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Examining Spatial Mismatch and Mobility in the Workforce System

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In the past few decades, income and wealth disparities in the United States have risen to unprecedented levels. Recent research has shown that economic mobility, defined here as one being able to earn more than previous generations of one's family, is the exception rather than the rule, particularly for individuals raised in the most disadvantaged zip codes in the country (Chetty et al. 2014). There are various explanations for this lack of economic mobility, including factors such as inadequate spending on social safety net programs and childhood exposure to the negative impacts of poverty.

Central to the notion of mobility is the idea that one should be able to gain access to higher-paying jobs. Yet barriers exist that make this difficult for some families. One such barrier has been the spatial pattern of urban development in the United States in the latter half of the twentieth century. This development resulted in sprawling, automobile-dependent metropolitan areas. Many employment centers, particularly retail and other services, moved to the more affluent suburbs.

The suburbanization of employment introduced the notion of "spatial mismatch," which is a phenomenon in which housing options affordable to lower-income families are physically distant from low- and middle-skill jobs. Spatial mismatch is most notable in metropolitan regions that feature greater housing segregation and less connectivity between urban housing and suburban employment centers, in part arising from there being more limited transportation options (Ihlanfeldt and Sjoquist 1998). A national survey of workers in 28 large metropolitan areas found that this imbalance was most pronounced in "hot" housing markets such as New York, Boston, Atlanta, and San Francisco (Cervero et al. 2006).

Spatial mismatch is important to the extent that prospective workers lack the means to get to the now-distant jobs. Transportation access and costs thus become important considerations, and the less extensive transportation networks that exist in many large metropolitan areas often mean that spatial mismatch equals an inability for lower-income workers to physically access promising jobs. The lack of accessibility of these job opportunities restricts job seekers' ability to identify openings and secure and maintain employment (Grengs 2010; Ihlanfeldt and Sjoquist 1998; Taylor and Ong 1995). In terms of equity outcomes, more compact, less sprawling areas with shorter commutes have been shown to produce higher rates of upward economic mobility, a finding that indicates spatial mismatch may also influence a child's later ability to achieve career success (Chetty et al. 2014).

The lack of connectivity between affordable housing and employment centers has a significant impact on regional economic development, especially in those metropolitan areas where public transit is less robust. In this chapter, we seek to understand whether a similar spatial mismatch pattern is evident between housing and workforce development opportunities, with a particular focus on data from the Atlanta metropolitan area. As a backdrop, evidence has found that the spatial mismatch of housing and jobs is a problem in Atlanta. Studies by the Brookings Institution highlighted the lack of transit access to jobs and found that Atlanta ranks 91st out of the largest 100 metropolitan areas in terms of the share of jobs accessible by public transit, considering the geographical breadth of its service coverage and its service schedule (Tomer 2012). Only 21.7 percent of jobs in the Atlanta metropolitan area are accessible within 90 minutes by transit, and only 3.4 percent of them are accessible within 45 minutes (Tomer et al. 2011). The situation is worse for jobs in the suburbs, where only 17.4 percent are accessible within 90 minutes by transit. And it is even quite low for jobs in the center city, where the percentage is 33.2 (Tomer et al.).

The existing housing/jobs spatial landscape makes the question of whether there is a spatial mismatch between housing and workforce development providers all the more important. If many lower-income and lower-wage families have very limited access to both jobs and training to make them competitive for jobs, then the possibility of economic mobility must be quite small. Understanding the spatial mismatch challenge in the context of workforce development is thus an important ele-

ment for assessing the economic isolation of lower-income families and the broader health and inclusion of the regional economy.

This question is also important because the economic turmoil of the last decade has shed light on the need for workers to develop specialized skills in a transitional economy. Workers that lack these skills must acquire them if they are to have any hope of economic mobility. Workforce development programs can be a vehicle for this skill acquisition, which makes the issue of spatial mismatch as a potential barrier to the effectiveness of these programs relevant.

BACKGROUND

Evidence has shown that workforce development programs can positively affect employment outcomes and earnings among target populations. For example, evaluations of Cincinnati's workforce development system found that programs collectively increased regional earnings by \$7.3 million per year and amounted to net benefits to employers of nearly \$5,000 per employee because of higher retention and reduced recruitment costs (DiMario, Elvery, and Spence 2016).¹ Workforce development providers and intermediaries often serve as a pipeline to employment and provide disadvantaged community members with access to the social networks that underpin a knowledge-based economy (Chapple 2006). At a regional level, the development of human capital, including workforce skill levels, is also seen as important for economic growth (Glaeser and Saiz 2003) and provides opportunities for greater social inclusion and economic diversification (Lowe 2007).

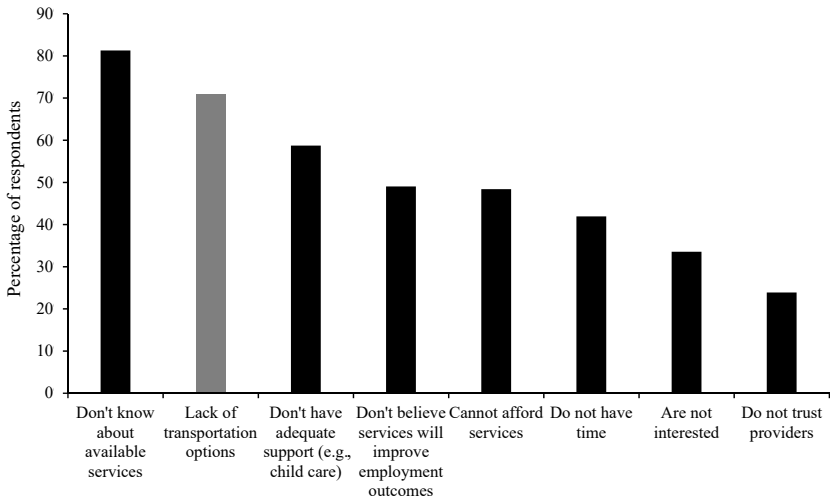
Previous work by the Atlanta Fed and its partners has shown that transportation challenges, if not spatial mismatch, exist and have implications for workforce development program outcomes. According to a survey of 204 workforce development providers and intermediaries in the 10-county area served by the Atlanta Regional Commission, the second most significant barrier to utilizing services was lack of transportation options to access services, just after lack of knowledge of available services (Metro Atlanta eXchange for Workforce Solutions 2014). This was the case despite the fact that 47 percent of workforce development providers offer transportation subsidies as part of their

support services (Rich 2002). More than 7 out of 10 providers and intermediaries responded that transportation limitations prevent prospective clients from accessing training as part of the Metro Atlanta eXchange for Workforce Solutions (MAX) survey (see Figure 26.1). Of these, 28 percent felt it was the top barrier based on their experience in the region.

In a recent study on regional workforce development alignment (Andreason and Carpenter 2015), access to transportation was also raised as an issue during interviews with representatives of various regional workforce development initiatives. For example, in Chicago, public transportation day passes were critical for clients needing to access training and work sites. When the Chicago Transit Authority deployed a new credit card-based fare system, workforce development providers were no longer able to distribute one-day transit subsidies, which, until an administrative solution was found, had a significant negative impact on the population served.

Concerns about spatial mismatch for workforce development programs are not new, and programs have been developed that specifically provide transportation options to job seekers and lower-income workers to help them access workforce development programs. One such

Figure 26.1 Barriers to Accessing Workforce Development Resources in Metropolitan Atlanta



SOURCE: MAX survey of metropolitan Atlanta workforce development providers (2014).

program at the federal level is the Jobs Access to Reverse Commuting (JARC) program.² JARC, which has been discontinued, was a U.S. Department of Transportation program funded by the 1998 Transportation Equity Act for the 21st Century. Designed to address access to jobs, particularly in suburban areas, it provided flexible transportation funds at a 50 percent match to states and metropolitan areas. Access to workforce development was a popular use of the funds. A study of clients served under California's JARC program found that the subjects were most interested in specialized transportation services for children and for accessing job training sites (Cervero and Tsai 2003).

Thakuriah et al. (2005) report on the findings from an analysis of JARC programs in 23 small and large metropolitan and rural areas. The analysis found that JARC transportation options included both fixed-route (for example, bus and rail) and demand-responsive (for example, paratransit and van pool) modes. The authors found that many demand-responsive services were attached to job training services, such as the King County Workforce Training Center in Seattle. The study included a survey of riders across these 23 metropolitan areas, which revealed that JARC users tend to have lower incomes than other commuters and that approximately 10 percent use JARC services for job-training or job-seeking purposes. Two important findings emerged from this work. First, almost two-thirds of survey respondents reported that they would not have been able to access their destination without the service, indicating that JARC opened up opportunities not just for employment but also for workforce development. Second, many users experienced higher earnings because of the services, and this was particularly true in large metropolitan areas.

Another study—this one focused on California—found that JARC activities included schedule extensions, new routes, user-side assistance, new shuttles, low-interest loans, and route extensions (Cervero and Tsai 2003). Specific examples included San Diego's All Congregation Together Comlink shuttle program and Santa Cruz's Connections Shuttle, both of which provided access to job training centers as part of their mission to connect residents with job opportunities. Twelve percent of trips taken on the Connections Shuttle were to job training centers. The Connections Shuttle also trained and employed job seekers to become drivers, thereby creating 100 jobs in the field over a short period. While the program gave precedence to public transportation

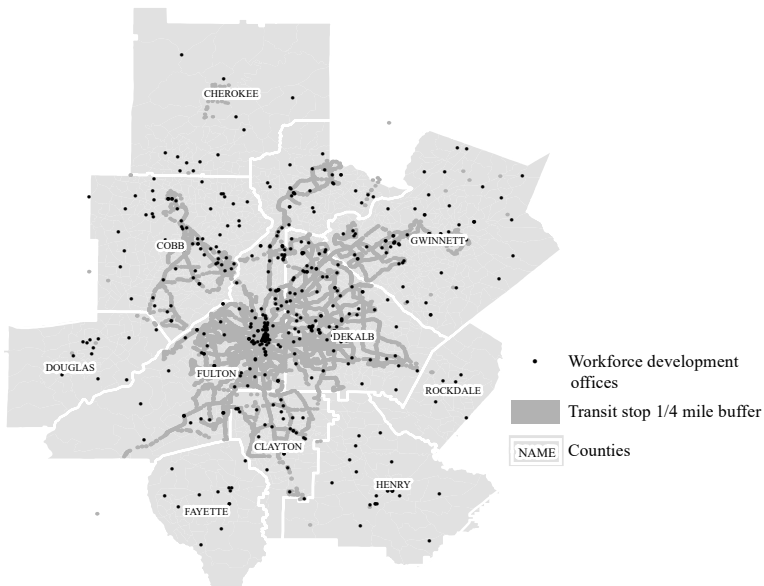
projects, it also funded other modes, including private automobiles. For example, a San Mateo County program offered low-interest loans to purchase a car, which led to a 26 percent increase in attendance at job-related educational activities among participants.

ANALYSIS OF ATLANTA REGIONAL WORKFORCE DEVELOPMENT PROVIDERS AND INTERMEDIARIES

This analysis is an extension of the previous analysis of Atlanta's MAX program to help provide a better understanding of the landscape of workforce development providers at the regional level, with an eye toward the question of whether there is a spatial mismatch problem. The possibility of spatial mismatch in Atlanta is credible, given its sprawling urban footprint and economy. Atlanta's metropolitan region spans 29 counties and includes 135 primary cities and towns (Metro Atlanta Chamber 2018).³

As part of the regional MAX initiative, funders including the state, regional workforce investment boards, and foundations were asked to provide lists of the workforce programs that they fund in the 10-county metropolitan Atlanta region. Their combined input identified 536 physical locations, which were geocoded by the address they were operating from in December 2014. The compiled list included providers and intermediaries from the academic, nonprofit, and for-profit sectors. Examples include One-Stop Career Centers, technical colleges, private trade academies such as cosmetology schools, mission-oriented nonprofits such as Goodwill, high schools that offer career pathway programs, county agencies such as departments of family and children services, and many others. Each of the 536 offices received the MAX survey, and 204 (38 percent) responded.

We analyzed this database of intermediaries and providers to see if there was evidence of spatial mismatch. Based on Atlanta regional transit data on the location of stops, a majority of the offices (63 percent) were within a one-quarter-mile to one-mile radius of a transit stop.⁴ As shown in Map 26.1, transit coverage is most dense in Fulton, DeKalb, and Clayton Counties. These three counties are served by the largest transit system in the region, the Metropolitan Atlanta Rapid Transit

Map 26.1 Atlanta Workforce Development Offices and Transit Coverage

SOURCES: MAX survey of workforce development providers (2014); Atlanta Regional Commission General Transit Feed Specification (GTFS) data (2016).

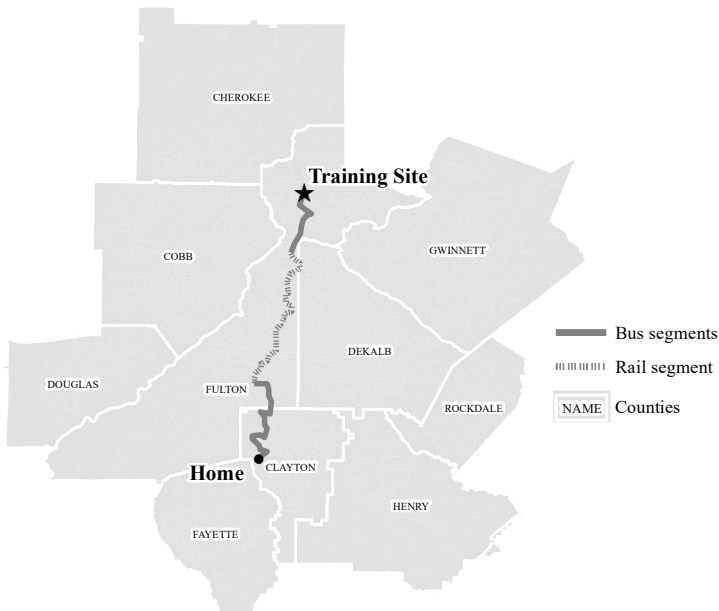
Authority (MARTA). Three additional counties, Cherokee, Cobb, and Gwinnett, provide bus service independent from MARTA, with limited local service and links to commuter stations in the urban core areas of downtown and midtown Atlanta. The remaining four counties (Douglas, Fayette, Henry, and Rockdale) have no countywide public transportation system but have limited regional commuter bus service. As only three counties opted into the MARTA system, clearly regional transportation coverage and coordination is lacking.

This result—that most workforce development providers are located close to transit—is somewhat misleading, however. Although most workforce development offices are accessible from a transit stop, Atlanta's transit system is largely designed for downtown commuters; cross-regional trips (e.g., trips from southern suburban communities to northern suburban employment centers) can be incredibly time consuming. For example, a trip originating within a quarter-mile of a MARTA transit stop in south Clayton County and ending at one of the

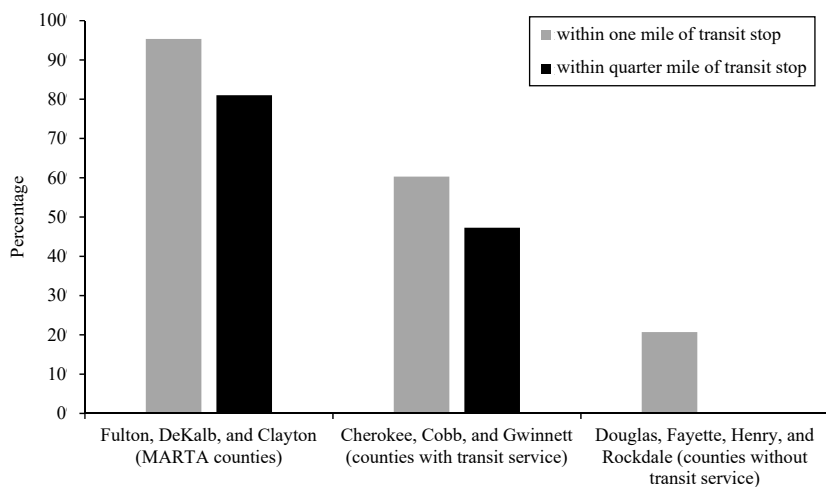
northernmost workforce development providers within a quarter-mile of a MARTA station would take between 2 hours 21 minutes and 2 hours 40 minutes to travel about 40 miles, based on MARTA's trip planner (see Map 26.2). Trips outside the MARTA system may take even longer or be impossible without an automobile. In the 10-county region, 1,658,801 working-age residents (50 percent) live in a census block group that lacks at least one transit stop, indicating lack of access to transit. These residents must depend on more expensive modes of transportation such as private automobiles, taxis, and rideshare services.

Not surprisingly, more workforce development sites in Fulton, DeKalb, and Clayton Counties (all part of the MARTA system, as stated above) are within a quarter-mile to a mile of a transit stop than sites in counties that have regional transit links or no transit access at all (see Figure 26.2). A small percentage (21 percent) of sites in the coun-

Map 26.2 Example of Transit-Accessible, Time-Consuming Trip from Home to Training Site



SOURCE: Fastest route from Hibiscus Court, Riverdale, Georgia, to Sun Valley Drive, Roswell, Georgia, determined using MARTA's trip planner (<http://www.itsmarta.com/planatrip.aspx>).

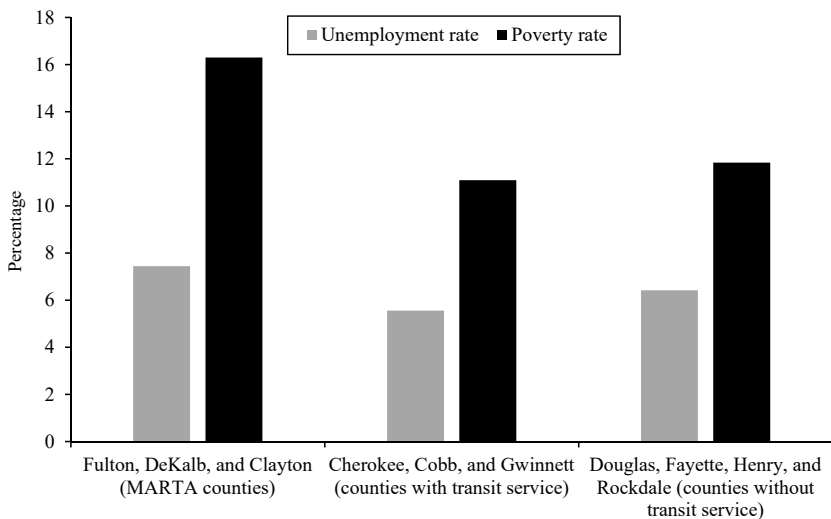
Figure 26.2 Share of Workforce Development Sites Accessible by Transit in Metro Atlanta Counties

SOURCE: MAX survey of workforce development providers (2014); Atlanta Regional Commission GTFS data (2016).

ties without public transit systems are within one mile of a transit stop because of the presence of a state-run Xpress commuter bus stop, which serves the central business district and connects with MARTA. None of these sites are within a more walkable one-quarter-mile distance of a transit stop, and none of them offer intercounty connectivity or connectivity to adjacent suburban counties.

Poverty and unemployment rates are highest in the core counties of Fulton, DeKalb, and Clayton, the counties forming the MARTA system (see Figure 26.3). However, although the unemployment and poverty rates in the suburban counties with transit service are lower than in those without transit service, the unemployment and poverty rates in those counties are still significant. Furthermore, a recent analysis of the region by the United Way of Greater Atlanta shows that there are pockets of need in every county in the Atlanta Regional Commission's coverage area except one (United Way of Greater Atlanta 2017). This reality makes the case that there is an important need for greater accessibility to workforce development sites in counties without transit services.

While the above analysis does not analyze where particular populations served reside in relation to workforce development locations, the

Figure 26.3 Unemployment and Poverty Rates of Metro Atlanta Counties

SOURCE: U.S. Census Bureau's American Community Survey five-year median household income estimates (2014).

map and descriptive statistics above suggest that many Atlanta households may indeed find it difficult to reach workforce development services from their respective residences. Nearly 200 offices (37 percent) are not located within a quarter-mile of a transit stop, and even those that are may not be accessible to a large number of households within a reasonable travel time. Furthermore, residents throughout the region may have trouble taking advantage of services provided by workforce development providers in outlying counties without transit service, because there are very limited transportation options for accessing these services.

DISCUSSION

The spatial mismatch between affordable housing and jobs has long been a concern for policymakers interested in promoting economic mobility, because mobility will be considerably more difficult for fami-

lies that have challenges getting to good jobs. In this chapter, we have looked at the related issue of the spatial mismatch of housing and workforce development programs, which can also be important if prospective workers and lower-income people need to acquire skills in order to qualify for available jobs. Looking at Atlanta, we find evidence suggesting that spatial mismatch between housing and workforce development providers may be a significant problem for many Atlanta lower-income families. Our research, like others, highlights the important role that transportation networks, particularly the existence of public transit options, can play.

We close by offering possible strategies for mitigating the impact of spatial mismatch. One possible approach is to invest more in infrastructure, including transit services and affordable housing, as research has shown that this can increase workforce development participation and improve outcomes for job seekers (St.Clair 2017). In Atlanta, the recent addition of Clayton County, a relatively lower-income area of the region, to the MARTA system represents progress in this context. In 2001, Clayton County began operating an independent transit authority known as C-Tran, but it consistently required significant state subsidy. Without a permanent revenue stream, the service was discontinued in 2009, and transit-dependent residents were forced to move or commute on foot (often several miles) in order to keep their jobs (Karner and Duckworth 2017). In 2014, recognizing the significant economic disadvantage to its population, Clayton County held a ballot initiative to join MARTA, which voters approved by a three-to-one margin.⁵ Clayton thus became the first new county to join MARTA since 1971.

Another approach to alleviating the spatial mismatch problem involves place-based economic and workforce development strategies that focus on employers located closer to communities than the often-distant suburban jobs. Local employers and industries could commit to training and employing the resident population, thereby providing critical opportunities for employment, particularly in underserved communities, and potentially increasing a firm's employee reliability and retention. Such efforts require relationship building between employers, residents, and often intermediaries. An example of this is Atlanta's Aerotropolis project, which aims to build a bridge between the airport, Atlanta's economic engine, and the lower-income, predominately African American neighborhoods surrounding it.

A third strategy is for workforce development intermediaries and providers to locate their services closer to the populations they are meant to serve or in more transit-accessible locations. This could involve relocating offices or providing satellite services near low-income housing or in central, transit-adjacent locations. Geographic information systems could be used to identify areas with high unemployment and then overlay them with transportation-system networks to ensure that new outreach facilities are easily accessible (Mabe, Powell, and Ruder 2015). Furthermore, better coordination of the workforce development, housing, and transportation sectors at the federal, state, and regional levels would allow agencies to leverage public funding and increase access to services for those that need them most. For example, federal programs such as the U.S. Department of Housing and Urban Development's Family Self-Sufficiency Program help coordinate job training for recipients of housing assistance in order to reduce reliance on subsidies. These facilities are often located in or close to communities that suffer from spatial mismatch and can potentially be leveraged by other workforce development providers.

Many programs have also focused on providing transportation subsidies to those seeking job training. The now defunct JARC program, mentioned above, was successful in providing access to workforce development in suburban areas through flexible funds that were adaptable to the needs and existing infrastructure of the area. Various studies have called for greater deployment of support services, including transportation and child care subsidies, in the provision of workforce development programs (Weigensberg et al. 2012). However, as noted in the Atlanta example, transit subsidies are often not fully available, and, perhaps more importantly, transit systems may be ill suited for seekers of job training. Indeed, some training programs have even required availability of a private vehicle to increase trainee attendance (Bell and Orr 2002). Some experts have suggested that private automobile ownership is the most effective solution for the poor to navigate a sprawling metropolitan environment (Giloith 2000). This indicates that the optimal strategy for using flexible funds to help improve workforce development outcomes might be tied to maximum flexibility in transportation. The city could achieve this by promoting access to private automobile ownership and usage in addition to providing transit subsidies, van pools, and other modes of group transportation.

Previous Atlanta Fed analysis found that workforce development program success is inhibited by system fragmentation, competition, and redundancies (Andreason and Carpenter 2015). Atlanta's MAX initiative was established to combat this tendency and coordinate resources across the system. MAX participants have discussed transit expansion options, realigned their training to better meet employer needs, and jointly implemented an online mapping portal to increase the visibility and connectivity between providers and their constituencies. The MAX portal could be further enhanced by coordinating relocation decisions and by including transportation access information as well as transit routes and trip planners. On balance, better regional coordination of and collaboration between providers has the potential to reduce transportation burdens and provide support services at scale.

Finally, new transportation technologies such as ride-sharing apps and self-driving or autonomous vehicles may provide future mobility solutions for workforce development participants. While these technologies are currently out of reach for many lower-income individuals, ride-share services have begun to explore partnerships with transit agencies and offer fixed-route and fixed-fare trips at reduced costs. As technologies improve, these modes may become increasingly affordable and accessible.

Our analysis constitutes only an initial examination of the role of potential spatial mismatch in the workforce development ecosystem in Atlanta. Policymakers and practitioners would benefit from the use of individual-level survey and administrative data on workforce development programs that could help provide a deeper understanding of the scope of the issue and more nuanced potential regional solutions. However, the role of transportation services generally and public transit specifically in workforce development should not be discounted. In order to ensure economic mobility at the regional level, job seekers must be able to physically access workforce development services.

As a final comment, we believe that the findings here are relevant for and can likely be generalized for metropolitan areas beyond Atlanta. Given that Atlanta's spatial layout resembles that of many southern and western cities in the United States that have experienced considerable growth since the mid-twentieth century, the patterns seen in Atlanta could signal similar challenges elsewhere. The analysis here and the prescriptions we offer may be relevant for a large number of other met-

ropolitan areas, such as Charlotte, Houston, and Nashville. We encourage policymakers in these places and others like them to take time to understand the spatial mismatch realities regarding both jobs and workforce development providers and then consider implementing strategies to reduce the adverse effects of this spatial mismatch. Only with such an approach will economic mobility—and broader economic vitality—become more widespread.

Notes

1. While studies have shown mixed results with respect to certain federal workforce development programs (Doolittle et al. 1993), at an individual level, even the perception of a greater skill level affects employment participation (Blumenberg 2002).
2. Other programs include the U.S. Department of Transportation's Ladders of Opportunity Initiatives and the U.S. Department Housing and Urban Development's Welfare to Work and Bridges to Work demonstration programs.
3. See a map of the 29-county metropolitan statistical area of Atlanta at <https://dch.georgia.gov/sites/dch.georgia.gov/files/Atlanta%20Service%20Area%20Map.pdf> (accessed August 22, 2018).
4. Data on transit stops were obtained from the Atlanta Regional Commission Open Data and Mapping Group platform at <http://opendata.atlantaregional.com/datasets/transit-stops-2016> (accessed August 23, 2018).
5. The measure called for a one-penny increase in the sales-tax rate.

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