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ARKOM SOMIN : THE CONSEQUENCES OF DEMOGRAPHIC CHANGE ON URBAN POTABLE WATER CONSUMPTION IN THAILAND. THESIS ADVISORS : KUSOL SOONTHORNTHADA, Ph.D., PRAMOTE PRASARTKUL, Ph.D., YOTHIN SAWANGDEE, Ph.D., BOONLERT LEOPRAPAI, Ph.D., THANEE MONTRIVADE Ph.D. 111 p. ISBN 974-663-333-3.

Shortage in urban potable water in Thailand is developing into a crisis situation. Studies on population factors related with potable water consumption are necessary. The objectives of this study are; firstly, to find the demographic and economic factors affecting urban potable water consumption of the domestic consumers and the commercial and industrial consumers ; secondly, to analyze the effect of demographic and economic changes on urban domestic potable water consumption. Data taken into account for analysis in this study were the secondary data collected by different government organizations. These included water consumption data from the Provincial Water Works Authority ; demographic data and number of households in municipal and sanitary district area data are from the Local Administration Department ; gross provincial product per capita are from the National Statistical Office and National Economic and Social Development Board. Multiple regression analysis using the areas of municipal and sanitary district as the unit of analysis was applied in this study.

Results of the study indicated that the factors significantly determined the urban potable water consumption in domestic consumers were the interaction variable between the number of consumers and the number of households, service coverage ratio, water tariff rates and per capita incomes. While the factors significantly affecting water consumption of commercial and industrial consumers were the number of consumers and water tariff rates. It was also found that demographic factors were the main indicators affecting the urban potable water consumption. In addition, demographic change in terms of the change in household size, the change in population density and the change in interaction variable between population size and number of household were main factors which affected on the change in urban potable water consumption