

- Developing the Transit Demand Index (TDI) (*Gregory Newmark - Regional Transportation Authority*)

A challenge for public transportation planners is estimating the potential demand for transit in a given area. An inexpensive tool that can provide detailed information on demand throughout a region is desired. This paper presents such a tool, the Transit Demand Index (TDI).

The TDI uses multiple regression analysis to estimate the contribution of various demographic, land use, and car ownership factors to transit demand. In order to gauge potential demand, these relationships are estimated in the portion of the community with the most transit provision and connectivity. These relations are then applied to the rest of the region to identify an upper bound of “potential” demand. In this case, the TDI formula is estimated in the City of Chicago and then applied to the suburban region.

The TDI effectively consolidates the many independent variables that contribute to transit into a single, easily mapped statistic. This statistic can be used to identify current demand patterns and to also assess the impact on demand of proposed policy interventions. The TDI is designed for ease of use. It relies on readily available data and measures transit demand in the density terms relevant to urban planning.