Offering a New Model to Evaluate the Impacts of Management Policies on the Efficiency of Bus Rapid Transit System (Case Study: Tehran, Iran)

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Abstract

The rapid pace of urbanization along with overpopulation, and sharply growth of private vehicles pose serious challenges for mega cities such as traffic congestion, waste the time of city residents, overuse of energy, high number of accidents, ecological fouling, reduce the level of social exuberance, and other related problems. The urban planners are of the idea that, the resolution of these problems lies in an active contribution of public transportation, in daily trips. In so doing, implementation of Bus rapid transit (BRT) system, which has been identified as one of the mass rapid transit systems in the world, is the best course of action to take. However, management of BRT and how to put controlling component on networks are the most effective factors, which play a central role to improve BRT operation quality with least cost. This research is aiming at demonstrating the effects of control and management methods on BRT by expressing the theoretical basics of research. The research work also includes the identification of all the effective factors on performance of BRT by using systematic sight, and cause and effect graphs. This paper specifically focuses on travel time, and capacity of the centralized system. According to hypothetic, a model has been offered in order to simulate the BRT performance system by using mathematics and (stock & flow) model.

Keyword: public transportation system, bus rapid transit, management policies, optimizing, reduce costs.