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The market for non-alcoholic wine in Germany – Structural analysis and implications for competitive strategies

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Abstract. Non-alcoholic wines have become increasingly important in recent years in Germany. A constant stream of new market players and products is evidence of a dynamic market development and for the creation of a new branch in the highly competitive wine sector. Thus, the central aim of this article is to provide a first analysis of the structure of the German market for non-alcoholic wines in order to derive implications for industry competition and possible competitive strategies of individual market participants. An explorative research approach has been applied including in-depth interviews with experts from various companies along the value chain (n=24). Results show that competition in the market for non-alcoholic wines must be regarded as dynamic due to strong external market forces. A high risk of new companies entering the market can be emphasised as well as the high bargaining power of the retail and a high threat of substitutes. Within the industry, however, rivalry is currently considered to be low, resulting in low profitability and a tendency towards high fluctuation of market participants. With regard to possible competitive strategies it becomes clear that especially for smaller wineries, a long-term successful survival within the market can only be realised with strong differentiation. Ultimately, the transfer of the products into an own category which departs from the classic image of non-alcoholic wine represents a promising approach in order to address entirely new target groups.

Keywords: non-alcoholic wine, dealcoholisation, structural analysis, five forces, competitive strategies, competition.

1. INTRODUCTION

In the European Union, a steady decline in wine consumption can be observed for decades, particularly in the main wine-growing countries of France, Italy and Spain [1,2]. In Germany, wine and sparkling wine consumption has long remained at a constant level of around 24 litres per capita. Since 2019, however, a slight decline of around one litre per capita was observable [3]. While overall alcohol consumption is decreasing in Germany and the EU – not only with regard to wine¹ – non-alcoholic alternatives are

¹ For instance, beer consumption in Germany dropped from 141 litres per capita in 1970 to 95 litres in 2020 [4].

becoming more and more important [5]. This development is often associated with increasing health awareness and new lifestyle trends, especially in younger generations [6]. Not only in Germany, wine producers are therefore focusing on non-alcoholic² wines, which differ from grape juices and sparkling wines in that the alcohol is removed from already fermented wine through the use of a dealcoholisation process [7].

Germany is a special market for non-alcoholic wines in several respects. On the one hand, the process of dealcoholising wine was developed and patented in the winegrowing region Rheingau at the beginning of the 20th century. This makes Germany the pioneer in the field of wine dealcoholisation, which is ultimately reflected in the comparably high number of five domestic service providers for this refinement step. At the same time, Germany has become the most important market for products in the “no & low” category³ [8], including non-alcoholic still and sparkling wines. Non-alcoholic sparkling wines accounted for around five per cent of the total German sparkling wine market in 2020. Still wines are less significant with a market share of under one per cent [9]. According to the market research institute IRI, the main distribution channel is food retail, where sales of non-alcoholic still wines totalled 3.7 million bottles in 2020, while sales of sparkling wines amounted to 21.7 million bottles [10].

Despite its still minor importance, the market is developing dynamically in comparison to the traditional alcoholic wine products, which are increasingly less consumed. For instance, the compound annual growth rate for non-alcoholic wine is indicated at 9 percent for the period from 2021 to 2025 [8]. While the overall data situation is so far still rather uncertain, a look at the market reveals clear trends: Large companies in the sparkling wine industry, such as Henkell-Freixenet and Rotkäppchen-Mumm, are increasingly being joined by wine cellars, cooperatives and small and medium-sized wineries with vineyards of less than 50 hectares. While non-alcoholic wines are primarily produced by existing companies in the wine industry, which are mostly focusing on complementing their portfolios of alcoholic wines, start-ups and winegrowing companies that focus exclusively on marketing non-alcoholic wines are also entering the market.

These developments not only raise questions about

suitable production processes, the optimization of sensory characteristics or marketing issues [11–16]. One relevant aspect that has so far remained untouched is the strategic positioning of individual companies. This seems all the more important as companies in a young, rapidly developing (sub)sector are sometimes faced with major challenges due to technological and strategic uncertainties, high costs, spin-offs and the confrontation with first-time buyers [17], which go far beyond the search for suitable manufacturing processes or possible marketing issues. Rather, the question of strategic positioning is essential for consolidating a company’s market position and for long-term success. In the face of steadily declining wine consumption, which could be strongly influenced by social trends and developments in alcohol policy in the future, the discussion of non-alcoholic alternatives represents an important building block for the development of the industry. With its long history and the comparatively high market relevance of non-alcoholic wines today, Germany is a particularly good case to consider.

The aim of this paper is therefore (1) to provide an initial comprehensive overview of the structure of the non-alcoholic wine industry in Germany and (2) to derive strategic implications for (potential) market participants from the data collected. For this purpose, an explorative approach in the form of expert interviews with a subsequent qualitative content analysis was chosen. A total of 24 interviews were conducted with experts from nine different types of companies along the value chain.

The remainder of this article is structured as follows: Section two outlines the development of the market for non-alcoholic wines in Germany. In addition, the basic production processes and the legal framework are presented. In section three, these initial findings are translated into a framework for analysing the intensity of competition according to Porter [17]. Section four is dedicated to the qualitative research approach. Section five presents the most important implications of the findings for possible competitive strategies. Finally, the results of the article will be discussed in section six.

2. NON-ALCOHOLIC WINES IN GERMANY

2.1. Market development of non-alcoholic wines in Germany

Non-alcoholic wines have been produced for over 100 years. In 1907, the German winegrower Carl Jung applied for a patent for his invention of vacuum distillation for wine. This process made it possible to separate the ethanol under vacuum low temperatures, which served to better preserve the volatile flavour compo-

² According to the German law, the term can be used for products with an alcohol content of up to 0,5 ABV.

³ In a recent study conducted on behalf of the European Commission, products in the no & low category are defined as “any beverage whose market positioning recalls, mimics or evokes that of an alcoholic beverage, but whose alcoholic content is lower than the minimum required for the alcoholic beverage of reference, or equal to zero” [5].

nents of wine. The development of the technology, which is still used today, took place at a time when the critical social and political debate about alcoholic beverages such as spirits, beer and wine reached a peak in Germany [18]. The First World War and the lack of a legal framework for production of non-alcoholic wines put an early brake on the success of the products. A second development stage began at the end of the 1980s, when innovative products were sought as a reaction to a new health movement, the so-called “light wave” [19]. Although there was a significant increase in production at this time, non-alcoholic wines did not achieve significant market shares [20].

Over the past five years, however, a dynamic market development can be observed, even if the absolute share of the products is still at a very low level in the context of the overall German wine market. As noted, the market share of non-alcoholic sparkling wines in Germany was estimated at around five per cent, that of still wines at under one per cent in 2020. The market volume of non-alcoholic sparkling wines in the overall sparkling wine market would therefore amount to around 14 million litres, while that of still wines would be even higher in relation to the total German market for still wines (approx. 16.9 million hectolitres in 2018) - in 2020, however, the German Wine Institute (DWI) assumed only three to five million litres, which would correspond to a market share of less than 0.3 per cent [9].

In summary, non-alcoholic sparkling wines have higher market relevance than their counterparts in the still wine sector.

Despite their low relevance for the German wine market as a whole, both categories are recognised as having high growth figures. According to IRI, non-alcoholic wine recorded sales and turnover growth of 40.8 per cent and 42.7 per cent respectively in the German food retail sector in 2020. Non-alcoholic sparkling wines grew at a much slower rate, with sales up 1.6 per cent and volumes up 5.9 per cent [10]. These developments are also reflected in an increasing variety of products. In 2023, the world’s largest wine fair ProWein dedicated a separate area to the category of non-alcoholic products for the first time [21].

2.2. Manufacturing processes

According to the legal framework in Germany, thermal processes and membrane processes are permitted for the dealcoholisation of wines. Thermal processes rely on distilling the wine under reduced atmospheric pressure, whereby the ethanol contained in the wine vaporises at temperatures of around 30 degrees Celsius [22].

The spinning cone column is one of the most widespread variants of distillation under vacuum [16]. In this process, the wine to be dealcoholised is passed over a moving, rapidly rotating cone, reducing the necessary dwell time in the column compared to classic vacuum rectification [23].

Membrane processes, on the other hand, work by separating the ethanol through special membranes that are only passable for certain volatile substances in the wine [24]. Although these systems do not require the product to be heated, membrane processes also have several disadvantages such as a high amount of water input or a significantly longer process time for complete dealcoholisation [25]. Thus, four of the five service providers for dealcoholisation operating in Germany are working with thermal processes. They play an overall important role, as the purchase of an in-house dealcoholisation plant is hardly feasible for smaller companies for financial reasons. At the same time, they offer dealcoholisation from small minimum quantities starting at 300 litres [26].

Before the process of dealcoholisation, a suitable base wine is required. While dealcoholisation can be applied for both red and white wine, grape varieties with a high aroma concentration such as Gewürztraminer, Muscat or Sauvignon Blanc are particularly recommended for dealcoholisation. In addition, the shortest possible time between fermentation and dealcoholisation is suggested in order to achieve the highest possible aroma concentration [27]. Nevertheless, some of the products differ greatly from the original in terms of flavour as the processes are associated with a changed sensory profile due to a loss of certain characteristics such as body and fullness [11]. Additionally, the concentration of acidity through the process and the volume loss of up to 20 per cent necessitates the addition of sugar, which is why many non-alcoholic contain residual sugar levels of 40 grams or more per litre.

2.3. Legal framework for non-alcoholic wines in Germany

As products with an alcohol content below 0,5 ABV, non-alcoholic wines have some special legal characteristics, such as the mandatory labelling with a best-before date. With Regulation 2021/2117, the European Union has decided to standardise the product designation of non-alcoholic wine throughout the EU as part of the revision of the Common Agricultural Policy (CAP) [28]. Accordingly, the term “alcohol-free” will be changed to “dealcoholised”. Even after the new EU legislation comes into force, the term “alcohol-free” will remain an optional addition to the mandatory term “dealcoholised”.

With EU Regulation 2021/2117, further regulations for non-alcoholic wines were adopted, which are to be transposed into national law. Accordingly, in the German case, non-alcoholic wines will in future be treated as products within the meaning of the German wine law. Although much discussed, this has no consequences for the indication of grape varieties on the labels: the varieties specified in Paragraph 42 of the German wine regulation, including Riesling, Spätburgunder, Weißburgunder or Grauburgunder, may therefore continue to be indicated on the label of non-alcoholic wines in future.

Furthermore, the EU regulation provides for the prohibition of the dealcoholisation of wines which have been chaptalized before alcoholic fermentation [28]. Legal obstacles also occur due to the current ban on the production of non-alcoholic organic wines in the European Union, as dealcoholisation as a permissible oenological process has not been included in the legislation for organic products (EU 848/2018).

While the legal framework conditions in the EU are being standardised, regulatory intervention in the market is also becoming increasingly important, as shown by the EU Parliament's recent decisions to beating cancer [29,30]. Although the focus here is specifically on ethanol as one of the main risk factors for cancer, the latest accusations of "alibi marketing" show that non-alcoholic beverages could also be the centre of EU alcohol policy in the future [31,32]. Alibi marketing refers to attempts by companies in the alcohol industry to promote their brands without explicitly advertising products containing alcohol or excessive sugars which they also manufacture. Beer producers, for example, often use the same brand images and slogans for their non-alcoholic beverages as for their alcoholic products [33].

In summary, non-alcoholic are the subject of extensive regulatory adjustments and efforts that will have a far-reaching impact on the beverages and still leave unanswered questions for producers and sellers.

3. FRAMEWORK OF COMPETITION INTENSITY

3.1. *Porters five forces*

The five forces analysis based on Porter [17,34] has established itself as a classic instrument for analysing industries and is has already been applied to analyse different aspects of the international wine sector [35-38]. Richter and Hanf [35] used the model to derive strategic implications for winegrowers' cooperatives in the highly competitive German wine market. In an international context, Mizik and Balogh [37] analysed the structure of the Chinese wine market using the Five Forces.

Bitsch et al. [36] have done the same for the largely unexplored Armenian wine market, also taking a qualitative approach. Lorenzo et al. [38] analysed generic strategies of different types of companies in the Spanish wine industry.

According to this market-oriented approach, the structure of an industry is a key factor influencing industry competition and the strategic options of individual companies. An industry is interpreted as a space within whose boundaries companies are exposed to five competitive forces, whose intensity ultimately determines the attractiveness of an industry. (1) **The risk of new companies entering the market** leads to reduced profitability as prices are depressed or costs for existing market players are increased. Barriers to entry, which are increased by the existence of economies of scale or existing product differentiation, are considered a decisive factor for the market entry of potential competitors. (2) **Rivalry between existing companies in an industry** is increased, for example, by slow industry growth or greater competition for market share. In addition, there are possible exit barriers, which are defined as those factors that cause a company not to leave the industry, even if they "generate lower or even negative rates of return" by staying. These include, for example, specialised assets or emotional barriers. (3) **The threat of substitutes** limits the profit potential of companies in the sector, as pricing for companies in a sector is restricted by the pricing of substitute products. At the same time, competition is intensified by the possible use of the same distribution channels and cooperation with the same supplier groups. Finally, the (4) **bargaining power of suppliers** and the (5) **bargaining power of buyers** can also exert an increasing influence on competition in the sector, especially if both groups are dominated by only a few companies. In view of the description of the market for non-alcoholic wines in Section 2, this provides an initial rough picture of the industry, which is shown in Figure 1. Consequently, service providers for de-alcoholization are in the position of suppliers, wineries and cellars make use of the service and pass the products on to the retail, which consists of various types of companies.

In the following, the findings from section 2 are transferred to the model in order to develop predictions for the empirical analysis.

3.2. *Threat of new entrants*

As described in section 2, the constant adjustments to the legal framework conditions or the possible accusation of alibi marketing not only tend to lead to a high level of uncertainty on the part of producers, service providers and retailers, but also to potentially high admin-

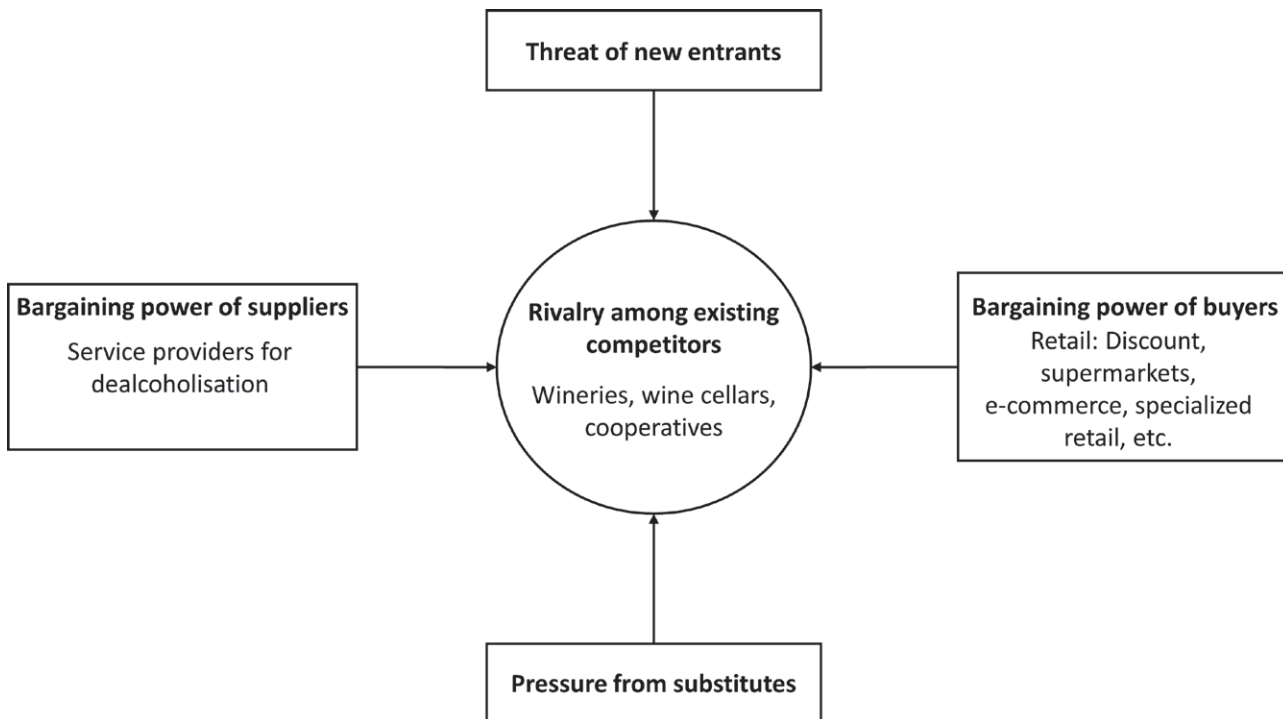


Figure 1. Framework for market structure.

Administrative barriers. On the other hand, low entry barriers can be assumed in the area of production, as smaller companies are allowed to deliver small minimum quantities from 300 litres to contractors. Purchasing own equipment to vertically integrate is not economically worthwhile for smaller companies in view of the small quantities produced. While high economies of scale can also be expected in the non-alcoholic wine sector if production is increased beyond a certain point, the low minimum quantities requested suggest that this aspect is rather irrelevant for market entry. Apart from the potentially high costs for marketing and distribution, non-alcoholic products can be produced without major capital expenditure: Base wines can be purchased on the bulk wine market and service providers can be commissioned to deal with dealcoholisation, filling and packaging. As most industry players produce non-alcoholic wines as a supplement to their existing portfolio, the additional capital expenditure, for example in the areas of marketing and sales, is rather low as existing structures can be used.

For vertically integrated companies with own dealcoholisation plants, there is no possibility to offer other non-alcoholic products made from wine using the dealcoholisation process. The capital invested therefore represents sunk costs. In smaller, non-vertically integrated companies, on the other hand, low switching costs can be expected, as

other non-alcoholic products made from grapes can easily be offered, such as grape juice, still wine or sparkling wine.

The German wine market is highly competitive due to a large oversupply, and retailers in particular have great negotiating power. Thus, entry to distribution channels can be challenging. Existing companies in the wine industry, such as Rotkäppchen-Mumm or Henkell-Freixenet, already serve existing distribution channels with their dealcoholised products. Potential newcomers to the industry must therefore either persuade the channels to favour their product or create entirely new distribution channels. However, as the industry can still be considered in an early development phase, access to retail channels may still be more open than in the wine and sparkling wine sector.

Prediction 1: Except from administrative obstacles, barriers to entry in the market for non-alcoholic wines are low.

3.3. Rivalry among existing competitors

At the moment, there still exist comparatively few competitors in the market for non-alcoholic wines, although major companies in the German wine industry are already operating in this sector, such as the sparkling wine producer Rotkäppchen Mumm, which holds

a market share of 50 per cent in the sparkling wine market [39]. At the same time, the market for non-alcoholic wines is characterised by dynamic growth, which means that companies are already improving their results by keeping up within the industry [17], indicating an overall low rivalry. As non-alcoholic wines must display a best-before date, this “deadline” implies that the products are difficult to store and must be marketed comparatively quickly. Companies are therefore more tempted to lower prices unnoticed (price shading), ultimately leading to high rivalry. On the other hand, product differentiation may still be possible due to the dynamic development of the sector – the buyer’s decision is not based solely on price and service.

High exit barriers which ultimately lead to an increased competition arise primarily for vertically integrated companies with their own dealcoholisation plant due to highly specialised assets and sunk costs. For smaller companies without own plants there exist low exit barriers as the switching costs to traditional wine production are low.

Prediction 2: The intra-industry competition in the market for non-alcoholic wines is low.

3.4. Threat of substitutes

In theory, all non-alcoholic drinks can be counted as possible substitutes for non-alcoholic wines. There is a wide range on offer in Germany, from juices and soft drinks to non-alcoholic beer. Following mineral water, non-alcoholic refreshments including lemonade and juices were the most popular beverage category in Germany in 2023, with a consumption of 124.9 litres per capita [40]. Non-alcoholic beers have steadily gained in importance in recent years and now account for seven per cent of the beer market [41]. Furthermore, flavoured wine-based drinks are introduced as well as new innovations in the field of juices and sparkling juices. With regard to the entire non-alcoholic beverage market, the threat from substitute can therefore be considered high. Additionally, substitutes can be purchased in all traditional sales channels and consumers have low switching costs.

Prediction 3: The threat of substitutes in the market for non-alcoholic wines is high.

3.5 Bargaining Power of Buyers

The food retail in Germany operates as an important buyer of wine and is highly concentrated in Germa-

ny. In 2018, almost 90 per cent of wine in Germany was sold through retailers. Discount stores (50 per cent) and supermarkets (28 per cent) were the strongest channels. In food retail, the five largest market players have a combined market share of 75 per cent. This conditions may lead to a high bargaining power in the context of non-alcoholic wines. Furthermore, the range of non-alcoholic alternatives on offer in Germany is wide, the switching costs for retailers therefore low. Ultimately, the variety of non-alcoholic wines is constantly increasing. A wide selection of different products increases the bargaining power of retailers, especially when product differentiation is low.

Prediction 4: The bargaining power of the buyers (retail) is high.

3.6. Bargaining power of suppliers

The group of companies which offer dealcoholisation is dominated by a small number of companies and is more concentrated than the group producers (wineries and wine cellars), leading to a high bargaining power of the suppliers. However, producers of non-alcoholic wine alternatives (wineries or cellars) often have the opportunity to produce close substitutes such as sparkling or still grape juices, lowering the bargaining power of the service providers as suppliers of non-alcoholic wines. Three of the five German service providers specialise in the dealcoholisation of wines. The performance of wineries and wine cellars is therefore of great importance to the service providers, leading to a lower bargaining power of suppliers. Within the industry for non-alcoholic wines, there are only a few companies that exclusively offer these products. Rather, there are wineries that supplement their portfolio with non-alcoholic products. This ultimately leads to a low bargaining power of suppliers (service providers for dealcoholisation) as their product/service is currently not a key input for the business of most buyers.

Prediction 5: Due to the high concentration of service providers but an overall lower importance of non-alcoholic wines for wineries and wine cellars, the bargaining power of the service providers as suppliers is medium.

4. EMPIRICAL STUDY

4.1. Methodology

To answer the research questions, an explorative approach in the form of guided expert interviews with

Table 1. Summary of predictions for competition intensity.

Market Force	Prediction
Threat of new entrants	High
Rivalry among existing competitors	Low
Pressure from substitute products	High
Bargaining power of buyers	High
Bargaining power of suppliers	Medium

a subsequent qualitative content analysis was chosen. This takes the following facts into account: Firstly, no industry structure analysis of the market for dealcoholised wines is available to date, which means that no existing knowledge can be used as a basis. Secondly, an explorative research approach seems particularly suitable for gathering initial insights into the characteristics of previously unconsolidated market structures. Thirdly, a qualitative approach is generally recommended in the context of industry structure analyses [17].

Between July and October 2022, a total of 24 interviews were conducted with experts from various types of companies along the value chain. The selection was based on the aim of examining the market for dealcoholised wines as broadly as possible. Experts from the following companies were interviewed:

- 5 dealcoholisation service providers
- 5 wineries
- 5 wine cellars
- 9 retail companies: discount (1), supermarket (1), specialised trade (2), online trade (2), gastronomy (1), distribution (1), consulting (1)

The survey of all five operating dealcoholisation service providers in Germany thus ensured representativeness in this area. This cannot be achieved with wine estates and wine cellars due to their large number in the German wine market. In the selection of interviewees from wineries and wine cellars, attention was paid to the availability of non-alcoholic wine in the assortments. Furthermore, differences in the strategic and regional orientation were considered. While wineries tend to have smaller business structures and their own vineyards as well as more regional distribution, wine cellars are considerably larger and are usually characterised by the purchase of bulk wine and large-scale distribution to the food retail. The same selection process applies to retail, where interviews with all key sales channels were carried out in order to obtain maximum diversity of information. The experts selected hold the position of managing directors, sales managers and marketing managers. All interview partners agreed to the recording of the inter-

view. The average duration of the interviews was 30 minutes. In total, guidelines were designed for five groups in advance of the interviews: Contractors/service providers, wineries and wine cellars, specialist retailers, supermarkets and discounters, and gastronomy. The semi-structured interview guidelines were oriented towards the theoretical framework of the five forces outlined in chapter three. Together with the predictions made about the intensity of the competitive forces, open interview questions were formulated. These guidelines were adapted depending on the position of the companies within the value chain. For instance, the guideline for wineries and cellars included the topics supplier relationship and buyer relationship. The guideline for the retail companies, on the other hand, focussed in particular on the buyer relationship due to the position of companies as purchasers and distributors of the products. Substitutes as well as the perception of general competition in the market were addressed in all interviews. Overall, questions were asked in an open manner to ensure a sufficient degree of freedom and a natural dialogue. This favoured obtaining as much information as possible from the interviewees and strengthened the explorative character of the study.

The interviews were fully transcribed and anonymised. A qualitative content analysis was carried out using MAXQDA software. For this purpose, a search grid was initially created based on the Five Forces. Each competitive force represented a superordinate category to which information from the interview texts was assigned in the form of sub-categories during the extraction process. For instance, information on possible minimum quantities for dealcoholisation, legal requirements such as the best before date, cost drivers or obstacles in the product development contributed to the analysis of market entry barriers. This information was therefore recorded in the search grid under the superordinate category “Threat of new entrants”. A total of 31 subcategories were identified and assigned to the superordinate Five Forces.

4.2- Empirical results

Regarding **threat of new entrants**, nine out of ten wineries and cellars describe extensive administrative barriers in the market for non-alcoholic wines. One central issue is the labelling according to deviating legal requirements. In addition, at the time of the interviews, there was a general uncertainty regarding the further development of the legal framework, particularly concerning the adoption of non-alcoholic wines in the German wine law, the indication of grape varieties on the label or the option of dealcoholising chaptalised wines.

On the other hand, the entry barrier for potential newcomers to the industry are kept at a low level as all service providers offer dealcoholisation from low minimum quantities of between 300 litres and 5,000 litres. However, two of the five service providers made it clear that they tend to focus on batch sizes from 10,000 to 12,000 litres for reasons of profitability. The high cost factor due to the already very time- and energy-intensive “start-up and shut-down” of the vacuum distillation systems is emphasised. Therefore, the consideration of economies of scale shows the financial advantage of large quantities for service providers. One of the experts from the part of the wine cellars also emphasises that larger batches in his company help to compensate for volume losses incurred during the process. As the service providers describe, dealcoholisation is associated with a loss of volume during the process of around 15 percent.

In terms of production costs, the service provider that uses the membrane process describes that the unit costs remain at a stable level of around one euro per litre when the production volume is increased from 1,000 litres to 5,000 litres. To summarise, economies of scale are only relevant for wineries with large batches as an increase in the production volume has no significant influence on unit costs if production is already low.

The analyses also show that possible backward integration, leading to cost advantages and complicating the market entry of newcomers, does not play a relevant role. Acquiring an own dealcoholisation plant is associated with enormous costs, which is why even three of the five wine cellars interviewed work with service providers. According to one expert from a wine cellar, purchasing their own vacuum distillation primarily helped to minimise production risks. However, the company also continues to rely on external services in order to be able to react flexibly in the event of bottlenecks. Smaller newcomers, on the other hand, can engage the support of service providers, who even offer the option of purchasing pre-bottled dealcoholised wines.

A high level of existing product differentiation would make it more difficult for new companies to enter the market. The statement of a sales manager of an internationally operating wine cellar is noteworthy here: According to him, non-alcoholic wines under newly introduced brand names have not been successful on the market, whereas they have been very successful to date as an addition to an already established brand. An interviewee from a winery describes a different approach: The winery would like to differentiate the non-alcoholic range as far as possible from the alcoholic wines so as not to create a comparison between the alcoholic and non-alcoholic products for the end consumer.

Still, the industry appears to be primarily utilising existing consumer loyalty for non-alcoholic wines, although consumer loyalty can overall be described as rather weak in the German wine industry due to the lack of strong brands. Product differentiation therefore tends to play a subordinate role in the German market for non-alcoholic wines so far, leading to a low barrier to entry.

In general, high switching costs to the production of other products could prevail the entrant of newcomers. However, two experts from wineries emphasise low switching costs because to the possibility of producing alcoholic wines always remains.

Finally, sales channels are also highly relevant for the potential market entry of newcomers. In four out of five cases, the experts from the wine cellars states that they use the same channels as for their alcoholic wines. Only one expert emphasises the focus on export business as part of a collaboration with British supermarket chains. A more differentiated picture emerges among the wineries surveyed: Here, the experts describe the search for new distribution channels specifically for non-alcoholic products. In this respect, the information on the attitude of the retail towards non-alcoholic wines is remarkable: On the one hand, it is emphasised that the marketing of the products requires a great deal of explanation as consumers don't know much about them. On the other hand, problems with the sensory profiles of the products are described as well as the fact that the products have not been able to assert themselves in the test runs to date.

The combination of the producer's and retailer's views makes it clear that access to distribution channels is likely to become more limited in the future, although it still tends to be easier at the moment due to an overall dynamic market development. In summary, the first assumption is confirmed: Besides the uncertainties concerning administrative issues, barriers to entry are low, leading to a high threat of new entrants.

The **degree of rivalry among existing market players** initially depends on the number of competitors in the market. Four of the ten experts from wineries and wine cellars interviewed recognise that more and more competitors are appearing on the market. At the same time, the market structures are considered to be rather “unstable”. The fact that the number of competitors is perceived as growing, but not as a threat, is well illustrated by the following statement: *“And yes, that's why I don't see myself facing too much competition at the moment, because there is simply still so much open space that everyone can find their customers”*. A look at the statements by the service providers and retailers also shows that the actors perceive an increased competition

but emphasise that the number of participants currently remains low.

Furthermore, 17 of the 24 experts interviewed describe gradual growth in the market for non-alcoholic wines. The remaining seven companies did not provide any information on this. Seven out of the ten experts from wine cellars and wineries emphasise a steady increase in demand and production. One sales manager states that the strongest demand in the entire portfolio can currently be observed in the non-alcoholic wine segment.

Possible price shading for non-alcoholic wines could arise primarily because the products are subject to a “deadline” due to their best-before date, which may lead to an unnoticed price reduction by competitors. According to several experts, the best-before date does lead to a certain amount of sales pressure, but the possibility of influencing pricing was not mentioned.

Possible sunk costs could lead to high exit barriers and ultimately to high industry rivalry. As eight of the ten wineries and wine cellars work with external service providers to carry out dealcoholisation, sunk costs in production are kept at a low level. If there are no long-term contracts in place, the costs of exiting the market are expected to be low. Overall, the second assumption is confirmed: The intra-industry rivalry is low due to low competition and a so far rather “unstable” market structure.

Concerning the **pressure from substitute products**, 18 of the 24 experts interviewed name one or more substitutes for non-alcoholic wines. The spectrum ranges from carbonated juices and non-alcoholic spirits, to tea drinks and beer through to soft drinks. Five of the eight experts from retail state that they also market the named substitutes themselves. Switching to competing products is therefore easy for the end consumer. The experts name several products that have been developed and launched on the market in recent years as close substitutes that could create the same “moment of pleasure” as drinking a glass of wine: Kombucha, wines and sparkling made from old fruit varieties or aperitif drinks such as sparkling tea. It can therefore be assumed that these product innovations are not only recognised by retailers, but are also increasingly included in their portfolios. Ultimately, the interviews show that four of the eight retail companies do currently not consider the inclusion of non-alcoholic wines into their portfolios to be a necessity. Only one interviewee from food retail describes non-alcoholic wines as a “must” on the shelf. In summary, the third prediction of a high threat of substitutes is confirmed.

Regarding the **bargaining power of buyers**, all wineries and wine estates market their products through

retailers, primarily in cooperation with the food retail and specialised retail. The latter distribution channel is primarily used by wineries, although they also market a proportion via direct sales. In summary, the food retail is an important distribution channel for non-alcoholic wines, both via central listings and via independently managed markets. This leads to a high bargaining power of the retail, as the retail in German is not only highly concentrated [42], but also and accounts for a large share of the total turnover of suppliers of non-alcoholic wines.

In addition, as already described, four of the eight retail companies surveyed do not currently regard the inclusion of de-alcoholised wines as a necessity. Ultimately, both experts interviewed from the specialised retail describe an enormous number of wines that are sent in for tasting every week. Considering this development, the following statement by the consultant interviewed is remarkable: *“There are times when I think: Wait, wait, wait, isn’t the supply growing faster than the demand?”*. In summary, prediction 4 of a high bargaining power of the retail is confirmed.

Regarding the **bargaining power of suppliers**, both the service providers and the wineries and wine cellars estimate the overall number of contractors that carry out dealcoholisation to be low. The experts from the service providers emphasise high capacity utilisation due to numerous enquiries - one expert even speaks of selecting enquiries, leading to high bargaining power. On the other hand, only one of the five service providers based in Germany specialises purely in the dealcoholisation process. The remaining four companies offer the service in addition to their main business (bottling plant, winery, fruit juice company and producer of natural aromas). Furthermore, the dealcoholisation process is used or can potentially be used for other products in all companies: In addition to non-alcoholic beer, the production of non-alcoholic fruit wines and chemical flavourings is discussed by the experts. One expert emphasises that the vacuum distillation system was only purchased because it also enables the desulphurisation of sweet reserve and thus the production of grape juices. Ultimately, this allows the service providers to spread their risk. This is reinforced by the fact that five service providers based in Germany rely on different minimum quantities required and slightly modified technologies. For instance, one service provider works with a special absorber resin that is supposed to better preserve the flavours. Companies that decide in favour of a service provider could therefore be exposed to high switching costs. However, only one of the ten wineries and wine cellars specialises purely in the non-alcoholic wine segment. The remaining companies focus on alcoholic wines and have added

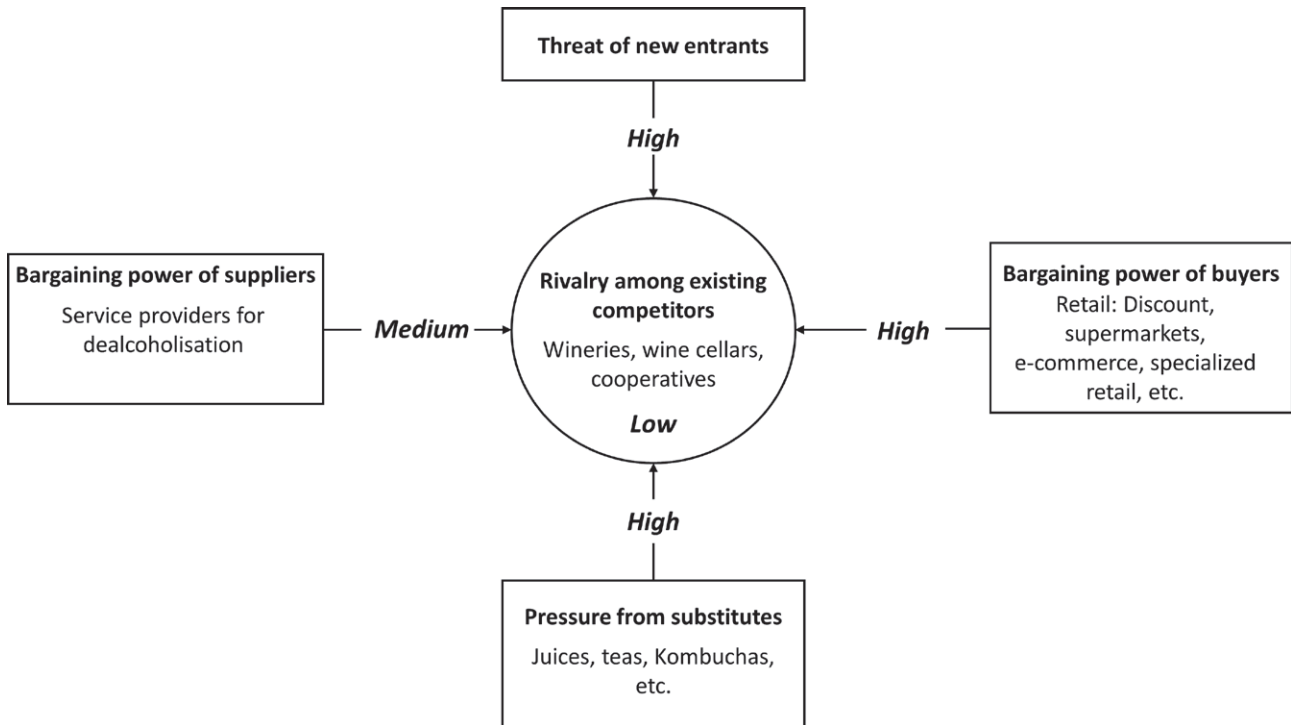


Figure 2. Framework for competition in the market for non-alcoholic wines.

non-alcoholic wines to their portfolios in recent years. Although several experts emphasise the growing importance of these products, a status as a “central input” cannot be derived from this, which ultimately lowers the bargaining power of the suppliers. Overall, prediction 5 of a medium bargaining power of the suppliers is confirmed due to a high concentration of service providers but an overall low importance of non-alcoholic wines for wineries and wine cellars.

Figure 2 summarises the findings on the intensity of competition in the market for non-alcoholic wines.

5. IMPLICATIONS FOR COMPETITION AND COMPETITIVE STRATEGIES IN THE MARKET FOR NON-ALCOHOLIC WINES

Although the market for non-alcoholic wines has only developed significantly in recent years, the competition in the market for non-alcoholic wines must already be regarded as dynamic, as the industry is subject to strong market forces.

While the service providers as suppliers are characterized by a medium bargaining power, the retail finds itself in a much stronger position. In addition, there is high pressure from substitutes. On the other hand, the

current low rivalry between the existing companies in the sector plays an important role for the strategic positioning of individual companies, also due to a pronounced atmosphere of “trial and error”. Ultimately, the importance of strategic considerations is reinforced by low entry barriers and a rising number of competitors within the market. Following on from the Five Forces, the generic competitive strategies according to Porter [17] are discussed for the market of non-alcoholic wines in Germany. Companies in the wine industry should thus either choose one of the following strategies: cost leadership, differentiation or focus strategy. The latter refers to a focus on market niches and thus on specific customer groups, specific products within the overall product range or on a specific geographical region [17]. This form of competitive strategy is therefore particularly relevant for smaller companies in the wine industry. Downstream, the focus strategy is also orientated towards cost leadership or differentiation.

5.1. Cost leadership and cost focus strategy

The aim of cost leadership is to achieve a competitive advantage through the lowest possible cost positioning compared to the competitors. An important prerequisite for the realisation of this strategy is the consistent

pursuit of cost advantages, e.g. realized by economies of scale. In the market for non-alcoholic wines, this is particularly relevant for larger, vertically integrated wine cellars with own dealcoholisation plants. For smaller companies, dealcoholisation via service providers is unavoidable in view of a possible entry into the market for non-alcoholic wines. As a result, the negotiating power of suppliers only becomes effective for smaller companies. At the same time, the service has an impact on the cost position: The lower volumes result in comparatively high unit costs, which in turn are reflected in higher product prices for smaller wineries.

5.2. *Differentiation and differentiation focus strategy*

To differentiate themselves from competitors and thus gain a competitive advantage, several experts from smaller wineries emphasise certain product attributes as a possible strategic dimension. For instance, some wineries rely on dealcoholisation of wines from specially selected vineyard parcels are from wines that have been matured in barrique barrels. It can be assumed that such attributes in a young, rapidly developing industry could still be more relevant than in the overall German wine industry, where product attributes that are associated with quality have largely been harmonised at a consistent high level over the past few decades [43]. It is therefore questionable to what extent this strategic dimension in the market for non-alcoholic wines can ensure a sustainable competitive advantage in the long term.

A classic way to achieve competitive advantages through differentiation is to establish brands which provide orientation, recognition value and an identification function for the customer [44]. Ultimately, establishing strong brands is about giving the customer added value and retaining their loyalty to the product in the long term. This strategy, however, is time-consuming and cost-intensive and is particularly feasible for larger companies. Still, the interviews show that in the non-alcoholic wine segment, large companies are primarily focussing on their existing brands and supplementing them with non-alcoholic variants.

A deeper look at the analyses shows that smaller companies with low brand strength almost entirely supplement their portfolios with non-alcoholic wines without clear differentiation from their alcoholic products. This group of “followers”, which is expected to grow steadily in view of the growing demand for dealcoholisation is strategically positioned between companies who are either focusing on cost leadership or differentiation. In view of the competitive forces affecting the market, this can be estimated as unfavourable position. Still,

these companies are currently able to “survive” in the market primarily due to the fact that in a young industry, “running with the pack” already leads to profits. It is this group that is to be characterised by enormous fluctuation in the long term – low entry and exit barriers are likely to show their full effect here.

Some market players, on the other hand, tend to position their non-alcoholic products as an extension of their range and thus deliberately attempt to differentiate their products from alcoholic wines. A classic example of this is the Dr. Loosen winery, which markets its non-alcoholic wines under the name “Dr. Lo”.

Still, these considerations raise the question of whether the positioning of the products is sufficient to secure long-term competitive advantages in a steadily growing and successively saturated market. A closer look at the way companies are positioning their products reveals that companies focus strongly on the characteristics of the “originals” when marketing non-alcoholic wines. This circumstance repeatedly leads to comparisons between alcoholic and non-alcoholic wines and negatively emphasises unavoidable differences in their sensory properties. This ultimately leads certain retail companies in Germany to take a rather cautious view of the products as the interviews show. Therefore, one promising approach of differentiation for smaller businesses could be to transfer non-alcoholic wines into a separate category by communicating independent and ultimately unique product characteristics, creating a product range that is completely different from the appearance of the remaining portfolio. In view of the growing number of young people who do not consume any alcohol at all [41], this could ultimately open up completely new target groups: People who have not yet consumed wine. The experts from wineries and cellars interviewed mostly perceive those people as a target group who have to refrain from consuming wine due to pregnancy, age-related restrictions or participation in road traffic. However, the possibility of addressing completely new target groups that were previously not part of the customer base is also being addressed. Placing the products as an independent category could ultimately give companies a comfortable competitive position, albeit with higher strategic risk but also higher profit potential.

6. DISCUSSION

Compared to the late 1980s, when non-alcoholic wines failed to achieve a market breakthrough in Germany, the framework conditions influencing the mar-

ket have changed significantly today. While back in the 1980s, an increased health and fitness awareness was primarily identified as the motive for the consumption of non-alcoholic wines, the fundamental social attitude towards alcoholic beverages has gradually changed at the latest since the beginning of the 2010s: The consumption of non-alcoholic beverages is increasingly accepted in the social environment, abstinence is even perceived as desirable and is an increasingly insignificant factor for social exclusion, especially among the younger generations. Increased health awareness is particularly evident among this population group, which manifests itself in social trends such as “Dry January” or “Sober October”, in which people actively call for temporary abstinence [45]. In September 2022, a study by the market research institute YouGov caused a stir, according to which almost half (49%) of young adults (aged 18 to 24) living in Germany do not consume alcohol [46].

It can therefore be assumed that alcohol-free alternatives will become increasingly relevant in the future, also due to the growing influence of the European alcohol policy [47]. One e-commerce company interviewed for this study is already actively incorporating the increased regulatory efforts for alcoholic beverages into its corporate strategy as a way to counteract future advertising restrictions. This reinforces the impression that non-alcoholic wines could represent an important market for the German wine industry in the future.

However, as the interviews show, expectations are far from uniform. The assessment of the expert from the discount sector stands out in particular. Accordingly, non-alcoholic wines will have minor relevance for this company type in the German food retail sector in the future. Other experts are sceptical with regard to the sensory properties and pricing of non-alcoholic wines, as the additional production step is associated with additional energy input and volume losses.

It is therefore of central importance to what extent the development of the market for non-alcoholic wines could currently be “overestimated”. The findings on the industry structure gathered in this study paint a rather sobering picture: the industry is characterised by strong competitive forces, low barriers to entry and exit, and a tendency towards a high fluctuation of market participants in the future, which ultimately also leads to a small size of the market in the long term. In view of the analyses carried out, one promising approach is to transfer non-alcoholic wines into a new, independent category – similar to what the German company “Bionade” has successfully achieved by moving away from classic lemonade.

This approach could also be highly relevant in order to be able to assert non-alcoholic wines against ever more

diverse substitutes. Tea drinks, Kombucha, lemonades, alcohol-free craft beers – the number of innovative alcohol alternatives is constantly increasing. Compared to these substitutes, non-alcoholic wines are clearly a niche product that is strongly oriented towards the sensory and emotional characteristics of its “original product”.

New innovations in the field of wine, such as fermentation of vine leaves [48,49], represent promising opportunities to create something “new” that can also stand out from strong substitutes. Additionally, products in the “low” category should not be neglected, as they are not only becoming increasingly important, but could prove to be very promising when it comes to “introducing” consumers to non-alcoholic variants.

Overall, the study highlights the need for further research in the field of non-alcoholic wines with regard to consumer research and market strategies. This study has made a first attempt to analyse the structure of the market for non-alcoholic wine in Germany and to derive possible strategic implications for existing and potential market participants. The explorative approach chosen, in conjunction with the expert interviews conducted, has made an initial contribution to this. In particular, the qualitative approach has helped to better understand the current uncertainty of industry participants with regard to legal changes, competitors or market developments through personal dialogue. Due to the limitations of qualitative research, this initial approach should be quantified with further research. For instance, surveys of individual company types on a broader scale are conceivable, which would enable an enhanced depiction of the different perceptions of market players. As shown, this study revealed slight differences in the attitudes towards non-alcoholic wines between specialised retailers, supermarkets and the discount with the latter tending to be less open to the products than the former.

Germany was a suitable case for this initial look at a market for non-alcoholic wine. With its highly competitive wine market, the country has some special features that significantly increase the relevance of competitive strategies. Ultimately, the findings gathered may not only be relevant to the German market, but also to other markets in which non-alcoholic wines are becoming increasingly important.

7. SUMMARY

Although non-alcoholic wines still occupy a clear niche position in the German wine industry, they are currently one of the most discussed products in view of the declining wine consumption in most European countries.

The aim of this study was therefore to gain an initial overview of the structure of the German market for non-alcoholic wines and to derive implications for market competition and possible strategic positioning of individual market participants. On the supplier side, service providers for dealcoholisation play a central role, especially with regard to the market participation of smaller wineries. As the mood of “trial and error” still seems to be pronounced at the moment, competition in the market between small wineries and large cellars is currently limited. Low entry barriers make it easy for new companies to enter the market. The retail has undiminished bargaining power, while at the same a wide range of substitutes exerts high pressure on non-alcoholic wines. Clear differentiation strategies therefore appear to be important for strategic positioning and long-term survival in the market, especially for small companies. Ultimately, this could also help to transform non-alcoholic wines into an own category, thereby separating the products from their originals and reaching entirely new target groups.

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