

Consumption and frequency of wine drinking in V4 countries

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Abstract

Keywords:

Wine
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Introduction. The aim of the article is to evaluate the consumption and frequency of drinking wine in the countries of the Visegrad Four.

Materials and methods. The data were obtained from the sources: Standard EU Alcohol Survey / Deep Seas, DATACube, Public Database VDB, Wine Consumption per Capita in Hungary, Wine Consumption per Capita in Poland. The following methods were used: The Kruskal Wallis test, Analysis of Variance Kruskal Wallis and Mann-Whitney test.

Results and discussion. Wine consumption in the individual countries of the Visegrad Four varies. Hungary has achieved the highest consumption in the last period, where the average consumption of wine in pure alcohol for the last decade (2010–2021) is 3.2 liters. The analysis shows that when evaluating all age categories in terms of frequency of wine drinking, the largest group (18.42%) are wine consumers who drink wine 2–5 days a year. The second largest group (16.58%) are wine consumers who drink wine 1–2 days a week. The third group are consumers (16.38%) with a frequency of drinking 2–3 days a month. From the point of view of the comparison of individual countries, it follows that in all four analyzed countries consumers consume wine occasionally but the most in Poland. From the point of view of regular consumption, the Czech Republic stands out. Wine consumers in Hungary and Slovakia have the same behaviour in contrast to the Czech Republic and Poland. On the other hand wine consumers in the Czech Republic and Poland have similar consumer behaviour. Among other comparisons of the states, there are significant differences in wine consumption in terms of the frequency of alcohol drinking.

Conclusion. Czech, Slovak and Hungarian winemakers who are starting to expand into the Polish market have a chance. Hungary has recorded the highest wine consumption in recent years, with an average consumption of 3.2 liters of pure alcohol per capita. Due to the globally decreasing area of vineyards, the demand as well as the prices of wine will increase.

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Introduction

Alcoholic beverages are among the basic cultural features all over the world (World Population Review, n.d.). Therefore, many of the countries take alcohol consumption as a normal thing and accept the availability of alcoholic beverages on the market as well as its promotion (Rehm et al., 2003). The first study on alcohol consumption was made in 1965 (Mandelbaum, 1965). However, the consumption of alcohol has a deeper character because alcohol is an addictive substance and its consumption has a negative effect on human health (McClure et al., 2013; Probst et al., 2020; Rehm et al., 2003). A recent study pointed out that for people between the ages of 15 and 39 consuming excessive amounts of alcohol can have a negative effect on overall health. Although differences in the risks of ill health by age or gender have not been demonstrated (GBD 2020 Alcohol Collaborators, 2022). For example, a French study talks about the positive effects of red wine on the cardiovascular system (Brownlee, 2006; Das et al., 2011; Higgins and Llanos, 2015). However, alcohol does not only affect health aspects if we look at it from another point of view, an equally important economic, business, trade and social perspective appears (Gavurova & Tarhanicova, 2021; Ranaweera et al., 2018; Laramée et al., 2013; Smutka et al., 2015; Svatoš & Smutka, 2012; Vološin et al., 2011; Hamdan et al., 2023). Therefore, it is important to consider the responsibility in business (Jurásek et al., 2021; Mnerie et al., 2016; Oliinyk et al., 2023). Combining it with the investigation of current peculiarities of food and beverage manufacturing development (Al-Zu'bi & Albloush, 2022; Ditsiou et al., 2023; Fachrurrozie et al., 2023, Huszka et al., 2022; Jencova et al., 2022; Nurliza & Oktoriana, 2021; Yousuf et al., 2022; Yousuf et al., 2023; Zsarnóczai et al., 2021)

In Europe, drinking alcohol is strongly linked to culture and is therefore characterized by its high consumption and by preference a different type of alcohol (Glover, 2000). According to Iontchev (1998) and Popová et al. (2007), alcohol drinking cultures are divided into three patterns. The Mediterranean pattern dominated by wine and fruit brandy. The Central European pattern includes countries such as Slovakia, the Czech Republic and Germany, which are specific for drinking beer as well as fruit spirits. With a closer specification the consumption of fruit spirits has been increasing in Slovakia for the last decades, while in the Czech Republic, on the contrary, beer drinking still dominates. The Northern European pattern is characterized by drinking spirits, respectively vodka. Following the fall of the communist regime a wider range of alcohol came onto the market and the lack of regulation led to an increase in its consumption (Leon et al., 1997; Zatoński & Jha, 2000). Even after the collapse of the communist bloc the countries of the Východní Evropa Four are important representatives. policies (Čábelková et al., 2022; Strielkowski et al., 2022) such as infrastructure, energy, digitization and, last but not least, agriculture (Visegrad Group (V4) | Ministry of Investments, Regional Development and Informatization of the Slovak Republic, 2020).

Even the V4 countries have one common tradition, the tradition of drinking alcohol which is also mentioned by the WHO. In 2019 the Czech Republic ranked in the top ten countries with the highest consumption of pure alcohol, namely in third place with an average value of 13.29 liters. Before the Czech Republic there were countries like Romania and Georgia. Next, Poland took twelfth place with an average value of 11.63 liters. Hungary and Slovakia ranked 23rd and 25th with average values of 10.60 and 10.48 liters. The V4 countries are therefore in the first top 25 out of a total of 198 countries in the world monitored by the WHO (Indicator Details, n.d.-b).

If we compare wine with other drinks or foods it is wine that stands out in terms of cultural and social factors and traditions such as age, gender, education, perceived risk,

religion or ethnicity (Camillo, 2012; Hussain et al., 2007; Somogyi et al. al., 2011; Outreville and Desrochers, 2016; Pape et al., 2017). The association of wine in relation to food, the symbolism of wine or other characteristics such as the frequent association of wine with a gift (Deroover, et al., 2021). As we mentioned, wine has its characteristic position in human association, and therefore we can say that people satisfy psychological and sensory aspects with wine. These aspects evoke in consumers a desire for community or the need to belong to a chosen company, mutual communication and the possibility of untying the personality (Bruwer and Li, 2007; Mnerie et al., 2016; Platania, 2016; Naglova et al., 2017; Olsen et al., 2007; Orth, 2005; Orth and Bourrain, 2005).

The wine industry in the V4 countries is strongly influenced by climatic conditions. The most suitable territory for the wine industry is Hungary which also has the highest consumption of wine in the entire V4. Hungary has more than 65,000 hectares of vineyards and annual consumption exceeds 240,000 liters. Next comes the Czech Republic which has approximately 16,000 hectares and their annual wine consumption exceeds 200,000 liters. Although Slovakia is a small country, it has more than 11,000 hectares of vineyards and an annual consumption of 85,000 liters of wine. The most inhospitable country for wine is Poland, even though it is large in area, it has only 700 hectares of fertile vineyards and annual consumption is 320,000 liters. However, when we compare it in terms of wine consumption per capita, we can determine the following order: Hungary, the Czech Republic, the Slovak Republic and Poland with the lowest wine consumption (Rogovska, 2018).

The aim of research is to evaluate the consumption and frequency of drinking wine in the countries of the Visegrad Four.

Materials and methods

The data were obtained from the sources (Standard EU Alcohol Survey/ Deep Seas, n.d.), (DATACube., n.d.), (Public Database VDB, n.d.), (Wine Consumption per Capita in Hungary, 2021), (Wine Consumption per Capita in Poland, 2021) and were processed in Excel and SAS. The pan-European alcohol survey was conducted from 24 April to 22 July 2020. The number of respondents for each country was: Slovakia (1505), the Czech Republic (1417), Hungary (1876) and Poland (1509), taking into account a sample that it consisted only of respondents who consume alcohol and specifically wine. The following data were processed on the basis of statistical characteristics such as age range, gender, countries of the Visegrad Four and specification of the frequency of wine drinking.

Coding:

- Age range:
 - 1 age group – 18–34 years
 - 2 age group – 35–44 years
 - 3 age group – 45–64 years

Only adults (economically active) between the ages of 18 and 64 were approached in the research. From the point of view of age categories the following intervals were used: 18–34 (young adults), 35–44 (middle-aged adults, 45–64 (old-aged adults). These categories are used in international research on alcohol consumption (Kilian, 2023).

- Frequency of drinking wine

Within the frequency of drinking alcohol in the first part we analyzed the frequency of drinking alcohol for each answer separately, and in the second part of the research, 3 basic sets were developed according to Table 1. The division was organized for the purpose of easier interpretation of the frequency of wine drinking.

Table 1

Frequency of drinking wine and its distribution

1	Every day	Regularly
2	5-6 days a week	
3	3-4 days a week	
4	1-2 days a week	
5	2-3 days out of the month	Occasionally
6	One day of the month	
7	6-11 days of the year	
8	2-5 days of the year	Almost never
9	Day in the last year	
10	I don't drink now but i used to drink	
11	I never drank in my life	

Statistical Methods

The Kruskal Wallis test is a nonparametric hypothesis test that compares three or more independent groups. Statisticians also refer to it as one-way ANOVA on ranks. This analysis extends the Mann Whitney U nonparametric test that can compare only two groups. If you analyze data, chances are you're familiar with one-way ANOVA that compares the means of at least three groups. The Kruskal Wallis test is the nonparametric version of it. Because it is nonparametric, the analysis makes fewer assumptions about your data than its parametric equivalent. Many analysts use the Kruskal Wallis test to determine whether the medians of at least three groups are unequal. However, it's important to note that it only assesses the medians in particular circumstances. Interpreting the analysis results can be thorny. At its core, the Kruskal Wallis test evaluates data ranks. The procedure ranks all the sample data from low to high. Then it averages the ranks for all groups. If the results are statistically significant, the average group ranks are not all equal. Consequently, the analysis indicates whether any groups have values that rank differently. For instance, one group might have values that tend to rank higher than the other groups. The Kruskal Wallis test doesn't involve medians or other distributional properties—just the ranks. In fact, by evaluating ranks, it rolls up both the location and shape parameters into a single evaluation of each group's average rank. Like one-way ANOVA, the Kruskal Wallis test is an "omnibus" test. Omnibus tests can tell you that not all your groups are equal, but it doesn't specify which pairs of groups are different.

Specifically, the Kruskal Wallis test evaluates the following hypotheses:

- Null: The average ranks are all the same.
- Alternative: At least one average rank is different.

Again, if the distributions have similar shapes, you can replace "average ranks" with "medians." Imagine you're studying five different diets and their impact on weight loss. The Kruskal Wallis test can confirm that at least two diets have different results. However, it won't tell you exactly which pairs of diets have statistically significant differences.

So, how do we solve this problem? Enter post hoc tests. Perform these analyses after (i.e., post) an omnibus analysis to identify specific pairs of groups with statistically significant differences. A standard option includes Dunn's multiple comparisons procedure. Other options include performing a series of pairwise Mann-Whitney U tests with a Bonferroni correction or the lesser-known but potent Conover-Iman method.

Analysis of variance Kruskal-Wallis

This is a method for comparing several independent random samples and can be used as a nonparametric alternative to the one way ANOVA.

The Kruskal-Wallis test statistic for k samples, each of size n_i is:

$$T = \frac{1}{s^2} \left[\sum_{i=1}^k \frac{R_i}{n_i} - N \frac{(N+1)^2}{4} \right] \quad (1)$$

where N is the total number (all n_i) and R_i is the sum of the ranks (from all samples pooled) for the i th sample and:

$$S^2 = \frac{1}{N-1} \left[\sum_{all} R_{ij}^2 - N \frac{(N+1)^2}{4} \right] \quad (2)$$

The null hypothesis of the test is that all k distribution functions are equal. The alternative hypothesis is that at least one of the populations tends to yield larger values than at least one of the other populations.

Assumptions:

- Random samples from populations
- Independence within each sample
- Mutual independence among samples
- Measurement scale is at least ordinal
- Either k population distribution functions are identical, or else some of the populations tend to yield larger values than other populations.

If the test is significant, you can make multiple comparisons between the samples. You may choose the level of significance for these comparisons (default is $\alpha = 0.05$). All pairwise comparisons are made and the probability of each presumed "non-difference" is indicated (Hollander and Wolfe, 2013; Conover, 1999; Critchlow and Fligner, 1991;). Two alternative methods are used to make all possible pairwise comparisons between groups; these are Dwass-Steel-Critchlow-Fligner and Conover-Iman. In most situations, you should use the Dwass-Steel-Critchlow-Fligner result. By the Dwass-Steel-Critchlow-Fligner procedure, a contrast is considered significant if the following inequality is satisfied:

$$W_{ij} = \frac{n_i(n_i+n_{j+1})}{\frac{n_i n_j}{24} \left[n_i+n_{j+1} - \frac{\sum_{b=1}^g t_{ij} (t_b-1)t_b(t_b+1)}{(n_i+n_j)(n_i+n_{j+1})} \right]} > q_{\alpha,k}, \text{ for } 1 \leq i \leq j \leq k \quad (3)$$

Where q is a quantile from the normal range distribution for k groups, n_i is size of the i th group, n_j is the size of the j th group, t_b is the number of ties at rank b and W_{ij} is the sum of the ranks for the i th group where observations for both groups have been ranked together. The values either side of the greater than sign are displayed in parentheses in StatsDirect results. The Conover-Iman procedure is simply Fisher's least significant difference method performed on ranks. A contrast is considered significant if the following inequality is satisfied:

$$\left| \frac{R_j}{n_j} - \frac{R_i}{n_i} \right| > t_{1-\alpha/2} \sqrt{S^2 \frac{N-1-T}{N-k} \left(\frac{1}{n_i} + \frac{1}{n_j} \right)} \quad (4)$$

Where T is a quantile from the Student T distribution on N-k degrees of freedom. The values either side of the greater than sign are displayed in parentheses in StatsDirect results. An alternative to Kruskal-Wallis is to perform a one way ANOVA on the ranks of the observations. StatsDirect also gives you an homogeneity of variance test option with Kruskal-Wallis; this is marked as "Equality of variance (squared ranks)". Please refer to homogeneity of variance for more details.

Technical validation

The test statistic is an extension of the Mann-Whitney test and is calculated as above. In the presence of tied ranks the test statistic is given in adjusted and unadjusted forms, (opinion varies concerning the handling of ties). The test statistic follows approximately a chi-square distribution with $k-1$ degrees of freedom; P values are derived from this. For small samples you may wish to refer to tables of the Kruskal-Wallis test statistic but the chi-square approximation is highly satisfactory in most cases (Conover, 1999).

Results and discussion

Wine consumption in the individual countries of the Visegrad Group varies (Figure 1).

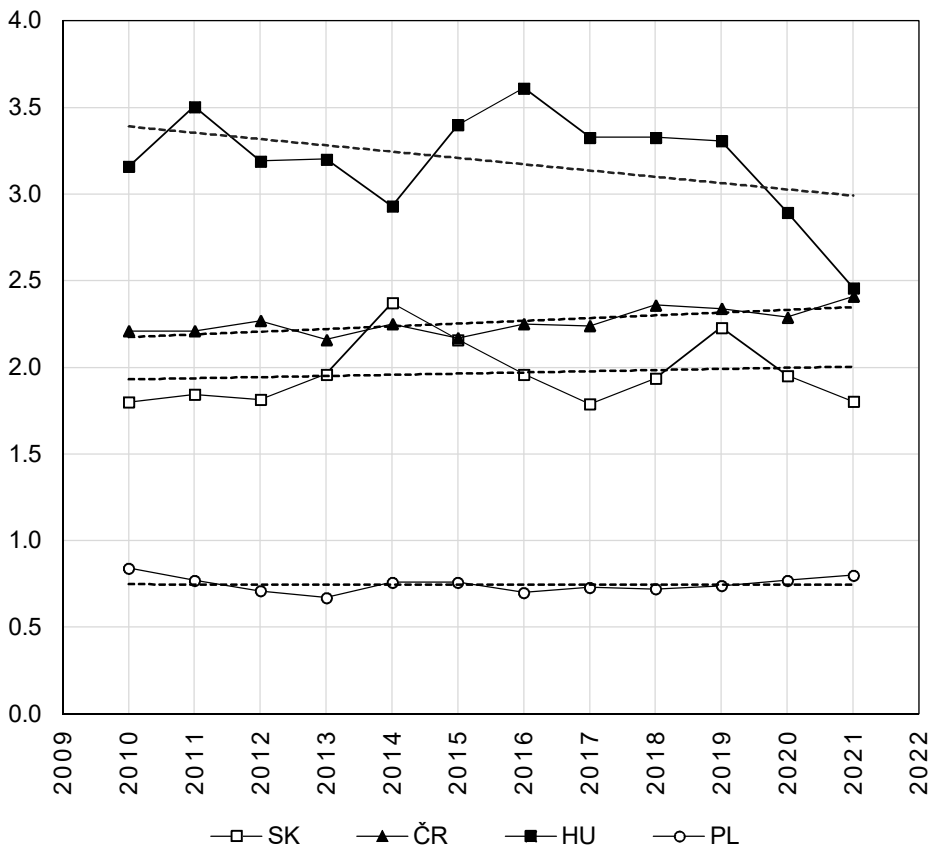


Figure 1. Consumption of wine from the Visegrad countries per capita in 100% alcohol

We are talking about the consumption of wine in 100% alcohol in liters per inhabitant. Hungary has achieved the highest consumption in the last period where the average consumption of wine in pure alcohol for the last decade (2010–2021) is 3.2 liters. The Czech Republic took second place with a value of 2.3 liters. Compared to Hungary it is almost one liter more which proves that Hungary is a wine powerhouse and the inhabitants like this alcoholic drink. The Slovak Republic is not too different from the Czech Republic where on average 2.0 liters are drunk in Slovakia. The most significant difference is represented by Poland where consumption during the monitored period reached only 0.7 liters. Poland is a country where wine is not grown much but it is not even widely consumed. The development trend of wine consumption in the V4 countries indicates a stable character. Overall, during the monitored period, countries such as Slovakia and the Czech Republic show a slow but increasing trend in wine consumption. Poland is more conservative in terms of consumption and the development (Hornowski et al., 2020) is neither decreasing nor increasing. On the contrary, from a long-term perspective, Hungary shows a downward trend in wine consumption, especially in 2020 and 2021, which represent the years affected by the pandemic. From the year-on-year point of view and sharper fluctuations in consumption, 2014 was the year for Slovakia and Hungary. The trends show opposite developments if something decreases in one country, it increases in the other until the last two years, 2020 and 2021, when both countries saw a significant decrease in consumption. Especially in Hungary, to the value of 2.5 liters, which represents a decrease compared to the average by 0.7 liters. In 2014, the consumption of wine in Slovakia increased and reached a value of 2.4 liters which represents the highest value of the monitored period. In Slovakia, the overall development of wine consumption is very fluctuating, but in the long term consumption is still increasing. As part of the comparison in the volume of consumption, the Czech Republic and Slovakia have the most similar wine consumption among the countries of the Visegrad Four.

Another part of the research deals with the frequency of drinking wine. Figure 2 shows the frequency of wine drinking for all V4 countries together by individual age groups (age groups 1, 2, 3). The analysis shows that when evaluating all age categories in terms of frequency of wine drinking, the largest group (18.42%) are wine consumers who drink wine 2–5 days a year. The second largest group (16.58%) are wine consumers who drink wine 1–2 days a week. The third group are consumers (16.38%) with a frequency of drinking 2–3 days a month. Figure 2 shows a graphic representation of the number of respondents of the age range depending on the individual answers to the frequency of drinking wine in the countries of the Visegrad Four. In age category 1, the most respondents (415) indicated that they consume wine 2 to 3 days a month. The second most numerous answer (362) was that respondents drink alcohol 1 to 2 days a month. The third most numerous group of answers (349) is the group that drinks wine only rarely, 2–3 days a year, and the fourth most numerous group of answers (279) is that they consume wine once a month. In age category 2, the most numerous group of respondents' answers (286) was one to two days a week. The second most numerous group of respondents (277) who drink wine again very rarely. The third significant answer (254) was respondents who consume wine 2 to 3 times a month. In age category 3, there were answers from respondents (536) which represents the largest number of respondents who indicated that they rarely drink alcohol, once a month. The second (398) and third (364) most numerous group of respondents' answers is that they consume wine 1–2 days a week and 2–3 days a month. From the analysis, we can conclude that people in age categories 1 and 3 consume wine more often, most often 2 to 3 times a month.

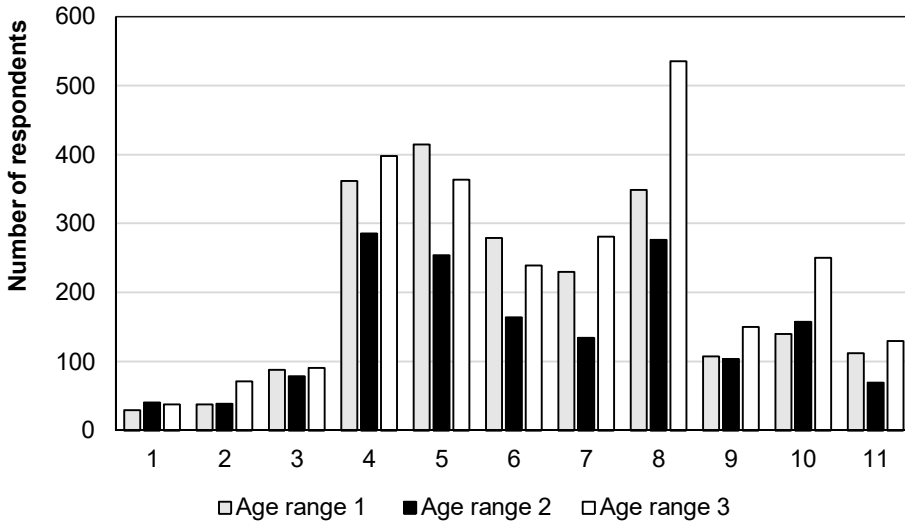


Figure 2. Frequency of drinking wine in Visegrad countries
Source: own processing

The situation is the same in terms of frequency of wine drinking and individual countries. In the Czech Republic there is the largest group of wine consumers (292) with a frequency of drinking 1–2 days a week. In Hungary (401) and Slovakia (312) the most numerous group of consumers is with the frequency of drinking wine 2–5 days a year. However, the analysis shows that in Hungary, the two most numerous answers are 5 (282) and 4 (267), which indicate that consumers drink wine 1 to 2 times a week and 2 to 3 times a month. In Poland, on the other hand there is the largest group (288) with a frequency of drinking 2–3 days a month.

Based on the addition of individual frequencies, summaries were processed. From the point of view of opportunity it follows that the largest group consists of occasional wine consumers of age category 1 (18–34 years). In the category of regular alcohol consumption, the largest age group is 2 (35–44 years). In general, if we take the individual categories of occasional wine drinking, the age categories are balanced (Figure 3).

Table 2

Frequency of drinking wine (how often they drink wine) in V4 countries

Age	Frequency of drinking Wine (how often they drink Wine) in V4 country												
Range	1	2	3	4	5	6	7	8	9	10	11	Total	
CZ	F	29	49	78	292	261	142	142	180	71	102	71	1417
	%	0.46	0.78	1.24	4.63	4.16	2.25	2.25	2.85	1.62	1.62	1.13	22.47
HU	F	31	46	67	267	282	158	225	401	102	201	96	1876
	%	0.49	0.73	1.06	4.23	4.47	2.51	3.57	6.36	1.62	3.19	1.52	29.74
PL	F	30	23	62	265	288	214	133	269	93	99	33	1509
	%	0.48	0.36	0.98	4.2	4.57	3.39	2.11	4.27	1.47	1.57	0.52	23.93
SK	F	19	30	51	222	202	168	146	312	96	147	112	1505
	%	0.3	0.48	0.81	3.52	3.2	2.66	2.31	4.95	1.52	2.33	1.78	23.86
Total	F	109	148	258	1046	1033	682	646	1162	362	549	312	6307
	%	1.73	2.35	4.09	16.58	16.38	10.81	10.24	18.42	5.74	8.7	4.95	100

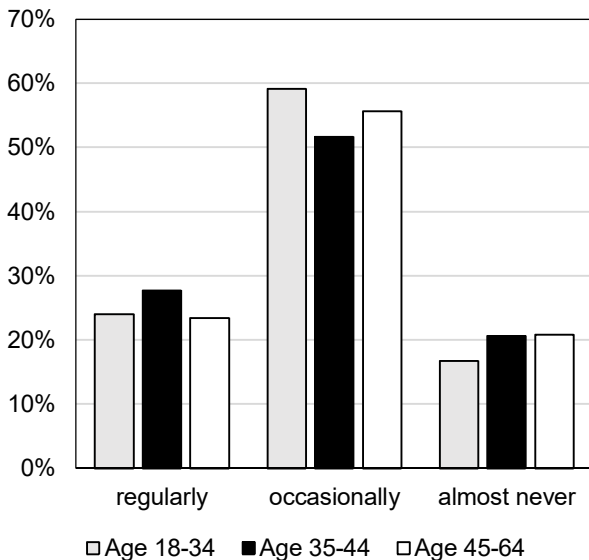


Figure 3. Summary of age range and frequency of wine drinking

From the point of view of comparing individual countries, it follows that in all four analyzed countries, consumers consume wine occasionally but the most in Poland. From the point of view of regular consumption, the Czech Republic stands out (Figure 4).

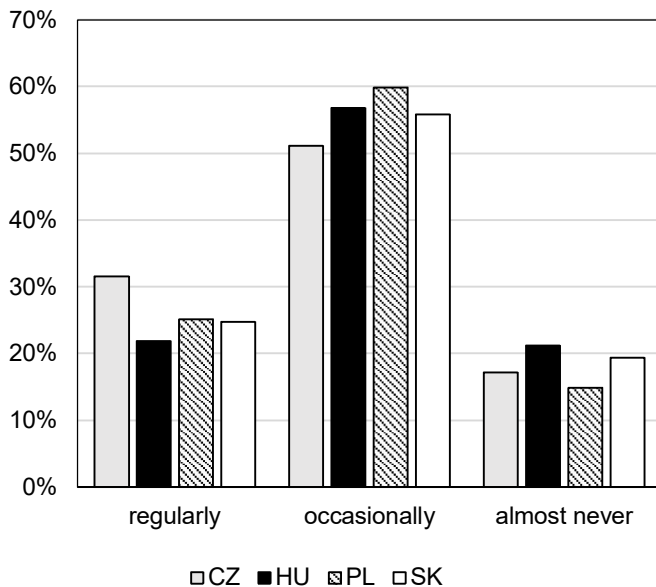


Figure 4. Summary of individual countries of Visegrad countries and frequency of drinking wine

Non-parametric tests were used to assess dependence between groups of respondents in individual countries. The tests show that when comparing the group of respondents between countries and individual age categories there is significant dependence (significant differences) between respondents in the Czech Republic and Hungary, between the Czech Republic and the Slovak Republic, between Hungary and Poland, and between Poland and Slovakia.

The results show that wine consumers in Hungary and Slovakia have the same behavior in contrast to the Czech Republic and Poland. On the other hand, wine consumers in the Czech Republic and Poland have similar consumer behavior. Among the other comparisons of the states there are significant differences in wine consumption in terms of the frequency of alcohol drinking (Table 3 and Figure 5). The Table also shows a comparison of consumer behavior in terms of age categories which shows that the situation is the same in almost all age groups which was described above, except for the group of respondents in the age category of 45–64 years where when comparing the states of the Czech Republic and Poland, behavior is different.

Table 3

Dependencies between age groups and individual states

Pairwise Two-Sided Multiple Comparison Analysis				
Dwass, Steel, Crichow-Fligner Method				
Variable: Wine				
Stat	Pr>DSCF	Pr>DSCF	Pr>DSCF	Pr>DSCF
	Age range 1	Age range 2	Age range 3	All age range
CZ vs. HU	0.0077	0.0017	<0.0001	<0.0001
CZ vs. PL	0.7557	0.7109	0.0014	0.0836
CZ vs. SK	0.0124	<0.0001	<0.0001	<0.0001
HU vs. PL	<0.0001	0.0316	0.026	<0.0001
HU vs. SK	0.9999	0.1396	0.9706	0.5722
PL vs. SK	<0.0001	<0.0001	0.0159	<0.0001

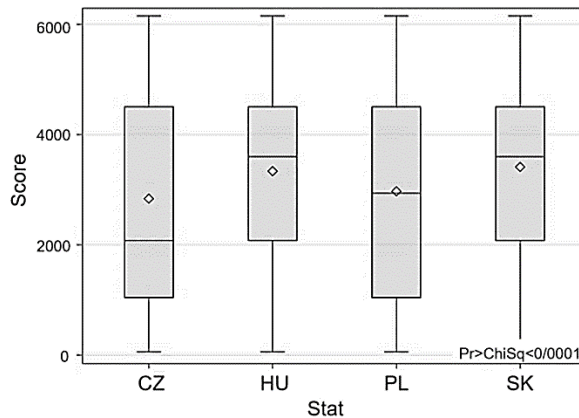


Figure 4. Dependencies between age groups and individual states

Furthermore, in the research we dealt with the comparison of the frequency of drinking wine in age categories depending on gender in the Visegrad Four countries as a whole and also in individual countries in percentage terms (Table 4). The analysis showed that there are no significant differences in the frequency of wine consumption between the sexes. The average difference between the sexes in the categories of frequency of drinking wine as a whole is 1.42%, while the biggest difference is represented by occasional wine consumers in the Czech Republic where the difference between the sexes is 9.71%, which means that women are more likely to be occasional wine consumers in the Czech Republic as men regardless of age category. From the point of view of the age categories and the individual countries of the Visegrad Four, the largest difference between the sexes is again recorded in the Czech Republic and Poland, namely in age category 2. In this case, again, a larger percentage of regular wine consumers are represented by women. Likewise, in the category of occasional wine consumers, the biggest gender difference is in age category 1 (difference 5.47%) and age category 2 (4.99%). Overall, the analysis shows that the frequency of drinking wine in the countries of the Visegrad Four is the same between the sexes, and it has not been proven that one gender consumes significantly more wine.

Table 4

Frequency of wine drinking by age and sex in %

Frequency	Age range	V4		SK		CZ		HU		PL	
		M	W	M	W	M	W	M	W	M	W
Regular	1	4.18	3.64	3.96	3.24	4.63	4.98	3.85	3.22	4.39	3.36
	2	6.96	9.47	7.23	7.13	7.29	12.94	6.50	7.26	6.94	11.33
	3	8.86	6.63	7.09	4.80	11.08	9.67	8.37	6.02	9.07	6.48
	Sum	24.97	24.53	18.28	15.18	23.00	27.60	18.72	16.49	20.40	21.17
Occasio	1	12.97	15.09	12.82	13.36	14.45	19.91	12.56	11.93	12.18	16.31
	2	11.86	14.04	10.37	11.15	14.31	15.93	10.79	12.24	12.32	17.31
	3	14.12	11.79	12.55	10.12	17.81	17.21	13.22	9.96	13.17	10.83
	Sum	56.24	55.54	27.15	25.29	32.82	42.53	27.42	25.21	28.19	34.12
Almost	1	16.96	21.88	14.73	18.81	17.81	25.46	17.29	17.12	17.99	27.40
	2	14.28	14.22	12.14	11.28	16.97	14.51	13.55	12.24	14.73	19.18
	3	18.20	14.19	15.69	13.10	22.02	19.63	16.08	11.41	19.69	13.82
	Sum	18.79	19.93	30.29	29.31	39.83	45.52	31.72	30.19	33.57	40.10

Discussion

Wine is a commodity with a long tradition, culture, production style or consumption style or ratio. Each country that grows grapes and produces wine is specific in its own way, and wine can never be produced in such a way that it is identical to the previous one or from another country. In the countries of the Visegrad Four, there is currently an increasing supply of wine. For many residents, wine consumption is a prestigious thing and belongs to a higher lifestyle. Beer is and was considered a substitute for wine. When beer consumption per capita in all four analyzed countries exceeds the average beer consumption in the EU-15 countries, it is possible to claim that wine has a special position on the market of alcoholic beverages.

Due to its uniqueness as an alcoholic beverage, wine is suitable for leisure time as well as for culinary specialties. (Chládková, Tomšík, Gurská, 2009). It is the same with consumers who are specific in the amount and frequency of consumption and whether wine is an important element of their culture and nationality. The countries of the Visegrad Four are closely linked countries with a long and so to speak common history, and wine is an inseparable part of them. According to the results from various national databases such as (DATACube., n.d.), (Verejná Databáze VDB, n.d.),

(Wine Consumption per Capita in Hungary, 2021), (Wine Consumption per Capita in Poland, 2021) and WHO (Indicator Details, n.d.-b) and (Ritchie, 2024) it was confirmed that Hungary, the Czech Republic and the Slovak Republic in particular are important consumers of wine, especially in this order. Hungary is an important producer of wine and has the highest per capita consumption of pure alcohol among the countries of the Visegrad Four, an average of 3.2 liters over the last decade, which was also confirmed by our findings compared to Indicator Details, (n.d.-b), Ritchie (2024) and Wine Consumption per Capita in Hungary (2021). The Czech Republic and the Slovak Republic formed one state for a long time, and after their division, these young states are still very similar in various spheres, and wine consumption is no exception. Likewise, our research confirmed that over the last decade, the consumption of wine in pure alcohol had a value in the Czech Republic (2.3 liters) and in the Slovak Republic (2.0 liters) per inhabitant. While these two countries, despite their size, have a significant position in the production and consumption of wine within the Visegrad Four. In Poland, the consumption of wine for the last decade was also confirmed to be 0.7 liters of wine in pure alcohol per inhabitant, according to the available databases. Even though Poland is a large country and does not have very good conditions for wine production, their efforts to produce it are still growing, and there are also fans of wine consumption there. Although the countries of the Visegrad Four are similar in various respects they still show certain deviations from the point of view of wine consumption. This is also confirmed by the publication of Moskale-wicz et al. (2016) which talks about the specificity of individual countries in alcohol consumption which were revealed in the results of research in 19 EU countries. According to Kilian et al. (2021) the overall intensity of alcohol drinking is decreasing while if we break down individual alcohol into specific types and into individual countries our research proved that in terms of the intensity of wine drinking in individual countries, it is balanced. The frequency of drinking alcohol proved that there is a statistically significant difference between countries in terms of the frequency of drinking alcohol. According to age categories a difference was noted in all compared countries, only between Slovakia and Hungary there are differences in the frequency of drinking wine and between the Czech Republic and Poland. The only exception was the third age category from 45-64 years where there was a significant difference between the frequency of wine drinking between Poland and Slovakia. The analysis proved that of the monitored countries of the Visegrad Four, the Czech Republic, Poland, Slovakia, and Hungary regularly drink from the most to the least. Overall, all countries show that the largest share of people who drink alcohol occasionally is in age category 2 (35-44 years old). An important aspect is also the gender and frequency of alcohol consumption in the individual countries of the Visegrad Four but also as a whole. Our research operated with a balanced proportion of men and women in individual countries, and the analysis shows that there is no significant difference in the frequency of drinking wine between the sexes in the Visegrad Four, nor in individual countries, except for the Czech Republic, where higher differences were demonstrated. A study by Petriashvili et al also speaks about this fact (2023) that women drink more wine than men who prefer beer to wine. This study says that out of the total number of respondents, 65.62% of women drank wine.

Conclusion

1. Along with water wine is the most widespread and popular drink in the world and it can be said that it accompanies the human race on its life journey almost all the time until today. The aim of the article was to evaluate the consumption and frequency of wine drinking in the countries of the Visegrad Group, which was fulfilled.
2. Hungary has achieved the highest consumption in the last period where the average consumption of wine in pure alcohol for the last decade (2010–2021) is 3.2 liters. The Czech Republic took second place with a value of 2.3 liters. Compared to Hungary it is almost one liter more which proves that Hungary is a wine powerhouse and the inhabitants like this alcoholic drink. The Slovak Republic is not too different from the Czech Republic where on average 2.0 liters are drunk in Slovakia.
3. When evaluating all age categories in terms of frequency of wine drinking the analysis shows that the largest group (18.42%) are wine consumers who drink wine 2-5 days a year. The second largest group (16.58%) are wine consumers who drink wine 1-2 days a week. The third group are consumers (16.38%) with a frequency of drinking 2-3 days a month. From the point of view of the comparison of individual countries it follows that in all four analysed countries consumers consume wine occasionally but the most in Poland. From the point of view of regular consumption, the Czech Republic stands out. The results show that wine consumers in Hungary and Slovakia have the same behaviour in contrast to the Czech Republic and Poland. On the other hand, wine consumers in the Czech Republic and Poland have similar consumer behaviour. Among other comparisons of the states, there are significant differences in wine consumption in terms of the frequency of alcohol drinking. Drinking wine is no longer the privilege of connoisseurs in Poland. Its consumption is gradually increasing, new wine shops and wine bars are appearing. Czech, Slovak and Hungarian winemakers who are starting to expand into the Polish market have a chance. Due to the globally decreasing area of vineyards, the demand as well as the prices of wine will increase.

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