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Dining alone or together?

The effect of group size on the service customer experience

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Abstract

Within the broader field of consumer experience of services, this paper addresses the impact of the size of a group of consumers sharing the same meal experience in a restaurant. This research is based on the quantitative analysis of sales receipts from 2753 restaurants tables. Multinomial logistic regression models and variance analysis show that the individual spend per guest depends on the number of guests per table. They also reveal that the proportion of prix-fixe menus ordered by table (vs. à-la-carte) is mostly maximized for meals taken as a couple and minimized for meals taken alone, depending on restaurant settings.

Keywords: Service experience, Restaurant, Group size, Individual spend, Menu, Consumer groups, Companions

1. Introduction

The indisputable link between the image of France and food is not only due to the quality and variety of its cuisine but also, most likely, because eating is one of the preferred activities of the French, particularly when it involves sharing a meal (Guillemin et al., 2016). On average, the French take one in every seven meals outside their homes. In 2017, they spent 55.6 billion euros in commercial restaurantsⁱ. In addition, the French share their meals in nearly three-quarters of the cases; sharing a meal is often one of the main motivations to visit a restaurant. The shared element is, indeed, a key component of food consumption.

The academic literature in the marketing field has long been interested in groups with various goals and different dimensions. For example, research has focused on the decision-making dynamics within a couple (e.g., Davis, 1976; Dellaert et al., 1998), family purchasing (e.g., Parkinson et al., 2016), group shopping behavior (e.g., Wu and Tsai, 2017), and even bulk purchases (e.g., Wang et al., 2013). Social psychologists, recently joined by marketing researchers, characterize a social group along three dimensions: the nature of the social link between its members, the depth of their relationship, and the number of individuals in the group (Ariely and Levav, 2000; Asch, 1955). Marketing has investigated the first two dimensions -for example, the relationships between consumers (e.g., Kurt et al., 2011) and the impact of companions during a shopping experience (e.g., Hanks et al., 2017). Other studies have also highlighted the impact of groups on innovation through behaviors such as mimicry and conformism (e.g., Chan et al., 2012; Yoon et al., 2011) or even on the co-creation of new offers (Fellsson and Salomonson, 2016). By contrast, the third characteristic has been the focus of relatively few studies, particularly with respect to its impact on individual behavior.

The marketing literature also includes several articles on the effect of the number of individuals present at the same point of sale on consumers' reactions, perceptions, and

behavior, most notably through the concepts of density or crowds (e.g., Her and Seo, 2018; Knoeferle et al., 2017; Turley and Milliman, 2000). Nevertheless, these studies have focused exclusively on the role of so-called imposed fellow customers, with whom an individual did not chose to share his or her shopping experience (Wu, 2007). Thus, the influence of other consumers with whom the individual has decided to share his or her meal, or chosen fellow customers, is largely unknown. Indeed, little research qualifies the shopping companion effect (Borges et al., 2010) especially regarding the number of physically present companions. To our knowledge, only Thompson (2011) discusses the size of a group of chosen fellow customers in terms of cherry-picking behavior during meals involving large groups.

Similarly, the spend variable also remains largely under-studied in the context of a service experience involving meals taken outside the home. Yet the social and cultural environment strongly influences this type of consumption, together with other variables such as the duration of consumption outside the home, which is likely to be less constrained in France than in the United States (De Castro, 2000; Edwards, 2013). In addition, while many restaurateurs effectively take into account the relationship between the choice of a *prix-fixe* menu or an *à-la-carte* menu and the total spend, limited research has examined the relationship between the two (Fang and Peng, 2013), particularly when the size of the group of consumers varies. However, considering that the choice between a *prix-fixe* vs. *à la-carte* may have an impact on the total spend and/or inventory management of the restaurateur, this impact is also likely to be true when the number of guests varies. These various elements, as well as the symbolic and social dimensions of the restaurant experience in the French cultural context (De Castro, 2000), all concur to justify a more in-depth examination of the phenomenon of social influences in this environment.

The purpose of this paper is to identify and explain the impact of group size on individual spend, on the one hand, and on the choice between a *prix-fixe* menu and an *à la-carte* menu,

on the other hand, during a restaurant experience outside the home. This quantitative analysis study is based on the *in situ* observation of some 4171 consumers (including 2750 meals). *prix-fixe*. From a theoretical perspective, our research is in line with marketing research on social influences (Ariely and Levav, 2000; Chan et al., 2012) and research in hospitality management (Yoon et al., 2011).

From a managerial perspective, members of the hospitality industry should consider group size when serving a single, two or several individuals. For the host, the objective is to manage the number of guests while optimizing space (Kimes and Robson, 2004). Depending on the size of the tables, guests will be more or less easily served simultaneously, thus underscoring the importance of satisfying them as a group.

2. Theoretical background and hypotheses

Depending on the number of individuals physically present during consumption, the size of a table in a restaurant (Bell and Pliner, 2003; Brindal et al., 2011) can be an influential variable for the restaurateur. Recent research indicates that having a meal, particularly outside the home, is a highly social activity (Higgs and Thomas, 2016). Many studies show consumer preference for group meals as well as a significant proportion of meals taken alone, sometimes out of necessity (De Castro and Brewer, 1992). Her and Seo (2018) more precisely find that taking a meal in a group is also dependent on the type of group involved and the social density perceived by the consumers in the restaurant. The subsequent reactions to these preferences have an impact on the individual spend as well as the menu choices of the consumers.

2.1 The influence of the size of the group on consumer spend

While research in restaurant revenue management has assessed the impact of the size of groups on the duration of the meal (Bell and Pliner, 2003) and even the tip left to the server (Seiter and Weger, 2010), these studies focus less on the impact of the size of the group on the spend and are primarily carried out in a North American context (Brindal et al., 2011). By relying more or less strong on density effects during consumption episodes, Van Rompay et al. (2012) show that the more an individual is accompanied in his experience by others, the more he is likely to spend to convey a positive social image and also to respond to the need for social connection. Studies in the context of shopping experiences as well as restaurant dining have confirmed the positive impact of meal companions on the total spend and the satisfaction with and consideration for the meal experience (Hart and Dale, 2014). Moreover, Bertsimas and Shioda (2003) indicate that restaurants' per-guest revenue increases with the size of the table. However, some studies have shown controversial results; for example, Thompson (2011) concludes that while larger groups remain seated longer at the restaurant table, they tend to spend less per person. This effect could be explained by the reaction of customers to the longer wait associated with servicing larger groups, which could lead them to order less. Moreover, Pliner and Bell (2009) show that even though the marginal quantity of food consumed by customers is lower when the number of guests increases, people who have dinner alone tend to eat less than those in groups. Finally, the size of the group may be a moderator of the effect of the atmosphere of a restaurant on the total spend, as may be, for example, the location or spacing between the tables (Robson and Kimes, 2009). In line with these works (Bell and Pliner, 2003; Hart and Dale, 2014; Van Rompay et al., 2012) and those of Donovan et al. (1994), which shows a positive correlation among the duration of a meal, the subsequent spend, and the size of the group, we offer the following hypothesis:

Hypothesis 1: The larger the group of diners, the higher is the individual spend.

2.2 The influence of group size on consumer choice

In services literature, studies have increasingly examined the concept of bundles, associating products with additional services, including those in the tourism industry (e.g., turnkey trips, all-inclusive stays) (Yolal et al., 2017). In the restaurant industry, one key management metric is a daily concern for the restaurant owner—namely, the number of *prix-fixe* versus *à-la-carte* menus (Myung et al., 2008). We define a “*prix-fixe* menu” as a fixed-price offer of a limited number of dishes listed in an explicit order. The *prix-fixe* menu is a powerful sales tool (Bowen and Morris, 1995) that allows restaurateurs to better control their consumption of raw materials, to improve the speed of service both in the kitchen and at the table, and to sell complete meals (with a better balance of an appetizer, a main course, and a dessert) (Myung et al., 2008). The *prix-fixe* menu offers good value for the money and can be viewed as summing up the whole restaurant dining experience (Annaraud, 2007; Merce et al., 2013). These commercial offers also serve as mind maps to make the diner's decision process easier in view of a menu that may seem overly complex. Some studies in the field of hotel financial management have shown that the efficiency of the business model of a restaurant increases with the consumption of *prix-fixe* menus (Fang and Peng, 2013). In addition, Merce et al. (2013) document that the choice of a *prix-fixe* menu or *à-la-carte* dining has an impact on total spend. However, if customers find the *prix-fixe* menu too “commercial,” they may be less satisfied, be more hesitant in their final choice (Hamilton, 2003). To avoid such an impression, recommending an *à-la-carte* or a more attractive *prix-fixe* menu could increase the customer's satisfaction, leading to higher revenue (Myung et al., 2008). Studies on the impact of the recommendations of the server on the customer have shown that individual consumption and spend increase when the advice is followed (Borchgrevink and Susskind, 2006). Customers are motivated to follow the recommendations of a server through peer pressure and, to various degrees, particularly when the customer is a member of a group. The

impact of the size of the group may increase the peer pressure regarding the suggestion, leading to a positive effect of group size on the proportion of prix-fixe menus ordered. Thus:

Hypothesis 2: The higher the number of guests at a table, the higher is the share of prix-fixe menus ordered.

3. Methodology

We conducted a quantitative analysis of data collected from the sales receipts of casual French-style restaurants in Paris with similar menu offerings. For each sales receipt, we collected the following elements: date of the meal, time of payment, location of the table, total spend of the table, number of guests at the table, and details of the dishes ordered (i.e., appetizers, main course, dessert, prix-fixe menus, alcoholic beverages, non-alcoholic beverages, and coffee).

3.1 Context

The three restaurants in the study are relatively similar in factors such as location (good visibility, same neighborhood), meal variety (the range of dishes offered is wide enough but standard), the average price for à-la-carte dining, and the decor. Sales receipts were collected with the full consent of the owners. To minimize the impact of outside factors that are part of any restaurant experience, we controlled for several elements during the experiment (e.g., absence of music, the presence of a single server for each table).

3.2 Participants and procedure

The sample includes 2750 tables and 4171 consumers. A preliminary examination of the receipts shows that the number of guests per table varies from one to nine, with an average of 1.52 consumers per table (the restaurant type has no impact on the number of guests per table) and an over-representation of tables with a single or two guests. For the purpose of this

research, the two dependent variables selected were the average individual spend and the share of prix-fixe menus per table (i.e., the number of prix-fixe menus by table divided by the number of guests at the table).

3.3 Measurements

An analysis of variance (ANOVA) of the data shows a variation in spend and the share of prix-fixe menus according to three categories of groups per table (one guest, two guests, and three or more guests). The correlation coefficient between the spend and the share of prix-fixe menus per table is significant ($p = 0.001$) but sufficiently close to 0 ($r = 0.061$) to justify an independent inquiry into each of the two variables. This result led to two statistical studies, each performing multinomial regression analysis as well as further inquiries through ANOVA and analysis of covariance tests.

4. Study 1: Impact of group size on total spend

4.1 The individual spend depends on the size of the table

A first multinomial regression analysis of the data (Table 1) shows that the variation in individual spend can be explained for 46% (pseudo $R^2 = 0.461$, $p = 0.000$) by the number of customers per table ($p = 0.000$) and the ordering of alcohol ($p = 0.000$). The variable "alcohol" actually increases the total spend per table, and is more influential at dinner than at lunch. Total spend is also at its highest during dinner. However, the impact of –the group size - follows the same trend for lunch and dinner and whether alcohol was consumed or not. These results show a link between total spend and group size. Note that, following a very particular – and often collective - decision process ‘depending on social interactions [with] other people at the table’ (Cohen et al., 2009, p.54) the choice of alcohols is difficult to compare to other products such as dishes and has not been studied here.

Table 1 Multinomial regression model to explain spend variations

Effects on spend	Likelihood-ratio tests	
	χ^2	<i>p</i>
Alcohol (yes/no)	1.33 E + 03	0.000
Number of guests per table	67,744	0.000
Weekend vs. week	2.503	0.286
Lunch vs. dinner	1.813	0.404
Location indoors vs. outdoors	1.427	0.49
Final model	1.45 E + 03	0.000

Pseudo-R² (Nagelkerke): 0.461

4.2 Individual spend increases with group size

The results show that the larger the group, the more significant is the increase of the individual spend (Table 2). When the meal is shared by three or more people, the individual spend increases by 2 euros on average, compared with a meal taken alone (+1,15 euros in restaurant 1; +1,31 in Restaurant 2; +2 euros in Restaurant 3). It is also interesting that the average spends, and the prix-fixe menu percentage, are lowest for Restaurant 2, regardless of the table size. According to the managers we interviewed, the environment of this room is darker, with many floors and with a close proximity between the toilets and the tables. Regarding this less convivial environment, thinning major works are precisely planned.

These initial results confirm hypothesis 1 ($F = 25,281$, $p = 0.000$). The variance in the spend is more significant when the group size increases (extended interval of confidence) (Levene variance homogeneity test: $L = 6.12$; $p = 0.002$). Overall, the individual spends of those

eating with a large group is superior. Nevertheless, this spend falls within a wider range than that of smaller groups.

Table 2 Overall effect of group size on individual spend (ANOVA)

	Average spend (€)	Standard deviation	Standard error	Confidence interval (95%)	
				Lower boundary	Higher boundary
1 consumer per table	15.997	6.276	0.065	15.698	16.295
2 consumers per table	17.224	6.358	0.010	16,788	17.660
3 consumers and more per table	18.801	7.163	0.018	17.872	19.729
Total	16.597	6.435	0.005	16.357	16.838

Specifically, an ANCOVA (see Appendix A) shows the positive link between the number of guests at the table and the average individual spend when we control for the following variables: type of dish, choice of an alcoholic beverage, and time of the meal (lunch or dinner) ($\eta^2 = 0.6$, the impact is then of great size because $\eta^2 > 0.14$). In addition, an inter-group analysis allows the completion of the test of hypothesis 1 at the level of each restaurant (see Appendix B). The results validate hypothesis 1 in the French cultural context as the trend is confirmed overall at the local level.

4.3 Discussion

As we had initially presumed, individual spend increases with the size of the table. While this result does not confirm the study of Thompson (2011) conducted in a different cultural context, it is consistent with the conclusions of Van Rompay et al. (2012) and Hart and Dale

(2014). A group of fellow-customers seems to create a favorable atmosphere for consumption and additional spending. The guests can be viewed as social facilitators (De Castro 1994), who work herein in the context of consumption outside the home. This element can also be explained by longer meals when taken in a larger group, as prior research suggests (e.g., Hart and Dale, 2014). Bell and Pliner (2003) show a positive correlation between the size of the group and the length of time spent in a restaurant. In addition, other studies indicate that this correlation would lead to larger quantities of food ordered and consumed (De Castro and Brewer, 1992; Hart and Dale, 2014; Pliner et al., 2006) and, therefore, higher spend. Indeed, the time spent at the table and the spend are positively correlated (Donovan et al., 1994). These effects, based on the theory of social facilitation, have been demonstrated in mostly Anglo-Saxon research. The results of the current study show that French consumers do not reduce their individual spend when having a meal in a large group; on the contrary, they spend more. The much-favored habit of the French of eating out with friends should therefore be encouraged by restaurant owners because it increases individual spend and, thus, the restaurant's revenue.

5. Study 2: Impact of group size on the share of prix-fixe menus

The variation in the orders of prix-fixe menus is explained (24%) by the multinomial regression (Table 3). The choice of a prix-fixe menu (vs. an à-la-carte selection) depends on several variables: the meal period ($p = 0.000$: 13% of menu choice for lunch and 5% for dinner, which is logically explained by the more frequent use of menus at lunch, and 11% during the week vs. 6% during the weekend), and the consumption of an alcoholic beverage not studied here ($p = 0.018$). The 'number of consumers at the table' ($p = 0.000$) explains the most the prix-fixe menu percentages variations ($\chi^2=309,989$). Complementary analyzes are however performed to verify the isolated effects of this variable.

Table 3 Multinomial regression model explaining the proportion of prix-fixe menus

Prix-fixe menu	Likelihood-ratio tests	
	χ^2	p
Number of guests per table	309.989	0.000
Lunch vs. dinner	81.792	0.000
Alcohol (yes/no)	26.404	0.002
Weekend vs. week	19.382	0.022
Location indoors vs. outdoors	8.889	0.448
Final model	4.35 E +02	0.000

Pseudo-R² (Nagelkerke): 0.240

5.1 The proportion of prix-fixe menus per table increases when meals are shared

The larger the group, the more the share of prix-fixe menus per table increases (Table 4). Tables with a single guest have a 7.93% share of prix-fixe menus, while tables of two have a 12.38% share and tables of three or more have a 13.23% share ($F = 8,594$; $p = 0.000$). Each guest may find it simpler to select a prix-fixe menu when in a group because the overall ordering process might be easier; that is, peer pressure may also have an implicit impact on the individual willing to conform to simplify the ordering process, as Higgs and Thomas (2016) suggest. Note that the variances are significantly different ($L = 24.509$; $p = 0.000$). There is more variance in the case of shared meals than in the case of meals taken alone and especially for meals taken by two guests. This suggests that two diners adopt more "extreme" behavior: the choice of a prix-fixe menu is very much a mutual decision.

Table 4 Overall impact of group size on the share of prix-fixe menus per table (ANOVA)

	Average share of prix-fixe menus per table	Standard deviation	Standard error	Confidence interval (95%)	
				Lower boundary	Higher boundary
1 consumer per table	7.93%	0.027	0.065	0.066	0.092
2 consumers per table	12.38%	0.029	0.010	0.103	0.144
3 consumers and more per table	13.23%	0.028	0.018	0.095	0.169
Total	9.70%	0.028	0.005	0.086	0.107

Moreover, an ANCOVA (see Appendix C) shows the link between the choice of a prix-fixe menu and the size of the group when we control other variables, even when the size effect is moderate ($\eta^2 = 0.113$).

Moreover, regardless of the restaurant, the share of menus per table is always lower for tables with a single guest. Considering each restaurant, the share of menus per table is also always lower for the restaurant 2, even if these results follow the same trend as other restaurants. Moreover, the prix-fixe menu percentage is highest for groups of two consumers in the first two restaurants and highest for three and more consumers in the third restaurant (see Appendix D). Regarding the selection of a prix-fixe menu in other table configurations, two groups stand out: in restaurants 1 and 2, tables of two consumers select the most prix-fixe menus, and in restaurant 3, the share of prix-fixe menus increases with the number of guests at a table. The results suggest a partial validation of hypothesis 2, because only two out of three restaurants meet the conditions of the hypothesis.

5.2 Discussion

The stronger preference for a *prix-fixe* menu by tables of two guests can probably be explained by the occurrence of a joint decision, following a dual decision process similar to that observed among couples (Davis, 1976; Dellaert et al., 1998). In addition, a meal served simultaneously for more than two guests eating together (i.e., appetizer, main course, or main course and dessert) sets the pace of the meal, which can be more pleasant for the guests if the service is properly synchronized. When there are more than two guests, the decision-making process becomes more complex and depend on the restaurant configuration and interior arrangement. It is then possible to imagine a new decomposition of the decisional unit: becoming an aggregate of individual preferences again, subject to social influences (unlike in the case of a couple, who have a tendency to make a joint decision). Finally, the differences found between restaurants can be explained by their respective settings. Restaurant 3 offers a less comfortable space, which may lead guests to order and eat more quickly than in a more spacious space (Her and Seo, 2018; Knoeferle et al., 2017). Indeed, according to the managers, the servers may have some difficulties to stroll between tables that are too close to each other, and then to take orders close enough to the individuals. Thus, customers may implicitly simplify their order. In this type of configuration, the larger the group, the simpler the choice is.

6. General discussion

As in any service offering, a satisfying restaurant experience presupposes that the service provider has considered the various components of the experience, such as the facility, the meeting between guests themselves and the meeting between consumers and employees, the product offering, the atmosphere and ambiance of the dining experience, and the overall management system (e.g., Fellesson and Salomonson, 2016; Seiter and Weger, 2010). This

paper better identifies some aspects of the consumer experience based on whether it is solitary or collective. Specifically, it highlights an influential variable in the restaurant context: the number of people sharing a service experience. This variable is rarely examined in a French context, even though the French have a high propensity to share meals in a group (Guillemin et al., 2016). The results show a significant and positive impact of the number of diners on individual spend and also on the share of menus ordered (which is, in most cases, maximized for tables of two guests).

6.1 Theoretical and practical contributions

This research follows the work of Thompson (2011) conducted in another cultural context and Fang and Peng (2013), who measure the performance of foreign restaurants from the perspective of the restaurant operator. Our results are also in line with the reflections of Chan et al. (2012) and the works of Ariely and Levav (2000) and Yoon et al. (2011), which highlight the importance of culture in the impact of the group on the search for variety or conformity.

An individual in a group will be inclined to spend more than an individual dining alone. These results are consistent with the reflections of Mora and Gonzalez (2016) who highlight that solo shoppers are more motivated by utilitarian elements and will only spend what they "usefully" spend. The pleasure of sharing a meal and the social interactions create a feeling of friendliness, which can make the meal last longer and could explain the higher individual spend. The restaurateur must preserve the group experience without disrupting the shared consumption through, for example, efficient service. Just like in community management marketing, any strategy favoring social interactions within the group should be encouraged. Groups are value-added customers to whom the restaurateur can offer special favors (e.g., appetizers on the house). In addition, the group can be either an inhibitor or a social facilitator when it comes to the selection of a *prix-fixe* menu. Therefore, restaurateurs

who want to increase the proportion of menus (to optimize inventory or simplify the service in the kitchen) must take this phenomenon into account when offering service to groups. This means, for example, identifying and convincing the leaders at the table who will influence the choices of the other guests. Another option is to convince a majority of guests to lead the others in following the dominant choice of a *prix-fixe* menu. Although this decision depends on the type of restaurant and the management's objectives (e.g., the search for variety in theme restaurants), this is also true for meals taken by couples, during which consumers tend to agree on the format of their meal. Finally, restaurateurs should offer culinary recommendations to consumers eating alone to encourage them to increase their spending.

6.2 Limitations and future investigations

A few limitations suggest several avenues for research.

First, we examine the impact of group size in light of behavioral variables. Thus, verbal data could allow for a better identification of mitigating variables, such as the attitude toward service, the satisfaction with the meal, or the impact of the atmosphere on consumption. Depending on the size of the group, guests will occupy a space that is more or less noisy, which will have an impact on the duration of the meal and, therefore, the spend of the guests in the group and potentially that of other guests as well. It would be also interesting to explore the wine decision-making within the tables in a qualitative way.

Then, we examine groups herein from a quantitative standpoint (i.e., the number of members of the group) rather than from a qualitative perspective considering the relationships or the types of interactions. It would be useful to extend future investigations on the qualitative dynamics of the group in order to deepen our results, considering the relationships that exist in the group (imposed or chosen fellow-customers and, more precisely, the affinity ties between members: friends, family, business, etc., or even the occasion consumption: wedding,

birthday, seminar) referring to Borges et al. (2010) or, more recently Her and Seo (2018) works. Some individual characteristics such as the type of consumers, loyalty to the restaurant, or even their expertise could be considered to better understand the individual response to the restaurant offer but also to the group.

Furthermore, many restaurateurs impose a fixed-price menu for all guests arriving in a large group to facilitate the ordering process and optimize inventory. It is therefore necessary to create more precise segments for large groups to better isolate their effects. To that extent, considering the current undersized sub-samples of tables of four guests and more per table (only 385 guests), a future qualitative study might attempt to clarify the impact of large tables.

In addition, from a methodological standpoint, and despite the control of external factors regarding the restaurant, a few elements could not be controlled (e.g., the olfactory environment, the noise level of other guests). Other potential inquiries for future research would be to explore restaurants located in other cities, or in an intercultural context. Finally, a further investigation may explore the hedonic and pleasurable values of individuals derived from a shared meal in different group sizes.

Appendices

Tests of Between-Subjects Effects

Dependent variable: Average individual spends

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected model	1328,180 ^a	5	265,636	1240,900	,000	,683
Alcohol (yes/no)	199,577	1	199,577	932,311	,000	,244
Lunch vs. dinner	,026	1	,026	,122	,727	,000
Type of Dishes	7,194	1	7,194	33,606	,000	,012
Number of guests per table	1004,074	2	502,037	2345,230	,000	,619

a. R-Squared = ,683 (Adjusted R-Squared = ,682)

Appendix A ANCOVA details for individual spends

	Average individual spends			Global evolution
	1 consumer per table	2 consumers per table	3 consumers and more per table	
Restaurant 1	16,39	17,38	18,53	↗
Restaurant 2	14,93	15,93	17,24	↗
Restaurant 3	16,04	17,45	19,48	↗

Appendix B Effect of group size on individual spends according to each restaurant (ANOVA)

Tests of Between-Subjects Effects

Dependent variable: % *prix-fixe menus* per table

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Modèle corrigé	162,457 ^a	5	32,491	91,402	,000	,137
Alcohol (yes/no)	3,488	1	3,488	9,812	,002	,003
Weekend vs. week	6,362	1	6,362	17,898	,000	,006
Lunch vs. dinner	29,437	1	29,437	82,810	,000	,028
Number of guests per table	130,049	2	65,025	182,921	,000	,113

a. R-Squared = ,137 (Adjusted R-Squared = ,135)

Appendix C ANCOVA details for the proportion of *prix-fixe menus*

	% <i>prix-fixe menus</i> per table			Evolution
	1 consumer per table	2 consumers per table	3 consumers and more per table	
Restaurant 1	9%	17%	13%	↗ ↘
Restaurant 2	7%	10%	7%	↗ ↘
Restaurant 3	8%	10%	15%	↗

Appendix D: Effect of group size on the proportion of *prix-fixe menus* according to each restaurant

References

- Annaraud, K., 2007. Restaurant menu analysis: can we go further?. *J. Foodservice. Bus. Res.* 10(4), 25-37.
- Ariely, D., Levav, J., 2000. Sequential choice in group settings: taking the road less traveled and less enjoyed. *J. Consum. Res.* 27, 279-290.
- Asch, S. E., 1955. Opinions and social pressure. *Sci. Am.* 193(5), 31-35.
- Bell, R., Pliner, P.L., 2003. Time to eat: the relationship between the number of people eating and meal duration in three lunch settings. *Appetite* 41(2), 215-218.
- Bertsimas, D., Shioda, R., 2003. Restaurant revenue management. *Oper. Res.* 51(3), 472-486.
- Borchgrevink, C.P., Susskind, A.M., 2006. Consumer acceptance of server recommendations. *Int. J. Hosp. Tourism A.* 7(4), 21-41.
- Borges, A., Chebat, J. C., Babin, B. J., 2010. Does a companion always enhance the shopping experience?, *J. Retail. Consum. Ser.*, 17(4), 294-299.
- Bowen, J.T., Morris, A.J., 1995. Menu design: can menus sell?, *Int. J. Contemp. Hosp. M.* 7(4), 4-9.
- Brindal, E., Wilson, C., Mohr, P., Wittert, G., 2011. Does meal duration predict amount consumed in lone diners? An evaluation of the time-extension hypothesis. *Appetite.* 57(1), 77-79.
- Chan, C., Berger, J., Van Boven, L., 2012. Identifiable but not identical: combining social identity and uniqueness motives in choice. *J. Consum. Res.* 39(3), 561-573.
- Cohen, E., d'Hauteville, F., Sirieix, L., 2009. A cross-cultural comparison of choice criteria for wine in restaurants. *Int. J. Wine Bus. Res.* 21(1), 50-63.

- Davis, H.L., 1976. Decision making within the household. *J. Consum. Res.* 2, 241-260.
- De Castro, J.M., 1994. Family and friends produce greater social facilitation of food intake than other companions. *Physiol. Behav.* 56(3), 445-450.
- De Castro, J.M., 2000. Eating behavior: lessons from the real world of humans. *Nutrition.* 16(10), 800-813.
- De Castro, J.M., Brewer, E.M., 1992. The amount eaten in meals by humans is a power function of the number of people present. *Physiol. Behav.* 51(1), 121-125.
- Dellaert, B.G., Prodigalidad, M., Louviere, J.J., 1998. Family members' projections of each other's preference and influence: a two-stage conjoint approach. *Market. Lett.* 9(2), 135-145.
- Donovan, R.J., Rossiter, J.R., Marcolyn, G., Nesdale, A., 1994. Store atmosphere and purchasing behavior. *J. Retailing.* 72(3), 283-294.
- Edwards, J.S., 2013. The foodservice industry: eating out is more than just a meal. *Food Qual. Prefer.* 27(2), 223-229.
- Fang, C.Y., Peng, P.Y.J., 2013. Does using an à-la-carte or combo set menu affect the performance of a teppanyaki-style restaurant? *Int. J. Contemp. Hosp. M.* 25(4), 491-509.
- Fellessen, M., Salomonson, N., 2016. The expected retail customer: Value co-creator, co-producer or disturbance? *J. Retail. Consum. Ser.*, 30, 204-211.
- Guillemin, I., Marrel, A., Arnould, B., Capuron, L., Dupuy, A., Ginon, E., Urdapilleta, I., 2016. How French subjects describe well-being from food and eating habits? Development, item reduction and scoring definition of the Well-Being related to Food Questionnaire. *Appetite.* 96, 333-346.

- Hamilton, R., 2003. Why do people suggest what they do not want? Using context effects to influence others' choices. *J. Consum. Res.* 29(4), 492-506.
- Hanks, L., Line, N., Kim, W.G.W., 2017. The impact of the social servicescape, density, and restaurant type on perceptions of interpersonal service quality. *Int. J. Hosp. Manag.* 61, 35-44.
- Hart, P.M., Dale, R., 2014. With or without you: the positive and negative influence of retail companions. *J. Retail. Consum. Ser.* 21(5), 780-787.
- Her, E., Seo, S., 2018. Why not eat alone? The effect of other consumers on solo dining intentions and the mechanism. *Int. J. Hosp. Manag.* 70, 16-24.
- Higgs, S., Thomas, J., 2016. Social influences on eating. *Curr. Opin. Behav. Sci.* 9, 1-6.
- Kimes, S.E., Robson, S., 2004. The impact of restaurant table characteristics on meal duration and spending. *Cornell Hotel Rest. A.* 45, 333-346.
- Knoeferle, K.M., Paus, V.C., Vossen, A., 2017. An upbeat crowd: fast in-store music alleviates negative effects of high social density on customers' spending. *J. Retailing.* 29(4), 541-579.
- Kurt, D., Inman, J.J., Argo, J.J., 2011. The influence of friends on consumer spending: the role of agency–communion orientation and self-monitoring. *J. Mark. Res.*, 48(4), 741-754.
- Merce, I.I., Milin, I.A., Rădac, B.A., Iancu, T., Sîrbulescu, C., 2013. Menu list-label of restaurant. *Lu. Știin. Manag. Agri.* 15(4), 141-146.
- Mora, J. D., González, E.M., 2016. Do companions really enhance shopping? Assessing social lift over forms of shopper value in Mexico. *J. Retail. Consum. Ser.* 28, 228-239.

- Myung, E., Hale Feinstein, A., McCool, A.C., 2008. Using a discrete choice model to identify consumer meal preferences within a prix-fixe menu. *J. Hosp. Tour. Res.* 32(4), 491-504.
- Parkinson, J., Gallegos, D., Russell-Bennett, R., 2016. Transforming beyond self: fluidity of parent identity in family decision-making. *J. Bus. Res.* 69(1), 110-119.
- Pliner, P., Bell, R., 2009. A table for one: the pain and pleasure of eating alone. In: Meiselman HL (ed) *Meals in science and practice. Interdisciplinary research and business applications*, Woodhead Publishing, Cambridge, 169-189.
- Pliner, P., Bell, R., Hirsch, E.S., Kinchla, M., 2006. Meal duration mediates the effect of “social facilitation” on eating in humans. *Appetite*. 46(2), 189-198.
- Robson, S., Kimes, S.E., 2009. Don’t sit so close to me: restaurant table characteristics and guest satisfaction. *Cornell. Hosp. Rep.* 9(2), 6-16.
- Seiter, J.S., Weger, Jr H., 2010. The effect of generalized compliments, sex of server, and size of dining party on tipping behavior in restaurants. *J. Appl. Soc. Psychol.* 4(1), 1-12.
- Thompson, G.M., 2011. Cherry-picking customers by party size in restaurants. *J. Serv. Res.* 14(2), 201-213.
- Turley, L.W., Milliman, R.E., 2000. Atmospheric effects on shopping behavior: a review of the experimental evidence. *J. Bus. Res.* 49(2), 193-211.
- Van Rompay, T.J., Krooshoop, J., Verhoeven, J.W., Pruyn, A.T., 2012. With or without you: interactive effects of retail density and need for affiliation on shopping pleasure and spending. *J. Bus. Res.* 65(8), 1126-1131.

Wang, J.J., Zhao, X., Li, J.J., 2013. Group buying: a strategic form of consumer collective. *J. Retailing*. 89(3), 338-351.

Wu, C.H.J., 2007. The impact of customer-to-customer interaction and customer homogeneity on customer satisfaction in tourism service. The service encounter prospective. *Tourism. Manage.* 28(6), 1518-1528.

Wu, S.I., Tsai, H.T., 2017. A comparison of the online shopping behavior patterns of consumer groups with different online shopping experiences. *Int. J. Mark. Stud.* 9(3), 24-38.

Yolal, M., Chi, C.G.Q., Pesämaa, O., 2017. Examine destination loyalty of first-time and repeat visitors at all-inclusive resorts. *Int. J. Contemp. Hosp. M.* 29(7), 1834-1853.

Yoon, S.O., Suk, K., Lee, S.M., Park, E.Y., 2011. To seek variety or uniformity: the role of culture in consumers' choice in a group setting. *Market. Lett.* 22(1), 49-64.

Endnotes

ⁱ<https://www.npdgroup.fr/wps/portal/npd/fr/actu/communiques-de-presse/restauration-hors-domicile-hausse-de-frequentation-en-2017-pour-la-seconde-annee-consecutive/>