



## Editorial

## Transportation and land development in Australia and North America: Property values, the private sector, housing and travel behavior

This is the second special issue produced in partnership between *Research in Transportation Economics* and the Transportation Research Board (TRB) of the National Academies' Standing Committee on Transportation and Land Development (ADD30). The first issue on "Transportation and land development: A global view" was published as Volume 60 in December 2016 and included studies from Canada, China, Peru, Thailand and the United States. This issue focuses on six original articles from Australia, Canada and the United States. The themes of these articles cover property values, the private sector, housing and travel behavior.

The first two articles examine property values near light rail stations. The first article, "Does residential property price benefit from light rail in Sydney?", by Mulley, Tsai and Ma, examines if land values, in an area with light rail and good bus access, changes over the long run. The authors study land prices in close proximity to light rail to test if there has been sustained price increases in the Sydney's Inner West Light Rail corridor. The study examines land values ten years after the completion of the infrastructure and finds that properties averaged about a half-percent increase in value for each 100 meters closer to the station. The study also finds less of an uplift within the 100-meter station-core area. The authors also report some evidence that land value premiums are greater at stations further from the Central Business District (CBD).

In contrast to the first article, "Impact of a Light Rail Extension of Residential Property Values", by Vandegrift and Camins-Esakov, finds no evidence of home value appreciation based on a case study of a station in Bayonne, New Jersey. The authors note that a previous study found that across the entire Hudson-Bergen Light Rail corridor, house prices next to the stations had an 18.4 percent annual appreciation premium relative to homes more than a quarter-mile from the line. Vandegrift and Camins-Esakov, however, who used a repeat-sales methodology, did not find evidence that proximity to the station raised the annual rate of property appreciation. Interestingly, the authors conclude that this may be due to this station being further away from the CBD. The authors contend that returns diminish with distance from the CBD because such locations have lower densities, which reduce the cost of parking and driving a car. The authors also note that the findings could be due to the local land use characteristics of the case study station.

The third and fourth papers of this issue focus on the role of the private sector. "The Entrepreneur Rail Model: Funding urban rail through majority private investment in urban regeneration", by Newman, Davies-Slate and Jones, uses four approaches to identify funding to build new rail systems on the premise of land value premiums near stations. Aside from the conventional model of the public sector fully funding capital investment, the authors present three models for private sector investment ranging from some

private investment to fully private funding models. An example of limited private investment includes the London Crossrail, where the private sector is contributing £4.1 billion of the £14.8 billion total project costs. The article highlights projects from Portland, Vancouver, and Edmonton where the private sector has made substantial investments to leverage urban regeneration. Finally, the paper highlights Hong Kong and Florida as examples of fully private-capital investments by the private sector to leverage land development opportunities in transit-oriented development at the stations. In promoting the Entrepreneur Rail Model, the authors propose that the traditional model of determining land uses around stations as a result of public investments in rail should be reversed to allow the private sector to propose a planning process that would maximize land uses to drive transit patronage. This innovative process would generate new roles for town planners and transport planners, along with governance arrangements between the public and private sectors.

The fourth paper, "Analysis of Firm Locations and Relocation in Relation to Maryland and Washington, DC Metro Rail Station," by Iseki and Jones, examines firm locations by industry in proximity to stations. The authors find that firms in five industries – finance, insurance, and real estate (FIRE), professional services, arts and entertainment, healthcare, and accommodation and food services – have a strong and/or increasing presence within a half-mile of Metro stations in Washington, DC. Moreover, from 1990 to 2000 professional services industry firms grew the most near stations. The analysis also reveals that the growth in firms in the FIRE industry was most prevalent along a portion of the Red Line and in downtown Washington, DC. Overall, their analysis shows an overall trend of suburbanization of firms despite the dominance of downtown. A density and hotspot analysis shows substantial growth of firms in first-ring suburban areas along the rail corridors in Maryland but not in Virginia. Finally, the study shows that Metro stations attracted firms from outside the Washington metropolitan region but lost more firms to the areas outside of the station areas within the region.

The fifth paper, "Preference Stability in Household Location Choice: Using Cross-sectional data from Three Censuses", by Rezaei and Patterson, examines microdata on people that moved from three Canadian censuses in Montreal to estimate household location choice. This presents an improvement over previous models, which were static based on data from one point in time. Findings from this study corroborate previous studies, which indicate that people prefer to move to areas with lower densities and larger houses, all else being equal. Other dwelling factors are also important, such as a preference for newer housing and being located closer to schools when children are present in the household.

With regard to transportation, households take into consideration commute time, accessibility, and transit service levels. People also tend to move to locations with higher concentrations of their own ethnic makeup. The study finds that households have become more sensitive to accessibility to job opportunities and people are becoming more willing to live in high-rise structures. People are becoming less sensitive to housing prices and higher density neighborhoods, and more attracted to locations with more public primary schools. Such factors are useful to regional planners and modelers to more accurately forecast future location patterns.

The sixth paper in this special issue, “The Influence of Infill Development on Travel Behavior”, by Louis Merlin, examines a case study of Atlantic Station in Atlanta. The study uses propensity scores and a differences-in-differences research design to identify how travel behavior changed for new residents of Atlantic Station as well as for residents who lived in the area around Atlantic Station from before the station opened. The study finds that residents of Atlantic Station had lower levels of vehicle miles travelled (VMT) and higher shares of alternative modes, due to higher regional accessibility and greater access to alternative modes of transportation. Despite the finding that existing residents of the area did not reduce their VMT by shifting their destinations towards new opportunities available within the development, the overall findings are promising for the travel behavior impacts of a large, well-

connected infill project in a region known for sprawl and automobile use on new residents to the project.

In summary, these six articles contribute to the body of literature on land use and transportation planning. As cities continue to grapple with the expansion of rail systems, finding alternative methods such as value capture and private sources for rail, economic development and the location of firms and households, and the impacts of infill development, these papers provide scholars, public and private sector professionals with evidence to guide practice and future research.

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