Did wine consumption change during the COVID-19 lockdown in France, Italy, Spain and Portugal?

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Abstract
This article documents how the COVID-19 crisis has affected the drinking behavior of Latin European wine consumers. Using a large online survey conducted during the first lockdown in France, Italy, Portugal, and Spain (*n*=7,324 individuals) we reconstructed the purchasing and consumption patterns of the respondents. As expected, according to supply difficulties and social disruption, the proportion of people reducing their wine consumption frequency is significantly higher than those who maintain or increase their consumption, even if wine consumption frequency held up better than other types of alcohol (beer and spirits). However, behind this observation appeared a heterogeneity among countries and individuals that we examined successively with a Marascuilo procedure and an ordered logit model. The latter identified the impact of demographic, commercial, and psychosocial factors on wine consumption frequency. The results shed light on changes in wine consumer behavior during the first lockdown and consider possible post-lockdown trends that could be useful to industry players.

"Gentlemen, in the little moment that remains to us between the crisis and the catastrophe, we may as well drink a glass of champagne." (P. Claudel)

I.   Introduction

The COVID-19 pandemic is a once-in-a-lifetime event that has already had major effects on societies and economies around the globe. In this article, we use survey data to investigate its impact on the drinking behavior of wine consumers in Latin Europe. More specifically, first we assess if the lockdown has led to a change in the frequency of wine consumption. Second, we explore a possible heterogeneity at country and individual levels considering the impact of demographic, behavioral, and psychosocial variables, which may explain the observed changes. For more details about lockdown policies across Europe, see Lümper and Neumayer (2020).

The objectives of this article are twofold. From a practical perspective, the wine industry is confronted with an unprecedented level of uncertainty. It is, therefore, of the utmost importance for all market players to have precise data about how wine consumption and purchasing patterns have evolved during the first lockdown. Moreover, reliable information on emerging trends, which may affect the demand for wine in the coming months, is urgently required. From an academic point of view, this situation represents a unique opportunity to investigate the drivers of wine consumption during periods of high uncertainty. Some researchers already expect a public health crisis resulting from alcohol use and misuse in the context of social isolation and stress during the COVID-19 lockdown (Clay and Parker, 2020),[19] yet some of the most reputed newspapers have published advice to help their readers organize virtual happy hours to maintain some form of socialization.[20]

To achieve the article's objectives, we conducted a large-scale online survey in France, Italy, Portugal, and Spain. Our sample has attractive features because it includes four Latin countries that share several cultural similarities. The survey includes a variety of questions related to the consumption and purchasing habits of consumers of wine and other alcoholic beverages (beer and spirits) before and during the lockdown; possible economic, emotional, and psychological effects of the lockdown; and sociodemographic variables. The total number of respondents from these four countries is 7,324 (6,920 living in those countries and 404 living abroad).

Our results can be summarized as follows. First, we explore the first lockdown trends in wine consumption in the whole sample and per country using, respectively, chi-square tests and the Marascuilo's procedure. The proportion of respondents reducing their wine consumption frequency is significantly higher than those who maintain or increase their consumption, yet wine consumption significantly held up better than other alcoholic beverages. Nevertheless, country specificities appear in France, where increasing and decreasing wine consumption frequency are not significantly different, and in Portugal, where reduction is significantly higher than elsewhere.

Second, we explore the individual heterogeneity of behaviors for the whole sample and per country using an ordered logit model. We note the loyalty of wine consumers to wine without substitution effects with other alcoholic beverages. Respondents who increased their wine

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[19] Using data on 1,547 patients diagnosed with COVID-19 in four large hospitals in Wuhan, China, Dai et al. (2020) find that COVID-19 patients with a history of cigarette smoking tend to have more severe outcomes than nonsmoking patients. However, alcohol consumption did not reveal significant effects on either development of severe illness or death rates in COVID-19 patients.
[20] See, for instance, https://www.nytimes.com/2020/03/20/well/virus-virtual-happy-hour.html and https://www.forbes.com/sites/alywalansky/2020/03/26/virtual-happy-hours-are-the-new-way-to-go-out-heres-how-to-plan-a-great-one/#f7bc4022a34e

consumption frequency were moderate drinkers before the lockdown, and they also increased their spending per bottle of wine.

Changes in consumption situations also have appeared. Digital gatherings have emerged, but they only have reduced the proportion of those who decreased their consumption frequency in France and Portugal. Conversely, many results concerning household size, age, and consumption status point to a reemergence of family consumption, which, in Spain and France, has contributed to increasing consumption. The supply structure has also changed. Globally, maintaining or increasing wine consumption frequency is positively associated with the consumption of wines held in cellars, as well as purchasing in wine stores and wineries. Finally, the relationship between the context of anxiety and wine consumption frequency increasing is more ambiguous than suggested by the literature, except partially in France. However, the significant association of increasing wine consumption frequency with certain consumption motivations (relaxing, sleeping, health) or low perception of the crisis as an opportunity for social and environmental changes, suggests that anxiety is not unrelated to the increase in consumption.

The remainder of the article is organized as follows. Section 2 briefly reviews the existing literature resulting in a set of four research questions. Section 3 presents the dataset, and section 4 is devoted to the empirical analysis. Section 5 concludes.

I. Uncertainty and the Consumption of Alcoholic Beverages

A. Review of the Literature

Mass tragic events such as infectious diseases often generate waves of intense fear and anxiety, causing great reductions in individuals' well-being (Balaratnasingam and Janca, 2006), as well as traumatic stress, depression, and anxiety (Liu et al., 2020; Peters et al., 2020). The experience of epidemic events is connected to the emergence of psychological disorders, such as anxiety and depression, harming people's quality of life (Holmes et al., 2020; Huang et al., 2020). Arpaci et al. (2020) go as far as to propose the use of the term *corona phobia* in addition to already existing types of fears (natural environment, animal, blood-infection injury, situational, social phobia, and agoraphobia) (APA, 2013). Specifically, COVID-19 has disrupted people's routines and generated extreme fear and anxiety. As a consequence, people can "develop disproportional cognitive, affective, or behavioral responses to the objects and situations that they associate with the COVID-19 pandemic and severe deteriorations may occur in the physiological and psychological functionalities" (Arpaci et al., 2020, p. 2).

Sensationalist headlines in the mass media foster anxiety and fear, inducing people to oscillate between denial and phobia, while also stigmatizing citizens racially perceived as being the source of the disease (Pappas et al., 2009). The generalized fear that affects people worldwide is further fueled by the severe symptoms of the coronavirus, uncertainty about the outcome of the disease, application of massive containment measures (Guan et al., 2020; Huang et al., 2020), and the fact that the event is unprecedented for most individuals (Soraci et al., 2020).

From an economic perspective, the COVID-19 crisis has been an exogenous shock to most markets, locally and internationally. For an empirical case study of impacts of the COVID-19 pandemic on global beverage markets see Wittwer and Anderson (2021). In the past, the wine industry has been affected by wars (Chavis and Leslie, 2009), natural disasters such as wildfires (Thach, 2018), and earthquakes (Forbes and Wilson, 2018), as well as terrorist attacks (Gergaud et al., 2018), among other events. The COVID-19 crisis is another extreme and tragic event that can have an immediate impact on alcohol consumption because it generates stress and anxiety among virtually all populations. The lockdown involved a serious disruption of social habits and relationships that has affected consumption. Indeed, the desire to reduce a negative effect and to

enhance a positive effect are central motivational processes underlying alcohol consumption. Research has shown that drinkers anticipate a stress-relieving effect and that alcohol consumption is associated with stress exposure (see Bartone et al., 2017, in a military context). In that sense, people drink to be able to cope better with a particular situation as a form of a reactive process initiated by the experience of negative emotions. People can also drink alcohol for social reasons and/or for sensation seeking, leading to enhancement drinking (drinking to enhance positive affect) (Cooper et al., 1995). Additionally, high scores on extraversion (associated with sociability) increase the expected frequency of wine consumption (Gustavsen and Rickertsen, 2019).

Due to the COVID-19 pandemic, physical separation (or social distancing) to prevent the spread of the virus has led to feelings of isolation and loneliness and has increased the prevalence of depression, anxiety, posttraumatic stress disorders, and insomnia in the population (Banerjee and Rai, 2020). However, during the lockdown, various technological devices have provided a way for people to maintain social connections with friends, family, their social networks, and/or the wider community (Marston et al., 2020). Digital socialization has created new occasions for alcohol consumption. The mobile phone application WhatsApp, for example, has extended the boundaries of young people's nightlife spaces (Truong, 2018), and can result in synchronous drinking in virtually connected, spatially separated locations, often with a hedonic motivation (Moewaka Barnes et al., 2016).

B. Research Agenda

Based on this discussion, we examine four related research questions. The literature is yet inconclusive about the impact of uncertainty on wine consumption. The crisis has disrupted distribution channels and reduced social interactions, suggesting a strong reduction in wine consumption frequency. However, loneliness and anxiety are well-known factors that increase alcohol consumption. The data enable us to analyze from the perspective of wine drinkers whether their consumption of other alcoholic beverages has been affected in the same way as their wine consumption behaviors during the lockdown. This leads us to the first question:

Question 1: Did respondents consume wine more frequently during the lockdown in both absolute terms and relative to other types of alcohol (beer and spirits)?
However, if wine has well-known social and cultural roles, social and cultural contexts may introduce heterogeneity in wine consumption behavior during the lockdown. Thus, our second question investigates possible country heterogeneity.

Question 2: Did wine consumption patterns of respondents during the lockdown significantly depend on their country of residence in Latin Europe?

The heterogeneity of behaviors can be not only social and cultural but also individual. Status, consumption patterns, supply habits, perception of risk and loneliness, and substitution effects between drinks are all relevant individual factors. Our two last questions investigate this individual level of heterogeneity.

Question 3: Which individual factors explain the observable evolution in wine consumption frequency of respondents during the first lockdown in Latin Europe?

Question 4: Did the effect of individual heterogeneity have a different profile depending on the country of residence?

Our study is purposely biased toward wine drinkers, to discover recent trends that are relevant to the wine industry.

II. Survey and Dataset

Between April 17 and May 10, 2020, exactly 7,324 respondents completed our questionnaire through the SurveyMonkey platform. We used an exponential discriminative chain-referral sampling method. Although this method is adequate given the urgency of the survey, it also generates a potential sampling bias that we hope to reduce through the large size of the sample. Table 1 details a sample structure that is relatively homogeneous across the four countries.[21]

Insert Table 1 here

Impression management (tendency to give favorable self-descriptions) often bias self-report data, questioning the validity of the survey research (Rosenman et al., 2011), especially when concerning alcohol consumption (Midanik, 1982; Stockwell et al., 2014). Because we cannot control this bias by using external data, readers should be aware of this potential bias but also assess its magnitude. Smith et al. (1984) examine this bias in alcohol consumption surveys in the United States by comparing self-reported data with actual sales. Their findings show a strong correlation (.84), especially because they survey adults who are free to participate or not in the study. More recently, Simon et al. (2015) and Karns-Wright et al. (2018) use transdermal alcohol monitoring to measure the validity of self-reported data on alcohol consumption with a correlation varying from .73 to .85. We therefore assume that although a bias may exist, its impact theoretically remains moderate.

Our outcome variable concerns alterations in individual wine consumption frequency with three distinctive modalities: less, as usual, more. For comparison and discussion of possible substitution effects purposes, respondents were asked the same question about their consumption of beer and spirits. In line with our literature review, we explore five categories of individual characteristics that may affect wine consumption behavior during the lockdown. In addition to the status (sociodemographic characteristics) of respondents, we include variables (detailed in the appendix) describing these characteristics:

- **Drinking habits**. The nature and volume of alcohol usually consumed may influence respondents' behavior during the lockdown. Three Likert scale variables (norm cons) self-report the consumption of respondents for each beverage, and we consider the previous remarks about the possible bias of self-reported alcohol consumption.

- **Expenditure pattern before and during the lockdown**. Two scale variables (norm exp bottle, lock exp bottle) describe the respondents' average expenditure in euros for the acquisition of a bottle of wine before and during the lockdown. To better describe potential cross effects of expenditure among alcoholic beverages we dispose of three dummies (lock add exp) describing an additional average expenditure during the lockdown, respectively, for wine, beer, and spirits. Figure 1 indicates that average wine expenditures have been reduced during the lockdown. It may partly explain an increase in the quantities consumed but a decrease in quality consumed. These variables must therefore be considered in the explanation of volume consumption during the lockdown. The respondents who did not buy wine are not represented so that the sum of frequencies is not equal to 1. Figure 1 shows the differences in distribution between a normal period and the lockdown period.

Insert Fig. 1 here.

- **Change in procurement patterns.** The specific conditions during the lockdown mechanically influence alcohol availability to individuals. A vector of dummies indicates the use of different distribution channels by the respondents before (norm proc) and during (lock proc) the lockdown. Figures 2a and 2b describe changes in procurement patterns per country. It appears that the lockdown greatly reduced the proportion of respondents purchasing their alcohol in wineries (particularly in France and Spain) and wine stores (particularly in Italy). Although declining, supermarkets remain the most frequent source of supply, particularly in Italy and Spain. Drive-through supermarkets and online supplies certainly have increased, but less than expected according to country[22]; consumption of wines held in cellars has dramatically increased, notably in France. These changes in procurement patterns, different from one country to another, may influence the outcome variable.

Insert Fig. 2a here.
Insert Fig. 2b here.

- **Change in consumption situations.** Wine is a social lubricant (Bucella, 2019) and the lockdown has reduced occasions to drink. A vector of dummies indicates the consumption situations that respondents commonly practice before (norm cons) and during (lock cons) the lockdown. Figures 3a and 3b indicate the proportion of respondents concerned for each situation per country. As expected, we note a dramatic reduction of opportunities to have a drink with friends and colleagues but a significant increase in self-consumption, notably in Portugal and Spain. The family consumption situation has held up fairly well. The most surprising report comes from the growth of online consumption situations in all countries but particularly in France. Thus, the heterogeneity of consumption situations before and during the lockdown according to countries makes it a source of potential explanatory variables of changes in wine consumption frequency during the lockdown.

Insert Fig. 3a here.
Insert Fig. 3b here.

- **Motives of wine consumption.** The lockdown may contribute to reducing certain motives ("friends") but increasing other ones ("relax", "sleep", and so on). Consumption patterns may change according to the specific respondents' usual motives of consumption. A vector of dummies (motiv) describes the usual motivations of respondents. Figure 4 indicates a prominence of taste and food-pairing motivations and a very specific distribution per country, notably in France and Portugal.

Insert Fig. 4 here.

- **Insecurity feeling regarding health (fear of virus) and wealth (fear of economic crisis).** Relationships between stress and alcohol consumption are largely discussed in the literature (e.g., Keyes et al., 2012). Insecurity feelings are self-reported on Likert scales. The heterogeneity of the reports (Figure 5) according to the respondents and their country of residence suggests differentiated effects on alcohol consumption frequency. Overall, the proportion distributions suggest that the Spanish are more afraid of the virus than of the economic crisis, the French more afraid of the economic crisis than of the virus, and the Italians and especially the Portuguese fear both.

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[21] We considered respondents' country of residence, not nationality. As a result, of the 404 respondents living outside their home country, some have been counted twice. For example, the respondent resides in France but is Italian. The person therefore belongs both to the group Resid FR, where they are marginal, and Living Abroad. In the latter group, they are mixed with Austrians living in France or in Germany. In short, the total population is not the sum of the categories of residence but of the nationalities.

[22] To better explore this finding, we added variables highlighting the proportion of online offers received by respondents (online offers received) and the proportion of respondents with wine apps on their smartphone (wine app smartphone).

- **Loneliness feeling** is a well-known driver of alcohol consumption (e.g., Akerlind and Hörnquist, 1992). Its influence is assessed through a measure of "feeling of isolation," referring to the psychometric loneliness scale (UCLA)[23] and by a measure of "feeling of refocusing on oneself" (reported on a Likert scale). Figure 6 shows the distribution of each scale variable with very specific features depending on the country. Note that "feeling of isolation" is a reverted scale, that is, strongly disagree means a high level of loneliness perceived and strongly agree a low level of loneliness perceived. "Feeling of refocusing on oneself" is a conventional scale that describes a more psychological than sociological isolation, because we can refocus on ourselves even in a family or friendship context.

- **Emerging positive initiatives.** The lockdown is quite systematically associated with a negative perception that may favor alcohol consumption. However, we add a scale variable (opportunity for initiatives) enabling respondents to express a vision in which this crisis is also a source of positive initiatives for a friendlier environmental and social society. Exploring it also enables us to glimpse a happier drinking experience (drinking to enhance positive affect). Figure 7 indicates a general agreement among Latin European populations about a positive vision of the first lockdown.

Summary statistics concerning each variable are presented in the appendix. In the following analysis, as opposed to a summary statistics presentation, scale variables will not be considered as continuous variables but discretized to better capture the specific distribution of respondents per degree (through a Likert scale). From this survey material, we can now address our research questions.

III.   Empirical Analysis

A. Changes in Wine Consumption During the Lockdown

To deal with our first research question we consider the frequency of changes (less, as usual, more) in wine consumption and by comparison with other alcoholic beverages. Figure 8 displays the observed frequency of changes in alcohol consumption per country and type of drink. It appears that everywhere the lockdown has led to a reduction in all alcohol consumption frequency. The answer to our first research question is therefore no; respondents do not consume wine more frequently during the lockdown in both absolute terms and relative to other alcohol types (beer and spirits). As expected, the supply difficulties and limitation of social relations have led to a reduction in consumption frequency.

Figure 8 shows that this effect may be different according to the beverage and the country. To examine this intuitive observation, we explore the existence of significant differences in drink consumption changes per country (within) (Table 2) and as compared to other countries (between)

[23] The three items measuring the sense of isolation (from the QCAL scale) were reduced by a factor analysis (α = .87; KMO = .72). The individuals' perceptions are recorded in five categories (Fisher's algorithm) to form an inverted Likert scale (1 strong, 5 weak feelings of isolation).

(Table 3). Each Table provides a chi-squared test to assess the equality of proportions (H0) considering the number of responses in each country (Table 2) and the number of respondents for each modality (Table 3). The rejection of the H0 hypothesis confirms the existence of significant differences in each Table that deserve to be commented on. Below the chi-square test, the Marascuilo's procedure (Marascuilo and Serlin, 1988) consists of carrying out comparison tests for all pairs of proportions, which makes it possible to identify which proportions are responsible for the rejection of H0, as well as to identify the homogeneous group of proportions.

On the one hand, the reduction in consumption frequency for all three types of drink have significantly higher proportions than the other alternatives over the whole sample. The same structure is verified in each country. Although belonging to the same group of proportions, wine consumption is still the one that has been reduced the least, and the consumption of spirits the one that has been reduced the most. People who have reduced their alcohol consumption frequency during the lockdown were therefore the most numerous with no significant difference among alcoholic drinks.

On the other hand, we note that the increase in alcohol consumption frequency may be significantly different according to the beverage. The increase in the consumption frequency of spirits is significantly less common everywhere (except for living abroad respondents). The increase in beer consumption is significantly more frequent than that of spirits (except in Portugal and for foreigners). Finally, the increase in wine consumption is significantly the most frequent in each of the countries. When the lockdown contributed to increasing alcohol consumption frequency, wine was the most frequently consumed of the three alternatives. Even so, French and abroad respondents display a proportion of increase in wine consumption frequency that is not significantly different from the reductions in consumption regardless of which type of alcoholic drink considered.

Finally, the discussion of research question 1 is more ambiguous than suggested by Figure 7. First, the proportion of people reducing their consumption frequency in all alcoholic beverages during the lockdown has been significantly higher than all other alternatives (more or as usual), except for the French and abroad respondents for which the decrease in wine consumption is not significantly different from all other alternatives. Second, the proportion of people increasing their wine consumption is significantly higher as compared to beer and spirits.

Thus, our second question prompts discussion of these findings to deal with possible heterogeneity per country. Table 3 examines whether the proportion of less, more, or as usual alternatives for each type of alcoholic drink is significantly different or not by country.

Concerning wine consumption, findings indicate that French and abroad respondents have a significant and higher proportion of answering more whereas Portuguese respondents have a significant and lower proportion for answering as usual. The proportion of those answering less is significantly different with two outsiders: French frequency is very low and Portuguese (partly abroad) is very high. Changes in wine consumption during the lockdown are significantly different according to the country. These findings are not specific to wine but do not concern the same countries. These contractions of the consumptions with different amplitudes reveal an initial heterogeneity of behavior per country. Our third question is more precise, questioning possible individual heterogeneity at the Latin European level and by country.

B. Individual Variables Affecting Changes in Wine Consumption Patterns

To the extent that we focus on the relationship between individual (i) characteristics (X_i) and a latent variable ($y*_i^w$) describing individual wine consumption in volume during the lockdown, we estimate an ordered logistic model.[24] The latent variable takes three values noted k ($k = 1,2,3$)

$$y_i^w = \begin{cases} 1 \text{ if } y*_i^w < \gamma_i^w \\ 2 \text{ if } y*_i^w = \gamma_i^{Bw} \\ 3 \text{ if } y*_i^w > \gamma_i^w \end{cases} \quad (1)$$

where γ_i^w is the threshold describing the previous individual wine consumption level. The probability distribution function being specified *(F)*, the probability that $y_i^w = k$ is noted.

$$Prob(y_i^w = k^w) = F(\gamma_k^w - X_i\beta^w) - F(\gamma_{k-1}^w - X_i\beta^w) \quad (2)$$

We can then determine parameters (β^w) of this model by maximizing the likelihood function.

$$L(y^w, \gamma^w, \beta^w) = \prod_{i=1}^{n} \prod_{k^B=1}^{3} [(\gamma_k^w - X_i\beta^w) - F(\gamma_{k-1}^w - X_i\beta^w)] \quad (3)$$

After testing different forms of probability distribution on all data, we retain a logit form for all estimates in order to facilitate the comparison. The likelihood function is then

$$L(y^w, \gamma^w, \beta^w) = \prod_{i=1}^{n} \prod_{k^w=1}^{3} \left(\frac{exp(\gamma_k^w - X_i\beta^w)}{1+exp(\gamma_k^w - X_i\beta^w)} \right) - \left(\frac{exp(\gamma_{k-1}^w - X_i\beta^w)}{1+exp(\gamma_{k-1}^w - X_i\beta^w)} \right) \quad (4)$$

Heteroskedasticity is controlled by using quasi-ML algorithms (Huber-White standard errors). The statistical impact of variables is based on the *p*-values. Due to their length, we fragment the results and their commentaries by category of variables (see part III).

Each Table presents the estimated coefficients of the ordered logit model and the marginal effects for each *k* value. Marginal effects are calculated at the means. For continuous variables, marginal effects indicate the change in the probability (*Pr(y=k)*) when the explanatory variable increases by one unit. For dummies, the marginal effect represents the change in probability (*Pr(y=k)*) when the variable changes from 0 to 1.

The following findings discuss our research questions 3 and 4 together, referring to Table 4 for the whole sample and Tables 5a to 5e for country samples (threshold values and predicted performance of each country model are included in Table 5e).

Insert Table 4 here.

- **Status effects on wine consumption during the lockdown (Tables 4 and 5a).**

The overall sample reveals no significant effect of status variables on changes in wine consumption frequency during the lockdown except for household size (no. children), and this is significantly

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[24] Given the number of variables, we assume that data verify the conditions for implementing the ordered logit model (Long and Freese, 2014). Based on the number of correctly predicted cases, the ordered logit model was preferred to the ordered probit model. Our findings focus on marginal effects.

observed in France and Italy. Does this mean that the lockdown was the occasion for the older children to go back to the family circle and have an opportunity for increased consumption frequency? Or did the continuous and exhausting presence of young children encourage parents to have a drink more often in the evening? No doubt the study of drinking motivations will tell us more about the effects of household size on alcohol consumption.

Insert Table 5a here.

Surprisingly, gender does not have a significant effect on the evolution of consumption, except in Italy, where males have consumed wine more often during the lockdown. Concerning age, we can distinguish Spain and Portugal, where the reduction in wine consumption frequency has been less significant with increasing age, and France, where young people have significantly increased (under 18 years) or maintained (18–25 years or student) their wine consumption. It tends to confirm the hypothesis of a more sustained consumption within the family circle. We note that income levels do not have any significant effect on consumption in the whole sample, as well as in the samples per country, but expenditure per wine bottle during the lockdown may explain this effect of purchasing power.

- **Expenditure effects on wine consumption during the lockdown (Tables 4 and 5b).**

Because the scale of wine prices is very different from one country to another, we focus our comments on variables describing the change in expenditure among the different types of alcoholic beverages. The variable lockdown additional expenditure is a dummy that takes the value 1 if the respondent has increased the average expenditure during the lockdown. In the whole sample, as well as in all subsamples, we note that an increase in wine expenditure is associated with a decrease in consumption frequency. Beyond what we learn from Figure 4, we may conclude that the lockdown has reduced the volume of wine consumed but increased its quality (price) for a significant proportion of respondents. Results also reveal significant cross-effect among alcoholic beverages. A substitution effect appears between wine and spirits to the extent that a higher expenditure in spirits decreases the frequency of wine consumption, notably in France and Italy. Conversely, a complementary effect appears between wine and beer: a higher expenditure in beer increases the frequency of wine consumption in all samples. The relatively lower price of beer and availability of supply locations frequented during the lockdown may explain this less intuitive result.

Insert Table 5b here.

- **Procurement pattern effects on wine consumption during the lockdown (Tables 4 and 5c).**

We expected that purchasing habits, as well as the ability of consumers to adapt to the local lockdown conditions, could have a significant influence on consumption frequency.
First, we could expect that an autonomous wine supply (personal cellar) could encourage wine consumption during the lockdown. Findings indicate that, throughout Latin Europe, the availability of a personal cellar is significantly and positively associated with wine consumption frequency, with a higher marginal effect of having a personal cellar during the lockdown than in normal situations. However, the estimates per country reveal different profiles. The influence of a personal cellar is not significant in Spain and Italy, whereas it is almost significant in France -p-value (.15) and highly significant in Portugal. In the countries concerned, these results raise questions about purchasing behavior after the lockdown. Some households will certainly try to refill their depleted stocks, which might reinforce the existing relationship with wine stores and wineries.

Insert Table 5c here.

Second, we expected that disruption and overcrowding anxiety in common distribution channels (supermarket, grocery, wine stores) may contribute to reducing the wine consumption frequency of respondents during the lockdown. However, in the whole of Latin Europe, people using these distribution channels have not significantly changed their consumption patterns. Here, again, some differences appear depending on the country. Wine procurement in supermarkets and grocery stores has significantly contributed to reducing wine consumption frequency in Spain, perhaps because of a specific epidemiologic and psychologic context (Rodriguez-Rey et al., 2020). However, the procurement in wine stores has significantly increased consumption in France and Italy, possibly because of a more secure business environment, better quality products, and better customer information. This proximity to specialty retail stores may change procurement habits after the crisis.

Third, we anticipated that online and drive-through distribution channels facilitated wine consumption during the lockdown. However, the findings are ambiguous. In the whole of Latin Europe, drive-through wine purchasing has facilitated the maintenance of wine consumption, except in Italy where it contributes to increasing consumption frequency. It is not only a safe practice for Italian wine consumers but also a behavioral change, because using a drive-through was significantly correlated with low consumption of wine before the lockdown. Surprisingly, online shopping did not contribute to changes in wine consumption across Latin Europe, although country results indicate a significant effect on maintaining wine consumption in France and Italy.

Having a wine application on a smartphone, receiving online offers during the lockdown, or using one's time to improve one's knowledge about wine, especially via the web, are significantly associated with an increase in wine consumption frequency throughout Latin Europe, a result that we corroborate partially in France and Portugal. But these online suggestions do not come only from the main digital platforms specialized in wine. As Korey (2020, p. 1) wrote in Wine at the age of COVID-19,[25] "we've also observed numerous creative uses of digital means in the industry: some wineries, wine merchants, and wine influencers have found new ways to stay in touch with consumers. From home delivery to special offers that include virtual one-to-one visits, wine sales continue online or by email, new hashtags make it social." The willingness to purchase more from local producers after the lockdown is already visible in the Italian subsample.

Finally, procurement in wineries is significantly associated with maintaining wine consumption in the whole sample and in the Italian and Portuguese subsamples, where it was not significant before the lockdown. The strengthening of the relationship between consumers and wineries is an interesting fact to consider in the future. An additional question to our survey regarding the intention to purchase local wines after confinement sheds more light on this trend (Figure 9). All countries show high or very high intentions for local supply offering prospects by local winemakers.

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Insert Fig 9 here.

- **Drinking habits and substitution effects (Tables 4 and 5d).**

Concerning drinking habits, our results confirm the possible effects of the lockdown on greater alcohol dependence.
The respondents who drink wine daily have not had significant results. For all others, regular wine consumers were the least inclined to reduce their consumption frequency and were most prone to increasing consumption frequency, particularly for the most moderate among them (drinking wine at least once a month). Marginal effects per country all confirm this result. Daily wine drinkers have

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[25] Alexandra Korey, Wine at the age of COVID-19, *The Florentine,* March 26, 2020.

had the same behavior except in Spain and Portugal, where the closure of bars has undoubtedly had a greater impact on daily consumption.

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Insert Table 5d here.

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Concerning substitution effects, drinking habits of beer or spirits did not have a significant (negatively expected) effect on wine consumption during the lockdown, except for respondents who consumed spirits at least once a week. This result in the overall sample has been verified in Italy and Portugal (with a more continuous effect depending on the levels of spirit consumption). Conversely, complementary effects among alcoholic beverages can be detected in France, where a high usual consumption of spirits reduces the probability of consuming less wine. In Portugal it significantly increases the probability of maintaining the same level of wine consumption during the lockdown.

During the lockdown, we have not detected any substitution effects among the types of alcoholic beverages. Whether beer (or spirits) drinkers increased or reduced their consumption, they still reduced their consumption of wine. We observe certain loyalty of consumers toward their favorite drinks in the whole sample as well as in the country samples. To conclude, the lockdown did not significantly induce a substitution effect among alcoholic beverages that could lead to significant modifications in market share in the future.

- **Consumption situation and motives of consumption (Tables 4 and 5e).**

In Latin Europe, the results indicate that consumption in all situations before the lockdown had been rather significantly associated with a decrease in consumption. The general tendency during the lockdown also has been to reduce consumption. It is interesting to note that the effects are of different amplitudes. Those who consumed in the context of real social interactions (with family, colleagues) reduced their consumption less (or even increased consumption among friends) than those who consumed individually (alone or online). However, these results are very partially confirmed in the subsamples by country but only in Spain and Portugal.

The influence of consumption situations on consumption frequencies during the lockdown is more visible and reveals a break in the relationship between consumption situation and consumption frequency. Consuming alone is associated with more frequent consumption, everywhere except in Italy, where the effect is not significant. The result shows possible correlations between isolation and consumption increase. A second interesting feature is a positive association in the whole sample, particularly in the French and Spanish subsamples, between family consumption and an increase in the frequency of consumption. The lockdown revived certain traditional habits, such as drinking wine during lunch and dinner. This trend could endure in post-lockdown practices. Only Portugal has shown a significant positive association between drinking among friends and drinking frequency (the lockdown conditions were less restrictive in Portugal).

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Insert Table 5e here.

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The lockdown has also generated new contexts for wine consumption, such as the digital happy hours. We expected this substitution with real social interactions to contribute to the increase in consumption. However, results are more complex. In the whole sample, this practice leads to a decrease in consumption that is all the more marked and significant the more frequent it is. This may be due to a digital fatigue, or to the fact that maintaining social interactions limits alcohol consumption. Even in normal times, social consumption was positively correlated to a limitation of consumption frequency. This might also be due to the fact that the majority of the respondents participating in virtual gatherings were younger than the average respondents, and they are usually

not those who consume more wine. However, the results by country show us that this practice may have contributed to increasing the frequency of consumption in France, maintaining it in Spain, or even limiting its reduction in Portugal. Finally, except for France, the practice of aperitifs did not contribute to the increase in consumption but rather helped to limit its reduction.

The study of motivations reveals a link between wine consumption frequency and anxiety. Only in Italy did we observe a positive association between tasting motivation and increased consumption. Specifically, there was a significant increase in the frequency of consumption linked to relaxing motivations in all samples, even sleep (Spain and Portugal) and a lesser reduction in the frequency of consumption linked to health motivations (Italy, Portugal). These results question a potential anxiety effect that the variables of loneliness and insecurity could better highlight.

- **Feelings of loneliness and insecurity (Tables 4 and 5f).**

Surprisingly feelings of isolation did not explain significantly any change in wine consumption except in France, where a high feeling of loneliness has been positively associated with maintenance of consumption (but also with a reduction of consumption). According to the results concerning motivations, we can suspect an impression management bias self-reported by respondents. The variable "feeling of refocusing on oneself" describes a more psychological than physical isolation and does not reveal any positive association between isolation and wine consumption. Conversely, this variable tends to reduce consumption frequency overall, in each country, but in a decreasing (or less significant) way as the feeling of refocusing increases.

Insert Table 5f here.

Conversely to what was expected, the fear of the virus did not significantly alter wine consumption, neither in the whole sample nor in any country sample. Conversely, the fear of an economic crisis is significantly associated with wine consumption frequency, but negatively. The increase in fear of a crisis decreases the proportion of people who have maintained or increased their wine consumption frequency during the lockdown. It has also increased the proportion of those who have reduced their consumption frequency.

To conclude, loneliness and insecurity feelings have not had any significant effect on wine consumption (feelings of isolation, except in France; fear of virus) or were negatively associated with wine consumption ("feeling of refocusing on oneself", less negative as the variable increases; fear of economic crisis). According to our results, the expected relationship between anxiety and an increase in alcohol consumption is undetermined, even though the motivation effect suggests that a bias may affect the self-reported feeling perception. We note that the variable opportunity for initiatives describing a positive perception of the lockdown is positively and significantly associated with an increase or maintenance of wine consumption frequency in the whole sample. However, findings per country specify these general results. In France, Italy, and Portugal, to disagree or strongly disagree with the idea that the lockdown might contribute to positive initiatives is significantly associated with increased wine consumption frequency. In this last finding only, we can observe a correlation between wine consumption and perceived anxiety.

IV. Conclusion

This article documents how the first lockdown implemented to deal with the COVID-19 crisis affected the drinking behavior of wine consumers in Latin Europe. Using a large online survey conducted in France, Italy, Portugal, and Spain (n=7,324 individuals) we analyze the evolution of the purchasing and consumption pattern of the respondents. Our study examines the wine consumption trend during the lockdown and its national and individual heterogeneity. Given the design of the survey and the methodological choices made in its treatment, several major results emerge.

Our first research question concerned the possible increase of wine consumption in line with anxiety and loneliness feelings despite commercial and social disruption. The findings indicate that the proportion of people reducing their wine consumption frequency during the lockdown has been significantly higher than all other alternatives (more or as usual). Additionally, when the lockdown contributed to increasing alcohol consumption, wine was the most frequently consumed alcohol compared to beer or spirits.

Our second research question explores the wine consumption trend of heterogeneity per country, considering the social and cultural specificities of wine consumption. Findings indicate that French and abroad respondents display a proportion of increase in wine consumption frequency that is not significantly different from the reduction in wine consumption frequency, and Portuguese respondents display a significantly higher proportion of respondents reducing their wine consumption frequency.

Our third and fourth research questions explore the individual heterogeneity of behavior, respectively, for the whole sample and per country. Some key results with strategic implications for market players are worth highlighting. Everywhere, there has been no significant effect of substitution among alcoholic beverages during the lockdown; instead, we observe a loyalty of wine consumers to wine and those who increased their consumption frequency had also increased its quality. Insofar as average usual consumption is positively associated with an increase in consumption frequency during the lockdown, opportunities for consumption in the medium segment of the market have emerged.

Changes in the consumption situation have also appeared. Digital gatherings have emerged, but they have reduced the proportion of those who decrease their consumption frequency only in two countries. A vast majority of European respondents do not have the intention of continuing digital gatherings after the lockdown. Conversely, many results concerning household size, age, and consumption status point to a reemergence of family consumption, which, in Spain as in France, has contributed to increasing consumption frequency and could continue after the lockdown. The supply structure has also changed. Consumption of wine stored in individual cellars has generally supported the maintenance or increase in wine consumption frequency, suggesting a possible future restocking trend, particularly from local wine stores and wineries whose supply has also supported European consumption.

Finally, the relationship between the context of anxiety (fear of the crisis, fear of the virus, feelings of loneliness, or refocusing on oneself) and wine consumption frequency increase is not significant, except partially in France. However, the significantly positive influence of certain consumption motivations (relaxing, sleeping, health) or low perception of the crisis as an opportunity for social and environmental changes, leaves doubt as to the impact of this anxiety-provoking context. This result suggests that we could have performed a better measurement of those perceptions.

Sales data and sociological surveys will come within a few months to confirm or clarify some of our inferences. Undoubtedly, concerning the threshold values and predictive performance of our models, country-specific functional forms and a better measurement of the variables will improve these results. Our reactivity in front of the surge of the COVID-19 crisis has come at this cost.

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Figures

Fig 1: Proportion of wine expenditure per level (in euros) and country, before (Norm) and during the lockdown, for one bottle

Fig2a: Procurement pattern (before the lockdown, proportion)

Fig2b: Procurement pattern (during the lockdown, proportion)

Fig 3a: Consumption situation pattern (before the lockdown, proportion)

Norm cons digital
Norm cons colleagues
Norm cons friends
Norm cons family
Norm cons alone

0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00

PORT SP IT FR

Fig 3b: Consumption situation pattern (during the lockdown, proportion)

Lock cons digital
Lock cons colleagues
Lock cons friends
Lock cons family
Lock cons alone

0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90

PORT SP IT FR

Fig 4: Alcohol consumtion by motivation (proportion per country)

Motiv others
Motiv wine challenge
Motiv wine sleep
Motiv wine health
Motiv wine romance
Motiv wine food
Motiv wine friendly
Motiv wine relax
Motiv wine taste

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9

PORT SP IT FR

Fig 5: Distribution of respondents according to their feelings of fear of the virus and the economic crisis per country (Are you worried about the Covid-19 and the economic crisis ?)

0.6 0.5 0.4 0.3 0.2 0.1 0

Fear of virus FR | Fear of crisis FR | Fear of virus IT | Fear of crisis IT | Fear of virus SP | Fear of crisis SP | Fear of virus PORT | Fear of crisis PORT

Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

Fig 6: Distribution of respondents according to their feeling of isolation (reverted scale) and their feeling of refocus on oneself

0.600 0.500 0.400 0.300 0.200 0.100 0.000

Feeling of isolation FR | Refocus on me FR | Feeling of isolation IT | Refocus on me IT | Feeling of isolation SP | Refocus on me SP | Feeling of isolation PORT | Refocus on me PORT

Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

Fig7: From this period are emerging positive intiatives ?

70 60 50 40 30 20 10 0

ALL FR IT SP PORT

Strongly disagree Disagree Neither agree nor disagree Agree Strongly agree

Fig 8: Proportion distribution of change in alcohol consumption during lockdown by type of beverage and country of residence

(Legend: FR, IT, SP, PORT)

Fig 9: Since the lockdown I feel I should purshase more local wine

(Legend: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree)

Fig 9. Will you keep on doing digital gathering after lockdown ?

(Categories: No / Yes for ALL, FR, IT, SP, PORT)

Tables

Table 1: Socio-economic characteristics of respondents

	All respondents		Portuguese residents		Spanish residents		Italian residents		French residents		Living abroad	
	N	%	N	%	N	%	N	%	N.	%	N	%
Sample size	7,324	100	1,940	26.4	2,549	34.8	1,146	15.6	1,374	18.7	404	5.5
Gender (male)	4,328	59.09	1,200	61.85	1,518	59.55	659	57.50	747	54.36	260	64.35
Urban	4,085	55.77	972	50.10	1,588	62.29	539	47.03	776	56.47	263	65.09
Sub-urban	1,704	23.26	481	24.79	481	18.87	354	30.89	314	22.85	97	24.00
Rural	1,535	20.95	487	25.10	480	18.83	253	22.07	284	20.66	44	10.89
Agriculture.	943	12.87	298	15.36	334	13.10	157	13.69	144	10.48	15	3.71
Industry	877	11.97	201	10.36	346	13.57	115	10.03	176	12.80	51	12.62
Services	4,122	56.28	1,043	53.76	1,461	57.31	626	54.62	759	55.24	297	73.51
Unemployed	601	8.20	260	13.40	111	4.35	56	4.88	166	12.08	10	2.47
Student	380	5.18	77	3.96	82	3.21	127	11.08	84	6.11	15	3.71
Retired	437	5.96	88	4.53	213	8.35	64	5.58	58	4.22	15	3.71

Table 2: Chi-square test and Marascuilo test of proportions equality of beverage changes per country

Sample	ALL		FR		IT		SP		PORT		Abroad	
Chi-square test (H0: proportions are equals)												
Chi-2 (Obs. value)	4,087.97		445.24		711.15		1,454.36		1,872.99		181.51	
Chi-2 (Critical value)	15.51		15.51		15.51		15.51		15.51		15.51	
p-value	<0.01		<0.01		<0.01		<0.01		<0.01		< 0.01	
H0	rejected		rejected		rejected		rejected		rejected		rejected	
Marascuilo procedure tests the significant difference among proportion (Pr), and classifies the proportion by group (Gr)												
Sample	Pr	Gr	Pr	Gr	Pr	Gr	Pr	Gr	Pr	Gr	Pr	Gr
Lock cons spirits more	0.031	A	0.041	A	0.032	A	0.022	A	0.03	A	0.043	A
Lock cons wine as usual	0.064	B	0.072	B	0.078	B/C	0.064	B	0.05	B	0.060	A/B
Lock cons beer more	0.062	B	0.091	B/C	0.058	B	0.072	B	0.03	A	0.072	A/B
Lock cons beer as usual	0.108	C	0.110	C/D	0.096	C/D	0.110	C	0.11	C	0.103	B/C
Lock cons wine less	0.153	E	0.118	D/E	0.153	E/F	0.149	D	0.18	D	0.142	C/D
Lock cons beer less	0.161	E	0.130	D/E/F	0.177	F	0.151	D	0.19	D	0.157	C/D
Lock cons spirits as usual	0.135	D	0.141	E/F	0.120	D/E	0.162	D	0.11	C	0.121	C/D
Lock cons spirits less	0.162	E	0.144	E/F	0.177	F	0.149	D	0.19	D	0.163	D
Lock cons wine more	0.124	D	0.152	F	0.110	D	0.120	C	0.11	C	0.139	C/D

Note : Two non-significantly different proportions belong to the same group, identified by a single letter. Two significantly different proportions belong to two different groups, each identified by a specific letter (A, B, C, D, E, F).

Table 3. Chi-2 test and Marascuilo test of proportions equality of countries per beverage change

	Chi-square test	Marascuilo Procedure		
		Sample	Proportion	Group
Lock cons wine more	Chi-2(9.5) = 84.47 [0.000] (H0 rejected)	IT	0.322	A
		PORT	0.326	A
		SP	0.360	A
		FR	0.443	B
		Abroad	0.502	B
Lock cons wine less	Chi-2(9.5) = 116.59 [0.000] (H0 rejected)	FR	0.344	A
		SP	0.447	B
		IT	0.448	B
		Abroad	0.514	B/C
		PORT	0.529	C
Lock cons wine as usual	Chi-2(9.5) = 43.07 [0.000] (H0 rejected)	PORT	0.144	A
		SP	0.193	B
		FR	0.209	B
		Abroad	0.218	B
		IT	0.229	B
Lock cons beer more	Chi-2(9.5) = 232.19 [0.000] (H0 rejected)	PORT	0.080	A
		IT	0.171	B
		SP	0.217	C
		Abroad	0.262	C/D
		FR	0.265	D
Lock cons beer less	Chi-2(9.5) = 100.6 [0.000] (H0 rejected)	FR	0.380	A
		SP	0.454	B
		IT	0.518	C
		PORT	0.534	C
		Abroad	0.566	C
Lock cons Beer as usual	Chi-2(9.5) = 12.75 [0.000] (H0 rejected)	IT	0.282	A
		FR	0.320	A
		PORT	0.324	A
		SP	0.329	A
		Abroad	0.372	A
Lock cons spirits more	Chi-2(9.5) = 48.45 [0.000] (H0 rejected)	SP	0.067	A
		IT	0.092	A/B
		PORT	0.096	B
		FR	0.119	B
		Abroad	0.157	B
Lock cons spirits less	Chi-2(9.5) = 73.2 [0.000] (H0 rejected)	FR	0.420	A
		SP	0.446	A
		IT	0.519	B
		PORT	0.530	B
		Abroad	0.588	B
Lock cons Spirits as usual	Chi-2(9.5) = 170.19 [0.000] (H0 rejected)	PORT	0.302	A
		IT	0.353	A/B
		FR	0.411	B
		Abroad	0.437	B/C
		SP	0.486	C

Note: Two non-significantly different proportions belong to the same group, identified by a single letter. Two significantly different proportions belong to two different groups, each identified by a specific letter (A, B, C, D, E, F).

Table 4: Ordered logit estimates (ME: marginal effects; k=1: less; k=2: as usual; k=3: more), all data (n=7,318)

Procurement patterns and consumption situations					Motives of wine consumption and status				
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)		Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Norm proc supermarket	0.059	-0.014	0.001	0.013	Motiv wine taste	0.077	-0.019	0.002	0.017
Norm proc grocery	-0.023	0.005	-0.001	-0.005	Motiv wine relax	0.459***	-0.108***	0.003**	0.105***
Norm proc cellar	0.16*	-0.038**	0.002***	0.036*	Motiv wine friendly	-0.004	0.001	0	-0.001
Norm proc winestore	-0.029	0.007	-0.001	-0.006	Motiv wine food	-0.087	0.021	-0.002*	-0.019
Norm proc online	0.044	-0.011	0.001	0.01	Motiv wine romance	-0.04	0.01	-0.001	-0.009
Norm proc winery	-0.058	0.014	-0.001	-0.013	Motiv wine health	-0.311***	0.076***	-0.011**	-0.065***
Norm proc drive	-0.237	0.058	-0.008	-0.05	Motiv wine sleep	0.17	-0.04	0.002***	0.039
Norm proc Others	0.05	-0.012	0.001	0.011	Motiv wine challenge	-0.051	0.012	-0.001	-0.011
Lock proc supermarket	-0.107	0.026	-0.002	-0.024	Motiv others	-0.045	0.011	-0.001	-0.01
Lock proc grocery	-0.121	0.029	-0.003	-0.026	Age_1 (below 18)	0.783	-0.169	-0.02	0.189
Lock proc cellar	0.181**	-0.043**	0.003**	0.04**	Age_2 (18>29)	0.165	-0.039	0.002	0.037
Lock proc winestore	0.14	-0.033	0.002**	0.032	Age_3 (30>40)	0.222	-0.053	0.003	0.05
Lock proc online	-0.14	0.034	-0.004	-0.03	Age_4 (41>50)	0.212	-0.051	0.003	0.048
Lock proc winery	0.144	-0.034	0.002**	0.032	Age_5 (51>60)	0.185	-0.044	0.003	0.041
Lock proc drive	0.175	-0.042	0.002***	0.04	Gender	0.087	-0.021	0.002	0.019
Lock proc others	0.129	-0.031	0.002**	0.029	Urban	0.031	-0.007	0.001	0.007
Lock proc online frequency_1	-0.04	0.01	-0.001	-0.009	Suburban	0.027	-0.006	0.001	0.006
Lock proc online frequency_2	0.026	-0.006	0.001	0.006	Agrisector	-0.114	0.028	-0.003	-0.025
Lock proc online frequency_3	-0.003	0.001	0	-0.001	Industrialsector	-0.158	0.039	-0.004	-0.034
Wine app smartphone	0.138**	-0.033**	0.002**	0.031**	Servicessectors	0.009	-0.002	0	0.002
Lock wine know improv	0.189**	-0.045**	0.003***	0.043**	Unemployed	-0.058	0.014	-0.001	-0.013
Online offers received	0.106*	-0.026*	0.002*	0.023*	Student	-0.037	0.009	-0.001	-0.008
Norm cons alone	-0.206**	0.05**	-0.006*	-0.045**	Othersectors	0.692	-0.152	-0.014	0.166
Norm cons family	-0.097	0.023	-0.002*	-0.022	Retirees	0.127	-0.03	0.002	0.029
Norm cons friends	0.147**	-0.036**	0.004*	0.032**	No. adults	-0.015	0.004	0	-0.003
Norm cons colleagues	-0.064	0.016	-0.001	-0.014	No. children	0.116***	-0.028***	0.002***	0.026***
Norm cons digital	-0.319	0.078	-0.012	-0.066*	Income_1 (living comfortably)	0.076	-0.018	0.002	0.017
Lock cons alone	0.329***	-0.078***	0.004***	0.074***	Income_2 (coping on present income)	-0.073	0.018	-0.002	-0.016
Lock cons family	0.206***	-0.05***	0.005**	0.045***	Income_3 (difficult on present income)	-0.174	0.042	-0.005	-0.037
Lock cons friends	0.103	-0.025	0.002	0.023	Income_4 (very difficult on present income)	0.101	-0.024	0.002	0.023
Lock cons colleagues	-0.199	0.049	-0.006	-0.042					
Lock digital drink_1(daily)	-0.394***	0.095***	-0.009***	-0.086***					
Lock digital drink_2 (at least once a week)	-0.314**	0.077**	-0.01*	-0.067**					
Lock digital drink_3 (rarely)	-0.221*	0.054*	-0.006	-0.048*					

*. ** and *** indicate statistical significance at the 10%. 5% and 1% levels. respectively.

Table 4 : to be continued

Expenditures, drinking habits and substitution effects					Feelings (loneliness and insecurity)				
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)		Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Lockdown exp bottle_2(less than 5€)	-0.001	0	0	0	Feeling of isolation_1 (hight)	-0.065	0.016	-0.001	-0.014
Lockdown exp bottle_3 (5€>10€)	-0.174	0.042	-0.004	-0.038	Feeling of isolation_2	-0.061	0.015	-0.001	-0.013
Lockdown exp bottle_4 (11€>20€)	-0.423	0.104	-0.015	-0.089	Feeling of isolation_3	-0.024	0.006	-0.001	-0.005
Lockdown exp bottle_5 (21€>30€)	-0.241	0.059	-0.008	-0.051	Feeling of isolation_4 (low)	-0.152	0.037	-0.004	-0.033
Norm exp bottle_2 (less than 5€)	-0.634***	0.156***	-0.027*	-0.129***	Fear of virus_1 (low)	-0.078	0.019	-0.002	-0.017
Norm exp bottle_3 (5€>10€)	-0.469**	0.113**	-0.011*	-0.102**	Fear of virus_2	0.114	-0.027	0.002	0.026
Norm exp bottle_4 (11€>20€)	-0.289	0.07	-0.008	-0.062	Fear of virus_3	0.085	-0.02	0.002	0.019
Norm exp bottle_5 (21€>30€)	-0.2	0.049	-0.006	-0.043	Fear of virus_4 (hight)	-0.047	0.011	-0.001	-0.01
Lock down Add exp wine	2.222***	-0.44***	-0.058***	0.5***	Fear of crisis_1 (low)	-0.285	0.07	-0.01	-0.06
Lock down Add exp beer	0.502***	-0.117***	0.001	0.116***	Fear of crisis_2	-0.065	0.016	-0.002	-0.014
Lock down Add exp spirit	-0.667***	0.164***	-0.035***	-0.13***	Fear of crisis_3	-0.242**	0.059**	-0.008*	-0.051***
Norm cons wine_1(daily)	0.194	-0.046	0.003	0.043	Fear of crisis_4 (high)	-0.159***	0.039***	-0.004**	-0.035***
Norm cons wine_2 (at least once a week)	1.337***	-0.311***	0.023***	0.29***	Refocusing on oneself_1 (low)	-0.012	0.003	0	-0.003
Norm cons wine_3 (at least once a month)	1.355***	-0.279***	-0.042***	0.322***	Refocusing on oneself_2	-0.31***	0.076***	-0.01**	-0.066***
Norm cons wine_4 (less than once a month)	0.987***	-0.209***	-0.028*	0.237***	Refocusing on oneself_3	-0.291***	0.071***	-0.008**	-0.063***
Norm cons beer_1(daily)	-0.039	0.009	-0.001	-0.009	Refocusing on oneself_4 (high)	-0.236**	0.057**	-0.006**	-0.052**
Norm cons beer_2 (at least once a week)	-0.141	0.034	-0.003	-0.031	Opportunity for initiatives_1 (low)	0.33	-0.077*	0.001	0.076
Norm cons beer_3 (at least once a month)	-0.038	0.009	-0.001	-0.008	Opportunity for initiatives_2	0.129	-0.031	0.002*	0.029
Norm cons beer_4 (less than once a month)	0.033	-0.008	0.001	0.007	Opportunity for initiatives_3	0.147	-0.035	0.002**	0.033
Norm cons spirits_1(daily)	-0.107	0.026	-0.003	-0.023	Opportunity for initiatives_4 (high)	0.166**	-0.04**	0.004*	0.037**
Norm cons spirits_2 (at least once a week)	-0.209**	0.051**	-0.006*	-0.045**	k=1 (threshold)	-7.63 ***			
Norm cons spirits_3 (at least once a month)	-0.11	0.027	-0.003	-0.024	k=2 (threshold)	-0.71			
Norm cons spirits_4 (less than once a month)	-0.038	0.009	-0.001	-0.008	k=3 (threshold)	0.36			
Lock cons beer_2 (less)	-0.617**	0.152**	-0.032	-0.121***	No. cases 'correctly predicted'	4,566 (62.4%)			
Lock cons beer_1 (more)	-0.541***	0.128***	-0.006***	-0.122***	*, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.				
Lock cons spirit_2 (less)	-1.144***	0.274***	-0.036***	-0.238***					
Lock cons spirit_1 (more)	-1.449***	0.338***	-0.031***	-0.308***					

	FR (n=1,372)				IT (n=1,146)				SP(n=2,549)				PORT(n=1,936)			
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Gender	0.072	-0.014	-0.003	0.02	0.29*	-0.07*	0.014*	0.056*	-0.021	0.005	0	-0.005	0.112	-0.03	0.006	0.022
Age_1 (below 18)	17.33***	-0.28***	-0.272***	0.55***	1.38	-0.26	-0.067	0.325	-1.689	0.382	-0.144	-0.239*	0	0	0	0
Age_2 (18>29)	-0.709	0.151	0.017***	-0.17	-0.17	0.04	-0.009	-0.032	-1.992*	0.441**	-0.161	-0.281***	3.305**	-0.54***	-0.127**	0.67***
Age_3 (30>40)	-0.485	0.101	0.016	-0.12	0.22	-0.05	0.008	0.045	-1.425	0.341*	-0.095	-0.247**	2.473**	-0.5***	-0.048	0.546***
Age_4 (41>50)	-0.186	0.038	0.007	-0.05	0.46	-0.11	0.013	0.094	-1.109*	0.269*	-0.053	-0.216**	2.019***	-0.45***	0.017	0.436***
Age_5 (51>60)	0.01	-0.002	0	0	0.46	-0.11	0.013*	0.094	-0.604*	0.147*	-0.023	-0.124*	1.518***	-0.35***	0.011	0.339***
Urban	-0.234	0.047	0.011	-0.06	0.08	-0.02	0.004	0.016	0.133	-0.032	0.003	0.029	0.139	-0.03	0.007	0.028
suburban	-0.212	0.043	0.008	-0.05	-0.08	0.02	-0.004	-0.015	0.141	-0.033	0.003	0.031	0.249	-0.06	0.011*	0.051
Agriculture sector	0.147	-0.029	-0.008	0.04	0.05	-0.01	0.002	0.009	-0.991	0.242	-0.061	-0.182*	-0.473	0.12	-0.03	-0.087*
Industrial sector	-0.451	0.096	0.012***	-0.11	0.28	-0.06	0.008	0.057	-1.043	0.255	-0.065	-0.19*	-0.372	0.09	-0.023	-0.069
Service sectors	-0.121	0.024	0.006	-0.03	0.45	-0.11	0.022	0.087	-0.871	0.204	-0.013**	-0.191	-0.428	0.11	-0.021	-0.086
Unemployed	-0.168	0.035	0.007	-0.04	-0.34	0.08	-0.022	-0.061	-0.579	0.143	-0.031	-0.112	-0.517	0.13	-0.033	-0.094*
Student	-0.335	0.071	0.01***	-0.08	0.5	-0.11	0.009	0.105	-1.029	0.251	-0.073	-0.178*	-0.464	0.11	-0.031	-0.083
Other sectors	-4.945***	0.545***	-0.259***	-0.45*	22.42***	-0.41***	-0.332***	0.74***	0.748	-0.161	-0.017	0.178	20.83**	-0.51**	-0.221**	0.729***
Retirees	-0.26	0.055	0.008	-0.06	1.32*	-0.26***	-0.048	0.306*	-0.845	0.208	-0.052	-0.156	-0.143	0.04	-0.008	-0.028
Income_1 (comfortable)	0.31	-0.064	-0.012	0.08	0.01	0	0	0.002	0.068	-0.016	0.002	0.015	-0.136	0.03	-0.007	-0.027
Income_2 (suitable)	0.141	-0.028	-0.007	0.03	-0.09	0.02	-0.004	-0.018	-0.09	0.022	-0.002	-0.019	-0.179	0.04	-0.009	-0.036
Income_3 (difficult)	0.304	-0.057	-0.019	0.08	-0.31	0.08	-0.02	-0.057	-0.223	0.054	-0.008	-0.046	-0.488*	0.12*	-0.032	-0.088**
Income_4 (very difficult)	0.255	-0.048	-0.015	0.06	-0.11	0.03	-0.006	-0.02	0.344	-0.079	0.001	0.079	0.05	-0.01	0.002	0.01
No. adults	-0.047	0.009	0.002	-0.01	-0.02	0.01	-0.001	-0.004	-0.039	0.009	-0.001	-0.008	-0.002	0	0	0
No. children	0.223***	-0.045***	-0.01***	0.06***	0.16*	-0.04*	0.008*	0.032*	0.05	-0.012	0.001	0.011	0.06	-0.02	0.003	0.012

*, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 5b : Expenditure effects

	FR (n=1,372)				IT (n=1,146)				SP(n=2,549)				PORT(n=1,936)			
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Norm exp bottle_1	0.177	-0.034	-0.01	0.04	-0.55	0.13	-0.043	-0.093	-0.295	0.072	-0.012	-0.061	-0.773	0.18	-0.056	-0.129*
Norm exp bottle_2	-0.803	0.182	-0.001	-0.18	-1.22**	0.29**	-0.109	-0.187***	-0.347	0.085	-0.012	-0.072	-0.496	0.12	-0.028	-0.095
Norm exp bottle_3	-0.63	0.129	0.024*	-0.15	-0.78	0.19	-0.042	-0.147	-0.096	0.023	-0.002	-0.021	-0.41	0.1	-0.022	-0.08
Norm exp bottle_4	-0.421	0.084	0.019	-0.1	-0.66	0.16	-0.039	-0.122	-0.056	0.014	-0.001	-0.012	-0.071	0.02	-0.004	-0.014
Norm exp bottle_5	-0.19	0.039	0.007	-0.05	-0.56	0.14	-0.043	-0.097	-0.06	0.014	-0.002	-0.013	0.073	-0.02	0.003	0.015
Lockdown exp bottle_1	0.254	-0.05	-0.013	0.06	0.51	-0.12	0.013*	0.104	0.924	-0.206	-0.008	0.214	-0.772	0.19	-0.048	-0.141
Lockdown exp bottle_2	0.574	-0.101	-0.041	0.14	0.64	-0.14	0.008	0.137	0.987	-0.218	-0.01	0.229	-0.874	0.21	-0.055	-0.159
Lockdown exp bottle_3	0.05	-0.01	-0.002	0.01	0.14	-0.03	0.006	0.027	0.836	-0.194	0.009*	0.186	-1.271*	0.3*	-0.079*	-0.224*
Lockdown exp bottle_4	-0.289	0.059	0.011	-0.07	-0.09	0.02	-0.005	-0.018	0.653	-0.147	-0.004	0.151	-1.266*	0.29**	-0.095	-0.194**
Lockdown exp bottle_5	-0.099	0.02	0.004	-0.02	-0.49	0.12	-0.036	-0.085	0.625	-0.138	-0.009	0.147	-0.619	0.15	-0.044	-0.106
Lockdown add exp wine	1.993***	-0.312***	-0.141***	0.45***	2.67***	-0.49***	-0.079***	0.568***	2.402***	-0.477***	-0.049***	0.526***	2.508***	-0.52***	-0.025*	0.545***
Lockdown add exp beer	0.758***	-0.137***	-0.05***	0.19***	0.69***	-0.16***	0.009	0.147***	0.262**	-0.062**	0.004**	0.058**	0.954***	-0.23***	0.01	0.216***
Lockdown add exp spirit	-1.087***	0.25***	-0.014	-0.24***	-1.09**	0.27**	-0.102*	-0.164***	-0.301	0.074	-0.012	-0.062	-0.28	0.07	-0.017	-0.053

*, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 5c: Procurement patterns' effects

	FR (n=1,372)				IT (n=1,146)				SP(n=2,549)				PORT(n=1,936)			
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Norm proc supermarket	0.222	-0.045	-0.01	0.05	-0.07	0.02	-0.003	-0.013	-0.005	0.001	0	-0.001	0.028	-0.01	0.001	0.006
Norm proc grocery	-0.031	0.006	0.001	-0.01	0	0	0	0	-0.095	0.023	-0.003	-0.02	0.313	-0.08	0.012*	0.066
Norm proc cellar	0.175	-0.035	-0.008	0.04	-0.2	0.05	-0.012	-0.038	0.166	-0.039	0.002*	0.037	-0.048	0.01	-0.002	-0.009
Norm proc winestore	-0.046	0.009	0.002	-0.01	-0.2	0.05	-0.009	-0.038	0.017	-0.004	0	0.004	0	0	0	0
Norm proc online	0.096	-0.019	-0.005	0.02	-0.53*	0.13*	-0.037	-0.093*	0.212	-0.05	0.003**	0.047	0.202	-0.05	0.009	0.042
Norm proc winery	0.033	-0.007	-0.002	0.01	-0.13	0.03	-0.006	-0.026	-0.025	0.006	-0.001	-0.005	-0.319**	0.08**	-0.018*	-0.062**
Norm proc drive	-0.549	0.121	0.007	-0.13	-1.79**	0.4***	-0.19**	-0.209***	0.742	-0.16	-0.017	0.177	0.419	-0.1	0.013**	0.091
Norm proc Others	0.001	0	0	0	-0.83**	0.2**	-0.073	-0.132**	0.131	-0.031	0.002	0.029	0.014	0	0.001	0.003
Lock proc supermarket	-0.004	0.001	0	0	0.17	-0.04	0.008	0.033	-0.432**	0.103**	-0.009**	-0.094**	0.007	0	0	0.001
Lock proc grocery	0.231	-0.044	-0.013	0.06	0.24	-0.06	0.007	0.049	-0.367**	0.09**	-0.015	-0.075**	-0.079	0.02	-0.004	-0.015
Lock proc cellar	0.249	-0.05	-0.011	0.06	0.15	-0.04	0.006	0.03	-0.148	0.036	-0.004	-0.032	0.527***	-0.13***	0.02***	0.111**
Lock proc wine store	0.413**	-0.078**	-0.025**	0.1**	0.57**	-0.13**	0.008**	0.12**	-0.146	0.036	-0.005	-0.031	-0.41	0.1*	-0.026	-0.075
Lock proc online	-0.374	0.079	0.011**	-0.09	0.44	-0.1	0.011**	0.092	-0.323	0.079	-0.012	-0.067	0.183	-0.05	0.008	0.037
Lock proc winery	0.045	-0.009	-0.002	0.01	0.35	-0.08	0.01**	0.072	-0.108	0.026	-0.003	-0.023	0.471**	-0.12**	0.016***	0.1**
Lock proc drive	0.013	-0.003	-0.001	0	1.52**	-0.28***	-0.08**	0.356**	-0.275	0.068	-0.011	-0.056	-0.112	0.03	-0.006	-0.022
Lock proc others	0.192	-0.037	-0.011	0.05	0.34	-0.08	0.009**	0.071	-0.273	0.067	-0.01	-0.056	0.631**	-0.15**	0.015***	0.139**
Post lock digital drink	0.004	-0.001	0	0	0.06	-0.01	0.003	0.011	-0.039	0.009	-0.001	-0.008	-0.045	0.01	-0.002	-0.009
Wine app smartphone	-0.002	0	0	0	0.01	0	0	0.001	0.145	-0.035	0.003	0.032	0.266**	-0.07**	0.012**	0.054*
Lock wine know improv	0.346*	-0.065*	-0.021*	0.09*	-0.07	0.02	-0.003	-0.013	0.17	-0.04	0.003	0.038	0.32**	-0.08**	0.013**	0.066*
Online offers received	0.049	-0.01	-0.002	0.01	0.12	-0.03	0.005	0.023	0.109	-0.026	0.002	0.024	0.183	-0.05	0.009	0.036
Lock proc online frequency_1	-0.538	0.098	0.035	-0.13	0	0	0	0	0.24	-0.058	0.008	0.051	-0.142	0.04	-0.007	-0.029
Lock proc online frequency_2	-0.231	0.048	0.008	-0.06	-0.06	0.01	-0.003	-0.011	0.297	-0.069	0.002	0.067	-0.21	0.05	-0.012	-0.04
Lock proc online frequency_3	-0.521	0.113	0.009	-0.12	0.06	-0.02	0.003	0.012	0.284	-0.067	0.002	0.064	-0.283	0.07	-0.017	-0.053

*, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 5d: Drinking habits and substitution effects

	FR (n=1,372)				IT (n=1,146)				SP(n=2,549)				PORT(n=1,936)			
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Norm cons wine_1	1.945*	-0.271*	-0.159**	0.43*	1.5	-0.32*	-0.003	0.322	-0.867***	0.211***	-0.04**	-0.171***	0.184	-0.05	0.009	0.037
Norm cons wine_2	2.583**	-0.518**	-0.025	0.55**	2.69***	-0.58***	0.096***	0.481***	0.708***	-0.168***	0.014**	0.154***	1.303**	-0.31***	0.046***	0.268**
Norm cons wine_3	2.498**	-0.335**	-0.188***	0.52**	2.34**	-0.39***	-0.129	0.525***	0.989***	-0.214***	-0.018	0.232***	1.381***	-0.31***	-0.004	0.318**
Norm cons wine_4	1.800*	-0.229*	-0.16*	0.39*	2.19**	-0.35***	-0.149	0.499***	0.756***	-0.166***	-0.012	0.178***	0.985*	-0.23**	0.008	0.225*
Norm cons beer_1	0.215	-0.041	-0.012	0.05	-0.18	0.04	-0.011	-0.034	-0.137	0.033	-0.004	-0.029	-0.056	0.01	-0.003	-0.011
Norm cons beer_2	-0.311	0.063	0.013	-0.08	-0.1	0.02	-0.005	-0.019	-0.141	0.034	-0.003	-0.031	0.022	-0.01	0.001	0.004
Norm cons beer_3	0.122	-0.024	-0.006	0.03	-0.27	0.06	-0.015	-0.05	-0.093	0.023	-0.003	-0.02	0.11	-0.03	0.005	0.022
Norm cons beer_4	0.104	-0.02	-0.005	0.03	-0.1	0.02	-0.005	-0.019	-0.007	0.002	0	-0.001	0.229	-0.06	0.01	0.047
Norm cons spirits_1	1.791	-0.218***	-0.162	0.38	-0.47	0.12	-0.035	-0.081	-0.584	0.145	-0.033	-0.112	-0.196	0.05	-0.011	-0.037
Norm cons spirits_2	-0.158	0.032	0.006	-0.04	-0.39	0.10	-0.024	-0.072*	0.217	-0.051	0.003**	0.048	-0.689***	0.17***	-0.047***	-0.12***
Norm cons spirits_3	-0.081	0.016	0.004	-0.02	0.06	-0.01	0.003	0.012	0.138	-0.033	0.003	0.03	-0.492***	0.12***	-0.03**	-0.091***
Norm cons spirits_4	-0.11	0.022	0.005	-0.03	-0.1	0.02	-0.005	-0.02	0.193*	-0.046*	0.004*	0.042*	-0.312*	0.08**	-0.017*	-0.061**
Lock cons beer_1	-0.553***	0.106***	0.03***	-0.14***	-0.45**	0.1**	-0.015**	-0.09**	-0.559***	0.131***	-0.006*	-0.125***	-0.571***	0.14***	-0.025***	-0.117***
Lock cons beer_2	-1.098**	0.254**	-0.018	-0.24**	-0.22	0.05	-0.013	-0.04	0	0	0	0	-0.315	0.08	-0.019	-0.059
Lock cons spirit_1	-1.422***	0.291***	0.04***	-0.33***	-1.44***	0.33***	-0.053***	-0.28***	-1.179***	0.279***	-0.034***	-0.246***	-1.73***	0.41***	-0.064***	-0.343***
Lock cons spirit_2	-1.261***	0.259***	0.037***	-0.3***	-1.04***	0.25***	-0.065***	-0.187***	-0.82***	0.195***	-0.02***	-0.176***	-1.381***	0.33***	-0.087***	-0.239***

*, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 5e: Consumption situation and motivation effects

	FR (n=1,372)				IT (n=1,146)				SP(n=2,549)				PORT(n=1,936)			
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Norm cons alone	0.066	-0.013	-0.003	0.02	-0.11	0.03	-0.006	-0.021	-0.377**	0.092**	-0.013*	-0.079**	-0.3*	0.07*	-0.017	-0.058*
Norm cons family	-0.262	0.05	0.015	-0.07	-0.12	0.03	-0.005	-0.024	-0.174	0.042	-0.003*	-0.038	0.117	-0.03	0.006	0.023
Norm cons friends	0.065	-0.013	-0.003	0.02	0.07	-0.02	0.003	0.013	0.065	-0.016	0.002	0.014	0.292*	-0.07**	0.016*	0.056*
Norm cons colleagues	-0.104	0.021	0.005	-0.03	0.04	-0.01	0.002	0.007	-0.009	0.002	0	-0.002	-0.069	0.02	-0.004	-0.014
Norm cons digital	-0.567	0.125	0.008	-0.13	-0.24	0.06	-0.015	-0.045	-0.626	0.155	-0.036	-0.119	0.139	-0.03	0.006	0.029
Lock cons alone	0.385**	-0.073**	-0.022**	0.1**	-0.1	0.02	-0.005	-0.019	0.59***	-0.138***	0.006*	0.132***	0.326*	-0.08*	0.015**	0.066*
Lock cons family	0.404**	-0.084**	-0.014**	0.1**	0.15	-0.04	0.008	0.029	0.37***	-0.09***	0.012**	0.078***	-0.143	0.04	-0.007	-0.029
Lock cons friends	-0.171	0.035	0.007	-0.04	-0.31	0.08	-0.019	-0.056	0.15	-0.036	0.002	0.033	0.599***	-0.15***	0.015***	0.132**
Lock cons colleagues	-0.572	0.126	0.008	-0.13	0.42	-0.1	0.007	0.088	-0.359	0.088	-0.016	-0.073	0.075	-0.02	0.004	0.015
Lock digital drink_1	-0.086***	-0.585	0.124	0.016***	-0.14	-0.49*	0.12*	-0.031*	-0.088*	-0.148	0.036	-0.004	-0.032	-1.299*	0.31*	-0.023
Lock digital drink_2	-0.067**	-0.066	0.013	0.003	-0.02	-0.37	0.09	-0.023	-0.068*	-0.337	0.083	-0.013	-0.07	-1.305	0.3**	-0.097
Lock digital drink_3	-0.048*	-0.052	0.01	0.002	-0.01	-0.48*	0.12**	-0.023**	-0.093*	-0.047	0.011	-0.001	-0.01	-0.809	0.19	-0.057
Motiv wine taste	0.079	-0.016	-0.003	0.02	0.31*	-0.08*	0.017	0.059**	0.12	-0.029	0.003	0.026	0.066	-0.02	0.003	0.013
Motiv wine relax	0.313*	-0.06**	-0.017	0.08*	0.53***	-0.12***	0.015**	0.109***	0.465***	-0.108***	0.003	0.105***	0.577***	-0.14***	0.023***	0.12***
Motiv wine friends	0.037	-0.007	-0.002	0.01	0.03	-0.01	0.001	0.006	-0.011	0.003	0	-0.002	-0.1	0.03	-0.005	-0.02
Motiv wine food	-0.101	0.02	0.005	-0.02	0.06	-0.01	0.003	0.011	-0.105	0.025	-0.002	-0.023	-0.132	0.03	-0.006	-0.027
Motiv wine romance	0.255	-0.049	-0.015	0.06	-0.11	0.03	-0.006	-0.021	-0.032	0.008	-0.001	-0.007	-0.137	0.03	-0.008	-0.027
Motiv wine health	-0.024	0.005	0.001	-0.01	-0.69**	0.17**	-0.054	-0.116***	-0.105	0.025	-0.003	-0.022	-0.531*	0.13*	-0.036	-0.094**
Motiv wine sleep	-0.148	0.031	0.006	-0.04	0.26	-0.06	0.007	0.054	0.188	-0.044	0.002**	0.042	0.623*	-0.15*	0.013***	0.138*
Motiv wine challenge	-0.091	0.018	0.004	-0.02	-0.09	0.02	-0.004	-0.017	0.012	-0.003	0	0.003	0.012	0	0.001	0.002
Motiv others	-0.105	0.022	0.004	-0.03	0.41	-0.09	0.007	0.088	0.03	-0.007	0.001	0.007	-0.26	0.06	-0.016	-0.049

*, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 5f: Loneliness and insecurity feelings' effects

	FR (n=1,372)				IT (n=1,146)				SP(n=2,549)				PORT(n=1,936)			
	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)	Coeff.	EM(k=1)	EM(k=2)	EM(k=3)
Feeling of isolation_1 (high)	-0.329*	0.068*	0.011*	-0.08*	0,21	-0,05	0,008	0,043	-0,027	0,006	-0,001	-0,006	0,043	-0,01	0,002	0,009
Feeling of isolation_2	-0.164	0.033	0.007	-0.04	-0,06	0,01	-0,003	-0,012	-0,051	0,012	-0,001	-0,011	0,165	-0,04	0,008	0,033
Feeling of isolation_3	0.164	-0.032	-0.009	0.04	-0,33	0,08	-0,022	-0,06	-0,195	0,048	-0,007	-0,041	0,347	-0,09	0,012**	0,074
Feeling of isolation_4 (low)	-0.136	0.028	0.005	-0.03	0,14	-0,03	0,005	0,027	-0,227	0,055	-0,008	-0,047	-0,275	0,07	-0,017	-0,052
Fear of virus_1(low)	-0.18	0.037	0.007	-0.04	0,47	-0,11	0,007	0,101	-0,387	0,095	-0,017	-0,078*	-0,101	0,03	-0,006	-0,02
Fear of virus_2	-0.047	0.009	0.002	-0.01	0,18	-0,04	0,007	0,036	-0,061	0,015	-0,002	-0,013	0,246	-0,06	0,01	0,051
Fear of virus_3	0.007	-0.001	0	0	0,4	-0,1	0,015*	0,081	0,01	-0,002	0	0,002	-0,174	0,04	-0,009	-0,034
Fear of virus_4 (high)	-0.37	0.077	0.012	-0.09	0,31	-0,07	0,013	0,061	-0,107	0,026	-0,003	-0,023	-0,027	0,01	-0,001	-0,005
Fear of crisis_1 (low)	-0.287	0.061	0.008	-0.07	-1,3	0,31	-0,133	-0,176*	-0,149	0,036	-0,005	-0,031	1,771	-0,36**	-0,059	0,415
Fear of crisis_2	-0.323	0.068	0.01***	-0.08	0,39	-0,09	0,008*	0,082	-0,044	0,011	-0,001	-0,009	-0,388	0,1	-0,025	-0,071
Fear of crisis_3	-0.199	0.041	0.008	-0.05	-0,41*	0,1*	-0,026	-0,074*	-0,271	0,066	-0,011	-0,056	-0,167	0,04	-0,01	-0,032
Fear of crisis_4 (high)	-0.212	0.043	0.01	-0.05	-0,26*	0,06*	-0,012	-0,051*	-0,113	0,027	-0,003	-0,024	-0,109	0,03	-0,006	-0,022
Refocusing on oneself_1 (low)	0.24	-0.045	-0.014	0.06	-0,52	0,13	-0,04	-0,089	0,519**	-0,117**	-0,003	0,12**	-0,397	0,1	-0,026	-0,072
Refocusing on oneself_2	-0.673**	0.148**	0.008	-0.16**	-0,6*	0,15*	-0,045	-0,102**	0,021	-0,005	0	0,005	-0,451*	0,11*	-0,027*	-0,085*
Refocusing on oneself_3	-0.25	0.051	0.01	-0.06	-0,49*	0,12*	-0,028	-0,091**	-0,112	0,027	-0,003	-0,024	-0,278	0,07	-0,015	-0,054
Refocusing on oneself_4 (high)	-0.073	0.015	0.003	-0.02	-0,41*	0,1*	-0,02	-0,078*	0,02	-0,005	0	0,004	-0,305	0,08	-0,016	-0,06
Opportunity for initiatives_1 (low)	0.091	-0.018	-0.005	0.02	1,09*	-0,22**	-0,031	0,251*	0,241	-0,056	0,002	0,054	0,194	-0,05	0,008	0,04
Opportunity for initiatives_2	0.956**	-0.152**	-0.079**	0.23**	-0,2	0,05	-0,012	-0,038	-0,408	0,101	-0,019	-0,082	0,562**	-0,14**	0,015***	0,123*
Opportunity for initiatives_3	0.296	-0.057	-0.016	0.07	0,01	0	0,001	0,002	0,126	-0,03	0,002	0,028	0,128	-0,03	0,006	0,026
Opportunity for initiatives_4 (high)	0.157	-0.031	-0.007	0.04	0,14	-0,03	0,006	0,027	0,031	-0,008	0,001	0,007	0,246	-0,06	0,013	0,048
k=1 (threshold)	-7.30*				-7.16****				-12.04***				-5.95**			
k=2 (threshold)	-1.66				0.12				-3.46*				2.14			
k=3 (threshold)	-0.51				1.54				-2.30				3.10			
No. cases 'correctly predicted'	808 (58,9%)				701 (61,2%)				1,627 (63,8%)				1,348 (69,6%)			

*, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.