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"Size Counts": the Effect of Queue Length on Choice Between Similar Restaurants

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Behavioral research of queuing has focused on customers in the queue. The current paper examines whether queues can also affect customers choice between services associated with different queues. Specifically, it examines choice between similar restaurants located near each other. The results show high correlation between the queue length outside each restaurant and the number of newcomers. However, the effect is much stronger in tourist areas where customers are less familiar with the restaurants. Moreover, the relative popularity of restaurants is highly unstable in such areas. The findings suggest that in unfamiliar environments, queues may signal quality. Practical and Theoretical implications are discussed.

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“Size Counts”: The Effect of Queue Length on Choice between Similar Restaurants

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EXTENDED ABSTRACT

Consider the following situation: a customer is faced with a choice between two restaurants that look similar, except that outside one, but not the other, trails a relatively long queue of customers. Which restaurant the customer should prefer? This question is of interest of many restaurants, cafes, bars, and other services that are typically located in the same area and face hard competition.

However, it seems that predicting behavior in such situations is not trivial. On the one hand, both logic and empirical evidence suggest that customers are reluctant to waiting and are likely to prefer the restaurant that is associated with a shorter queue. On the other hand, previous research on herding behavior suggests a variety of reasons that make customers follow the herd, which can imply preference for the longer queue. Unfortunately, previous research on queuing falls short in providing clear predictions for the effect of queues on behavior in such settings because it is typically focused on customers' responses in the queue. The research on queuing management does not address customers' preferences for services that are associated with different queue lengths.

The current research provides a first step towards understanding the effects of queues on customers' choice between services. Specifically, it examines prospective customers who can choose between similar restaurants that are associated with different sizes of queues. The focus of interest is the question whether the length of the queue can have an effect on the customer's choice between the restaurants.

The empirical examination is conducted by observations made across pairs of similar restaurants during prime hours to analyze the potential link between the length of the queue outside each restaurant and the number of customers who choose that restaurant (and join its queue). We manipulated the degree of customers' familiarity with the restaurants by looking at six pairs of “tourist restaurants” (i.e., restaurants that are located in tourist destinations and serves tourists who are not familiar with the restaurants), and six pairs of “local restaurants” (that the customers are usually familiar with). We hypothesized that if queues are indeed related to customers choice between restaurants, then the effect will be stronger with tourists because their low familiarity with the service. This stronger effect would be reflected by larger fluctuations between the restaurant's popularity from day to day in tourists but not in local restaurants (e.g., the restaurant that was more popular in a certain day will become less popular in another day—an effect that we call “inversion effect”). Each pair was carefully selected to ensure that the restaurants were indeed similar in terms of food type, quality of the food served, number of seats available, and pricing. In addition, the two restaurants in each pair were situated adjacent to each other. For each pair, we made six sets of observations over six consecutive days during prime hours. Two main measures were recorded: (a) the length of the queue outside each restaurant at the start of each observation, and (b) the total number of customers who joined each queue during the 20-minute observation period.

The results showed a strong positive correlation between the length of a queue and the number of customers who joined the queue, suggesting that customers preferred restaurants with larger queues. As predicted, this correlation was much stronger in tourist restaurants ($r_{length,join}=.86, p<.0001$) than in local restaurants

($r_{length,join}=.72, p<.0001$). As expected, the variance in changes of restaurants' popularity from day to day in tourist areas is significantly larger than in local areas ($F=4.63, p<.0001$, Levine's test). In order to control for possible restaurant fixed effects (e.g., quality), we regressed the preference for a certain restaurant on the queue length in that particular day, and the average queue lengths of all other 5 days of observation. The regressions results showed that the effect of the queue length on choice was significant even when such fixed effects are controlled. Specifically, in local restaurant there seem to be a fixed effect (e.g., A}B), but the probability of choosing A decreases when the queue for A is shorter. In tourist areas, there were no evidence for such fixed effects; the only significant effect was that of the queue length on choice.

The findings of the current study have important implications for restaurants managers, mainly in tourist destinations. The results suggest that such restaurants face continual competition, with each day starting a new “game.” Creating a longer queue outside a restaurant as the prime dining hours begin may have a strong influence on determining the winner in this competition.

We believe that in local areas, it will be harder for restaurants to benefit from herding behavior once their relative positions have been established. Yet, holding longer queues seems beneficial even in local areas. This effect would be probably most relevant whenever a new restaurant is opened. Then, the owners/managers may benefit from keeping supply slightly lower than demand. Informal conversations with restaurant managers reveal that some are already aware of this phenomenon and act accordingly.

The current study has also important theoretical implications. First, it is the first empirical study that examines whether herding can occur when it implies a direct and noticeable cost such as waiting longer times. Second, it provides some insights on the effect of queues on prospective customers outside the queue. The strong association between the length of queues and choice that was demonstrated here suggests that it should be interesting to study similar situations and to further study the cognitive mechanisms associated with such decisions. We think that the positive effect observed here is limited to cases where customers have an obvious choice, and where queue length may hint at service quality (e.g., restaurants, nightclubs). It is probably foolish for a post office to intentionally create longer waiting lines. Yet, at least in the case of restaurants, trying to eliminate or shorten queues is not a recipe for success. Indeed, the current study demonstrates that “size really counts.”

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