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Issues And Challenges Related To Dynamic Resource Allocation Policies In Road Transport Sectors

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Abstract - With the enormous exponential growth of population all over the world in general and India in particular, people have to heavily depend on public and private transport systems for their day to day life. A public transport system is normally maintained by government and is supposed to provide regular and continuous transport services to the public. The major public transport is road transport in countries like India. As the government could not provide adequate transport facilities meeting the public demand, private transport undertakings have slowly come up providing transport facilities. Though the transport undertakings are supposed to provide high quality of service at reasonably economic fares, due to improper planning of transport systems the above goal could not be achieved and transport sectors are running under loss. This limitation can be mainly attributed to the un organized scientific planning of transport system causing huge investments, vehicles count not be used to fullest extent, high operating costs etc. This has resulted in high transport fares which forced public to go in for unorganized transport means, which normally violate rules and regulation resulting in unsafe and uncomfortable travel by the public. An attempt is made in this paper to address above issues through maximizing utility of the vehicles through dynamic vehicle allocation planning, new planning strategies, optimizing fleet size, improving research in planning, reshaping transport activities, transport systems integration , providing economic transport charges, careful consideration of social and economic strategies ,consideration of environmental problems, scientific planning for matching vehicle and service demands, developing strategies for reducing traffic congestions, optimizing travel time etc. As a part of future work, the dynamic resource allocation is simulated and the

simulation results will be validated with real time values. Since, in fixed planning the vehicles and their routes are defined and even when the vehicles are not fully utilized the schedule does not change. In such cases, dynamic resource allocation planning could be used to direct less used vehicles to more demanding routes. Hence in effective traffic management, dynamic resource planning plays a vital role.