SUMMARY

1974: Philippe Petit and the Twin Towers challenge.

Bees and Global Balance

What is the sound of sustainability? Buzzing, without a doubt. Even if at first it may seem strange, bees have much more to do with environmental *balance* than one might imagine. Bees are much more than honey producers, in that our future depends partly on them.. Together with other pollinating insects, they very much have an irreplaceable role in nature; without them, pollination of flowers and plants would cease and interbreeding between plants of different species would decrease, with serious consequences for food production and global *balance*. The Food and Agriculture Organisation of the United Nations (FAO) states that 3 out of 4 food crops in the world depend to a certain extent on pollination; the most common are apples, strawberries, peppers, onions, coffee and cocoa.

Bees make an essential contribution to maintaining biodiversity on our planet, but in recent years unfortunately their role has become increasingly fragile and threatened. Bee and other pollinating insect populations are continuing to decline, especially in Europe and North America[1]. Endangerment is largely due to intensive cultivation practices, changes in soil use, climate change and a large number of substances used in agriculture.

Since the 20th of May last year, we have been celebrating World Bee Day, established by the UN, to highlight the importance of these animals for the world's ecosystem and biodiversity. The aim is to raise awareness about the need to protect these precious pollinators.

It is therefore clear that the matters at stake are closely linked and in line with the goals of sustainable development set by the United Nations in its Agenda 2030, in the pursuit of *balance*: from the solution to the problems linked to hunger in the world, to the promotion of responsible production and consumption that guarantee a sustainable use of resources, without taking away the focus on the dangers linked to the loss of biodiversity and the degradation of ecosystems.

The theme of this year's statistical report is *balance*, which means equilibrium, from Latin *aequus*=equal and *libra*=pair of scales. It indicates a situation where there is an exact distribution of components in a set. Analysing the society, the economy and the environment in which we live with this approach, from a statistical point of view, inevitably brings us to evaluate the possible *balance* or rather, the imbalances that characterise the world around us.

"Balance" is the common thread.

Balance has both an intrinsic nature, i.e., how a single component is balanced or not in itself, and an extrinsic nature, i.e., how different components interact with each other in such a way as to achieve a global *balance* or not. The nature of *balance* is also unstable: human societies are characterised so much by change, that the point of *balance* can only be reached at certain times, then giving way to other situations of imbalance that will then return to rebalance in a play destined to change over time.

Objectively, we live in a very complex and integrated world, in which growing and sometimes contrasting forces of a social, economic and cultural nature operate, which are difficult to combine in a unified and stable vision. The idea of there only being one right way of doing things (Taylor's one best way) seems to have completely disappeared, since it has been established that the same solutions to the same problems may not work if you change the context in which you work.

"Life is like riding a bicycle. To keep your balance, you must keep moving."
Albert Einstein

On the contrary, increasing interest is being shown in the approach that favours and values mechanisms of *balance* and conciliation between the various pressures emanating from society. The examples that can be given are countless. However, the most important issue with the most serious consequences if not dealt with, is the relationship between man and the environment and, in particular, between the needs of economic development and the protection of health and life on the planet. The recent weather events in Veneto, among them "Vaia", the frightening rain storm with winds that destroyed millions of trees in the mountains of Veneto in just a few hours last October, now seem unequivocally attributable to climate change, prompting a reflection on "living" out our time with respect for "nature", understood as land and all of its components.

[1] Greenpeace, http://salviamoleapi.org/

Balance is sustainability[2]

The key element is the pursuit of a *balance* that is both intergenerational and intragenerational; future generations have the same rights as current generations and, within the same generation, people belonging to different political, economic, social and geographical backgrounds have the same rights.
This guarantee, mainly of an ecological nature, has been the subject of international debate, with particular emphasis on the rationalisation of resources and the environmental impact of human actions. In a period in the history of mankind where human behaviour risks upsetting the *balance* of nature, caring for the environment becomes a priority.
The concept of *balance* is therefore based on an ethical and political principle that implies sustainable development, i.e., that the economic and social dynamics of modern economies are compatible with the improvement of living conditions and the capacity of natural resources to reproduce themselves indefinitely.
"Development is sustainable when it meets the needs of the present without compromising the ability of future generations to meet theirs. Sustainable development, far from being a fixed state of harmony, is rather a process of change in which the use of resources, the direction of investments, the orientation of technological development and institutional changes are made consistent with future as well as present needs."[3]
Since this first definition appeared in 1987 in the United Nations' Brundtland Report, the concept of sustainability has been further developed and expanded, to the point of being made the main principle inspiring policies aimed not only at economic progress, but also at improving the existence of people in its multidimensionality, through the satisfaction of man's basic physical, intellectual, emotional, moral and spiritual needs.
Sustainability has become an integral word of the language used for the description, analysis and planning of social systems at all levels of government: international, national, regional and local.
The Brundtland Report was followed by the United Nations Conference on Environment and Development (Rio Earth Summit, 1992), the Millennium Declaration (hence the Millennium Development Goals, 2000) and the Conference on Sustainable Development (Rio + 20, 2012).
At the European level, in Lisbon in March 2020 the European Union approved a programme of reforms to render itself a knowledge-based, competitive and inclusive economy. The result is a strategy with concrete objectives to be achieved within 10 years, i.e., in 2010, a deadline which then has shifted to 2020. The overall strategy regarded about ten different areas that included social policies and the relevant sectors for the construction of a modernised European social model based oninnovation, welfare reform and social inclusion, the enhancement of human capital and labour retraining, equal job opportunities for women, etc,. and indeed, sustainable development.

Agenda 2030, a Challenge for Veneto

On the 25th of September 2015, the USustainable Development, a global action plan for individual well-being, environmental protection prosperity of countries. The Agenda expects 17 Sustainable Development Goals (SDGs) to be achieved by 2030. These goals aim at establishing a development model that combines economic progress with social development and at increasing attention toward the environment, so as to ensure a more *equitable* and prosperous society, with respect of future generations. The 17 goals, divided into 169 targets, are closely interlinked and are:
1. No Poverty
2. Zero Hunger;
3. Good Health and Well-being;

[2] Data and forecasts available as of April 2019.
[3] This is what the United Nations World Commission on Environment and Development (WCDE) affirmed in 1987 in its "Brundtland Report - Our Common Future".

Fig. 1 - The institutional path toward global sustainability

4. Quality Education;
5. Gender Equality;
6. Clean Water and Sanitation;
7. Affordable and Clean Energy;
8. Decent Work and Economic Growth;
9. Industry, Innovation, and Infrastructure (*equitable* and sustainable);
10. Reducing Inequality;
11. Sustainable Cities and Communities;
12. Responsible Consumption and Production;
13. Climate Action;
14. Life Below Water;
15. Life On Land;
16. Peace, Justice, and Strong Institutions;
17. Partnerships for the Goals.

About 4 years later something has been done, but many challenges still remain that cannot be postponed, with the knowledge that time is a luxury that we do not have! The "Global SDG Index 2018[4]" measures the progress of 156 countries towards sustainable development. The EU leads the world ranking with Sweden, Denmark and Finland at the top (83-85 out of 100 points), followed by Germany and France with more than 80 points; the top non-European country in the ranking is Japan in 15th place. Italy is sits at 29th place, obtaining a score of 74.2, signifying that is about three quarters of the way toward carrying out the Agenda.

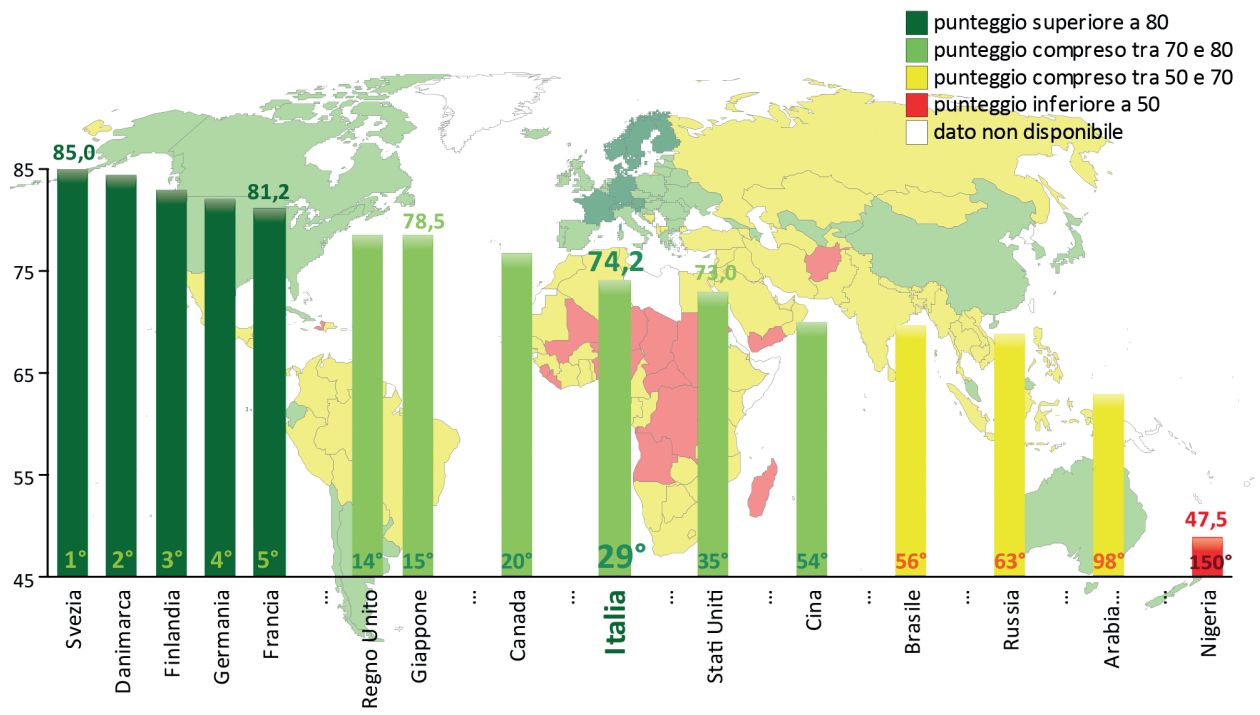
Agenda 2030, Italy three quarters of the way there

In most rich countries, the most serious sustainability shortfall is ecological debt, due to uncontrolled economic development, over-exploitation and depletion of natural resources. After significant progress in combating extreme poverty and malnutrition, in facilitating access to health and education services and basic infrastructure, deveoping countries risk to regress due to conflicts.

We need a change in culture, by overcoming the

[4] The "Global SDG Index" takes values from 0 to 100 and expresses the percentage of achievement of the Agenda 2030 goals: the closer the indicator is to 100, the closer the country is to full achievement of the SDGs. Bertelsmann Stiftung and Sustainable Development Solutions Network. *SDG Index and Dashboards Report 2018 - Global responsibilities implementing the goals*. July 2018.

Fig. 2 - Global SDG Index 2018: scores and rankings of some countries



Source: Processing by the Regione Veneto Statistical Office of data from Bertelsmann Stiftung and Sustainable Development Solutions Network, July 2018

current obsession for economic growth; society is mature for this change, young people insistently ask for it, and we have the power to do so. "*Act so that the effects of your actions are compatible with the permanence of genuine human life.*," says Hans Jonas[5]; in every decision we must look to the future, to what repercussions it will have on ourselves, on others and on nature.

The national strategy

The national version of Agenda 2030 is the National Strategy for Sustainable Development (SNSvS in the Italian acronym), approved in December 2017.

The SNSvS is subdivided into five areas, corresponding to the "5Ps" of sustainable development proposed by Agenda 2030:

- People: combating poverty and social exclusion and promoting health and well-being to ensure the conditions for the development of human capital;
- Planet: ensuring sustainable management of natural resources, combating the loss of biodiversity and protecting environmental and cultural assets;
- Prosperity: establishing sustainable patterns of production and consumption, ensuring quality employment and training;
- Peace: promoting a non-violent and inclusive society without any discrimination. Combating illegality;
- Partnerships: intervening in the various areas in an integrated manner.

The 5 Ps of the SNSvS: People, Planet, Prosperity, Peace, Partnership

The Strategy also identifies a system of sustainability mechanisms, defined as transversal areas of action and fundamental tools to guide the integration of sustainability in policies and planning; it provides for compatibility with existing programmatic documents, in particular with the National Reform Programme (NRP in the Italian acronym) and, more generally, with the Economic and Financial Document (DEF in the Italian acronym), in line with the goals already existing at EU level. The National Strategy for Sustainable Development is the national reference framework for regional and sectoral planning, programming and assessment processes of a .

The way towards a regional sustainable development strategy

The resolution of the European Parliament of the 6th of July 2017 recognizes the centrality of local and regional authorities in the implementation of SDGs. It is at the local level, in fact, that the impact of the achievement of the Agenda's Goals is observed in practice, and it is always at the local level that policies of inclusion and participation of citizens can be most effectively implemented in the monitoring and assessment phases of the policies implemented. In order to comply with the said Resolution and subsequent national provisions, the Veneto Regional Council, by decision of the 18th September 2018, started the process of drawing up its own Sustainable Development Strategy, which will define the regional strategic objectives in line with the national strategy. The regional planning and programming tools currently in force will be the starting point for the formulation of the document of the Regional Strategy for Sustainable Development. The Regional Strategy document should identify the regional goals, priority actions and the necessary mechanisms for their implementation, identifying the main funding channels and providing specific ways of integrating them into the Regional Financial Economy Document (DEFR in the Italian acronym).

For this purpose, a control room has been set up, coordinated by the Secretary General for Planning, to testify to the transversal nature of development. There will be a broad involvement of local institutions and civil society, also through the establishment of a Regional Forum, thematic tables and a dedicated website.

The regional strategy in this area is a great opportunity not only to assess where we are as the region of Veneto on a whole but, above all, to identify new trajectories of growth.

The 17 goals of Agenda 2030 need to be measured and monitored over time to re-adjust policies and actions. For the monitoring and assessment of progress, the UN has defined 244 indicators, although not always quantifiable and relevant for every country. In Italy, ASviS[6] proposes a composite indicator combining different elementary measures, acting as an overall indicator of a region's progress towards, or deviation from,

Veneto's path toward sustainability: strengths and investment objectives

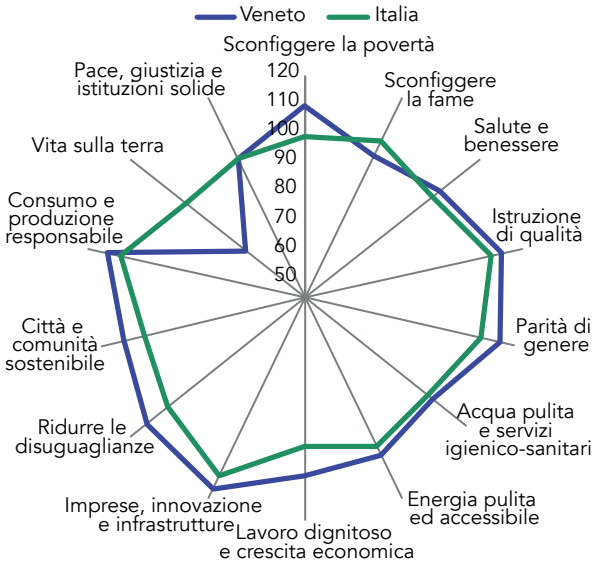
[5] Philosopher, 1903 -1993

[6] The Italian Alliance for Sustainable Development (ASviS), born in 2016, today brings together over 200 of the most important institutions and networks of civil society.

reaching its various goals. This is a preliminary measurement; while the composite indicator is effective because it allows homogeneous comparisons between regions, it does not highlight the characteristics of a specific territory.
For the goals for which comparison with Italy overall is available[7], the Veneto region exhibits better levels of sustainability than the national average for 11 goals, while in 2 cases it is in a slightly more critical position; for one it is in line with Italy.
Since 2010, significant improvements and some slight setbacks have been observed in Veneto. The average per capita income is growing (20,350 euros), but there are still major disparities, with 15.4% of Veneto people at risk of poverty or social exclusion; however, with a view to greater social inclusion and fair distribution, progress can be seen, especially in the last year. Life expectancy, at 83.4 years, is rising and is among the highest in the world despite not being accompanied by healthy life years.
Despite actions aimed at improving healthcare and eating habits, smoking and alcohol abuse is once again on the rise, as is the proportion of overweight children (22.5%). The mortality rate for road accidents is also improving but remains critical in our region. Nevertheless, the goal "Health and Well-being" remains attainable with the excellence of Veneto's healthcare.
Almost all indicators of participation in the education system and vocational development are improving over time. School drop-outs (11%) are falling sharply and the overall level and quality of education is also increasing. In 2018, 64.8% of 25-64 year olds had at least a further education diploma and 32% of 30-34 year olds had a degree.
There is more gender equality in various aspects of life, although there are still major gaps to be closed: the employment rate of women with small children remains lower than the rate of women without children, a gap that has been widening since 2015; the proportion of women executives is much lower than that of men and the distance is increasing; the presence of women in entrepreneurship is also lower.
The labour market is struggling to return to pre-crisis levels, although it is still better than the Italian one and has shown progress over the past year. The unemployment rate, which stood at 6.4% in 2018, was slightly down, but the proportion of people who worked involuntarily on a short-time basis has gotten worse, and undocumented workers are also on the increase, accounting for 8.9% of the total in 2016.
Agriculture has been showing mixed results. The value of economic production per agricultural unit has decreased over time, going from over 64 thousand euros in 2011 to 43 thousand in 2015. On the other hand, the percentage of agricultural land dedicated to organic production methods is increasing (2.3%).
The business world is also advancing in its crossover to sustainability, thanks to investment in innovation (spending on research and development as a percentage of GDP is 1.3%) and the increased use of human resources with higher qualifications (of those employed, 14.5% have scientific and technological skills with a university education).
The use of energy from renewable sources is improving, representing 21.3% of final electricity consumption, and the proportion of recycled municipal waste is increasing (73.6% of the total), but there are still some critical environmental issues. We should be alert to the excessive consumption of the soil, with more than 12% of the region's territory being subject to soil sealing[8]. The waste of drinking water,

[7] Currently, the ASviS composite indicator is not available for 3 goals at a regional level due to lack of data. These are: goal 13 "Climate Action", goal 14 "Life below Water" and goal 17 "Partnerships for the Goals".

Fig. 3 - Veneto in comparison with Italy. Composite indicator by target - 2017



Source: Regione Veneto Statistical Office on ASviS data

[8] Soil sealing is caused by artificially covering the ground with asphalt or concrete that makes it inert and non-productive. It is a specific form of destruction caused by non-renewable resources

due to the increasing inefficiency of the water networks causing the dispersion of about 40% of the total water volume, is also worrying. Quality of air in cities also remains problematic, given that 90.5% of the city's capital control units recorded more than 35 exceedances of PM10 limits and 15% recorded exceedances of nitrogen dioxide.
Alongside this, there is a good range of protected areas that are valuable for maintaining the environmental *balance* (23%) and stable marine areas recognised as important for biodiversity (38km2) and km of coastline (64.2%).

and must therefore be monitored.

Fig. 4 - Veneto's path toward the objectives - 2010-2017

Source: Processing of data from Istat and ASviS by the Regione Veneto Statistical Office

The social balance between demographic changes and the labour market

Agenda 2030 is based on a reality: the planet is exploding with people. This is a euphemism of course, but goes far to highlight the proven fact that the global demography is constantly growing. Today the Earth is home to over 7 billion people, and forecasts for 2050[9] estimate a global population that will reach 9.8 billion. This is a demographic growth that, however, does not affect all countries in a consistent manner; as repeatedly pointed out, in some areas of the world the demographic trend shows an opposite path, made up of very few births and de-population. Migration and population ageing are inevitable consequences of this phenomenon, which can have profound effects on societies and which pose a challenge to many goals of sustainable development. First and foremost, this concernes the goals related to poverty and hunger, education and the reduction of inequalities, but also to fiscal and political pressures on issues such as health care, pensions and social protection systems. Demographic *balance* is therefore one of the major underlying themes for development in the years to come, which all too often is overlooked.

In Veneto the population returns to growth...

As of the 31st of December 2018, it is estimated that there are 4,910,400 residents in Veneto, over 5,000 more people than in the previous year, equal to a rate of 1.1 more inhabitants per thousand. After 3 years of demographic decline, with an overall loss of 22,559 inhabitants, there appears to have been a slight recovery of the population, in contrast to the national trend (-1.5 per thousand).

This is a positive sign because population increase is only expected in 4 regions (Trentino Alto Adige, Emilia Romagna and Lombardy, as well as Veneto).

... as a result of migration

Migration, especially international migration, is the main reason for population growth in the last year, offsetting the negative balance of natural dynamics, i.e., the balance between births and deaths. In 2018 the natural component's contribution remained strongly negative (-12.8 thousand units), but unlike the years immediately preceding it was compensated by the incoming migratory flows, so as to increase the population.

After the decline that occurred during the years of crisis, migration flows have resumed. The migratory balance with foreign countries in 2018, positive with 17.8 thousand units, exceeded that of the previous year (13.9 thousand) and was the highest in the last 7 years. As regards interregional mobility, it is on the upswing, and Veneto has become more attractive for those coming from other regions: for movements within the country, there is an estimated positive balance of 5.9 thousand units, compared to 4 thousand in the previous year.

The birth rate crisis persists

The downward trend in birth rates, which has been going on for 10 years, was also observed in the last year. In 2017 there were 36,596 births in the Veneto region, -25% compared to 2008, and in 2018 there were an estimated 1,000 fewer births than in 2017. The phase of decline in the birth rate triggered by the crisis that began in 2008 seems therefore to have become a structural trend.

There are several factors determining this decline; one of these is structural, i.e., it concerns the shrinking number of potential mothers (-104 thousand women of childbearing age in the last 10 years). The most updated forecasts, however, unlike the previous ones, suggest a forthcoming period of temporary recovery in birth rate, in correspondence with the beginning of a period of maximum fertility of women born during the slight growth trend of the nineties and two thousands.

Another factor that affects the number of births is the drop in the average number of children that each woman brings into the world; in the worst years of the economic crisis, in Veneto, the number of children per woman in 2008 went from 1.49 to 1.36 in 2018, a value higher than the national average (1.32) but still not flourishing. If the couples who postponed having children during the crisis do not recover, they now risk not having children at all. This is a critical issue that places Italy, together with the countries of Southern Europe, among the European countries with the lowest fertility. Currently in Europe, where on average 1.59 children are born per woman, the situation is diverse, with France (1.9), Sweden (1.78) and Ireland (1.77) being the most prolific countries.

Combining parenthood with work is still a problem, especially for mothers

The shifting of motherhood towards older ages

[9] UN, "World Population Prospects", 2017.

also contributes to the lowering of fertility: today in Veneto, as well as in Italy, on average a woman gives birth at 32 years of age, one year later than in 2008. With the age of fertility shifted to later life, it is much more likely for a woman to be childless or unable to have the desired number of children (on average more than 2). Mothers, in particular, are at a particular disadvantage in terms of work, as they suffer more from the loss of their jobs (77% of people with children who resign from work are women), and they continue to bear the bulk of the burden of domestic and family care duties. The Mother's Index seeks to measure the position of mothers in the areas of care, work and service, so as to gauge the "quality of life of mothers". In 2017 the index registered substantial stability for Veneto compared to 2004, placing our region in an intermediate position in the regional ranking.

Families that change

As a result of these natural and migratory trends, the family structure has been weakened to the extent of being broken down, in some ways resembling "northern" models more and more, while maintaining certain features. In fact, even in Italy, developments that Northern European countries have been experiencing for some time are increasing, such as the decrease in marriages and the increase in divorces and de facto couples, the increase in reconstituted families and the progressive dissociation between parenting and marriages, and the legal recognition of civil unions between persons of the same sex. However, some typical aspects of our family system remain, such as low fertility, the progressive postponement of parenthood and the delay with which children leave their family home.

Single numbers rise

In Veneto in 2017 there were 2,076,323 resident families, almost double the number compared to 1971 but considerably smaller in size: in almost 50 years the average number of family members has fallen from 3.6 to just over 2. In particular, the number of one-person households has increased, especially among the elderly, and the number of large families has drastically decreased.

Couples with children are declining (-6.4% compared to 2007) but remain the most common type of family: 717 thousand in 2017 in Veneto. Here, more markedly than in the national average, there is a reduction in the number of single-child couples compared to those with two or more children. In 2017, single-child couples from Veneto represented 45% of all couples with children, whereas in 2007 there were over 50%, while couples with two or more children reached almost 55% (49% in 2007).

Alternative couple arrangements

We are getting married less and less and later on. At the beginning of the 1980s, there were almost 24,000 weddings a year in Veneto, about 5.4 per 1,000 inhabitants, while in 2017 there were 14,270, just 2.9 per 1,000 residents. Even when one chooses to marry, one increasingly opts for civil marriage, so much so that civil marriages have surpassed religious ones and today account for almost 60% of all marriages, more than the national average (49.5%).

The progressive spread of more secularised behaviour is further evidenced by the increase in more more uxorio cohabitations and in the births of children outside or before marriage. Specifically, in 2017 10% of couples living together in Veneto were unmarried, when 10 years earlier this figure was 6% and not even 2% in 1997, and the majority of these couples had children (56%, compared to 27% in 2007).

Second families on the rise

As a result of growing marital instability, new forms of families became established, such as reconstituted families and single-parent families. The former, in 2017, amounted to about 103 thousand and represented 8.5% of all couples in Veneto (in 2007 this was 6.5%). In 60% of cases, couples decided to re-marry, the majority of partners already with children (60%). Therefore, there was an increase in the number of children and young people living in a "blended" family. As for the latter, there were 202,000 single-parent families, 15% more than ten years earlier, and in more than eight out of ten cases these took the form of mothers living with children.

People active later in life

In Italy, more than in other European countries, there is a general tendency to postpone the main milestones of family development, such as marriage and children, but also the mere achievement of living independently in one's own new home. And so, the majority of young Italians continue to live in their parents' house

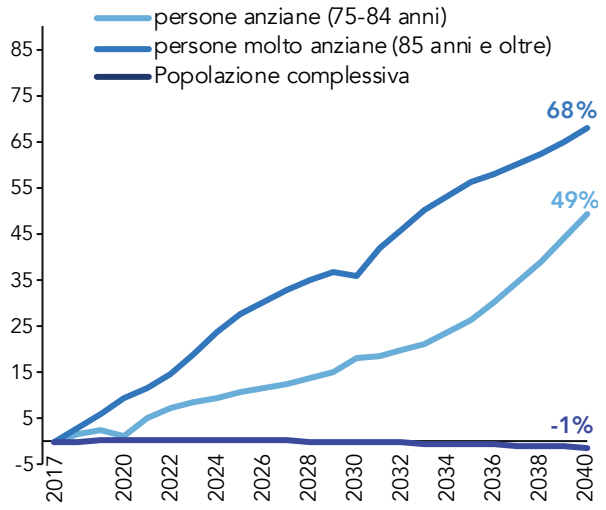
for a very long time, on average up to the age of 30, while in Sweden and in Denmark they leave home at just 21 years old. After all, job insecurity and the economic crisis have exacerbated uncertainty about the future and difficulties in securing an adequate salary.

The situation in Veneto does not differ much from the national average. In 2017, 504,000 young people between 18 and 34 years of age still lived with their parents, constituting about 61%, an increase of almost 4% compared to 2007.

Society is living longer but demographic balance is at risk

In comparison to the rest of Europe, Italy holds another demographic record that it would not wish to welcome. In addition to being among the lowest levels of fertility, Italy is distinguished by having the highest proportion of elderly people (22.6% compared to 19.4% in Europe), so much so that, together with France, it holds the record for the highest number of people over 100 years old. The generational imbalance in Italy has reached a size such that for the first time the number of people born has fallen below that of people in their 80s. Veneto is following suit and forecasts point to a further increase in the ageing population for the next few decades. Today, in line with the national level, 22.6% of Veneto's population is over 65 years of age, but it is estimated that the proportion of older people will already have exceeded 30% by 2033. There are 38,681 people in their 80s, over 2,000 more than those born. There are also 1,196 people over the age of 100!

Fig. 5 - Growth forecasts for the elderly population(*). Veneto - 2017-2040



(*) % Variation on 2008. Forecasts from 2018.
Source: Regione Veneto Statistical Office on ASviS data

The overall ageing of the population is due to the combined effect of the increase in life expectancy in a context of low birth rates. Life expectancy continues to grow. In Veneto in 2017 it reached 83.4 years, while the Italian average was 82.7 years. Therefore, rather than just focusing on individual population contingents, we need to pay attention above all to generational imbalances: the low birth rate is thinning out the younger generations while the elderly population is becoming increasingly numerous. Generational imbalance leads to serious problems in social and economic sustainability. Thus, the relationship between these two trends must be reversed, investing in the quality of life of young people and aiming to restructure their future.

Pensions and generations, a precarious balance…

The problem of the ageing population weighs heavily on the *balance* of the public pension system, which is dependent on the contribution of an active population that will become increasingly insufficient in the face of the growing number of beneficiaries of old-age insurance benefits. By 2017, it was already clear how critical it was to maintain a constant level of working capacity in both the country and in our region. In Veneto, the number of potential older workers exceeded the number of young people recruited by 43 units. In less than fifteen years, the turnover index of employed people in Veneto has risen from 97 in 2005, thus highlighting a situation in which there were more employed young people than those in the 55-64 age group, to the value of 127 in 2008 and 344 in 2018. Ageing is also linked to the recent decade's recession, which has made it more difficult for young people to find work, so much so that from 2005 to 2018 the employed population of Veneto in the age group 15-24 years decreased by 33.3%, with a loss of almost 53,600 units, compared, however, with a growth in this age group's population of 5.4%. At the same time, changes in retirement regulations have led to an increase in the number of employees in the 55-64 age group, which has more

…but in Veneto the pension system is more sustainable.

than doubled in recent years. Thus, between 2005 and 2018, the employment rate of people aged between 55 and 64 in Italy rose from 31.4% to 53.7% and in Veneto from 27.4% to 55.6%.

Balance at work: entering, leaving, changing

It is noted however that in Veneto the pension system is more sustainable. For every 100 people employed there are 61 pensioners, the fourth lowest proportion among the Italian regions.

The world of work incorporates various types of *balances*: the *balance* between supply and demand, between the educational system and the world of work and between pensioners and workers in the context of an ageing population. Labour is a market where workers represent supply (as they offer their work) and companies represent demand (as they ask for workforce). These two forces in the field try to find a point of *balance* even if the needs of both are not always able to converge.

More people unemployed and more difficulty finding work for foreigners and people with only a middle-school education…

As of 2017, there were about 143,600 unemployed people in Veneto, equal to 6.3%. Of these, more than half had been previously employed (53%) while 19% were awaiting their first job. 44% had a further education diploma, 13% had a degree, while 43% had at best a lower secondary school education. However, companies did not seem to be able to employ this workforce, as only few of the latter were recruited (28% of the expected figure). The same is true for immigrants. Among the unemployed, 23% were foreigners, but businesses' hired only 16%. The unemployment rate, equal to 6.3% in Veneto, rises to 12% among immigrants and 9% among those who have not continued their studies beyond lower secondary school qualifications.

…but also more recruitment within professions involving services and trade

Going into detail, one in three unemployed people was qualified in services and trade. In particular, 13% were a shopkeeper or a person in charge of a catering company and 7% were a sales person. Out of 100 people who working in these fields, there were about 8 unemployed, compared to an average of 5 out of 100. However, the average number of months spent job seeking was 11 compared to 15 months on average. Therefore, in terms of both supply and demand, the professions in services and trade are the most dynamic, where there are more unemployed people but where there is also more demand from businesses.

Companies are struggling to find engineers and language graduates

On the contrary, among the workers who are difficult for companies to find are those qualified in technical professions. This difficulty is partly due to the few unemployed people with these skills; for every 100 employed in this category there are only 2 people looking for work.

In 2017, in Veneto, the total unemployment rate for 15-34 year olds was 11.5%, which decreases as the level of education of the person increases. It sat at 20.5% for those who just had lower secondary school qualification, halved for those with a further education diploma and was 8.3% for those who had completed tertiary education. At the average Italian level, the situation has the same trend and the differences are even more visible. However, not all educational paths are equally sought after by businesses; some are more preferred than others. In order to avoid under-staffing or recruitment difficulties, collaboration between industries and the educational system is necessary. In fact, schools must be able to educate people to suit the market and businesses must invest in human capital, which becomes a factor in their competitiveness. The economic/statistical and engineering degree groups are the most sought after by companies and are also those with the most university degrees. However, companies are finding it difficult to recruit engineers, especially computer engineers, and language graduates, given the small number of candidates. The direction of the market, is therefore evident. On the one hand, companies need qualified personnel in the field of *Information and Communication Technology*, on the other hand, a greater presence of professionals who are able to interact with international markets is required, characterised by different languages and cultures, sometimes very distant from ours.

Ten years since the start of the recession, the labour market has been significantly transformed

The area in which there is a profound gap between the school system and the world of work is certainly that of post-graduate education and in particular of the PhD, which is not sufficiently valued and is not considered as an "added value".

In the ten years since the beginning of the crisis, the labour market has significantly changed.
In line with the national figures, the economic situation in Veneto is recovering and employment in recent years has grown. This is so much so that in 2018 it recorded a rate of 66.6%, even higher than that of 2008. However, this growth concerns only employment and mostly that of precarious employees.

Employment is increasing, but there are more and more temporary and underemployed workers

In 2018, there was an increase of 0.8% in the number of people employed in Veneto compared to 2017. This increase is only due to fixed-term contracts, which rose by 10.9% compared to the previous year, while " permanent" employees decreased by 1.1%. The use of fixed-term contracts is becoming more and more regular. The share of total employees under these contracts rose from 11.9% in 2008 to 17% in 2018.
In ten years, there has also been an increase in part-time employment and a significant increase in involuntary part-time employment. This shows a sign of employment distress and is, for all intents and purposes, a mismatch between supply and demand for work; employees are employed on a part-time basis, not by choice, but for external reasons, mainly due to business needs. In Veneto, in 2017, the share of involuntary part-time workers in total employment was 8.8% compared to 4.2% in 2008. Compared, however, to other Italian regions, once again the situation in Veneto proved to be good: Veneto placed second in the regional ranking for the lowest levels of underemployment (Trentino Alto Adige ranked first with 6.9%, the Italian average stands at 11.4%).
In line with the national trend, in addition to a mismatch between supply and demand, the increase in involuntary part time work was partly due to the shift in employment towards sectors of economic activity where short-time work is more widely used.
In 10 years, the Veneto region, against a sharp fall in the number of workers in industry, particularly in the construction sector (-33%), there was growth in agriculture and services of 10.4% and 8.4% respectively.
In this context, the concept of "quality work" is also included. In particular, for young people, the downward shift in wages, the "low quality" and "low intensity" types of work that are becoming more and more widespread, and the delayed entry into the world of work can only increase their risk of being poor despite receiving a salary.

In ten years more working women and older employees

In addition to the characteristics of the work, the socio-demographic composition of those employed has also changed in this decade. On the whole, the aggregate of employed people is, compared to ten years before, more "elderly" and more educated, although it must be stressed that compared to the past, workers today are more often over-qualified[10]; finally, many more women are working (in 2018 the female employment rate was 58.2%).
Particularly affected by the crisis are young people, while the employment levels of people aged 55-64 are increasingly high. The emergence of the ageing population and of the crisis has highlighted the need for political action aimed at promoting even more prudent management of pension savings, improving the long-term sustainability of public finances while ensuring the adequacy of benefits and the expansion of the active population. For this purpose, the Lisbon Strategy already set a target of 50% for the employment rate of the population aged 55-64 by 2010. Today in 2018, in Veneto 55.6% of 55-64 years olds work (in Italy 53.7%) compared to the much lower figure of 32.1% in 2008; in just ten years this rate has seen a growth of over 23 percentage points.
In this scenario, the current Italian policy on pensions "Quota 100" deserves a small mention. The European Commission has been critical of the lowering of the retirement age, stating that this would entail greater burdens for the State. To this, Claudio Durigon MP, Undersecretary of Labour, replied that "The resources allocated to quota 100 amount to about 22 billion over three years. I understand that every time the pension system is tackled the human side of people, worn out by work, is not looked at, but when looking at the accounts there are benchmarks to show how sustainable the measure is".

Business on the road to sustainability

In order to achieve and maintain a harmony between the social welfare of workers and economic prosperity, it is essential that the manufacturing industry focuses its attention on the local area. Manufacturing choices must be responsible, not only with regard to environmental protection, but also and above all they must respect and support the

[10] Over-qualified workers, i.e., those with a higher education qualification than that required to carry out a given profession. Underemployed, instead, denotes a worker with a part-time employment contract who would like to work more hours and would be willing to do so within two weeks.

balance and development of the local community, integrating shared values and the pursuit of profit logic into company strategies.
This approach is part of the broader concept of corporate social responsibility, which concerns corporate commitment to effectively managing ethical, environmental and social impact issues within the company and in society. The approach of companies must therefore be oriented towards sharing and being in line with stakeholders: all forms of reporting on the sustainability of their production activities *are* therefore desirable and valuable, in line with target 12.6 of Agenda 2030 "Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle".
Currently there are about one hundred organisations/companies in Veneto whose system of social responsibility is certified to the requirements of the SA8000 standard, to ensure the ethicalness of its production chain and its production cycle.

There are around one hundred Veneto firms with a certified system of social responsibility

The number of organisations/companies from Veneto registered in 2017 under the European Union's Eco-Management and Audit Scheme (EMAS) was 48, slightly down on previous years. This certification is one of the tools of transparency on the responsibilities related to production and the pressure that it exerts on ecosystems and the consequent commitment by companies in adopting policies and practices related to proper environmental management. Another instrument that lays down the principles for correct environmental management of the company's production processes is the ISO 14001 environmental certification. In Veneto there are 1,303 companies and 2,223 production sites certified ISO 14001 as of November 2018.

Transparency: the key word in environmental management

The choice of sustainable production and commitment to transparency must be understood not exclusively as a cost for the company, but above all as an investment that guarantees a more solid and long-term positioning in the market. Istat gives testimony to the value of sustainable production by estimating, at a national level, significant differences in productivity for companies with a medium-high level of sustainability, with respect to units with no sustainability. The potential of investments linked to innovation and the renewal of production processes and products for better energy efficiency and beyond has been confirmed.
In the period 2014-2016 it is estimated that 52.5% of Veneto's industrial and service companies with at least 10 employees had introduced innovations, presenting a propensity for innovation greater than the national figure. Among these, companies that introduced product or process innovations invested a total of €3.4 billion in innovation. The average expenditure per employee in Veneto is significantly higher than in 2014.

How to improve? Innovation

Expenditure on private research and development in Veneto was about 1 billion 400 million euros in 2016 and represented more than 2/3 of total regional expenditure. Business investment grew by more than 20% compared to the previous year. In 2016, the total R&D expenditure carried out in Veneto by all sectors amounted to 2 billion euros, equal to 8.6% of national expenditure. The percentage incidence of R&D expenditure on the regional Gross Domestic Product was 1.3%, an increase compared to the previous year.
At the end of 2018, there were about 860 innovative start-ups in Veneto, with the region coming in as the fourth in Italy where these are concerned. More than 65% of innovative start-ups in the Veneto region operate in the services sector, where software production, IT consultancy and research and development activities predominate. However, little more than 30% operate in industrial sectors and in the construction industry.

The number of innovative start-ups in Veneto remains high

The use of digital technologies at national level and in Veneto is continuing to grow, but there remains a *significant gap* compared to other EU countries.
The introduction of 4.0 technologies, favoured also by the specific regulations introduced with the Industry 4.0 Plan, is not enough on its own to start a real digital revolution in companies. It should include an integrated approach, involving technology, organisation and work.

Digital culture in enterprises

In Veneto, the most widespread technology is the Internet of Things (5.8%), followed by horizontal in-

tegration of data (4.3%), Cybersecurity (3.8%), and the Cloud (2.9%); investments in 4.0 technologies are mainly attributable to the manufacturing sector.
Of course, manufacturers are also always looking to attract customers and new markets, which today are showing an ever-increasing focus on responsible production. In fact, it is estimated that almost three out of four Italians are willing to pay more for products considered sustainable, especially if they relate to food consumption.

New habits are changing marketing channels

New styles of consumption and conscious purchasing choices are leading to a new structure of marketing channels.
In 2018, in Veneto, the number of fixed retail outlets afell by 1.5% compared to the previous year, a more noticeable decrease than that of the national trend, while there were signs of expansion from all forms of large-scale retailing. As far as large-scale retail sales are concerned, Veneto is the region with the highest growth in the North (+6.0% in the last year, +20.4% in the last ten years).

Traditional shops are struggling, while large-scale retail is growing

Internet retail businesses registered with the Veneto Chambers of Commerce at the end of 2018 have more than tripled in 10 years, with an average annual increase of 23.2%. In 2018, in Veneto, 36 online purchases were made for every 100 inhabitants, with an upward trend in purchases compared to the previous year.

E-commerce companies tripled in ten years

In this context, the trend of bankruptcies in Veneto continued to demonstrate strong signs of improvement for the regional productive fabric; business bankruptcies in 2018 decreased by 13% compared to the previous year.
As of the 31st of December 2018, there were 432,970 active companies in the Veneto production system, representing 8.4% of the Italian entrepreneurial base.

Strong tertiary sector momentum continues and bankruptcies fall

The number of companies active in the Veneto region was slightly down on the previous year; the long-term process of sectoral reorganisation of the Veneto production system led to a new production structure, where the main and more traditional production sectors leave room for many tertiary sectors. The most significant increases are those reported by business services, financial services and social and personal services, while a slight decline can be observed for manufacturing, construction, trade and agriculture.
Within the manufacturing industry, the most distressed sectors in 2018 were the wood and furniture manufacturing industry, the chemical, rubber and plastic industry, the fashion sector and the mechanical engineering sector. The jewellery, sportswear and medical equipment industry, which includes eyewear production, was the only growing manufacturing sector in the year just ended.
The decline of the artisan entrepreneurial base also continued in 2018. At the end of the year there were 126,741 artisan businesses in Veneto, 29.3% of the total number of businesses in Veneto, down by 1.4% compared to the previous year. The two main sectors for regional artisan entrepreneurship, manufacturing and construction, which together account for more than 60% of business, have both been declining (-2.2% and -1.9% respectively compared to the previous year). The ongoing restructuring of the artisan system, which sees sectors in difficulty leaving room for "new" sectors in the artisan sphere, is evidence of the new opportunities that can arise from *combining* craftsmanship and technology, in order to bring craft together with the culture of management and marketing, in a period of transition to a digital world. This will provide a new accessibility to quality and tailored craft products and services, which will join, being both robust and aesthetically-pleasing, other goods produced on a large scale.

For the craft sector it is fundamental to seize new opportunities

After all, all over the world, Italians are considered the craftsmen of excellence. Made in Italy luxury craftsmanship is an economic asset that is particularly sought after abroad, ranging from the fashion sector to jewellery, furnishings and food production.
In fact, despite the slowdown in world trade, Veneto's exports reached their historical peak. In 2018 Veneto's exports reached 63.3 billion euros and recorded a growth rate (+2.8% on an annual basis) almost in line with the national average.
The main destination markets for Veneto goods are those of the EU, +4.1% on an annual basis, which

New record for Veneto exports

is responsible for more than 60% of the total value of Veneto products exported. The German market remains the top export destination for Veneto, a market that accounts for 13% of all regional exports. Sales of Veneto products to the French market reached 6.5 billion euros, the highest increase in terms of value of exported goods (+460 million euros compared to 2017). Veneto exports also achieved good results in Spain (+7.6%), the Netherlands (+6.9%) and the Czech Republic (+7%).

The value of trade with non-EU markets, on the other hand, was almost stationary, with growth of less than 1%. Among the markets outside of the EU, the best performance was achieved in North America, which was strong in the mechanical, electrical equipment, furniture and metalworking sectors.

Instrumental mechanics, the leading sector in regional exports, with almost 13 billion euros in 2018, was able to maintain a competitive advantage that allowed it to achieve a significant rate of growth in foreign sales also in 2018 (+6%). The positive trend in mechanics was also driving sales of metallurgical products.

The fashion sector remained the second largest export sector in Veneto and is one of the flagships of the regional productive fabric, thanks to its ability to combine industry and craftsmanship. Foreign turnover is growing, amounting to 10.6 billion euros in 2018 (+1.5%).

Machinery and metals drive regional exports

Another sector has been doing well and reacting to the challenges posed by increasingly fierce international competition is that of wood-furniture, which increased its foreign sales by +3%, maintaining the positive trend of recent years and remaining focused on EU markets.

With the results achieved in recent years, the agricultural food sector continues to be one of the leading sectors of regional export. 2018 was not a brilliant year (+0.4%) and the sector was more impacted than others by a market scenario that was not favourable to international trade and by the slowdown in consumption in some of the main reference markets. This result is due to the significant drop in sales in Germany, the reference market for companies in the sector. As for France, the number of agricultural food exports to its market were positive.

Foreign trade for Veneto companies was also maintained due their high level of openness to international trade. The high propensity for exports[11], 38.1% of regional wealth, makes Veneto one of the regions most open to international markets in Italy. In the last decade, exports have been a fundamental component of our aggregate demand during a period of weak household consumption and investment, and foreign demand has been decisive for the *balance* of our economic system and for supporting employment.

High propensity for export of the Veneto business fabric

The balance between accounts and sustainable economic growth

The 2018 Nobel Prize in Economic Sciences was awarded to US economists William D. Nordhaus[12] and Paul M. Romer[13], for having integrated climate change and technological innovations into long-term macroeconomic analysis. Their work has allowed us to develop methods and theoretical tools to respond to a question becoming more and more relevant: *how to promote economic growth that is at the same time, both durable and sustainable*.

Nordhaus, in the 90s, was the first person to develop quantitative models that describe the global interaction between the economy and climate; Paul Romer instead has shown that knowledge and innovation are the drivers of long-term economic growth.

Both, analysing the transition phases of human history and highlighting the benefits and risks of capitalism, have studied models, in search of a *balance* between economic growth and social welfare.

We cannot talk about *balance*, in a broad sense, when revisiting the salient facts that shaped 2018: the tariff wars between the United States and China, the meeting between American President Donald Trump and North Korean leader Kim Jong-un following months of threats of nuclear war, the new American sanctions against Iran, the growth of debt in emerging and developing countries, the collapse of the price of oil, the management of the Brexit process, the tensions between Italy and the EU, the demonstrations of the yellow vests in France, the return of terrorism in Europe with the shooting at the Strasbourg Christmas markets, as well as the crises of Turkey, Argentina, Venezuela, and so on.

If, therefore, the global economic situation ap-

[11] Determined by the relationship between exports and wealth produced by a region.
[12] Yale University.
[13] NYU Stern School of Business, New York.

peared to have been boosted by a cyclical recovery that began in mid-2016, intensified in 2017 and spiked in 2018 due to the good prospects of sustained growth and widely profitable financial markets, from mid-2018 the world economy would face the issue of political risk; a source of systemic uncertainty that could affect the choices of international investors, move markets and lower the rate of global growth. World growth for 2018 is estimated at +3.6%, should position itself at +3.3% in 2019 and at +3.6% in 2020.

In 2018, the European economy proves to be very fragile in the face of the worsening international economic situation. Production activity weakened significantly across the Eurozone in the second half of 2018 as a result of the slowdown in world trade growth, in a climate where confidence was undermined by uncertainty and output in some Member States was negatively affected by temporary domestic factors such as disruptions in car production, social tensions and fiscal policy uncertainties. As a result, the growth of Gross Domestic Product in both the Eurozone and the EU slipped to 1.9 % in 2018, a decrease compared to the 2.4% of 2017.

The economic momentum at the beginning of this year has slowed down, although the fundamentals remain solid. Economic growth will continue, but will be more moderate. According to the forecasts, the GDP of the Eurozone is expected to grow by 1.2% in 2019 and 1.5% in 2020. As far as the entire European Union is concerned, it is expected that there will be a 1.4% increase in 2019 and a 1.7% increase in 2020.

In Italy, economic growth continued for the fifth consecutive year in 2018, but slowed down compared to 2017. The relatively dynamic growth phase, by the standards of the Italian economy, which began in mid-2016, began to lose momentum in the second quarter of last year; three quarters have therefore passed since the start of the setback and, on the basis of available economic indicators, even the beginning of 2019 does not promise better results.

The EMU suffers the decline of the international framework

In 2018, GDP at market prices was €1,756,982 million, an increase of 0.9% in real terms[14] (in 2017, growth was +1.7%). At the beginning of 2019, the Italian economy showed a moderate recovery that interrupted the weak decline in activity recorded in the two previous quarters. The level of GDP in the first quarter of 2019 is almost unchanged from that of the beginning of 2018. According to Istat's preliminary estimate, in the first quarter of 2019, Italian GDP recorded an economic increase of 0.2% and +0.1% compared to the same quarter in 2018.

Italian growth is positive, but slowing down

Decree Law 4/2019 introduced two measures of fiscal expansion: "Quota 100" and "Citizen's Income". The " Citizen's Income", in substitution of the previous Income of Inclusion, is considered an intervention for social inclusion and the fight against poverty aimed at supporting distressed families, through the occupational and social reintegration of people at risk of marginalization. For households consisting exclusively of one or more persons aged 67 years or more, the measure is referred to as a "Citizens' Pension". The full implementation of the measure should contribute to fighting poverty, inequality and social exclusion and generate a significant decrease in the rate of non-participation in the labour market. Although it should be noted that the number of beneficiaries of the Citizens' Income does not correspond to the total number of those in poverty[15], in Italy the number of applications submitted on the 30th April 2019, in the space of two months, was 1,016,977, between those submitted on-line on the dedicated government website and those submitted to the Post Office or to the CAF tax assistance centres. 60% were submitted by people between 40-67 years old, 22% between 25 and 40 years old, while 15% of the applications were from over 67 years old and therefore regarded the Citizens' Pension.

Budgetary measures are expansionary

In Veneto, 35,501 applications were submitted, representing 3.5% of the total number of applications submitted throughout Italy. At the provincial level, 60% of the applications came from the three major provinces, Padua, Verona and Venice, each with about 20% of the total regional applications, followed by Vicenza, Treviso (15% each) and Rovigo (7%). Belluno was at the back of the line, with just 3.7% of applications.

[14] Any changes from one or more years prior are reported in real terms to take inflation into account.

[15] The values used as a reference for defining the eligibility requirements and the amount of the Citizen's Income benefit do not refer to the absolute poverty thresholds but derive from the relative poverty risk threshold, set at 60% of the median distribution of comparable disposable household income.

The research institute Prometeia estimates that the two measures, Citizen's Income and Quota 100, could lead to an increase in households' disposable income of 0.4%, with a net expansive effect on GDP estimated at 0. 1%. This effect would come as result of the reallocation of resources to households at the expense of financial companies, assuming that the propensity to spend of the former is high and higher than that of the latter. It is assumed that the increase in households' disposable income will be around 1% in the years 2020-2021. All of this is based on the assumption that the effectiveness of the measures is in line with that estimated by the government in terms of adherence and implementation. For 2020, the forecast is rather uncertain as the refinancing of the measures is currently dependent on an increase in VAT rates; to avoid recessionary effects, alternative forms of financing will have to be found.

Veneto's economy

The 2017 regional accounting data, released by Istat in December 2018, show that Veneto was one of the driving regions of the entire national economy.

With a current turnover of 162,505.4 million euros, Veneto remains the third region in Italy for wealth generation, after Lombardy and Lazio. 9.4% of the national Gross Domestic Product is produced in Veneto. In 2017 Veneto recorded growth by +2.3%, well above the +1.6% forecast of a year ago and the +1.6% national average.

The GDP per inhabitant of Veneto in 2017 was 33,122 euros at current values, 16% higher than the national figure. For 2018, GDP per capita was estimated at 33,776 euros at current levels.

When comparing the economies of European regions, a great deal of heterogeneity emerges, but Veneto is in a position above the general average.

Veneto's GDP was estimated to have grown by 1.1% in 2018, a rate above the national average. Domestic demand increased by 1.4%, more due to the rise in investments, +4.3%, than due to the rise in household consumption, +0.8%.

Veneto is ranked third for the production of wealth

The result for 2018 is attributable to the good performance of Veneto industry, which recorded an increase in added value of 2.3%, the recovery of the construction sector, +2.3% and the positive but subdued performance of services, +0.7%.

Veneto is in a good position among its European competitors

The analysis of Veneto's economic growth and its breakdown into components that identify contributions to development of different origins show that Veneto is highly competitive.[16].

From a first glance at the available data we can conclude that Veneto has been one of the driving regions for the national economy for the last 10 years, together with the autonomous provinces of Bolzano and Trento, Lombardy and Emilia Romagna in first place. However, the territorial peculiarities may hide differences in the dynamics of growth.

Competitive strength is the most advantageous feature of Veneto

In our region there is a high concentration of specialist production in the manufacturing sector, which has recorded lower growth than the service sectors, with the latter having been the main engine of growth in recent years at the national level. The contribution to economic growth made possible by the structural composition of the Veneto production system is therefore less pressing than the national trend.

When breaking down its overall *structure*, Veneto's real stand-out contribution appears to originate from the *local* component, i.e., the autonomous growth capacity of the area, given by a series of factors that are difficult to identify and measure. These factors concern characteristics of the territory linked to the technological, infrastructural and logistical sphere, to the depth of management culture in companies, to peculiarities concerning the productivity of the labour forces of the area, or, in other words, simply the dynamism and competitive strength of the people of Veneto.

Knowledge of the specific features and socio-economic trends of the area favours the identification of strategies and policies for sustainable development that can be adapted to diverse regional features, as if they were tailor-made.

Aiming for economic sustainability means working towards durable and *balanced* growth, through a conscious and correct use of resources.

Strategies for sustainable development, tailored to the specific features of the territory

Tourism is competitive and balanced when it is

[16] See Chapter 1 for some methodological notes on shift&share analysis.

sustainable

Tourism is undoubtedly an important economic resource for Veneto, but what is its impact on the area?

There are strong concerns about the sustainability of tourism in Europe. In 2006, the European Commission already adopted a renewed sector policy, with the main objective of contributing to "improving the competitiveness of the European tourism industry and creating more and better jobs through the sustainable growth of tourism in Europe and globally". And now the contribution that tourism can make to sustainable development is recognised in Agenda 2030, where it is proposed to develop sustainable tourism that "creates jobs and promotes local culture and products" through the implementation of policies and the application of targeted measures.

The commitment is to promote responsible and quality tourism in order to achieve three key objectives: economic prosperity, economic and social cohesion, and environmental protection. These aspects, in the long term, are connected in an unbreakable link, a *balance* between economic development and protection of destinations, to be achieved through integrated political strategies.

Knowing the impact of tourism on the area and the population at different times of the year is essential in order to establish strategies to avoid the saturation of certain services and situations of overcrowding, in order to ensure both the satisfaction of tourists and the quality of life of the inhabitants. Veneto is particularly interested in this matter because of the number of tourists it hosts every year. In 2018 it welcomed over 19.5 million tourists (+2.2% compared to the previous year) for a total of 69.2 million overnight stays (+0.2%). If we compare the number of visitors to the resident population, in Veneto on average 39 tourists per thousand inhabitants are counted every night. This is an average among very different regional and temporal situations. The impact of tourism on the population is more intense in lake areas (402 tourists per thousand inhabitants, with a strong peak in August when there are more tourists than inhabitants) and in the seaside areas (352 which becomes 1,222 in August). In the cities of art, and in particular in the capital cities, tourist inflows are more distributed throughout the year, with Venice at the forefront with an average of 127 tourists per thousand inhabitants staying every night of the year, reaching 366 in the historic centre, which rises to 450 in July.

Number of tourists per thousand inhabitants

However, social impact is also measured by the supply of employment in the sector. In 2017 in Veneto there were about 112,400 employed people in the core tourism sectors (hotels, accommodation facilities, restaurants, travel agencies, tour operators, air and sea transport of passengers), i.e., sectors with activities mainly aimed at attracting and satisfying the needs expressed by tourists in the destination of reference, in order to achieve an economic return in terms of profit. The number of employees rises to 190,000 if we also consider the activities closely linked to tourism (rental management, museums and other entertainment facilities, transport and bars), i.e., activities closely linked to tourism, whose recipients, however, cannot be defined as 100% tourists as the services are also used by residents.

Working in the tourism sector

Work in the tourism sector is more balanced from a gender perspective: 52 out of 100 of people employed are males and 48 females, compared to an average ratio of 57 men and 43 women out of the total employed population. The tourism sector is notable for having a greater presence of workers of a younger age, under 35, and jobs which are less permanent than the average; there are more fixed-term contracts and more part-time jobs. However, the aspect that most distinguishes work in the tourism world is the typical working schedule. The needs of tourists in fact require a continuous presence of staff throughout the whole day and week. Thus, if the percentage of the average employed citizens of Veneto who have worked in the evening does not exceed 22%, for those employed in tourism it exceeds 71% and then the percentage of people who have worked at night reaches 40%. The work then continues over the weekend; 88% have worked at least one Saturday in the last month and 82% at least one Sunday.

But sustainability also means reducing the seasonal effect of that in question. The high concentration in the summer months does not only affect revenue. A more evenly distributed flow throughout the year would lead to better use of existing infrastructure and more stable staffing.

The cities of art are historically the type of destination with the best distribution of flows throughout the year. On the contrary, seaside

High or Low Season?

resorts shows, by their nature, the strongest seasonality. For the other types of destination, over the years there has been a slight improvement. Up to 2018 there has been a more equal distribution of flows between the months of the year than in the past, both for the lake and mountain areas and also for spa areas.
Wine and food, the pride of Veneto's tourist offering, with its extraordinary ability to attract tourist inflows, is a real asset to the country's economy, thanks to a transversality that brings benefits to all those who are part of the supply chain of the sector and encourages a more equal distribution of tourists throughout the year. The daily expenditure of tourists on wine and food is the highest, equal to about €177.

Wine and food tourism creates balance

Among the issues to be addressed in the pursuit of sustainable tourism, the European Commission has always included making the tourism experience available to all, without discrimination. Regione Veneto has set itself the objective of making all the cultural, artistic, scenic and environmental assets of the region accessible to all, in the knowledge that a move towards inclusiveness means working towards an overall improvement in the tourism industry.

An experience for all?

A figure which is still provisional and partial indicates that there are 711 hotels in Veneto accessible to people with reduced or impaired motor or sensory capacity, equal to 23.9% of those in the region.
In the cultural field, it should be noted that attention to the needs of the disabled is evident in about 41% of the museums in Veneto through easy access with guides or facilities such as ramps, equipped bathrooms, elevators, etc. 24% of the institutes provide visit support through appropriate materials and information support, such as tactile routes, catalogues or explanatory panels in Braille, etc.

In balance with the environment

There is a delicate *balance* between tourism, resident population, natural environment, identity and cultural traditions, which can be disturbed by mass tourism and traffic, if attention is not paid to the quality of development and the consequences of any environmental and social deterioration. Excessive tourism could cause environmental damage in ecologically sensitive areas, high consumption of natural resources, increased pollution, deterioration of cultural heritage, and may contribute to the suppressing of culture, the loss of local traditions and serious socio-economic imbalances. On the other hand, the scarcity of tourism can lead to the impoverishment of an area and the reduction of financial resources and interest in improving it and preserving its environmental and cultural heritage.
However, most macroscopic effects are generated by the production activities and related mobility, not by tourism. In the "sustainable" model, consistent with the goals of Agenda 2030, the environmental, economic and social dimensions must be *balanced* and the need for the movement of people and goods must be balanced with the need to limit their negative impacts.
The Audimob sample survey on the mobility of people has recorded a moderate increase in attention to sustainability in recent years.In the Veneto region, as at national level, there has been a decrease in the use of motorised vehicles, which however remain the most widely used, in favour of "foot/bicycle" means of transport. Moreover, the protection of the environment and health makes interventions such as restrictions on vehicular access to cities, the promotion of public transport, that is, shared, *demand-based* and sustainable mobility services, imperative.

How people move around

The air we breathe

The situation in which the cities of the Po Valley find themselves is unfortunately critical. In the 2018 ranking of Legambiente, among the first twenty-five cities that exceeded at least one of the daily limits for PM10 or the Ozone, there were six of the seven from Veneto (with the exception of Belluno).
As is well known, the contributions of the emission sectors to pollution can vary considerably at the municipal level and depending on the weather and

climate conditions. As regards PM10, for example, road transport in Verona accounts for 35.3%, followed by heating systems (32.6%); in Venice it accounts for 12.5%, while inland waterways and maritime activities account for 46.5%.[17].

Cars, traffic and urban sprawl

The high average age of the cars on the road and traffic congestion make the situation more critical: Italy has one of the highest motorisation rates in Europe, 636 cars per thousand inhabitants, with 633 in Veneto.

74 hours a year in traffic in Verona and 73 in Padua

Verona and Padua, respectively with 74 and 73 hours spent in in traffic per year, are among the top twenty Italian cities with less than 800,000 inhabitants with more congestion than the Italian average. The heavily urbanised configuration of central Veneto favours the use of private vehicles and increases road traffic. This territory, in fact, characterised by *urban sprawl*, is one of the areas with the greatest dispersion of settlement in Italy, with 95 municipalities with an urban area of more than 25%.

Padua, Verona, Treviso, Vicenza and Venice are among the top twenty[18] Italian provinces for the number of commutes, 300/350 thousand each, with a significant impact on intra and extra-municipal traffic, since the car is the most used vehicle.

Mobility is changing

Other aspects of mobility help to define the situation. Among these, there has been a rise in the number of people who travel daily, following a few years of decline: from 2012 to 2017, in Italy it went from 75.1% to 88.5%, in Veneto from 78% to 90.5%; the percentage of travel for work/study and family/personal affairs is falling, in favour of travel for purposes leisure/entertainment; changes that can affect the hourly flows of traffic.

In Veneto, 31% of daily travel is for work and study

A long-term analysis of the trend of road accidents has revealed a slow but persistent increase in the number of accidents, even outside peak hours on weekdays; evidence that can, in part, be traced back to the variety of driving patterns found by Audimob.

Infrastructure and services for sustainable mobility

Traffic is affected, to varying degrees, by infrastructure provisions, sustainable mobility services and policies to encourage the use of public transport. In Veneto these are present to varying degrees; their effectiveness is proportional to their frequency.

Padua is ranked third in Italy with 10.5 km of tramways

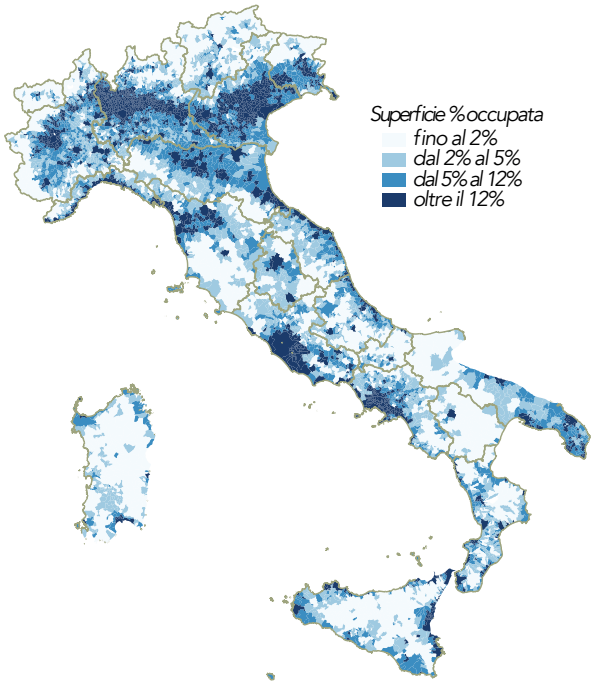
The tramway infrastructure network in Veneto is present in Padua and Venice, respectively the third and tenth cities in Italy per km of network.

The presence of traffic lights, correlated to the level of urbanisation of an area, can help the flow of traffic if they have "smart" systems; only in Vicenza and Venice are there "traffic pre-emption systems", which are activated for the priority passage of public transport

[17] INEMAR (INventario di EMissioni in ARea) is a database of emissions into the shared atmosphere within the framework of an agreement between Lombardy, Piedmont, Emilia Romagna, Veneto, Friuli Venezia Giulia, Puglia and the Autonomous Provinces of Trento and Bolzano.

[18] Il percorso casa-lavoro, Analisi dei dati sulla mobilità del censimento 2011, 2019 Alberto Sbrogiò.

Fig. 6 - Percentage of urbanised territory by municipality. 2011



Source: Processing of Istat data by the Regione Veneto Statistical Office

vehicles. The commercial speed of buses[19] is also a decisive factor for the competitiveness of LPT and is an indirect indicator of the degree of congestion in cities. The Italian average is 19.4 km/h, Padua has the lowest in Veneto with 14.6 km/h; the highest is in Rovigo, 25 km/h.

Further measures to encourage the use of public transport are the 30 Zones and Limited Traffic Zones (ZTL), aimed at reducing traffic and air and noise pollution. They are found in all the provincial capitals of Veneto, with the exception of 30 Zone in Rovigo and Padua. Infomobility services, such as variable message signs, are available in all the Veneto provincial capitals except Belluno. Electronic parking payment systems are not available in Belluno and Rovigo. Only Verona has a road and traffic warning service via text message. *Car sharing* is active in Verona, Padua and Venice, as is *bike sharing*, which is also operational in Treviso. Rovigo and Belluno are below the average of Italian provincial capitals for cycle paths - 21.1 km every 100 km - while all the other cities are above. According to Motus-E[20], Padua has a good offer of alternative mobility, with almost 182 km of cycle paths, in terms of the proportion of journeys made using public transport and *sharing mobility*,. Treviso and Venice are well placed with regard to the use of bicycles, walking and all forms of electric transport; with respect to the adoption and implementation of Urban Mobility Plans - UMPs, Sustainable Urban Mobility Plans - SUMPs[21] and others, Low Emission Zones, ZTLs or toll zones, all the Veneto provincial capitals are between 1 and 2, where the maximum is 5 instruments adopted.

The Metropolitan City of Venice, as part of preparation of the SUMP, has the additional objective of developing and defining integrated plans, such as a freight logistics plan, a cycle path network plan and a catchment area plan for local public transport services.

In 2017, travel by local public transport continues to grow.

Passengers, for all modes of transport, amounted to 464.38 million, an increase of 1.57% compared to 2016.

Renewal of Veneto LPT: greener transport and more travel on public transport

Regional and local rail services record an increase of 1.25 million passengers.

With regard to road transport services, for an essentially equivalent quantity of services offered, there was an increase in demand met in urban areas and a slight decrease in suburban areas (-2.1%).

The results for tramway services are clearly positive: passengers in Padua and Venice total 25.4 million in 2017, up 2.5% on 2016 and four times as many as in 2010. As a result of the reduction in the overall use of road transport in urban areas, traffic congestion and pollutant emissions have reduced.

Water travel on the Venice Lagoon increases continuously, with particularly significant annual growth rates: from 2016 to 2017 there was an increase in passengers of 4.28%; the total number is 145.07 million, of which 68.2% are subscription holders.

The fleet of local public transport vehicles is older than the European average, about 13.5 years versus 7 years. In this regard, there is the important commitment of the Veneto Region in co-financing the purchase of the latest generation of buses by public transport service providers; these are low-emission vehicles even with alternative fuel, an important step on the road to converting the vehicle fleet for greater environmental sustainability.

The impact of polluting emissions from transport is considerable, as these then contribute to climate change and global warming. Scientists at the UN Intergovernmental Panel on Climate Change (IPCC) estimate that in order to reduce in part the dramatic consequences of climate change on the environment, global warming must be limited to no more than +1.5°C compared to pre-industrial levels and, to do so, global greenhouse gas emissions must be reduced by 40% by 2030 compared to 1990 levels. The energy sector will play a very important role in this process, offering a twofold contribution to the reduction of carbon dioxide emissions: on the one hand, through the reduction of energy consumption and, on the other hand, through the increasing use of renewable and clean sources for energy production. Overall, it will be a question of rebuilding a new *balance* that enables the continuous development of collective well-being but is at the same time sustainable both environmentally and in terms of consumption of the planet's finite resources, at least

[19] Average value, in km/h, determined on the basis of the public service timetable of the LPT lines. It is the ratio between the expected travel times and the length of the routes served.

[20] MOTUS-E is an Italian association made up of industrial operators, academics and members of environmental and opinion associations.

[21] Strategic planning tool with a medium-long horizon (10 years), provided for by the Decree of 4 August 2017; the SUMPs must be adopted by all Metropolitan Cities, wide-reaching authorities and individual and aggregated Municipal Authorities serving more than 100,000 people.

with regard to those that have been most exploited so far, namely fossil fuels.
As early as the Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009, the EU had set targets for improving energy efficiency and increasing the use of renewable sources, to be achieved by 2020: for the former, it meant increasing energy efficiency by 20% compared to 1990; for the latter, the goal was to cover 20% of gross final consumption through the use of renewable sources.
With Agenda 2030, the European Commission set out its plan for implementing the climate and energy goals, in particular in its three key objectives: reducing greenhouse gas emissions by at least 40% compared to 1990, achieving a share of energy consumption covered by renewable sources of at least 27% and improving energy efficiency by at least 27%. This package is, in fact, a continuation of the previous "2020" package.
The trend of the indicator for the development of renewable sources is certainly positive both in Europe and in Italy. In 2016, the most recent data available for the EU28 as a whole, coverage in the European Union reached 17%, an upward trend, although not yet sufficient to reach the 20% set for 2020.
In Italy, the situation seems more positive, given that as early as 2014 it had reached 17.1%, further increasing in subsequent years, reaching 17.4% in 2016 and even 18.3% in 2017, exceeding its target of 17% in advance.
The situation also appears positive in Veneto, since the regional objective of 10.3% was already well exceeded in 2016, the last available year of monitoring data, with 17.6%.
With regard to primary production[22], we can see that this has gradually decreased in Europe (EU28) in the period 2008-2017, falling from 862 million to 758 million TOE. In Italy, the trend has gone through alternating phases, but has increased on average, rising from 32.9 million TOE in 2008 to 36.7 million TOE in 2017. In Veneto the available data reaches 2015, however, we can observe some changes since 2008 and, in particular, the fact that primary production has more than doubled, from 0.7 to over 1.5 MTOE thanks to the strong development of renewable sources, which increased from 0.7 to 1.4 MTOE. However, there is still a deficit, given that primary production covers just 13.9% of regional final consumption; however, there has been an improvement compared to 2008, when production covered just 6.2% of consumption.
In terms of consumption, positive data is observed for Italy in terms of energy intensity, the indicator that shows the energy efficiency of a country, which is measured in tons of oil equivalent (TOE) needed to produce 1 million euro (M€) of wealth: from 2006 to 2016 it fell from 113.2 to 98.5 TOE/M€, a value that put Italy in sixth place in Europe behind Ireland, Denmark, Malta, Luxembourg and the United Kingdom.
As far as the electricity subsector is concerned, production in Veneto in the period 2008-2017 shows an immediate drop, with the lowest historical value in 2011 and a subsequent recovery until 2015, aided by the strong development of renewable resources. In the past two years, on the other hand, there was a further decline, which in 2017 led to a production of just over 15,500 GWh. Consumption, on the other hand, was variable until 2015, followed by continuous growth in the following two years, which in 2017 brought it back above 30,000GWh for the first time since 2008. Overall, in the Veneto region, renewable energy sources accounted for more than 42% of all regional electricity production in 2017.

Italy in 2017 already reached 18.3% energy produced from renewable sources...

... and Veneto 17.6% in 2016!

[22] Primary energy production occurs when natural resources are exploited, for example, in coal mines, oil fields, hydroelectric plants or in the production of biofuels. The production of electricity from renewable sources such as sun and wind is also included in the primary production of energy. From the ENEA glossary.

"What is genius but *balance* on the edge of the impossible?"
Norman Mailer

The analysis in this year's Statistical Report can help to provide strategic information on a perpetually changing situation so that a strategy can be devised to reconcile conflicting needs with sustainable synthesis, dynamic development, respectful of differences and effective in results.
The intention is also to stimulate widespread reflection, from an organic and unitary perspective that involves all aspects of everyday life in our regional community.

"Some vices miss what is right because they are deficient, others because they are excessive, in feelings or in actions, while virtue finds and chooses the mean."
Aristotle