

ERSA Research Brief

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The Comfort of the future: The role of Social Norms in Constructing the Ideal towards Sustainability – A Randomised Field Experiment

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In the environmental sustainability (ES) movement, the challenge of modifying human behaviour for effective demand side management of resources has been highlighted. This challenge is peculiar in the Tourism Accommodation Industry (TAI) as managers struggle to balance the need to be sustainable with their objective of providing comfort for their guests. Consequently, the uptake of many sustainability initiatives in the industry is limited. To address this challenge, a solution to foster the uptake of ES practices in establishments in the industry is proposed. This solution is based on the argument put forward by Elizabeth Shove and some of her colleagues, that comfort is largely socially constructed, contradicting the positivist approach which emphasises the biological and psychological nature of comfort. Although Shove does not focus on tourism, her argument is adapted for the TAI context. The solution is targeted at reducing energy consumption from Heating, Ventilation, and Cooling (HVAC) in these TAEs, but with possibility for expansion to water saving initiatives as well.

Findings from the literature indicated that HVAC is one of the biggest energy drivers in TAEs. Managers of these TAEs in South Africa are however challenged with addressing this driver as it often requires building retrofits or the purchase of new technology, both of which are expensive. This challenge is more severe in smaller TAEs who struggle with funding challenges and those in older buildings which require extensive retrofits. This study proposes a behavioural solution, specifically the use of nudges in the form of social normative prompts, to significantly reduce energy consumption from HVAC systems. The effectiveness of this solution is tested within the framework of a Randomised Control Trial (RCT). Although the superiority of social normative appeals compared to simple environmental appeals on behaviour modification of hotel guests has often been evaluated in the literature, the outcome often tested is the response to the towel reuse initiative due to the ease of observing behavioural responses. This study replicates the same evaluation for appeals to adjust room temperature levels. Temperature data logging information technology is applied to observe behavioural responses. The focus on testing the theory of the social construction of thermal comfort, as well as the use of the temperature data logger for observing behaviour, are a novel contribution to the existing body of knowledge.

The findings of the study provides evidence for the effectiveness of social normative prompts in influencing hotel guests' room temperature settings, indicating that thermal comfort is, to a large extent, socially constructed. The implication of this is that the future of the current unsustainable trend in resource consumption and Green House Gas pollution, driven by the increasing adoption of, and demand for, HVAC systems in buildings, can be modified towards more sustainable levels.

The contribution of this study to the existing body of knowledge is hence twofold: 1) it verifies the extent to which thermal comfort is socially constructed by providing evidence of the effectiveness of previously tested descriptive social norms in modifying hotel guests' environmental behaviour; and 2) it contributes to the findings of previous studies on the effects of social norms on individual private behaviour, such as hotel guests' towel reuse behaviour, and demonstrates that these findings extend to guests' room temperature setting behaviour. These contributions help better understand the preferences of hotel guests and provide

useful insights for the design of sustainability-centred intervention programs that affect hotel guests' comfort levels.

The advantages of the tested solution are that the implementation cost is much lower than that of alternative solutions and the potential payback period is short. This implies that small TAEs, as well as those operating in older buildings, can easily implement this intervention to achieve consumption reduction. Furthermore, the learnings from this intervention program will be applicable to foster behavioural modification for consumption reduction, not only for other energy drivers but also for water drivers in TAEs. This is because the intervention focuses on hotel guests' behaviour as it relates to their comfort experience. These will, therefore, assist in designing sustainability-driven intervention programs to modify other comfort-related guests' behaviour (such as time spent in the shower, turning off lights not in use while in the room etc.).

Given the objective of reducing the negative impact of Tourism and fostering sustainable development of the local economy, the findings of this study are relevant to TAEs in South Africa, as well as other developing countries where resource management is a challenge, and the growth of their Tourism industry cannot be compromised.