

A COMPARATIVE STUDY OF GRAVITY MODELS AND ENTROPY-MAXIMIZATION TECHNIQUES FOR URBAN TRIP DISTRIBUTION

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Received: 13 Dec 2024

Accepted: 14 Dec 2024

Published: 17 Dec 2025

ABSTRACT

Urban trip distribution is a critical component of transportation planning, serving as the link between trip generation and traffic assignment. Two predominant methodologies for modeling trip distribution are the gravity model and entropy-maximization techniques. This paper provides a comparative analysis of these approaches, examining their theoretical foundations, computational requirements, and practical applicability. The study highlights the strengths and limitations of each method and explores their performance across various urban scenarios.

KEYWORDS: *Gravity Models, Entropy-Maximization Techniques, Urban Trip Distribution, Transportation Planning, Urban Mobility*