

## ABSTRACT

Thesis Title : Water Demand : A Case Study of Metropolitan Waterworks  
Authority (Bangkok Metropolis, Nonthaburi and Samut-  
Prakan Provinces)

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The Metropolitan Waterworks Authority (MWA) has been providing clear water to three provinces in central region of Thailand for more than thirty years. During this long period of services, MWA has faces with problems arising from the rapid growth of the cities due to unbalance of demand and supply. Before the eight national economic and social development plan (1997-2001), the economy was tremendously expanded, however, after the beginning of this plan the economy was turning down deeply, causing enormously shrinkage in demand for water.

The objectives of this study are to examine the variables of the water demand that rooted in the overall economic and social policies and the organization master plan itself, and to find out how water demand is affected. This research is based on both time series and descriptive data from the following government units; the Interior

Ministry, National Economic and Social Development Board, the Ministry of Commerce, and United Nations.

By using Multiple Regression Analysis (MRA) technique, it has been found three independent variables which have significant effect on water demand. These variables are Gross Provincial Product (GPP), Effective Water Price (WP) and Population per Household (PHH).

The estimated results are conformed with these three independent variables. Price elasticity, income elasticity, and population per household size elasticity are -0.0216, 0.4395 and 0.1736 respectively. And the dominant income elasticity indicates that gross provincial product height growth will lead to greater demand for water.