

PAITON KIATKAMCHORN : MASS TRANSIT NETWORK AND POTENTIAL
SPATIAL INTERACTION IN BANGKOK METROPOLITAN AREA. THESIS
ADVISOR : ASSO. PROF. PONGSRI CHANHOW,
(CO-ADVISOR : ASSO. PROF. SRISARD TANGPRASERT,)

122 PP.

The purpose of this research is to compare the potential spatial interaction among the traffic zones in Bangkok Metropolitan Area with the connectivity of the mass transit network. To simplify the study, the study area was divided into 2 zones. The residential area in the northern part of Bangkok, comprising 20 traffic zones, was designated as the trip-production zone and the whole service area of the mass transit network, including the first zone, totaling of 75 traffic zones was the trip-attraction zone. The potential spatial interaction between the two zones was calculated using the Gravity Model developed by JICA (1973). The connectivity of the mass transit network was derived from simple matrix calculation based on the Network Analysis.

It was found that 1) The traffic zones having the high potential interaction are in Phranakorn, Sampanthawong, Phyathai, Pathumwan districts and in the high density residential areas in the north and in Amphoe Muang Nonthaburi. 2) The zones with high connectivity are in Phranakorn, Phyathai, Pathumwan districts. 3) The connectivity index for the whole mass transit network is 0.58 which is a medium connectivity and the diameter is 3. 4) The correlation between the potential interaction and the connectivity is moderate ($r = 0.547$) at 05 level of significance. It can be concluded that the management of the mass transit network is relatively highly efficient.