



# Economic Impacts of Bus Rapid Transit in Southeast Michigan

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In recent years, Bus Rapid Transit (BRT) has generated great interest across the United States and around the world.

*The population density, travel-time-to-work, and average household size of Southeast Michigan are comparable to those of other cities where BRT has proven successful.*

There are over two dozen BRT systems currently operating in the US today, and more are in the planning stages, including in the Detroit metro region. This study aims to synthesize available evidence related to performance, cost, and impact of BRT and other transit systems on communities where they have been implemented and to develop a framework to identify potential economic impacts (quantitative and qualitative) of BRT in its broader use in Southeast Michigan. The study is intended to address the following BRT-related questions within the context of Southeast Michigan:

- What impact, if any, does BRT have on the age-group demographic of areas near routes and stations? Which age groups, if any, receive a BRT “advantage” (population growth disproportionate to the growth of that age group in the region as a whole)?
- What impact, if any, does capital investment in BRT have on short-term jobs?
- What impact, if any, does BRT have on “choice riders” (i.e., riders who have other modes of transportation available)?
- In what ways is Southeast Michigan similar to or different from other cities where BRT has been implemented? What can the region do to increase the likelihood of replicating results seen elsewhere?
- Does BRT impact Transit Oriented Development (TOD)? In what ways?

## Estimates of Job Growth Potential from \$300 Million Capital Investment Using Various Approaches

Approach	Total Number of Jobs	Total Job Creation		Construction-Related Job Creation Factor
		Factor Per \$1 Million Investment	Construction-Related Jobs	
Weisbord's estimate	4,620	15.4	1,386	31% of total jobs
ARRA 2009 Formula	3,260	10.8		Not available
Grow American Act Formula (GAA)	3,900	13		Not available
REMI TranSight Model Considering Detroit Metro Region	3,480	11.6	1,962	6.54 jobs per \$1 million investment

## Study Methods

To identify the BRT-advantaged age groups, shift-share analysis was performed using data from the Cleveland (heavy) and Kansas City (light) BRT systems. To estimate job growth potential from capital investment, the project applied Weisbord's estimate, ARRA 200 formula, GAA formula, and REMI Tran-Sight Model considering the Detroit Metro region. To identify current and future trends for the region, the authors analyzed data covering the last 5 to 10 years of taxable real estate values; injury and fatal crashes; and specific demographics, including employment sector, age group, median income, and daily vehicle miles traveled.

## Findings

- The population density, travel-time-to-work, and average household size of Southeast Michigan are comparable to those of other cities where BRT has proven successful.
- Heavy BRT has a greater potential to produce economic benefits.
- Arterial corridors in Southeast Michigan are currently at low-to-moderate congestion levels; therefore, BRT will not significantly improve travel times or reduce emissions and noise. However, other benefits – such as land development, job growth, improved ridership base, reduction in travel costs, and an improved tax base – can be expected.
- Tax incentives and the high cost of parking at work can attract choice riders. Federal law currently allows employers to offer employees the opportunity to purchase BRT passes with pre-tax dollars, providing a financial incentive for using transit. This benefit is available only through employers.
- Transit-oriented development can be encouraged by providing easy access to abundant development-related data and fostering cooperation among agencies.
- Capital investment will produce a significant number of short-term, construction-related jobs. Due to the multiplier effect, these jobs will benefit the region economically in the near term.
- Operational investment will generate long-term government and transit-related jobs, specifically, drivers, maintenance personnel, and security and administrative staff.
- Rather than simply duplicating another region's successful system, the system planners should – at every stage of development – take into account the region's unique roadway characteristics, job locations, demographics, and other local attributes unique to the area.

## Policy Recommendations

The planned BRT system has the potential to foster greater sustainability in the region, more efficient public transportation, and, most important, a more reliable mode of transportation for those who must rely on transit and those who would choose to forego dependence on automobile travel if a viable alternative were offered. At the same time, there are challenges that must be faced. It is the authors' hope that the current political leadership has the will and desire to embrace transit-oriented strategies that will make Southeast Michigan a more vibrant community in which to live, work, and raise a family.

## About the Authors

Utpal Dutta is a Professor of Civil, Architectural & Environmental Engineering at the University of Detroit Mercy. Jeff Henze is a Masters candidate in the Community Development program at the University of Detroit Mercy.