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Determinants of domestic water consumption in Hermosillo, Sonora, Mexico

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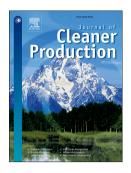
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Abstract

- This article presents a cross-sectional study that explored the determinants of 5 domestic water consumption in Hermosillo, Mexico in a continuous 24-hour water 6 supply. A probability sample with a confidence interval (CI) of 95% was established 7 by applying a 65 question survey to collect data on 403 households. Consecutively, 8 the model reflecting the water consumption in Hermosillo households was 9 identified through a multiple regression analysis using ordinary least squares 10 (OLS). The analysis revealed that the statistically significant variables that explain 11 the domestic water consumption in the home with a share of 31.6% were low water 12 cost, number of bathrooms in the household, measured service supply, use of 13 purified bottled water per week in households, and the number of female 14 inhabitants. After obtaining the model, the monthly water consumption was 15 calculated in a group of houses throughout the equation to compare it with the 16 water consumption measured by the operating agency, and it showed an 17 acceptable approximation (78-90%). The results contribute to improving the 18 current understanding of factors influencing the use of the vital liquid, and they may 19 be useful in the development of policies to promote the sustainable use of water 20 resources. 21
- 22 **Keywords:** Water consumption, measurement, per capita, housing.
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1. Introduction

1.1. Situation and water scarcity

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- 30 It is claimed that approximately 1,000 million people worldwide do not have potable
- water, 2,500 million have no access to sewage systems, and the wastewater

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