates undersell American joblessness by ignoring those no longer seeking work and positively counting those involuntarily working shorter hours.<sup>2</sup>

Yet at the same time that many Americans cannot find full-time work, some employers cannot hire suitable workers for their vacancies. Media reports confirm a skills mismatch in highly technical work like advanced manufacturing to centuries-old work like mining.<sup>3</sup> Some of these mismatches involve professional training shortfalls, but others find origins in education deficits. Recent Brookings research found that metro areas with larger "education gaps"—shortages of educated workers relative to employer demand—had consistently higher unemployment rates than other metro areas from 2005 to 2011.<sup>4</sup>

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But even if a metropolitan labor pool's skills do match current job openings, employers also need workers to have physical access to those jobs. Indeed, this is one of the primary purposes of metropolitan transportation networks, and the efficiency, quality, and cost of that network affects employers' ability to access broad pools of labor.<sup>5</sup> Fortunately, America's roadway network is robust and decades of investments mean essentially every job is accessible by the vehicles that use it.

While automobiles do provide broad job accessibility, there is no guarantee the trip is easy. The nation's average distance to work jumped from 9.9 miles in 1983 to 13.3 miles in 2009.<sup>6</sup> Meanwhile, as solo drivers topped 74 percent of all commuters, the average number of hours wasted in traffic increased from 14 hours in 1982 to 34 hours in 2010.<sup>7</sup> Just as importantly, there is still a sizable portion of Americans that confront longer commuting distances without a vehicle. The costs of owning and operating a vehicle are such that ten percent of American households in the nation's largest metro areas do not have access to a private vehicle. Compared to their car-owning counterparts, zero-vehicle households are more likely to earn low incomes, live in cities, and take public transportation to work.<sup>8</sup>

Problems with the daily commute don't just affect workers—they affect employers' bottom lines too. The lack of reliability caused by persistent traffic congestion reduces the size of labor catchment areas.<sup>9</sup> Other research finds that congestion geographically limits business markets, raises business-related transportation costs like logistics, and limits firm productivity through reduced employee productivity.<sup>10</sup> Employee commuting costs also force businesses to increase wages to compensate for the congestion burden, which then pass additional costs along to the end consumer.<sup>11</sup>

Public transit offers businesses a possible solution to some of these congestion-related expenses. First, firms' employees can elect for an alternative to automobile congestion, whether it means multi-tasking on a bus route or speedier travel on a subway. Second, switching commuters from private automobiles to public transportation takes cars off the road, theoretically freeing up roadway capacity for the remaining vehicles, whether personal travelers or freight.<sup>12</sup> But to actualize these benefits, a metro area must include a transit system that efficiently and equitably connects jobs to the broadest possible labor pool.

Unfortunately, little is known whether public transportation serves metropolitan jobs. Inconsistent data collection, organization, and publication between transit agencies, plus the lack of federal requirements regarding geographic data collection, mean employers and residents have little knowledge about how well transit serves their metro area.

This information gap comes at a considerable consequence to employers. First, research finds that workers prefer to take transit if it closely serves their job locations.<sup>13</sup> Thus, employers could attract additional transit-reliant or transit-preferred labor pools if they locate near well-connected transit stops—but determining those transit-rich locations is difficult. Second, with decades of decentralizing development, employers may have little understanding of to what extent sometimes-antiquated transit routing efficiently connects their job sites to prospective labor pools.<sup>14</sup> Finally, inconsistent transit information makes it difficult to judge the efficacy of public programs promoting transit usage for employment, such as the federal Job Access and Reverse Commute program or Partnership for Sustainable Communities discretionary grants.<sup>15</sup>

This brief attempts to fill that gap by explicitly measuring how well fixed route transit connects jobs to metropolitan labor pools. First, it explores what shares of jobs are located near transit networks. Next, it adds labor pools to the analysis and determines how much labor is within reach of those same job locations. It concludes with a discussion of the implications for public policy ranging from transportation investment criteria, to land use and tax reform, and finally to information upgrades.

## Methodology

This brief combines detailed data on employment, transit systems, and household demographics to determine transit accessibility within and across the country's 100 largest metro areas.<sup>16</sup> The data provide a "supply side" model of how well transit connects employers to potential workers. It builds off the data, analyses, modeling, and nearly all of the same methodological specifications as Brookings' "Missed Opportunity" report.<sup>17</sup> The exceptions to those specifications are:

**Origins:** Census tracts, and their geographic centroids, serve as the origin units. The research classifies each census by total employment and job counts within eleven industrial categories.<sup>18</sup> Those industrial cat-

egories correspond with Standard Industry Classification (SIC) Divisions, including a subdivision of Services (Division I) into Low Skill and High Skill categories.<sup>19</sup> In addition, this research shortens Division A (Agriculture, Forestry, And Fishing) to 'Agriculture' and Division E (Transportation, Communications, Electric, Gas, And Sanitary Services) to 'Utilities.'

**Destinations:** Census block groups, and their population-weighted mean centroids, serve as the destination units. This research classifies each block group by either working-age population between 18 and 64 years old or the population at least 25 years old.

**Coverage:** The share of jobs in tracts that are considered "served" by transit (i.e., tracts with access to at least one transit stop within 3/4 mile of their geographic centroid).

**Labor Access:** The share of metropolitan population, either working-age or at least 25 years old, that can reach the typical job in 90 minutes via transit. This measure is only calculated for those census tracts that can reach at least one other block group within 90 minutes.

**Education:** This sub-analysis within the second finding examines labor access across three resident education categories (High School or Less, Some College or Associate's Degree, Bachelors Degree or More). The sub-analysis counts all residents at least 25 years old.

## Findings

### ***A. Over three-quarters of all jobs in the 100 largest metropolitan areas are in neighborhoods with transit service.***

Mass transit can best support metropolitan economies when it serves both the neighborhoods where people live and the places where businesses locate. This section focuses on the second of those two functions by examining transit job coverage, or the share of metropolitan jobs in neighborhoods served by transit.

Across the country's 100 largest metro areas, over 75 percent of jobs are in neighborhoods with fixed route transit service. This coverage rate means transit serves 77.7 million jobs in those metro areas. This coverage rate exceeds working age residents' transit coverage rate (69.5 percent), suggesting transit better serves jobs than people.

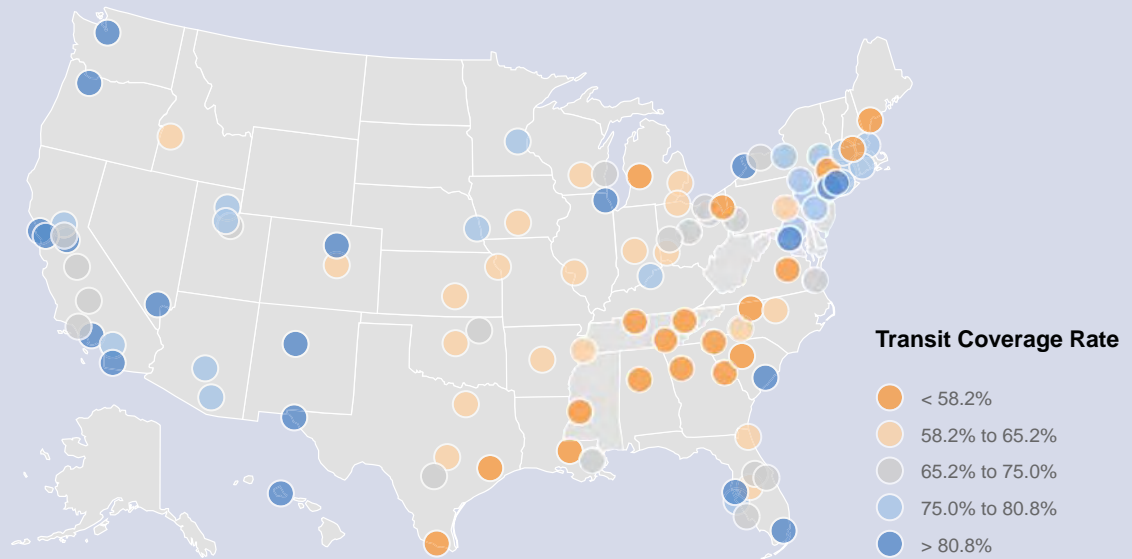
Western and Northeastern metro areas offer transit service to the widest share of local employers, with a large drop-off for coverage rates in Midwestern and Southern metro areas (Table 1, below). If Midwestern and Southern metro areas offered their businesses the same coverage rates as their Western counterparts, then an additional 3.5 million Midwestern jobs and 6.5 million Southern jobs would have access to transit.

**Table 1. Share of Jobs with Access to Transit, 100 Metropolitan Areas by Region**

Geography	Metropolitan			City			Suburb		
	Total Jobs	Covered Jobs	Rate	Total Jobs	Covered Jobs	Rate	Total Jobs	Covered Jobs	Rate
All 100 Metro Areas	102,978,179	77,700,952	75.5%	38,344,050	36,308,908	94.7%	64,634,129	41,392,044	64.0%
Midwest	20,957,229	14,682,116	70.1%	7,046,221	6,817,863	96.8%	13,911,008	7,864,253	56.5%
Northeast	23,922,939	19,254,879	80.5%	7,684,947	7,672,237	99.8%	16,237,992	11,582,642	71.3%
South	33,320,610	22,309,295	67.0%	13,055,197	11,756,520	90.1%	20,265,413	10,552,775	52.1%
West	24,777,401	21,454,662	86.6%	10,557,685	10,062,288	95.3%	14,219,716	11,392,374	80.1%

*Source: Brookings Institution analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data*

**Map 1. Share of Jobs with Access to Transit, 100 Metropolitan Areas**



*Source: Brookings analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data*

Large metropolitan areas—and their large quantities of jobs—drive the higher coverage rates in Western and Northeastern metro areas. Between the two regions, six metro areas rank in the top 20 of both transit job coverage and total metropolitan jobs: New York, Los Angeles, San Francisco, Seattle, San Diego, and Denver. Strong transit coverage for so many jobs lifts their region’s overall coverage rate. Beyond just the largest metro areas, a large share of all Western and Northeastern metro areas exhibit coverage rates above average. Map 1 (above) illustrates this point via the blue circles in the associated regions.

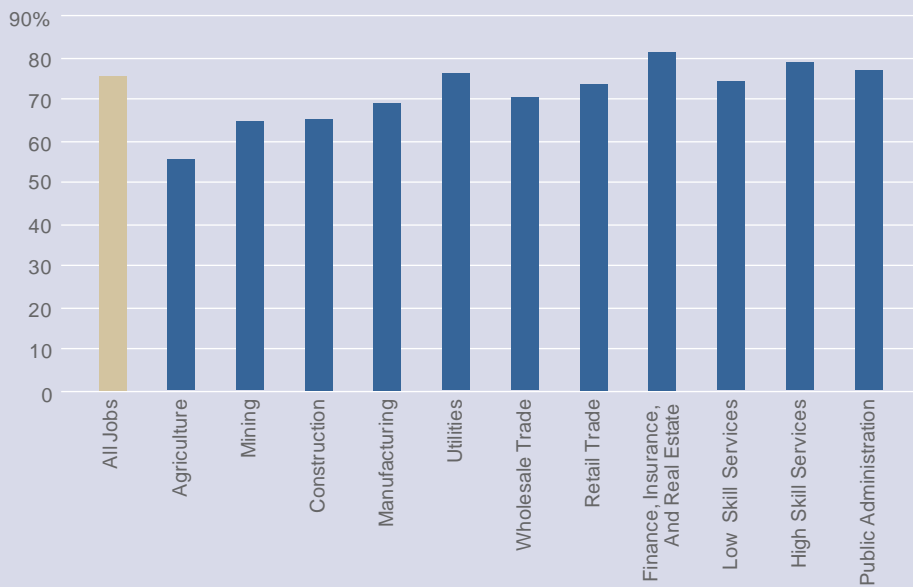
For the Midwest and South, the story is the inverse. First, some of their largest job centers do not offer broad transit coverage to their local businesses. These include metro areas like Dallas, Houston, Atlanta, Cincinnati, and St. Louis. The regions’ metro areas also consistently exhibit sub-average coverage rates: 46 of 61 metro areas fall below the 100-metropolitan average.

The disparities are even larger between city and suburban coverage levels. Across all 100 metro areas, 94.7 percent of all jobs in city neighborhoods receive transit service of some kind, while only 64 percent of suburban jobs are in transit-covered neighborhoods. Since so many metro areas have high city coverage rates, suburban service is the more accurate barometer of overall metropolitan coverage levels.

For example, consider the cases of San Jose and Richmond. Both metropolitan areas offer transit service to over 97 percent of city jobs. But while San Jose’s suburban transit routes extend well beyond the city core, offering service to 84 percent of its suburban jobs, Richmond’s suburban routes stop close to the municipal borders, offering service to only 29 percent of suburban jobs. The end result is that San Jose’s overall transit coverage rate ranks fourth and Richmond’s ranks 94th. And Richmond isn’t the only metro that registers this extreme city/suburban dichotomy. Atlanta, Grand Rapids, and McAllen all show near-ubiquitous transit coverage in their primary cities and limited suburban coverage, pushing their overall coverage rates to the bottom quintile.

The difference between city and suburban coverage rates is especially problematic because the majority of metropolitan jobs are now in the suburbs. Across the 100 metro areas, 64.6 million jobs are in the suburbs versus only 38.3 million jobs in cities, including 72 metros where more jobs are in the suburbs than their primary cities. This leaves metro areas’ suburban jobs, such as the 2.2 million in suburban Atlanta, at a structural disadvantage. It is critical that metro areas with majority suburban jobs focus on suburban and suburb-to-suburb routing. Equally important, building and retrofitting suburban locations with higher density

**Figure 1. Transit Job Coverage by Industry Category, 100 Metropolitan Areas**



Source: Brookings analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data

development and concentrated corridors can improve the suburban routes already in operation.

Coverage differences between cities and suburbs also affect specific industries' coverage rates. Simply put, the industries with higher city concentrations enjoy higher coverage rates.<sup>20</sup> FIRE jobs—Finance, Insurance, and Real Estate—exhibit the highest single industry coverage rate, followed by High Skill Services and Public Administration. Those industries with the largest suburban concentrations—Agriculture, Construction, Manufacturing, and Wholesale Trade—grapple with some of the lowest transit coverage rates. Although the coverage splits in Figure 1 (above) may seem small, even single percentage point differences leave thousands of jobs out of transit's reach. For example, if Low Skill Services' coverage rate equaled High Skill Services then transit would reach another 368,800 Low Skill Service jobs.

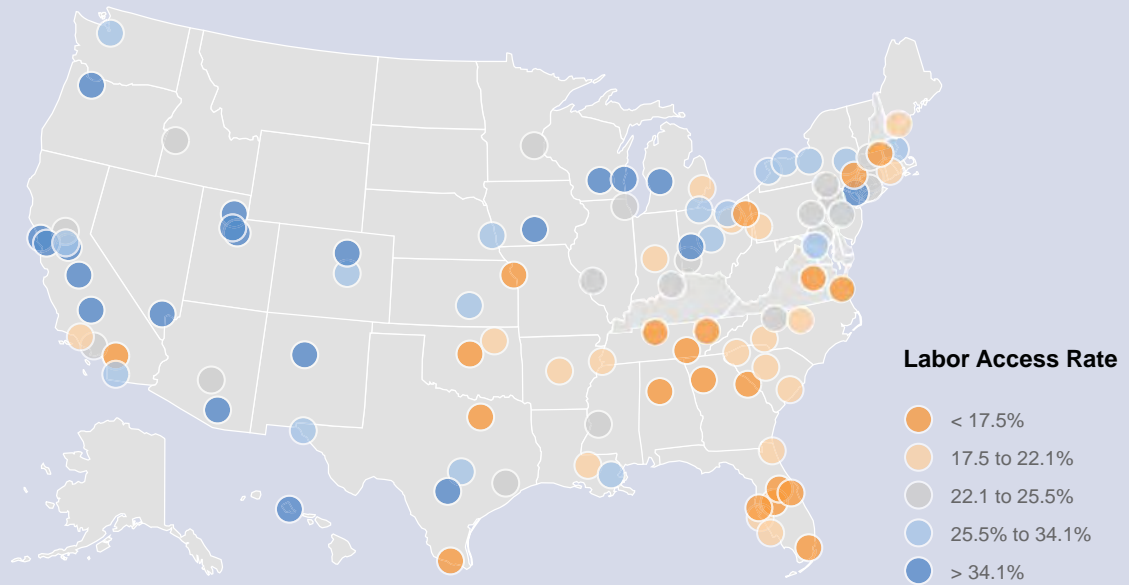
The basic implication of these coverage differences, whether across industries or particular metro areas, is that transit routing and land development policies will either expand or limit employees' transportation choices. An individual working in an industry well-served by transit or living in a metro area with a broad transit network will have a range of choices to get to work. On the other hand, working in an industry underserved by transit or living in a metro area with a limited transit network, especially in the suburbs, will leave a worker with fewer choices and potentially force them to take on the added expenses related to vehicle ownership.<sup>21</sup>

***B. The typical job is accessible to only about 27 percent of its metropolitan workforce by transit in 90 minutes or less.***

Transit's value to employers only begins with proximity to a local stop. Once a stop is within reach, the next consideration is whether transit provides employers with access to the broadest potential pool of labor and customers. This section addresses the employee portion of that equation by measuring the share of metropolitan labor accessible to the typical job via transit within 90 minutes of travel time.<sup>22</sup>

Across all neighborhoods served by some form of transit in the 100 largest metro areas, the typical metropolitan job can access 27.3 percent of all working-age labor by transit in 90 minutes. This is a few percentage points lower than working-age residents' access to metropolitan jobs (29.9 percent).<sup>23</sup> In both cases, the 90 minute commute threshold provides ample time for workers to walk to local stops, transfer routes if needed, and reach their final destination. It also reflects the majority of transit commuters that take longer than 45 minutes to reach work.

**Map 2. Share of Working-Age Residents Reachable in 90 Minutes via Transit, 100 Metropolitan Areas**



Source: Brookings analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data

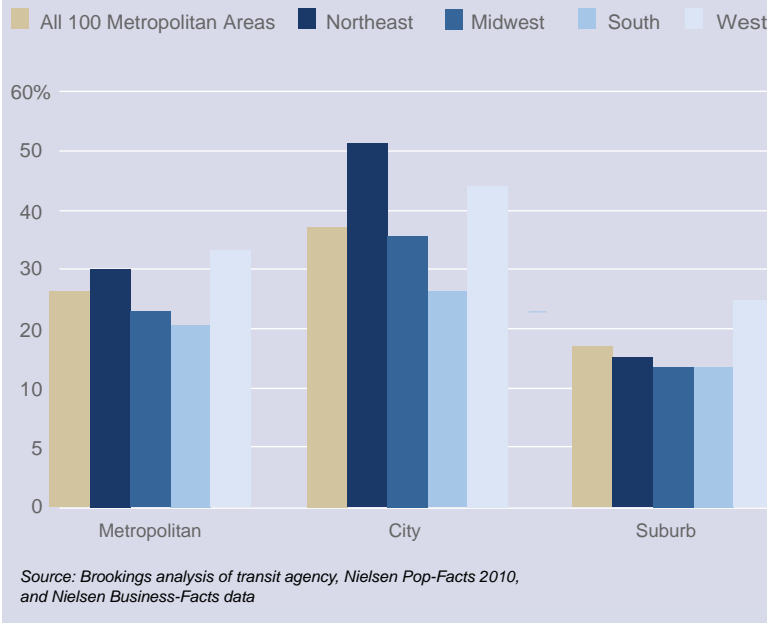
Taken together, these two accessibility shares provide a sobering account of the costs of continuous decentralization. While the majority of households and jobs are near transit stops—proving that metropolitan transit networks do reach most of our neighborhoods—the distances between people and their regional jobs are too great to generate higher accessibility rates. Thus, transit routing improvements must address coverage gaps in the suburbs and disconnects between population centers and job nodes.

Not all metro areas suffer from a disconnect between jobs and housing (Map 2, above). Jobs in Western metro areas are accessible to the largest shares of local labor, accounting for 14 of the 20 metro areas with the highest access rates. This includes the country’s top four performers, all of which have access levels of at least half of their working-age residents. The single best access rate belongs to metropolitan Salt Lake City (64.1 percent), while its neighbors Provo (47.0) and Ogden (44.0) also achieve high access rates. The Wasatch Front metro areas’ access rates reflect both the broad transit investments already made in Utah, as well as that state’s commitment to denser development.<sup>24</sup>

Comparatively, Southern metro areas’ labor access levels call attention to their overall levels of decentralization and limited transit investment: 15 of the 20 metros with the lowest labor access rates are in the South. This group includes the single worst metropolitan labor access rate, Palm Bay (6 percent), and some of the country’s largest population and employment centers. Jobs in Dallas, Miami, and Atlanta all suffer from poor access to labor via transit. Dallas and Atlanta’s poor labor access rates are especially challenging because many of their jobs aren’t covered by transit in the first place.

In addition to these two groups of best and worst performers, some of the metro areas with the best coverage rates do not maintain their relative rankings when it comes to transit access. For example, Chicago achieves the 18th best coverage rate due to extensive city and suburban transit networks. The coverage is especially impressive considering that 67 percent of jobs are more than 10 miles from downtown Chicago.<sup>25</sup> However, those long distances between communities make it difficult for jobs to reach labor clear-across the metropolitan area, leading to an access ranking of 53rd. Tampa, Charleston, and Providence also fall into this category of broad transit coverage and bottom-50 access rates.

**Figure 2. Share of Working Age Residents Reachable in 90 Minutes via Transit, 100 Metropolitan Areas by Region**



City and suburban labor accessibility statistics reinforce the vital relationship between transit routes and land use decisions. The typical city job is accessible to 38.2 percent of metropolitan working age residents, whereas for suburban jobs the figure is only 17.3 percent of residents. This 20-plus percentage point difference reflects cities' central location within the country's hub-and-spoke transit designs, creating streamlined connections to the country's suburbs and easy access to city populations. The differential also reinforces how difficult it is for suburban jobs to reach labor pools living in other suburbs, especially those on geographically opposite sides.

The four metropolitan regions experience similar splits between city and suburban labor access rates (Figure 2, left). Northeastern

cities generate the highest accessibility rates—their jobs can typically reach over half of metropolitan labor—but their suburban jobs can only reach around 15 percent of working-age residents, a nearly 31 percentage point difference. Poor suburban performance extends to Midwestern and Southern jobs, too. All told, those three regions' 30 million suburban jobs struggle to reach even 15 percent of their metropolitan labor pools.

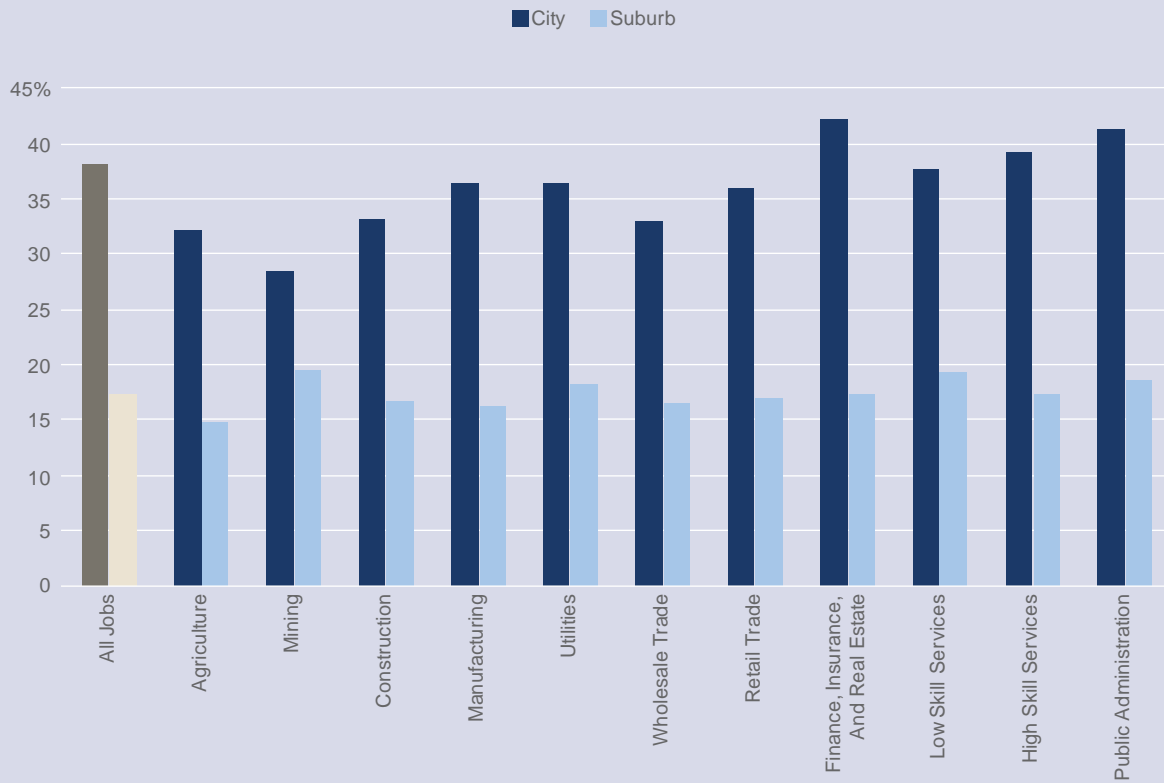
Many single metro areas also experience a wide gap between their city and suburban jobs' access to labor (Table 2, below). The largest gap belongs to the New York metro area. Serving as the nodal center of 24 commuter rail lines and many more express bus routes, New York's city jobs are accessible to nearly 60 percent of the region's working-age labor. The transit system's design simply works for firms in New York City's five boroughs and Newark. Comparatively, New York's suburban jobs are within reach of less than 15 percent of regional labor, underscoring the metro area's enormous land area and the challenges of transit

**Table 2. Top Splits between City and Suburban Labor Access in 90 Minutes via Transit, 100 Metropolitan Areas**

Metro Area	Labor Access Rates		
	City	Suburb	Difference
New York-Northern New Jersey-Long Island, NY-NJ-PA	58.1%	14.4%	43.7%
Des Moines-West Des Moines, IA	51.2%	8.7%	42.5%
Minneapolis-St. Paul-Bloomington, MN-WI	49.0%	13.1%	35.9%
Washington-Arlington-Alexandria, DC-VA-MD-WV	56.9%	22.4%	34.5%
Modesto, CA	53.7%	19.9%	33.7%
Buffalo-Niagara Falls, NY	51.9%	18.6%	33.4%
Syracuse, NY	45.6%	13.3%	32.3%
San Francisco-Oakland-Fremont, CA	52.6%	21.4%	31.2%
Boston-Cambridge-Quincy, MA-NH	46.9%	15.9%	31.0%
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	43.9%	13.8%	30.1%

Source: Brookings Institution analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data

**Figure 3. Share of Working Age Residents Reachable in 90 Minutes via Transit, by Industrial Category, 100 Metropolitan Areas**



Source: Brookings analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data

connections between suburban communities. Multiple other metro areas in Table 2 share New York’s characteristics of regional rail service and large suburban land areas: Washington, San Francisco, Boston, and Philadelphia.

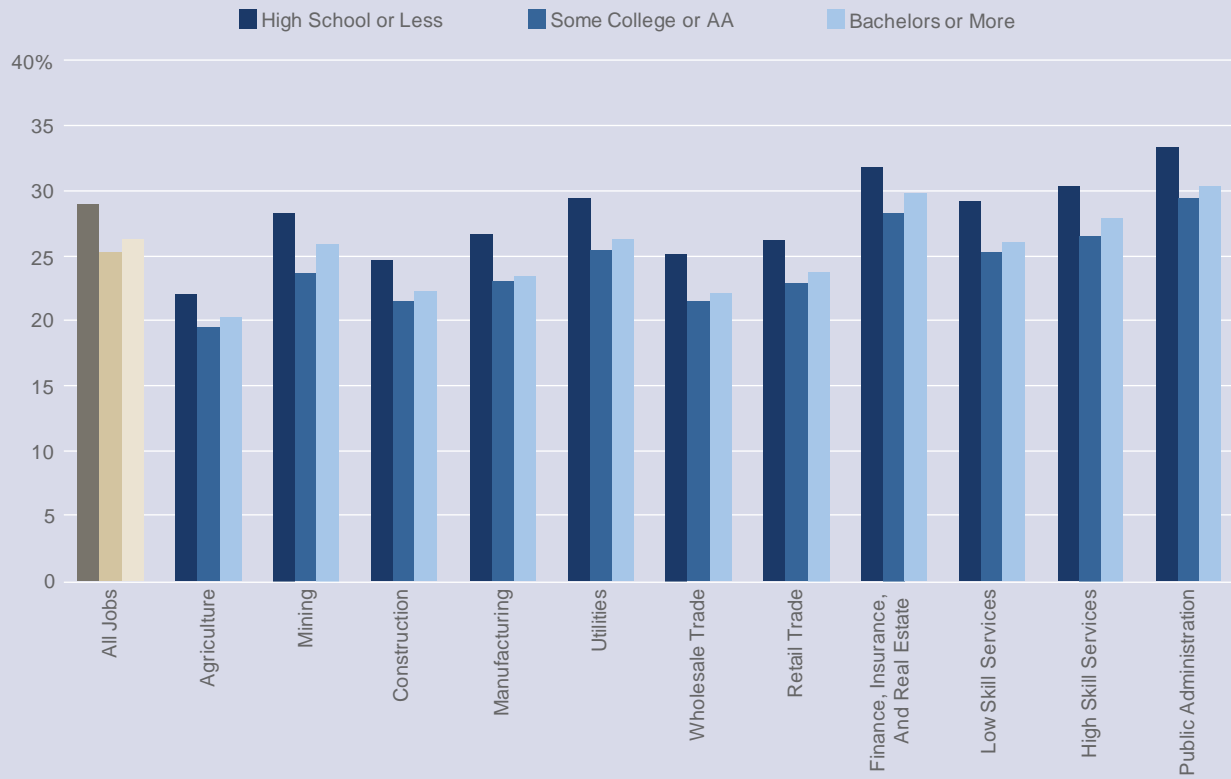
The eleven industry categories also confront labor access variability between their city and suburban jobs (Figure 3, above). Most industries’ city jobs access labor at an impressive rate, with all but one industry having access to at least three out of 10 metropolitan workers. This includes the top industry, FIRE jobs, which typically access 42.2 percent of working-age residents in 90 minutes. The two other industries with the highest concentrations of city jobs—Public Administration and High Skill Services—also generate top labor access rates. The combination of relatively high concentrations of city jobs and higher labor access rates leave those industries in an ideal position to attract transit-based commuters.

Conversely, each industry experiences a huge drop-off in suburban labor access rates. All eleven industries hover between 14 and 20 percent access, reemphasizing the relative isolation of those suburban firms from their potential labor pools.

These access differences between city and suburban labor access—whether measured by single metro areas or separate industrial categories—stand as a stark reminder of the consequences of uncoordinated transportation investments and land use decisions. Even if fixed route transit reaches suburban job centers, too many job centers remain disconnected from the rest of their metropolitan environment.



**Figure 4. Share of Working Age Residents Reachable in 90 Minutes via Transit, by Industrial Category and Educational Level, 100 Metropolitan Areas**



Source: Brookings analysis of transit agency, Nielsen Pop-Facts 2010, and Nielsen Business-Facts data

Unlike the city/suburb splits, industries access labor pools at relatively equal rates irrespective of educational levels (Figure 4, above). The typical metropolitan job reaches 28.9 percent of individuals with a high school diploma or less, followed by 26.3 percent of individuals with a Bachelor's degree or more and 25.2 percent of individuals with either some college or an Associate's degree.

The 11 industrial categories share this lack of variation across the three education groups (Figure 4). City-concentrated industries like FIRE and Public Administration continue to access the most labor across all three education types, while suburban industries like agriculture and construction reach lower labor shares. But irrespective of city concentration level, the same tight ordering of educational access exists throughout all eleven industries: high school or less, bachelor's or more, and then some college or associate's. For those industries that favor certain education levels over another, the transit system does not align with those variations.

## Implications

While Brookings' recent transit research focused on how well residents can access metropolitan jobs, this analysis flipped the perspective and analyzed how well jobs can reach labor. This perspective did not lead to a change in aggregate results: transit serves a majority of jobs, but those jobs can only reach a fraction of their local labor pools in a reasonable amount of time. In this case, the average transit-served job in the county's 100 largest metropolitan areas can access only 27 percent of its local labor pool. These accessibility metrics hamper transit's ability to generate more riders and leverage some of transit's advantages versus the automobile, especially congestion costs borne by employers.

Improving metro areas' transit access could be as simple as running more buses and trains. Yet a serious public funding crisis limits agencies' ability to expand their service and enhance connections between jobs and households. Instead, revenue declines are widespread and many agencies are already planning fare increases and operating cuts to close yawning budget gaps. A recent report found that, since January 2010, 79 percent of transit agencies cut service, raised fares, or considered either action.<sup>26</sup> Interestingly, the survey found the major reasons for those revenue gaps were gas prices, local revenue shortfalls, and state revenue shortfalls—not changes in ridership.<sup>27</sup>

It becomes critical then for the nation to focus on smart transit investments, specifically those that coordinate with other transportation and land use decisions. With the current environment in mind, the findings of this research point to three broad implications at the local, regional, state, and national levels.

### **Transportation: Include job locations in investment decisions**

Certain metro areas exhibit strong transit performances, irrespective of their size, regional location, or development patterns. Los Angeles may cover 4,850 square miles, but its extensive transit network and top coverage ranking suggests even the largest metro areas can reach nearly all employers. Most Southern metro areas fall short on connecting their employers to broad labor pools, but San Antonio bucks that trend by providing targeted suburban routing alongside multiple express routes. And while Las Vegas may have one of the lowest shares of city jobs, its grid-like routing and recent bus rapid transit investments prove that suburban routing can generate relatively high metro-wide labor access.

Using the metropolitan leaders as a guidepost, the country needs a divergent transportation playbook to best connect employers and local households.

First, metro areas should continue to add transit service in a manner that best matches their current and future employment centers. Metro areas with few coverage gaps should continue to enhance connections between employment centers and multiple regional neighborhoods. Denver, Hartford, and Washington each have major fixed-route transit projects underway designed to do just that. Given the price tag of certain fixed-route investments, metro areas like Jacksonville and Grand Rapids are expanding their suburban job connections through lower-cost, flexible routing such as local community shuttles.

The private sector can also support their local transit system by providing financial support for capital upgrades. Businesses and researchers agree that transportation investments increase a location's accessibility and, in turn, create value for nearby landowners. Unlike many European and Asian counterparts, however, public agencies in the United States do not leverage land value increases for their own gain—known as value capture techniques. David Levinson and Emilia Istrate outlined many of the local policy options available to implement public value capture at locations with new infrastructure investments: impact fees and joint development at locations with new development; and special assessment districts and tax increment financing (TIF) in areas with pre-existing development.<sup>28</sup> The private sector's willingness to jointly develop infrastructure by sharing in their land-value gains will lead to more revenue, and infrastructure investments, for public transit agencies.

Finally, employers can support transit alternatives. First, employers can offer private transit services to augment public transit. Microsoft's and Google's private buses offer a model for other large firms and business consortiums.<sup>29</sup> The rise of one-way bike and car sharing networks, including Daimler's Car2Go service, offer an alternative to fixed-route transit and private automobile ownership. Bike sharing is especially promising for the so-called "last mile" connections between fixed transit stops and job locations, easing pressure on transit to offer stops at every corner. Bike usage is also nearly carbon neutral and facilitates street shopping, potentially helping other businesses along highly traveled corridors. Employers should consider funding these investments.

### **Beyond Transportation: Use policy levers and governance reforms to enhance suburban labor access**

The discrepancy between coverage and accessibility is not shared equally across intrametropolitan geography. City-centered jobs are found closer to transit and can reach larger shares of metropolitan labor pools than suburban jobs. However, with 63 percent of jobs in the suburbs, bringing suburban performance closer to city levels would help transit systems match their metropolitan economies and development patterns. Normalizing performance levels may be easier said than done—if suburban routes fail to attract certain ridership levels they will create a drain on already-limited capital—but it is difficult to imagine transit ridership jumping without improved suburban service.

One method to address the discrepancy between city and suburban labor access is for employers to locate in more transit-friendly suburban locations. In some metro areas, denser communities may already exist and relocation will be a viable option. However, analyses suggest that there is pent-up demand for higher density commercial and residential communities, leading to higher prices for those areas in short supply.<sup>30</sup> As such, it may require employers to work with public land use planners and economic development officials to rezone and reconfigure select municipalities. The current redevelopment of automobile-focused Tysons Corner, VA into a multi-modal, walkable environment exemplifies the critical role employers can play in the process.<sup>31</sup> Public redevelopment officials should actively engage their private sector colleagues to collaborate and attract buy-in.

Municipalities and other governmental bodies can also institute specific policies that incentivize job development in denser suburban locations. Officials should start with amending decades-old planning documents by removing anti-density policies, such as mandatory parking minimums, to make high density construction an easier and more cost-effective proposition.<sup>32</sup> Enacting grouped tax incentives, often called Enterprise Zones, in transit-served districts is another method for policy to nudge private sector employers to the desired place.<sup>33</sup> The federal government already provides a model for this kind of policy activity via the U.S. General Services Administration's transit access targets.<sup>34</sup>

Beyond policy reforms, metropolitan leaders should consider governance reforms like redesigning transit service areas to more accurately reflect their metropolitan economies. Many metro areas include a regional transportation district that includes multiple jurisdictions and/or transit agencies in the planning process. Other municipalities suffer from parochial transit agencies or suburban communities uninvolved in the metro area's transit network, all of which leave a system that fails to encompass the metro area's geographic extent. Detroit is famously the largest metropolitan area in the country without a regional transportation authority. In other large metro areas like Dallas and Atlanta, core transit agencies cannot overcome suburban jurisdictions that elect to ignore transit service entirely. The results of both situations are clear: jobs in cities and suburbs fail to connect with labor pools in other parts of the metro area.

Fixing these regional transportation shortcomings is not solely a transportation problem—it's a governance issue. Fortunately, leaders in Detroit and Atlanta are attempting to establish more regional transit networks. Other metro areas with significant regional coverage gaps, like Birmingham, seem to be stuck in neutral. In either case, the private sector has a critical role in building support for regional governance enhancements.

### **Information: Invest in data systems to improve decision making**

Brookings' transit accessibility research helped reveal the cavernous gaps in data quantity and quality from one metro area to another. Simply put, it's impossible to assess the efficiency and equity of a transportation network without data.

Upgrading local transportation, demographic, and economic data is a critical first step in actualizing the reforms listed in the previous two categories. Selecting preferred investment corridors, determining which suburbs exchange labor pools, assigning optimal locations for bike sharing stations: these all require geographically accurate data. The same situation applies to making the hard choices between competing Enterprise Zone locations. Many intelligent transportation systems utilize data improvements to enhance transit service itself. Popular examples already implemented across the country include digital arrival boards or microchip-embedded travel passes.

Employers also stand to benefit from data improvements. Combining demographic and transportation data will enable employers to determine the most accessible locations throughout a metro area. This data exercise may be particularly valuable when evaluating the higher land costs often associated with denser developments versus peripheral, low density plots. If data improvements lead to smarter transit investments, those service improvements could lead to reduced congestion and lower costs for employers, too.

The need for data investment creates a particular role for national policymakers. U.S. DOT should implement the optimal policy levers to require geographic data provision from all transit agencies receiving federal support. Since this will require additional costs above the current financial and performance data supplied to the National Transit Database, U.S. DOT must be careful to avoid an unfunded mandate.<sup>35</sup> One possibility is to initiate a trial program through another federal discretionary grant program, such as New Starts, to measure the costs and benefits of a local data program. U.S. DOT could also work with their colleagues in GAO to measure the expected costs on transit agencies to upgrade their data equipment and personnel. The federal government is already moving in this direction, for example, by commissioning reports to study alternative data formats.<sup>36</sup>

## Conclusion

**T**he Great Recession offered a wake-up call to the country's leadership: It was time to fundamentally reconsider economic growth models. Many leaders and elected officials, understandably, chose to focus on bringing more and better jobs to the country's metro areas. Lost in this economic shuffle was the fundamental need to also add accessible jobs.

This particular research, and the two preceding pieces, proved that the country still has much to learn about the spatial relationships between where people live and where jobs are. A metro area's accessibility performance, whether by transit or alternative travel modes, is not a simple equation. Instead, complex interactions between firm behavior, household preferences, land use policies, and even natural geography determine the connectivity of a metro area's own micro economies.

Based on this complexity, it's critical that leaders in the public and private sector begin to shift policy in a direction that enhances accessibility. This will require new approaches to transportation investment, fundamental restructuring of associated economic policies, and expanded investments in the data infrastructure to support 21st century decision making. Leaders now know what is possible—it's time to start implementing these new approaches.

## Endnotes

1. Source: Bureau of Labor Statistics. For more information on metropolitan unemployment rates and other economic indicators, see the Brookings MetroMonitor homepage.
2. For a complete picture of national employment, see the Bureau of Labor Statistics' Employment Situation Summary (updated monthly).
3. For a broad discussion of the current structural relationship between unemployment and the workforce's skills, see: NPR All Things Considered, "2 Million 'Open Jobs'? Yes, But U.S. Has A Skills Mismatch," June 15, 2011.
4. Jonathan Rothwell and Alan Berube, "Education, Demand, and Unemployment in Metropolitan America" (Washington: Brookings, 2011).
5. Stephen Gibbons and Stephen Machin, "Transport and Labour Market Linkages: Empirical Evidence, Implications for Policy and Scope for Further UK Research" (London: HM Treasury, 2006).
6. Brookings analysis of U.S. Department of Transportation 2009 National Household Travel Survey data.
7. Driving alone statistic from: Brookings analysis of U.S. Census Bureau's 2009 Single-year American Community Survey Estimates. Congestion statistic from: David Schrank, et al, "Urban Mobility Report" (College Station: Texas Transportation Institute, September 2011).
8. Adie Tomer and Robert Puentes, "Transit Access and Zero-Vehicle Households," (Washington: Brookings, 2011).
9. The UK's Eddington Transportation Study focused a great deal on improving access to London's skilled labor pool in order to improve the national economy. See: Rod Eddington, "Main Report: Transport's Role in Sustaining the UK's Productivity and Competitiveness," (London: HM Treasury, 2006).
10. Glen Weisbrod, Don Vary, and George Treyz, "Measuring the Economic Costs of Urban Traffic Congestion to Business" (Washington: Transportation Research Board, 2003).
11. For background on a series of studies regarding employee's commutes effects on business costs, see: Glen Weisbrod, Don Vary, and George Treyz, "Economic Impacts of Congestion" (Washington: Transportation Research Board, 2001).
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14. For more information regarding decentralizing development patterns, see: U.S. Department of Agriculture, "Summary Report: 2007 National Resources Inventory," Natural Resources Conservation Service and Iowa State University (Washington, 2009).
15. Thomas Sanchez and Lisa Schweitzer, "Assessing Federal Employment Accessibility Policy: An Analysis of the JARC Program," (Washington: Brookings, 2008).
16. The 100 largest metros as defined by the U.S. Office of Management and Budget in 2008 and based on updated Census Bureau population estimates for that year
17. For a full description of the methodology, see Appendix 1 of: Adie Tomer, et al, "Missed Opportunity: Transit and Jobs in Metropolitan America," (Washington: Brookings, 2011).
18. The Business Facts database classifies less than one percent of all jobs as 'Nonclassifiable Establishments,' also known as Major Group 99. Any analysis of total jobs includes these jobs, but specific industrial analyses exclude them.
19. This research divided Division I's Major Groups into two categories based on the Major Group's share of workers with and without a Bachelors degree: Low Skill Services (Major Groups 70, 72, 75, 76, 79, and 88) and High Skill Services (Major Groups 73, 78, 80, 81, 82, 83, 84, 86, 87, and 89). For more information, see Table A in Missed Opportunity's Appendix 1 (PDF).
20. A basic scatter-plot of the eleven industries' city job share and overall transit coverage rate finds a correlation coefficient of 0.78. This expresses a strong relationship between job locations and transit coverage.
21. Tomer and Puentes, "Transit Access and Zero-Vehicle Households."
22. The 90-minute threshold is consistent with the methodology used in the Missed Opportunity report. It reflects an inclusive time allotment based on 2008 American Community Survey and 2001 National Household Travel Survey transit data. For more information, see: Tomer, et al, "Missed Opportunity", Box 2 (page 13).

23. Tomer, et al, "Missed Opportunity", Finding C.
24. Envision Utah, a public-private partnership initiated in 1997, helped Utah craft its recent policies geared toward sustainable development patterns. The partnership involved extensive community interaction and detailed planning, resulting in multiple comprehensive strategy documents. For more information, see the Envision Utah website at <http://envisionutah.org/>.
25. Elizabeth Kneebone and Oleg Firsin, "Jobs Sprawl and the Great Recession" (Washington: Brookings, forthcoming).
26. American Public Transportation Association, "Impacts of the Recession on Public Transportation Agencies – 2011 Update" (Washington: APTA, August 2011).
27. *ibid*
28. David Levinson and Emilia Istrate, "Access for Value: Financing Transportation through Land Value Capture" (Washington: Brookings, April 2011).
29. Microsoft's Connector service in the Puget Sound region runs over 15 routes and 55 buses equipped with Wi-Fi, bike racks, and power outlets serving over 3,000 workers each day. Google runs an extensive bus service in the San Francisco Bay Area. For more information, see: Community Transportation Association of America, "Profiles of Employer-Sponsored Transportation Programs" (Washington: March 2011).
30. For more information about the economics of density, see: Ryan Avent, *The Gated City* (Seattle: Amazon Digital Services, 2011); Chuck Kooshian and Steve Winkelman, *Growing Wealthier: Smart Growth, Climate Change and Prosperity* (Washington: Center for Clean Air Policy, January 2011).
31. The Fairfax County Development Activity web page shows the wealth of private sector activity involved with the ambitious redevelopment plan.
32. For more information on the economic costs of parking in the transit context, see Section 9.1 of: Robert Cervero and David Aschauer, "Economic Impact of Transit Investments: Guidebook for Practitioners" (Washington: Transportation Research Board, 1998).
33. For more information about Enterprise Zones, see the U.S. Department of Housing and Urban Development's summary web page.
34. Sarah Krouse, "New Federal Initiative Aims to Bolster Transit-Oriented Sites," *Washington Business Journal*, February 18, 2011.
35. See the National Transit Database's web page for more information on what's included in the annual database.
36. For one example, see: Martin Catala, et al, "Expanding the Google Transit Feed Specification to Support Operations and Planning" (Tampa: National Center for Transit Research, November 2011).

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