

# T R A M



## Non-stop equity:

Assessing daily intersections between transit accessibility and social disparity across the Greater Toronto and Hamilton Area (GTHA)

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## Executive summary

To: Metrolinx

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Accessibility can be conceptualized as the potential for people to reach places through the transportation system. Accessibility is a key performance measure to better understand the interactions between transportation and land-use. The transport system can alter the accessibility of places, producing interest in development. Development alters land-use, producing changes in the demands on the transport system. Residents of areas with good transit accessibility to employment may enjoy shorter travel times to work and potentially have a larger range of job opportunities available to them through transit. In contrast, a lack of transit accessibility for vulnerable populations may be one factor contributing to systemic social and economic exclusion. By comparing transit accessibility to low- and higher-wage jobs, and from more or less socially disadvantaged areas, we investigate if those with potentially greater transit need experience equitable transit access. In this way, we are using a transit accessibility measure to assess the equitable distribution of public transportation resources in the GTHA; a policy issue raised by Metrolinx in *The Big Move*: “Access to frequent, fast and affordable transit is...crucial for equity and social cohesion...there are several pockets of concentrated social need in the GTHA. The transportation system needs to improve the mobility options for people in these areas, connecting at-risk, vulnerable and disadvantaged communities to the jobs, social services, and health care facilities which can improve people’s lives” (Metrolinx, 2008, p.8).

To assess equity and to highlight areas in need of more public transportation resources, two general questions are asked:

1. What is the level of accessibility to jobs provided to the most socially disadvantaged areas in the GTHA region? Is the level of accessibility to jobs in these disadvantaged areas better or worse compared to the rest of the GTHA region? Does this level of accessibility affect the usage of public transit in these areas?
2. Are there any imbalances in accessibility to jobs using transit and actual settlement patterns in the region? Is transit accessibility available at the time of day when it is actually needed?

To answer these questions we looked at how easy it is to reach job opportunities using transit at different periods of the day from socially disadvantaged and other areas. We also divided GTHA employment opportunities into low and higher-wage categories to examine accessibility for two different wage groups. Lastly, we looked at the impact of daily accessibility variation on transit

usage. The main findings of this work are highlighted in the next section, followed by a list of recommendations.

## Social Disadvantage and Accessibility

- The most socially disadvantaged areas (areas with a low median wage, high unemployment, concentrations of recent immigrants, and unaffordable housing costs) have better accessibility to jobs by public transit than the rest of the region. The number of high or low-wage jobs actually accessible using transit from these areas is, on average, 12 times greater than from other areas.
- These higher levels of accessibility are linked to travel time savings for these areas. Residents have shorter travel times to their jobs than the rest of the region. They may spend, on average, 64% less time traveling to work compared to people from all other areas.
- These disadvantaged areas are overwhelmingly located in the City of Toronto (74%) This helps explain why these disadvantaged areas have such good transit accessibility.
- High levels of accessibility to jobs by transit may lead to higher transit ridership. Ridership is more likely amongst residents of the City of Toronto. Ridership is also more likely amongst residents of socially disadvantaged areas.
- Although transit may be a viable and useful mode of travel for residents of the *most* socially disadvantaged areas, lower-middle income areas actually have less transit based accessibility to jobs. On average, people from the most socially disadvantaged areas have twice the number of jobs, both low- and high-wage, accessible to them using transit than lower-middle income areas. Also, lower-middle income areas have almost half the number of jobs accessible to them than higher-income areas.
- Lower-middle income areas are less likely to be in the City of Toronto (66%) and much less likely to be in the downtown core (13%). The regional dispersion of these places helps explain their low levels of accessibility to jobs using transit.

## Transit Ridership and Employment Wages

- Transit use among low-wage workers is lower than high-wage workers. On average, 23% of higher-wage workers use transit, compared to only 11% of low-wage workers. This may indicate that low-wage workers are travelling to and from areas that are not well served by transit, and travelling during off-peak hours.

- Low-wage workers use transit more often between 5:00 to 6:00am. Also, transit ridership for higher-wage workers increases as the distance between their home and work increases. For low-wage workers, distance appears to have the opposite effect.
- There is a large imbalance between the high number of jobs reachable by transit along the western lakeshore corridor (between Toronto and Hamilton) and the number of workers who are within close and easy transit proximity to these jobs.

## Recommendations

1. Off- or early peak commuting is important, especially for low-wage earners. Service increases during the early morning, afternoon, and evening need to be considered, especially to the airport and North York region. Increased bus services can be considered in newer lower income neighbourhoods with street layouts that are difficult to serve via rail transit.
2. Lower middle-income areas are more scattered throughout the region. New service should try to connect these areas to employment centers and regional transit hubs.
3. Metrolinx should use accessibility to jobs on a regular basis to evaluate land-use and transportation performance, and to see how this performance changes over time.
4. A better understanding of the existing transit market is recommended to develop policies that are tailored towards different groups of transit users in the region.
5. Future research should focus on fare structure in the region, especially from the most socially disadvantaged and lower-income areas. With presto card's implementation, fares should help, not hinder, transit use for those less fortunate.
6. Regional standardization, organization, and coordination of online General Transit Feeds Specifications (GTFS) data for all transit operators across the region is essential to the future of transit research in the region.
7. While equity is mentioned as a goal in the Big Move, the concept receives little to no explicit attention throughout the remainder of the document. Equity is a complex concept. Some further thought should be given to what Metrolinx' concept of equity is, how transit users conceptualize equity, and how – if it is indeed a concept that holds value—it will be inculcated into the planning and operation of transit across the GTHA.
8. Lower middle-income areas requires much more attention with detailed analysis to better understand the transportation needs of residents in these areas and how to fulfill these needs.