

## Technical Advisory – Market Access Module

The TREDIS market access module was developed to enable analysis of transportation improvements that enhance the effective scale of labor and delivery markets, in terms of consequential impacts on the concentration of business investments in affected locations. Users should be aware of three issues affecting how they can use this aspect of TREDIS.

1. **Combination Use of Market Access with Travel Time Savings.** The market access effect in TREDIS reflects wider impacts on business scale economies that are in addition to the direct impact of travel time savings for users. Travel time savings can occur without market access effects, but market access effects are not possible without there being some reduction in travel times to outer areas. The calculation process is built on that assumption and NCHRP research has established that there is no double counting involved. The bottom line is that market access impacts should not be entered into TREDIS without there also being some change in travel times.
2. **Focus on Expansion not Contraction of Markets.** The existing research literature on agglomeration and market access reflects the observed relationship between business activity concentrations (accrued investment in specific locations) and the size of local and regional markets. It reflects a theory that new business capital investment can be attracted to locations that get enhanced market access. However, once that capital investment is made, it is not simply a reverse process to dismantle the concentration of buildings and other accrued investments if market access is subsequently reduced. There is scant research available on how this negative process actually works, and TREDIS is not designed to model negative market changes.

In the case of a negative impact scenario, TREDIS can model the impact of longer travel times that result from such a situation, but it will not show any further impact from also reducing the scale of market access. This issue has been flagged for further research and consideration in future versions of TREDIS. In the meantime, a user who wishes to do so can still reverse the base and project case to show a negative market access impact as a positive change, and then make the assumption that the negative impact would be the reverse of what is modelled. However, the realism and appropriateness of that approach is not known.

3. **Adjustment for Freight-only or Passenger-Only Access.** The market access responses in the existing TREDIS v4 were developed based on research that reflected the scale of markets accessible within various travel time limits. Currently,

changes in the POP40 measure primarily reflect labor force (passenger) market impacts, while changes in the EMP180 measure primarily reflect business to business (passenger and freight) market impacts. The forthcoming TREDIS v5 will expand capabilities by offering explicit capabilities to distinguish freight-only or passenger-only access improvements for regional or intercity access. In the meantime, a user who wishes to model regional or intercity passenger-only service changes must reduce the size of their market access inputs to reflect the fact that access is only being improved for a fraction of business-related activities. This adjustment has in fact been done for several regional commuter rail and intercity passenger rail studies. TREDIS subscribers are encouraged to contact TREDIS for further assistance in appropriately handling this situation in TREDIS v4.