



## DETERMINANTS ELECTRICITY DEMAND IN INDUSTRY AND HOUSEHOLDS

Štefan Bojnec, University of Primorska, Slovenia  
Email: stefan.bojnec@fm-kp.si

Drago Papler, University of Primorska, Slovenia  
Email: drago.papler@gmail.com

### ABSTRACT

**Purpose:** This paper investigates determinants of electricity demands by industrial enterprises and households during deregulation and liberalisation of electricity distribution markets with changing competition among electricity distribution enterprises.

**Methodology:** Demand function is employed using ordinary least square regression analysis on time-series data.

**Findings:** The electricity demand in industry is positively associated with real gross domestic product, real substitute prices for natural gas and real prices of fuel oil, but negatively with real price of electrical energy and with the dummy variable for electricity market liberalization. The electricity demand by households is positively associated with households' real income, real substitute prices for natural gas and for fuel oil, and with the dummy variable for market liberalization, but negatively with real price of electrical energy for higher tariff rate for households.

**Originality:** The electricity demand is explained by real price of electrical energy, real income, real prices of substitutes of electrical energy in consumption, and a dummy variable for electricity market liberalization and the Gini coefficient of market concentration. The electricity demand functions are estimated for industry and for households, respectively. The effect of market liberalization on electricity demand differs between industry and households because the electricity market liberalization for industry has also been in place for a longer period than for households.