

New York Restaurants: A Wine Odyssey Between 1865 and 1920

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Abstract

We examine the existence of wine in New York City restaurant menus over the period 1865 to 1920 for a sample of 850,000 restaurant menu items and 51,000 wines. Wine was already commonly present on menus in 1865, and its offering increased up until 1914 before dropping with the outbreak of First World War (WWI). Casual restaurants offered a narrower wine selection. Special menus displayed a significantly higher probability of containing wine but with a more limited choice indicating that wine was especially appreciated on special occasions. French wines, especially from Bordeaux and Champagne, were the most represented on menus followed by wines from Germany. The average selling price of a bottle of wine was around US\$40 in 2018 terms. Prices, however, fluctuated widely over time and wine type. Notably, American wines were about 50% less expensive than French or German wines.

Keywords

restaurant; New York; wine; menu

Introduction

Restaurants do more than simply feed people—they transmit culture, encourage socialization, and express the values of a particular place. (Virginia Moench)¹

This article studies the presence of wine in New York City (NYC) restaurant menus over the period 1865 to 1920. These 55 years following the end of the American Civil War in 1865 were very rich in economic, political, sociodemographic, and natural events. Several crises and the long depression marked the period between the Civil War and the turn of the century. Simultaneously, a natural disease, the Phylloxera, devastated European and, a few years later, American vineyards. The years 1899 and 1900 witnessed majestic New Century celebrations. More than one million immigrants, mostly from Central, Eastern, and Southern Europe, arrived in NYC from 1880 to 1920. The First World War (WWI; 1914–1918) adversely affected economic conditions and stopped the globalization process that had started with the industrialization a few decades before. Finally, on January 16, 1920, Prohibition was established.

Wine is an experience good that has distinctive features as compared to other consumption goods and food items. First, the term *wine* does not refer to a homogeneous product. It is common to distinguish between at least three broad categories: bulk, ordinary, and fine wines. However, whereas bulk and ordinary wine mostly serve the same purpose as beer and target a similar clientele,² fine wine typically caters

to wealthier clients and may be used as a social status marker. Therefore, the demand for fine wines and, consequently, their prices tend to be more sensitive to economic conditions (Dimson et al., 2015). Moreover, the status of wine in general, and specific types of wine, has evolved. For instance, sparkling wines from Champagne have a long-standing association with the notions of luxury and festivities. More recently, wines from Tuscany and Piedmont have developed a strong reputation, and their prices have subsequently risen (see, e.g., Masset et al. (2020)). However, other wines, such as sweet wines from Sauternes or Madeira, have experienced an opposite dynamic characterized by less interest from consumers and stagnating prices over the last two decades. Finally, wine also has a strong cultural dimension, especially in France, Germany, and Italy, which have a long viticultural tradition. As such, the demand and the consumption of wine is closely related to customers' origin and cultural background.

This article exploits the New York Public Library's (NYPL) menu collection. Our data set contains more than

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850,000 menu items and 51,000 wines for the period under analysis. This sample not only encompasses menus for NYC restaurants but also for railway and boat services or restaurants outside of NYC. It thus enables us to investigate in a precise manner a variety of questions relating to three main dimensions: the presence of wine on menus and factors affecting it; the type of wine offered in restaurants and the evolution over time; the pricing of wine in restaurants of the late 19th and early 20th century.

Our results illustrate the close connections between wine offer and the conditions prevailing in the surrounding environment. More specifically, we show that wine was already commonly offered on NYC restaurant menus in 1865. The probability of having wines on a menu increased between 1865 and 1914. It, then—during WWI, declined significantly. This drop was reinforced with U.S. states starting to introduce laws against saloons, and federal debates on the 18th Amendment, eventually leading to Prohibition in 1920. These observations illustrate a positive relationship between economic conditions and the interest in wine. It also highlights the influence of emotional factors and extraordinary events on wine demand. Interestingly, the number of wines and the diversity of the wine offer per menu did not increase over time, on the contrary. This may be due to several factors such as the Phylloxera forcing restaurants to focus their wine offer on regions that escaped/recovered from the disease. Also, the more comprehensive coverage of NYC restaurants after 1900 includes a relatively higher number of casual restaurants as compared to fine dining venues. Casual restaurants typically offered a narrower wine selection. Special menus (e.g., for a special event) were associated with a significantly higher probability of containing wine but with a more limited choice. Again, this shows that wine was very much appreciated on special occasions.

France was already, and by far, the leader representing 60% of the wine offer over the sample period. Red Bordeaux wines were much more numerous than their Burgundian counterparts. However, the most sought-after were the sparkling wines from Champagne. Germany was number two. Its share increased in the early 1900s and then declined during WWI, but only marginally until 1917—when the United States declared war on Germany and German-Americans' influence, which were mainly antiprohibition, declined. Portuguese and Spanish wines were also popular, but mostly for their fortified sweet wines. On the contrary, Italy—which produced little sweet wines—was in these two countries' shadows. Here we see the impact of customers' taste and cultural preferences on the wine offer. U.S. wines were already present in restaurants before 1900, but their market share only substantially increased after that year. This is consistent with the prediction of Thomas Jefferson from a century before, that “we could, in the United States, make as great a variety of wines as are made in Europe, not exactly of the same kinds, but doubtless as good.” Most U.S. wines were merely copies from their European counterparts, such

as “Californian Burgundy” or “Sauterne Souvenir.”³ California was already the number one state in terms of wine production, and the immigrants' role was essential. Notably, Agoston Haraszthy, originally from Hungary, is still considered the “Father of California Viticulture.”

Expressed in 2018 price terms, a bottle of wine was on average selling for around US\$40 over the sample period. French wines were the most expensive, whereas American wines were among the least expensive. Overall, the evolution of wine prices closely followed inflation. Prices declined in nominal terms during the Long Depression, marked by several years of deflation. They then stabilized until the beginning of WWI, and during the war, increased but at a slower pace than the Consumer Price Index (CPI). This close connection between wine prices and inflation suggests that contrary to today and apart from a few high-end cuvees, the vast majority did not qualify as *fine wines* or *luxury goods*. Among the few wines that experienced a price increase, one finds sparkling wines from the Champagne region and some particular brands. It is interesting to notice that most wineries from the 1865 to 1920 period have disappeared but that the Champagne brands have remained very powerful until today. From this perspective, Champagne producers were in advance on their time.

This article contributes to the literature along several dimensions. Indeed, looking at the history of wine in restaurants in the context of NYC at the turn of the 20th century allows making unique analyses. The article first brings insights into the historical relationship between restaurants and wines, thereby contributing to the nascent realm of research on restaurant economics. Second, it contributes to the literature on wine economics by examining the evolution of wine offers during a period marked by a natural disaster (devastation of vineyards around the globe due to the Phylloxera outbreak) and major political (WWI), economic (Long Depression), and legislative (Prohibition) events. Third, it relates to (the history of) marketing as it documents the emergence and development of brands in the context of Champagne wines. Finally, it connects with the anthropology of food by describing the influence of culture and country of origin on consumption patterns.

The remainder of the article is structured as follows. Section “Development of the Conceptual Framework” describes the conceptual framework. Sections “Data” and “Wine in NYC Restaurants” present the data set and analyze the wine offer's specificities in NYC restaurants during the period under investigation. Section “Conclusion” concludes.

Development of the Conceptual Framework

A Brief History of Restaurants

The notion of restaurant is relatively recent. It can be traced back to the late 18th century (see Spang (2019) or Symons

(2013)) and appears as a byproduct of the French revolution. Symons (2013) notes that before this event, “Great cooks had worked for the relatively small number of well-to-do households. Losing their patronage, such professionals sold their skills on the market.” He quotes Grimod de la Reynière, who asserts that “to take advantage of their talents, [the great cooks] turned themselves into . . . Restaurateurs.”

Grimes (2009) shows that at the beginning of the 19th century, NYC restaurants were much less advanced than those in major European cities (such as Paris). This changed with the opening of Delmonico’s by two Swiss immigrants in 1828, which brought fine dining to NYC for the first time. Delmonico’s is regarded as the oldest genuine restaurant in the United States. It is also one of the first to have allowed customers to order various items from a *carte des mets* or menu instead of imposing them a *table d’hôte* fare as it was common until then (Choate & Canora, 2008). Assael (2018) studies the history of public eating in London, covering a period (1840–1914) similar to this article. However, she does not explicitly address the relationship between restaurants and wine. She notes that “between the 1840s (and especially from the 1870s) and the First World War, the London restaurant both emblemized, and contributed to, the myriad forces and formations that constitute what has been labelled ‘modernity.’” She further underlines that “in the rich and expansive field of social and cultural history [. . .] of late- nineteenth- and early twentieth-century London, the restaurant remains surprisingly overlooked.” In related work, Assael (2013) reveals the linkages between restaurants and food on the one side and transnational exchanges in London in 1840 to 1914.

As noted by Brillat-Savarin, already in the early 19th century, it was common to accompany the best dishes with “the best French or foreign wines” (Symons, 2013). Gehrels (2016) discusses the relationship between wine and hospitality, which emerged in the 17th century when English aristocrats started to accompany their good meals with wine. Gehrels’ work outlines some of the research conducted in this field and illustrates some gaps. Although hospitality and wine economics have attracted attention from academics, not much evidence exists on the two’s interaction. This article aims at contributing to the nascent literature on the economics of hospitality and wine by analyzing the wine offer in NYC restaurants over a period that saw the metropolis multiply its population by a factor of five and become the world’s largest city. We use this context to examine three complementary research issues related to (a) the factors affecting the presence of wine offered in restaurants, (b) the type and origin of wines present on the menu, and (c) the pricing of wine in restaurants.

Research Questions

Factors affecting the presence of wine on restaurant menus. To address this issue, it is necessary to have a clear idea of the

universe of food outlets in NYC during the period under investigation and the factors that affected it. Russek (2010) studies the linkages between the development of restaurants and American culture. Although her work mostly covers a period after the one considered in this article, it nevertheless contains interesting insights about the types of food outlets in the 19th century. On the one hand, the country’s industrialisation, coupled with transportation developments, led to a boom in the number of urban workers who frequented inexpensive lunch counters, cafeterias, and self-service restaurants. On the other hand, fine dining places also emerged. Many were located within hotels, but following the success of Delmonico’s, the number of independent restaurants serving refined cuisine increased to cater to the demand from “elite Americans with aristocratic pretensions” (Haley, 2011). The sumptuous meals served were paired with fine wines under the waiter’s assistance (Haley, 2011).

The culinary landscape then started to evolve. By the turn of the century, the development of the urban middle class led to a new generation of restaurants “where the middle classes could feel comfortable dining” (Haley, 2011). In the early 20th century, economic development, coupled with changes in leisure activities, made restaurant dining even more popular. As Russek (2010) notes,

not only were elaborate dinner parties fading as a prominent social activity among the middle classes, but the popularity of the automobile and a growing prominence of women in public places added to the increase of dining outside the home.

The interest in wine and its appearance on restaurant menus can also be traced back to a change in travel habits and an increase in Americans’ overseas travel. Dupont et al. (2012) document that in 1860, around 27,000 American tourists traveled abroad. This number had risen to 250,000 by 1920. This new travel habit was made possible by the arrival of steamships, which were also used to transport goods faster to the United States by increasing hotel and restaurant services on the European continent and a favorable exchange rate. Many Americans also used traveling in Europe to build an identity and show they belonged to a privileged bourgeoisie with roots on the European Continent (Stowe, 2017).

It thus appears reasonable that the democratization of gastronomy should result in a progressive increase over the sample period in the number of restaurants offering wine. Indeed, Haley (2011) quoting an article from the *New York Times Sunday Magazine*⁴ discusses some of the recommendations made to the new middle-class regarding the appropriate pairing of wine with food (e.g., a glass of Xeres with soup, or a bottle of red Burgundy with roast). Aune (2002) discusses the interaction between gastronomy and fine wines and argues that restaurants “enchant” their customers and enhance their dining experience by combining both.

The major events animating these years have probably also affected the wine offer of restaurants. The Long Depression (1873–1896) and the Phylloxera plague may have harmed the number of restaurants serving wine during the late 18th century. Subsequently, the celebrations surrounding the new century in 1899 and 1900 have presumably led to a boom in the wine offer. More generally, menus associated with special occasions such as anniversaries or commemorations contained more frequently wine, given the wine image as *the* beverage of celebration (Dunn, 2016). On the contrary, the Great War (1914–1918), particularly after the United States declared war on Germany in 1917, must have resulted in a more limited offer of wines in restaurants. Finally, with the Prohibition, wine abruptly disappeared from restaurant menus.

To the best of our knowledge, Preszler and Schmit (2009) is the only study relating to some extent to the first question. They also examine the presence of wine in NYC restaurants. However, contrary to this article, they use contemporaneous data, and their analysis is more limited in its scope as it only considers wine produced in New York State. They show that the type of cuisine has no impact on the propensity to propose New York wines, but the more expensive restaurants appear less likely to sell New York wines.

Types of wines present on restaurant menus. The United States is a land of immigrants. Immigrants have brought their food traditions and wines with them. Although wine production in the United States is considerable today, it was still low in the 19th century. Therefore, we can assume that most wines offered in NYC restaurants, especially at the beginning of the sample period, were European. The development of a wine industry in the United States and the increase in local wines' quality (thanks to the experience gained and the constant benchmarking with European counterparts) have certainly contributed to reinforce the market share of U.S. wines in NYC restaurants in the later part of the sample period. The Phylloxera outbreak in Europe in the second half of the 19th century has accelerated a wine industry's development in the United States. This may have led to an increase in the presence of domestic wines in NYC restaurants. Mendelson (2009) provides a comprehensive presentation of the emergence and development of wine in the U.S. from Thomas Jefferson to the Prohibition and Napa Valley's consecration as the epicenter of fine wines in Northern America.

More specifically, we can expect that the most frequently offered wines in NYC restaurants came from countries that already exported part of their production to foreign markets and/or that accounted for a significant share of immigration to the United States. For instance, French (Bordeaux, Champagne) and Portuguese (Port, Madeira) wines already enjoyed a strong reputation and were widely available in the United Kingdom before the 19th century. As reported in the

Thomas Jefferson Encyclopedia (www.monticello.org), "the strong wines of Portugal and Spain" were the most popular in the United States in the late 18th century. Following his stay in France in 1784, Thomas Jefferson's tastes evolved toward French and Italian wines, which were lighter in alcohol than Madeira and Port wines. Thus, one may assume to see several French, Italian, Portuguese, and Spanish wines on NYC menus over 1865 to 1920.

The massive immigration wave to the United States at the end of the 19th century was diverse. It led to many changes in the working of the country and the lifestyle of the population. Borjas (1994) reports that between 1881 and 1924, around 25.8 million immigrants arrived to the United States from the Old World. Grant (2003) shows that immigration patterns evolved through time. Until 1895 many immigrants came from Germany. It then started to decline, and immigrants from Southern and Eastern Europe with similar skills arrived. Thus, one may expect the number of German wines present on NYC restaurant menus to increase until the turn of the century. Then, with the Great War outbreak in 1914 and the engagement of the United States against Germany in 1917, their presence should decline substantially.

The discussion so far can be summarized as follows. Wines from France, Germany, Italy, Portugal, Spain, and the United States were present in NYC restaurants. Their respective market shares have probably evolved depending on sociodemographic, natural, and political factors. However, determining precisely which countries, regions, and wineries were best represented on the menus remains an empirical question.

Pricing of wines offered in restaurants. Not much is known about wine prices in NYC restaurants between 1865 and 1920. A notable exception is Freedman and Warlick (2011), who exploit the NYPL collection to look at the specificities of high-end dining in the 19th century in the United States. They note that "hotels offered meals as part of the overall lodging charge [. . .]. The menus carry no prices except for the wines, which were an extra (and often considerable) expense." They further quote Lord Acton and note that "wine was extraordinarily expensive" and indicate that "A great variety of vintages and merchants were represented; Madeira commanded the highest price. [. . .] Hock (Rhine wine) was also pricey. [. . .] Champagne and Bordeaux were comparatively inexpensive but still cost more than the entire meal." These observations are in contradiction with the price hierarchy observed today. Wines from Burgundy are the most expensive, ahead of Bordeaux and Champagne and some wines from Piedmont, Tuscany, and California. It thus appears relevant to examine the price hierarchy of the various types of wines and, in particular, to explore how it has evolved over the period under investigation.

The issue of wine prices in general (i.e., not only in restaurants) has recently attracted much attention from academics. A large part of the Wine Economics literature focuses on analyzing the (static) determinants of wine prices and the factors that affect their evolution over time (see, e.g., Storchmann (2012)). Most of these articles examine fine wines, typically including wines from Bordeaux, Champagne, and Burgundy. Dimson et al. [2015] appear particularly relevant in the context of this study because of the time period it covers. The authors examine the evolution of Bordeaux First Classified Growths prices over more than a century using price data from London merchants and auction houses. Their results show that these wines have seen their prices increase at a pace that exceeds inflation. Although their returns do not match equity, they nevertheless compare favorably with bonds. Studies based on more recent data sets draw mixed conclusions regarding the return of fine wines (see Le Fur and Outreville [2019] for a literature survey). This can be explained by the fact that over the last two decades, wine has become an investment in the eyes of some market participants (Masset et al., 2020). Its market has also become globalized with consumers from all countries, including China (Masset et al., 2016). The situation was quite different in the 19th century. Wine concerned some (mostly wealthy) western consumers and was by no means perceived as a potential object of speculation. Determining how wine prices have evolved between 1865 and 1920, therefore, appears as a very relevant question.

Data

Presentation and Preparation of the Data Set

The NYPL possesses a vast collection of nearly 45,000 menus. Miss Frank E. Buttolph started collecting them in 1900 and added more than 25,000 menus to the collection until she left the Library in 1924. The collection has then continued to grow, though at a slower pace. Thanks to Miss Buttolph's involvement, the collection offers excellent coverage of the NYC restaurant scene from 1900 to 1920, but it is less comprehensive for the period 1865 to 1899.

The NYPL has launched a project called "What's on the menu" in 2011, whose main objective is to digitalize all the menus it possesses and transcribe them in a format that researchers can readily use. This has led to the creation of four files:

- a. The file DISH contains all individual dishes that have appeared at least once on a menu. This represents a total of approximately 450,000 dishes. For each dish, a description is provided as well as a unique dish_id.
- b. MENUITEM contains for each dish the list of all menus in which it appears. This represents a total of

more than 1,300,000 items. For each one, a menu-item_id is provided.

- c. MENUPAGE contains an analytical description of the menu (size and number of pages) and provides a menu_id variable.
- d. MENU contains for each menu information on the restaurant's name, sponsor, event & occasion, venue, place, date, location, currency, and so on.

The four files can be merged one after another using the variables dish_id (to merge the DISH file with the MENUITEM file), menuitem_id (to merge with the MENUPAGE file), and menu_id (to merge with the MENU file).

We use the date variable from the MENU file to retain only the observations that belong to the 1865 to 1920 period. We then identify all wines from the complete list of dishes. The two main issues are related to the manual imputation of all menu items when converting them into digital files. As such, there are frequent spelling mistakes, and similar dishes often appear under different names. To identify all wines and avoid errors, we use a double-check procedure. We use keywords, and we also scroll manually through all data lines (in alphabetical order) and check all entries. This leaves us with close to 25,000 wines out of a total of 250,000 dishes. We then assign to all wines from the same producer/same cuvee an identical wine_id. We also determine the country of origin and the type/color (e.g., red, white, rosé, sparkling, sweet) of each wine. We further determine the producer's or negociant's name and the specific production region for major wine-producing countries.

The NYPL collection contains menus for NYC restaurants but also for other places. We determine each venue's location as NYC, the United States ex-NYC, railway/boat, or elsewhere. To achieve this categorization, we rely on the venue's physical address (when available) or other information (e.g., sponsor and currency). In the NYPL files, there is a unique id for each menu but not for each restaurant. We thus also create a restaurant_id based on each restaurant's name. Again, it is essential to be careful as similar restaurants, event types, and so on, may appear under different names (because of spelling mistakes and/or different word orders). Finally, we ensure that prices are in dollars (not in cents) and compute prices in US\$2018.

Descriptive Statistics

Hereafter, we provide descriptive statistics to illustrate our final data set's specificities in terms of data coverage for the period 1865 to 1920. Table 1 reports the number of menus (Panel A) and menu items (Panel B) for four subperiods. The number of menus shows limited coverage before 1899, with some years having zero observations. The number of menus collected increases dramatically in 1899 and continues to do so until the end of the sample period in 1920 for

Table 1.
Number of Menus and Menu Items Per Subperiod.

Panel A: number of menus	All locations		NYC restaurants only	
	All menus	Menus with wine	All menus	Menus with wine
1865–1898	1,313	604	567	289
Av. per year	39	18	17	9
1899–1900	3,796	941	1,242	405
Av. per year	1,898	471	621	203
1901–1913	4,872	1,653	1,598	780
Av. per year	375	127	123	60
1914–1920	2,488	959	2,210	848
Av. per year	355	137	316	121

Panel B: number of menu items	All locations		NYC restaurants only	
	All items	Wines	All items	Wines
1865–1898	53,155	6,508	25,167	3,361
Av. per year	1,563	191	740	99
1899–1900	225,007	16,212	102,967	8,255
Av. per year	112,504	8,106	51,484	4,128
1901–1913	285,247	14,092	133,684	6,996
Av. per year	21,942	1,084	10,283	538
1914–1920	299,662	14,370	282,956	13,323
Av. per year	42,809	2,053	40,422	1,903

Table 2.
Presence of Wine on Menus in Different Locations.

Variables	NYC	USA	En route	Elsewhere
# menus	5,617	2,583	3,503	766
# menu items	544,774	145,081	147,399	25,817
Av. #items per menu	97.0	56.2	42.1	33.7
Menus with wine, %	41.3	43.3	13.0	34.1
Wines/all items, %	5.9	7.0	4.7	8.4
Av. #wines per menu (all menus)	5.7	3.9	2.0	2.8
Av. #wines per menu (menus with wine)	13.8	9.0	15.3	8.3

NYC = New York City.

NYC restaurants. This is also true for menu items and wines for the New York market. Overall, slightly less than half of all menus appear to be in NYC, and more than one-third of them contain at least one wine. Considering the entire sample, the number of menus and menu items, including wines, follows a similar pattern essentially. However, it reached a maximum in 1900—thanks to the many menus related to the New Century celebrations and is followed by a drop in menus over the 1914 to 1920 period while menu items, including wines, stagnate over the same period.

Table 2 provides more detailed statistics on the presence of wine on restaurant menus. Restaurants located in NYC generally had more items (5,600) on their menu as compared to other locations such as *en route* services (3,500) or

restaurants in other U.S. locations (2,600). Moreover, the choice was also the largest on NYC menus and much lower *en route* due to more restrained space and capacities onboard train and boat services. The proportion of menus including wine reaches around 40% and is the largest in NYC and non-NYC U.S. restaurants. This compares to a much lower presence on *en route* services (13%). The proportion of wines compared to food items is also larger in restaurants than on trains and boats, hinting at a more contained choice of wines for the latter. Surprisingly, *en route* services who decided to offer wine displayed a broad selection, which was equivalent to the choice in NYC restaurants (13–15 different wines) and more extensive than in non-NYC restaurants (8–9 wines).

Wine in NYC Restaurants

Hereafter, we analyze the three research questions presented in the section “Development of the Conceptual Framework.” We first aim at getting a clear understanding of the factors that affect the wine offer in restaurants. We then examine the types of wines on NYC restaurants’ menus. In particular, we look at the position of the various producing countries and regions. Finally, we model the evolution of wine prices and compare it with the sample period’s inflation rate.

The Presence of Wine on Menus

In this section, we examine the factors that affect (a) the probability that a restaurant proposes wine on its menu; (b) the total number of wines offered on a menu, as well as (c) their diversity (style, color, and origin). We use a logit regression model for specification (a) and OLS regressions for specifications (b) and (c). The diversity is captured through Shannon’s entropy.

All specifications involve the following independent variables: (a) Event: a dummy variable taking the value 1 in case the menu is for a special event (e.g., anniversary and commemoration); (b) $\ln(\#items)$: a continuous variable that captures the natural logarithm of the total number of items (excluding wines) on the respective menu; (c) %prices: percentage of items (excluding wines) on each menu for which a price is available; (d) Median price: the median price of all items (excluding wines) on each menu; (e) subperiods: dummy variables for the four subperiods 1865 to 1898, 1899 to 1900, 1901 to 1913, and 1914 to 1920; and (f) Location: dummy variables for restaurants located in NYC, elsewhere in the United States, *en route* (i.e., on a ship or in a railway service), and elsewhere (typically in Europe). For most restaurants, the database contains just one or a few menus. However, a few specific places (e.g., railway services and large hotels) appear more often in the database. To account for this, we further include dummies to control for those venues for which the data set contains more than 10 menus.

The analysis of the probability that a restaurant offers wine on its menu may suffer from a potential limit. Some restaurants may already in the 19th century have had a separate wine list that might not have necessarily been collected and included in the data set. To control for this, we run two additional tests based on restricted data sets, which are less likely to be affected by this bias. That is, we redo the analysis but, first, only for restaurants that appear no more than 10 times in the data set, and, second, without the top 10% of the most expensive restaurants. Indeed, large, highly visible, and relatively costly venues are more likely to have food items and alcoholic drinks on two dedicated lists. The results from all specifications, including the two additional tests presented above, are reported in Table 3.

We document that several specificities have a significant impact on the probability of finding wine on a menu. Particularly special events show a strongly positive and significant increase of the likelihood of finding wines on menus, hinting that already at the turn of the 20th century, citizens celebrated these occasions by consuming wine proposed by restaurateurs. We also report that food items have a significant influence on the presence of wines on menus. More extensive menus containing more food items, and thus a wider variety of choices also leads to a higher probability of consuming wine. This relation is equally verified for menus, including pricier food items, which can be used as a proxy for the presence of fine dining venues in the sample.

In general, several dimensions display a positive and significant relationship with the number of wines found on a menu. These include the occurrence of a special event, the availability of prices on the menu, the price of food items, and the restaurant’s location. Confirming findings in the descriptive statistics *en route* services have a lower probability of displaying wines on menus, but they offer a rather wide choice when they do. The different sample periods also show differences with the periods around the turn of the century and during WWI, on average, having fewer wines on their wine menus than for the other sample periods. These results all hold when we only contemplate the NYC restaurant market. Finally, examining non-NYC restaurants, we find a higher probability of these including wines on their menu but combined with a lower choice overall.

The Type of Wine on Menus

Table 4 reports the market shares of the various wine-producing countries by period and by location. We distinguish four distinct periods: 1865 to 1898 (from the Civil War to the eve of a new century), 1899 to 1900 (the turn of the century and its celebrations), 1901 to 1913 (the progressive era), and 1914 to 1920 (WWI and the increase of voices calling for a Prohibition). We further study in more detail the years 1917 to 1920, which appear pivotal with the U.S. actively participating in WWI and debating about Prohibition. The different panels indicate the situation for various geographic areas starting with NYC and then turning to the United States, *en route* services, and finally elsewhere outside the United States.

Overall, France dominated restaurant menus in NYC with a market share of around 60% over the entire sample period. Wines from Germany (about 20%), Spain and the United States (around 5%–6%) and Italy and Portugal (around 3%) complement the market. Germany’s position was rather prominent in today’s terms, and it was relatively common to have a choice between a French claret for red wines and a German hock for white wines, which was mainly in the form of Liebfraumilch. A rather vast selection among negociants and producers, such as John Baptist

Table 3.
Analysis of the Factors Affecting the Wine Offer in Restaurants.

Factors	All locations						NYC only				
	Wine on the menu?			Wine on the menu?			Wine on the menu?		Wine on the menu?		Diversity of the wine offer
	All data	Without visible places	Without priciest places	All data	Without visible places	Without priciest places	All data	Without visible places	Without priciest places		
Intercept	-1.1***	-1.31***	-1.07***	-1.59***	-1.82***	-1.6***	-1.59***	-1.82***	-1.6***	0.42***	0.6***
Special event	0.54***	0.57***	0.53***	0.27***	0.36***	0.24**	0.27***	0.36***	0.24**	0.02	-0.03
Number of non-wine items	0.21***	0.25***	0.2***	0.49***	0.53***	0.49***	0.49***	0.53***	0.49***	0.37***	0.21***
%prices available	-0.61***	-0.7***	-0.59***	-1.55***	-1.35***	-1.32***	-1.55***	-1.35***	-1.32***	1.03***	0.34***
Median price non-wine items	0	0.03**	0	-0.04*	0	-0.07***	-0.04*	0	-0.07***	0.04***	0.01
1899-1900	0.33***	0.37***	0.36***	0.11	0.1	0.12	0.11	0.1	0.12	-0.35***	-0.18***
1901-1913	0.16**	0.1	0.16**	0.23***	0.16*	0.23***	0.23***	0.16*	0.23***	0.01	-0.03
1914-1920	-1.08***	-0.9***	-1.1***	-1.25***	-1.03**	-1.26***	-1.25***	-1.03**	-1.26***	-0.71***	-0.44***
USA	0.2***	0.21***	0.18***	-0.08***	-0.08***	-0.01	-0.08***	-0.08***	-0.01		
En route	-0.94***	-0.81***	-0.86***	0.24***	0.24***	0.18***	0.24***	0.24***	0.18***		
Elsewhere	-0.31***	-0.26**	-0.37***	0.19***	0.19***	0.14***	0.19***	0.19***	0.14***		
Top restaurant Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nobs	12,466	5,107	12,099	5,614	2,517	5,352	5,614	2,517	5,352	1,722	1,504
R ²	.26	.05	.26	.18	.03	.17	.18	.03	.17	.72	.58

*, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Table 4.
Market Share of the Various Wine Producing Countries by Location and Period.

Location & period	Wine by origin (in % of total)					
	France (%)	Germany (%)	Italy (%)	Portugal (%)	Spain (%)	USA (%)
Panel A: NYC						
1865–1898	67.5	13.7	1.5	4.7	8.2	2.3
1899–1900	58.0	21.8	1.8	3.8	5.5	4.8
1901–1913	59.9	21.2	2.4	3.3	5.6	5.0
1914–1920	59.1	19.7	4.8	2.4	4.6	7.3
1917–1920	61.8	16.0	5.4	1.8	3.6	9.5
Complete sample	59.9	19.9	3.2	3.2	5.4	5.6
Panel B: USA						
1865–1898	63.8	13.2	0.5	6.3	10.5	4.5
1899–1900	61.5	18.0	1.3	2.9	5.5	7.1
1901–1913	63.7	17.6	1.4	2.6	5.9	5.8
1914–1920	69.8	11.7	1.9	1.9	7.4	4.9
1917–1920	33.3	16.7	0.0	0.0	0.0	0.0
Complete sample	63.1	16.6	1.1	3.5	6.8	5.9
Panel C: En route						
1865–1898	69.6	12.6	0.9	6.3	7.4	2.0
1899–1900	62.6	19.7	0.2	5.0	8.0	3.8
1901–1913	63.8	16.8	0.0	3.5	6.7	8.3
1914–1920	63.9	6.9	0.0	3.1	3.8	22.2
1917–1920	61.5	7.0	0.0	3.5	4.0	24.0
Complete sample	63.4	17.3	0.2	4.4	7.2	6.8
Panel D: Elsewhere						
1865–1898	61.9	17.5	1.3	5.7	8.1	1.1
1899–1900	58.0	23.4	1.4	5.9	7.5	1.6
1901–1913	60.9	16.9	3.5	6.6	5.8	0.5
1914–1920	67.2	27.0	1.5	0.0	1.5	1.0
1917–1920	86.8	7.5	1.9	0.0	0.0	0.9
Complete sample	60.7	20.4	2.0	5.5	6.6	1.1

Sturm or Anton Busch, was also available hinting at this wine region's interest. Demand for Spain and Portugal was mainly in the form of fortified wines such as Port wines or Madeira, which was very much in line with the situation in the United Kingdom.

The evolution over the different periods shows gainers and losers among the various wine-producing regions. Wines from Italy and the United States tripled their market share between 1865 and 1920, while German wines saw an increase of around 35% over the same period. Simultaneously, though remaining clear leader, France lost approximately 10%, and Portugal and Spain halved their market shares. Interestingly, with the United States entering WWI in 1917, a decline for German wines and a boom in U.S. wines occur on restaurant menus.

Outside NYC, the overall distribution of market shares in the United States, and onboard trains and ships are similar. France and Germany are clear leaders, but French (German) wines are slightly more (less) represented than in

NYC. However, the evolution of onboard services diverges from classic restaurants. Italian wines are virtually nonexistent on these menus, and with the outbreak of WWI, the share of German wines drops by 60% while U.S. wines close to triple their market share.

The evolution of U.S. wines compared to German and French wines was driven by two reinforcing effects. First, the consumption and wine supply did not collapse, but the German wine supply almost disappeared with WWI. This reinforced the market share of French and American wine offerings. However, from 1914 onwards France was also at war with crucial battlegrounds, especially in the Champagne region (around Verdun). Thus, French wines also suffered, leading to a reinforcement of the presence of U.S. wines. Second, the substantial improvement of U.S. wines in terms of reputation, quality, and distribution made these wines more popular and accessible to consumers. A reasonable hypothesis could also explain the diverging market share evolution for *en route* services compared to restaurants. *En*

Table 5.
Most Popular Wines by Location.

Rank	NYC		USA		En route		Elsewhere	
	Wine	Occ.	Wine	Occ.	Wine	Occ.	Wine	Occ.
#1	Mumm	1,450	Mumm	358	Mumm	579	Mumm	108
#2	Moët & Chandon	818	Pommery	315	Moët & Chandon	421	Pommery	66
#3	Pommery	763	Moët & Chandon	245	Ch. Pontet-Canet	239	Moët & Chandon	53
#4	Ch. Pontet-Canet	618	Veuve Clicquot	237	Pommery	224	Heidsieck & Co.	45
#5	Veuve Clicquot	581	Heidsieck & Co.	209	Veuve Clicquot	182	Veuve Clicquot	38
#6	Louis Roederer	432	George Goulet	182	Louis Roederer	162	George Goulet	37
#7	Heidsieck & Co.	366	Ruinart	141	Ch. d'Yquem	140	Perrier-Jouet	35
#8	Piper-Heidsieck	359	Perrier-Jouet	133	Piper-Heidsieck	122	Louis Roederer	24
#9	Ruinart	355	Ch. Pontet-Canet	111	Perrier-Jouet	105	Irroy (Taittinger)	20
#10	Krug	306	Piper-Heidsieck	109	Ruinart	100	Ch. d'Yquem	17
#11	Cresta Blanca	290	Ch. Gruaud-Larose	103	Ch. Margaux	94	Deutz	16
#12	Ch. d'Yquem	289	Irroy (Taittinger)	79	Henkell	85	Ch. Leoville	16
#13	Perrier-Jouet	284	Louis Roederer	77	Ch. La Tour Blanche	84	Ch. Margaux	15
#14	Montebello	239	Ch. d'Yquem	64	Ch. Gruaud-Larose	82	Ch. Pontet-Canet	14
#15	Urbana Wine	237	Carl Acker	59	Ch. Lafite-Rothschild	72	Ch. Lafite-Rothschild	14
#16	Pol Roger	235	Ch. La Tour Blanche	52	Heidsieck & Co.	66	Ch. Margaux	12
#17	Ch. Margaux	213	Ch. Cos d'Estournel	46	Ch. Margaux	66	Deinhard & Co	12
#18	Ch. Gruaud-Larose	196	Cook's	43	Deinhard & Co	60	Ruinart	11
#19	Ch. Lafite-Rothschild	195	Ch. Margaux	40	Ch. Rosemont-Geneste	59	Piper-Heidsieck	11
#20	Sandeman	190	Krug	36	Cook's	58	Montebello	11

route services work more on a just-in-time basis. Restaurants with extensive cellars could consequently continue to offer stored German and French wines even during the war. This increased the latency of the war's effect on restaurant wine offerings. The blockade on Germany reinforced this effect. Moreover, many railroad companies' proximity to the U.S. government made it more challenging to continue offering German products on board. Restaurants were less affected by such pressures and could more easily continue to provide what their customers demanded and empty their cellars progressively. Elsewhere the overall pattern is equally present in levels and evolutions but for U.S. wines, representing around 1% of the market. It thus appears that while U.S. wines (strongly) gained in popularity inside the United States, this was not the case abroad.

In unreported results, we also examine French wines' precise provenance to evaluate which region(s) were the most represented in NYC restaurants. We find a distribution that is relatively in line with the situation observed today but with some nuances. Bordeaux was the leader, more or less on a par with Champagne, with each region representing around 40% to 45% of all French wines offered in restaurants. For Champagne, a few big producers who still exist today dominated the market and worked on their brand management and storytelling. Bordeaux producers from the left bank included in the 1855 classification already enjoyed a solid reputation and were more popular than left-bank

wines. Sauternes was also already famous for sweet wines. Overall, a mix of brand, appellation, and terroir was put forward for this region. Burgundy had a market share close to 16% relative to all French wines. This period constitutes the golden age of Burgundy negociants, and a wine's terroir was already a prime characteristic and, therefore, frequently mentioned accordingly in the menus. However, opposed to Champagne and Bordeaux, none of today's top wineries existed but for the *Domaine de la Romanée Conti*. Wines from the Rhone Valley represented less than 1% of the total, and other regions such as Alsace or the Loire valley were anecdotal.

To further deepen the analysis, we identify the wines most represented on the menus. They are reported in Table 5. Out of the 20 most represented wines in NYC menus, 17 are from France, confirming this country's strong position in NYC gastronomy. Only two U.S. wines (*Cresta Blanca* and *Urbana White*) and one port wine (*Sandeman*) appear in the top 20. Inside France, five wines are from Bordeaux and 12 from Champagne. This region constitutes the top 3 represented brands (*Mumm*, *Moët & Chandon*, and *Pommery*) and all top 10 wines on menus apart for position four going to *Pontet-Canet* from Bordeaux. The popularity of *Pontet-Canet* in NYC restaurants is not accidental. It can be linked back to the *Cruse* family, who managed to position it as the railway *Pauillac*. It was therefore visible and well-known to a traveling clientele and had an established reputation and

brand. Overall, the menus included a rather similar repartition with a strong weight on Champagne and Bordeaux wines in the rest of the United States or on *en route* services.

The reported evidence is compelling, even from today's perspective. It clearly illustrates the power of brands and marketing tools already in use at the turn of the 20th century and remains valid a century onwards. This confirms findings by Simpson (2004) or Harding (2021), who study the evolution of Champagne in Britain in the 19th century. For example, the Champagne house Pommery & Greno, managed by Madame Pommery and her commercial director Adolphe Hubinet, left no stone unturned to expand nationally and internationally and to establish the producer as a strong brand in the second half of the 19th century. As a precursor, they laid many of the foundations for promoting luxury products: style, brand, communication, and public relations at the estate. For example, they proposed higher prices (by among others a presence on restaurant menus), built a simple brand name (a single memorable name on the label), and controlled distribution channels. They further promoted the brand with heavily increased advertising expenditures through all press channels and created an illusion of scarcity by proposing vintage Champagne for the first time in 1870. This allowed better-known Champagne houses to distinguish themselves from competitors who would sell (common) non-vintage Champagne only (Simpson, 2004). The appearance of vintage Champagne, made only in the best years, helped increase the entire brand's prestige and boost sales of the whole range (even of the non-vintage bottles). The same principles were then used by many other Champagne houses such as Moët & Chandon during that time to establish this beverage as a premium sparkling wine. These practices appear to still be coherent with current marketing practices for many luxury products (see, for example, Kapferer and Bastien (2012)).

Our evidence also demonstrates and confirms the importance of classifications (see Malter (2014) for recent evidence on the significance of status and classifications). In times of international expansions such as for Bordeaux wines in the Anglo-Saxon world of the 19th century, having a strong and easily comprehensible classification system is useful. The 1855 classification for Bordeaux's left bank helped to position and sell wines abroad and allowed Bordeaux to take a leading role it has kept until today. Therefore, it is unsurprising that even today, Bordeaux wines are among the first to be imported and the most popular in many emerging wine markets in Asia (Masset et al., 2016). Under limited information, it gives useful markers to inexperienced customers. Finally, a superstar effect, some wines witness today, has also existed for some time but not necessarily for the same producers. For Champagne and Bordeaux, a strong brand allows some producers to be recognized and to be able to charge high prices that go beyond

an ordinary wine bottle. In the 1880s, it was, for example, already common to pay three times more for a premium (superstar) champagne such as Pommery or Moët & Chandon than for a common brand (Harding, 2018). Some of today's price levels and the subsequent questioning and outcry (e.g., 305,000 USD for a bottle of 1947 Cheval Blanc or 275,000 USD for a bottle of 1907 Heidsieck champagne) may be warranted but not new. High prices already appeared outrageous at the beginning of the 20th century with the London trade stating in 1890 that "if the [champagne trade] is ever to die [. . .] it will commit suicide [since] a limit can be reached to the price at which consumer will buy," while revising their opinion in 1911 stating that

the consumption of Champagne has more than doubled in the last fifty years, in spite of the fact that the price of this Wine has increased about seventy-five percent. [. . .] It is very curious that each increase of price was followed by a corresponding increase in the consumption. (Harding, 2019)

The long-standing history of winegrowing, experience in marketing wines, and a recognized reputation may explain European wine's predominance in the United States. Mostly Bordeaux and Champagne producers were first movers and able to penetrate foreign markets with a European diaspora used to quality wines from these regions. However, European wines also had another significant advantage over domestic wines. The major urban hubs (e.g., New York, Boston, Philadelphia, and Chicago) were situated on the East Coast with a population of European descent. In these hubs, wine merchants first settled and created a vast distribution network to distribute their wine imports. These wine merchants had the network to source wines from Europe and the organizational know-how to bottle these wines and market them to a wealthy clientele. Moreover, European producers could further draw on experiences gained in penetrating European and South American markets.

U.S. wine producers did not benefit from this head-start but evolved over the period 1860 to 1920. Several issues on both the supply and demand side accompanied the early evolution of the U.S. wine industry in the 19th century. Production conditions were difficult. The low population density in winegrowing regions led to a shortage of labor supply and high wages (Simpson, 2011). It was even more difficult to find experienced and qualified workers. This affected wine quality as winegrowing in cool European climates could not be transposed directly to the hotter Californian climate. As a solution, from the 1880s onwards large, commercial wineries were established to save on labor costs and improve wine-making techniques. Access to capital was also difficult. The creation of larger wineries and their membership in the California Wine-Makers Corporation (CWMC) allowed consolidating wine quality and prices due to its ease of access to financing (Simpson, 2011).

On the demand side, U.S. winegrowers faced the issue that the major population hubs were situated at a long distance in the East. While the East Coast's European immigrant elite was used and inclined to drink prestigious European wines, the broad population in the rest of the country favored beer and spirits over wine (Simpson, 2011). The unreliable and unfinished railroads across the country also impeded sales. However, the improvement of transportation and the population growth throughout the country formed a more important urban clientele, especially in the distant East Coast market. U.S. wine sales began to be distributed more systematically with the regrouping of West Coast wine dealers into the heavily endowed California Wine Association (CWA) in 1894 (Simpson, 2011). It effectively created horizontal consolidation by combining the sales and production efforts of various large winegrowers. It also initiated a massive vertical integration by, among others, building its own distribution network (Briscoe, 2018). The CWA thus controlled the entire channel from production to retailer, and assured wine quality.⁵ Overall, the CWA successfully produced qualitative wine that it could sell to European immigrants in large urban areas. Still, the U.S. wine industry overall had less success in exporting its wines.

This evidence may explain the positive evolution of U.S. wines in the United States but also in NYC restaurants and *en route*. The professionalization in production, quality control, marketing and distribution efforts allowed U.S. wines to gain market shares by being distributed more widely to an ever-growing clientele.

The Price of Wine on Menus

Consumption habits were quite different over the period 1865 to 1920 compared to today. Many people accompanied their glass of wine with sparkling water (seltzer). It was also common to consume fortified wines (Madeira or Sherry) as part of a cocktail (thus containing other ingredients/beverages as well). In such cases, it is difficult to establish a reference price for the wine as such. For the analysis in this section, we focus on pure wines without the addition of another beverage. We also focus only on NYC prices to avoid problems induced by the use of different currencies.

We express all wine prices on the equivalent of a 0.75-liter bottle and convert them to a 2018 USD basis. Information on the quantity served was sometimes missing. Where possible (for example, some beverages are commonly served in standard size glasses), we inferred the size of the service. Otherwise, we removed the corresponding observations from the analysis. Some prices appear extreme (very high or very low). This probably reflects the diversity of food and wine offerings at the time, but it may also suggest the presence of errors in the data. Indeed, the prices have been transcribed by hand based on menus that are

sometimes difficult to decipher (low image quality). A typical mistake is to report a price in dollars when it was initially in cents. The error "dollars instead of cents" is relatively easy to identify and correct using filters and manual controls. Other possible transcription errors are more difficult to deal with, and the quantity of observations does not allow for manual control of each price. Therefore, we have decided to use the prices as they are and perform robustness tests by considering winsorized prices.

Figure 1 shows how average prices have evolved in NYC restaurants over time. The figure includes wines from various origins to allow identifying which wines were the most expensive. It is structured in two panels. The upper panel shows the historical average prices, whereas the lower panel reports prices expressed in 2018 USD. This distinction is important, given that the latter part of the 19th century has been marked by substantial deflation. In historical terms, wine prices overall drop until the turn of the century. They then increase again, ranging between USD 1.5 and 2.0. This is also the case for French, German, and U.S. wines. For Portugal and Spain, prices drop over the entire sample period. This could be due to the increase in competition Port and Madeira wines witnessed from nonfortified wines such as Claret (Harding, 2018). In 2018 terms, wine prices dropped at the end of the 19th century from an average USD 55 to around USD 40. A level which has remained constant until 1920. The evolution especially mirrors French wines' prices, which constitute the majority of the market and were the most expensive. U.S. wines are at the other end of the spectrum, with prices around USD 20, which tend to increase at the end of the sample period. The professionalization and vertical integration of the CWA may explain this price increase. Finally, wines from Germany, Spain, and Portugal show a price decline which is especially pronounced for Portugal and which slightly rebound for German wines.⁶ The price discrepancies among the various wine regions can be explained by differences in individual/collective reputation and status and consequently perceived quality. At that period, a lack of wine experts reinforced the importance of variables such as producer notoriety, country, or region of origin. Consumers often had access to incomplete information on wine quality, were rather uneducated on how good wines should taste and high prices incentivized fraudsters to produce cheap imitations. This was mostly the case, as many wines were mixed with foreign wines. However, quality would also vary depending on transportation and evolving wine-making techniques, subject to a producer's wealth and status (Simpson, 2004). Wine regions were more or less successful in solving these issues. The 1855 Bordeaux classification bears witness to the importance of status, and collective reputation becoming a reference for consumers and the wine trade in the 19th century. It clearly helped this region to better market its wines abroad (Simpson, 2004). For Champagne, it was the

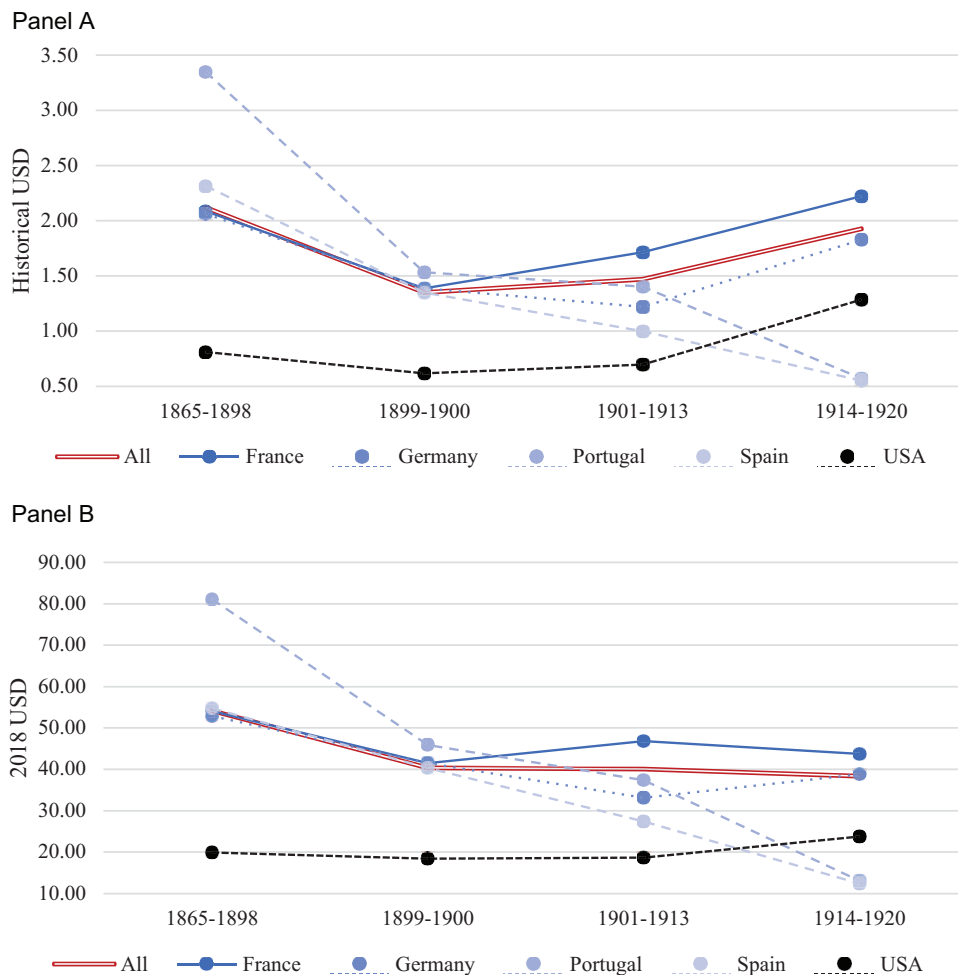


Figure 1. Price Evolution in NYC Restaurants by Wine Producing Country: (Panel A) Historical Average Prices. (Panel B) 2018 USD Average Prices.

early adoption of producer brands and the emergence of vintages (as for port wines), which created an informal classification system to help consumers more easily choose the best wines.

Wine prices may also have evolved due to changes in costs. Simpson (2004) shows that lower production, distribution, and transportation costs and a drop in tariffs did not spur a higher demand in wine in the British market. He further provides evidence that many wine merchants had difficulties modifying wine prices due to sticky cost structures. This hints at a rather inelastic price structure for wine in this time period. In the United States, import duties were relatively high for foreign wines and were increased at the end of the 19th century (Simpson, 2011). Moreover, foreign wines were, especially in restaurants and on trains, consumed by a wealthy clientele who were less price-sensitive. As is still the case today in fine dining, fine wine prices in

restaurants were frequently much higher than the price charged for a meal (Freedman, 2011).

Given the predominance of French wines in NYC restaurants, we report in Figure 2 the same information as in Figure 1 but for specific types of French wines: Bordeaux First Classified Growths, other Bordeaux wines, Sauternes wines, and Champagne. Focusing on distinct and homogeneous regions, representing a few wines but many observations helps mitigate the concerns induced by possible data errors.

In historical price terms, we confirm a downward trend for the 19th century. The evolution in the 20th century, however, strongly depends on the considered region. While Sauternes and other Bordeaux wine prices remain relatively constant, Champagne’s prices strongly increased, and those for Bordeaux First Growths slightly dropped. Over the entire period, Sauternes and Champagne were the most expensive, with prices around USD 2.7, followed by

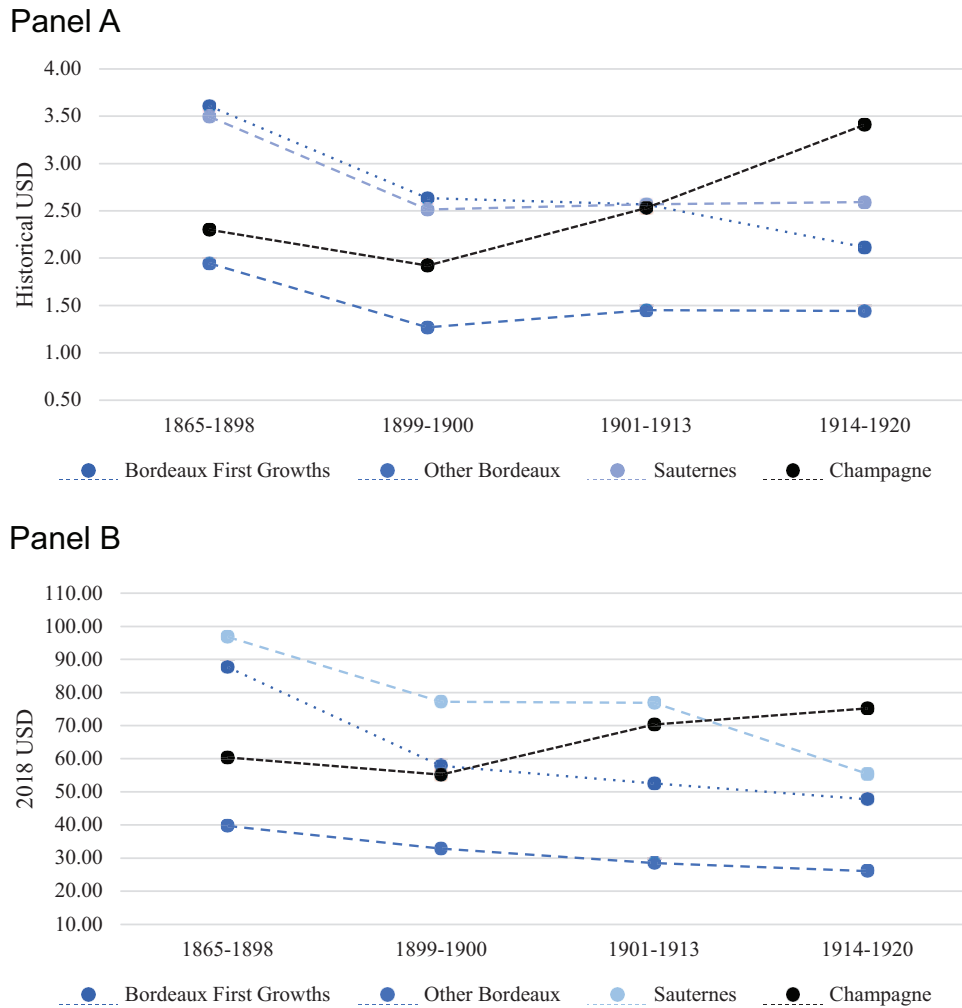


Figure 2. Price Evolution in NYC Restaurants of French Wines. (Panel A) Historical Average Prices. (Panel B) 2018 USD Average Prices.

Bordeaux First Growths at USD 2.5 and finally other Bordeaux wines at an average USD 1.5. At the end of the sample period, Champagne, however, sold for prices, which were around 75% higher than for First Growths and twice those of other Bordeaux wines. In 2018 price terms, all types of wines drop in price over the entire period. This drop is especially pronounced for Sauternes wines. Only Champagne manages to keep prices stable and even to increase them by around 15%. Price levels, as compared to today, are rather low for Bordeaux First Growths, Sauternes, and Champagne at a price ranging between USD 59 and 72.

Conclusion

This article exploits data for NYC, United States, and *en route* restaurants drawn from the NYPL's menu collection.

We examine the presence of wine on menus and factors affecting it, the types of wine offered in restaurants and the evolution over time, the pricing of wines in restaurants in the late 19th and early 20th century. Our results show that wine was already commonly present on the menus of NYC restaurants in 1865. The probability of having wines on a menu further increased between 1865 and 1914 before dropping during WWI. These observations illustrate that (a) improving economic conditions increase the interest for wine and (b) the demand for wine is sensitive to emotional factors and negatively affected by dramatic events.

France was already the wine-offering leader over the sample period. Especially red Bordeaux wines and sparkling wines from Champagne were the most sought-after. Germany was number two. Its share increased in the early 1900 and then declined during WWI, but only marginally

until 1917—when the United States declared war on Germany. Portuguese and Spanish wines were also quite popular but mostly for their fortified sweet wines. Expressed in 2018 price terms, a bottle of wine was, on average, selling for around USD 40 during the sample period. French wines were the most expensive, whereas American wines were among the least expensive. Overall, the evolution of wine prices over the period 1865 to 1920 closely follows inflation. This close connection between wine prices and inflation suggests that contrary to today and apart from a few high-end cuvees, the vast majority did not qualify as fine wines or luxury goods. Among the few wines that experienced a price increase, one finds sparkling wines from the Champagne region. Evidence from aggregate historic wine data (Nelgen et al., 2017) and culinary history (O’Connell, 2016) hints that Prohibition in the 1920s and 1930s has served as an exogenous shock to the United States and strongly altered its wine market in terms of production and consumption patterns. This reshuffling of the cards allowed for a new wine and regional positioning and market shares for grabs. A more in-depth analysis of these phenomena constitutes an interesting venue for future research. Furthermore, this paper has only extracted and exploited information on wine from the NYPL collection of digitalized menus. Thus, it appears worthwhile to examine the evolution of food offerings in restaurants over this time period. The food and wine pairing in those days would further allow to create a natural link between both items.

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Notes

1. Quote from a review of “The Restaurants Book: Ethnographies of Where we Eat” by Beriss and Sutton (2007)
2. This has changed over the last 50 years because of the relative decline in price of other drinks compared to wine and the introduction of tighter regulations in wine-consuming countries.

3. Note that Sauternes was spelled without the “s” at the end in the case of Californian wines.
4. “Covers for Two”: A Gastronomic Study; Relative Cost of a Seasonable and Well-Ordered Dinner at the “Smart” New York Restaurants. *New York Times Sunday Magazine*, 2 September 1906.
5. This is opposed to the traditional system in which several intermediaries would coexist and the potential for quality-diminishing operations (e.g., mixing low- and high-quality wines) due to diverging incentives between the market participants existed.
6. Results with prices winzorised at the 10% to 90% levels are close to those presented in Figures 1 and 2.

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