Lausanne 2024 Abstract Submission

Title
What is Natural Wine? Alternative ways to define an elusive market

I want to submit an abstract for:
Conference Presentation

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Keywords
wine, natural foods, marketing, premiumization, segmentation, product attributes

Research Question
Natural wine is thought to be to be a fast-growing wine industry segment. But is it? What is natural wine? How can it be defined as an economic market segment?

Methods
Online survey of 513 wine producers from 9 European countries, including 383 (75%) natural wine producers and 130 (25%) non-natural wine producers.

Results
We find that wine producers cannot agree on any production or sensory criteria for defining natural wine. The segment is better defined by business and marketing characteristics.

Abstract
NOTE: PLEASE DO NOT USE THIS TEXT ABSTRACT. TEXT REFERS TO TABLES AND FIGURES IN ATTACHED PDF.
THANKS

MOTIVATION, INTRODUCTION, AND SUMMARY

Natural wine is increasingly thought by many, and widely reported in the media, to be one of the fastest-growing...
segments of the wine industry.

But is it?

Nobody knows, and this is our first motivation for this paper. It is easy to verify increasing media coverage of the natural wine segment, but to measure “natural wine” as an economic market segment—or to track its market share and growth—requires a definition that can reliably differentiate natural wine from ordinary (i.e. “non-natural”) wine.

What is natural wine? Can the segment be defined and measured, and if so, how?
In the scant literature on this question, research has found wide divergence in consumer attitudes. We contribute a different kind of information: an analysis of the opinions of wine producers—both natural and non-natural—across Europe.

We collected data from 513 wine producers in 9 European countries, of which 75% are natural wine producers and 25% are non-natural wine producers. We surveyed each producer on their definitions of natural wines and expectations and assumptions about their characteristics, and we analyzed their agreements and disagreements.

We find substantial disagreement among natural wine producers, among non-natural wine producers, and between the two, over almost all plausible sensory and production criteria for defining natural wine. We find a better basis for defining the segment based on business or marketing criteria.

DESIGN, METHODOLOGY, AND DATA

Between June and October 2023, we conducted online surveys of wine producers around Europe. Each producer completed a questionnaire about their firm’s characteristics, and what sensory, production, and business characteristics that they deem necessary for wine to be “natural,” and about the acceptability in natural wine of characteristics that would traditionally be considered flaws in ordinary winemaking.

513 producers completed our survey, including 383 (75% of the sample) who self-identified as natural wine producers and 130 (25%) who did not. The three nationalities represented most were France (49% of producers), Hungary (16%), and Italy (15%).

RESULTS

The initial research question is whether natural wine can be usefully defined as a market category, and if so, how. We consider, and sort our results by, three different possible types of attributes that could be used as a basis for assigning some subset of all wines to the natural wine category. We consider, and survey producers, on possible definitions of natural wine based on (1) production characteristics, (2) sensory characteristics, and (3) business characteristics.

Producers diverged widely in their answers, and agreed on few possible criteria that could form a useful definition. For instance, about half of natural wine producers strongly agree that natural wine must be unfiltered and the other half do not. About one-third strongly agree that it should be made without any added sulphur dioxide. Two-thirds strongly agree that hand-harvesting is essential, but only one in six for biodynamic certification.

The results, therefore, show considerable divergence both within and between the groups of natural wine producers and non-natural wine producers.

1. Production Characteristics

We find that natural wine cannot be easily differentiated or defined based on any unique set of production characteristics. Our results suggest that the idea of “minimal intervention” means many different things to different people: biodynamic methods, dry farming, wild fermentation, clay amphorae, or even the absence of electricity.

As the results in Table 1 [TABLES AND FIGURES IN PDF] show, producers, both natural and non-natural, substantially disagreed over which of 10 possible production characteristics, if any, are necessary for a wine to be
classified as “natural wine.”

Although non-natural wine producers, collectively, yielded almost the same rank-order as natural wine producers in terms of percent agreeing with each of the 10 possible requirement, percentages of agreement were consistently lower (in 9 of 10 questions) for non-natural producers than for natural producers.

An example of this phenomenon is shown in Figure 1 (agreement with the hand-harvesting requirement among natural vs. non-natural producers).

2. Sensory characteristics

Red wines are easily identified by their color, sweet wines by sugar content, sherrys by oxidation. Can natural wine be defined by its sensory characteristics?

We find, in short, that it cannot. Disagreement between natural wine producers, and even more vehement disagreement between natural and non-natural wine producers, render any sensory-related definition impractical. However, the differences in opinion between natural and non-natural winemakers in our results are worth examining.

A significant minority—and in some cases majority—of natural winemakers embrace attributes that might be considered flaws in ordinary winemaking, such as oxidation, reduction, volatile acidity, secondary fermentation, or brettanomyces. Meanwhile, non-natural wine producers are much more likely to prefer natural wines to adhere to traditional quality standards.

As an example, Figure 2 shows natural and non-natural wine producers’ responses to whether “a good natural wine” should be “free from oxidation” or “free from reduction.”

Fewer than half of natural wine producers minded oxidation and reduction in natural wine, whereas more than 70% of non-natural producers strongly preferred their natural wines not to be oxidized or reduced.

3. Business characteristics

Our data show that what differentiates natural wine producers most is in their unorthodox marketing, sales, and distribution methods. Businesses are very small and weakly capitalized, and many are not the owners’ primary sources of income. Most wholesaling goes through a small, well-defined group of all-natural wine distributors, who in turn sell to all-natural-wine bars, wine stores, and restaurants whose buyers often rely solely on the distributors to determine which wines are “natural.”

DISCUSSION

Data from one question in our survey, “What motivated you to produce natural wine?,” may cast an interesting light on business practices in the natural wine segment: We were surprised to find that, as shown in Figure 3, that only 6.3% of natural wine producers strongly agreed with the statement that they were motivated to produce natural wine by better market chances, whereas 20.6% strongly disagreed.

This raised the possibility that natural wines this raised the possibility that natural wine producers may not be guided primarily by profit, which could help explain the seeming disconnect between supply of and demand for flaws—as well as providing some context for the result from a final key question in our survey: we asked all participants (natural and non-natural producers) this simple yes-or-no question: “Does natural wine taste good?”

We conclude with these results, which are shown in Figure 4.

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What is natural wine?

Alternative ways to define an elusive market

Extended Abstract, AAWE 2024, Lausanne

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The initial research question is whether natural wine can be usefully defined as a market category, and if so, how. We consider, and sort our results by, three different possible types of attributes that could be used as a basis for assigning some subset of all wines to the natural wine category. We consider, and survey producers, on possible definitions of natural wine based on (1) production characteristics, (2) sensory characteristics, and (3) business characteristics.

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As the results in Table 1 show, producers, both natural and non-natural, substantially disagreed over which of 10 possible production characteristics, if any, are necessary for a wine to be classified as “natural wine.”
Table 1. Necessary Production Characteristics of Natural Wine, According to Producers

<table>
<thead>
<tr>
<th>Tier of Agreement</th>
<th>Requirement / Rank by Agreement</th>
<th>Natural Producers</th>
<th>Non-Natural Producers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Strongly Agree</td>
<td>Do Not Agree</td>
</tr>
<tr>
<td>Tier 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some agreement among natural producers, less among non-natural</td>
<td>1. Only Wild Yeast</td>
<td>82.2%</td>
<td>7.8%</td>
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<tr>
<td></td>
<td>2. Only Spontaneous Fermentation</td>
<td>76.0%</td>
<td>10.2%</td>
</tr>
<tr>
<td></td>
<td>3. No Additives/Processing Aids</td>
<td>73.9%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Tier 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerable disagreement, esp. among non-natural producers</td>
<td>4. No Fining</td>
<td>68.1%</td>
<td>17.8%</td>
</tr>
<tr>
<td></td>
<td>5. Hand-Harvested Grapes</td>
<td>68.1%</td>
<td>18.8%</td>
</tr>
<tr>
<td></td>
<td>6. 100% Organic Certified</td>
<td>67.1%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Tier 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widespread disagreement among all types of producers</td>
<td>7. No Filtering</td>
<td>51.2%</td>
<td>32.4%</td>
</tr>
<tr>
<td></td>
<td>8. Less than 30 mg/L added SO2</td>
<td>48.0%</td>
<td>30.0%</td>
</tr>
<tr>
<td></td>
<td>9. No added SO2 at all</td>
<td>28.2%</td>
<td>59.0%</td>
</tr>
<tr>
<td></td>
<td>10. 100% Biodynamic Certified</td>
<td>14.6%</td>
<td>63.8%</td>
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</tbody>
</table>

1 Includes “Strongly Disagree,” “Somewhat Disagree,” and “Neither Agree Nor Disagree.” Excludes “Somewhat Disagree.”

Although non-natural wine producers, collectively, yielded almost the same rank-order as natural wine producers in terms of percent agreeing with each of the 10 possible requirement, percentages of agreement were consistently lower (in 9 of 10 questions) for non-natural producers than for natural producers.

An example of this phenomenon is shown in Figure 1 (agreement with the hand-harvesting requirement among natural vs. non-natural producers).
Figure 1. “To be considered a natural wine, a wine should be…”
By Type of Wine Producer Surveyed (Natural vs. Non-Natural)

Made of Hand-Harvested Grapes?
Natural Wine Producers Only (n=383)

- Disagree: 7.6%
- Neither Agree nor Disagree: 11.2%
- Agree: 81.2%

Made of Hand-Harvested Grapes?
Non-Natural Wine Producers Only (n=130)

- Disagree: 27.7%
- Neither Agree nor Disagree: 18.5%
- Agree: 53.8%
2. Sensory characteristics

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**Figure 3. Are Natural Wine Producers Trying to Make Money?**

![Pie chart showing responses to the question: What motivated you to produce natural wine? - You saw better market chances for your wine (Natural wine producers only n=383).]

This raised the possibility that natural wine producers may not be guided primarily by profit, which could help explain the seeming disconnect between supply of and demand for flaws—as well as providing some context for the result from a final key question in our survey: we asked all participants (natural and non-natural producers) this simple yes-or-no question: “Does natural wine taste good?”

We conclude with these results, which are shown in Figure 4.
Figure 4. Does Natural Wine Taste Good?

Agree/Disagree Overall, by Type of Wine Producer Surveyed (Natural vs. Non-Natural)

For me, natural wine has a good taste
Natural Wine Producers Only (n=383)

- Agree: 69.7%
- Neither Agree nor Disagree: 24.8%
- Disagree: 5.5%

For me, natural wine has a good taste
Non-Natural Wine Producers Only (n=130)

- Agree: 38.5%
- Neither Agree nor Disagree: 33.1%
- Disagree: 8.5%