Metropolitan Policy Program
at BROOKINGS

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Washington, DC
May 12, 2011

Missed Opportunity:
Transit and Jobs in Metropolitan America

We believe we may have a public transit moment before us in the U.S. today.

From major metropolitan systems with iconic transit like New York and Washington …. To new light rail lines … like those that just opened up in Charlotte and Phoenix…. To growing bus networks in Colorado Springs and Albuquerque ….. Even the ferry boats that traverse the Puget Sound and Boston Harbor ….

Public transit is a critical part of the economic and social fabric of these as well as other metropolitan areas.

Every year, over 10 billion trips are taken using public transit. A number that has generally been trending up in recent years. Almost all of these trips occur in the nation's 100 largest metro areas. These places are the real heart of the American economy—and harbor two-thirds of our population, generate 75 percent of our gross domestic product, and account for over 95 percent of all transit passenger miles traveled. Every single one of the 100 largest metros has some form of public transit.

Education, shopping, health care, and recreation: These are some of the reasons why people take transit in metropolitan America. But one of the most important is to get to work.

While three out of four commutes still occur alone in a car, recent statistics show that the share of Americans getting to work by transit *grew* during the last decade for the first time in a generation.

Despite the recent leveling off due to the recession we do consider this to be a moment for public transit in America. There are several driving forces:

First is the emerging disruption of escalating gas prices. The U.S. Energy Information Administration—along with most Americans—is already looking out for $4 gas (if they're not

seeing it already). These rising fuel prices will drive increased demand for transit as commuters seek to reduce their travel costs.

But whether commuters will shift to transit is the result of many things … including whether or not transit is even available and whether it gets people where they want to go. More on that in a minute.

Transit will also benefit from the fact that we are a growing nation. By 2050, we could grow—incredibly—by another 130 million people. That's more than the entire population that today lives west of the Mississippi River. What is more is that three-quarters of this growth will occur in metropolitan areas.

Another driving force is the imperative of lower carbon. Today in the U.S., transportation is the single largest contributor to the nation's carbon footprint. And even small increases in driving will still spew out more and more carbon—potentially wiping out the benefits gained from more fuel efficient cars and the expansion of cleaner fuel alternatives.

So given these forces the natural question is: *Are we ready for this public transit moment?* How well does transit cover our metropolitan areas? How well does transit connect metropolitan workers to jobs? And how well does transit function for those workers who may need it most?

Our challenge is that, when it comes to answering these questions, strikingly little is known. In the U.S. today, we have no consistent transit information across and between metropolitan areas.

So to better understand these issues, we analyzed, collected, and—in some cases—built geospatial data for 371 systems that provide transit service in the nation's 100 largest metros. As you can imagine, the data collection was the hard part.

In some cases, the data were easy to find—such as the information that goes in to web-based transit routing tools which many of the nation's largest transit systems already use. In other cases (like when we got this information on paper) we had to create digital route and schedule information from scratch. The comprehensive database that results provides the first comparable, detailed look at the relationship between transit service, income, and the location of employment.

Let's see how this all plays out in Denver—a metro area with a robust network of transit routes that largely mirror the street grid. A worker living in Littleton, a southern suburb, could walk to the new light rail line a few blocks from their home and ride it all the way to work near 16th and California in downtown Denver. There are no transfers required and the whole trip takes 34 minutes. To get to a job in the eastern suburb of Stapleton, that commuter would continue on the train, then transfer to a bus. That whole trip takes 85 minutes.

Our model simulated literally billions of similar commute trips for every neighborhood with transit service in the 100 largest metro areas.

So, what did we find?

- First is that nationally we face a transit paradox between transit coverage and job access;
- Second, is that by virtue of policy, the market, and a little luck there is clear variation *between* metro areas; and
- Third, we need a new game plan for helping Americans get to work.

To start, let me return to that paradox which is that…while some form of transit serves a large share of metropolitan America. That same service falls short connecting residents to employment—especially when those jobs are outside of the urban core.

Let's get into that first part: Where and whom does transit serve in metropolitan America?

For "transit coverage" we're talking here about the share of working age-residents living in neighborhoods within at least three-quarters of a mile of a transit stop. Based on that definition, we found that across the nation's 100 largest metros, nearly 70 percent of working-age people live in neighborhoods with transit coverage. Or put another way, while almost 40 million Americans *are without* transit access in their communities another 88 million *do* have service.

Now we recognize that "service" and "convenience" are not the same thing and all transit stops are not equal, but overall these numbers are good and quite encouraging.

And while 70 percent of working age people have transit coverage, we found that the numbers are even *better* for poor neighborhoods as 89 percent of metropolitan residents in lower-income communities are served. This greatly exceeds the shares for middle- and high-income neighborhoods which are at 70 and 53 percent, respectively.

Not surprisingly given the well-known historical connections between cities and transit, we found that an amazing 94 percent of city residents live in neighborhoods with coverage.

These are a lot of abstract numbers, so let's focus for a minute on Central Virginia and see how all this plays out in metropolitan Richmond which is outlined there is gray with the city of Richmond in the middle. The darker colored neighborhoods are those with higher population densities.

As we zoom in to one neighborhood close to the downtown part of the city you can clearly see the bus lines in white and the hub-and-spoke nature of the transit network. Dense neighborhoods in central cities generally have strong transit coverage like you see here in Richmond.

That's a city example. But what about the two-thirds of Americans who live in suburbs? What does transit coverage look like for them? We found that only 58 percent of suburban residents live in neighborhoods served by transit.

So let's look out in the Richmond suburbs such as this relatively dense neighborhood west of the city that is literally the end of the line for bus service. As you can see, its neighboring suburban communities lack transit service altogether. This is typical in many metros.

Now while these city/suburban trends have emerged over the decades for lots of reasons they are, in some ways, anachronistic now that a majority of jobs and a majority of low income residents live in suburbs. The future efficacy of metropolitan transit systems will thus rest squarely on their ability to reach the growing segment of suburban, especially low-income suburban, commuters.

This leads directly into the other part of the transit paradox which is that, in most metro areas, transit falls short on connecting workers to jobs

In other words, it is not enough for us to know which places have coverage. Transit doesn't help someone if it doesn't get them to where they want to go within a reasonable period of time.

So 'Job access' is the other critical part of the analysis. For this we're talking about the share of metropolitan jobs that the typical working-age resident can reach by transit in 90 minutes. Based on this definition, we found that 30 percent of jobs are accessible. Put differently, 70 percent of jobs in the nation's largest metro areas are *inaccessible* to the average commuter.

Here, too, there are important splits between cities and suburbs to keep in mind. For one, the job access figures are much better for city neighborhoods than suburban ones.

But obviously, the point is not that a worker can reach *all* jobs throughout their metro area what matters is what kind of jobs they can get to and are they qualified for those jobs?

We found that workers in neighborhoods with transit can reach just over one-quarter of low and medium skilled jobs within 90 minutes, compared to one-third of metro area jobs in high-skill industries.

What emerges, then, is a mismatch: High-income households are in neighborhoods with the worst transit coverage yet high-skill jobs are the most accessible by transit. On the flip side: Low-income households are in neighborhoods with the best transit coverage but they are less able to use transit to get to the jobs they likely qualify for.

Taken together, these findings suggest that in many places there is a disconnect between where people live and where they work.

However, these aggregate numbers hide a great amount of variation. For example, we found a lot of difference in transit coverage rates between metros.

Take Los Angeles where 96 percent of metropolitan residents live in neighborhoods with transit service of some kind. As you can see here, nearly every one of them is covered. Other major metros like New York, Miami, and Washington each also have coverage rates well above the national average.

Contrast this with metros in the South like Atlanta where less than 40 percent of residents have transit coverage. This map shows a concentration of service in the city but very limited reach outside the urban core. Other Southern Metros like Birmingham, Nashville, and Greenville, South Carolina all lack service to over two-thirds of their metro residents.

There is also variation, then, in terms of the jobs in these metros that are accessible by transit.

In Salt Lake City, San Jose, and Portland, Oregon the typical commuter can get to large shares of metro jobs by transit. But check out the figures for places like Youngstown, Orlando, and McAllen, Texas.

So to better account for the big picture we brought together the transit coverage and transit job access rankings into a Combined Transit Performance metric to indicate the best and worst overall performers.

Fifteen of the 20 metro areas that rank highest on this score are found in the West. And fifteen of the 20 metros that score lowest are in the South.

Why do Western metros seem perform the best?

For starters, these are places that have invested in their transit systems. And not just rail transit. The bus networks in many of these metros are extensive and reach well into the suburbs.

They are also much more likely than others to combine comprehensive planning with growth management policies, and employ infrastructure regulations such as impact fees. Jobs and housing are more compact than in other metropolitan areas, and are thus easier to serve by transit.

They are also more likely to have topographical barriers to development. Mountains, deserts, oceans all help hem-in the outward trajectory of growth in many of these places.

Why do Southern metros perform the worst? It's a bit of the reverse:

These are generally not places with extensive transit coverage. And the transit service that does exist often does not reach out into the suburbs.

They tend to not employ innovative land use tools and, instead, stick with a traditional regulatory framework where residential and commercial uses are kept separate, and development is spread out. In such places, it is difficult to connect people to jobs with public transit in a cost-effective manner.

And to go along with that, they have few topographical barriers to metropolitan growth.

The bottom line here is that the success of transit in helping commuters get to work rises and falls on much more than the transit system itself. Transportation networks interact with the location of employment and housing in complex ways that influence the metrics analyzed in our report.

Given all that my final point is that we need a new game plan for helping Americans get to work. In the post-recession economy, we need more jobs, and we need better jobs. We also need accessible jobs.

But while there is definitely potential for a transit moment in the U.S. today severe budget constraints and rapidly fluctuating energy prices and transportation costs complicate the route to broader economic recovery. In the short run, transit agencies face real threats in terms of service cuts, delayed investments, as well as deferred maintenance.

Revenue declines are widespread and many agencies are already planning fare increases to go along with operating cuts to close yawning budget gaps. At the same time, transit agencies and commuters alike are struggling with the impacts of higher gasoline costs. As rising prices put greater pressure on household budgets, it's clear that more and more commuters will be looking for alternatives to driving.

In light of these challenges, we need a three-part plan.

First is that we do need a total transport approach to job access.

some metros like Washington, Los Angeles, and Hartford will (and should) continue to build rail and bus rapid transit projects to address the coverage gaps revealed in this report. But metros also need a range of other transportation options like car sharing which is already underway in some metros, and privately-run services that connect to corporate campuses like in metropolitan Seattle.

But as we noted, our results show that it's not enough just to have robust transit and transport service. So the second thing is to go beyond transportation and link accessibility to next-generation metro growth policy and practice. What does this mean?

To make the most of existing service and plan for future routes and investments, metro leaders need to pursue integrated problem solving across a range of disciplines. One way is to

incorporate land use policies that improve job access better than transit interventions alone.

This includes efforts to reduce decentralized growth as they're doing in Sacramento by examining land use patterns, density, and urban form to find innovative solutions to challenges like housing, carbon emissions, economic development, and job access.

But to reiterate, it's not a matter of just how many jobs that can be reached, but what kinds of jobs. So while coordinated transit and land use planning is a necessary step, our analysis demonstrates that those efforts must also explicitly address the apparent mismatch between household access and job skills.

And for their part, the largely successful transit-oriented development efforts of the past decade should place a stronger emphasis on locating jobs in those areas—to complement their residential focus.

Lastly, we've got to harness the power of information. Smart decision-making begins with comprehensive, accurate data. However, this research project revealed that many agencies lack the fundamental pieces to construct the measures necessary for next-generation policymaking.

So we recommend that the federal government work with its metropolitan transit partners to maintain an updated database of standardized transit data. This information will not only help local leadership create better strategies and get the maximum benefit out of their transit systems but by having a comparable, consistent set of information the federal government can use job access as a key metric as it awards some types of discretionary grants.

To demonstrate the power of this kind of information, we partnered with Microsoft to make the detailed findings of this project available in an interactive mapping tool on the Brookings website. Each of you will be able to leave here today and personally investigate how transit performs in your metro and your neighborhood. This tool will serve as an example of what relatively small investments in data can do to improve decisionmaking.

Let me end with a quote from my favorite philosopher, Yogi Berra. Yogi said: if you always do what you always did, you'll always get what you always got.

One thing this report makes clear is that we can't keep doing what we always did.

We can't keep ripping the wires out of our metropolitan transit networks. Nor can we just indiscriminately make investment decisions without purpose. This is definitely the time to invest, but we've got to invest smarter: By filling in the transit service gaps in our metropolitan networks, by going beyond transport and linking it to how our metro areas grow and develop, and by deploying advanced technology and information systems to enable us to make better decisions.

U.S. metropolitan areas have a lot to show for a century's worth of transit investment. But more needs to be done to ensure that transit connects workers to jobs in the 21st century metropolis. Now is the time to start.