Session E1

Asymmetric Salience-Driven Effects of Discounts on Hotel Products: Evidence from A Lab Experiment - Oriol Anguera-Torrell and Juan Luis Nicolau

The recently proposed salience theory of consumer choices poses that individuals are salient thinkers who, when choosing between two vertically differentiated alternatives, overweigh a specific attribute -such as price or quality- if this attribute stands out in the choice context. One of the novel predictions of this theory is an asymmetric effect of discount policies. It predicts that it is always possible to introduce a discount on a high-quality product, encouraging the salient thinkers to overvalue the high-quality product in their decision-making, but not the other way around. This study aims to test this prediction through a laboratory experiment in a hotel-related context. Participants will need to choose between two vertically differentiated hotel products and will be randomly distributed among three different groups. The first group -the control one- will offer participants both products, with no discount applied to any of them and the superior product being priced higher. Alternatively, the second group will exclusively apply a discount on the superior product and the third group on the inferior product. If consumers are salient thinkers, we expect to find that there will be a higher demand for the superior product in the second group than in the control one. Yet, the third group should not be expected to show a higher demand for the inferior product than the control group. The results of this study will be presented at the 2024 IATE conference and are expected to offer valuable insights for revenue managers about the effects of sales across vertically differentiated hotel products.

The Demand Curve Analysis on The Substitutive Relationship Between Shared Accommodations and Hotels - Gabrielle Lin, Jason Li Chen, Gang Li and Haiyan Song

Research has widely acknowledged the substitution effect of shared accommodations on the hotel industry (e.g., Guttentag & Smith, 2017). Nevertheless, existing analyses predominantly hinge on the inverse correlation between the supply of shared accommodations and the business performance of hotels (e.g., Dogru et al., 2020), neglecting the comprehensive demand curve analysis rooted in microeconomic principles for identifying a substitution effect.

In a departure from this trend, the present study employs behavioural economic demand models to construct the alone-price and own-price demand curves for hotels and the cross-price demand curves for shared accommodations (Hursh & Roma, 2013; Hursh & Schwartz, 2023). This novel approach aims to quantify the substitutive relationships between shared accommodations and various types of hotels — from economy to midscale and upscale establishments.

What sets this study apart is its consideration of the variations in substitution effects based on customer profiles, encompassing factors such as travel companionship (i.e., individual vs. with friends) and personal characteristics (i.e., gender, age and accommodation preferences). The analysis extends beyond the conventional single-directional view, exploring the substitutability of shared accommodations for hotels as well as the substitutability of each type of hotel for shared accommodations.

Furthermore, this study reveals an asymmetric substitutive relationship between shared accommodations and hotels. These findings provide valuable insights for devising market competition strategies tailored to shared accommodation providers and each type of hotel. As the hospitality landscape evolves, understanding these nuanced dynamics becomes imperative for stakeholders seeking to optimise their market positions and cater to diverse consumer preferences.

Understanding the Drivers of Profit Inefficiency in The Restaurant Industry - David Boto-Garcia, Mats Carlbäck and Ganna Demydyuk

Study purpose and Contribution

Low productivity is a key determinant of firm survivability in the market, with productive and cost inefficiencies being important predictors of firm closure (Mhlanga, 2018). Efficient management increases market shares and subsequent firm growth, particularly during recession periods (Poretti and Heo, 2022). Most of the literature on firm efficiency in the hospitality sector has focused on productive (e.g., Dapeng et al., 2020; Liu and Tsai, 2021) and cost efficiency (Arbelo et al., 2017; Hu et al., 2010). However, far less attention has been paid to performance efficiency with respect to profits. While there is a positive link between productivity and financial performance (Peng et al., 2021), profit efficiency is more complex because apart from productive efficiency it also requires output allocative efficiency in prices given market demand.

The purpose of this study is to evaluate the structural patterns and drivers of financial performance efficiency. This is done using data for the Swedish restaurant industry at the firm level. With an average return on investment (ROI) of 0.2 percent and the unprecedented bankruptcy rate (over 500 restaurant firms in 2023, which is 39 percent higher than in 2022), there is need to understand the factors that explain foregone rents relative to best practice. While some works have related restaurant size, location, and experience to productive (Alberca and Parte, 2018; Assaf et al., 2011) and cost efficiency (Mhlanga, 2018), we know little about their influence in profit efficiency.

Relatively few studies have looked at the drivers of operational performance in the foodservice sector. To our knowledge, Assaf et al. (2011), Alberca and Parte (2018) and Mhlanga (2018) are the only works that have evaluated productive and cost efficiency in the restaurant industry. We contribute to this body of literature by providing one of the first comprehensive evaluations of profit efficiency in this sector. In this respect, profit efficiency has been scarcely investigated in the tourism sector to date, with Arbelo-Pérez et al. (2017), Oliveira et al. (2013) and Yang et al. (2017) being a few notable exceptions. This stream of research has studied the drivers of foregone profits in the hotel sector, but the restaurant industry has received comparatively far less attention. We aim to close this gap.

Analysis and Data

The analysis of this study used Stochastic Frontier Analysis (SFA) to estimate profit inefficiencies based on a panel dataset on 4,144 restaurants in Sweden over a five-year period (2017-2021). The data was provided by UC (Upplysingscentralen) as Swedish credit rating agency collecting data from all active companies in Sweden, based on their audited reports provided to the authorities. Hence, the data cover all food service firms currently trading in Sweden as a limited company and fulfilling the following criteria:

• The company has an accepted risk rating, 1, 2, 3, 4, 5, F (fusion) or C (commission)

• The company has an operating revenue that exceeds 0 SEK for any of the previous three years

• The company has submitted an annual report within the last 30 months.

The Nonstandard Profit Function (NSPF) approach, first introduced by Humphrey and Pulley (1997), was adopted to characterize the role of firms' structural characteristics on foregone rents. We adopt a translog

profit function where profits are a function of output and input prices. We estimate a Battese and Coelli (1995) model where the mean of the inefficiency term is allowed to be explained by restaurant type (sit-down restaurant, catering, canteen, or fast food), years of operation, size (number of outlets), a dummy for COVID-19 periods (2020 and 2021) and some interactions between them.

Preliminary Findings

Consistent with microeconomic theory, profits are increasing in output levels and non-decreasing in input prices. In particular, the profit elasticity with respect to output is 0.728 at the sample means. The profit elasticities with respect to labor and capital unitary costs are -0.114 and -0.193, respectively. Interestingly, our preliminary results indicate that profits are more sensitive to percentage increases in capital costs than wages.

Our analysis indicates that foregone rents increase with the number of years on operation. On the contrary, the number of outlets as an indicator of firm size decreases restaurant profit inefficiency. We also document that restaurant firms are less inefficient than other foodservice enterprises. However, no significant differences are detected between fast-food and traditional restaurants, and this is unrelated to the number of outlets. Although fast-food restaurants might be less productive efficiency, this might be offset by a greater efficiency in setting output prices.

Importantly, the analysis indicates an average profit efficiency of 0.466, implying that an average Swedish restaurant has been continuously losing more than half of its potential profits. These levels of profit efficiency remained almost constant over the study period and independent of the COVID19 crisis, i.e., the average distance to the profit frontier is approximately the same before and after 2020.

Conclusions and Implications

The empirical findings of this study indicate that the Swedish food-service industry level of operations, particularly its profit efficiency, remains far from optimal before and during the COVID19 pandemic. Suboptimal pricing, labor, and capital costs are defined as the key drivers of inefficiency. The effect of size on efficiency was different for restaurants compared with other types of firms. In addition to these theoretical contributions, our results pinpoint several areas in which management's attention may pay back in increased profit efficiency.

While the need to rectify production inefficiencies is obvious, improving the pricing structure throughout the industry could help improve performance strategically. Optimal pricing does not automatically mean higher prices that impact demand elasticity, but a maximization of customer willingness-to-pay. Value-informed pricing (Ingenbleek, 2014) starts with knowing the product value to customers and continues with an understanding of its key elements and their importance-performance scores (Carlbäck, 2022). Hence, systematic customer value information can and should be integrated into regular pricing decision process, and further guide the entire operating and strategic resource allocation for realizing full profit potential (Carlbäck, 2022)

Further, existing food service businesses should assess their debt structure and wage cost to adjust to optimal levels, as both have an incremental effect on profit efficiency, as do the number of outlets within one company. Food-service firms in planning should consider these potential drivers of inefficiency when deciding on their future structural characteristics and evaluating their strategic choices. Thus, priority

should be given to less capital- and labor-intensive models or the initial investment must be sufficient. Future restaurants must be clear about the need to build customer loyalty to ensure sufficient pricing levels that cannot be compensated for by building more outlets. By contrast, firms other than restaurants can consider expansion to optimize their profitability through economies of scale, thereby ensuring that there will be enough funds to cover that.

A further focused study on restaurant firms within their first years of operation, perhaps using a more detailed dataset, could provide more insightful advice to this important group of entrepreneurs for future start-ups. While the current dataset provided a great insight into the country-level food-service industry data, some important effects and variables may be missing to derive more practical value.