

Pandemics, Business Resilience and Sustainability

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Field Investigations on the impact of Covid-19 on Nebbiolo vine-growing and wine-making entrepreneurs of the Alpine Foothills and Lowlands of Northern Piedmont, Italy

Dipak R. Pant*, Stéphane Jedrzejczak**

Abstract

The issues related to the resilience of small and medium enterprises are key to understanding how disruptions and contextual constraints provoked by the Covid-19 pandemic's have impacted the lives and livelihoods of small entrepreneurs and their partners along local supply chains and markets. The capacity of SMEs to resist, adapt and take advantage of external environmental changes is key to the sustainability of local economic processes. This report provides an overview about the resilience and vulnerabilities of SMEs engaged in the production and trade of wine of a specific area in north-western Italy during the coronavirus pandemic of 2020-2021 in the villages and small towns of the Alpine foothills and pre-Alpine lowlands in northern Piedmont. The research combined field survey, documentary analysis, and stakeholder consultations to shed light on present uncertainties for the wine business community and context. The perspectives gained in the field lead to a critical re-thinking on existing business and development models useful to elaborate new plausible and sustainable scenarios (alternative images of future) about the Nebbiolo business community. For policy makers, this understanding is useful to steer the local development process towards sustainability, to broader issues surrounding business continuity, resilience, and sustainable local development.

Keywords: business resilience, SMEs, pandemics, sustainability, local development

JEL Codes: 013, 020, P25

1. Introduction

This report was drafted after a field research on the disruptions linked to the Covid-19 pandemic on the lives and livelihoods of small entrepreneurs, engaged in the production and trade of wine in the villages and small towns of the Alpine foothills and pre-Alpine lowlands in northern Piedmont, north-western corner of Italy.

The results of this small research should provide an overview of wine entrepreneurs and their socio-economic context, as well as some insights into families, businesses, groups, organizations, and institutions involved in the local economy. The overview and insights should be useful to companies and institutions interested in local development in the Nebbiolo wine production areas of northern Piedmont, Italy.

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The economic reality of Italy, like that of most of Western Europe, shows that entrepreneurs who do business alone (solo) and/or through small and medium-sized enterprises (SMEs) are the ultimate building blocks of the local economic system, as well as the key drivers of local development. SMEs represent 99% of all non-financial productive assets in the European Union. EU's SMEs generate over 55% of value-added and 66% of personnel employment in all sectors, excluding finance (European Commission¹, 2020).

In the era of trade disruptions and contextual constraints (as in 2020), issues related to the resilience of SMEs become of prime importance for scientific research.

SME resilience is built into processes that include, but are not limited to, being creative in problem solving and strategic in outlook while improving day-to-day performance.

Understanding the factors that improve the resilience of entrepreneurs in times of drastic disruption (such as during the pandemic) is useful for entrepreneurs themselves to develop sound business development plans. Therefore, issues of SME resilience need to be understood holistically, including the real life and business context of entrepreneurs.

Characteristics of micro, small and medium-sized enterprises

Company Category	Staff Headcount	Turnover / or	Balance sheet total
Micro-sized	<10	< 2 million	< 2 million
Small-sized	<50	< 10 million	< 10 million
Medium-sized	<250	< 50 million	< 43 million

Source: own elaboration of European Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises

¹ The definition of a small or medium enterprise (SME) is important for access to finance and support programs of the European Commission that aims to support small businesses and self-employment in EU countries. Small and medium-sized enterprises (SMEs) are defined in the EU Recommendation 2003/361. The main factors determining whether an enterprise is a SME are two: 1. staff headcount ('medium' < 250 workers, 'small' < 50, 'micro' < 10); 2. turnover or balance sheet ('medium' ≤ € 50 million turnover or ≤ € 43 m. balance sheet total, 'small' ≤ € 10 m. turnover or balance sheet, 'micro' ≤ € 2 m. turnover/balance-sheet).

For policy makers, this understanding is useful to steer the local development process towards sustainability, that is, a widely shared eco-socio-compatible prosperity, and to mobilize public resources to support entrepreneurs moving in that direction.

Hopefully, our little research will spark a debate not only on the urgent need for informed attention to specific issues of the wine trade and pandemic disruptions, but also to broader issues surrounding business continuity, resilience, and sustainable local development.

Repartition of enterprises by sizes in Europe



Source: SME Academy elaborated on the basis of European Commission Data
retrieved at: <https://www.smeacademy.eu/news/what-do-the-european-smes-mean-to-the-labour-market>

2. About SMEs, Resilience, Sustainability

Taking an interest in the resilience of SMEs means taking into account both their ability to seize opportunities in risky situations (like pandemic), creating possibilities for rebounding, to develop and their ability to anticipate, mitigate or learn from risks and uncertainties, and to reduce the sources of vulnerabilities. It is therefore necessary for SMEs' organizations to have a strategic, dynamic and positive approach to risk and uncertainties. (Brustbauer, 2016),

SMEs' resilience has received particular interest from researchers after the financial crisis of 2008 (Saad et al. 2021). Resilience is qualified as crucial for the company at the same level as performance and efficiency (Altintas and Broyer, 2009). It is defined as the ability to manage difficult conditions in such a way as to guarantee both the existence and the prosperity of the company (Haase and Eberl, 2019). Also, resilience includes three main variables: anticipation, resistance and adaptation. In the literature, several determinants of SMEs' resilience have been identified (Wishart, 2018), among these, we distinguish the essential role of the entrepreneur and/or manager. These

studies have thus focused on: the mindset of the entrepreneur (Doern & al., 2016), the social capital and the social skills of the entrepreneur (Baron and Markman, 2000), the behavior of the entrepreneur (Conz et al., 2017), and finally the psychological resilience of the entrepreneur (Ayala & Manzano, 2014) which is defined as the ability to anticipate potential threats, deal effectively with unexpected events, and adapt to change in order to become stronger than before.

SMEs must continually face the unknown, marked by the increased uncertainty, especially in periods of crisis in which they have little or no information to carry out a check on the effects of their actions or strategies, and the adequateness of their decisions and responses to changes. The uncertainty is both environmental and linked to their decision-making (Althaus, 2005). It is difficult for them to predict changes in their business environment. These uncertainties expose SMEs to different types of risks that can alter their performance and increase their vulnerability” (St-Pierre and El Fadil, 2017). Known (risks) or unknown uncertainties can indeed reveal real weaknesses or multiple vulnerabilities in the organization of business. All information, experiments or research that can enlighten entrepreneurs and managers on the evolution of their business environment and the potential consequences of their strategies appear as fundamental. In this perspective the pandemic crisis can also be the trigger for SMEs to reconsider their present business models through the identification of new market opportunities and the exploration of new resources and business partnerships through which to create and deliver value (Zutshi et al., 2021).

3. Research Objectives

The main objective of this field survey project is to identify and understand the key elements that determine the resilience of SMEs in times of contextual disruptions (as in the current pandemic situation) resulting in an economic crisis.

Another goal of this research is to explore the path to sustainable local development driven by resilient SMEs in the aftermath of the economic crisis caused by pandemic disruptions.

Finally, the results of this research intend to provide intellectual (and moral) support to the small indigenous entrepreneurs of northern Piedmont who for generations have been engaged in the production and trade of Nebbiolo wine of distinguished quality.

4. Method and Procedure

This research is about the resilience and vulnerabilities of SMEs engaged in the production and trade of wine in northern Piedmont during the coronavirus pandemic of 2020-2021. The aim is to shed some light on their business, context, ethos² and their future.

The research combines field survey, documentary analysis, and stakeholder consultation integrating the qualitative information acquired through fieldworks with the selected info/data obtainable from the specialized media and economic database of sectors, organizations and institutions.

In the first phase, info/data sources, field sites and key-respondents were identified. In the summer, when the coronavirus outbreak rate slowed down and movement restrictions were partially relaxed, field investigations were conducted in selected locations. Subsequently, the field notes and info/data were analyzed. Consultations (both online and on-site) were carried out to interpret the preliminary regarding the business community and territory. The comprehensive critical review of all available info/data and field was carried out to draft this report.

5. Empirical Survey

5.1. Actors, Field and Business

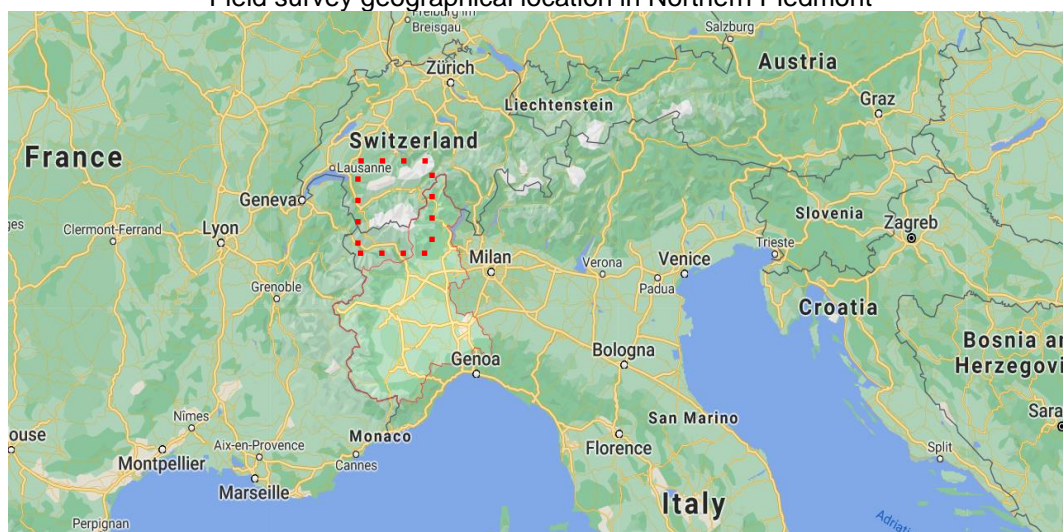
Hundreds of entrepreneurs, organized in small family firms, cultivate vineyards, produce and sell wine in several rural municipalities and small towns over the foothills and lowlands on the southern flank of Monte Rosa massif (western Alps) in northern Piedmont, north-western Italy bordering Switzerland.

Indigenous grapevine farmers and wine producers (*vitivinicultori*) of Northern Piedmont's Alpine foothills and lowlands are well known for the cultivation of Nebbiolo, a grapevine typical of the soil on the southern flanks of Monte Rosa massif³.

² 'Ethos' is a term derived from the Greek word meaning "character". Ethos is used to describe beliefs, guiding principles, values and aspirations which characterize a human group, community, or nation.

³ *Massiccio del Monte Rosa* in Italian, *Monte Rosa-Massiv* in German, *massif du Mont Rose* in French; home to the second highest peak in the Alps.

Field survey geographical location in Northern Piedmont



Source: Google Maps

Nebbiolo is a native black-coloured grape variety, considered valuable and suitable for high quality aging wines, popularly known as *Spanna del Piemonte*. It is also the source of famous wines like Barolo and Barbaresco.

The term 'Nebbiolo' (*Nebiol/Nebiul* in local dialect) appears for the first time in an ampelographic guide of 1200 AD. According to local historians, the term derives from the Latin *nobilis* (= noble), because this grape variety has always been the source of distinct high-quality wines. Others, however, argue that the term may be related to the Italian term *nebula* (= fog, mist) or *nuvola* (= cloud) derived from Latin *nubilum*. Because the dark Nebbiolo grapes are wrapped in light frosty patina, which makes them look clouded and misted. The reference to the 'cloud/fog/mist' could also derive from the late ripening of Nebbiolo grapes, so much so that their harvest often takes place in the period of the misty days of Autumn, when weather frequently becomes cloudy and the fog begins to appear on the Alpine foothills and lowlands.

Nebbiolo is said to be one of the most demanding grape varieties for winemaking, due to its long vegetative and ripening cycle. It is the first vine to sprout but the last to be harvested and the last to drop its leaves.

All this has two fundamental consequences. Its grapes are subjected to various atmospheric agents, being exposed for a long period of the year, and their harvest is rather late compared to the average. The fermentation and bottling demand particular care. Therefore, the working timespan is long, and meticulous workmanship is needed.

The Nebbiolo entrepreneurs perform multiple tasks in their small but complex agri-business firms. They are agriculturalists (horticulture farmers) who cultivate grapevines. They are landscape managers who upkeep the vineyards. They do manufacture as they produce and bottle wine ready for sale. And they function as traders by selling to individual customers, visiting groups, bars, restaurants, wine merchants etc.

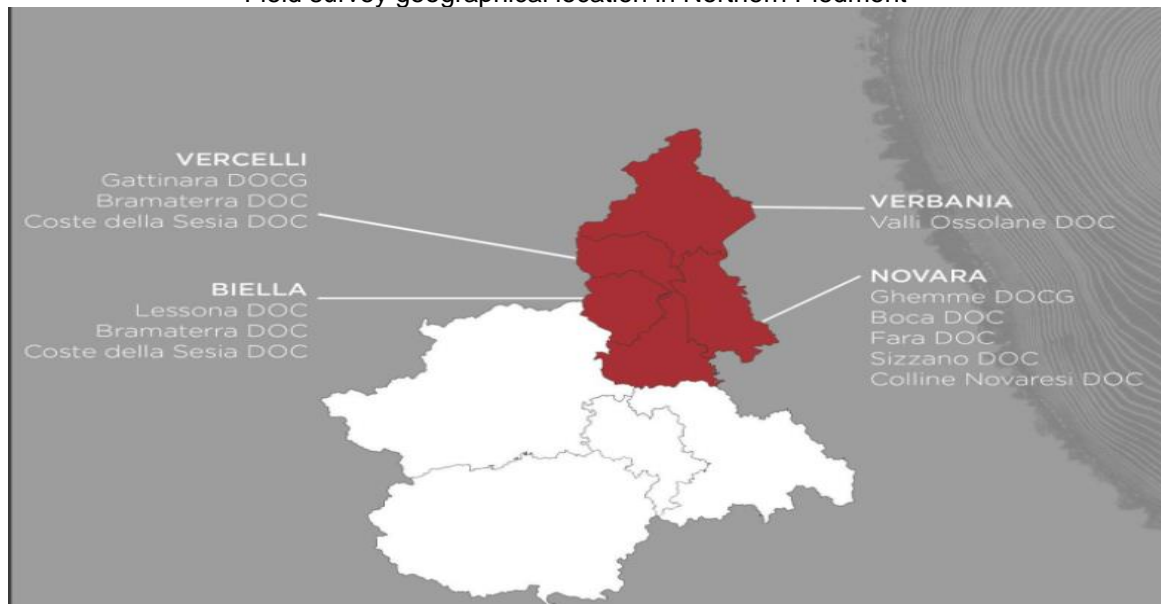
A few Nebbiolo entrepreneurs are also engaged in marginal service activities such as tour guiding, providing hospitality with catering, hosting wining-and-dining events, farm visits etc. (*turismo enogastronomico, agriturismo*). Their involvement in hospitality (lodging) and catering (restaurant, bar) services are negligible; less than 10 firms out of 138 are engaged in such activities as side business. More common are the activities of receiving visitors and organizing guided tours to vineyards and cellars.

Nebbiolo wines are produced in limited quantity by mostly family-run small companies and private households for generations in the lowlands and foothills of the western Alps, including parts of the territories of Biella, Novara, Verbano-Cusio-Ossola and Vercelli, the four provinces in northern Piedmont.

In 1999, a consortium "to protect Nebbiolo of northern Piedmont" (Consorzio Tutela Nebbioli Alto Piemonte) was established by the local firms to guarantee the common quality standards and exclusive right of denomination of the origins of their products - *Denominazione di Origine Controllata* (DOC) & *Denominazione di origine Controllata e Garantita* (DOCG). Their DOC & DOCG Nebbiolo wines are among the high-quality products of four provinces of northern Piedmont.

The majority of SMEs who form northern Piedmont's Nebbiolo consortium are located in the hilly areas of the province of Novara (*Colline Novaresi*), in the foothills of ValSesia (*bassa Val Sesia*, bordering Biella, Vercelli and Novara) and in the municipalities of Verbano-Cusio-Ossola (VCO).

Field survey geographical location in Northern Piedmont



Source: Northern Piedmont Nebbiolo Consortium

Northern Piedmont *Nebbiolo* Consortium Membership

Province	Municipalities	Number of Firms
Biella (BI)	Brusnengo, Candelo, Cerreto Castello, Cossato, Curino, Lessona, Masserano, Mottalciata, Sostegno, Quaregna, Valdengo, Vigliano Biellese, Villa del Bosco	23
Novara (NO)	Agrate Conturbia, Barengo, Boca, Bogogno, Borgomanero, Briona, Cavaglietto, Cavaglio d'Agogna, Cavallirio, Cressa, Fara Novarese, Fontaneto d'Agogna, Gattico, Ghemme, Grignasco, Maggiore, Marano Ticino, Mezzomerico, Oleggio, Prato Sesia, Romagnano Sesia, Sizzano, Suno, Vaprio d'Agogna, Veruno	72
Verbano-Cusio-Ossola (VCO)	Beura, Cardezza, Bognanco, Crevaladossola, Crodo, Domodossola, Masera, Montecrestese, Montescheno, Pallanzeno, Piedimulera, Pieve Vergonte, Premosello, Ornavasso, Trontano, Viganella, Villadossola, Vogogna	23
Vercelli (VC)	Gattinara, Lozzolo, Roasio, Serravalle Sesia	20
Total		138

Source: own elaboration on Northern Piedmont Consortium data

Location of Nebbiolo producers in Northern Piedmont, Italy



Source: Google Maps

There are more Nebbiolo entrepreneurs in the province of Novara compared to other provinces. The province of Novara borders the Milan metropolitan area's western peripheries. Novara and VCO are very close to north-west Italy's tourist destinations such as big navigable lakes (Lago Maggiore and Lago d'Orta), ski facilities and Alpine tourism spots (Val Sesia, Val d'Ossola). Novara and VCO are also close to Switzerland which represents one of the major wine export destinations for Italian wines.

The total agricultural surface used for the cultivation of Nebbiolo by consortium members is around 500 hectares on hills and lowlands that fall under the municipal jurisdiction of 61 municipalities in four bordering provinces.

Very few among the Nebbiolo consortium members cultivate more than 50 hectares. 59 hectares of vineyards belong to the largest producer who delivers about 350.000 bottles of wine in a year and employs around 15 permanent collaborators including family members and part-time and seasonal collaborators. Several more temporary collaborators are employed during the high work pressure seasons of harvest or special occasions.

The smallest firms cultivate around 0.5/1.0 hectare, produce around 1500 bottles a year, and employ 1-2 permanently active personnel (usually, the owner and his/her family member) and few seasonal/part-time collaborators for harvest. Small wine

entrepreneurs are usually engaged in other activities for the bulk of their income. Some are retired workers (pensioners) who continue helping their offspring, kin, and friends in winemaking.

On average, the Nebbiolo firms cultivate circa 20 hectares and 3 collaborators, including family members and seasonal part-time collaborators.

Pride of local heritage, emotional attachment to the territory, and maintenance of family traditions play an important role in the continuity of business despite winemaking being economically non-viable for the tiny (micro) entrepreneurs.

To maintain the specific characteristics and quality standards of the Nebbiolo wines, which are labelled as specially denominated wines and protected brands (DOC & DOCG), attention is paid to the containment of yields. Use of chemical agro-inputs is quite limited. The overall tendency is to follow an eco-compatible production process. Certified "organic" labels are increasing in number.

As a final product (bottled wine), the Nebbiolo of northern Piedmont does not have enough international brand recognition and market share, unlike the Barolo from southern Piedmont or the Chianti from Tuscany, despite being on par in quality.

The main commercial channel of high quality Nebbiolo wine is in the upscale firms of hospitality, restaurant, and catering (Ho.Re.Ca.) businesses that have customers in Italy, Switzerland, Germany, the rest of Europe and, to a lesser extent, outside Europe. Another very important commercial channel for northern Piedmont's Nebbiolo wine is the food and wine tourism (*turismo eno-gastronomico*) that includes special events and fairs organized by individual firms or by consortiums in collaboration with the local institutions in the wine-producing territories.

The Covid-19 breakout, successive lockdown and continued restrictions practically disrupted the two major commercial channels for a substantial period in 2020. After a partial lull during the Summer 2020, coronavirus contagion spread further, and restrictions were imposed again on people's movement. Even after the slowdown of contagion rate and partial relaxation of lockdown measures, many restrictions for interactions, movements and gathering were and are still in place. The coronavirus paranoia is widespread. All that is inhibiting commercial, social and recreational activities. The Nebbiolo wine business has been hard hit by the disruptions and inhibitions.

Perhaps, the Nebbiolo firms could recover together with the recovery of global and local economies when the pandemic will be over, but some permanent changes could also occur. Therefore, it is important to assess the pandemic's impact on local businesspersons and their context, the response from local actors (entrepreneurs, consortium, institutions) and the key-elements of resilience. And it is necessary to explore alternative images of the future for Nebbiolo entrepreneurs, their business, community and territory.

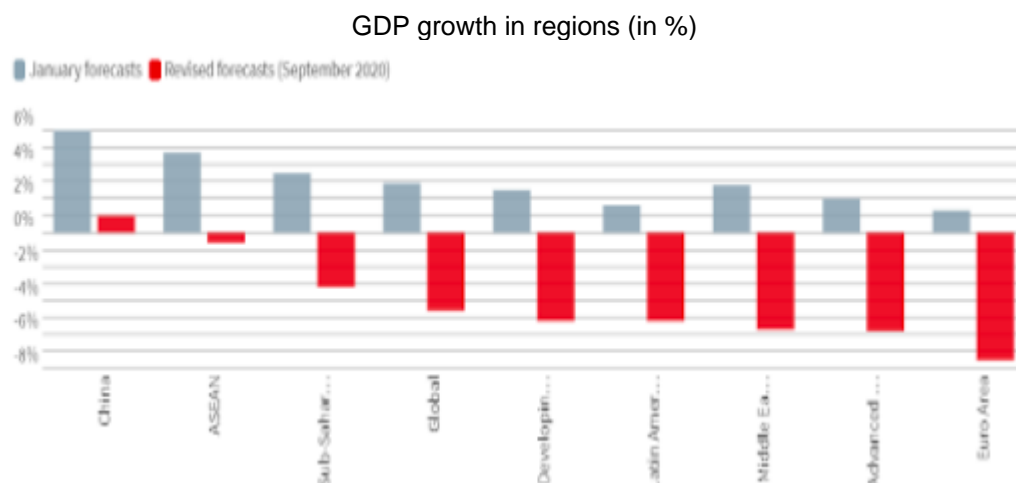
5.2. Pandemic Disruptions

Northern Piedmont's Nebbiolo wine entrepreneurs have suffered disruption in their commercial activities and sharp decline in their income and investment for most of 2020. Their business problems constitute a tiny part of a large scenario of global economic crisis caused by the China-originated coronavirus disease of 2019 (Covid-19).

Current coronavirus pandemic is the largest public health crisis in living memory. While world-wide the number of coronavirus infection cases continues to increase at the time of writing of this report, in several places the cases are diminishing, new cases (mutants and variants) are emerging. Vaccine roll-out is proceeding in many places. In Italy and in the rest of Europe some containment measures, which disrupt normal movement and meetings of people, are in place. The disruptions have triggered a global economic depression which is likely to become the most severe since World War II.

In 2020 (continuing in the first months of 2021), the worldwide contagion of Covid-19 has dramatically affected lives, livelihoods, consumption, and lifestyle of people. Public health services have been overwhelmed. Several business sectors and supply chains have been disrupted, particularly the sectors of restaurants, bars, cafeterias, small walk-in shops, retail trade, services and tourism which are the main commercial outlets used by the small-scale producers of distinct products such as Nebbiolo wines.

Real economic growth, consumption, trade and investment all over the world declined sharply. The main export market for Italy's wines is the euro currency zone within the European Union, and that is the most pandemic-hit area in the world, followed by other industrially advanced countries, Middle East, Latin America, other developing countries, sub-Saharan Africa, south-east Asia, and China.



Source: OECD & IMF, 2021

Economic projections depict an increasingly negative picture of global recession. In June 2020, Organization for Economic Co-operation and Development (OECD) projected a -6% drop in global GDP, and -7.6% to double digit fall in case of a second pandemic wave (which actually took place).



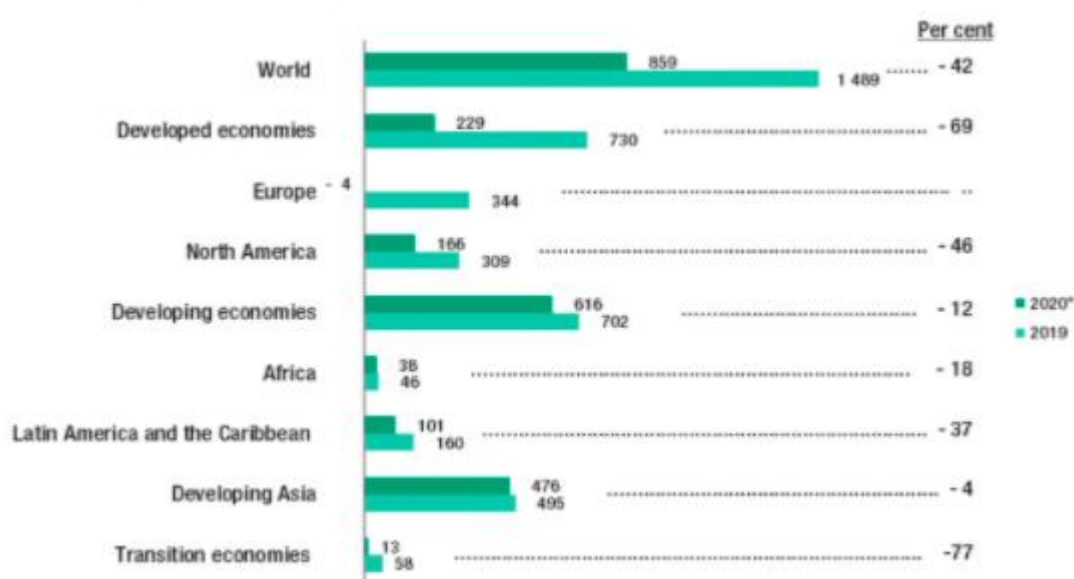
IMF, 2020

The initial direct impact of the lockdowns may have caused a decline in the level of output between one-fifth to one-quarter in many economies, with consumers' expenditure potentially dropping by around one-third. Several other international

organizations issued similar forecasts. The International Monetary Fund (IMF) projected a decline in global GDP by -4.9 percent in 2020, 1.9 percentage points below the earlier forecast, followed by a forecast of partial recovery with global growth at 5.4 percent in 2021.

The World Investment Report issued by the United Nations Conference on Trade and Development (UNCTAD) indicates a steep decline in global foreign investment by -40% in 2020, with a further possible decrease by -5 to -10% in 2021 (UNCTAD, 2020).

FDI inflows by region, 2019 and 2020 (billion of US \$)



Source: UNCTAD, 2020

The World Trade Organization (WTO) reported a decline in the volume of global merchandise trade in the first quarter of 2020 by -3% year-on-year. Further decline of -18.5% in the second quarter is expected, potentially leading to a drop of -32% in 2020.

Merchandise trade volume and real GDP, 2017-2022 (annual % change)

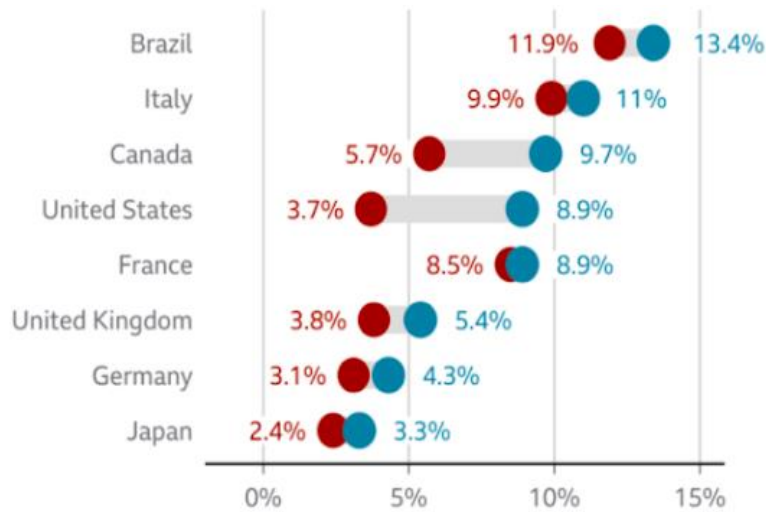
	2017	2018	2019	2020	2021P	2022P
Volume of world merchandise trade^b	4.9	3.2	0.2	-5.3	8.0	4.0

Source: WTO, 2021

Recovery in 2021 is projected to be modest. So, there are serious doubts about the prospect of export to the international markets of distinct Italian products like Nebbiolo wines. The disruptions are continuing also in relationships with international wine merchants and international fair/expo for exportation to foreign markets. According to the official data provided by Italy's national statistical bureau (ISTAT), the exportation of wine to foreign market from Italy shrank by -3,4% and the exports from Piedmont diminished by -2,1% in the first semester of 2020 (January-June), compared to the same period in 2019. It should be noted that, from January to mid-March 2020 there were no pandemic disruptions. So, the fall in exports during and after the lockdown periods (March-June, November 2020 - January 2021) could be steeper than estimated.

Based on the information provided by the International Labour Organization (ILO), the IMF has depicted a worsening picture of unemployment in all major economic systems. Italy's chronic unemployment and under-employment situation is likely to get worse in near future.

World economies struggling with rising unemployment
(yearly unemployment rate change, 2019 and 2020 compared)



Source: ILO & IMF, 2021

5.3. Pandemic and Italy's Business World

In 2020, Italy was the first area in Europe to report coronavirus outbreak and the first to introduce lockdown measures. The economic impact seems to be generally negative for Italy and euro-zone. Italy's economy was already more sluggish than average in the Eurozone since the financial crisis of 2008-2009. In 2020 it got worse; it is expected to do better in 2021.

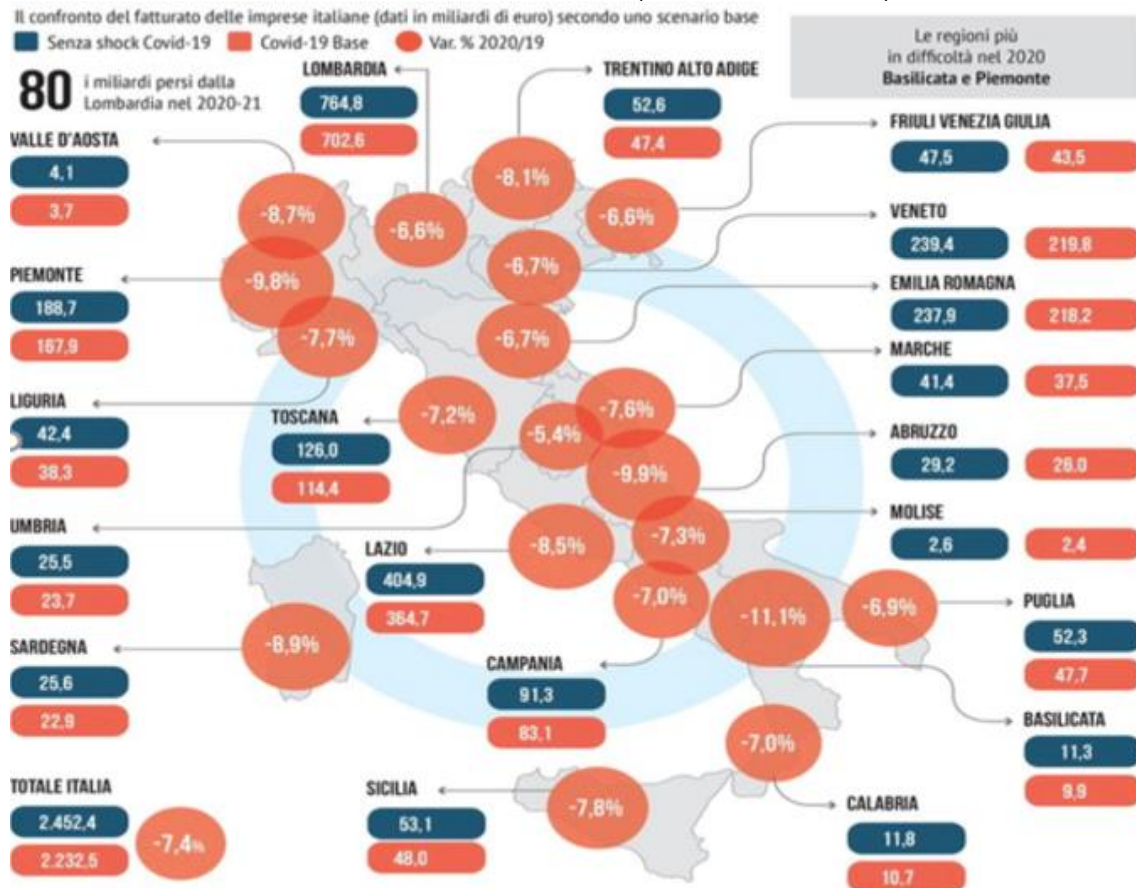
GDP Records, Euro-zone and Italy



Source: Istat & Eurostat, 2021

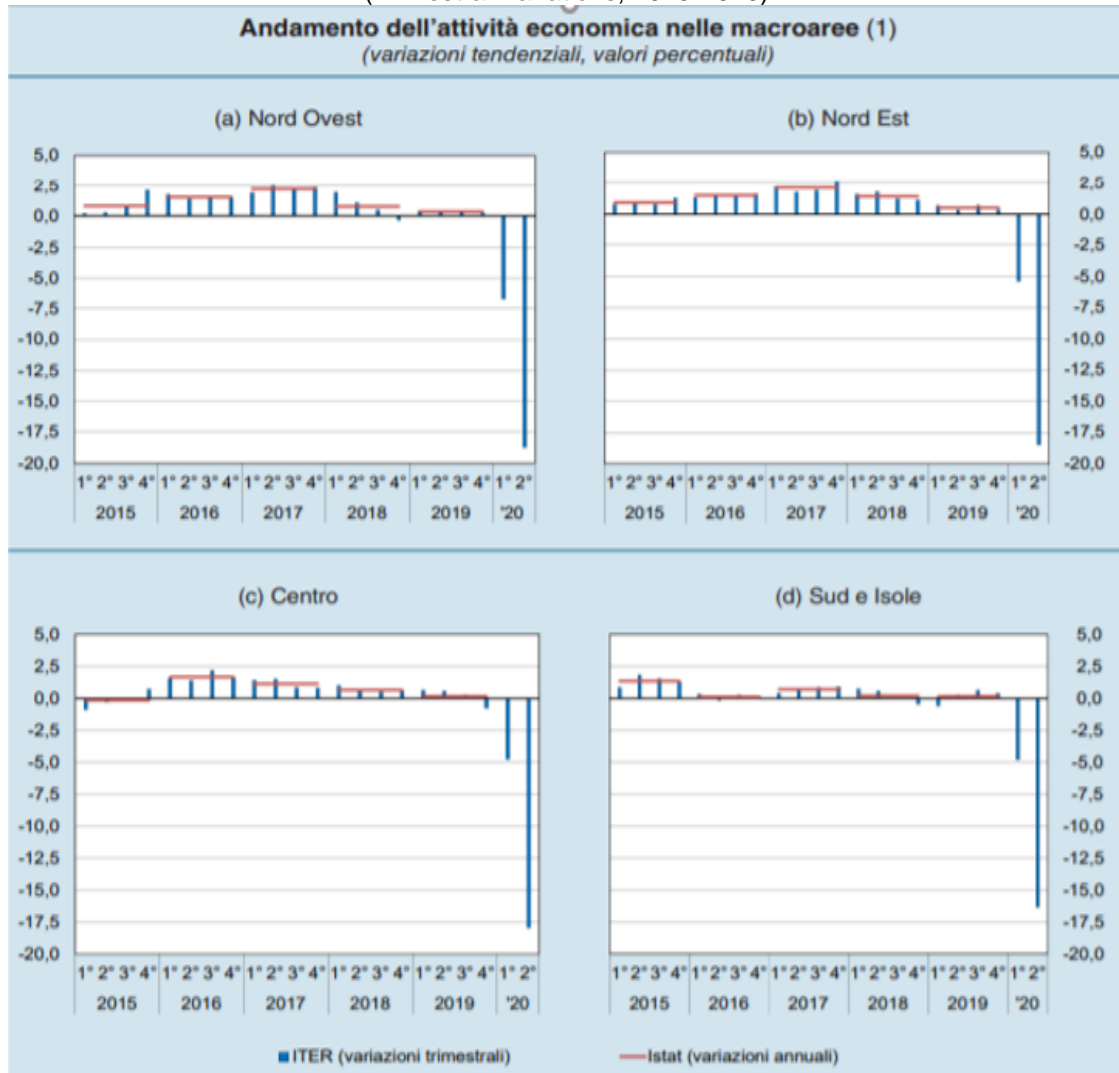
Pandemic disruptions have negatively impacted the business landscape of Italy. However, there seems to be territorial variations at sub-national level (macro-area/region/province). Piedmont, the home region of Nebbiolo wine entrepreneurs, is the second worst affected region in terms of decline in the revenue of local enterprises.

Comparison of Enterprises' Revenues in Italy's 21 Administrative Regions, Before and After the Pandemic (Variation 2019-2020)



ISTAT, Banca d'Italia & Cerved (2021)

Comparison of Enterprises' Revenues in Italy's 4 Macro-areas:
(a) North-west, (b) North-east, (c) Central Area, (d) South and Islands
(Trimestral Variations, 2015-2020)



Source: ISTAT, 2021

According to Confartigianato, association of manufacturing and craft SMEs of Italy, the pandemic has sharply reduced industrial employment. Confartigianato's examination of the available ISTAT data shows that the greatest reduction is found in the class of medium-large companies, with 50 employees or more. It seems that micro and small enterprises are more resilient.

5.4. Commercial Problems of Northern Piedmont's Nebbiolo Wine Entrepreneurs

There are sectoral variations in the severity of economic impact in the business landscape of Italy. Northern Piedmont is hard hit because this sub-region relies to a great extent on two most pandemic-disrupted business sectors, i.e. hospitality and tourism. The two interrelated sectors are the most important commercial channels for northern Piedmont's wines, particularly the small-scale high quality Nebbiolo wines.

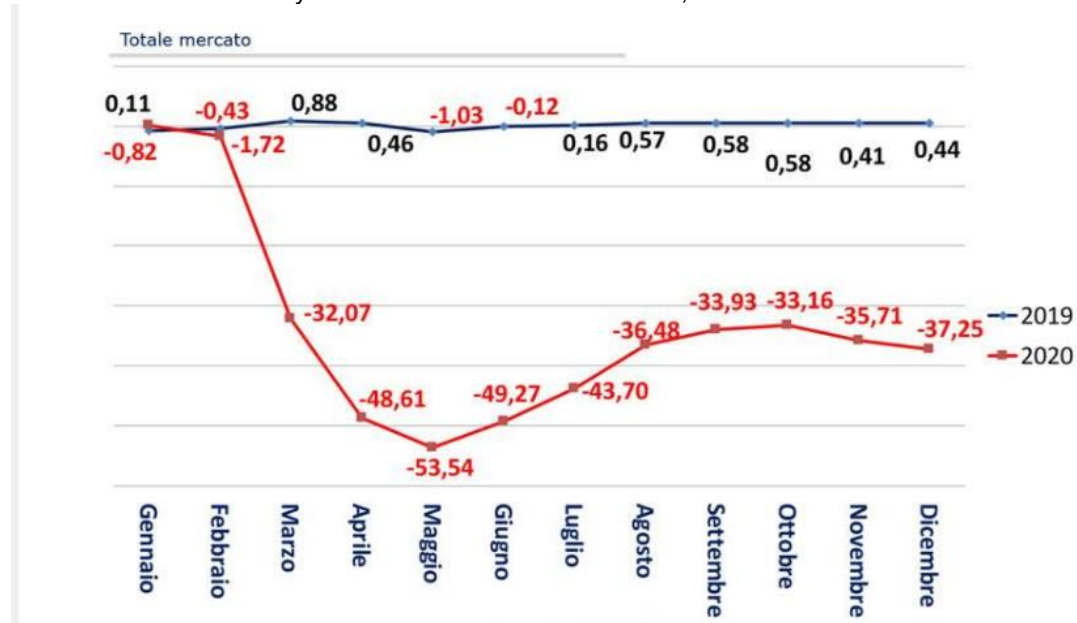
Italy's Worst Hit Business Sectors,
Negative Variation in Gross Revenue 2019-2020 (in millions of Euro)



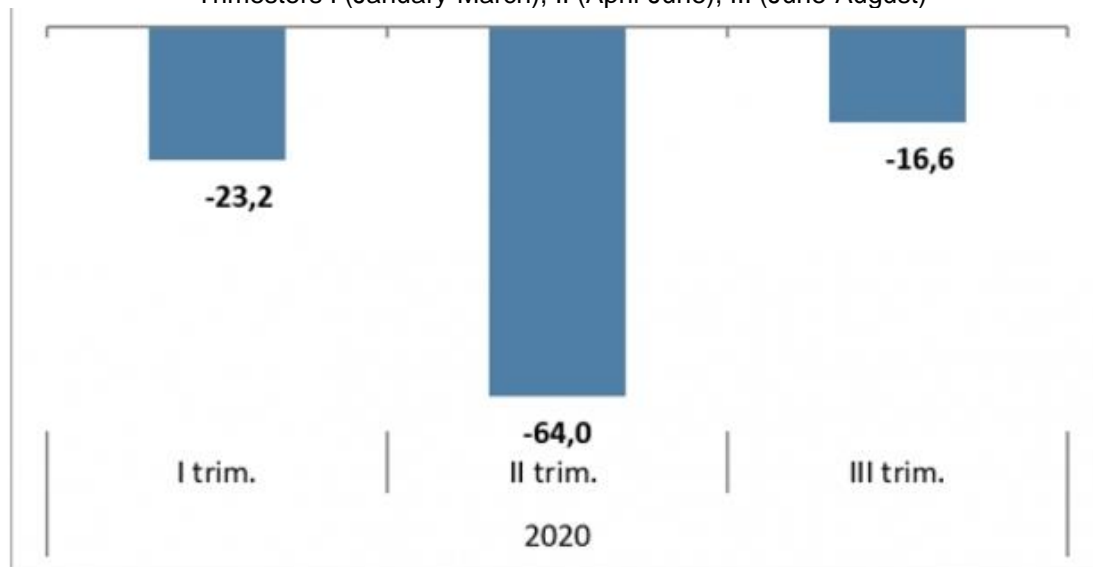
Source: Cerved, 2021

The situation is dire in the commercial channel of hospitality, restaurant and catering (HORECA). According to a recent estimate by Federvini (national association of wine entrepreneurs) and Federazione Italiana Pubblici Esercizi (FIPE, the Italian federation of restaurateurs and bar-owners, part of national guild of merchants) nearly one-third of all eateries and bars in Italy have closed permanently and the remaining ones have seen drastic decline in their earning in 2020.

Italy's business sector of Ho.Re.Ca., 2019 and 2020



Source: Federvini, 2021

Decline in Gross Revenue of Catering Business in Italy in 2020
Trimesters I (January-March), II (April-June), III (June-August)

Source: FIPE/Confcommercio, 2021

Tourism contributed over 10% percent of global GDP and 300 million jobs in 2019. The COVID-19 pandemic has led to an unprecedented collapse in economic activity. A major commercial channel for wine is tourism, particularly the gourmet tourism (*turismo eno-gastronomico*) consisting in visit to cellars and vineyards for tasting, banqueting and purchasing wine. According to Italy's observatory of wine tourism (Movimento

Turismo del Vino), around 12% of the total wine trade in Italy takes place as direct purchase from the wineries by visiting individuals and groups during vacation, weekends and special events/banquets organized by local stakeholders to promote local wine and tourism. In case of Nebbiolo wine of northern Piedmont, the tourism channel is particularly important because the sub-region, bordering Switzerland, is located in a favorable position for its proximity to big urban metropolitan areas of north-western Italy (Milan, Turin, Genova) and Switzerland, major rail and road transport corridors and international airports. And the sub-region has many Alpine, rural and lake tourism destinations.

In normal times, 53% of all visiting customers are said to be foreigners (mostly from Switzerland and EU countries). After the pandemic disruptions in tourism since 11 March 2020, all visits and tastings for small and large groups in the Nebbiolo territory, already booked for 2020, were canceled. There are no new reservations for 2021, while the agenda for 2020 was full at the end of 2019. In the first eight months of 2020, the reduction in this form of wine trade is estimated to be around -22% in individual and small groups, -24% in guided group tours, and -9% in special events.

Special events are concentrated in Spring and Summer. This explains the relatively mild decrease in wine trade through events because there were lesser restrictions in Summer 2020, and domestic tourism did recover to a limited extent. The loss in tourism has badly affected the hotels, restaurants and bars where the wines were consumed.

In the first half of 2020, the consumption of high-quality wines (DOC and DOCG) at hotels, restaurants and bars seems to have gone drastically down; the negative variation is estimated to be nearly -70% compared to the previous year. Overall wine sales by primary producers to HORECA is estimated to have dropped between nearly 50% less in volume and nearly -70% in value. The primary producers had to lower down the price and sell away to stock merchants and supermarket chains as demand is low in the usual channels. According to provisional estimates, the total financial loss for primary producers could be a reduction by more than -50% in 2020 compared to 2019.

In 2020 the trend in value has marked a -24%, with an unsold volume compared to the previous year of 3 million hectoliters. The months of the pandemic and forced closures, according to UIV, has highlighted a very strong disparity in the performance of the various companies. For the first time, in fact, the volumes of purchases in large-scale

distribution exceeded those of HORECA, traditionally the context with the greatest added value. In Italy, the decrease in value of orders for restaurants (-38%), wine shops (-23%) and direct sales (-19%) was only partially offset by large-scale distribution (+ 12%), for a balance negative to sales of over 3 billion euros (data for 2020).

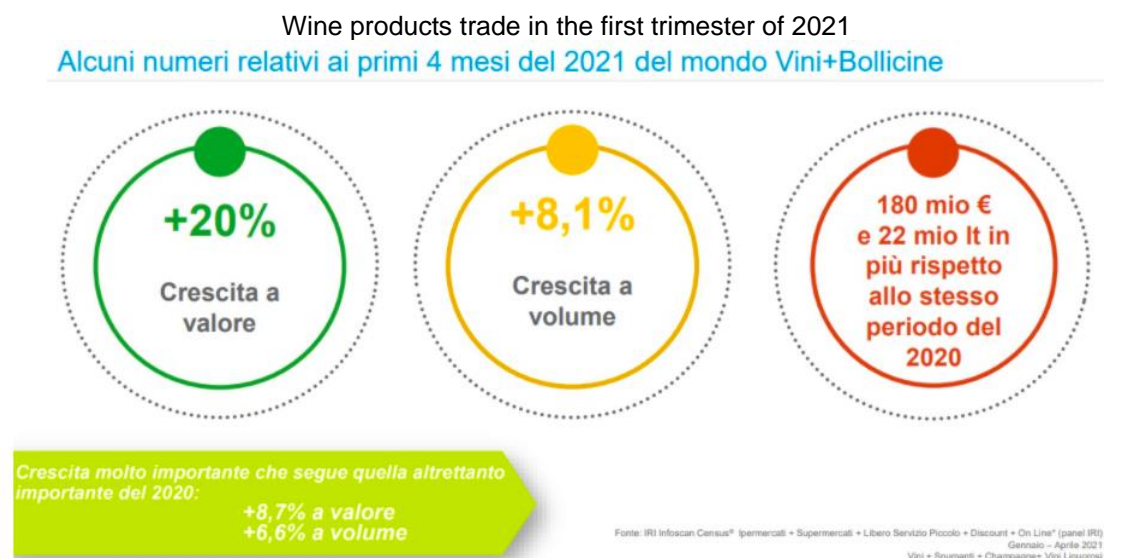
Italy's top performing business sector during the pandemic year has been e-commerce and digital services. The majority of Nebbiolo entrepreneurs, like the majority of small-scale wine entrepreneurs all over Italy, who run very small family firms, do not make enough use of e-commerce and digital services due to the shortage in technical competence, resources, and time.

Best Performing Business Sectors in 2020
Positive Variation in Gross Revenue, 2019-2020 (in millions of Euro)

LE PERFORMANCE MIGLIORI		
COMMERCIO ONLINE	6.707 €	+55,0%
DISTRIBUZIONE ALIMENTARE MODERNA	132.966 €	+22,9%
INGROSSO PRODOTTI FARMACEUTICI E MEDICALI	38.114 €	+13,8%
APPARECCHI MEDICALI	7.649 €	+10,2%
SPECIALITÀ FARMACEUTICHE	27.841 €	+8,2%
MATERIE PRIME FARMACEUTICHE	4.703 €	+7,5%
LAVANDERIE INDUSTRIALI	1.714 €	+4,6%
CANTIERISTICA	10.118 €	+4,0%
GAS INDUSTRIALI E MEDICALI	2.222 €	+4,0%
PRODUZIONE ORTOFRUTTA	5.530 €	+2,5%

Source: Cerved, 2021

Another business sector doing relatively well during the pandemic is the large-scale organized modern distribution (supermarket chains). Large corporations are engaged in this sector who possess enough resources, logistics and manpower to continue their business by organizing various measures and alternative forms such as online shopping, drive-thru, home delivery etc. Produced in small-scale and relatively pricey, the high-quality Nebbiolo wines have no access to mass market through the modern organized distribution channels.



Source: IRI infoscansensus, January – April 2021

5.5. Logistical Issues

Because of all above mentioned circumstances, according to the entrepreneurs contacted, wine sales by primary producers seems to have noticeably diminished in March-June 2020 (the first four months of the pandemic) compared to the same period in 2019. Despite some relaxation in restrictive measures during Summer 2020 (July-September) sales by primary producers does not seem to have recovered totally from the loss incurred in Spring. The renewed restrictions in Fall and Winter have worsened the situation.

Overall, Nebbiolo entrepreneurs of northern Piedmont estimate their loss in sales to be substantial for the year 2020, and probably also for 2021, According their rough (not yet numerically verified) estimate, the pandemic year's commercial loss could be from -80% to -50% compared to the pre-pandemic year.

Despite a sharp decline in sales, the activities related to production continue as the grapevine cultivation, vineyard management, fermentation and bottling need to keep going. When the pandemic began in early Spring 2020, the Nebbiolo vineyards were already blooming. Grapevines ripened in the Summer, ready to be harvested in the Fall. The wine derived from the harvest of previous year was supposed to have been sold by late Summer, to make room for the new wine from the Fall harvest.

Besides the financial loss due to the contraction in sales and export, the small Nebbiolo producers of northern Piedmont are facing daunting logistical challenges in storing the

unsold wine. As small family firms with limited space and facilities, the northern Piedmont's Nebbiolo producers are in trouble.

According to Federvini (Italy's national business guild of wine producers and traders), as of 31st December 2020, there were more than 60 million hectoliters of wine, more than 8 million hectoliters of musts and a little less than 3 million hectoliters of new wine still in fermentation in the Italian wine plants and cellars.

Compared to 2019, there is an increase in idle stocks of wines in 2020 and 2021. More than 60% of all unsold wines are said to be in northern Italy (including the region of Piedmont). More than 50% of the unsold wine is of high-quality and special denomination (DOC and DOCG) like many Nebbiolo wines of northern Piedmont.

5.6. Institutional Support and Local Initiatives

The regional administration of Piedmont (*Regione Piemonte*) offered little direct support to Nebbiolo producers of northern Piedmont to mitigate their loss due to the pandemic. The central government of Italy offered 1200 Euro as a one-off direct cash support to all Italian citizens who are registered as entrepreneurs and self-employed workers and who have not yet retired to receive regular pension. Naturally, also the Nebbiolo entrepreneurs benefited from this little blanket help.

The central government offered another one-off direct cash support specifically to vineyard cultivators at the rate of 600 to 900 Euro per hectare of vineyard (depending on the record of their previous year's yield and revenue) in case the entrepreneurs choose to reduce their grapevine production by 15% in 2020.

Financial commitment by Italy's Ministry Agriculture and Forest for wine producers in 2021

MISURA	Stanziamiento
Promozione sui mercati dei Paesi esteri	98.027.879
Ristrutturazione e riconversione vigneti	144.162.893
Vendemmia verde	4.805.420
Investimenti	57.665.151
Distillazione sottoprodotti	19.221.657
Totale	323.883.000

		PROGRAMMA NAZIONALE DI SOSTEGNO - Settore vino - RIPARTIZIONE FONDI 2021					
		Promozione sui mercati dei Paesi terzi	Ristrutturazione e riconversione dei vigneti	Vendemmia verde	Investimenti	Distillazione sottoprodotti	Totale
1	Piemonte	6.015.066,00	9.175.769,00	334.792,00	3.843.910,00	0,00	19.369.537,00
2	Val d'Aosta	137.066,00	0,00	3.264,00	19.588,00	0,00	159.918,00
3	Lombardia	3.054.020,00	5.725.705,00	175.980,00	2.201.022,00	0,00	11.156.727,00
4	Bolzano	880.479,00	863.427,00	39.840,00	411.725,00	0,00	2.195.471,00
4	Trento	1.767.360,00	1.352.739,00	73.543,00	711.806,00	0,00	3.905.448,00
5	Veneto	13.240.405,00	17.210.149,00	701.953,00	7.653.748,00	0,00	38.806.255,00
6	Friuli VG	3.181.336,00	4.692.056,00	202.435,00	2.153.024,00	0,00	10.228.851,00
7	Liguria	224.875,00	92.087,00	11.598,00	88.008,00	0,00	416.568,00
8	Emilia Romagna	5.806.222,00	15.037.753,00	370.821,00	5.232.476,00	0,00	26.447.272,00
9	Toscana	7.039.777,00	15.183.838,00	439.175,00	5.671.821,00	0,00	28.334.611,00
10	Umbria	1.182.609,00	3.148.332,00	90.357,00	1.171.809,00	0,00	5.593.107,00
11	Marche	1.581.571,00	3.909.036,00	125.728,00	1.536.180,00	0,00	7.152.515,00
12	Lazio	1.627.853,00	2.341.971,00	131.813,00	1.259.275,00	0,00	5.360.912,00
13	Abruzzo	2.961.529,00	6.342.920,00	240.075,00	2.709.035,00	0,00	12.253.559,00
14	Molise	371.691,00	971.379,00	38.542,00	425.533,00	0,00	1.807.145,00
15	Campania	1.848.021,00	3.874.955,00	174.276,00	1.820.647,00	0,00	7.717.899,00
16	Puglia	6.920.756,00	13.852.422,00	644.743,00	6.638.946,00	0,00	28.056.867,00
17	Basilicata	397.510,00	932.561,00	36.311,00	404.384,00	0,00	1.770.766,00
18	Calabria	796.653,00	2.170.338,00	77.202,00	897.281,00	0,00	3.941.474,00
19	Sicilia	7.689.996,00	32.952.946,00	702.210,00	10.803.854,00	0,00	52.149.006,00
20	Sardegna	1.894.717,00	4.332.510,00	190.762,00	2.011.079,00	0,00	8.429.068,00
	Totale regionale	68.619.512,00	144.162.893,00	4.805.420,00	57.665.151,00	0,00	275.252.976,00
	Quota nazionale	29.408.367,00	0,00	0,00	0,00	19.221.657	48.630.024,00
	Totale generale	98.027.879,00	144.162.893,00	4.805.420,00	57.665.151,00	19.221.657	323.883.000,00

Source: Italian Ministry of Agriculture and Forest, 2021

A compensation of 0,06 Euro (6 cent) per hectoliter per day for six months was offered to wine producers who would store the already bottled wine in their cellars or in rented space.

For those Nebbiolo entrepreneurs who needed a loan to buy extra containers or equipment, or to rent storing space, a new credit facility was offered with 0% interest rate for a loan amount equivalent to 80% of the annual revenue of their firm. For those who had received a loan before the pandemic and were paying back in periodical installments some respite was provided by suspending the payback and interest for the current fiscal year.

The direct and indirect support provided by the government to Nebbiolo entrepreneurs of northern Piedmont is quite below the actual need to compensate for their financial distress.

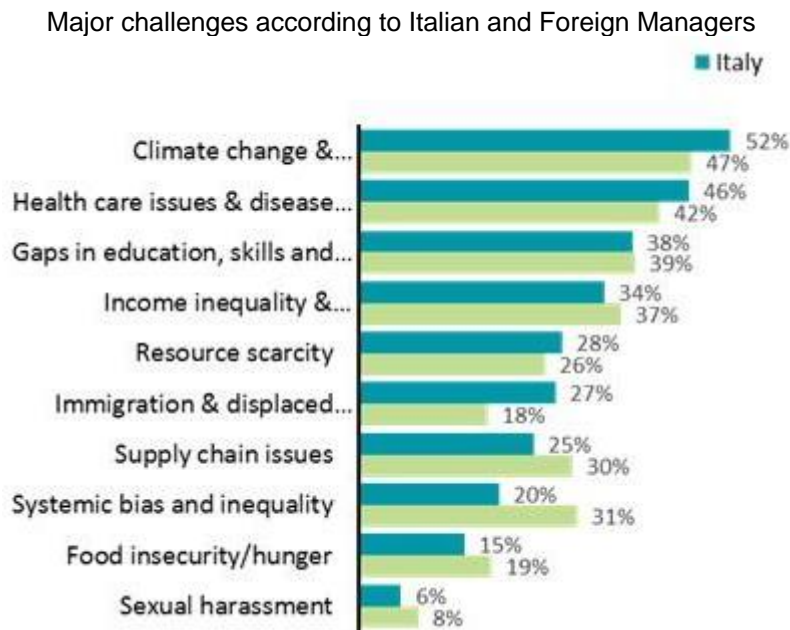
Usually, Nebbiolo entrepreneurs, as most of the entrepreneurs of other high-quality wines of Piedmont and Italy, do not sell their wines to supermarket chains (large-scale distributors). There seems to be some change in this regard after the pandemic. Since the pandemic, Italy's finest quality wine trade seems to have shifted towards dealings with large-scale distributors (supermarket chains) and online trading, which grew by 9% and 102%, respectively, compared to last year. The national trend is reflected also at the local (northern Piedmont) level.

A very small minority of Nebbiolo entrepreneurs were engaged in e-commerce before the pandemic. The pandemic disruption seems to have changed that too. There seems to have occurred an accelerated digitalization (in terms of e-commerce) in many entrepreneurial sectors, including wine entrepreneurs.

6. Critical Analysis

6.1. Business Resilience, Global and Local

Recently, Deloitte (international consulting and auditing firm) presented Global Resilience Report 2021 in the World Economic Forum at Davos (Switzerland). Deloitte's report is based on a survey about pandemic disruptions and new challenges as conceived and practiced by 2,260 chief executive officers (entrepreneurs and top managers), belonging to the private and public sectors in 21 countries, including 102 leading businesspersons from Italy.



Deloitte Global Resiliency Report, WEF, 2021

Deloitte's survey sought answers to the following questions:

- How do organizations cope with the pandemic and beyond?
- What characterizes a resilient organization?
- And what are the top societal issues going forward?

The survey suggests that organizations that deliberately build the following attributes into their operations and cultures are better positioned to survive disruptions and to recover earlier.

Prepared. Over 85% of respondents considered that pre-planning and finding a balance in addressing short- and long-term priorities helped them to cope with pandemic disruptions.

Adaptable. Just 22% of the surveyed businesspersons said their organizations had the technologies and skills needed to facilitate remote and flexible working before the pandemic. In 2020, out of necessity, +42% percent adopted these technologies and relative skills. Nearly 75% respondents of those who had already (before pandemic) adopted such technologies and developed the necessary skills said that they are coping better thanks to the programs such as digital training, outplacement, flexible times/options, partial work-from-home through remote connectivity. Remote connection technology was a critical enabler throughout the pandemic.

Collaborative. Two-thirds of respondents who said their companies removed organizational silos⁴ before the pandemic reported managing the events of 2020 better than their peers who had not done the same. Collaborative, not competitive, atmosphere within the organization mitigates the risks and unleashes creative solutions and innovation.

Trustworthy. Building trust with the stakeholders and community, not only with the employees and shareholders or investors, is considered another important element in business resilience. Organizations that prioritized the health and safety of their employees and customers, the morale of their employees, and the security of their data and communications weathered 2020 pandemic disruptions better than those who did not do so.

Responsible. Beyond the bottom line of business success, the entrepreneurs acknowledge that the business world must address the needs of key stakeholders and be socially responsible. Among the entrepreneurs and top managers surveyed by Deloitte, an overwhelming majority (87%) said that the stakeholder-oriented and socially responsible organizations could adapt quickly to disruptive events.

The current commercial problems and logistical issues negatively affecting the Nebbiolo wine entrepreneurs of northern Piedmont, illustrates their weakness in preparedness. They may have to do more homework in terms of strategic foresight exercise (scenario planning) in order to balance their short- and long-term priorities.

Adaptability seems to be a frequent characteristic among the Nebbiolo wine entrepreneurs. A vast majority of them display a certain level of versatility as multi-tasking required in agri-business. They display enough flexibility in working modalities and procedures within the limits of territorial characteristics, agricultural activities, seasonality and logistics. They are quite adaptable.

Collaborative, not competitive, working atmosphere within the organization is quite common among the Nebbiolo entrepreneurs as most of the firms are small-sized and owned/run by family members, and their staff (full-time/part-time/seasonal), usually, are familiar fellow local citizens sharing the same territory and traditions.

Trust is key for northern Piedmont's Nebbiolo entrepreneurs. They do prioritize safety and happiness of their collaborators, customers and partners. But they do not display

⁴ 'Organizational silos' describe the compartmentalization and communication-gap that occur when employees or entire departments within an organization do not want to, or do not have the adequate means to share information or knowledge with each other.

enough capabilities in securing data, maintaining efficient communication, building wider networks, and engaging new partners. The small Nebbiolo entrepreneurs acknowledge that they must be attentive to the needs of collaborators and stakeholders and be socially responsible.

Even the least educated Nebbiolo entrepreneurs are aware of **climate uncertainty** and **environmental issues**, and their lifestyle and working ways are increasingly environment-friendly. In their outlook, however, a serene and hedonistic fatalism seems to prevail over anguish-filled environmentalism of the urban-based environmental activists.

6.2. Business resilience, in Italy and North Piedmont

Italy's national statistical bureau (ISTAT) has thrown some light on the features and resilience of nearly 1 million enterprises of all sizes⁵, and has classified them in the following categories:

'Statics-in-Crisis'
(*statiche in crisi*)

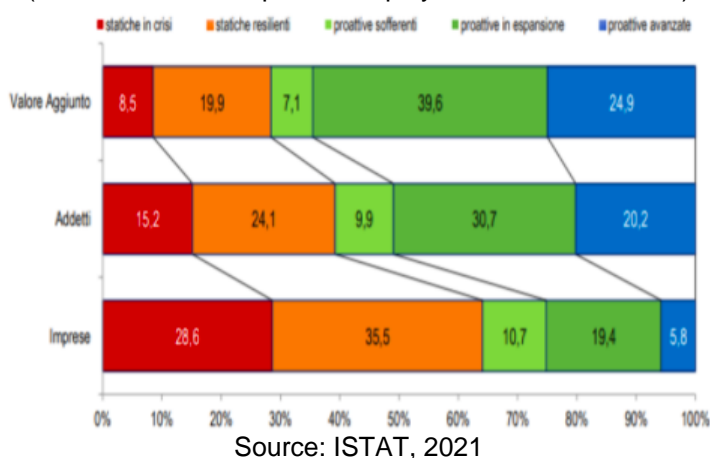
'Resilient Statics'
(*statiche resilienti*)

'Suffering Pro-actives'
(*proattive sofferenti*)

'Expanding Pro-actives'
(*proattive in espansione*)

'Advanced Pro-actives'
(*proattive avanzate*)

Italian Enterprises' Current Situation
(distribution of enterprises, employees and added value)



28.6% of enterprises are considered 'statics-in-crisis' (*statiche in crisi*) that were in trouble even before Covid-19 pandemic disruptions, but are likely to survive despite the

⁵ Between 23rd October and 16th November 2020, ISTAT carried out the second edition of the rapid survey on the situation and prospects of business enterprises in the Covid-19 health emergency, aimed at circa 1 million small (min. 3 employees) to large companies, in total consisting of 12 million employees who, overall, represent almost 90% of the added value and about three quarters of the overall employment of industrial and service companies. The integration of this information with that collected through the previous rapid survey (May 2020) allows to deepen the evolution of the operating conditions and strategies of companies during 2020 and to evaluate through which processes the Italian businesses are trying to exit from the Covid-19 emergency.

crisis. On average they have fewer than 7 employees. They display low propensity to export, low labor productivity and little added value. They have not developed new products or processes, have been blown away by events and have limited themselves to using family reserves and available support and subsidies. They belong to business sectors such as tourism, accommodation, catering, non-residential health care, leisure, games, sports, and personal services. Their market is usually confined to local and regional contexts. They do not have a wide brand recognition. They are tiny and small, mostly family-owned/run companies, deeply rooted in their territory, with little access to wider markets. They are likely to be traditional family firms of rural areas and small towns, owned and run by very matured and aging household members, deeply rooted in their family history and native territory. At individual and family/household-level, they tend to administer very cautiously their resources and relations. They tend to save and not get indebted. They receive family and community support in times of need. It is evident that the basis of their resilience is in the strong sense of belonging, identity, trust and social solidarity - all extra-economic elements.

What they have in common is their economic behavior. They do not invest consistently to innovate. They tend to not borrow at risk. They are facing income loss and shortages; but they keep stoically upright and move on. They are at risk of losing market share and revenues also in the future (post-pandemic). However, they are not the first candidates for closure or bankruptcy. They are under pressure but may not drop out and disappear. And the reason is simple: the family-business-place-community-nexus is stronger to weather economic-financial storms. They are used to constraints and pressure. They constantly face uncertainties, particularly related to the inter-generational passage when the control of the family firms passes to younger offspring.

Like this category of ISTAT's national sample, the majority of Nebbiolo wine entrepreneurs of northern Piedmont are facing commercial loss. They are at risk of losing market share and revenues in the post-pandemic periods. They also face the uncertainties and challenges of intergenerational passage. But they resist thanks to the socio-cultural (extra-economic) strength that makes them resilient despite their fragility in economic terms.

According to ISTAT, the majority (35.5%) of Italian firms are 'resilient statics' (*statiche resilienti*). They have an average employment of more than 7 employees. The schooling of the workforce is not much better than the previous category ('static-in-

crisis') of firms; but labor costs, productivity and added value are much higher. Exports are slightly better. These are well-established small, mostly family-owned/run companies, deeply rooted in their territory, have recognizable brand and/or market prestige, enjoy social consensus and support. They represent the hard core of Italy's entrepreneurial resistance. Their businesses are in food and drinks, retail trade, real estate, construction materials and services, wholesale, pharmaceutical distribution, hardware chains and IT services. They are defined as 'static' because they do not innovate enough, do not invest their resources and time in changing the organization's structure, business model, products and technologies. They work hard, tend to save, and not get indebted.

They do not seem ambitious. They may not thrive. However, they continue to survive thanks to their established market position, modest revenues, little debt pressure, low liquidity level, social consensus, and support from stakeholders and community. Freedom from debt pressure, sense of belonging, identity, trust and solidarity make such enterprises quite resilient even in difficult times such as the current pandemic period. Again, it is evident that the socio-cultural (extra-economic) elements such as sense of belonging, native identity, social consensus, multi stakeholder relationship and community support are crucial for business resilience of small enterprises. Some medium-sized and well consolidated family firms of Nebbiolo entrepreneurs may fit into this category.

ISTAT found that 10.7% of the Italian business enterprises are 'Suffering Pro-actives' (*proattive sofferenti*). They are small companies, on average around 11 employees. In terms of labor costs, productivity and added value, they are not particularly brilliant. Their workforce may not be better trained than the previous categories, but they are more likely to invest their resources and energy in training and innovation. They are ambitious. They struggle to become competitive in the wider market. They are also more likely to export. They require greater liquidity and wider movements, so they suffer financial crunch and/or debt pressure. They have been hit hard by pandemic disruptions but have reacted with new products, digital applications, remote connectivity, diversified sales channels, business processes reorganization, intensification of partnerships.

In this category there are many upscale hotels, high range catering, elite personal services, cultural and media services, ICT, technical consultancy, tourism and transportation. They are often urban based and may not have a strong local (native)

identity and sense of belonging and may receive lesser community support. They are combative but their outlook remains negative. ISTAT considers this segment to be the one most at risk of closures.

In these critical times, the least resilient Italian companies seem to be those that show weakness both in extra-economic (socio-cultural) and purely economic (market/finance) terms. Their vulnerability is linked to the absence of a protective umbrella of strong socio-cultural (extra-economic) resources such as a sense of belonging, indigenous (native) identity, social consensus, stakeholders' trust, and community support. And this extra-economic vulnerability is aggravated by the presence of high economic pressure in terms of market access, competition, liquidity crisis, debt and financial burden.

It is rare to find such cases among the Nebbiolo firms of northern Piedmont. Almost all Nebbiolo entrepreneurs are local natives (indigenous), well-inserted in local business networks, long-time investors, with strong support from local networks that makes them relatively resilient despite their sluggish performance in marketing and financial management.

19.4% of the ISTAT sample are considered 'Expanding Pro-actives' (*proattive in espansione*). They operate in relatively sophisticated business sectors such as pharmaceuticals, electricals, electronics, precision mechanics, postal and courier services, chemicals, machinery, metals, financial services, insurance, and ICT. On average they have about 20 employees, many well trained and experienced workers. They have high productivity, propensity to export, and excellent added value. Their added value is helpful in innovating to cope with the pandemic disruptions. They invest in digital transformation, supply chain efficiency, export market outreach, strong partnerships, and better stakeholder relations. Usually, such firms are to be found in traditional manufacturing districts in industrial peri-urban areas. To some extent, they enjoy key socio-cultural (extra-economic) resources that favor resilience. But their adapting capabilities in changing circumstances and their efficient business management are the determining factor for continuity and resilience. It is rare to find such cases among the small/medium-sized Nebbiolo firms of northern Piedmont.

5.8% of the ISTAT sample of enterprises are considered 'Advanced Pro-actives' (*proattive avanzate*). On average, they employ more than 40 persons, with better education and training background compared to an average Italian firm. They display a very strong propensity to export. Their growth trajectory has not changed significantly

despite the coronavirus pandemic disruptions. They overtake all the other categories in terms of investments in digital transformation and connectivity, workforce training/retraining, and international market outreach. Many medium-sized locally owned (Italian) enterprises and a large part of foreign-controlled companies (partnership, joint venture, multinational corporation or international franchising) are to be found in this category. Such enterprises are concentrated in the sectors of beverages (especially gourmet food, wine and spirits for export), publishing, pharmaceuticals, banking and finance, mechanics, insurance, renewable energy and other so called "green" sectors.

Their resilience is based mostly on economic elements such as financial strength, technological innovation, qualified and skilled workforce, international network, brand position and global market share. The socio-cultural aspect of resilience has no significant role in their resilience. The small-sized Nebbiolo firms of northern Piedmont do not belong to this category.

The ISTAT categorization of firms for risk and resilience provides a comprehensive picture of Italian enterprises based on the quantitative information about their formal structures, functions, and market performance.

However, more territory-specific and sector-specific in-depth studies are needed to analyze, microscopically and contextually, the situation of many tiny enterprises, like northern Piedmont's Nebbiolo wine producers, who are deeply rooted in local territory, community, history and tradition, and who are the ultimate backbone of Italian economy.

6.3. Resilience and Vulnerabilities of Nebbiolo Wine Entrepreneurs

The issues of SME resilience and vulnerability must be understood in a holistic manner, at different levels of business context:

- Individual/household level of entrepreneurs/firms
- community level of the place-system
- consortium-level of entrepreneurial sector/sub-sector
- institutional level (public policy and market regulation)
- market level (consumption, supply chain, and competition).

The Nebbiolo entrepreneurs of northern Piedmont display similar strength and similar weaknesses as most small and very small enterprises in Italy and in the rest of western Europe.

However, they display some specific features due to their habitat (i.e., the Alpine foothills and lowlands) where the specific raw material (i.e., the Nebbiolo grapevine) is a typical product of local soil and ecosystem. They have adapted to and modified their habitat since generations. They have developed precious know-how and high skills (*maestranze*) to cultivate and refine their product (Nebbiolo wines) in collaboration with local stakeholders. Besides, they have managed their agricultural and rural landscape. All this represents singularity, uniqueness, and distinction. It supports their resilience and has a great potential if properly marketed, not merely by proposing a single typical product (i.e., Nebbiolo wine) but also by promoting the entire context of their typical product through a well-calibrated place-brand strategy.

At individual/household level, the Nebbiolo entrepreneurs display a certain level of versatility, multi-tasking capacity, and enough flexibility in their working modalities and procedures. They are quite adaptable. But they do not display enough capabilities in securing data, maintaining efficient communication, building wider networks, and engaging new partners.

At the community level of the place-system, the Nebbiolo producers display points of strength that signal their resilience in times of shock and disruption. Local community support, identity assets and socio-cultural resources are fundamental for Nebbiolo producers' resilience. Their consolidated collaboration with local stakeholders is based on familiarity, trust and a shared ethos. Their ethos is a result of a cumulative cultural mixture of local, regional, national and international influences over time. However, the hard-core of their ethos is decidedly local. Their "local" culture is rooted in the indigenous rural cultural substratum (*civiltà contadina*) of western European continental heartland (*Westeuropäisches kontinentales Kernland*).

Their communities have been, so far, ethnically homogenous and demographically stable tending to ever lowering birth rates among the natives (indigenous), an aging population, and an inexorable migratory inflow from places with totally different ecosystems, traditions, taste, taboos, know-how, skills, culture, and work ethics such as the Middle East, Maghreb (Arab-speaking northern Africa) and sub-Saharan Africa, most of whom follow the religion of Islam where wine has always been a taboo (prohibited item). Northern Piedmont's local identity (*l'identità primaria*) is slowly but

increasingly heading towards a new risky situation. The increasing immigration of Islam-followers and high birth rate among the migrants already established in the area, is likely to change consumption and workforce at local level in the medium/long run. And this is certain to affect Nebbiolo wine entrepreneurship in the long run.

EU's and Italy's policies and the propaganda of the mainstream Western and Italian media seem to promote pluri-ethnic (multicultural) society. Massive immigration, ethnic plurality and multiculturalism, in the long run, can negatively affect local economic performance by undermining local ethos, identity, community relations, know-how, work ethic, traditional flavors and tastes... - the intangible resources that generate local "high touch" in the creation of distinct and precious products such as Nebbiolo wines. The local "high touch", derived from cumulative experimentation and refinement from generation to generation over the centuries, could be lost with the affirmation of so-called "multiculturalism". "Multiculturalism" has a potentially negative implication for the Nebbiolo wine of northern Piedmont which is a culture-intensive and skill-intensive business, based on local "high touch" and know-how, rooted in the local territory.

At the consortium level of sector/sub-sector, there are vulnerabilities related to interpersonal differences, inter-firm rivalry and communication gap among the small entrepreneurs who deal with Nebbiolo wine. To some extent, some of the vulnerabilities are caused by the constraints of time as the small entrepreneurs are constantly under pressure of multi-tasking.

At institutional level - in terms of dialogue and reciprocal understanding with public policymakers, market regulators and decision-makers - northern Piedmont's Nebbiolo entrepreneurs do not seem to be much effective. Their collective bargaining power seems to be quite low. Their business is small in volume, but quite complex and demanding. Because it combines agricultural skills, manufacturing capacity and commercial activities within a single business process. So, they have very little spare time for lobbying activities. Small size and few staff, hard work, no deep pockets, complex procedures (Italian bureaucracy!), personal and family requirements and time constraint are hurdles for the Nebbiolo entrepreneurs and their key-stakeholders to become more cohesive, more active as a business lobby and more powerful as a civic force for local development.

At the market level, Nebbiolo entrepreneurs may need further cultural exposure and targeted training to understand the evolution and complexity of the international wine scenario and to reposition themselves in national and global niches. Their brands are

not yet well-known. An average Nebbiolo entrepreneur is weak in exploring new business horizons, developing commerce by reaching new customers and niches, using digital possibilities and remote connectivity, improving the trading and marketing skills of the workforce.

7. Strategic Foresight

7.1. Persistent Mega-trends and Emerging Scenarios

According to a recent research and analysis conducted by Barclays, one of world's 10 largest investment banks, the impact of Covid-19 pandemic and related measures are likely to accelerate four mega-trends in the global business landscape:

- A. acceleration of de-globalization
- B. reversal of urban agglomeration and hypermobility
- C. acceleration of remote connectivity and digitalization
- D. demand for "green" policies.

Barclay's recent findings are not new to the social scientists who have been observing the global economy and discussing its trajectory and sustainability for many years.

De-globalization and new trends in supply chain

More than two decades before the current pandemic, because of relentless de-industrialization (particularly of the manufacturing sectors) and chronic unemployment of blue-collar and low-skilled labor, the political mood in the more industrialized countries had already begun to change. More than a decade before the current pandemic, in the aftermath of the 2008 global financial crisis and the subsequent long economic recession in Europe and North America, globalization had begun to fall out of fashion in the West. Protectionism and economic nationalism had begun to gain more political support. A new process of re-regionalization and relocation had already begun long before the Covid-19 pandemics.

Not just for the pandemic, but for many other localized disasters or conflicts, every company can expect a major disruption in its supply chain from time to time. The pandemic has caused sudden and severe disruptions in supply chains and trade in nearly every industry. This shocking experience has strengthened and is accelerating the re-localization/re-regionalization process which consists of shortening the supply chain and ensuring the supply of essential items from places as close as possible to

home: from 'just in time' to 'just in case'. Cost differences between developed and many developing countries are narrowing in manufacturing, making offshoring less attractive. Most companies don't have a clear idea of what's going on downstream in their supply chains, where sub-levels of suppliers can play small but critical roles. This is also where most of the disruptions originate.

More than three decades before the pandemic, proximity to "zero km" began to become a business virtue in the agri-food sector. Since then, the drive towards an ever-shorter supply chain has become a feature of high-level and high-value agri-food companies of Italy (and many parts of EU). One of the protagonists of the "zero km" push was a well-organized social movement called the Slow Food campaign, originally from the Piedmont region, now known internationally. The push to shorten the supply chain in the agri-food sector was dictated by reasons of health (safety); for cultural values (indigenous, traditional, pure, authentic, original...); for environmental concerns (less traffic, less emissions, less carbon footprint) and for ethical motivation (transparency, no exploitation of cheap labor in faraway lands). This thinking is now also influencing other non-agri-food sectors in which entrepreneurs and their stakeholders are increasingly attentive to 'sustainability'.

Due to the constraints of the pandemic, de-globalization is gaining a new speed. It has the following implications for Nebbiolo entrepreneurs in northern Piedmont:

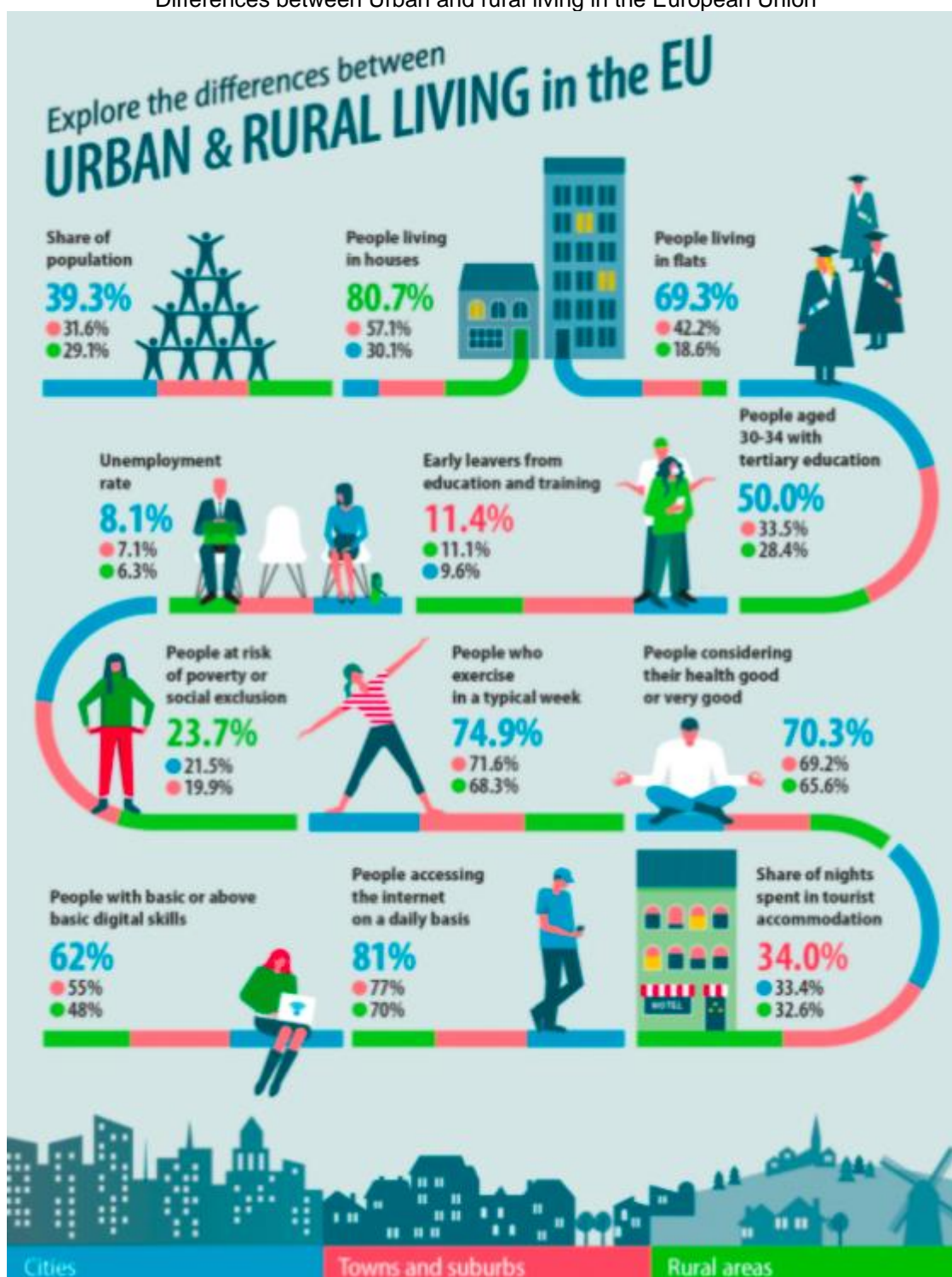
- Maximum efforts must be done to shorten further the supply chain of essential items needed as production factors for their enterprises including labor, working instruments and necessary materials (e.g., packaging material).
- The minimum waste should be generated in the production process. It is also necessary to explore the possibilities of adding circular economic value by using all waste and leftovers as secondary raw material for other production processes within the wine sector, in neighboring sectors (crop and fruit farming, horticulture, livestock, feed, composting etc.) as well as in other sectors
- More attention and investment should be directed to increase local and domestic tourism, exploration of niche market segments all over the world and targeted marketing: multi-target narrowcasting, no mass target broadcasting.

De-urbanization and new trends in human mobility

In 2019, the year just before the current pandemic, human population had already exceeded 7 billion, around 56% of that is concentrated in urban areas (in 1951, global urban population was about 30%); an unprecedented situation in human history.

According to European Commission's central statistical bureau (Eurostat) data from 2018, around 44.8% of the EU population lives in cities, 36% in peri-urban and intermediate areas such as suburbs and small towns and 19.2% in rural areas. Final and complete statistics of 2020 are not yet available, but provisional estimates show that the exodus from large urban areas appears to have been consistent and rapid in the year of the pandemic and the trend seems to indicate the growing attractiveness of rural areas.

Differences between Urban and rural living in the European Union



Source: Eurostat, 2021

Urban area's major feature - the mass transportation facility - is severely affected by the fear of coronavirus contagion. The Covid-19 crisis has promoted active individual non-motorized mobility such as walking and cycling. Unlike public transport, it is easier to physically distance oneself from another in individualized and non-motorized modes of transport. In fact, the percentage of walkers and cyclists in European cities has increased significantly due to Covid-19. Infrastructures for non-motorized individual mobility - walking, cycling and skating - require little investment. Such type of mobility leads to physical activity by ordinary people, cleaner and safer public places and healthier lifestyles.

For Nebbiolo wine entrepreneurs from northern Piedmont sub-region, mainly rural and dotted with many small towns but not large cities, the de-urbanization process has the following implications:

There will be many more business opportunities with the growing residential attractiveness of the Nebbiolo countryside and small towns.

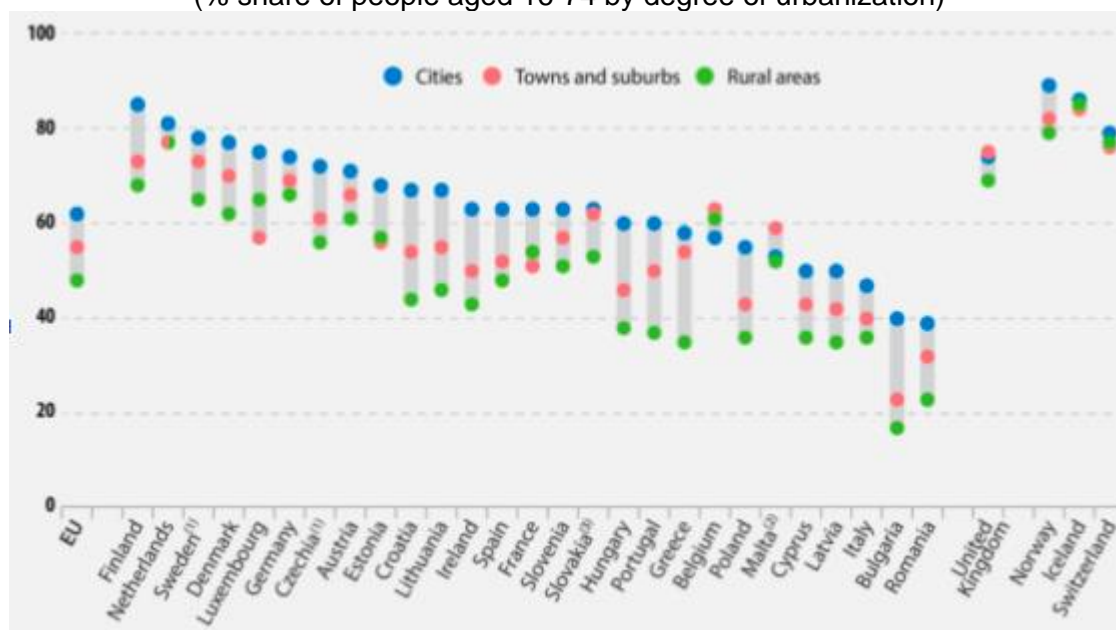
More efforts are needed to make the Nebbiolo campaigns known to the outside world (territorial marketing, place branding).

Greater consultation with local institutions is needed for a sustained campaign to develop infrastructures that connect the various municipal areas for non-motorized traffic of pedestrians and bikers. It is likely that maximum walkability and bikeability will make the territory more livable and attractive; and may expand the Nebbiolo wine market and boost many other local businesses.

Remote connectivity and digitalization

In Italy and other industrially advanced countries of Europe, since the late 1980s, there has been a shift towards the service sector which has generated urban development, employment and prosperity. The pandemic poses a direct threat to that model. For many workers worried about the coronavirus and for many employers looking to cut costs during the pandemic crisis, technologies that support remote working, video conferencing, document sharing, instant messaging etc. provide viable alternatives to urban workplaces. Even in a remote rural corner, services like video streaming and social media offer a taste of the cultural effervescence that has drawn so many to the big cities over the centuries.

People with basic or above basic digital skills, 2019
(% share of people aged 16-74 by degree of urbanization)



Source: Eurostat, 2020

Before the pandemic, teleworking was not particularly widespread in European countries. According to the European Foundation for the Improvement of Living and Working Conditions, less than a tenth (below 10%) of Italian workers used, occasionally and sporadically, remote connectivity before the pandemic. As the disruption continued, workers and businesses adjusted remarkably quickly to the new reality. Government, corporate and other meetings shifted online; in schools and colleges, classes were taught virtually; e-medicine took off. These new behaviors are likely to stick in some (not all) work sectors and population segments. McKinsey Global Institute estimates that more than 20 percent of the global workforce could work the majority of its time away from the office and be just as effective.

This trend has following implications for Nebbiolo business:

More attention and investments are needed in the digitization of commercial functions and in improving the digital skills of entrepreneurs and collaborators.

Better preparation for shipping and delivery is needed.

Demand for "green" policies

More than a decade before the pandemic-related economic crisis, there were substantial government stimulus programs to address the 2008-2009 financial crisis, but few of them included sustainability-centered action. This time it's different. Many

(though not all) countries are using their recovery plans to implement environmental priorities.

The European Union plans to dedicate around 30 percent of its \$880 billion plan for COVID-19-crisis plan to climate-change-related measures, including the issuance of at least \$240 billion in “green bonds”. In September 2020, China pledged to reduce its net carbon emissions to zero by 2060. India has begun investing massively in renewable energy. Japan has pledged to be carbon neutral by 2050. South Korea’s “Green New Deal”, part of its economic-recovery plan, invests in greener infrastructure and technology, with the stated goal of net-zero emissions by 2050. While campaigning, US president-elect Joe Biden pledged to invest \$2 trillion in clean energy related to transportation, power, and building. Canada is linking recovery to climate goals. Nigeria plans to phase out fossil-fuel subsidies and to install solar-power systems for an estimated 25 million people. Colombia is planting 180 million trees...

In the industrialized countries, including Italy, consumers are increasingly turning to products that have sustainability credentials. According to ISMEA (Istituto di Servizi per il Mercato Agricolo Alimentare), an Italian public research and information service center dedicated to agri-food sector, the inclination of Italians to buy organic/bio products has increased after the pandemic crisis. Compared to the sales before and during the Christmas and New Year holidays of 2019, in 2020 after the pandemic, the sale of certified bio/organic wines and sparkling wines increased by +27%, bio/organic vegetables by +11% and bio/organic meats by +15%.

Recent Italian national policy is strongly promoting 'sustainability' in the wine sector⁶.

The imperative for Nebbiolo business is clear along two fronts:

- The entrepreneurs need to respond to the sustainability concerns of consumers and investors through organic farming, controlled supply chain, certified products, and training to workforce in sustainability-centered practices.

⁶ A livello nazionale, al fine di adempiere al comma 1 dell'articolo 224-ter della legge 18 luglio 2020, n. 77 e poter procedere con la definizione del disciplinare riportante l'insieme delle regole produttive e di buone pratiche alla base del sistema di certificazione della sostenibilità della filiera vitivinicola con l'obiettivo di recepire i più recenti orientamenti in materia di sostenibilità economica, ambientale e sociale nonché di un adeguato sistema di monitoraggio - con il Decreto Dipartimentale prot. n. 288989 del 23 giugno 2021 - è stato costituito il Comitato della sostenibilità vitivinicola.

- Sustainability credentials, well-recognized organic/eco/bio certification of Nebbiolo wines may prove to be the new competitive edge in domestic (Italian), EU and global markets.

7.2. Post-pandemic Uncertainties

Despite all human efforts aided by up-to-date science and technology, it is impossible to predict how the coronavirus will evolve, how vaccines could prove effective in immunizing the global population, and how long it might take to overcome the pandemic. The evolution of the coronavirus is, therefore, a key variable that could determine the future of human activities, including businesses such as wine production and trade.

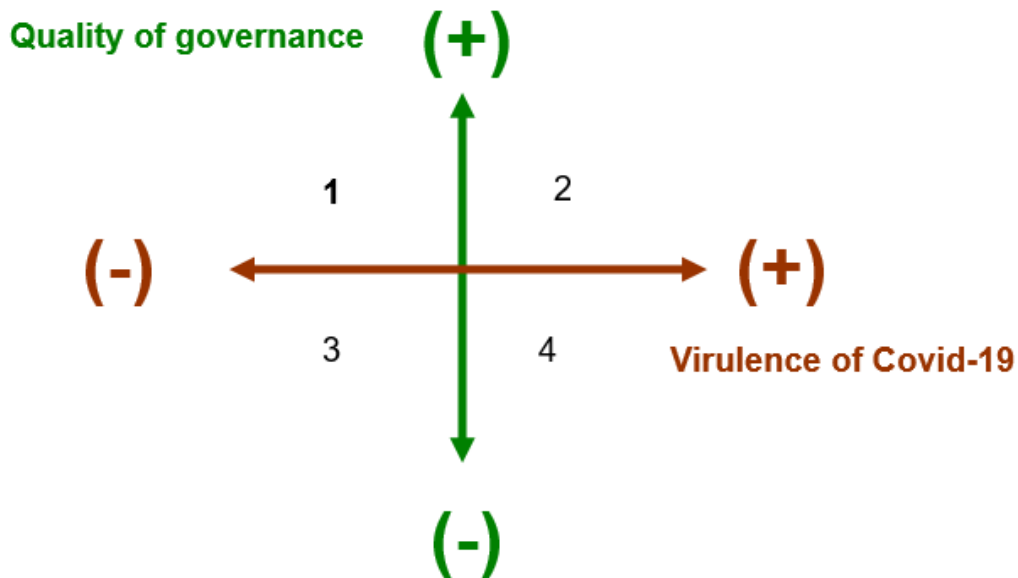
The economic shock of the COVID 19 crisis has been greater than that of any previous crisis since World War II. Anguish and uncertainty about the future are rife. To mitigate people's distress and dispel the negative effects generated by uncertainties, the economic responses of governments have become unprecedented and massive. In the coming years, entrepreneurs and organizations will have to adapt to more government interventions. The role of politics in re-orienting the market and local development will be more important than ever.

However, due to national and political differences, governments may intervene to make their economic systems follow divergent paths towards recovery. In the case of Italy, as in other EU countries, there is an additional level of complexity: the juxtaposition of national and EU policies and administrations. The efficiency of the EU's administrative apparatus is far from reassuring, as clearly demonstrated by the limits and difficulties in dealing with illegal migratory waves and pandemics. There are marked national differences in the efficiency of the administrative apparatus among the EU Member States. Italy's administrative apparatus is known to be one of the most inefficient in the EU⁷. Therefore, the quality of governance - in terms of policy effectiveness, political will to implement, and administrative efficiency - is another key-variable.

Ultimately, future macroeconomic scenarios are likely to unfold by the combined effects of these two key-variables:

⁷ Among 27 EU member states, Italy is ranked as 23rd for government effectiveness. That means, Italy is near the bottom of ranking, just above Croatia, Greece, Bulgaria, and Romania. World Bank ranks Italy in 55th position among 193 countries for administrative efficiency. Italy's position is lower than many Asian, African and Latin American countries such as South Korea, Bermuda, Taiwan, Brunei, Chile, Israel, Uruguay, Mauritius, Barbados, Qatar, Malaysia, China, Seychelles, Jamaica, Bahamas etc.

- A. Virulence of Covid-19 in terms of the persistence of coronavirus, contagion, multiplication of coronavirus variants, inefficacy of vaccines, intractability of variants...
- B. Quality of governance in terms of policy efficacy and administrative efficiency.



Scenario 1: The most desirable scenario would combine a situation where Covid-19 virulence decreases and the quality of governance increases. The timing and measure of decrease in Covid-19 virulence are uncertain, but the availability of vaccines may improve the situation. The increase in quality of governance is likely to remain the same, at least in Italy. Strong political will, efficient public administration, transparency in policy making and administrative affairs, and accountability of politicians and bureaucrats would certainly make a positive difference, and future may be better.

Scenario 2: In case the coronavirus persists for longer, and if the vaccines are less effective in medium/long-run, better public policy response and more efficient public administration are necessary to mitigate the social distress and economic depression. In Italy, the increase in quality of governance is likely to change very little. Hopefully, the shock of the pandemic and the availability of new public resources (recovery fund) may push Italy's politicians and administrators to do better.

Scenario 3: In the most likely scenario, coronavirus weakens by vaccine or through herd immunity, meanwhile the performance of politics and public administration remains the same - business as usual.

Scenario 4: The worst-case scenario would combine persistence of Covid-19 causing widespread distress and economic depression with the continuity of politics and bureaucracy as usual.

7.3. Sustainability, Wellness, Place-brand: Strategic Imperatives for Nebbiolo wine entrepreneurs

For Nebbiolo wine, sustainability is the ultimate principle that comprises all four dimensions of quality in business:

- quality of the business output (product/service)
- quality of the business process (operations, management)
- quality of the business system (organization, workforce, workplace, stakeholders, networking)
- quality of the business context (place-system).

The quality of the business context, i.e., place-system, adds extra value to all products and services generated in each territory through the prestige of that territory which becomes a brand in itself.

Northern Piedmont has a great potential as a place-brand of high value due to its natural landscapes, location and distinct products such as Nebbiolo wines. At present, it has several weaknesses in terms of land-use planning, aesthetic devaluation of the landscape (invasive infrastructures to make roads for automobiles, building constructions from the 1970s and 1980s), inadequate public transport system, and poor management of cultural resources.

Nebbiolo entrepreneurs should collaborate with local public institutions to establish a high-value place-brand of their territory. Three major actions are needed for a place-brand strategy of the Nebbiolo territory:

Land-water security (hydrogeological stability), land-use planning, landscape management, and land-people relations - these issues must become the top priority. After that, walking and cycling, two forms of non-motorized mobility, must be placed at the top of the priorities in planning and infrastructure development in the territory. The Nebbiolo area should aim at the creation of a complete network of non-invasive infrastructures of non-motorized mobility paths that follow the criteria of inclusive usability starting from the most vulnerable people (children, elderly, and persons with disabilities). In the Nebbiolo area it should be possible, for both residents and visitors,

to move around on foot, with a wheelchair and by bicycle in all normal movements for work, school, entertainment, wine tasting, shopping ...

In addition to participating in various fairs/exhibitions in distant places, a commitment is required to multiply the quantity and frequency of cultural and commercial events such as outdoor markets, fairs, scientific and literary events, art exhibitions, shows, sports, competitions, parties, festivals... within the Nebbiolo territory

There should be a project to establish and promote a place-brand through a management protocol (*il "Protocollo di Sostenibilità del Nebbiolo dell'Alto Piemonte"*) shared with the rest of the local business community. That protocol of management would be the guarantee of ethics, eco-compatibility, health and safety of each product or service generated in that territory.

These three actions are strategic. They may unleash a series of positive situations in terms of cost/risk reduction, public health, social cohesion, wellness, energy saving, environment, management of cultural and landscape resources, commercial and cultural life, multi-season tourism, proliferation of small businesses and civic associations.

Sustainability and wellness are two sides of the same coin. Wellness means living healthily in a safe, clean, comfortable, and economically viable habitat. Sustainability is the compass that directs us to use fewer materials and less energy, while meeting our basic needs with safety and comfort. A territory acquires prestige and increases its attractiveness for visits and investments through the wellness of its inhabitants and through the sustainability of its habitat.

Ethnographic insights of business community and context, and the perspectives gained in the field, lead to a critical re-thinking on existing business and development models. Critical re-thinking on existing business and development models helps to elaborate new plausible and sustainable scenarios (alternative images of future).

A plausible and desirable scenario for the future of the Nebbiolo business community is in establishing a place-brand of high value characterized by constant efforts to raise socio-environmental standards and to deepen inter-sectoral synergy at local level involving agriculture, manufacturing, trade, tourism, recreational and cultural sectors.

The place-brand may be assessed and indexed by sustainability indicators to visualize change over time through greater granularity of measurements, so that benchmarks are created to evaluate the effectiveness of entrepreneurial strategies and public

policies that aim to promote resilient businesses and sustainable local development. This field research hopes to open new horizons of research on sustainability parameters and place-brand value index which, eventually, may evolve as the major theoretical contribution in business studies.

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Dipak Raj Pant is a field anthropologist and an (accidental) economist, active in research on 'sustainability' issues. He serves as part-time senior faculty member of School of Economics & Management at LIUC (Castellanza, Italy) and Department of Economics & Management at University of Trento, Italy. Prof. Pant has experience in designing, planning and evaluating sustainable development projects in different countries besides Italy. Occasionally, he serves as visiting professor in foreign universities. In 2000, Prof. Pant established the first applied research centre on sustainable economy in Italy (Unità di Studi Interdisciplinari per l'Economia Sostenibile/Interdisciplinary Unit for Sustainable Economy, LIUC) and served as the centre's head until 2017.

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Stéphane Jedrzejczak is a business and development economist, active in research and teaching on sustainability thematics. He is currently a lecturer in 'Sustainable Business Management' and 'Comparative Economics' at University Cattaneo - LIUC (Castellanza, Italy). Besides, he has also served as contract professor at SUMAS University (Milano, Italy) and postdoc researcher at Insubria University (Varese, Italy). He previously collaborated with the Interdisciplinary Unit for Sustainable Economy at University Cattaneo - LIUC, where he was also granted in 2017 a Ph.D. in Management, Finance and Law for Business for research on incubation and impact investing practices for sustainable oriented entrepreneurship.
