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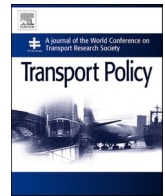
Autores

Héctor M. Posada

Andrés García-Suaza



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Transit infrastructure and informal housing: Assessing an expansion of Medellín's Metrocable system[☆]

Héctor M. Posada^a, Andres García-Suaza^{b,*}

^a Universidad de Antioquia, Colombia

^b School of Economics, Universidad Del Rosario, Colombia

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ABSTRACT

Transportation policies have a valuable influence on the allocation of resources within cities. Therefore, investigating the impacts of transit interventions is relevant, especially in developing countries where informal housing is highly prevalent and spatial disparities are noteworthy. We study the impact of a transit expansion of the Metrocable system in Medellín, Colombia, as a natural scenario to understand the causal links between lowering access costs and informal housing. Using a difference-in-difference identification strategy, we estimate that the expansion of Line H of Metrocable reduces informal housing up to 15 percentage points. We also show that the magnitude of the effect depends on the distance to the intervention. We find that the labor market plays a crucial role when exploring potential mechanisms mediating the analyzed causal relation.

1. Introduction

Transportation infrastructure shapes the urban structure by influencing economic and social activities organization (Weisbrod, 2008; Redding and Turner, 2015; Baum-Snow and Turner, 2017; Glaeser, 2020). Specifically, transit infrastructure investment generates firms and households to reallocate production and consumption resources, changing decisions related to residence, working place, schooling, among others. The impact of these investments might be more critical in developing countries where lack of job opportunities, informal labor, spatial segregation, and informal housing are highly prevalent (Glaeser et al., 2008; Boisjoly et al., 2017; Mahabir et al., 2016). Hence, disentangling how transit interventions affect informal housing is essential to understanding the wider economic benefits of transportation policies in the developing world.

According to UN-Habitat (2003), informal housing is a dwelling solution characterized by one or more of the following: low quality of building materials, overcrowding, tenure insecurity, and lack of connection to sanitation and water infrastructure (see also Gechter and

Tsivanidis, 2020). Informal housing is usually present in the urban periphery in settlements with poor spatial connection to the rest of the city, inadequate public infrastructure provision, and high environmental and geological risks. Both informal housing and informal settlements have been boosted by a sum of factors such as migration, urban poverty, illegal land occupation, the absence of compliance with planning regulations, and the lack of affordable formal housing (see Fekade, 2000; Gaisie, 2015; UN-Habitat, 2003; Durand-Lasserve, 2006).

To improve housing living conditions, governments have implemented different policies, including slum upgrading programs (Galiani et al., 2017; Cattaneo et al., 2009); provision of utility infrastructure (Gonzalez-Navarro and Quintana-Domeque, 2016); and provision of transit infrastructure (Ordóñez-Barba et al., 2013; Soares and Soares, 2005). Regarding the latter, the reduction in transportation costs improves accessibility and has positive impacts on productivity, market access, job opportunities, among others. Hence, a complete assessment of transport policies requires quantifying its impact on different dimensions of household well-being. There is extensive literature assessing the impact of transit infrastructure on productivity and

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* Corresponding author.

E-mail addresses: hector.posada@udea.edu.co (H.M. Posada), andres.garcia@urosario.edu.co (A. García-Suaza).