

## Econometric models for the forecast of passenger demand in Greece

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### Abstract

The structure of models of forecast of passenger demand is first discussed. Parameters affecting modal split and mobility are analyzed. After many trial and errors procedures, three econometric models have been developed for the forecast of passenger demand in Greece: one for total demand, one for rail demand and one for private car demand. The validity of each model is tested by means of statistical and diagnostic tests, which are: Estimation of Coefficient of Determination ( $R^2$ ), Collinearity test of independent variables, Statistical test of the  $F$ -statistics, Statistical test of the standard error, Model function form test, First degree self-correlation test to residuals, Residuals correlation, Heteroscedasticity and normality test, Model stability test and Forecasting ability of the models through U-Theil Statistics. The validity of the models has been also corroborated through the study of elasticities of independent variables. Once checked the forecasting ability, the models can be used for the forecast of future demand and modal split for passenger demand in Greece.

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*Keywords : Demand, forecast, mobility, econometric, rail, private car.*

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