

ENERGY CONSUMPTION IN SOUTH AFRICAN HOTELS: A PANEL DATA ANALYSIS

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Addressing the large energy consumption of Hotels and tourist accommodation establishments requires an understanding of the factors that drive this consumption. This enquiry is particularly crucial for the South African economy which has experienced significant strain in meeting its domestic energy demand. This has occurred alongside increases in international tourist arrivals which add to the pressure on already strained energy resources, having to meet the energy requirements of both tourists and the local population. Where various researches have been done in the past to understand resource consumption of residential, commercial and industrial buildings globally, research targeted at resource consumption in tourist accommodation establishments is sparse; and non-existent for South Africa. This is not satisfactory given that these establishments are high resource consumers, and have one of the highest environmental impacts of all sub-sectors in the tourism sector. This study contributes to the sparse global (and non-existent South African) literature on resource consumption in tourism accommodation establishments by testing hypotheses on the various drivers of energy consumption in Hotels using a novel panel dataset. The dataset presents daily energy consumption data for twenty-two Hotels across South Africa. Findings from various specifications of the Dynamic Random Effects Model suggest that the number of rooms in a Hotel, the services and facilities offered, and climatic conditions are strong drivers of energy consumption in the Hotels in the dataset. While the role of occupancy as a driver could not be fully ascertained due to severe data limitations, the role of tariff rate in regulating consumption is highlighted, suggesting that price regulation does play a significant role in curtailing electricity consumption, even in high-end Hotels. Results further suggest that in the design of policy and practices for energy efficiency in South African Hotels, the details of the energy consumption of the facilities and services offered at the Hotel should be the first point of call; and the strenuous impact of extreme weather conditions on energy consumption needs to be factored in at the phase of building design and construction. These findings are relevant not only for government and public authorities but also for industry managers and stakeholders, as well as third-party energy service providers to the industry.

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