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ARTICLE

To share or not to share: An analysis of wine list disclosure by Swiss restaurant owners

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Abstract
This paper uses data from the 2021 Swiss edition of the Gault&Millau food guide to analyze the probability with which restaurant owners decide to share their wine list with the public. This is an important question relating to the amount of information circulating in markets characterized by information asymmetry in the context of experience and credence goods. We find that restaurant owners are more willing to share wine lists with others if competition is limited or their wine list does not contain idiosyncratic information that competitors may use strategically. Interviews indicate the challenge for restaurants to balance the risk of sharing information with competitors and the opportunity to attract wine lovers by revealing an appealing wine list. We also show that this decision depends on cultural considerations.

Keywords: competition; information asymmetry; reputation; restaurants; wine list

JEL classifications: D82; L15; L66; L83

I. Introduction

Perfect information, one of the five conditions of perfect competition, is rarely satisfied. In most markets, product or service suppliers possess more information than consumers about quality and prices. Information asymmetry has been defined as a condition wherein "different people know different things" (Stiglitz, 2002, p. 469). Akerlof (1970) shows that such an informational problem can ultimately cause an entire market to collapse or shrink into a low-quality product market. Bergh et al. (2019, p. 133) identify three factors generating information asymmetry: "1. unobservable or uncertain qualities of actors or their products and services, 2. structural barriers to information propagation, and 3. strategic and behavioral barriers that limited information sharing." For Connelly et al. (2011), holding an information advantage has potential benefits. This would motivate some economic agents to keep information private. Private information has been identified as a source of acquisition gains

(Capron and Shen, 2007) and competitive advantage (Makadok, 2011). Williamson (1975) argues that information asymmetries between potential transaction partners raise the search, monitoring, and bonding costs of a transaction due to the high cost of achieving informational parity. Because it is costly for underinformed parties to achieve informational parity, some firms may exploit superior information to their advantage, leading honest firms to leave the market.

Such an asymmetry of information problem prevails in the case of experience (Nelson, 1970) and credence goods (Darby and Karni, 1973). Both concepts of experience and credence goods are used to describe situations in which consumers lack essential information about product attributes. In the case of experience goods, be it a service or a product, consumers may not be able to assess their quality or utility until after consuming it. With credence goods, utility may still be difficult to evaluate after consumption. Restaurant services and wine are traditional examples of experience and credence goods or services (Ashton, 2014; Chossat and Gergaud, 2003). In both cases, consumers can only observe and determine the quality of the product once it has been tasted. Once the tasting is done, it still remains challenging to ascertain the exact utility a consumer may get out of it. In the case of restaurants, the necessary information every customer may want to collect before deciding on which restaurant to dine at is twofold: (1) the *food menu*: consumers need a document that contains information about the style of food offered by the restaurant; and (2) the *wine menu*: consumers need a wine list as wine is, in many restaurants, considered an essential add-on to food. Even if a food menu is almost always accessible, the wine list, which is also essential information, is often unavailable and/or not easily accessible to potential customers. Wine lists may, specifically in high-end restaurants, contain strategic information that should remain secret and not be unveiled to competitors who could take advantage of it to improve their wine offer. In such restaurants, highly skilled *sommeliers* devote time to listing wines that are (*i*) of high quality and (*ii*) exclusive, that is, not commonly available, at least locally. Keeping a wine list secret is a way to prevent close competitors from getting inspiration to source wines discovered by others. A well-designed wine list is a key asset to attracting passionate wine connoisseurs with a high willingness to pay for food and wine. The last decade has been marked by a sharp rise in the price of certain rare wines, particularly Burgundies, which are frequently on the menus of high-end restaurants in Switzerland. These wines are often sold directly from the wineries through allocations at prices well below their market counterparts. Top restaurants with experienced sommeliers are more likely to have established strong ties with sought-after wineries and to benefit from allocations. This allows them to offer rare wines at lower prices and build a loyal clientele of wine lovers. However, this can also encourage them not to publish their list to avoid attracting one-time visitors who are only interested in getting a good deal on speculative wines. Thus, it is, *à priori*, unclear what drives the decision by restaurant owners to publish their wine list or keep it secret.

To answer this question, we collected information from the Swiss edition of the Gault&Millau food guide, which is, with the Michelin red guide, the most influential guide in the country. Switzerland is home to many high-end restaurants and a popular tourist destination. Moreover, Gault&Millau specializes in wine in its Swiss edition, as it also publishes an annual list of the 125 best Swiss wine producers.

Our results show that the choice to make a wine list publicly available depends on the restaurant's quality level or reputation. In this matter, high-end restaurants appear more reluctant to disseminate wine information than lower-rated restaurants. High-end restaurants have the means to make themselves visible, and all have a website that is kept up-to-date. This suggests that not publishing one's wine list is a voluntary decision and not a random one. A second pattern that emerges from the data is that the stronger the local competition, the less restaurant owners are willing to share their wine list with others. Combined, these two results suggest that restaurant owners are less likely to share their wine list with competitors, especially when it contains winery names discovered by highly skilled *sommeliers* who are well-connected in the industry. Third, this choice also depends on cultural considerations. We observe that restaurants in the German-speaking part of Switzerland are, on average, more prone to communicate freely about their wines than similar restaurants in the rest of the country. Last, we get that Asian restaurants are less willing to share their wine list publicly than other restaurants.

This article reviews the literature in Section II. Section III describes the research agenda while Section IV introduces the dataset and descriptive statistics. Section V presents the empirical results, while Section VI concludes.

II. Literature review

A prosperous restaurant is more than just the food and drinks served to guests. The service, the atmosphere, the presentation of the dishes, and the wine selection are all elements that contribute to building a great dining-out experience. Beyond its financial impact (Livat and Remaud, 2018), wine service increases customer satisfaction, loyalty, and a restaurant's prestige and perceived value (Gil-Saura, Ruiz-Molina, and Berenguer-Contrí, 2008). Moreover, wine consumption is often compared to an aesthetic experience, like appreciating art. It is a source of pleasure that involves all the senses and develops a personal taste (Charters and Pettigrew, 2005). Thus, wine is consumed for the attributes it delivers and its status representation.

Thus, an available wine list may be valuable to restaurants. These may use their list to sell and promote their wine offerings. According to Berenguer, Gil, and Ruiz (2009), a wine list is not only used to communicate about wine for commercial purposes; it also reveals the type and personality of the restaurant owner and is used to differentiate the restaurant from its competitors. Lockshin, Cohen, and Goodman (2009) show that the value a wine list may convey to customers varies across countries. However, literature agrees on specific aspects of wine list design and content. A wine list must be clear, avoid ambiguity, and include unique products and local wines (Gil, Berenguer, and Ruiz, 2009). It should also be easy to use and update, modern, selective, and varied (Oliveira-Brochado and da Silva, 2014; Gil, Berenguer, and Ruiz, 2009). Sirieix et al. (2011) and Terblanche and Pentz (2019) add aspects restaurateurs consider in their wine offer: local wines, taste, food pairing, and price. Other evidence on the factors triggering wine purchases concludes that grape varietal, awards, and price are essential attributes for customers (Corsi, Mueller, and Lockshin, 2012). Further analysis suggests that higher sales are achieved when the wine offer is included in the food menu and when the price does not come with currency signs (Yang and Lynn, 2009). The list

should also contain multiple wines produced by the same winery and include reserve wines, covering multiple price ranges and addressing different customer types, such as customers looking for organic wines (Delmas, Gergaud, and Lim, 2016).

Wines and beverages are essential profit drivers. Excessive prices can lead to reduced wine sales. On the other hand, restaurants that price their wines too low cannot sustain their costs. As a rule of thumb, most restaurateurs use a markup of three, which covers the initial purchasing cost, inventory and service costs, and profit margin. However, it varies widely depending on the type of restaurant (Livat and Remaud, 2018), and the traditional markup can be reduced for more expensive wines or influenced by "by the glass" offers (Dearden, Guo, and Meyerhoefer, 2021). De Meza and Pathania (2021) further examine whether the second-cheapest wine on a restaurant wine list is a rip-off. They find that the markup on the second-cheapest wine is significantly below that on the four next most expensive wines. Cardebat et al. (2021) find evidence that price dispersion in restaurant sales of wine increases with competition. The price should also account for the willingness to pay of customers while considering retail prices visible to consumers when pricing their wines (Amspacher, 2011). A solution to avoid comparisons is to list wines rarely present in retail shops.

Another aspect is the overall image and reputation of the restaurant. Casual restaurants should propose lower prices to meet their clientele's expectations (Yang and Lynn, 2009). For example, in casual restaurants, sales of alcoholic beverages increase when less expensive wines are offered. On the contrary, fine dining customers may be willing to choose more expensive wines, concluding that higher prices can be a synonym for higher quality. A well-designed wine list can become a competitive advantage in distinguishing restaurants (Gil, Berenguer, and Ruiz, 2009). Maynard and Davidson (2012) further suggest focusing wine marketing on the environment of the restaurant and less on its clientele. In the highly competitive food and beverage business, differentiation constitutes a significant feature and can determine long-term success. For these reasons, not all restaurants are willing to publish their list online. Indeed, in addition to consumers, competitors can check it and adapt their selection and pricing accordingly. Since pricing, a strategic aspect of the restaurant business, can be easily copied, some restaurant owners may share their list without the price information. Thus, this paper will assess the variables explaining the decision of restaurants to publish their wine lists online.

III. Research agenda

A well-made wine list can become a competitive advantage to distinguish among restaurants (Gil-Saura, Ruiz-Molina, and Berenguer-Contrí, 2008). In the highly competitive F&B business, differentiation constitutes a significant feature and can determine long-term success. Consequently, a well-constructed wine list that meets customers' needs and ensures a fair turnover ratio is an asset to protect. For these reasons, not all restaurants are willing to publish their list online. Indeed, in addition to consumers, competitors can examine it, adapting their mentions and pricing accordingly. Since pricing can be easily copied and constitutes a source of risk, some establishments may make a list public without the relative prices. The quantitative part of this study assesses the variables that impact the probability of a restaurant publishing

its wine list online. At the same time, the main factors inducing or preventing the posting of the list will be discussed via a qualitative analysis using interviews with professionals operating in the restaurant industry.

IV. Data

A. Presentation of the dataset

Our sample includes all restaurants listed in the 2021 Swiss edition of the Gault&Millau (GM thereafter) restaurant guide. Together with the Michelin Red Guide, Gault&Millau is one of the most influential food guides and Switzerland's market-leading gastronomic and comprehensive guide. For each of the 811 restaurants included in the 2021 edition, we know its overall food quality score (from 12 to 20 points), location, cuisine type, and website. A brief, informative review is also provided for each rated restaurant. The author of the review is anonymous. Restricting the sample to only restaurants listed in this guide ensures that a specific criterion is followed to sort out Switzerland's many different food businesses.[1]

We manually check whether the restaurant website contains a wine list, whether this includes price information, and whether it is available for download. Approximately one restaurant out of two (408) has its wine list available for inspection on its website. Among these, 98.5% (402) include wine prices, while 86.5% (352) restaurants have their wine list available for download, with 99.4% including prices.

B. Qualitative analysis

Among the restaurants in our quantitative sample, 254 were contacted for interviews to help determine management practices and challenges. In total, 14 contacts were willing to be interviewed. Interview participants represent three, four, and seven restaurants from the Italian-, French-, and German-speaking regions, respectively. They also represent different quality levels, with three respondents in 14-point restaurants, four in 15, four in 16, and three in 18-point restaurants. Interviews with sommeliers and wine experts ensured they shared valuable and representative insights, adding up to the quantitative results thanks to their background in the wine industry, which was not always limited to restaurants. Among the different interview questions, one directly pertained to the availability of wine lists ("*Why do you publish/you do not publish your wine list on your website?*"). All interviews were conducted online and lasted between 20 and 30 minutes, depending on the elaboration of the responses.

C. Descriptive statistics

Table 2, Panel A, shows the breakdown of restaurants by Swiss region. Of the 811 restaurants in the sample, 62.2% (504) are located in the German-speaking part of Switzerland. This is due to the larger size of the region compared to the French-

[1]According to a recent report retrieved from the Gastro Suisse website, in 2018, there were around 23,000 restaurants and cafés in Switzerland (Nathani et al., 2021).

Table 1. Type of wine list availability

Wine list	Yes	%	No	%
Available	408	50.31	403	49.69
Available with prices	402	49.57	409	50.43
Downloadable	352	43.40	459	56.60
Downloadable with prices	350	43.16	461	56.84

Notes: This table reports the number and proportion of sampled restaurants that publish their wine list online (with or without prices) and whether this is available for download.

Table 2. Wine list availability—breakdown by region and region type

Language	Total	%	Yes	%	No	%	Average GM points
Panel A: Breakdown by region							
French-speaking	243	29.96	97	39.92	146	60.08	14.17
German-speaking	504	62.15	284	56.35	220	43.65	14.33
Italian-speaking	64	7.89	27	42.19	37	57.81	14.03
Total	811	100	408	50.31	403	49.69	
Panel B: Breakdown by region type							
Rural area	500	61.65	232	46.4	268	53.6	14.33
City	311	38.35	176	56.59	135	43.41	14.19
Total	811	100	408	50.31	403	49.69	

Notes: Panel A shows the number and proportion of sampled restaurants publishing their wine lists online by linguistic region. The last column reports the average GM points received by sampled restaurants by region. Panel B provides the same information for sampled restaurants in cities (municipalities with more than 15,000 inhabitants) or rural areas (less than 15,000 inhabitants).

and Italian-speaking parts, which account for 30% (243) and 7.9% (64) of the sample, respectively.[2] There are striking regional differences in sharing wine list information. Restaurants in the German-speaking part of Switzerland share their wine list online (56.4%) more than in the French-speaking (39.9%) and Italian-speaking (42.2%) parts, respectively.

Table 2, Panel B, informs us about the potential differences between rural areas and cities. A city in this context corresponds to any municipality with at least 15,000 inhabitants, according to the official records of the Swiss Federal Statistical Office. A majority of restaurants in the sample are located in rural areas (61.7%),

[2]The sample distribution per region is close to the distribution of the Swiss population but slightly over-represents the French- and Italian-speaking regions. According to Federal Statistics, in 2020, out of the entire population, around 70% lived in German-speaking cantons, followed by 25.9% and 3.1% in French- and Italian-speaking cantons, respectively. This means that in the two smaller regions, competition among restaurants is fiercer than in the German-speaking part of the country.

Table 3. Wine list availability—breakdown by cuisine type and restaurant type

Cuisine	Total	%	Yes	%	No	%	Average GM points
Panel A: Wine list availability and cuisine type							
Local	173	21.33	83	47.98	90	52.02	14.04
Creative / Modern	155	19.11	82	52.9	73	47.1	15.17
Traditional	131	16.15	62	47.33	69	52.67	14.13
International	80	9.86	47	58.75	33	41.25	14.06
Italian	77	9.49	36	46.75	41	53.25	14.03
Mediterranean	63	7.77	27	42.86	36	57.14	14.37
French	41	5.06	25	60.98	16	39.02	14.17
Swiss	16	1.97	9	56.25	7	43.75	13.94
Asian	39	4.81	16	41.03	23	58.97	13.62
Fusion	6	0.74	4	66.67	2	33.33	14.17
Other	30	3.7	17	56.67	13	43.33	13.87
Total	811		408	50.31	403	49.69	
Panel B: Wine list availability and restaurant type							
Independent restaurants	510	62.89	254	49.8	256	50.2	14.56
Hotel restaurants	301	37.11	154	51.16	147	48.84	14.11
Total	811		408	50.31	403	49.69	

Notes: Panel A indicates the number and proportion of sampled restaurants publishing their wine lists online by cuisine type. The last column reports the average GM points received by sample restaurants by cuisine type. Panel B provides the same information for sampled restaurants that are independent businesses or hotel restaurants.

and wine lists are available online more frequently in cities (56.6%) than in rural areas (46.4%). Both panels also report in the last column the mean of Gault&Millau scores per category. All mean scores are relatively close, suggesting no *a priori* bias due to diverging restaurant quality in those different regions.

In Table 3, Panel A, we check whether the availability of wine lists varies across cuisine types.[3] Restaurants with cuisine types such as creative/modern, international, French, Swiss, and fusion are likelier to share their wine list information than restaurants with other types. Mean GM scores appear to vary more than in previous tables. Creative/modern gets the highest mean score (15.17), while Asian, Other, and Swiss cuisine types exhibit the lowest ones (13.62, 13.87, and 13.94, respectively).

Table 3, Panel B, further compares wine list availability for independent restaurants (62.9%) and those that are part of a hotel resort (37.1%). In both cases, results are relatively similar, with slightly more than half displaying their wine lists online.

[3]The cuisine types are proposed by Gault&Millau. We regrouped some of them to reduce the number of cuisine types.

Table 4. Availability by Gault&Millau scores

GM score	Total	%	Yes	%	No	%
12	51	6.29	26	50.98	25	49.02
13	225	27.74	110	48.89	115	51.11
14	244	30.09	129	52.87	115	47.13
15	135	16.65	68	50.37	67	49.63
16	92	11.34	51	55.43	41	44.57
17	33	4.07	17	51.52	16	48.48
18	23	2.84	6	26.09	17	73.91
19	8	0.99	1	12.5	7	87.5
Total	811	100	408	50.31	403	49.69

Notes: This table indicates the number and proportion of sampled restaurants publishing their wine lists online by GM score.

This may be because a hotel business brings a comfortable amount of revenue to a restaurant. In the gastronomic segment of the market for restaurant services, profits are traditionally limited, and hotels help get more resources that are eventually used to improve the quality of food served in the restaurant.

Table 4 compares wine list availability by quality tier as proxied by GM scores. More than half of all sampled restaurants (57.83%) have scores ranging from 13 to 14 points. As expected, only a few restaurants obtained high scores of 17 points or more, and none obtained a perfect score (20 points). Wine list availability appears to be diverging again among quality levels. Restaurants with a score of 18 or 19 points are less likely to share their wine list online than lower-rated restaurants (19.3% versus 51.68%, respectively).

Table 5 contains the correlation matrix for both the dependent and independent variables. We do not detect any significant multicollinearity issues in the probability model we estimate in the next section. Low levels of variance inflation factors confirm this in the econometric analysis.

V. Empirical analysis

A. Methodology

In this section, we run a probit regression model for the probability that a restaurant owner decides to release her wine list online. Our sample contains data on 811 restaurants in the 2021 Swiss edition of the Gault&Millau food guide. The estimated probit model is:

$$Y_i = \beta_0 + \beta_1 Qual_i + \beta_2 Comp_i + \beta_3 X_i + \varepsilon_i, \quad (1)$$

where Y_i corresponds to a dummy that takes the value 1 if the wine list was found on the website of restaurant i, 0 otherwise; Y_i is regressed against a series of exogenous controls. In detail, we control for restaurant quality ($Qual_i$) by splitting GM scores

Table 5. Correlation matrix

		1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	20
1	Wine list: available: Yes	1																		
2	14 ≤ Gault&Millau score ≤ 15	0.03	1																	
3	16 ≤ Gault&Millau score ≤17	0.03	−0.40	1																
4	18 ≤ Gault&Millau score ≤19	−0.11	−0.19	−0.09	1															
5	# of restaurants in GM (City)	0.08	0.09	−0.06	0.03	1														
6	Prop. with similar score (City)	−0.07	0.01	−0.06	−0.12	−0.60	1													
7	German-speaking region	0.15	0.06	0.04	−0.02	0.08	0.05	1												
8	French-speaking region	−0.14	−0.09	−0.03	0.02	−0.03	0.00	−0.84	1											
9	Hotel restaurant	0.01	0.00	0.08	0.10	−0.04	−0.11	0.01	0.00	1										
11	Local cuisine	−0.02	0.03	−0.06	−0.06	−0.01	0.06	−0.08	0.04	0.01	1									
12	Creative cuisine	0.03	−0.06	0.20	0.16	0.05	−0.04	0.04	0.01	0.04	−0.25	1								
13	Traditional cuisine	−0.03	0.05	−0.06	−0.04	−0.21	0.22	0.03	0.04	−0.05	−0.23	−0.21	1							
14	International cuisine	0.06	0.03	−0.06	0.00	−0.02	−0.06	0.16	−0.11	0.03	−0.17	−0.16	−0.15	1						
15	Italian cuisine	−0.02	0.00	−0.01	−0.04	0.14	−0.11	0.00	−0.04	−0.09	−0.17	−0.16	−0.14	−0.11	1					
16	Mediterranean cuisine	−0.04	0.00	0.03	−0.01	−0.05	−0.05	−0.13	−0.06	0.06	−0.15	−0.14	−0.13	−0.10	−0.09	1				
17	French cuisine	0.05	−0.06	−0.01	0.01	0.04	−0.04	−0.01	0.03	0.00	−0.12	−0.11	−0.10	−0.08	−0.07	−0.07	1			
18	Swiss cuisine	0.02	−0.01	0.01	−0.03	−0.06	0.06	0.06	−0.03	0.02	−0.07	−0.07	−0.06	−0.05	−0.05	−0.04	−0.03	1		
19	Asian cuisine	−0.04	0.00	−0.06	−0.04	0.16	−0.12	0.00	0.04	0.02	−0.12	−0.11	−0.10	−0.07	−0.07	−0.07	−0.05	−0.03	1	
20	Fusion cuisine	0.03	0.01	0.00	−0.02	0.05	−0.05	−0.02	−0.03	0.02	−0.05	−0.04	−0.04	−0.03	−0.03	−0.03	−0.02	−0.01	−0.02	1

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into four equivalent groups and using four different dummies: $12 \leq$ GM score ≤ 13 (reference), $14 \leq$ GM score ≤ 15, $16 \leq$ GM score ≤ 17, and $18 \leq$ GM score ≤ 19. This model also includes variables that control for competition surrounding restaurant i: $Comp_i$. This vector includes a variable that counts the number of restaurants found in GM in the city where restaurant i is located. The higher the number of restaurants in the city, the more likely competitors will check and use the information contained in the wine list of restaurant i. Although competitive intensity may play a role in the willingness to share the wine list or not, we hypothesize that it is relatively unlikely that restaurants use the information in the wine list of restaurants operating in different quality segments. This is why we use a second measure of direct competition that informs us about the proportion of restaurants with a similar score in GM at the municipality level. A vector of exogenous variables, X_i, is for cuisine types, hotels, and linguistic regions. There are 11 cuisine type dummies: Other (reference), Local, Creative, Traditional, International, Italian, Mediterranean, French, Swiss, Asian, and Fusion; three dummies for the main linguistic regions of Switzerland: French, Italian (reference), and German; and one dummy variable for hotel restaurants (independent restaurants being the reference category). Our regressions use robust standard errors.

B. Empirical results

Table 6 reports estimation results for three different specifications of Model (1). The first column contains the probit estimates of Model (1) on the full sample (811 observations). The second (third) column contains the results of a similar regression with canton (city) fixed effects. There are 26 cantons in Switzerland, and sample restaurants were found in 412 different cities. Regressions that include a canton or a city fixed-effect include cities or cantons where a minimum of two restaurants have been identified; this explains the varying number of observations among the three columns.

Restaurants with a score greater or equal to 18 points in GM (3.8% of the sample) put their wine list online less often, all other things being equal, than lower-rated restaurants. We detect no significant difference among lower-rated restaurants rated in GM. Restaurant owners further appear to consider the environment of the restaurant before choosing to put their wine list on their website. Here, the higher the proportion of restaurants with a similar grade in the city, the less likely restaurant owners are to share their wine list publicly. Our fixed-effect specifications confirm this. The negative impact of the number of restaurants in the city listed in GM obtained in the more constraining model with city fixed effects shows that restaurant owners strategically manage wine information and are more reluctant to share it in more competitive environments.

As far as cuisine types are concerned, there is no or very little difference in the choice of making a wine list public, except for Asian restaurants in Specifications 1 and 2. These appear, on average, to be more reluctant than other restaurant types to share their wine selection with their customers and competitors. This may be because, in Asian restaurants, wine is rarely the most popular beverage. For example, it is common for Japanese gastronomic restaurants to have more sakes than wine on

Table 6. Probit analysis

	(1)	(2)	(3)
Dependent variable: "Available wine list: Yes/No"			
Quality			
14 ≤ Gault&Millau score ≤ 15	0.00140 (0.102)	−0.0155 (0.104)	0.0628 (0.171)
16 ≤ Gault&Millau score ≤17	0.0296 (0.143)	0.0113 (0.145)	−0.287 (0.248)
18 ≤ Gault&Millau score ≤19	−0.944*** (0.279)	−1.000*** (0.288)	−1.129*** (0.379)
Competition			
# of restaurants in GM (City)	0.00266 (0.00320)	−0.00527 (0.00460)	−0.0719*** (0.00528)
Proportion with similar score (City)	−0.277 (0.170)	−0.490*** (0.187)	−1.618** (0.679)
Regions			
German-speaking region	0.291 (0.189)	0.890** (0.364)	3.717*** (0.700)
French-speaking region	−0.117 (0.197)	1.133** (0.491)	−0.444 (0.952)
Cuisine styles			
Local cuisine	−0.270 (0.257)	−0.316 (0.262)	0.0146 (0.425)
Creative cuisine	−0.135 (0.262)	−0.167 (0.268)	−0.0358 (0.431)
Traditional cuisine	−0.253 (0.263)	−0.307 (0.272)	−0.181 (0.479)
International cuisine	−0.113 (0.280)	−0.164 (0.286)	0.146 (0.460)
Italian cuisine	−0.401 (0.278)	−0.439 (0.284)	−0.237 (0.432)
Mediterranean cuisine	−0.391 (0.295)	−0.478 (0.302)	−0.424 (0.478)
French cuisine	0.0462 (0.314)	0.126 (0.324)	0.473 (0.496)
Swiss cuisine	−0.119 (0.396)	−0.131 (0.390)	—
Asian cuisine	−0.576* (0.317)	−0.556* (0.326)	−0.371 (0.461)
Fusion cuisine	0.112 (0.565)	0.00370 (0.560)	0.608 (0.764)
Hotel restaurant	0.0462 (0.0961)	0.114 (0.101)	0.145 (0.166)

(*Continued*)

Table 6. (*Continued.*)

	(1)	(2)	(3)
Constant	0.244 (0.324)	0.450 (0.336)	1.831** (0.879)
Canton fixed-effect	No	Yes	No
City fixed-effect	No	No	Yes
N	811	809	395
Pseudo R-squared	0.0423	0.0665	0.109

Notes: This table reports the results of three different versions of a probit regression of wine list availability on several control variables. *XX ≤ Gault&Millau score ≤ YY* are a set of three dummies taking the value one whether a restaurant has a GM score within the considered bracket, 0 otherwise (ref. category: *12 ≤ Gault&Millau score ≤ 13*). *# of restaurants in GM (City)* and *Proportion with similar score (City)* are two competition variables. The first one counts the number of GM-rated restaurants in the city, while the second one is the proportion of restaurants with a similar score in that city. *German-speaking and French-speaking regions* are two dummy variables, taking the value one whether a restaurant is located in the given linguistic regions, 0 otherwise (ref. category: Italian-speaking). *Hotel restaurant* is a dummy, taking the value one if a given restaurant operates in a hotel and 0 otherwise. *Local cuisine* to *Fusion cuisine* is a vector of 10 dummy variables for cuisine styles (ref. category: other). The second and third specifications include either canton or city fixed effects. Only those cantons (specification 2) and cities (specification 3) with at least two observations are included in the regressions. Robust standard errors clustered at the canton level are in parentheses; ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

their menu. Other Asian cuisines (e.g., Thai or Chinese), which are spicier, are struggling with pairing food and wine. Finally, in Indian cuisine, wine is not usually paired with food due to religious beliefs about alcohol consumption. For all these reasons, wine's role is not central in Asian restaurants, and professionals may avoid publishing their wine lists.

C. Qualitative analysis

We conducted several interviews with managers of restaurants rated 18 or more in GM to better understand why they are more reluctant to share their wine information with others. One respondent, who used to share the wine list in the past, decided to remove it after noticing that some nearby restaurants started to offer similar wines at a much lower price. Thus, high-end restaurants try to avoid being mimicked by second-tier restaurants that can afford to sell similar wines at lower prices because of lower operating costs. The other two respondents stated that the accuracy of the wine list is one of the main reasons they keep their wine list offline. Wine lists in such restaurants contain many wines, and updating the list is time-consuming. Restaurant owners prefer not to publish this information to avoid discrepancies between the online version of the list and the actual wine offer. In this way, they avoid disappointing guests interested in visiting the restaurant for a specific wine that is no longer available in the cellar.

This explanation also aligns with a cultural element of uncertainty avoidance in the Hofstede model. The probability that a given restaurant will share its wine list publicly is significantly higher in the German-speaking part of Switzerland than in the Italian- or French-speaking parts of Switzerland. The significant positive coefficient we get for the French-speaking part variable in Column (2) is not significant

in the other model versions. According to Hofstede's cultural dimensions, countries displaying low uncertainty avoidance will not be threatened by uncertainty and will not try to control the future. Germany scores 65 in uncertainty avoidance, meaning it will try to control the future, emphasizing details and systems strongly. However, the score is lower than for France (86) or Italy (75) (Hofstede Insights, 2021). Hence, not publishing the lists in the Italian and French parts of Switzerland may be seen as an attempt to avoid the risks related to the publication. This includes customers selecting wines that are out of stock before arriving at the restaurant.

From the interviews, it was possible to gain further insights regarding the role of competition and the possible impact on wine availability online. All the respondents stated that they do not consider the competition when tailoring their offer. A few respondents stated they consider the competition only to price their wines correctly. On the other hand, whether to publish the list or not may be affected by the presence of competitors nearby. One respondent stated that they removed the wine list from the website after realizing that competitors were starting to present the same wines at lower prices.

Some restaurant owners declare that their wine list is a competitive advantage for them. Thus, they post it on the website to attract customers, especially wine lovers, who typically choose a restaurant based on its wine rather than its food offer. One sommelier declared that he personally chooses hotels based on their wine list. On the contrary, another respondent stated that he prefers not posting their list online to avoid competitors improving their wine offerings and lowering their prices. It would be noteworthy to research whether publishing the list online increases the expenses of customers allocated to wine and if it attracts wine amateurs who are willing to select more expensive bottles.

VI. Conclusion

Information asymmetry can arise due to unobservable or uncertain product quality, structural barriers to information propagation, and strategic barriers to information sharing. Holding an information advantage can provide potential benefits such as acquisition gains and a competitive advantage, but it can also result in exploitation and drive honest firms out of the market. Information asymmetry is especially prevalent in the case of experience and credence goods, such as restaurant services and wine. In the case of restaurants, consumers need information about the food and wine menu before deciding where to dine. However, wine lists, which may contain strategic information, are often kept secret and are not easily accessible. This raises the question of why some restaurant owners choose to publish their wine list while others keep it secret.

To answer this question, we collected wine list availability information for all restaurants in the 2021 Swiss edition of the Gault&Millau food guide. We complement this data by interviewing industry experts such as restaurateurs or sommeliers. Our findings show that high-end restaurants are less likely to disseminate wine information than lower-rated restaurants, suggesting that it is a voluntary rather than a random decision. High-end restaurants may keep their wine lists secret to maintain a competitive advantage, especially if they have skilled sommeliers who have

established strong connections with wineries. Furthermore, the stronger the local competition, the less willing restaurant owners are to share their wine list with others. Cultural considerations also play a role, as restaurants in the German-speaking part of Switzerland are more prone to communicate their wines than in other parts of the country. Asian restaurants are also found to be less willing to share their wine list publicly compared to other restaurants.

These findings contribute to our understanding of how information asymmetry affects the disclosure of information in the restaurant industry and shed light on the strategic considerations of restaurant owners when sharing their wine lists with the public. Further research could explore the impact of wine list disclosure on consumer behavior and restaurant performance. It could also examine the effectiveness of alternative strategies for managing information asymmetry in the restaurant and wine industries, such as the best design of wine lists and their updating frequency.

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