Article

Not All Wine Businesses Are the Same: Examining the Impact of Winery Business Model Extensions on the Size of Its Core Business

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Abstract: The purpose of this paper is to examine the impact that various types of business model extensions (hospitality and tourism, online sales platforms, and sustainability) have on the winery business. The research is based on company data and online observations of N = 886 German wineries and deploys a content analysis, netnography, and structural equation modeling (SEM) in order to test the hypothesis on business model extensions of wineries, which have been set forth in the previous literature. The findings indicate that business model extensions related to online sales platforms have a positive impact on winery business size. These results mean that developing online sales platforms enlarges the winery BM (business model) size and type (manager-run, state-owned, or cooperatives). The paper presents in detail the impact of winery BM extensions on winery BM model type and size, thereby contributing to the literature on business model innovation.

Keywords: business model change; business models for sustainability; wine business; tourism business models; family SMEs; wine cooperatives; Germany

1. Introduction

Business models represent both the connections between key business model components (theory-building approach) as well as transformational tools for addressing change, innovation, and competitive advantage in organizations—especially in times when radical technological changes shake up whole industries [1,2]. Therefore, business models serve the purpose of generating new value by envisioning new possibilities as well as by changing, challenging, and even defying existing business models inside wider socio-technical transitions [3,4]. Moreover, business models can serve the purpose of facilitating an understanding about the organization by communicating, sharing, measuring, and simulating the business model [5]. Business model extensions are a specific type of business model innovation, preceded in scale by business model component change and succeeded by the introduction of parallel business models, disrupting the existing business models [6]. BM extensions have also been researched from the process perspective, where creation, extension, revision, and termination present BM change along its lifecycle [7]. Similar approaches can be found in the strategic literature, where companies seek to extend the strategy in order to leverage the existing activity system for offering new products or services with a cost advantage [8]. In order to understand business model extensions as a type of business model innovation, there is a need to define what constitutes a core SME winery activity or a core business. According to Johnson et al. [9], the core business relies on key resources, key processes, and a profit formula. The vineyards are a key resource in any wine business, both for grape production and for wine tourism. Both indicators can therefore be used to identify a winery core business size.

It has been proven, however, that BM extensions are the most common method of venturing out but also provide below-average profits compared to business model
migration to new markets or industries [10]. There is evidence in the literature that in some cases, BM extensions contribute to the evolution of the core BM in the long run [11]. However, how the different types of BM extensions impact the core BM has not been researched in the previous literature.

In order to address the aforementioned research gap on the impact of BM extensions on the development of core BM, the present research sets out to research the impact of the three common business model extensions in wineries on the size of core winery business. The three most common winery business model extensions are hospitality and tourism, online sales platforms, as well as a sustainability orientation. Keeping in mind the relevance of business model research for management theory, it is expected that the findings contribute both to further understanding of the business model extension process and the impact that certain business model extension types have on organizational development in terms of the size of the business and its legal form. The increased understanding of how certain business model extension types impact the business size should also help managers navigate the uncharted terrain of venturing out into the previously unknown industries with more deliberation and understanding of the transformation processes involved.

Business models research itself originated in the highly innovative, high-tech industries, later developing through research into the duality of technology and organization, while in recent years it seems to be connected to strategic research [12–14]. However, rapidly changing technology and market environments necessitate a business model approach based on continuous innovation and not one-way imitation through competitive strategy [15–17]. Businesses are therefore trying to determine and navigate their own direction through experimentation, R&D, and exploration of new technologies and market opportunities, sometimes even pursuing more than one business model at once [18,19]. However, for existing businesses already operating on the market, this transitioning to new business models can happen in different modes [20,21]. Business model extension can either be in a form of evolutionary business model innovation or an adaptive business model innovation, both identified as relevant by Foss and Saebi [22]. Regardless of the mode, BM extensions are defined by activities that are new to the firm but already known in the industry/other industries. These BM extensions are being introduced/added to an existing BM, called the core BM of the company.

Wine business model research is a scarcely researched domain, with a modest number of contributions from a handful of authors. However, previous research has defined in detail the three major modes for extending the business model boundaries beyond the existing capabilities and knowledge in the organization. These are wine hospitality and tourism [23], online shops and platforms [24,25], and sustainability [26,27].

The indicators used in the previous literature on wine business innovation and its impact on core winery business are quality, awards, and revenue growth, while experimentation has been identified as the major capability relevant to the evolution of winery BMs [23]. In this sense, any activity outside of the grape growing and wine production can be suitable for BM experimentation in the wine business. Business models of small wineries focus on differentiating the value proposition, strengthening the ties to family tradition, relationship building with stakeholders, and opportunity seeking and exploiting [28]. It is worth noting that the importance of non-financial aspects of winery business models are prevailing in small family wineries. This is in strong contrast with the corporate-type international wine groups, where finance, sales, and marketing are integrated into a corporate-style business model [29]. There is a research gap in the previous wine business literature on business processes in the European-style, SME wineries [30]. None of the researched wineries in the German market are organized as a large corporation, thereby pointing to the higher suitability of the non-financial aspects for researching the wine business model core and its extensions. At this point, a specific business model of wine cooperatives, which can be found in “old wine world” countries, should be better explained. Previous literature acknowledges that a wine cooperative is a separate business entity or a model, where the aspect of inter-organizational network-type ties between
small producers needs to be taken into account [31]. This aspect is especially relevant regarding more loose and complex governance modes, which differ in wine cooperatives compared to classic corporate-style hierarchies. Previous research on wine business models has identified differences in winery BMs between “old wine world” and “new wine world” countries as well as between regions. This research presents a sample of “old wine world” wineries from 13 different wine regions, not taking into account these external aspects but rather examining the inside-out perspective of business model innovation and change.

2. Literature Review: Conceptualizing Business Model Extensions in the Wine Business and Defining Research Hypotheses

2.1. Basic or Core Business of a Winery

Previous research and dictionaries define the wine business as a business whose core purpose is making, marketing, and selling wine [28,32], which is why the present research defines only wine making and selling operations as core wine business activity, while all the other activities are seen as wine business model extensions. This has been necessary in order to differentiate between the wine business core activities and extended wine business activities and precisely measure the impact of these BM extensions on the core wine BM. The basic business model type in the sense of winery ownership/legal type and size has been previously researched in the literature. These two indicators have been used to compare the efficiency and profitability of different types of wine businesses [33,34]. Further research deploys these two indicators for researching winery organizational capabilities for sustainability, but the focus has predominantly been on whether or not the family is involved [35]. On the other hand, in the present research, four major types of ownership are taken into account: (A) owner-manager, (B) professional management, (C) cooperative, and (D) state-owned enterprise. These categories have been included in indicator (2), company type, presented in Table 1 below. There is also indicator (1), vineyard size. Indicators 1 and 2 together are used to measure a first-order construct named wine production BM.

Table 1. Variables deployed in the study.

| (1) Vineyard size | (2) Company type | (3) Vinotheque | (4) Events | (5) Wine tours | (6) Online shop | (7) Other products | (8) Social networks | (9) Sustainability discourse | (10) Eco-wine certificate |
|-------------------|------------------|---------------|-----------|----------------|----------------|------------------|---------------------|--------------------------|--------------------------|

There has been no previous research on winery business model extensions. However, value propositions have been researched from the perspective of winery offer design, winery branding, and website evaluations [36–38]. Building on the results of the previous studies, it appears that there are three relevant business model extension opportunities for wineries, which are presented and operationalized below. The first one is tourism and hospitality, the second one is online sales platform creation, and the third one is sustainability.

2.2. Business Model Extension 1: Hospitality and Tourism

Extending or supplementing the winery offer by engaging in a cooperative cluster provides an opportunity for entrepreneurs to innovate and differentiate their offer through augmented and ancillary services and find new customers [39–42]. Wine tourism is often referred to as an attractive extension of agricultural production into the hospitality and tourism business, but it has been poorly conceptualized [42–44]. In product-centric firms (such as wineries often are), establishing separate service units within existing production units is usually only a first step toward servitization, as it almost certainly develops further in the future [45,46]. In order to understand hospitality- and tourism-related business model extensions of wineries, the following three dummy variables have been operationalized: (3) vinotheque, (4) events, and (5) wine tours. The data for these variables have been collected by observing the presence of these offering components on the winery’s website.
2.3. Business Model Extension 2: Online Sales Platform

Business model extension through new technology often presents a platform for developing completely new business models in the long term, in the wine industry and beyond [47, 48]. Especially regarding novel ICT, the deployment of corresponding technological solutions is not limited to any particular field, but presents an opportunity to be seized in many traditional industries through a process of technological cross-fertilization [49, 50]. However, SMEs usually lack resources for BM experimentation and new strategy implementation regarding new technologies for digital transformation: industry 4.0, Internet of Things, machine learning, and artificial intelligence [25, 51]. Previous literature also gives little insight into the process of multi-branded platform development, where sales platforms involve multiple companies or multiple brands [52]. The present research attempts to understand the development of a winery sales platform, which can extend to other types of products and brands beyond wine. Wineries often extend their product portfolio by including grape juice, vermouth, gin, and similar drinks, which are outside the core wine industry [53]. In addition, social media are proven to be an essential element of online platforms, facilitating the communication process [54]. In order to understand the process of creation of online sales platforms as a path of winery offer digitalization and a business model extension, the following variables have been deployed, as presented in Table 1: (6) online shop, (7) other products, and (8) social network, by observing whether the winery has an online shop on its website (dummy variable), whether products other than wine are offered (dummy variable), and how many social network links are present on the website.

2.4. Business Model Extension 3: Sustainability

Wineries often concentrate on the value capture activities and profit making, while social and environmental benefits and value creation activities often fall short [26]. These unsustainable winery business models have a too-narrow focus of operation and do not take into account a full spectrum of risks (social and environmental) into account [55]. Sustainability-oriented capabilities in wineries are said to be rooted in strategic orientation and proactive socio-environmental practices [35]. It is therefore expected that the sustainability orientation positively influences the core winery business size, enabling it to grow and transform further. In order to explore this effect, a first-order construct of sustainability has been measured through indicators (9) sustainability discourse and (10) eco-wine certificate, as presented in Table 1. Both indicators are dummy variables. The sustainability discourse relates to any sustainability-oriented content on the winery website, from sustainability and environmental certification to environmental protection through biodiversity conservation, gentle grape processing, and similar. The eco-wine certificate data have been collected from a Gault & Millau wine guide.

Keeping in mind the gaps in the previous research on business model extensions of wineries through hospitality and tourism, online sales platforms, and sustainability, the following research hypotheses have been operationalized and presented below in the Figure 1:

**Hypothesis 1 (H1).** Winery BM extension into hospitality and tourism has a positive effect on the size of the core winery business.

**Hypothesis 2 (H2).** Winery BM extension into online sales platforms has a positive effect on the size of the core winery business.

**Hypothesis 3 (H3).** Winery BM extension into sustainability has a positive effect on the size of the core winery business.

The hypothesized model represents a reflective first-order and formative second-order model, as identified by Jarvis et al. [56] and applied in practice by Tehseen et al. [57]. It aims
at explicating and measuring the impact of three types of business model extensions of wineries on their core business: the wine production and sales.

![Diagram](image)

**Figure 1.** Research hypotheses H1–H3.

### 3. Methodology

#### 3.1. Research Methodology and Data Collection

The research deploys mixed methods by combining content analysis as a qualitative research method and SEM as a quantitative data analysis method. Content analysis is a qualitative research method and a highly quantified type of textual analysis [58]. However, research differs from the classical textual analysis by deploying netnography as a research field that deals with websites as well as other digital artefacts [59]. Websites, as a netnographic data source, are then combined with the data obtained from an offline wine guide.

The primary data have been collected from multiple sources (both online as well as offline) in the period from 2016 to 2020. The overall sample size has been \( n = 886 \) wineries, and it consisted of German wineries listed in the Gault & Millau wine guide, which means it is an elite sample of wineries. The data for the first two variables (company type and vineyard size) have been sourced from this wine guide. The data on sustainability have also been sourced from the Gault & Millau guide but have also been extended by searching the wineries’ websites for further content related to sustainability and the environment: biodiversity conservations, gentle grape processing, energy efficiency, nature protection, and similar narratives. The rest of the variables, which are listed in Table 1, have been collected by observing wineries’ websites, thereby deploying netnography. The data scraping from wineries’ websites has been performed manually. The data from different sources have first been integrated into an Excel database and then exported into IBM SPSS v26 [60]. The CFA (confirmatory factor analysis) and SEM (structural equation modeling) have been conducted in IBM AMOS v23 [61]. The previous literature posits that the number of observations needs to be at least ten times larger than the number of variables for the CFA to be valid [62]. Keeping in mind that the number of observations (866) is more than 86 times larger than the number of variables (10), this condition can be considered fulfilled. Taking into consideration that both scale variables as well as dummy variables (which were classified as nominal) have been deployed, the CFA has been performed both on original data as well as on standardized data. However, there has been no difference between the two outputs, all values remaining exactly the same for both original as well as standardized data.
3.2. Construct Validity and Reliability Analysis

Confirmatory factor analysis has been deployed in order to establish a measurement model and validate the four latent research constructs. It is presented below in the Figure 2 and Table 2. With $X^2 = 61.67$ (df = 29), CFI = 0.956, TLI = 0.916, and RMSEA = 0.036, the model can be considered satisfactory. Keeping in mind that there is a smaller number of items, it would be expected to have low Cronbach’s alpha. However, it would not make sense to apply Cronbach’s alpha criteria to an instrument that is not a questionnaire, as it has been specifically created for questionnaires [63,64]. Therefore, it has been decided not to calculate this value, as it is deemed not relevant for this particular model because of the differing data collection technique.

The data from different sources have first been integrated into an Excel database and then exported into IBM SPSS v26 [60]. The CFA (confirmatory factor analysis) and SEM (structural equation modeling) have been conducted in IBM AMOS v23 [61]. The previous literature posits that the number of observations needs to be at least ten times larger than the number of variables for the CFA to be valid [62]. Keeping in mind that the number of observations (866) is more than 86 times larger than the number of variables (10), this condition can be considered fulfilled. Taking into consideration that both scale variables as well as dummy variables (which were classified as nominal) have been deployed, the CFA has been performed both on original data as well as on standardized data. However, there has been no difference between the two outputs, all values remaining exactly the same for both original as well as standardized data.

Figure 2. Confirmatory factor analysis for determining validity and reliability of first-order constructs.

Table 2. Standardized regression weights of confirmatory factor analysis.

| First-Order Constructs, Indicators, and Path Directions | Estimate |
|--------------------------------------------------------|----------|
| Vineyard size ← Core winery business size              | 0.645    |
| Wine tours ← BM Ext. 1: Hospitality and tourism        | 0.553    |
| Vinotheque ← BM Ext. 1: Hospitality and tourism        | 0.544    |
| Events ← BM Ext. 1: Hospitality and tourism            | 0.379    |
| Online shop ← BM Ext. 2: Online sales platform         | 0.499    |
| Other products ← BM Ext. 2: Online sales platform      | 0.396    |
| Sustainability discourse ← BM Ext. 3: Sustainability    | 0.754    |
| Social networks ← BM Ext. 2: Online sales platform     | 0.209    |
| Eco wine certificate ← BM Ext. 3: Sustainability       | 0.330    |
| Company type ← Core winery business size               | 0.904    |

3.3. Common Method Bias

The model has been tested for common method bias by conducting a Harman’s single-factor test [65]. The test has been conducted by running a single-factor FA in AMOS, where a one-factor model would account for more than 50% of the variance if there has been a common method bias problem. All observed variables loaded with a value of 0.27 to a common factor, $0.27^2 = 0.07$, leading to a 7% of variance explained by a common factor. Because this value is less than 50%, we can conclude that there is no common method bias in the model.
4. Results

The results of the descriptive statistics are presented in the first part of the results section. They refer to the company type and vineyard size in order to better explain the company type and size first-order construct, thereby providing a further explanation of the sample characteristics. In the second part, results of the structural equation modeling are presented in order to test the research hypotheses H1–H3.

Mean vineyard size of a German winery is 31.69 ha, as presented in Table 3. However, there are significant differences depending on the legal and organizational form of a winery. The smallest are the owner-managed wineries with a mean vineyard size of only 16.14 ha, and this is also the largest proportion of wineries. Considerably larger are wineries with professional management, where ownership and management are divided. Their mean vineyard size is 36.39 ha. Somewhat larger are the state-owned enterprises, with 56.74 ha, which also represent the smallest group out of the four types: only 19 wineries belong to this group. Cooperatives are the largest winery type in terms of vineyard size with a mean vineyard size of 256.72 ha. However, their complex structure in terms of ownership, grape production, and wine production is an interesting case of a wine business model, which is typical for European countries.

Table 3. Winery business model ownership types and mean vineyard size.

| Company Type            | Mean Vineyard Size (in ha) | n   | Std. Deviation |
|-------------------------|----------------------------|-----|---------------|
| Owner-manager           | 16.14                      | 775 | 15.231        |
| Professional management | 36.39                      | 22  | 26.903        |
| State-owned enterprise  | 56.74                      | 19  | 49.504        |
| Cooperative             | 256.72                     | 51  | 190.641       |
| Total                   | 31.69                      | 867 | 74.747        |

The hypotheses H1–H3, developed in the previous sections, have been tested using the structural equation modeling in AMOS v23 [61] on the overall sample of n = 886. The statistical significance (p) can be obtained from Table 4, while standardized regression values (β) are presented in Figure 3 and Table 5. The obtained results demonstrate that winery BM extension into online selling platforms has a positive effect on wine production BM (β = 0.36, p < 0.001), which is also statistically significant. This result leads to a conclusion that hypothesis H1 has been confirmed. Winery BM extension into hospitality and tourism has a positive effect on wine production BM (β = 0.20, p = 0.002), but the effect is not statistically significant. This result leads to a conclusion that hypothesis H2 has been rejected. Winery BM extension into sustainability has a negative effect on wine production BM (β = −0.15, p = 0.217), and the result is not statistically significant. This result leads to a conclusion that hypothesis H3 has been rejected.

As shown in Figure 3, the created structural model includes the positive effects of BM Extension 1: hospitality and tourism (β = 0.20), BM Extension 2: online sales platforms (β = 0.36), and a negative effect of BM Extension 3: sustainability (β = −0.15) on the wine production BM of a winery. In addition, due to the fact that BM Extensions 1 and 2 both have a positive effect on wine production BM, while BM Extension 3 has a negative effect, it has been hypothesized that there is also a mutual effect between BM Extensions 1 and 2 (β = 0.35), which has also improved the overall model fit.

The unstandardized regression weights and statistical significance are presented in Table 4, while standardized regression weights are presented in Table 5. The indicators with the highest regression weights are company type (β = 0.908) as a measure of wine production BM, sustainability discourse (β = 0.891) as a measure of sustainability, vineyard size (β = 0.643) as a measure of wine production BM, and wine tours (β = 0.555) as a measure of BM Extension 1: hospitality and tourism.

The model fit indices of the structural equation model are presented in Table 6. It can be concluded that they have improved compared to the FA. With X²/DF = 2, CFI = 0.958, and RMSEA = 0.034, it can be concluded that the model represents a satisfactory fit.
Table 4. Unstandardized regression weights of the structural equation model related to hypotheses H1–H3.

| First-Order Constructs, Indicators and Path Directions | Est.  | S.E.  | C.R.  | p   |
|-------------------------------------------------------|-------|-------|-------|-----|
| Core winery business size ← BM Ext. 1: Hospitality and tourism | 0.338 | 0.109 | 3.089 | 0.002 |
| Core winery business size ← BM Ext. 2: Online sales platform | 0.676 | 0.173 | 3.905 | *** |
| Core winery business size ← BM Ext. 3: Sustainability | −0.156 | 0.126 | −1.235 | 0.217 |
| Vinotheque ← BM Ext. 1: Hospitality and tourism | 1.000 |       |       |     |
| Wine tours ← BM Ext. 1: Hospitality and tourism | 1.024 | 0.156 | 6.577 | *** |
| Event ← BM Ext. 1: Hospitality and tourism | 0.703 | 0.111 | 6.311 | *** |
| Other products ← BM Ext. 2: Online sales platform | 0.835 | 0.172 | 4.851 | *** |
| Online shop ← BM Ext. 2: Online sales platform | 1.000 |       |       |     |
| Company type ← Core winery business size | 1.000 |       |       |     |
| Sust. discourse ← BM Ext. 3: Sustainability | 1.000 |       |       |     |
| Eco wine cert. ← BM Ext. 3: Sustainability | 0.313 | 0.248 | 1.262 | 0.207 |
| Social networks ← BM Ext. 2: Online sales platform | 0.383 | 0.110 | 3.492 | *** |
| Vineyard size ← Core winery business size | 520.751 | 6.476 | 8.145 | *** |

Note: *** signifies value less than 0.001.

Table 5. Standardized regression weights of the structural equation model related to hypotheses H1–H3.

| First-Order Constructs, Indicators and Path Directions | Estimate |
|-------------------------------------------------------|----------|
| Core winery business size ← BM Ext. 1: Hospitality and tourism | 0.201 |
| Core winery business size ← BM Ext. 2: Online sales platform | 0.363 |
| Core winery business size ← BM Ext. 3: Sustainability | −0.153 |
| Vinotheque ← BM Ext. 1: Hospitality and tourism | 0.541 |
| Wine tours ← BM Ext. 1: Hospitality and tourism | 0.555 |
| Event ← BM Ext. 1: Hospitality and tourism | 0.381 |
| Other products ← BM Ext. 2: Online sales platform | 0.407 |
| Online shop ← BM Ext. 2: Online sales platform | 0.488 |
| Company type ← Core winery business size | 0.908 |
| Sustainability discourse ← BM Ext 3: Sustainability | 0.891 |
| Eco wine certificate ← BM Ext 3: Sustainability | 0.279 |
| Social networks ← BM Ext. 2: Online sales platform | 0.205 |
| Vineyard size ← Core winery business size | 0.643 |

Figure 3. The reflective–formative measurement model of the impact of winery business model extensions on core wine production business model (hypotheses H1–H3).
Table 6. Model fit of the structural equation model related to hypotheses H1–H3.

| Indices                  | Obtained Value | Model Interpretation in Relation to Criteria Set by Hooper et al. [66]               |
|--------------------------|----------------|-------------------------------------------------------------------------------------|
| Chi-square value/DF (CMIN) | 2              | Acceptable, as CMIN should be between 2 and 3 [66]                                  |
| NFI                      | 0.922          | Unacceptable, as it is lower than the threshold value of 0.95                       |
| TLI                      | 0.926          | Unacceptable value, as it is lower than the threshold value of 0.95                 |
| CFI                      | 0.958          | Acceptable value, because the value is greater than 0.95 [66]                      |
| RMSEA                    | 0.034          | Acceptable value, as it is lower than threshold value of 0.07 [66]                 |

When analyzing the path of influence in the presented model, it becomes evident that different types of BM extensions have a direct effect on the core BM of wineries. Because the wine production BM has been defined through the vineyard size and legal organization type, the results provide empirical evidence of how quantitative growth can be achieved by extending the core wine production BM. However, having in mind the negative effect of BM extension sustainability on wine production BM, it could be that perhaps further research is needed to examine the impact of BM extensions on profitability and not only winery size.

5. Discussion

5.1. Theoretical Implications

The research hypothesis H1, that winery BM extensions into hospitality and tourism have a positive effect on core winery business size, has been rejected. However, the positive effect this BM extension on the core winery business size (0.36) should be taken into account, although it is not statistically significant. It is therefore a BM extension that creates and captures value in cooperation with different types of stakeholders in the tourist destination, which does not necessarily impact the growth of the core winery business size. The results therefore confirm the previous findings of Bruwer and Alant [67] on the experiential nature of the wine tourism consumption. It means that the essence of this BM extension is in the value adding and value capture outside core wine business, while not having a direct impact on the winery business growth. However, positive effects and synergies between the core wine business and a hospitality and tourism BM extension are possible and have been documented in the previous literature, especially regarding hospitality and tourism as a sales channel for the winery’s wines and a support in branding the winery and the wine region, as well as increasing the brand recognition, equity, and loyalty for the winery’s wines [68]. However, a BM extension of wineries into hospitality and tourism is connected to additional investments into new facilities and new staff, and most importantly, demands a completely novel mindset and business skillset, which is demand-oriented. This may present a large obstacle for established small wineries run by older female vintners, which are demonstrated by Ilak Peršurić and Žutinić [69] to be less prone to managerial and business-oriented tasks compared to agricultural tasks.

The research hypothesis H2, that winery BM extension into online sales platforms has a positive effect on core winery business size, has been accepted. This means that there is a statistically significant positive influence of BM extension into online sales platforms (0.36) on core winery business size. Keeping in mind that business model research originated in the digital, high-tech industries, where the BM migration is a standard rather than an exception [13], it is perhaps not surprising that the winery business model growth potential has been confirmed for online sales platform BM extension. Wineries can not only adapt to the external conditions but also evolve further through vineyard growth. This makes digitalization through online sales platform a very potent tool for driving winery growth. These results confirm the suitability of novel ICT for changing traditional industries through the process of mutual interaction between emergent and traditional industries [49].

Innovative business models are only relevant if they can attract participation from relevant stakeholders and hence promote value co-creation, extension, and diffusion [70]. However, previous literature has not dealt with the sustainability-oriented business model
extensions, leaving a major research gap in how business models can evolve in time in a more sustainable manner. The research hypothesis H3, that winery BM extension into sustainability has a positive effect on core winery business size, has been rejected. However, the negative effect of this BM extension type on the core winery business size (−0.15) should be noted, although it is not statistically significant. This confirms the previous findings that wineries concentrate on value capture and profit making while value creation through sustainability falls short [26]. Although sustainability in the wine industry is traditionally being viewed as essential for improving the production efficiency and quality [71], it appears that value capture through new technology is disconnected from value creation through sustainability. Therefore, further research is needed in this area to understand this disparity between value creation and value capture for sustainability. However, a caution is needed when interpreting the results, as quantitative growth in size does not necessarily mean there is a lack of growth in terms of quality, price levels, and consequently higher profits. Actually, farms with sustainability-oriented and organic products are shown to be able to set higher prices within certain socio-demographic target markets and possibly achieve higher profits [72,73]. In addition, sustainability can bring cost reduction through an increased efficiency, which can be a powerful market positioning strategy [74,75]. Future research should therefore take into account potential value creation savings through an increased efficiency, potential value creation advantages through superior quality, and improved value capture through higher prices or superior sales channels.

The forces of globalization and internationalization are among the most potent business model change forces in the wine industry and beyond, impacting their resource architecture and demanding a novel knowledge base, routines, and capabilities [29,76]. The present research has demonstrated that not all business model extensions are equal in terms of their impact on the core winery business size and the alternatives should therefore carefully be evaluated according to the strategy that is best suited for a certain winery. Wine industry BMs are the product of a number of factors present in a certain wine region and its competitive environment, while a wine region’s competitive position is determined by the region’s position in the global wine trade [77]. This opportunistic aspect of business model extensions should not be forgotten, as the regional resource availability is usually an important first step in pursuing a certain type of BM extension. The current research extends the use of SEM methodology for researching strategic issues in the wine business. Strategic issues in the wine business have previously been modeled through an SEM methodology in order to uncover the relationship between differentiation and organizational performance in a winery [78]. The present research extends the understanding of strategic choices in a winery, from a holistic perspective, by extending the understanding of the strategic choices beyond wine production.

No previous wine business research has researched the wine business extensions, which is the most important contribution of this research to the wine business innovation research. In addition, this research deploys an innovative, netnographic research approach. Regarding the conceptualization of the core winery business and business model extensions, the research hypothesizes that it makes sense to understand only wine making and sales as the core winery business in the sense of value-creating activity. The reason is that it is a complex industry where value capture activity can vary from cellar door sales with additional tourism services through online sales to supermarket sales. The results could not confirm the previous findings that small, family wineries focus on value creation [28]. Although the sustainability, as a value creation activity, is negatively related to the size of the vineyard, this relation has not been statistically significant.

5.2. Managerial Implications

The implications of the results point to the need to rethink the sustainability approaches in larger, state-owned wineries as well as cooperatives, as it appears that it is a BM extension that tends to be employed by smaller owner-manager or family types of wineries.
The larger wineries would need to put an accent on rethinking the whole sustainability discourse in the winery, as well as on obtaining eco-wine certificates. For the small winery managers, the tendency of BM extension into sustainability to negatively influence the BM growth needs to be carefully considered as it bears important implications. Firstly, it needs to be decided if it is the right approach for a winery that is planning on expanding rapidly and quickly. Secondly, if the BM extension into sustainability does not support growth, then the business model strategy needs to concentrate on higher value added and value captured per bottle instead of seeking possible economies of scale. Keeping in mind that BM extension into hospitality and tourism has no significant influence on the growth of the winery core, the value added and value captured also need to be crafted carefully in order to support the core winery business in this non-growth-oriented strategy.

5.3. Limitations

One major limitation of the present study is the use of a netnographic method for data collection, which proved to be significantly different from standard questionnaire instruments, which are normally used as a basis for structural equation modeling. However, this approach could also demonstrate the wider possibilities for the deployment of SEM beyond questionnaire-collected data. In order for this to become a more widely used research approach, validity and reliability rules for instrument validity need to be rethought. The netnographic data collection method generally suffers from lower instrument validity, but the advantage compared to standard questionnaires is that it does not suffer from common method bias, and a larger quantity of data can be easily obtained, which makes them suitable in certain research contexts. The research uses recent aggregate data to understand the mutual connection between the selected variables related to business model extensions and business size in the research timeframe. The research therefore makes no attempt to either conduct a longitudinal study or predict the future development of the wine businesses involved.

This research deals with BM and takes a resource-based approach because it is more suitable for agri-food SMEs, as they rely on finite and scarce resources, knowledge, and relations, all identified to be major elements of a resource-based theory by Acedo et al. [79]. It does not deal with BM diversification, as this approach tends to be more suitable in the publicly traded companies with abundance of capital and human resources, operating globally [80–82]. These conditions do not apply to the German SME wineries, therefore deeming a resource-based approach more suitable.

A further limitation of this study is related to its focus on one industry and one country with 13 wine regions. This makes the transferability of the results to a wine industry context in other countries possible only with caution, similarly to a transfer of the results to other industries. This is not to say that results could not be relevant in other countries or industries, but the results should be used with caution in the differing research contexts. In addition, further evidence should be collected in order to understand how the phenomenon of business model extensions functions in other countries and industries.

6. Conclusions

The research tests a model of the impact that three types of BM extensions have on the core BM, thereby increasing the understanding of the organizations and their business model change over time. Business models are usually dispersed at the intersections of different industries, but the impact of venturing out into “uncharted territories” has not been well-researched or documented. This research attempts to close this research gap and provide insights into the impact that these BM extensions have on the core business. It appears that in order to have a growth-oriented strategy, companies need to venture out into digital sales platforms. Hospitality and tourism have no statistically significant impact on size of the core winery business, similarly to sustainability, which calls for further research into the impact of BM extensions on other core BM aspects, such as profitability. For example, further research could research in detail the profitability of core BM and
BM extensions, and whether there are spill-over effects of BM extensions on core BM in terms of profitability. Future research should also put more effort into creating indicators for better classification of business model innovation types. For example, when does a change in business model cease to be business model extension and becomes business model migration? Although this discussion is not so relevant for the agricultural industries, as the connection of the farmers with the land is usually very strong, in other industries, the question of business model extension that becomes business model migration is a very important one. The results also demonstrate that sustainability and wine and tourism represent a different type of business model extension than an online sales platform. While online sales platforms appear to impact directly the core wine production BM element, sustainability and hospitality and tourism should be further examined if in certain cases they represent a BM component change or BM migration. However, both online sales platforms and hospitality and tourism have a positive impact on core winery business size, and both can directly impact the sales of wine. On the other hand, sustainability deals more with higher value added and quality, while not having a direct impact on winery size and growth. In fact, the influence has been slightly negative on the size of the winery, although not statistically significant. Furthermore, the overall winery data regarding turnover and profitability of core business and BM extensions should be researched in more detail. It would be important for the future research to differentiate between family and non-family wineries as well as between privately owned, cooperative, and government-owned wineries. Family and non-family wineries, as well as privately owned wineries, can be further researched by deploying quantitative and possibly also SEM methodology. On the other hand, cooperatives and state-owned wineries are a rather seldom type of winery, therefore calling for a qualitative and case study approach in order to better understand their business model extensions.

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