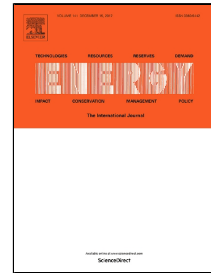


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Estimating the Determinants of Electricity Consumption in Jordan

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## Estimating the Determinants of Electricity Consumption in Jordan

### Abstract

This research analyzes proposed determinants of electricity consumption in Jordan during the period 1986-2015. For the upcoming years, Jordan's electricity consumption projections expected to exceed electricity generation capacities. Therefore, to understand electricity consumption key determinants, six independent variables were used: Gross Domestic Product (GDP), electricity prices, population, urbanization, structure of economy, and aggregate water consumption. A multivariate model was constructed using annual data to examine the influence of the independent variables on electricity demand. Johansen Cointegration test is used to examine the long-term relationships in the model, and Vector Error Correction Model (VECM) is utilized then. VECM regression results show that GDP, urbanization, structure of economy and aggregate water consumption are significant and positively related to electricity consumption, while electricity prices are significant and negatively related to electricity consumption. Population showed significant positive effect on electricity consumption in the short run. The result of VECM implies that there is a need to invest more in green energy projects, ban importing low efficiency electrical appliances and review refugee reception policy in place.

**Keywords:** Electricity Consumption; GDP; Determinants of Electricity Demand; Jordan; Vector Error Correction Model.

### 1. Introduction

Between the years 1986 and 2015, Jordan experienced a surge in electricity demand. In 1990, total electricity consumption was recorded at 3089 Gigawatt-hour (GWh). In 2015, electricity consumption reached 16173 GWh ([Ministry of Energy and Mineral Resources, 2015](#)). Electricity

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