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Leader Effects and Gender Differences in Sequential Restaurant Ordering Environments

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Abstract

We empirically examine the strategic importance of the choices of the first person ordering, that is, the leader, for the decisions made and money spent by other commensals at a restaurant table. Our aim is to study the similarity of orders—in terms of dishes, drinks, and prices—among the table leader and the other commensals. The empirical results reveal that table leaders, both male and female, exert a considerable influence on the choices made by other diners. We analyze the differences arising when males and females act as table leaders. (JEL Classifications: D12, D91)

Keywords: gender differences, leader effect, restaurant dining, sequential ordering, strategic decision.

I. Introduction

We often observe that people sitting at a restaurant table order the same or very similar dishes and/or drinks relative to the choice of the leader ordering first. As a result, consumers and their food ordering decisions have increasingly become an important topic of research across many disciplines. This area of research has advanced considerably in the recent years through a wide range of studies and a varied set of experiments has been performed to monitor this specific type of framework. Overall, results support the fact that multiple environmental and social factors determine food intake and eating behavior.

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A particularly important factor in explaining the restaurant ordering behavior of diners is the effect of one's peers through social interactions and influences. We therefore empirically examine the strategic relevance that the choice of the leader ordering first has on the decisions made by other commensals at the table. That is, we examine the ordering behavior of economic agents in sequential decisions and the related consumption environment of these decisions. We study the similarity of orders—in terms of dishes, drinks, and prices—among the table leader and the other commensals sitting at the table. We particularly focus on the differences arising when males and females act as table leaders.

The rest of the article proceeds as follows. Section II provides a review of the related literature. Section III describes the experimental methodology and Section IV analyzes the main empirical results obtained. Section V concludes.

II. Literature Review

When dining at a restaurant, individual decisions are made in a group context wherein each member displays his or her choices sequentially. The literature analyzing such social situations has generally focused on the psychological side of the decision making process. For instance, Woolley and Fishbach (2017) illustrated through four different studies how random similarity of food consumed raises trust and cooperation among strangers. Stöckli, Dorn, and Liechti (2018) highlighted the importance of social effects and norms when agents are exposed to a social situation such as dining. Gender effects are accounted for only when considering romantic relationships. In this regard, Hasford, Kidwell, and Lopez-Kidwell (2018) examined how the formation and maintenance of romantic relationships influenced the eating behavior of partners, an effect that differs considerably between genders.

The literature on consumer behavior has provided a substantial amount of contrasting evidence when analyzing social interactions among different decision makers. The effect of social influence as an element inherent to consumption has been highlighted by Raghunathan and Corfman (2006), who have shown how the perception of interpersonal agreements with the members of a group increased the enjoyment of the shared experience. Consequently, social exclusion provides very powerful incentives regarding the purchasing behavior of decision makers. Mead et al. (2011) showed how socially excluded people were willing to spend and consume strategically, sacrificing their personal and financial well-being to increase their social well-being.

A common framework for the validation of experiments testing the effect that one's peers have on the choices made is given by the ordering behavior of the diners composing a table. Ellison, Lusk, and Davis (2013) found that people are more inclined to order the same or similar dishes to their friends when they dine out. Their study highlighted the fact that eating out is very much a social and emotional phenomenon, rather than a physical one, where diners simply wish to nourish their bodies with food. The empirical analyses performed by this branch of the

literature reveal that, if known, the orders of the other diners have a considerable influence on the choice behavior of the remaining ones. This behavior may lead diners to decrease their personal satisfaction so that the choices made conform to those of the group (Ariely and Levav, 2000). Quester and Steyer (2009) identified thresholds that determined whether decision makers order differently from their peers or conform to the group.

On the other hand, Ellison (2014) analyzed the lunch receipts from a full-service restaurant in Oklahoma over a three-month period. Thus, the research data were based on the information retrieved from the receipts, although she also went undercover to the restaurant and was able to obtain additional information directly from servers. The main conclusion derived from this experiment was that diners do not want to be too different from their dining companions, that is, people were happier when making similar choices to those seated around them, a result that contradicts the variety-seeking behavior expected to be exhibited by people. Similarly, Lee, Kim, and Kwak (2018) used data retrieved from transaction receipts at a café to study the menu choices of individuals in a group setting. They found that the menu choices of individuals are likely to conform to the precedent choices made by the members of the group.

Given the fact that empirical papers are generally based on the examination of receipts, the authors are unable to identify gender effects on the behavior of the dining partners. This drawback is addressed in this article, because direct access to the restaurant personnel has allowed us to account for the gender of the leader who made the initial choice.

III. Empirical Framework

The main purpose of the current study is to better understand the dynamics of peer behavior—focusing on the influence that the choices of a leader have on those of his/her tablemates during dinnertime at a restaurant.

A. Data Collection

During the winter of 2017/2018, orders for daily dinners have been collected from a full-service moderately-priced restaurant in Bavaria, Germany. The restaurant has never been used for research purposes, so diners did not know that their food choices were being monitored.

The restaurant offers daily a seven-degustation-courses menu (two starters, two pasta dishes, one fish, one meat, and a dessert), and a daily menu with four or five courses (starter, pasta dish, main course with either fish or meat, or both if requested, and a dessert). The customers can choose to order single dishes from a menu that changes weekly and is composed by:

- starters: four or five items depending on the week;
- pasta dishes: four or five items depending on the week;
- traditional plates offered every day of the year that are classified as "classici" starter and "classici" pasta: six different items for each category;
- the starter and pasta categories have three varieties: vegetarian, fish, and meat;
- three main courses with fish and three with meat;
- four or five desserts.

In summary, every week the restaurant offers about 30 different items through five different menu categories: starter, pasta (including soup), fish, meat, and dessert. The menu contains descriptions of the items and prices. The study is based on a sample of 209 collected observations. Each observation corresponds to a table composed of at least two diners. Information is restricted to those aspects that could be observed in a reliable and unobtrusive manner.

B. Data Description

Table 1 describes the distribution of the sample analyzed in terms of the number of persons that composed each table. Regarding demographics, the sample consists of 582 people, out of which 287 are adult males and 284 adult females, while the rest are children. Considering the entire sample of orders collected during the study, customers ordered 213 starters, 195 pasta dishes, 231 main courses, and 103 desserts. The daily menu was chosen 180 times and the 7-courses-degustation menu 49 times.

Table 2 displays the average price in euros of the starters, pasta dishes, main courses, desserts, daily menus, and the degustation menu. The average price of some dishes could seem high for a moderately-priced restaurant. However, this bias can be explained by the fact that the period during which the data were collected was the "truffle season" and customers generally eat fresh truffle, white or black, with every type of dish ordered from the starter to the dessert.

In order to compute the correlation between the money spent by the leader and each of the other tablemates on food, beverages, or both, we have observed:

- the prices of all the dishes ordered by each commensal;
- the prices of all the beverages ordered by each commensal, which include apéritifs and all types of wine: white, red, rosé, and sweet.

IV. Leader Effects Conditioned by Gender

We use the information gathered to verify empirically if, and to what extent, tablemates are influenced by the choices of the leader. We have categorized the data retrieved by the gender of the leader to identify the influences of male and female leaders on their dining companions when ordering main, daily, and dessert dishes.

Table 1
Composition of the Tables Sampled

Number of Persons	*Percentage*
2	59.8
3	11.0
4	17.2
5	0.5
6	2.9
7	1.9
8	1.4
More than 8	5.5

Table 2
Average Dish and Menu Prices in Euros and Their Respective Standard Deviations

Dishes	*Average Price in €*	*Standard Deviation*
Starter	15.04	4.63
Pasta	18.28	6.46
Main	28.13	5.36
Dessert	7.68	2.51
Daily menu	66.84	9.55
7 course menu	79.00	0

These dishes have been selected because they constitute core choices of the diners that suffice to identify the required effects. Including all other possible dishes would not modify the results obtained while extending the length of the article considerably. The tables presented throughout this section describe the choices made by a leader regarding a specific dish and if it is followed by his/her tablemates. All tables display significant Chi-Square values, which illustrates the soundness of the results obtained.

Table 3 describes the relation between the decision of the leader to order a main dish and that of the tablemates to do the same. When a male leader orders a main dish, 67.1% of the commensals make the same decision, a percentage that increases to 77.3% when he does not order a main dish. However, when it comes to a female leader deciding to order a main course, more than 85% of the tablemates follow her behavior, while skipping the main dish leads to more than 86% of the dining companions to do the same.

The same test performed on daily menus revealed very similar results, which are presented in Table 4. As the empirical values illustrate, if a male leader orders a daily menu, then 74.2% of his dining companions follow, a percentage that reaches 100% when he decides not to order a daily menu. In the female leader case, both percentages are nearly identical. That is, when she orders a daily menu,

Table 3
Influence of the Choice of the Leader on His/Her Tablemates: Main Course

			Main Course of Leader		
Male Leader			*Ordered*	*Not Ordered*	*Total*
Main	Ordered	Count% within main of leader	4967.1	2222.7	7141.8
	Not ordered	Count% within main of leader	2432.9	7577.3	9958.2
Total		Count% within main of leader	73100.0	97100.0	170100.0
			Main Course of Leader		
Female Leader			*Ordered*	*Not Ordered*	*Total*
Main	Ordered	Count% within main of leader	6585.5	1813.6	8339.9
	Not ordered	Count% within main of leader	1114.5	11486.4	12560.1
Total		Count% within main of leader	76100.0	132100.0	208100.0

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
Male leader	33.826	1	.000
Female leader	103.944	1	.000

Table 4
Influence of the Choice of the Leader on His/Her Tablemates: Daily Menu

			Daily Menu of Leader		
Male Leader			*Ordered*	*Not Ordered*	*Total*
Daily	Ordered	Count% within daily of leader	4674.2	00.0	4627.1
	Not ordered	Count% within daily of leader	1625.8	108100.0	12472.9
Total		Count% within daily of leader	62100.0	108100.0	170100.0
			Daily Menu of Leader		
Female Leader			*Ordered*	*Not Ordered*	*Total*
Daily	Ordered	Count% within daily of leader	5596.5	53.3	6028.8
	Not ordered	Count% within daily of leader	23.5	14696.7	14871.2
Total		Count% within daily of leader	57100.0	151100.0	208100.0

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
Male leader	109.854	1	.000
Female leader	175.044	1	.000

then 96.5% of her tablemates follow; however, this percentage equals 96.7% when she does not order a daily menu.

Finally, Table 5 illustrates the influence of the leader when ordering dessert. If a male leader skips dessert, then 90% of his tablemates do the same, while 74.2% of the guests order dessert when the male leader orders it. On the other hand, when a female leader decides to skip dessert, then 92.7% of the tablemates follow her decision, a percentage that falls to 58% when she orders it.

Table 5
Influence of the Choice of the Leader on His Tablemates: Dessert

			Dessert of Leader		
Male Leader			*Ordered*	*Not Ordered*	*Total*
Dessert	Ordered	Count% within dessert of leader	2374.2	1410.1	3721.8
	Not ordered	Count% within dessert of leader	825.8	12589.9	13378.2
Total		Count% within dessert of leader	31100.0	139100.0	170100.0
			Dessert of Leader		
Female Leader			*Ordered*	*Not Ordered*	*Total*
Dessert	Ordered	Count% within dessert of leader	1858.1	137.3	3114.9
	Not ordered	Count% within dessert of leader	1341.9	16492.7	17785.1
Total		Count% within dessert of leader	31100.0	177100.0	208100.0

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
Male leader	61.204	1	.000
Female leader	53.508	1	.000

Clearly, the choices made by the leader exert a considerable influence on the commensals' decisions. Moreover, substantial differences arise when considering the gender of the leader, with females exerting a larger influence except in the case of the dessert. It should, however, be noted that dessert is the dish less ordered, a fact that may be due to diners feeling freer to skip it if they are satisfied with what they have already ordered.

Now we analyze the correlations between the money spent by the leader and his/her dining companions on food and drinks. We observe that table leaders have a decisive influence on the ordering behavior of the other diners regarding the selection of food, drinks, and the prices (i.e., bill) being paid. These results prevail when dividing the sample by demographics, though the relative intensities differ between male and female leaders as follows:

- When considering males [females], we obtain the following Pearson correlation coefficients on the prices to be paid at the same table for the
  - food of the leader and the other guests 0.73 [0.83] ($p < 1\%$)
  - drinks of the leader and the other guests 0.88 [0.75] ($p < 1\%$)
  - total bill of the leader and the other guests 0.75 [0.83] ($p < 1\%$)

Note that, although the influence of the leaders on their tablemates is considerable in both cases, women leaders exert a higher influence than men when considering the total bill and food choices. However, when considering the price of drinks, the results are reversed, with male leaders exhibiting a higher influence on commensals. The pattern observed in the food versus drinks scenario may be because women tend to drink cheaper wines than men, who generally aim for high quality (Eads, 2014).

V. Conclusion

We have empirically illustrated the considerable influence that the leader's choices exert on the resulting decisions and the money spent by his/her tablemates. Dividing the sample by gender has allowed us to observe that male [female] leaders have a greater influence on the choice of drinks [food]. These results should open the way for and complement future research on the strategic coordination incentives that arise among the different agents involved in sequential decision environments.

References

Ariely, D., and Levav, J. (2000). Sequential choice in group settings: Taking the road less traveled and less enjoyed. *Journal of Consumer Research*, 27(3), 279–290.

Eads, L. (2014). Women care less for quality than men. *The Drinks Business*. Available from https://www.thedrinksbusiness.com/2014/08/women-care-less-for-quality-wine-than-men/. Accessed September 20, 2018.

Ellison, B. (2014). "I'll have what he's having": Group ordering behavior in food choice decisions. *Food Quality and Preference*, 37, 79–86.

Ellison, B., Lusk, J., and Davis, D. (2013). Looking at the label and beyond: The effects of calorie labels, health consciousness, and demographics on caloric intake in restaurants. *International Journal of Behavioral Nutrition and Physical Activity*, 10, article 21. Available at https://ijbnpa.biomedcentral.com/track/pdf/10.1186/1479-5868-10-21.

Hasford, J., Kidwell, B., and Lopez-Kidwell, V. (2018). Happy wife, happy life: Food choices in romantic relationships. *Journal of Consumer Research*, 44(6), 1238–1256.

Lee, J. C., Kim, J., and Kwak, K. (2018). A multi-attribute examination of consumer conformity in group-level ordering. *Australasian Marketing Journal* (*AMJ*), 26(1), 41–48.

Mead, N. L., Baumeister, R. F., Stillman, T. F., Rawn, C. D., and Vohs, K. D. (2011). Social exclusion causes people to spend and consume strategically in the service of affiliation. *Journal of Consumer Research*, 37(5), 902–919.

Quester, P., and Steyer, A. (2009). Revisiting individual choices in group settings: The long and winding (less traveled) road? *Journal of Consumer Research*, 36(6), 1050–1057.

Raghunathan, R., and Corfman, K. (2006). Is happiness shared doubled and sadness shared halved? Social influence on enjoyment of hedonic experiences. *Journal of Marketing Research*, 43(3), 386–394.

Stöckli, S., Dorn, M., and Liechti, S. (2018). Normative prompts reduce consumer food waste in restaurants. *Waste Management*, 77, 532–536.

Woolley, K., and Fishbach, A. (2017). A recipe for friendship: Similar food consumption promotes trust and cooperation. *Journal of Consumer Psychology*, 27(1), 1–10.