

## CONSUMER PREFERENCES IN THE CONTEXT OF POSSIBLE ORGANIZATION OF ENOTOURISM SERVICES IN CENTRAL POLAND

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**Purpose:** The aim of the research was to determine consumers' expectations regarding enotourism, examine the possibilities for its development in central Poland, and explore strategies to enhance profitability for vineyard owners.

**Methodology:** The study was conducted in 2024 using quantitative PAPI (paper and personal interview) and CAWI (computer-assisted web interview) methods among Polish residents. The representative sample was 1067 people. A total 984 correctly completed surveys which were used for analysis. The questionnaire consisted of three parts: general questions on the use of enotourism services, knowledge and use of services in central Poland and demographic information. using survey forms with 984 participants from 16 voivodeships across Poland. The questionnaire covered three parts: general enotourism behaviors, specific knowledge and demographic data. The model's dependent variable was the frequency of visiting enotourism sites in Poland. Due to its dichotomous nature a logistic regression model was applied, including only statistically significant variables. Model quality was evaluated using the Hosmer-Lemeshow test and C-statistics.

**Findings:** The positive perception of central Poland as an enotourism destination strongly correlates with visitors' frequency of vineyards visits. Central Poland has the potential to become an important enotourism center; however, this requires a well-organized, strategic approach and coordination of various stakeholder activities.

**Originality/value:** The article introduces a fresh perspective on the potential for enotourism development in central Poland, highlighting opportunities from climate change and shifting wine growing zones. It uniquely analyzes specific factors attracting enotourists, such as prior visitor experience and interest in local wine production, within a region without strong wine traditions. The article is aimed at tourism policymakers, vineyard owners, local authorities and

tourism development organizations. It also serves research in enotourism and those interested in the tourism potential linked to horticultural adaptation to changing climate conditions.

**Keywords:** enotourism, vineyards, central Poland.

**Category of the paper:** Research paper.

## 1. Introduction

In recent years, sustainable development issues have become a key element in vineyard management around the world, including in Poland. Sustainable development of vineyards is a key element of wine tourism in Poland, contributing to environmental protection and promoting responsible agricultural practices. By using ecological viticulture practices, such as reducing the use of pesticides, using natural fertilizers, and managing water, winemakers can minimize the negative impact on the environment while improving the quality of their products (Vinci et al., 2022). Polish vineyards are increasingly implementing ecological cultivation methods, such as minimizing the use of pesticides and artificial fertilizers, which contributes to maintaining biodiversity and soil health (Nowak, 2022). For example, Winnica Turnau (West Pomeranian Voivodeship) and Winnica Srebrna Góra (Lesser Poland Voivodeship) use natural preparations and composting, which allows maintaining a healthy ecosystem around the vineyards (Kowalski, 2021).

Additionally, vineyards engage in educational activities by organizing workshops and tastings that promote ecological awareness among tourists (Wiśniewski, 2020). Educational tours are also often held in vineyards, during which visitors can learn about sustainable viticulture practices and the wine production process (Zielińska, 2019). The Adoria vineyard (Lower Silesian Voivodeship), for example, offers special educational programs for schools and tourists promoting ecological wine production methods (Grabowski, 2018). Sustainable practices also include the use of renewable energy and water resources management, which helps reduce the carbon footprint of wine production (Lewandowski, 2023). Many vineyards, such as Winnica Płochockich (Świętokrzyskie Voivodeship), invest in solar panels and rainwater recovery systems, which significantly reduces their impact on the environment (Szymańska, 2021). The introduction of sustainable viticulture practices also attracts tourists who are increasingly ecologically aware and seek authentic wine experiences, including wine tasting, education on viticulture, and relaxation in picturesque vineyard landscapes (Mariani et al., 2022). Moreover, the development of wine tourism supports the local economy by generating additional income for winemakers and local tourism-related enterprises (Gómez et al., 2019). Winemakers who invest in sustainable practices can also count on the loyalty of customers who value products made with respect for the environment and tradition (Pomarici, et al., 2017). Thanks to these initiatives, wine tourism in Poland is becoming not only a tourist attraction but also an example of the integration between agricultural activities and

environmental protection, which has a significant impact on local communities and the economy (Majewski, 2022). Sustainability is not only a matter of environmental protection but also an approach that takes into account the economic and social aspects of wine production. In Poland, as in other European countries, vineyards are exposed to climate change, which may have a significant impact on the quality and quantity of the harvest (Hannah et al., 2013). For this reason, farmers are increasingly using organic farming practices, limiting the use of plant protection products while promoting natural, ecological methods of plant protection (Kowalski, 2021; Nowak, 2022).

Tourism as a dynamic phenomenon is constantly evolving under the influence of various social, cultural, economic, political, as well as natural and technological factors (Bibiciou et al., 2013). These changes have contributed to an increase in interest in new types of tourism, among which enotourism holds a special place. Due to its specificity, enotourism, at least on a small scale, can also be considered a good example of sustainable tourism (Kowalczyk, 2010). Wine tourism has long existed in parts of Europe and North America, and in Australia it has developed as a distinct tourism product since the early 1980s (Weaver et al., 2002; Yuan et al., 2005; McNamara et al., 2015). Enotourism has always been associated with "old world" regions, having a profound impact on their cultural and regional development (Gomez et al., 2019; Vazquez, 2021). In these countries, wine production is abundant and dominates most social interactions and social life (Zainurin et al., 2022). In Europe, enotourism was often associated with official wine trails and roads. Formal links between tourism and wine, especially through the creation of wine routes, have existed since the first half of the century and have expanded significantly in recent times (Hall et al., 2000). Recently, "new world" and developing countries have also joined this trend, and wine consumption and related products such as enotourism, wine festivals, and wine routes are starting to become embedded in their lifestyles (Singh et al., 2020; Yadav et al., 2022). The world of wine is becoming more and more popular, starting from getting to know the vineyard, wine production and gaining knowledge about grape varieties and their characteristics, as well as the bottling process (Fuentez-Fernandez et al., 2022). Well known as enotourism, vinotourism or wine tourism, it has many definitions, dimensions and meanings and is a relatively new form of tourism that has developed in wine-producing countries and/or regions (Bibiciou et al., 2013). The definition of wine tourism is not uniform because it can be analyzed from different perspectives, such as marketing or traveler motivation (Jaykumar, Fukey, 2014). According to Bunghez (2022), it involves visiting vineyards and vineyards, ending with wine tasting, which also includes a presentation of the wine production route, from growing and harvesting grapes to bottling and aging processes. It combines wine, food, culture and experiences related to tasting wine and its production method, which has great potential for wine-producing areas (Trigo, Silva, 2022). Wine tourism is perceived as a sensory experience that offers various attractions for visitors, such as a lifestyle experience, the pleasure of tasting or participation in festivals, as highlighted by the studies of Hall and Macions (1998), Hall et al. (2000), Charters and Ali-Knight (2002)

and Getz and Brown (2006). Anastasiadis and Alebaki (2021) defined it as a new form of tourism encompassing a wide range of activities and infrastructure. As noted by Carlsen and Boksberger (2015), wine tourism is based on complex interactions between tourists, wine products, the adapted winery environment, management systems and other elements of the winery. Byrd et al. (2015) succinctly defined it as a vineyard tour during which tourists experience what they love about wine. The three main elements of wine tourism are: visits of wine connoisseurs and buyers, visits to vineyards and wine routes (Olaru, 2012). Telfer (2001) identified three components that constitute a winescape: the presence of vineyards, the production activities of the vineyards, and the vineyards where the wine is produced and stored. Wine tourism research suggests and promotes the idea that food and wine can be, and often are, the primary reason for traveling to a particular region and not necessarily the travel activity (Bibiciou, 2013).

Getz and Brown (2006) indicated that the main goals of tourist' trips are attractive scenery, pleasant climate, affordable accommodation, ease of obtaining information, and wine routes that are well-marked and offer a variety of attractions. Wine tourism should focus on experiences and activities related to wine tasting and vineyard visits (Ribero Santos et al., 2019). Enotourism should offer unique and authentic tourist experiences that need to be more personalized and diverse. Wine tourism can play an important role in the economic development of wine regions while consolidating them as tourist destinations (Lopez-Guzman et al., 2014).

The combination of wine and tourism can bring significant economic revenues to wine-producing regions (Bruwer, 2003). Wine tourism industry employees believe that wine tourism effectively improves the image of a wine brand and contributes to the construction of the infrastructure of tourist destinations (Baker, 2016). Wine tourism brings direct economic value to regions by supporting local producer networks, including not only wine producers, but also regional food producers, hospitality, and arts and crafts (Telfer, 2001; Founatin, 2014; Serra et al., 2021). At the level of an individual producer, it is difficult to estimate exact income, but wine tourism increases the number of revenue streams and direct sales (Carlsen, Dowling, 1998; Remenova et al., 2019; Smyczek et al., 2020). The economic role of wine tourism is based on increasing the importance of the brand, which may concern regional brands as well as consumer loyalty and long-term repeat visits and purchases (Alonso, Liu, 2012; Tafel, Szolonki, 2021). In their study, Szolnoki and Tafel (2021) showed that the direct and indirect impact of wine tourism in German wine regions amounted to EUR 5 billion in 2019. Dreyer (2019) described the growing activity of wine tourism in the last decade and noted the versatility of wine tourism in Germany. According to New Zealand government data, an average of 13% of international holiday tourists visiting the country visit vineyards or participate in wine tourism activities each year, equating to more than 200,000 people per year (Zealand, 2014). This market is lucrative as international wine tourism tourists spend an average of NZ\$ 3700, compared to an average spend of NZ\$ 2800 for all visitors (Baiurd et al., 2018).

Importantly, 94% of international wine tourists are independent travelers, which strengthens their ability to travel to rural regions, and their stays are significantly longer (average 18.6 days) compared to the average for all visitors of 14.4 days (Zealand, 2014). In recent years, with China's rapid economic development, visiting vineyards has become a new type of tourism in China (Ye et al., 2014). However, from the perspective of the wine tourism industry as a whole, it is still in its infancy with enormous potential for future development (Smyczek, 2020). The Third Global Wine Tourism Conference (World Tourism Organization, 2016) indicated that wine tourism is still an immature market that requires more in-depth research to better understand its future. Viticulture is often seen as an extremely important factor for regional development in rural areas due to its contribution to regional branding and significant employment opportunities (Hall, Gossling, 2016). This perception is reinforced both by direct aspects, i.e. visits to vineyards, and indirect aspects, for example, purchasing local wine and food in restaurants, which highlights the role of viticulture in tourism in such regions (Baird et al., 2018). Value for wine tourists is created by aspects related to the product, such as: the quality of the wine offered, the attractiveness of the landscape (Dodd, Gustafon, 1997), the winery, the historical context of the wine region and the regional cultural heritage (Charters et al., 2009). Nowadays, consumers increasingly pay attention to local products. This is due to the trend of returning to using products from natural raw materials, including food, and activities aimed at implementing the idea of sustainable development in everyday life (Kołodziej, 2022). Thanh and Kirova (2018) analyzed 825 TripAdvisor reviews using an economic experience model and found that winery education is the dominant aspect in wine tourists' experiences, in addition to entertainment. Nella and Christou (2021) found that a winery visit includes the experiential value of learning about wine and its production, which attracts a large number of tourists to wineries. Wine tourism is considered a sustainable form of spending free time, which is due to its inextricable links with “nature, know-how and economic activity” (Pulpon, Ruiz, 2019). UNWTO (2016) recognized wine tourism as a key element of gastronomic tourism that can play a multi-faceted role in sustainable rural development, promoting destination heritage, natural resource conservation, income generation and social benefits, especially for less advantaged regions.

In the face of global climate change, the tourism sector in Europe is experiencing significant transformations. Climate change directly affects this sector, which is particularly visible in the predictions of a decline in tourist activity in southern Europe and an increase in the northern and continental parts after 2050 (Sottini et al., 2021). As research by Droulia and Charalampopoulos (2021) indicates, the expansion of vineyards into new areas is changing the traditional geography of wine-growing areas. In northern regions, new opportunities are emerging for viticulture, which was previously considered risky (Fraga et al., 2013). They create opportunities to introduce hybrid, more resistant and durable grape varieties adapted to more difficult conditions (Myśliwiec, 1992; Schernewski, 2011; Bosak, 2013; Myga-Piątek, Rahmonov, 2018; Johnson, Robinson, 2019). In turn, according to Maciejczak

and Mikciuk (2018), changes in the crop calendar caused by climate change may affect the profitability of the enotourism industry, and the increased frequency of extreme weather phenomena such as droughts and heat waves may create a risk for sustainable wine production, as noted by Szwed et al. (2010). The increase in global temperature may contribute to changes in traditional wine regions, creating new alternatives, which in turn may affect tourist satisfaction and change demand patterns in the enotourism sector (Brzózka, Jaczewski, 2016; Marcinkowski, Pniewski, 2018). New wine regions emerging in northern Europe may attract tourists by changing the tourism landscape (Santos et al., 2020). Additionally, changes in the seasonal distribution and quality of wine encourage producers to rethink their cultivation strategies, which is key to maintaining competitiveness and attracting tourists (Romanowicz et al., 2016). Poland is not a typical wine country. Both in terms of vineyard area, wine production, and wine consumption, it is below the world average (Jeziorska-Biel et al., 2021). Although it was not popular before, it is gaining in importance. The increase in the number of vineyards and the development of enotourism services may transform this niche sector of tourism into a significant market segment (Bosak, 2013; Kołek, 2023). Similarly, in the northern New York region, the increase in average annual temperatures creates challenges for wine producers, which highlights the need to adapt cropping strategies to changing climatic conditions (Kundzewicz et al., 2018). Research by Dec and Krupa (2014) indicates that enotourism in regions rich in vineyards is becoming an important direction of development for small rural farms, especially since a significant percentage of tourists buy wine produced on-site.

Running a vineyard in Polish conditions can be a challenge in terms of profitability due to both the climate and the specifics of the market (Maciejczak, Mikciuk, 2018). Despite the growing number of vineyards, Poland still faces issues related to low production scale and significant competition on the international market (Szumelda, 2019). Wine production requires substantial financial investments in vineyard development, as well as appropriate adaptation of cultivation methods to local climatic conditions, which may be less favourable than in traditional wine-producing regions (Sidorkiewicz, 2023). The climate in Poland, characterised by cold winters and short summers with moderate temperatures, presents difficulties for Polish winemakers in cultivating grapevines, which are particularly sensitive to weather conditions (Kozmiński et al., 2020). In recent years, climate change may create new opportunities for winemaking in Poland, but at the same time, it necessitates the implementation of appropriate adaptive strategies to minimise the risks associated with unfavourable production conditions (Maciejczak, Mikciuk, 2018). In addition to climate challenges, the Polish wine market is also characterised by specific consumer demands and low awareness of local wines, which further complicates the development of this industry (Trestini et al., 2020). Despite the growing interest in regional wines, Polish winemakers have to compete with imported wines that dominate the market (Wójcik, 2022). Therefore, to increase profitability, Polish vineyards need to invest in

marketing and consumer education while developing the unique qualities of their products that can attract the attention of discerning customers (Kunicka-Styczyńska et al., 2016).

Vine is grown in various regions of Poland. Generally, the first larger vineyards began to develop in the 1980s in the Podkarpackie Voivodeship and in the Lubuskie and Lesser Poland Voivodeships. These regions, as Smogór (2012) pointed out, have been the main wine-growing areas in the country for years. However, according to the latest KOWR data (2024), in the 2023/24 economic year, the largest area under vines (covered by the register, intended for commercial production) was still located in the Lesser Poland Voivodeship (122 ha), Podkarpackie Voivodeship (85 ha), Lower Silesia (52 ha) and Lubuskie (51 ha). However, in three voivodeships covering central Poland, i.e. Masovian, Łódź and Świętokrzyskie voivodeships, the total area of vineyards covered 67 ha. For comparison, in the 2017/18 marketing year, as Olewnicki (2018) pointed out, in these voivodeships it was 33.4 ha. Within a few years, it doubled. Therefore, it is a promising region not only in terms of the development of winemaking itself, but also in terms of the possibility of developing enotourism.

The Podkarpackie region in Poland is an example of a developing model of small wine farms that combine the production of high-quality wines with agritourism offers. This area is characterized by a significant number of vineyards, which makes it the nucleus of a real wine region (Olszewski, 2013). According to the Polish Tourist Organization (2024), the enotourism offer in Poland has so far been poorly recognizable, therefore it was necessary to highlight it as part of promotional activities. The Polish offer of enotourism trips was also limited, with the dominant role of importers and wine sellers, which resulted from the emerging market for this type of services (Kosmaczewska, 2006). However, research by Wójcik (2022) showed that wine production in Poland has increased as much as 43 times over 13 years (wine years 2009-2022), which contributes to the increase in wine consumption and can potentially support the development of wine tourism. Wine tourism in Poland is gaining popularity and becoming an increasingly important tourism segment, with the Podkarpackie region as the leading wine region in the country (Krupa, Stokłosa, 2015). Despite various obstacles, the first groups of enotourist have visited Polish wine farms since 2008, which proves the effectiveness of ongoing efforts to revive wine traditions in regions such as Poscarpathia, Lesser Poland and western Poland by supporting the establishment of small vineyards and the development of grape processing on agricultural and agritourism farms (Wrzochalska, 2001). There is an increase in the number of vineyards, companies offering important development factors is the activity of organizations and associations supporting viticulture and establishing vineyards, which translates into an increase in the skills of vineyard owners in the fields of viticulture and wine production. The promotion of Polish winemaking, including the organization of wine festivals, also plays an important role in their activities.

However, enotourism, or wine tourism, is a key element in supporting vineyard revenues and can significantly enhance their profitability (Jesiotr, Szymańska, 2016). Enotourism in Poland is developing dynamically, with vineyards increasingly incorporating tourism offerings

as an integral part of their operations (Bunghez, 2022). Sokół (2015) research highlights opportunities for the development of enotourism in Poland, emphasising the growing interest in winemaking within the country. This view is also supported by Dominik (2016), who explains that the increasing interest in wine in Poland stems from Poles adopting Western lifestyles, which translates into a rise in the consumption of this beverage. Moreover, studies show that integrating tourism activities with agricultural operations can lead to better resource utilisation and diversification of income sources, which is particularly important in the context of changing economic and climatic conditions (Seo, 2010; Luo et al., 2023).

## 2. Materials and methods

### 2.1. Data collection

The analyzes presented in this work were carried out using the results of empirical research, and their aim was to determine the factors (determinants of more frequent (regular) use of enotourism services, both in Poland in general and in central Poland in detail. The research was carried out in 2024 using quantitative PAPI methods (paper and pen personal interview) and CAWI (computer assisted web interview), among the inhabitants of Poland. In accordance with the principles of selecting a representative sample for survey research, with a confidence level of  $\alpha = 0.95$  and a fraction size of 0.5 (standard value) and assumed maximum error of 3.0%, the representative sample is 1067 (with the population of Poland provided by the Central Statistical Office at the beginning of 2024 being 37.6 million people). The total number of surveys indicated above was collected, and after verifying the correctness of their completion, 984 were used for further analyses.

The questionnaire consisted of three parts, the first - containing questions regarding, among others: general use of enotourism services by respondents both in Poland and abroad, motives for enotourism trips, time spent in vineyards, amount of financial resources allocated to enotourism services. The second part concerned the respondents' knowledge and use of enotourism services located in central Poland. According to the NUTS classification of Polish macroregions, until 2016 the central part of Poland included the Masovian and Łódź voivodeships. However, after the classification was changed in 2017. the Świętokrzyskie Voivodeship was included in the central region, while the Masovian macroregion was separated as a separate region. This research is part of a larger project, including, apart from enotourism itself, research on climate change over a longer period of time, therefore all three above-mentioned voivodeships are included in the Central Poland region, despite changes in NUTS classifications in individual years. Central Poland is a promising region where winemaking is developing (Maciejewska et al., 2024). The location of large urban agglomerations in this area



may be a demand factor for developing vineyards focused on enotourism, especially for short, one-day or weekend visits. It was therefore important to check among the respondents whether they knew the enotourism offer in this region, as well as to determine the factors that may influence the use of enotourism services. The third part of the survey was a specification specifying, among others, gender, age, education, place of residence, disposable income of respondents, as well as economic and social situation.

## 2.2. Statistical Analysis

As part of the preliminary analysis, the distribution and characteristics of the analyzed variables were assessed, divided into the frequency of visiting enotourism places in Poland. The dependent variable of the model was "frequency of visiting enotourism places in Poland". Due to the dichotomous nature of the dependent variable (regressor) "never or once in life", "at least once every few years (several times in life)", a logistic regression model was used. A prediction was made for the level "at least once every few years (several times in life)". Independent variables (regressants) of the model were also determined, including: enotourism places, time spent on such trips, and money spent on such purposes. The developed model included only statistically significant variables. The quality of the obtained model and the accuracy of the prediction were assessed based on Hosmer and Lemeshow Goodness-of-Fit. The C-statistic value and the Hosmer and Lemeshow goodness-of-fit test were used to assess the quality of the resulting model. All analyses were performed using the SAS 9.4 (Field, 2024).

## 3. Results

The sample consisted of 984 participants (640 women and 344 men) over 18 years old. Respondents were also divided by their education, place of residence, and subregion. Respondents were also asked about disposable income and socioeconomic situation. Table 1 displays the characteristics of the study sample.

**Table 1.**  
*Socio-demographic characteristics of the study sample*

Variables		Total Sample	
		N	%
Total Sample		984	100.0
Gender	Woman	640	65.0
	Men	344	35.0
Age	18-30	369	37.5
	31-45	333	33.8
	46-60	220	22.4
	Under 60	62	6.3

Cont. table 1.

Education	Primary	37	3.7
	Medium	94	9.6
	Above	853	86.7
Accommodation	Village	196	19.9
	A city with a population of less than 50 thousand	135	13.7
	A city with a population of 50 to 99,9 thousand	200	20.3
	A city with a population of 100 to 250 thousand	304	30.9
	A city with a population of over 250 thousand	149	15.1
Macroregion	Northern	201	20.5
	Northwest	147	15.4
	Southwest	93	9.5
	Southern	108	11
	Central	307	31.2
	Eastern	128	13.1
Monthly income	Up to 60 EUR	97	9.8
	121-180 EUR	245	24.9
	Above 180 EUR	642	65.2
Socio-economic group	Currently not working anywhere	5	0.5
	Student	107	10.9
	Pensioner	122	12.4
	Farmer	122	12.4
	Blue collar worker	56	5.7
	Clerk	123	12.5
	Employee working for a company/office	377	38.3
	Self-employed	182	18.5

Source: Own study.

As already indicated in the introduction, enotourism in Poland is still a developing branch of tourism. The research showed that just over half (50.7%) of all respondents had ever been to a vineyard (regardless of whether in Poland or abroad). Various factors influence the likelihood of visiting wine tourism destinations. People who, based on surveys, visited places related to wine tourism in the past year both in Poland and abroad have a 2.6 times greater chance of visiting such places in Poland at least once a year compared to people who did not visit all such places (OR: 2.60; 95% CI: 1.10-6.14). However, people who visited a wine center abroad in the last year have a 42.9% greater chance of visiting such centers in Poland at least once a year compared to people who did not visit such a place (OR: 1.43; 95% CI: 1.16-1.82). It is interesting that people who spend half a day in places offering wine tourism have an 8.5 times greater chance of visiting such a center in Poland at least once a year compared to people who did not spend time there (OR: 4.48; 95% CI: 1/03-69/93). People staying all day in wine centers have a five times greater chance of visiting such places in Poland at least once a year (OR: 5.05; 95% CI: 1.59-43.07). However, people spending 2-3 days there have an 11.6 times greater chance of visiting such places in Poland at least once a year (OR: 11.65; 95% CI: 1.35-100.72).

Apart from the time spent on enotourism trips, it was decided to examine how the declared financial resources allocated to enotourism trips among respondents may influence the use of the enotourism offer of Polish vineyards. The research has shown that people willing to spend EUR 60-120 on accommodation services during enotourism trips have a 28% greater chance of

going on an enotourism trip in Poland compared to people willing to spend up to EUR 60 per person (OR: 1.28; 95% CI: 1.05-2/08). However, people willing to spend EUR 121-180 have a 32% greater chance of going on an enotourism trip located in Poland (OR: 1.32; 95% CI: 1.06-2.79). However, people willing to spend over EUR 180 have a 162% greater chance of going on an enotourism trip to Poland (OR: 2.62; 95% CI: 1.44-15.69). Moreover, respondents who intend to use additional attractions during an eco-tourism trip have a 45% greater chance of visiting these places more often than people who do not use them (OR: 1.45, 95% CI: 1.09-2.30). People interested in wine and wine regions are almost twice as likely to visit these places more often than people who are not interested (OR: 1.97; 95% CI: 1.15-4.10) (Table 2).

**Table 2.**

*Statistically significant variables and their estimation properties used to build the logistic regression model*

Variable	Estimate	Point Estimate	Pr>ChiSq
How many places related to wine tourism have you been to in the past year?		-2.587	0.013
	Poland	-0,033	0.968
	Poland and other countries	0.9538	2.596
	Other countries	0.3575	1.429
	Wasn't	0	1
How much do you spend time on average in places offering wine tourism?	Half day	2.1381	8.483
	Whole day	1.6188	5.047
	2-3 days	2.4551	11.647
	More than 3 days	1.6225	5.066
	1,5 week	16.8915	>999.999
	Don't spend	0	
How much money on average do you spend per person on an enotourism trip?	Up to 60 EUR	0	
	60 -120 EUR	0.2479	1.281
	120-180 EUR	0.276	1.318
	Above 180 EUR	0.9623	2.618
Enjoyment of additional attractions	Yes	0.3695	1.447
	No	0	
Interest in winemaking – wine regions	Yes	0.6797	1.973
	No	0	

Source: Own study.

Research has shown that people who are motivated by the desire to learn new things are twice as likely to go on regular tourist trips located in central Poland compared to people for whom this issue is not important. This may mean that novelties related to vineyards, such as new wine varieties, new production techniques, or interesting wine events, are a key factor attracting these tourists. Visitors who were attracted by events organized by vineyard owners have over six times greater chance of regular enotourism trips compared to people for whom these events are not important. These events are a strong motivating factor for people practicing enotourism. The belief that wines from vineyards in central Poland can be of high quality paradoxically limits regular enotourism. Each additional point in this opinion reduces the chance of regular visits to vineyards by 41%. This may be due to the fact that tourists who have already rated the wines as high-quality products may not feel the need to return, believing that

they have already experienced the best products of the region. The research also showed that people who consider central Poland to be a good region for the development of enotourism have a 64% greater chance of being frequent visitors to vineyards at every level of this opinion. This means that a positive perception of the region strongly correlates with greater interest and regular visits by enotourists (Table 3).

**Table 3.**

*Statistically significant variables and their estimation properties were used to build the logistic regression model*

Variable		Estimate	Point Estimate	Pr>ChiSq
What prompted you to visit a winery in central Poland? – novelty		0.4572		0.6752
	Yes	0.7138	2.042	0.0185
	No	0		
What prompted you to visit a winery in central Poland? – events organized by the owner of the winery	Yes	1.8106	6.114	0.016
	No	0		
Objectives of visits to vineyards in central Poland – expanding information on wines	Yes	-0.5316	0.588	0.0264
	No	0		
Wines from vineyards located in central Poland can be a high-quality product		-0.6603	0.517	0.0115
Central Poland is a good region to develop enotourism services		0.4971	1.644	0.0455

Source: Own study.

## 4. Discussion

Enotourism in Poland, although still in the development phase, has great potential. Many studies emphasize the importance of appropriate promotion as a key factor influencing the development of this form of tourism in Poland (Jesiotr, Szymańska, 2016). In central Poland, winemaking and enotourism can become an important element of the local economy if they are properly developed and promoted. Research conducted by Sidorkiewicz (2023) shows that Poland as an enotourism destination has a lot to offer. The Polish enotourism product model includes natural values, local and regional enotourism products, as well as units supporting and promoting enotourism. Nevertheless, the development of enotourism in central Poland encounters many challenges, such as the need for changes in legal regulations regarding winemaking and the need for cooperation between local authorities and the tourism industry. Consumers of enotourism are interested not only in wine tasting, but also in the opportunity to spend time outdoors, visiting nearby tourist attractions and participating in local cultural events (Roman, Prus, 2020). Survey research conducted in central Poland shows that there is significant potential for the development of enotourism if these expectations are properly taken into account in the tourist offer. It should be emphasized, however, that this development will depend on the further development of vineyards and the increase in grape cultivation in this region. Examples from other regions, such as the Pod-Carpathian Voivodeship, show that

enotourism can be an effective tool for activating rural areas (Kuźniar, 2012). Wine tourism can also make a significant contribution to the economic development of rural regions, increasing the income of local wine producers and creating new jobs. In Chile, the development of enotourism has contributed to the diversification of the economy, which was previously heavily dependent on extractive sectors (Fuguerora, Rotarou, 2018). It also supports social development by preserving and promoting local cultural heritage. This is particularly evident in regions such as Somontano in Spain, where wineries create emotional experiential bonds with tourists, which promotes social sustainability (Cristòfol et al., 2020). Sustainable development of enotourism also includes care for the natural environment. In Spain, the sustainable development of enotourism is based on respect for local natural resources and landscape, which is crucial for the long-term success of this form of tourism (De La Torre et al., 2008). A similar approach can be seen in Poland, where regions like the Podkarpackie Voivodeship have emphasised the importance of integrating enotourism with local natural and cultural heritage. This region, known for its scenic landscapes and traditional agricultural practices, has successfully combined wine production with tourism to enhance both economic viability and cultural preservation (Kuźniar, 2012). Moreover, the Lubuskie Voivodeship has developed its enotourism sector by focusing on the natural beauty of the region and its historical ties to viticulture. This area demonstrates how respect for natural resources and the landscape can create a sustainable tourism model that not only attracts visitors but also supports local wine producers (Greinert et al., 2019). Examples from other regions, such as the Małopolska Voivodeship, also illustrate the potential for tourism to become a vital part of the local economy. This region, with its rich cultural heritage and growing number of vineyards, shows how enotourism can be integrated with other forms of tourism to create a diversified and sustainable economic base (Bajgier-Kowalska et al., 2017).

## 5. Conclusions

Enotourism is a form of tourism that connects wine lovers with visits to vineyards, tastings and learning about wine production processes. Traditionally associated with regions such as France, Italy and Spain, it is also starting to gain popularity in less known wine regions. Central Poland, despite the lack of wine traditions comparable to the above-mentioned countries, has a chance to join this trend, especially in the context of global climate change, which affects shifts in wine-growing zones. Thanks to its central location and various natural and cultural values, it has favorable conditions for the development of enotourism. Research clearly shows that various factors such as: previous experience with enotourism, time spent in wine resorts, accommodation expenses, use of additional attractions, interest in winemaking, news and events organized by vineyards are the key factors attracting enotourists

to Poland central. At the same time, the positive perception of the region as a good place for the development of enotourism strongly correlates with the frequency of tourists' visits to vineyards. To maintain the interest of enotourists, wineries should constantly introduce innovations and organize various events that will attract both new and returning guests. This requires cooperation between wine producers, local authorities and tourist organizations. It is also crucial to invest in tourist infrastructure, education and promotion of the region as an enotourism destination. Examples of successful enotourism development strategies from other regions of the world can be an inspiration for winemakers from central Poland. It is also important to understand the expectations of consumers, who are increasingly looking for authentic, ecological and educational tourism experiences. The development of enotourism in central Poland is a real possibility, which, however, requires an organized approach and cooperation of various entities. Available literature suggests that running a vineyard may not always ensure full profitability, but adding enotourism activities significantly increases the chances of achieving stable income. These activities can include not only direct product sales but also the organization of events that strengthen the bond between customers, the wine brand, and the region where it is produced. Integrating enotourism with agricultural production offers real opportunities to increase farm income while contributing to greater financial stability and the development of local communities. In the face of growing challenges in agriculture, such an approach represents a modern and effective strategy for the future.

The conducted analyses, while providing valuable insights that lays the groundwork for further research. However, such comparison will require additional studies to be conducted in subsequent years to observe trends and changes over time. It is essential to emphasize that the main limitation of this study lies in its one-time nature capturing a snapshot from 2024. This limits the ability to assess longitudinal trends or predict future developments in enotourism preferences and influencing factors, such as climate representative understanding of enotourism in Poland. Future studies should aim to focus on regional specificities by including comparative analyses across voivodeships. This approach would help to uncover localized factors and differences influenced by Poland's diverse socio-cultural and environmental characteristics. Moreover, studies focusing on the impact of infrastructure development – such as transport, accommodation and additional attractions – on the region's enotourism appeal would offer actionable insights. Comparative analyses between central Poland and other regions with similar climatic and viticultural conditions could highlight best practices. The role of sustainable and eco-friendly practices in attracting modern enotourists should also be explored, alongside the influence of climate changes on vineyard suitability. Furthermore, assessing the economic and social benefits of enotourism for local communities, including job creation and income generation would underline its broader impact. Exploring the use of emerging technologies like mobile applications or virtual reality to enhance the tourists experience and promote the region would provide valuable direction for innovation. This study demonstrates the significant value of building upon its foundations to explore enotourism's potential comprehensively and sustainably.

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