



Additional study on wine tourism and the contemporary risk management

The impact of global risks on the wine tourism

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Executive Summary

The recovery of tourism, including wine tourism, is observed in many countries of the world as early as 2021. Ukraine also significantly intensified internal regional tourist flows by the beginning of 2022. The trainings that were held in the partner countries and in Ukraine at the beginning of 2022 increased interest in the development of the Black Sea wine tourism. However, the military invasion of Ukraine in February 2022 brought to the fore the significance of geopolitical risks for many countries in the world. Most business owners did not expect such a sharp drop in business income, did not expect the outflow of the population, changes in the structure of personnel, the energy and food crisis. The risk foresight is the most difficult task of managing. However, this report demonstrates some facts and events that allow using preventive methods to foresee crises and reduce suddenness in terms of risk management.

This report presents the results of the latest survey of wine tourism in Ukraine, followed by an analysis of key risks emanating from current economic, societal, environmental and technological tensions. The report continues with reflections on enhancing resilience, drawing from the lessons of the last two years of the COVID-19 pandemic. Description of risks is presented in a separate part. Each part ends with a list of key preventive methods for predicting risk. These key preventive methods will enable wine tourism stakeholders to mitigate the impact of rising global risks and threats.

The key findings of the survey and the analysis are summarized below

Most of the wine tourism stakeholders in Ukraine, despite the active hostilities, believe that wine tourism will develop in the next 5-10 years. They also see this evolution in the expansion of tourism services. The main risks associated with wine tourism and TheSeaOfWine project are economic and geopolitical risks. Consumer prices are forecast to increase by 50%. Meanwhile, respondents believe that TheSeaOfWine project will be of interest not only to tourists from other regions of Ukraine, but also to foreign tourists. Poland and Moldova stand out as partner countries and donors for tourism flows.

Due to the difficult economic situation of Ukrainian enterprises in 2022, certification and other methods of sustainable development are not planned by most wineries. The geopolitical situation significantly affects all factors involved in the ecological



balance of viticulture and winemaking. Respondents also expect a decrease in wine growing areas and a change in the structure of wine sales. In the context of the COVID-19 pandemic, wine tourism stakeholders noted some positive things: online tastings have appeared, virtual tours, in general, technological advances are noted. However, intensive tourism flows from abroad have yet to be expected.

Introduction

This report includes different areas of research within an approach to risk management. The report focuses, in particular on five types of risks: environmental degradation, economic strains, societal challenges, geopolitical tensions, and unequal, insecure digitalization (environmental, economic, societal, geopolitical, technological risks respectively).

Risks do not occur in isolation. They can have compounding effects. Among other things, the lack of timely and accurate risk information is fertile ground for rumors. For example, till now, COVID-19 continues to pose a critical threat to the world. It is already evident that when a health system is overwhelmed and people fail to access needed information, mortality increases. At the same time, all these processes, of course, reduce the working-age population. That is, the presence of rumors and unofficial information leads to a decrease in the development of the entire economic system, in particular tourism. This creates a wide gap in incomes between citizens and among different countries, interest in travel is declining.

A resultant, uneven, economic recovery risk compounds/intensifies social fractures and geopolitical tensions. These risks, are most likely to form an interconnected chain of events, leading to a global, systemic crisis.

As an example, consider the following two chains of events (and risks).

- (1) Failure to address climate change (Environmental risk) -
Biodiversity loss (Environmental and Economic risk) -
Infectious diseases, such as COVID-19 (Societal and Economic risk) -
Extreme weather events (Societal and Economic risk) -
Large scale involuntary migration (Societal risk) -
Struggle for resources (Societal and Geopolitical risk)
- (2) Fracture of interstate relations and terrorist attacks (Geopolitical risk) -
Human-made environmental damage (Environmental risk) -



Natural resources crisis (Environmental and Economic risk) -
Failure to stabilize food prices and reducing the food security of the population (Economic risk) -
Increasing polarization and resentment within societies (Societal risk).

After surveys prepared by experts from the World Economic Forum, a risk analysis of changes in the various spheres of society was performed in materials during 2007-2022 [1]. An evaluation has been made of the capacity of the global community to find solutions to global problems which require social cohesion and global cooperation. The content of the reports is based on a global annual review of risk perception conducted by members of the World Economic Forum communities. Drawing on extensive research on global risks, this report aims to understand the potential risks for the development of wine tourism stakeholders.

This report adopts the definition of risk: “A risk is an uncertain event or condition that, if it occurs, can cause significant negative impact for wine tourism within the next 10 years”. This definition is based on the World Economic Forum’s “global” risk approach, but is quite specialized.

The report examines the impact of various risks on wine tourism, in particular, the impact on *TheSeaOfWine* project is considered. The research period is from 2020-2022. The difficulty in risk management in wine tourism, which the project focuses on, is that two complex and interrelated industries can simultaneously experience different risks: winemaking/viticulture and tourism/hospitality. Ukrainian wine tourism of this period is influenced by two interconnected risk chains as mentioned earlier. On the one side, the restrictions on people caused by the pandemic from March 2020 until now have reduced the intensity of tourist flows. On the other side, the expansion of the military conflict between Ukraine and Russia has almost stopped the development of tourism within the country. Each of these risks can cause significant impacts. Any one risk can put *TheSeaOfWine* project at stake.

Enhancing the flow of information between stakeholders is a key. That is exactly why the report involves compiling a questionnaire for a survey of Ukrainian wine tourism stakeholders. The questioning foresees extracting current problems from decision-making in the context of economic, environmental, geopolitical and other changes. These solutions are pertinent for the wine trade and tourism, for those who accompany tourists or are involved in the hospitality industry. As such, this report highlights a number of key measures or recommendations that wine tourism stakeholders should consider to improve their risk management capabilities.



1. Overview of the impact of global risks on Ukrainian wine tourism, 2020-2022

Global risk management involves the management of each individual economic activity. Wine tourism also needs clear rules and vision of its development [2-5]. Taking into account ecological, economic and other types of risks, key decisions can be made at the level of management for each wine region, winemaking and tourism associations, individual participants (wineries, hotels, tasting rooms, bars, restaurants, etc.).

Adding value starts in a vineyard. This is where environmental risks come in. The vineyard productivity provides the quantitative indicators of the future wine. Due to the chemical, varietal and other properties of grapes the vineyard gives a quality wine. That is why many wineries in the Old and New World allocate considerable funds to maintain the environment in the areas of grape cultivation. This direction of activity brings together producers of grapes and wine. They simultaneously oversee the prevention of economic and environmental risks.

Quality wine is in demand. There is a need to remove the finished product outside the wine region. It is wine tourism here that is the catalyst for the movement of wine. Wine is delivered to shops, wine restaurants, bars, i.e. to consumers by different methods transport. Furthermore, transport has one of the most powerful environmental impacts. This is why, environmental and economic risks are closely linked.

There are limitations in the ability to adapt to environmental problems. In this report, a person is considered from two sides: employed in wine tourism or a consumer of wine tourism services.

On the one side, the development of wine tourism creates new jobs. If vineyards and wine production are automated and mechanized, there will be fewer jobs in the vineyards and in the winery. At the same time, there is an opportunity for employment in the tourist service sector.

On the other side, tourists, guests of wineries, vineyards, tasting participants, etc. are more willing to consume eco-friendly products, including wine. They desire to live and eat in a more natural environment. Wine tourism, which is mainly located in rural areas, is able to provide just such tourism products.



These two sides describe rational human behavior in different ways. The adaptability of the first group of people decreases with the advent of more environmentally friendly or technologically advanced industries. For instance, they do not want to delegate work to robotics. After all, this means getting out of your comfort zone and starting to study the tourism business. The ability to adapt of the second group of people, is faster, however, it also has its limitations. For example, not everyone is ready to consume wine which is not in glassware; not everyone is ready to purchase products from recycled waste; not everyone is willing to pay more for eco-friendly packaging. For this reason, environmental, technological and societal risks are closely linked too.

It is well known that technology is at the core of geostrategic competition. Having said that, wine regions, winemakers, representatives of HoReCa can compete as well. According to The Global Risks Report 2022 by the World Economic Forum, the number of cross-border cyberattacks and misinformation worldwide have continued to grow rapidly in recent years. Thus, technological risks are associated with the loss of information or the use of incorrect data, i.e. associated with the threat of economic losses. That is why, the connection between these two types of risks is obvious.

The correlation between technology and geopolitical competition – a trend that has been accelerated by COVID-19 as more aspects of work and life moved online. The experience of change is also in wine tourism: in the period before the pandemic, there were no online tastings, online excursions, scientific and practical issues of wine tourism development were not discussed so easily and often. Technological advances have made it possible for people to be present in a place far from their physical location. On top of that, where there is competition, geopolitical risk is inevitable, which poses a threat of interstate conflicts, terrorist attacks, etc. This raises doubts about the existence of tourism as such.

All things considered, this report can state that the risk differentiation is needed for stakeholders of Ukrainian wine tourism and *TheSeaOfWine* project, which follows below.



1.1. *Environmental risk*

The main shift in the understanding of environmental risk was 15 years ago (according to The Global Risks Report 2007 by the World Economic Forum), when there was an increased awareness of the potential consequences of climate change.

Risk factors and their consequences are as follows.

Risk factors: extreme weather events, a decline of quality and quantity of water, increased prevalence of diseases.

Consequences

In the Odessa region, significant fluctuations in the average temperature have been observed over the past five years [6-12]. During the ripening period of grapes in April 2019, the lowest temperature was observed – about 6 °C, in June – the highest was about 28°C. In July, it decreased by 23% to about 21°C (Fig.1). Statistical data on the wine industry and vineyards (Fig.2) represent that there was a sharp decline in the industrial processing of grapes which was observed throughout Ukraine in 2019. In the Odessa region, this decrease was 41.6% compared to 2018. In other words, a sharp temperature drop has caused a harsh impact on vine yields and wine materials [13-14].

Grape harvest areas are rapidly declining. In 2018-2020 this figure was 3.8-3.9 thsd. ha, then in 2021 it decreased to 3.0 thsd. ha – this is 23% lower than in 2020 and 13.8 times less than in 2017 (Fig 3).

Despite the fact that Fig.3 and Fig.4 show different indicators of growing and producing grapes, visually the graphs are very similar. As we can see from the graphs, 2018 is a year of a sharp decline, the period 2018-2020 is a slight decrease in indicators.

When the vine encounters adverse climatic conditions, the grape harvest decreases, but the sugar content usually increases (Fig 5). A higher sugar content leads to better quality wines, but Fig.5 shows instability for the industrial processing of grapes. From year to year, the quality and sugar content are different, which is contrary to sustainability.



Fig.1. Average month-temperature in Odesa region (2017-2021), °C
 Source of data: <https://www.wunderground.com/history/monthly/ua/odessa> and <https://climateknowledgeportal.worldbank.org/country/ukraine>

Like in the rest of the world, in Ukraine, there is a shift from the wine-growing zone to the north, which is problematic in terms of risk management. So, for example, winemaking began to actively develop in Vinnitsa and Zhytomyr regions [4] (Vinnitsa is located at a latitude of 49°13' and Zhytomyr is located at a latitude of 50°15'), which were not previously wine-growing regions in Ukraine until now. For comparison, Odesa is located at a latitude of 46°28', Mykolaiv – 46°57', Kherson – 46°39' (a traditional area for growing grapes).

Along with sugar content, which attracts birds and insects, the development of grape diseases is also unpredictable. Numerous studies predict behavior modification and geographic distribution of vine pests.

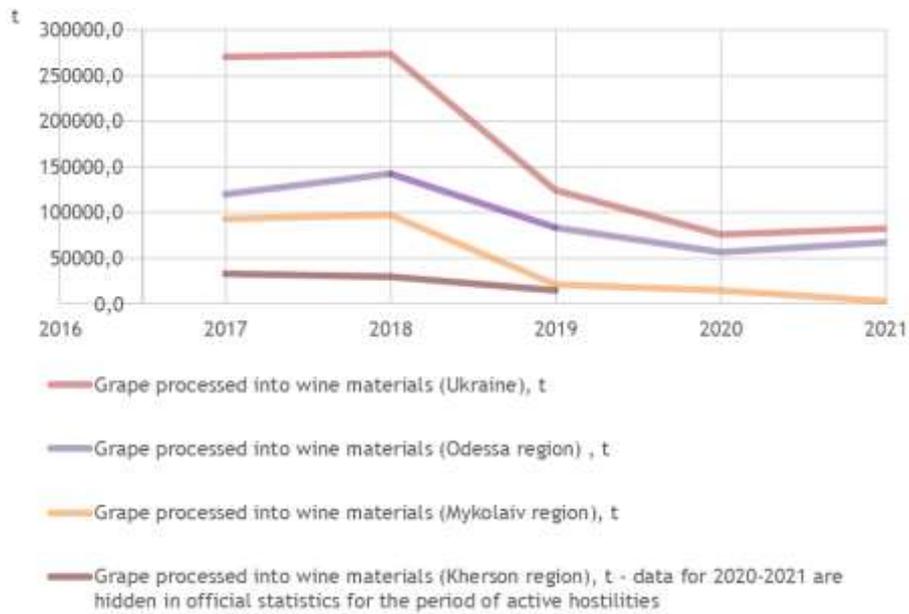


Fig.2 Grape processed into wine materials (2017-2021), t
Source of data: <https://www.ukrstat.gov.ua/>

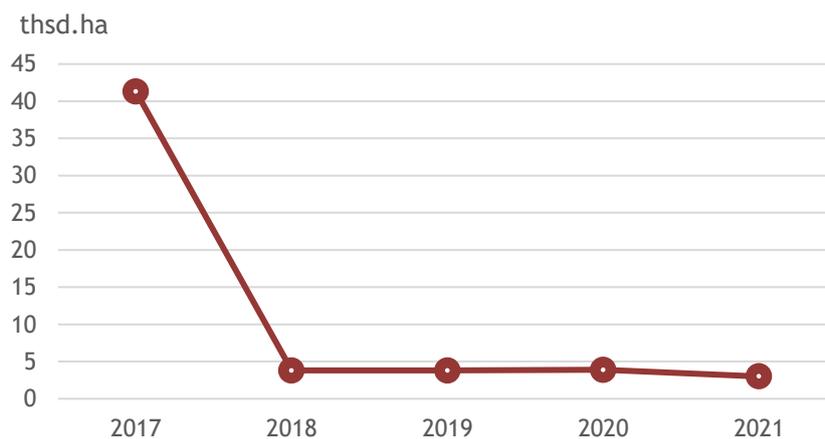


Fig.3. Harvested area in Ukraine 2017-2021 (vineyards), thsd. ha
Source of data: <https://www.ukrstat.gov.ua/>

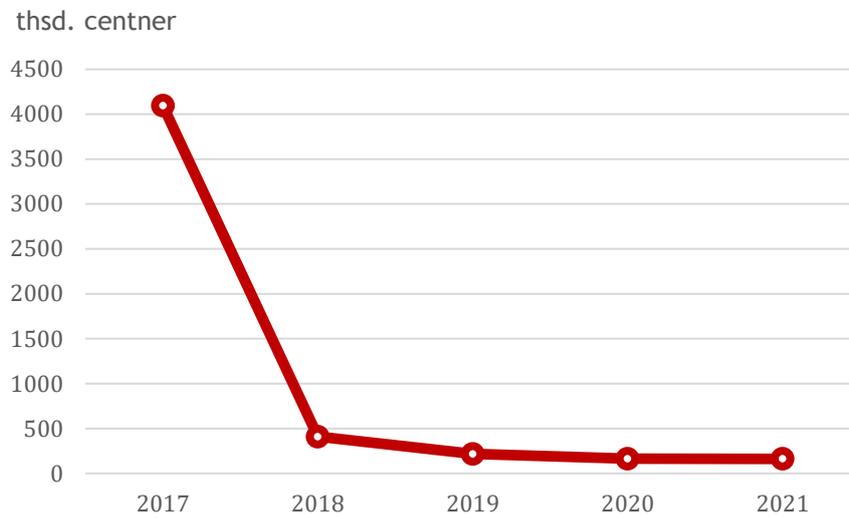


Fig.4. Volume of wine materials production in Ukraine (2017-2021), thsd. centner

Source of data: <https://www.ukrstat.gov.ua/>

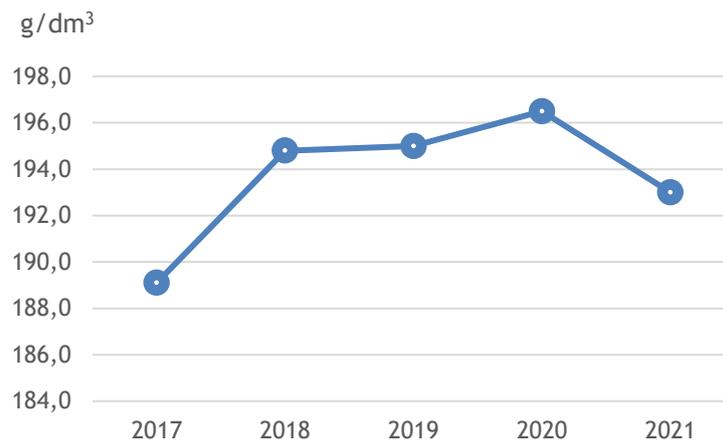


Fig.5 Average sugar content in grape (2017-2021), g/dm³

Source of data: <https://www.ukrstat.gov.ua/>



As previously stated, wine tourism is not only winemaking and vineyards, it is also the people who work in this business and who consume services and products. Environmental changes affected people. So, for example, the COVID-19 pandemic, being a consequence of global climate change, still continues to cover some countries in waves. This is the strongest factor of instability. During 2020-2021, the death rate has declined significantly, but mutating viruses still pose a threat to humanity [15-23]. Therefore, within the framework of the state policy of many countries, security protocols have appeared and are used when receiving guests, tourists, sightseers. The National Tourism Organization of Ukraine recommends that tourism enterprises declare their responsibility with security protocols and use special SafeTravels signs in premises and marketing communications. Most of the participants in *TheSeaOfWine* project use these protocols.

Loss Prevention Measures: using energy carefully (water, electricity, fuel) and using green energy, using regional/local products and using recyclable resources, encouraging organic production methods and keeping the CO₂ footprint small.

1.2. *Economic risk*

Economic risk is the risk involved in investing in a business opportunity. It refers to the potential for changes in macroeconomic conditions to have a negative impact on an enterprise or investment [24-27].

Ukraine winemaking depends on the importation of grape seedlings, fertilizers, wine barrels, corks, starter cultures and laboratory preparations, as well as supplies of equipment for bottling the wine. At the same time, tourism is only involved in international trade by foreign tourists, whose payments are made in national currency. As a result, wine tourism depends in part on the global market for foreign exchange, goods and services.

Risk factors: exchange rate fluctuations, price and tax instability.

Consequences

In response to the COVID-19 pandemic, Ukraine imposed the state of emergency in all oblasts to maximize mobilization of resources and protect public health. Despite the unprecedented development conditions in which Ukraine found itself as a result of the spread of the COVID-19 pandemic, the price dynamics in the consumer



market throughout 2020 generally remained foreseeable (Fig.6, inflation was not more than 5% per year).

The main difference from previous years and at the same time the main factor influencing the price dynamics was the limited demand due to forced measures to prevent the spread of the pandemic. In 2020 it imposed restrictive measures: airway and railway traffic suspended, intercity and international bus service stopped. The measures to control the spread of COVID-19 included: a combination of preventive non-medication measures including home isolation, social distancing, capacity building of health care facilities to provide care, collection of relevant data, formation of the country's Stabilization Fund for rapid procurement of medical equipment, raising payments to health care professionals involved in combatting the coronavirus infection, etc. [28-30]

At the beginning of 2021, high consumer inflation in Ukraine was a consequence of the general development of the world economy, which continued to be under the influence of structural changes in the world related to the spread of the COVID-19 pandemic. At the end of 2021, the dominant influence factor (external factor of price) became the increase in natural gas prices [31].

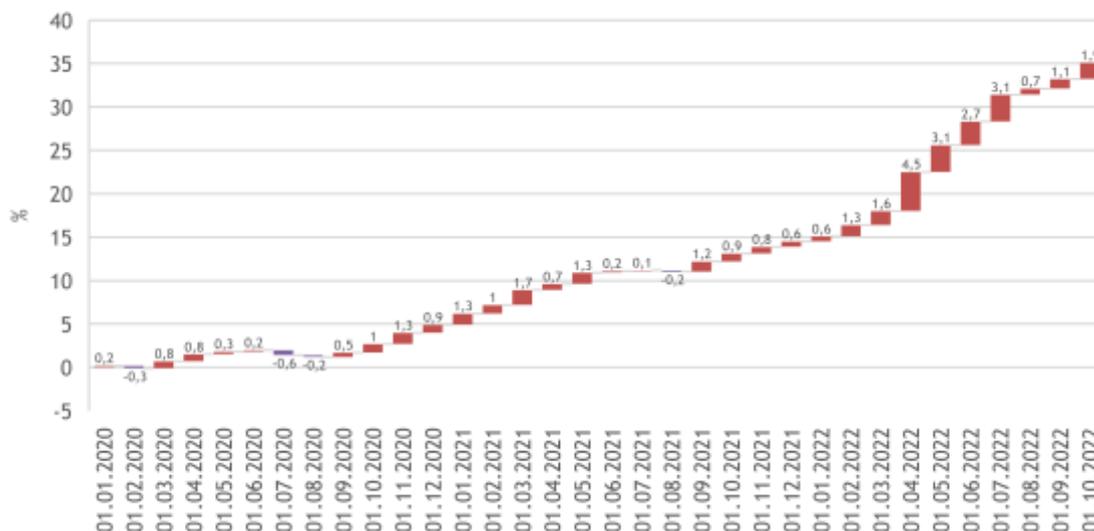


Fig.6. Consumer prices in Ukraine, % of the previous month with accumulation 2020-2022

Source of data: <https://www.me.gov.ua/Documents/List?lang=uk-UA&tag=OgliadInfliatsii&id=50f4353c-f19f-4a99-96c9-a0fdbb01f915&pageNumber=1>



It is known the fact that Gross Domestic Product (GDP) is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Ukraine GDP growth rate for 2020 was -3.75%, a 6.95% decline from 2019; for 2021 was 3.40%, a 7.15% increase from 2020. Fig.7 shows the indicator decreasing and its recovery in 2021.

Statistical data on consumer prices confirmed that against the background of a full-scale war on the territory of Ukraine, its economy remains resistant to pressure from a significant number of destabilizing factors in 2022. Despite the destroyed infrastructure in a large area, the breakdown of logistics chains, the persistence of external factors of high energy and food prices, the level of consumer inflation does not currently have any signs of forced hyperinflationary. GDP plunged by 15.1 per cent year on year in the first quarter of 2022 and by 37.2 per cent in the second quarter, when the most severe and widespread fighting took place.

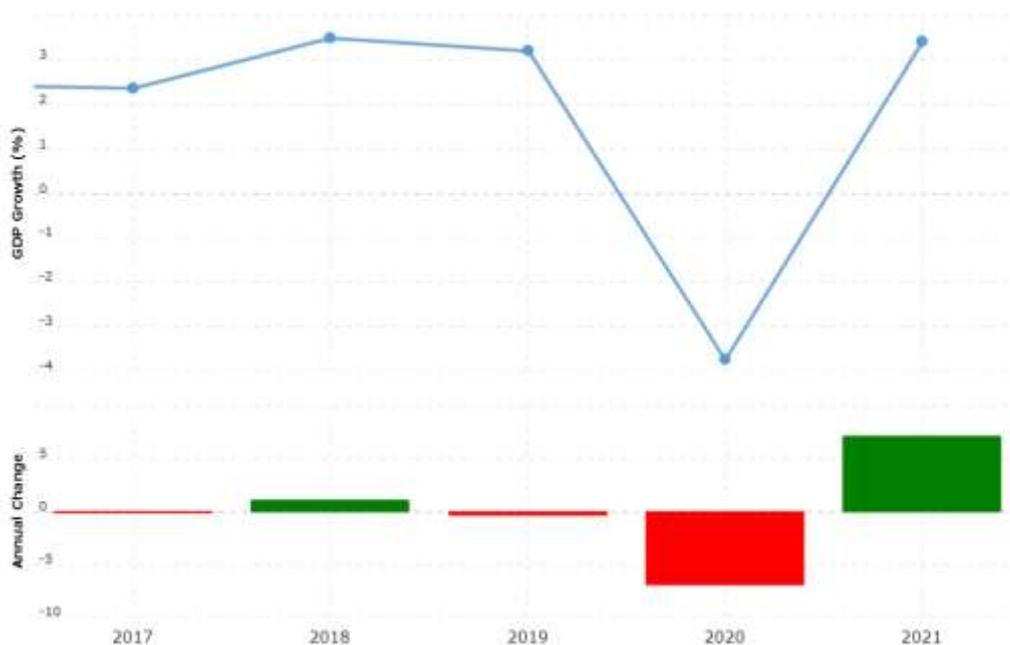


Fig.7. Annual percentage growth rate of UA GDP

Source: <https://www.macrotrends.net/countries/UKR/ukraine/gdp-growth-rate>

Economic risk is often the most unpredictable. Because a business can always be at a disadvantage due to exchange rate fluctuations or regulatory changes in the country where it operates.



Loss Prevention Measures: risk management planning, risk registering, formation of the Internal Operations Manual with a description and priorities of risks, positioning of the risk manager.

1.3. Societal risk

In 2021 we were seeing record levels of unemployment due to lockdown measures to control transmission COVID-19 (Fig.8). The societal impacts, such as changes in consumer behaviors, the nature of work online and/or offline changed our way of life forever. These social dimensions of the crisis, including continued stress on people's well-being and incomes, will be felt by people worldwide and create substantial societal consequences for the long term. Although immediate employment challenges still dominate public attention, wine tourism businesses must anticipate and respond to these societal risks.

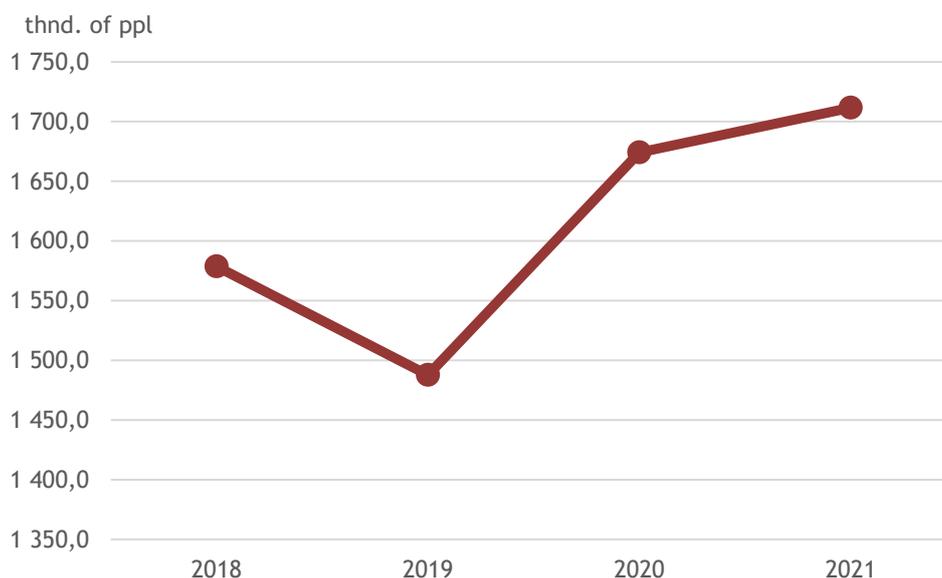


Fig.8. Unemployed population in Ukraine, aged 15-70 years, (2019-2021), thsd. of ppl

Source of data: <https://www.ukrstat.gov.ua/>



Risk factors: change of occupation, change of the level of unemployment, health status of people, employment and livelihood crisis, infectious diseases, widespread youth disillusionment.

Consequences

During 2019-2021, the level of layoffs for economic reasons in Ukraine increased significantly, from 21.5% to 27.1% of all unemployed. On the contrary, the rate of dismissal for personal reasons decreased from 39.6 to 32.4%. The remaining reasons for the increase in unemployment (Fig.9) have not changed significantly.

According to the World Health Organization, there has been 4.4 million infection cases in Ukraine since the beginning of the pandemic, resulting in 105,505 deaths by 25 February [32-33]. As of 25 February, the fatality rate stood at 2.2% and the recovery rate at 84.4%. Excess mortality data in Ukraine suggest around 160-170 000 pandemic-related deaths.

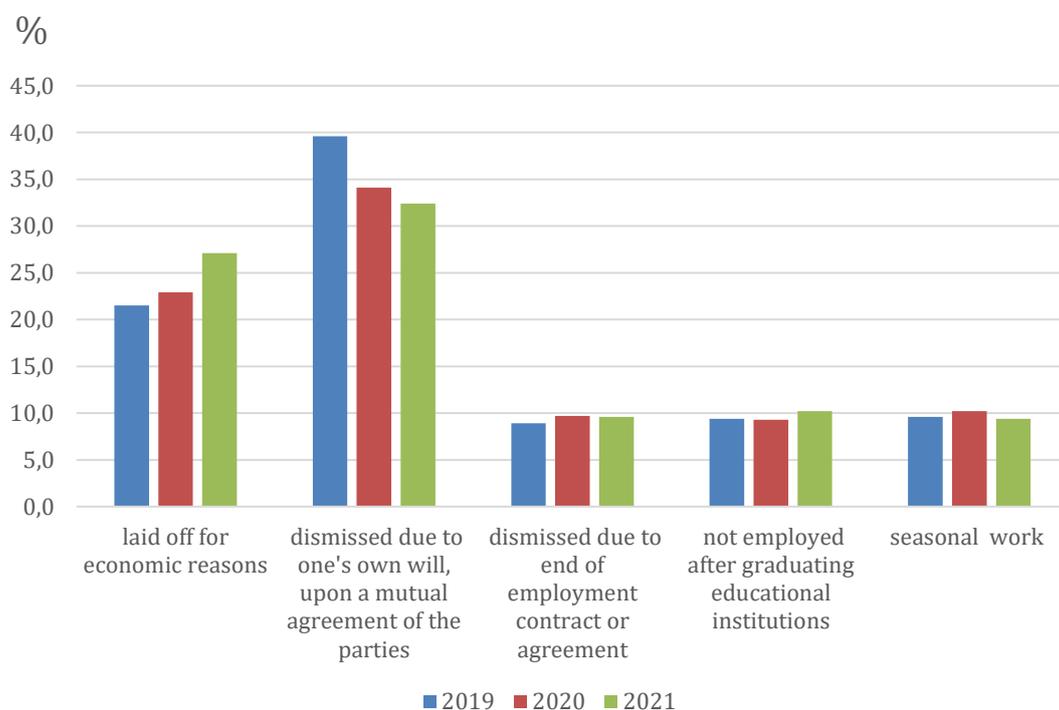


Fig.9. Unemployed population in Ukraine and reasons of unemployment (2019-2021), %

Source of data: <https://www.ukrstat.gov.ua/>



The effects of the pandemic on employment have affected women more acutely than men, a phenomenon observed in other countries. The employment drop related to social distancing measures had a large impact on sectors with higher women’s employment shares, and the statistics show that employment rates decrease was sharper for women than for men (Fig.10). The employment in tourism includes many professions and types of economic activity, so in this report we consider separately employment in the service sector and trade. Closures of schools and day-care centers significantly increased childcare needs, which had a particularly large impact on working mothers. With the COVID-19 crisis women are likely to experience long-term setbacks in workforce participation and income.

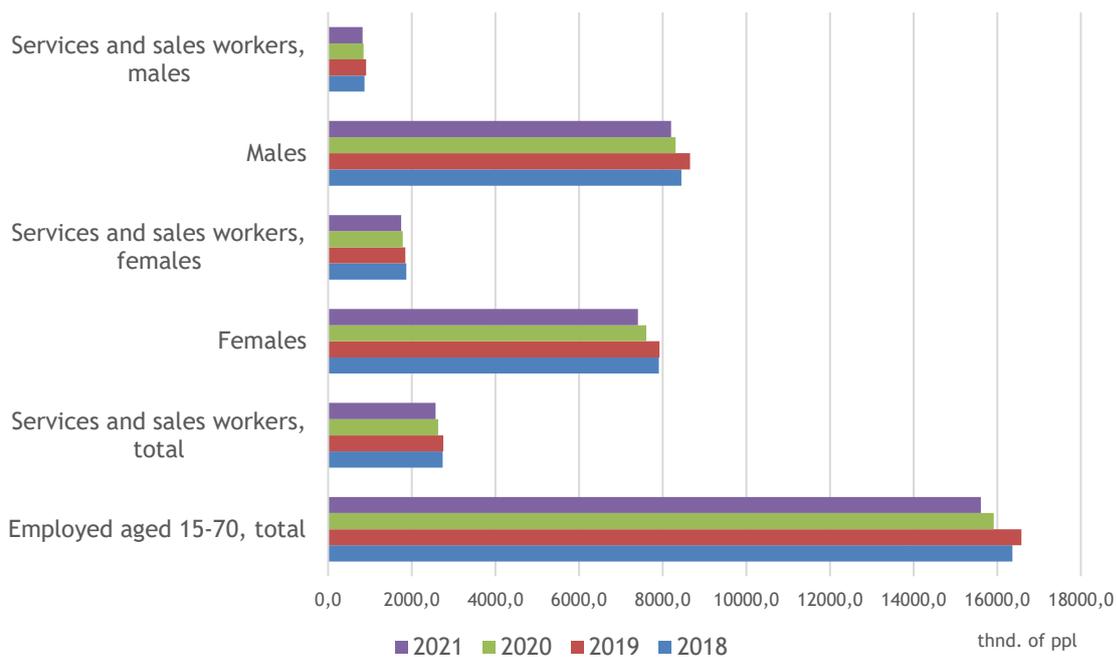


Fig.10. Employed population in Ukraine, aged 15-70, by occupational group and sex, 2018-2021, thnd. of ppl

Source of data: <https://www.ukrstat.gov.ua/>

Youth employment in developed economies has only just recently returned to pre-2008 financial crisis levels. In developing economies, youth unemployment has risen steadily, creating a real risk of social unrest. For young people in education, the



pandemic is likely to cause new inequalities. Many students in poorer communities lack the necessary tools to access online courses or are unable to easily work at home. The consequences of these educational inequalities, especially for girls and young women, will disadvantage them in labor markets and further exacerbate inequality [11].

Youth employment in Ukraine is tending to decline (male and female). The number of men in employment between 15 and 29 years exceeds the number of young women in employment. Considering that wine tourism places are located primarily in rural areas, the fact that the rural youth employment decreases each year is negative (Fig.11). The United Nations defines youth as persons between the ages of roughly 15 and 24. It also recognizes that this varies without prejudice to other age groups listed by member states such as 18-30. This report uses two age groups (15-24 and 25-29) according to the State Statistics Service of Ukraine.

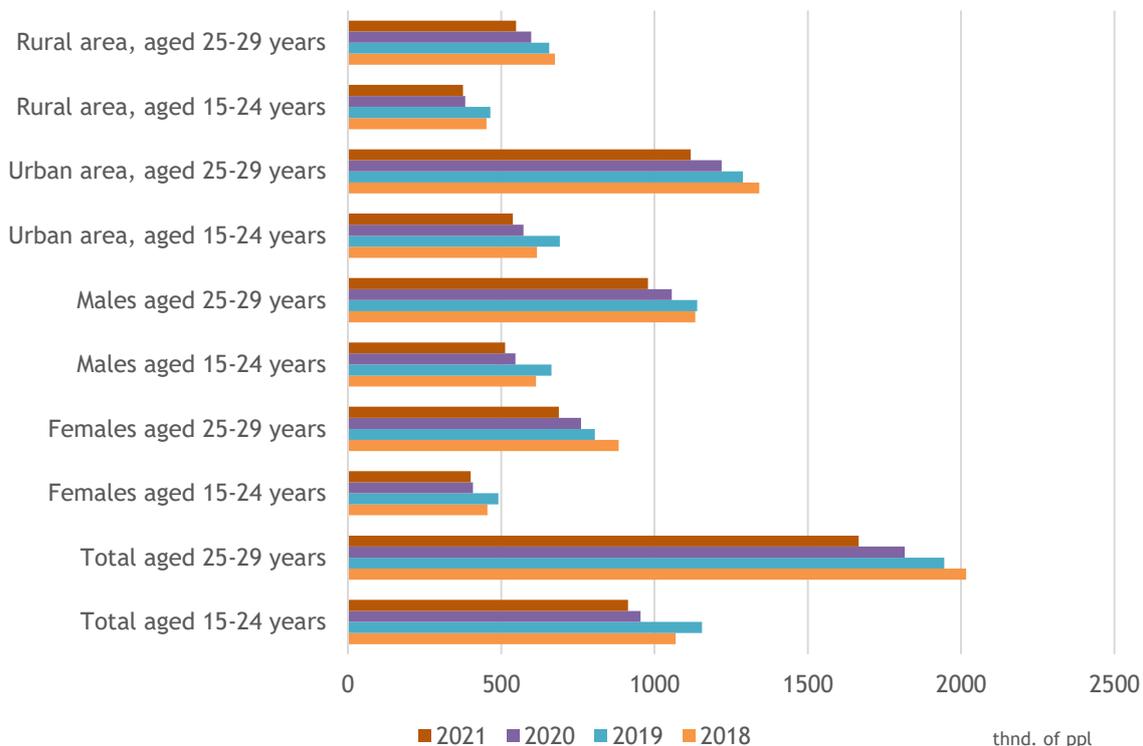


Fig.11. Youth employed in Ukraine, by age group, sex and place of residence, 2018-2021, thnd. of ppl

Source of data: <https://www.ukrstat.gov.ua/>



Loss Prevention Measures: workforce development programs, advanced training, safe use of machinery, safe work practices, safety training, material and immaterial incentives, support for mothers in socio-economic difficulty.

1.4. Geopolitical risk

The war between Russia and Ukraine (began on February 24th, 2022) represents the most significant military event in Europe since World War II, but also raises a number of economic changes. As the war drags on with countless lives lost and significant destruction in its wake, the impact is being felt beyond the borders of Ukraine. Capital markets, government policymakers, central bankers and corporate leaders have all been forced to adapt to the unique conditions. Many countries imposed substantial economic sanctions on Russia [32-33]. There have been significant changes in the tourism.

Risk factors: prohibition on the movement of people in the direction of the active positions of the conflict, loss of sovereign territories, loss of part of the labor market, decrease in business activity.

Consequences

According to the United Nations, more than eleven million people have left their homes in Ukraine so far, 5.3 million of which have left to neighboring countries. Since the war started, half of all Ukrainians have lost their jobs, only 2% were able to find temporary earnings [32-35].

Radiation and nuclear security, food and energy security have been fluctuating since the beginning of the war. Tourism development is impossible in dangerous conditions. Also, in 2022, wine tourism in the Black Sea region temporarily suspended, as military invasions cover almost all of Ukraine. The Mykolaiv and Kherson regions, which are taken into account in the construction of wine routes, have been bombarded for a long time (Fig.12). A lot of vineyards have been mined, access to the coast has been blocked for security purposes.

The consequences of the geopolitical conflict have crossed Ukraine's borders. The internal tourism in Ukraine in certain regions is represented by rare excursions or tastings. In other countries, the deficiency of Russian and Ukrainian tourist flows is detrimental to the economy.



* Assessed Russian advances are areas where ISW assesses Russian forces have operated in or launched attacks against but do not control.

Fig.12. Assessed control of terrain in Ukraine and main Russian maneuver axes in October 29, 2022, 3:00 PM ET

Source: <https://www.understandingwar.org/>

Loss Prevention Measures: risk analysis, sustainability assessment, coordinated actions with partners and destination management.



1.5. *Technological risk*

Technology risk, also known as information technology risk, is a type of risk defined as the potential for any technology failure to disrupt a business. Companies face many types of technology risks, such as information security incidents, cyber-attacks, password theft, and more. Without an appropriate incident response, every type of technology risk has the potential to cause economic risk.

Risk factors: failure of cybersecurity measures, loss of information, use of incorrect data.

Consequences

Thanks to modern dependence on technology, businesses have several different technological vulnerabilities. These will vary for each industry and the types of technology used. *TheSeaOfWine* project is subject to technological risk. This project aims to use a new IT platform. The IT platform uses a set of data on wine-producing regions from several countries. Distorting or restraining this information undermines the project's ultimate intent and objectives.

Risk management is the process of identifying, evaluating, assessing and controlling threats to capital and goals of a company / project. These threats, or risks, could stem from a wide variety of sources, including financial uncertainty, legal liabilities, strategic management errors, accidents and natural disasters. Management must continually monitor internal operations, stakeholders for changing circumstances that must be addressed to reduce the risk of loss [36-37].

Consider the example of a winery as a tourist attraction. The client base of such an enterprise consists of the data of tourists, information that they leave in the form of reviews, preferences for organizing holidays and preferences for buying wine, transactions from a card account, individual data on the accommodation of tourists. With cyber criminality and data privacy breaches on the up – not a week goes by without reference to a breach somewhere. Therefore, the competitiveness of the winery depends on the customer/tourist/visitor base, methods and incentives for managing technological risks.

Loss Prevention Measures: keeping software up-to-date, regular internal audits of IT environments, improving the digital literacy of employees and managers.



2. Global risks perceptions survey 2022 (Ukraine)

The survey carried out in total anonymity among those involved in wine tourism. Information about labor activity and personal participation in *TheSeaOfWine* project is used exclusively for the creation of a scientific report and is not distributed outside the project (in accordance with the Law of Ukraine "On the Protection of Personal Data" [38]).

2.1. Questionnaire

1. Which field of activity do you represent?

- Winemaking
- Trading in wine products
- Tourism & Hospitality
- Other

2. Which position do you represent in your company?

- Owner of company
- Event coordinator
- Wine technologist
- Sales Manager
- Member of the tourist service team
- Transport team member
- Guide
- A combination of several positions

3. Is there a risk manager position in your company's business?

- Yes
- No
- The functions of the risk manager are performed by a person in another position

4. How serious are the following risk management challenges in your business in 2023?

- It is difficult to find new ways of working to respond to the pandemic
- Owners/top-managers do not have the appropriate risk management expertise
- Limits on risk management resources, including budget
- Unclear division of responsibilities & accountability for risk



- High turnover in personnel
- Risk management processes are manual and time consuming
- The pace of digital and other transformations within our organization is slower than the rest of the world

5. From which countries do you expect tourists on Ukraine's wine routes in the next 5-10 years?

- Please specify _____
- Foreign tourists are not expected

6. What activities are offered to your tourists/customers?

- Wine tasting
- Guided tours (cellar or vineyard)
- Events at the winery (wine party)
- Events outside of the winery
- Accommodation (hotel, rooms for rent)
- Virtual wine tourism experiences

7. What is the probability of the following events taking place in Ukraine's wine tourism in the next 5-10 years?

- Wine tourism will acquire the characteristics of health and even medical tourism
- Wine tours will become more inclusive than before
- With the advent of online tastings, wine tours will lose their fans
- Online tastings will become a tool for announcing actual tastings
- Wine tourism will acquire the characteristics of nostalgic or ethno-tourism
- Wine tourism will become oriented towards foreigners
- Wine tourism will be limited to agritourism during the grape harvest
- Types of tourist services and entertainment in wineries and vineyards will expand
- The types of tourist services and entertainment in cellars and vineyards will decline

8. How do you envisage the damage to The Black Sea wine tourism in the next 2-3 years due to the massive military invasion in Ukraine?

- Reduce the area of vineyards in the Ukrainian Black Sea regions
- Increase in youth wine sales structure, decrease in sales revenue
- The difficulty of moving tourists across regions that have been destroyed



- The difficulty of providing tourists with walks through the vineyards and wine regions
- Decline of interest in wine tourism
- Loss of authentic technologies and recipes in winemaking

9. Do you plan to work with certified wineries (for representatives of the tourism and hospitality business) in the next 5-10 years?

- Yes, only with certified wineries
- I plan to work with any wineries
- No, I do not plan to work with certified wineries

10. Which of the activities do you consider the most exposed to economic risks (expansion of the shadow economy, prolonged economic stagnation, financial and economic crisis)?

- Wine tasting
- Guided tours (cellar or vineyard)
- Events at the winery (wine party)
- Events outside of the winery
- Accommodation (hotel, rooms for rent)
- Virtual wine tourism experiences

11. Do you plan to certify wineries (for representatives of the winemaking business) in the next 2-3 years?

- The winery is certified organic viticulture and winemaking
- The winery has a certificate of biodynamic viticulture and winemaking
- The winery has a certificate of sustainable viticulture and winemaking
- The winery is certified (please indicate the type of certificate) _____
- No planning due to the expense
- I have no plans for other reasons

12. Do you expect price instability in the next 5-10 years?

- Yes, prices will increase up to 15%
- Yes, prices will increase by 16-30%
- Yes, prices will increase by 31-50%
- Yes, more than 50% price increase
- No, I don't expect any increase
- I expect a slight increase in prices



13. How do you envisage the damage to Ukraine's winemaking environment due to global climate change in the next 5-10 years? (please indicate several the most expected)

- Significant damage to vineyards
- Significant damage to grape varieties
- Reduced productivity of vineyards
- Terroir changes
- Major soil change, i.e. a drought
- Rise in air temperature
- Reduction in the number of sunny days

14. Which of the activities do you consider the most exposed to environmental risks (extreme weather events, human-made environmental damage, geophysical disasters)?

- Wine tasting
- Guided tours (cellar or vineyard)
- Events at the winery (wine party)
- Events outside of the winery
- Accommodation (hotel, rooms for rent)
- Virtual wine tourism experiences

15. How important is official information about possible global risks and their impact on wine tourism to your business?

- Official information in wine tourism is not enough
- Official information is not important
- I use the information from my colleagues and friends
- I use information from various sources, including social networks, group chats, popular publications

16. What group of risks do you foresee as most damaging for your business in the next 5-10 years?

- Economic
- Environmental
- Geopolitical
- Societal
- Technological



17. In the current geopolitical situation, which of the partners in other countries are expected to be more interested in Ukrainian wine products?

- Please specify _____

18. How seriously have the COVID-19 pandemic measures affected your business?

- Business almost stopped its development in 2020
- After the first restrictions, business recovered quickly, in 2021 it returned to its previous level
- Business is distributed only at the regional level so far, tourists in 2020-2021 were only from Ukraine
- With the help of new technologies, some of the events have been held online
- Through new technologies, products and services find their buyers faster
- The pandemic has led to high sales of wine and/or services

19. Which of the activities do you consider the most exposed to societal risks (employment and livelihood crisis, infectious diseases, widespread youth disillusionment)?

- Wine tasting
- Guided tours (cellar or vineyard)
- Events at the winery (wine party)
- Events outside of the winery
- Accommodation (hotel, rooms for rent)
- Virtual wine tourism experiences

20. What is your knowledge of *TheSeaOfWine* project's goals and objectives?

- A lot, I follow the development of the project through different channels
- I'm a member of the draft wine roads
- I took part in the training
- Nothing. This quiz was taken by accident, I do not know the project

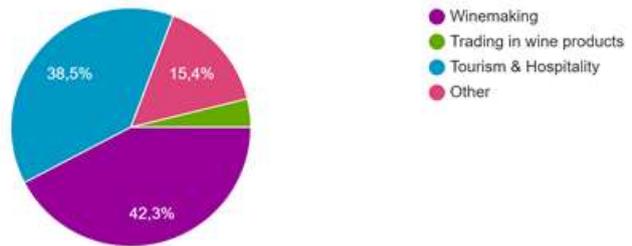
2.2. Analyze Questionnaire Data

To gather reliable information on this topic, we conducted an online survey with 96 stakeholders of wine tourism from Ukraine.

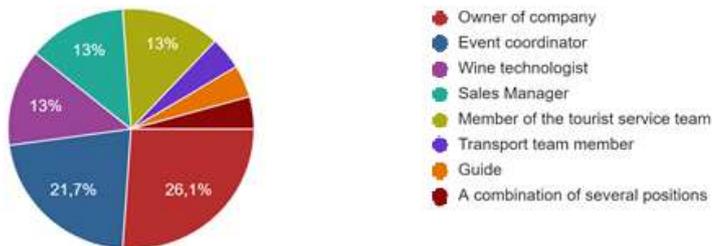


Data collection took place in October 2022. Most of the respondents were winemakers (42.3%) and representatives of the tourism industry (38.5%).

Which field of activity do you represent?



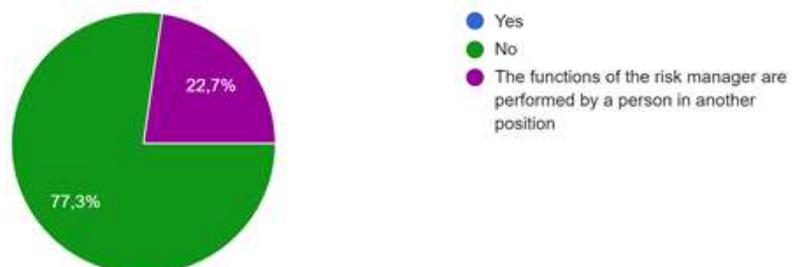
Which position do you represent in your company?



Most of the respondents were owners of companies (42.3%) and event coordinators (21.7%).

77.5% of all companies do not have a position of a risk manager in their staff. None of the companies has a risk manager as a separate position.

Is there a risk manager position in your company's business?



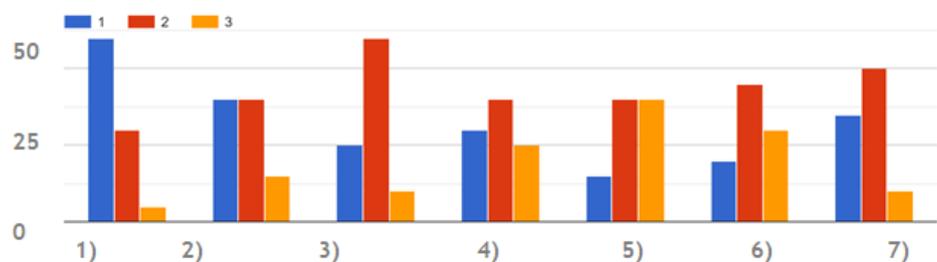


However, respondents noted that in some companies (22.7%) the functions of a risk manager are performed by other responsible persons.

Respondents named the following as the most serious problems in 2023:

High turnover in personnel (30.8%); Risk management processes are manual and time consuming (23%); Unclear division of responsibilities & accountability for risk (19.2%).

How serious are the following risk management challenges in your business in 2023? (3 - is serious, 1 - is not serious)

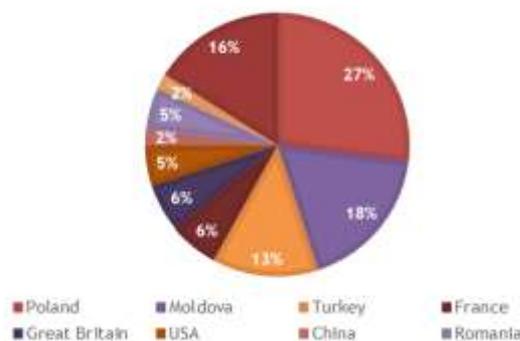


The least difficult problem in 2023 respondents consider “It is difficult to find new ways of working to respond to the pandemic”.

- 1) It is difficult to find new ways of working to respond to the pandemic
- 2) Owners/top-managers do not have the appropriate risk management expertise
- 3) Limits on risk management resources, including budget
- 4) Unclear division of responsibilities & accountability for risk
- 5) High turnover in personnel
- 6) Risk management processes are manual and time consuming
- 7) The pace of digital and other transformations within our organization is slower than the rest of the world

Respondents expect tourists on Ukraine’s wine routes in the next 5-10 years from Poland (27%), Moldova (18%), Turkey (13%).

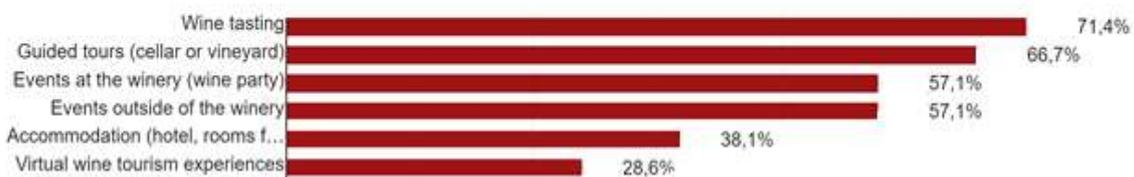
From which countries do you expect tourists on Ukraine’s wine routes in the next 5-10 years?





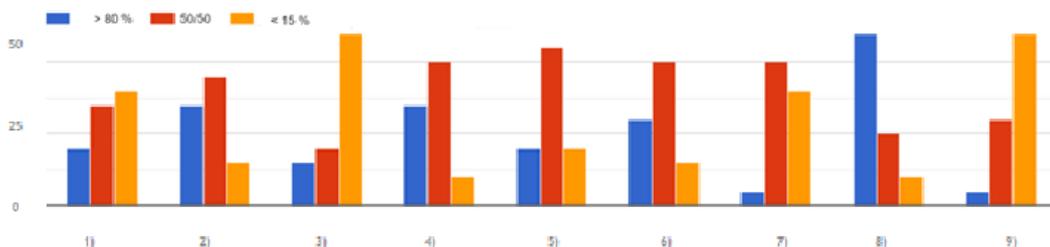
The main activity of tourists in wine tourism respondents called tastings (71.4%). Tour of vineyards, wineries, various wine events outside the winery – quite common in wine tourism in Ukraine (57-77%). Less commonly, wine tourist accommodation and virtual tours (28-38%) are organized.

What activities are offered to your tourists/customers?



According to respondents, it is most likely to be expected to expand wine tourism services, expanding activities for tourists in the next 5-10 years.

What is the probability of the following events taking place in Ukraine's wine tourism in the next 5-10 years? (> 80 % - is serious, < 15 % - is not serious)

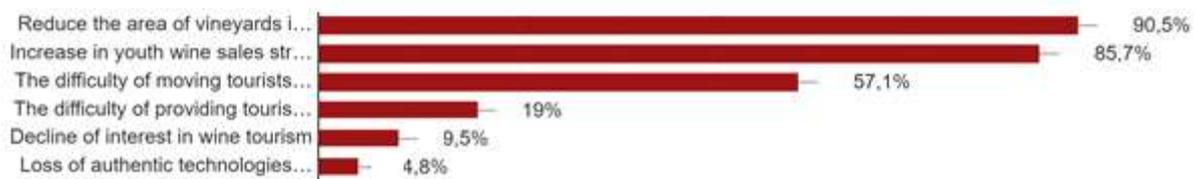


- 1) Wine tourism will acquire the characteristics of health and even medical tourism
- 2) Wine tours will become more inclusive than before
- 3) With the advent of online tastings, wine tours will lose their fans
- 4) Online tastings will become a tool for announcing actual tastings
- 5) Wine tourism will acquire the characteristics of nostalgic or ethno-tourism
- 6) Wine tourism will become oriented towards foreigners
- 7) Wine tourism will be limited to agritourism during the grape harvest
- 8) Types of tourist services and entertainment in wineries and vineyards will expand
- 9) The types of tourist services and entertainment in cellars and vineyards will decline



The least expected change in the opinion of the respondents is a decrease in the interest in wine tours, a decrease in the number of services for tourists and activities of wine tourists.

How do you envisage the damage to The Black Sea wine tourism in the next 2-3 years due to the massive military invasion in Ukraine?



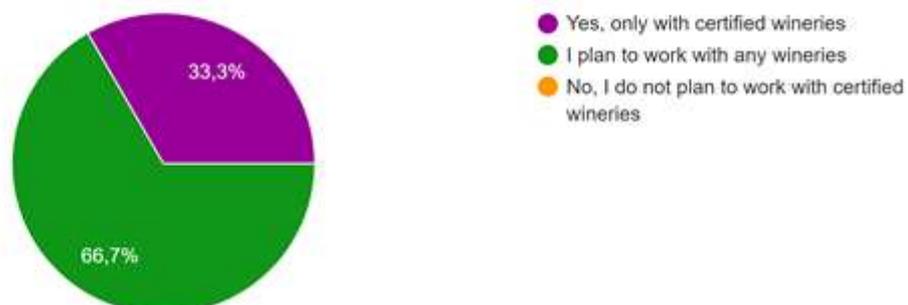
Due to Russia's invasion of Ukraine in 2022, respondents consider the following problems to be the most difficult to solve in the next 2-3 years (more than 50% of respondents):

- 1) Reduce the area of vineyards in the Ukrainian Black Sea regions
- 2) Increase in youth wine sales structure, decrease in sales revenue
- 3) The difficulty of moving tourists across regions that have been destroyed

Least expected soon "Loss of authentic technologies and recipes in winemaking" (less than 5%).

2/3 of all respondents plan to work with various wineries, including certified ones.
1/3 of all respondents plan to work exclusively with certified wineries.

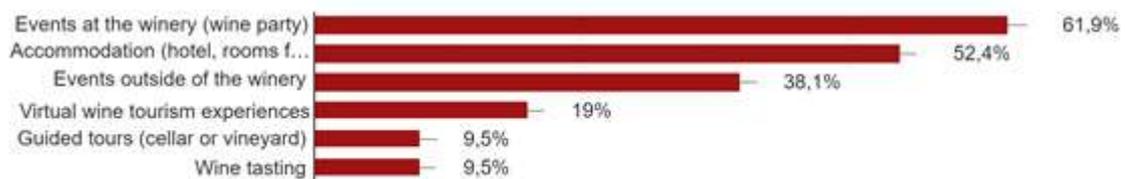
Do you plan to work with certified wineries (for representatives of the tourism and hospitality business) in the next 5-10 years?





“Events at the winery (wine party)” and “Accommodation (hotel, rooms for rent)” – these are the activities that, in the opinion of the respondents, are the most exposed to economic risk.

Which of the activities do you consider the most exposed to economic risks (expansion of the shadow economy, prolonged economic stagnation, financial and economic crisis)?



Despite the fact that 1/3 of wine tourism stakeholders have a desire to work only with certified wineries, 68.4% of winemakers have no plan to certify their business. 21.1% of winemakers find the certification process expensive.

Do you plan to certify wineries (for representatives of the winemaking business) in the next 2-3 years?



26.1% of winemakers certified their business to sell wine for export.

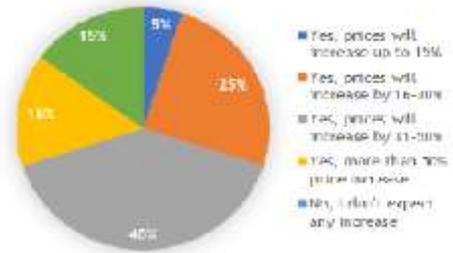
The winery is certified (please indicate the type of certificate)

12 (26,1%) - VI-1 Certificate (wine products to EU, Reg. No. 555/2008, EU Commission (Chapter III))



The vast majority of respondents expect an increase in prices in Ukraine up to 50% (in the next 5-10 years).

Do you expect price instability in the next 5-10 years?



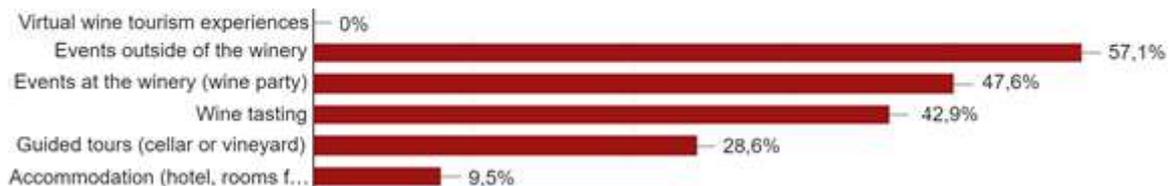
In the next 5-10 years, due to global climate change, respondents identified almost all the proposed types of environmental damage. They consider it the least risk factor “Reduction in the number of sunny days” – less than 5% of all respondents.

How do you envisage the damage to Ukraine’s winemaking environment due to global climate change in the next 5-10 years? (please indicate several the most expected)



According to those questioned, the environmental risk causes serious damage to wine tourism. The services most at risk, according to those interviewed, are those provided to tourists, both outside the cellar and inside the cellar, as well as wine tastings (28-57%).

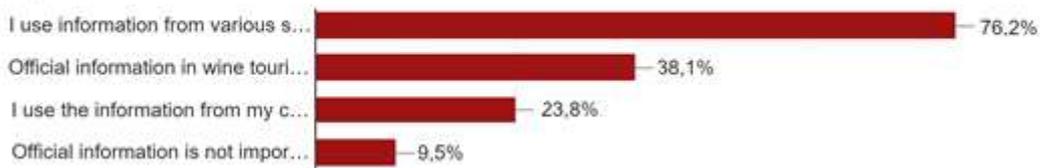
Which of the activities do you consider the most exposed to environmental risks (extreme weather events, human-made environmental damage, geophysical disasters)?





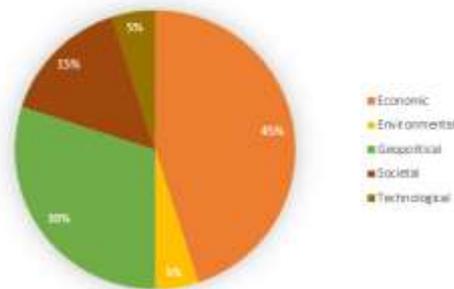
The vast majority of respondents believe that any information for the development of wine tourism is useful and necessary (76.2% of all respondents). Official information is not important for 9.5% of respondents.

How important is official information about possible global risks and their impact on wine tourism to your business?



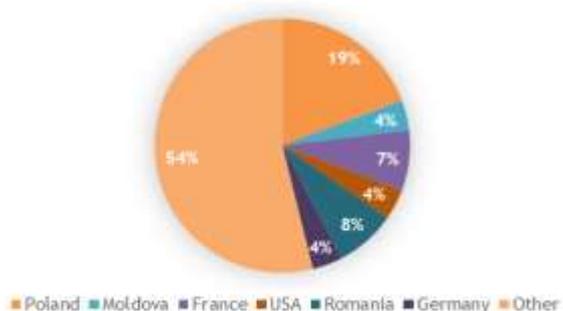
According to the respondents, the economic risk group and the political risk group are the most influential for wine tourism. Respondents indicated them as a priority, respectively 45 and 30%.

What group of risks do you foresee as most damaging for your business in the next 5-10 years?



45% of respondents indicated that Poland will be interested in Ukrainian wine products.

In the current geopolitical situation, which of the partners in other countries are expected to be more interested in Ukrainian wine products? Please specify

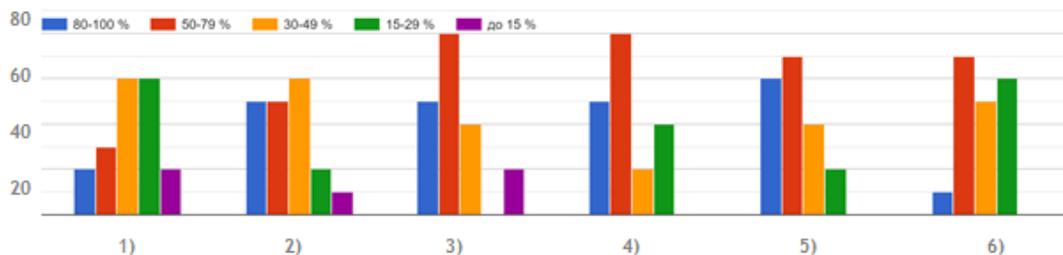




After the COVID-19 pandemic for more than a year, respondents noted that:

- 1) Through new technologies, products and services find their buyers faster;
- 2) Business is distributed only at the regional level so far, tourists in 2020-2021 were only from Ukraine;
- 3) With the help of new technologies, some of the events have been held online.

How seriously have the COVID-19 pandemic measures affected your business? (> 80 % - is serious, < 15 % - is not serious)



- 1) Business almost stopped its development in 2020
- 2) After the first restrictions, business recovered quickly, in 2021 it returned to its previous level
- 3) Business is distributed only at the regional level so far, tourists in 2020-2021 were only from Ukraine
- 4) With the help of new technologies, some of the events have been held online
- 5) Through new technologies, products and services find their buyers faster
- 6) The pandemic has led to high sales of wine and/or services

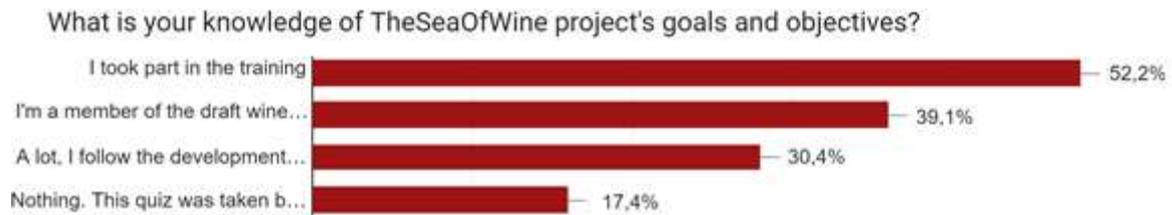
Respondents (more than 50%) accept that societal risks are influential on their business. Namely, at risk: guided tours (cellar or vineyard), events at the winery (wine party), events outside of the winery, accommodation (hotel, rooms for rent).

Which of the activities do you consider the most exposed to societal risks (employment and livelihood crisis, infectious diseases, widespread youth disillusionment)?





TheSeaOfWine project is quite popular among respondents, only about 17% completed this survey without knowing about it before.



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