II Socio-Economic Framework

Key features of Italy

Italy is a peninsula located in southern Europe, at the centre of the Mediterranean Sea. Its territory holds mountain chains of the Alps and the Apennines, a few major rivers, with the longest being the Po, and many lakes (the largest is Lake Garda), plus numerous islands, including the major islands of Sicily and Sardinia and 70 other smaller islands. Italy covers a total surface area of 301,336 km^2 (not including the Republic of San Marino and the Vatican City state). Its maximum length is 1,200 kilometres (from Vetta d'Italia to Capo delle Correnti). The terrain is primarily hilly and mountainous at respective percentages of 41.6% and 35.2%. Its extensive coastlines total approximately 8,300 kilometres in length. All these features ensure that Italy presents a highly diversified landscape.

47 Italian cities and cultural sites are included on the UNESCO Worldwide Heritage List.

Climatic conditions are generally temperate, though with regional variations. Summers are hot in the northern Regions and occasionally rainy, while the central Regions can present significant humidity and the southern Regions are subject to torrid heat. Winters in the cities of northern Italy feature cold temperatures, humidity and fog, whereas temperatures in the south are much more comfortable (10-20°C).

Italy possesses approximately 40% of the world's art treasures. It is currently the country with the largest number of officially recognised world heritage sites (47 cities and cultural sites included on the UNESCO Worldwide Heritage List).

II.1 Key factors in the development of Italian society

Following the reunification of Italy, the census taken in 1861 showed that Italians residing in Italy numbered 26 million. Over time, Italy doubled its population, with a impressive increase occurring in the immediate aftermath of the Second World War (1945-1950), when annual growth rates of more than 1% were recorded, especially in urban and suburban areas.

After world war II the rebuilding of the industrial infrastructure, along with much of the rest of the country, plus the political and economic policies enacted, ushered in major socio-economic changes, transforming Italy from a poor, rural type society to an industrialised one. The years from 1956 to 1963 are known as those of the "Italian Economic Miracle", a period characterised by a steep rise in income. This process of growth fuels massive migratory flows among the country's Regions, with the better employment conditions to be found in urban areas serving as the chief catalyst for an intensive exodus from rural areas to cities, both from the inland mountainous zones of the Alps and the Apennines and from Sicily and Calabria, with the favoured destinations of the migration being Rome, Milan, Turin and Genoa. This exodus to industrial areas is still underway, though it has slowed due to the current depressed state of the economy.

The years of the "Italian Economic Miracle" witness massive migratory flows among the country's Regions.

In accordance with the overall framework, the structure of the Italian people also changed over time, in terms of both population and

customs, going from approximately 47 million inhabitants in the 1950's to the roughly 60 million of today. In terms of demographics, this period was characterised by a sharp drop in the birth rate and a gradual ageing of the population.
Indeed, in 2011 there were 144 people aged 65 or older for every 100 people younger than 15 (the ratio had been 97 to 100 in 1992), while the average number of children per women was 1.4, the combined result of figures of 2.07 for resident foreign women and 1.33 for Italian women. There were also noteworthy changes in the demographic indexes for the resident population.

Table II.1: Demographic indicators of the resident population[1]

	1961	1971	1981	1991	2001	2011	2030	2065
Ageing ratio[a]	38.9	46.1	61.7	92.5	127.1	144.5	207.1*	257.9*
Age dependency ratio[a]	51.6	55.5	53.1	47.5	48.4	52.3	63.2*	82.8*
Average age of the population (at January 1st)	33.5	34.5	36.1	38.9	41.7	43.5	47.0**	49.7**
Life expectancy at birth (males)	67.2	69	71.1	73.8	77	79.4*	82.8**	87.7**
Life expectancy at birth (females)	72.3	74.9	77.9	80.3	82.8	84.5*	87.7**	91.5**
Average number of children per woman	2.4	2.4	1.6	1.3	1.3	1.4	1.4*	1.6**
Birth rate per 1000 population	18.3	16.8	11.1	9.8	9.4	9.1*	8.1**	8.3**
Death rate per 1000 population	9.1	9.5	9.6	9.6	9.6	9.7*	10.6**	13.9**

The low birth rates of the eighties and nineties set off a rapid aging of the Italian population, a process that has reached levels among the highest in the world.

* estimates
**projection
Note
[a]: Censuses 1961-2001 and 1st January 2009-2065

Following the Second World War, 42% of the population still worked in the agricultural sector, though the industrial and services sectors (respectively accounting for 32% and 26%) were gaining increasing importance. Industrial development in the sixties modified the distribution of employment among the economic sectors: the percentage of the active population employed in industry reached 41%, while the figure for services was 30%, and the percentage employed in agriculture fell to less than 30%.
By 1981, the trend of the Italian economy towards the services sector had resulted in a further shift of the active population into services, which reached a percentage of approximately 50%.

[1] Source: ISPRA processing of ISTAT data

The economic crisis of recent years has been hard felt by the labour market, bringing to light not only the marked divergences still to be found between the different Regions of Italy, but also the difficulty young people face in entering the job market, plus the large number of people who have given up looking for jobs (employment discouragement), and the low representation of female workers. The economy continues to move towards the services sector: approximately 68% of salaried workers are employed in the services.
In 2011 economic activity in Italy felt the repercussions of the overall domestic and international situations. The major crisis that began in the United States in 2007 caused severe damage in Italy, leaving its economy with one of the lowest growth rates in the world.
In 2011 the variation in the volume of the GDP was +0.4%, while the percentage of the population between the ages of 20 and 64 with jobs was 61.2%, with a marked gender imbalance: 72.6% of men were employed but only 49.9% of women. Divergences between Regions were also significant: in the south, the level of overall employment was less than 50% (47.8).

Table II.2: The employed by position, sector of activity and geographical area[2]

Geographical area	**Absolute figures (in 1000's)**			**Percentage variations 2011/2010**
	figures in 1,000's			**%**
	Employees	Self employed	Total	Total
North	93	217	310	-6.5
Central	50	68	117	-4.6
South and the islands	270	153	423	2.7
TOTAL Agriculture	**413**	**438**	**850**	**-1.9**
North	2,732	343	3,075	2.4
Central	682	129	812	-1.7
South and the islands	674	130	804	0.6
TOTAL Industry in strict sense	**4,089**	**603**	**4,692**	**1.4**
North	526	378	904	-2.4
Central	246	145	391	-10.1
South and the islands	365	186	552	-6.2
TOTAL Construction	**1,138**	**709**	**1,847**	**-5.3**
North	5,738	1,897	7,636	0.8
Central	2,625	881	3,506	1.6
South and the islands	3,238	1,199	4,437	0.8
TOTAL Services	**11,601**	**3,978**	**15,579**	**1.0**
North	9,090	2,835	11,925	0.7
Central	3,603	1,223	4,826	-0.1
South and the islands	4,547	1,668	6,216	0.2
TOTAL	**17,240**	**5,727**	**22,967**	**0.4**

The distribution of the active population by sector shows that by 2011 approximately 68% was employed in the services. The percentage employed in agriculture fell to less than 4%.

[2] Source: ISTAT

Table II.3: Rateal of employment of the population aged 20-64 by sex and geographic area[3]

Geographical area	2005			2011		
	Men	Women	Total	Men	Women	Total
	%					
Northwest	78.9	57.5	68.3	77.9	59.4	68.7
Northeast	80.0	59.3	69.7	79.7	61.5	70.6
Central	76.2	54.0	65.0	75.8	55.2	65.3
Central North	78.4	57.0	67.7	77.8	58.7	68.2
South and the islands	67.5	32.7	49.9	62.7	33.4	47.8
ITALY	74.6	48.4	61.5	72.6	49.9	61.2

The employment rate shows a sharp gender imbalance: 72.6% of the employed are men and 49.95% are women.

II.2 The main driving forces and the resulting environmental pressures and impacts

The key facets of the country's geographic and socioeconomic situation, and especially its demographic dynamics and the behaviour of its economic protagonists (families and businesses), are closely related to the pressures of human origin that threaten the national environment (air, water, soil and nature pollution, waste generation, consumption and deterioration of natural resources).

Socio-demographic considerations

The production activities and the individuals found in a given territory constitute the root causes of pressures on the environment in terms of consumption, waste generation, traffic, emissions etc.. With this in mind, any analysis of the environmental situation must include an analysis of the demographic outlook, which can have noteworthy socioeconomic consequences.

As of 1 January 2012, Italy's resident population numbered 59,394,207 people, 6.8% of whom (4,053,599) were foreigners. The increase registered in the overall population as compared to the figure from the previous census is attributable to the increase in the number of foreign citizens.

The increase in the resident population registered in the 2011 census, as compared to the previous census, is traceable to an increase in the number of foreign residents.

Two out of three foreign residents live in northern Italy (35% in northwest Italy and 27% in the northeast), while 24% live in central Italy and 13% in the south and the islands.

In terms of the total population, 26.5% lives in northwest Italy, 19.3% in northeast Italy, 19.5% in central Italy and 23.5% in southern Italy, with 11.2% of the population living on the country's islands.

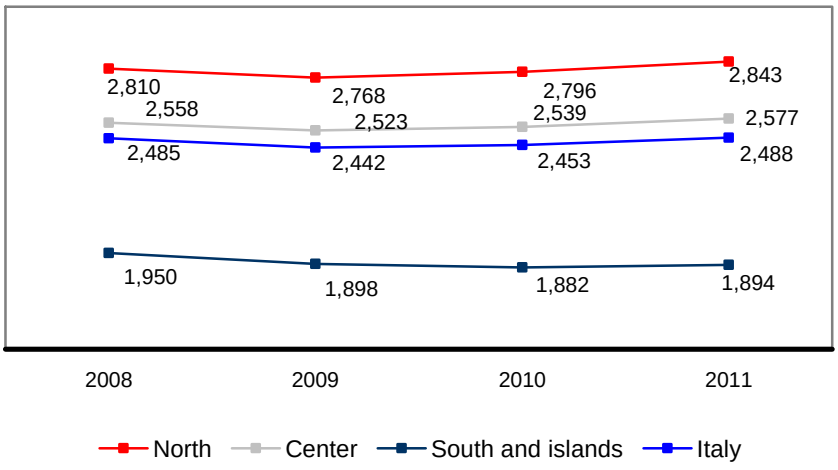
Geographically, noteworthy differences can be observed between the various Regions in terms of both surface area and demographics. The most populous Region is Lombardy, with more than 9.7 million residents, followed by Campania (more than 5.7 million) and Lazio (more than 5.5 million). The Regions that cover the greatest surface area, on the other hand, are Sicily, Piedmont, Sardinia and, in fourth place, Lombardy. The levels and composition of consumption are also affected by demographic changes: in particular, variations in the size of families and in the

[3] Source: ISTAT data processed by ISPRA

characteristics of their members have an influence on the allocation of available budgets.

The number of families residing in Italy, equal to 21.8 million in 2001, currently stands at 24 million, while the average number of family members went from 2.6 to 2.4 during the same period, confirming the trend towards fewer large families and a growing number of families consisting of a single person. The traditional family of a married couple with children is no longer the predominant model. New forms of families are on the rise, including those headed up by a sole parent who is not widowed, by a single person who is not widowed, as well as couples who live together without being married and married couples with families recomposed from earlier marriages. Four out of ten people between the ages of 25 and 34 still live in their families of origin: 45% because they are unable to support themselves independently. It should be noted that 11.1% of the families residing in Italy find themselves in a condition of relative poverty – meaning 8 million and 173 thousand individuals, accounting for 13.6% of the population – while 5.2% are in a state of absolute poverty – meaning 3 million and 415 thousand individuals, or 5.7% of the total population. In southern Italy and the islands, the intensity of relative poverty increased. In 2011, average monthly household expenditure, in current values, was equal to 2,488 euro (compared to 2,453 euro in 2010), varying from a minimum of 1,782 euro (for families consisting of a single person) to a maximum of 3,215 euro (for families of 5 or more people). Compared to the previous year, consumer spending on food, equal to 477 euro, increased by 2.2%. On the average, this represents 19.2% of total monthly household expenditure. In contrast, the percentages of expenditure for clothing and footwear, furnishings, home appliances, services for the home and for leisure time and cultural pursuits decreased, while price increases led to higher percentages of spending on places of residence and transportation. Looking at regional differences, Lombardy once again recorded the highest figure (3,033 euro) and Sicily the lowest (1,637 euro).

In 2011, four out of ten people between the ages of 25 and 34 still lived with their families of origin: 45% because they could not support themselves independently.



In 2011, average monthly household expenditure was equal to 2,488 euro in current values, varying from a minimum of 1,782 euro to a maximum of 3,215 euro.

Figure II.1: Average monthly household expenditure by

geographical area, figures in euro[4]

Economic considerations

In 2011, Italy's GDP remained unchanged in real terms.

The Gross Domestic Product (GDP), which represents the total output of goods and services produced in a country in a given period, valued at market prices, remained unchanged for Italy in 2011, in real terms.

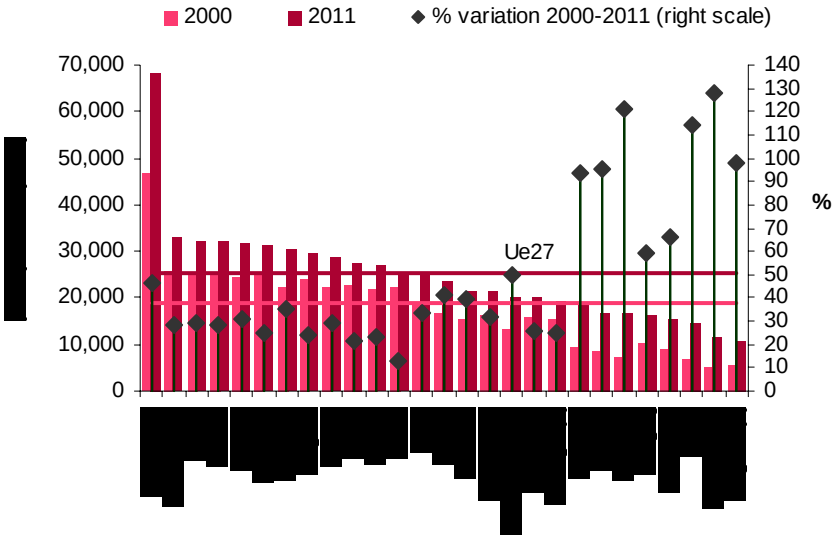
In the European Union, the per capita GDP at PPP[5] differs considerably country by country.

In 2011, the GDP ranged from the 68,400 euro in Luxembourg to Latvia's 14,800 euro.

GDP growth rates have varied significantly among the different European states: healthy growth in Germany, weak in Spain and Italy, extremely negative in the countries subject to programs of fiscal adjustment, such as Greece and Portugal.

Unlike what has occurred in Europe as a whole (EU27), where the countries that start from a lower level of per capita GDP, at PPP, are those that feature the highest grouth rates, the Regions of Italy have not followed this pattern of convergence towards economic growth, seeing that the southern Regions have failed to close the gap with the richer Regions of the north.

In 2011, due to the fact that the level of economic growth recorded in our country was the lowest in the European Union, Italy's per capita GDP (at PPP) stood only 0.4% above the average for the EU27 countries, whereas it had been 18% than the average in 2000.



Unlike the year 2000, when Italy's per capita GDP stood 18% higher than the average per capita GDP for the EU27 countries, in 2011 our country's economic growth rate, the lowest in the European Union, placed the Italian per capita GDP only 0.4% above the average for the EU27 countries.

Legend

* PPP: purchasing power parity

Note:

[a] The figures are updated to 5 November 2012. Any discrepancies with those that appear in other publications or in national or international databanks may depend or rounding-off or on the fact that the latest adjustments in the data have not been taken into account.

[4] Source: ISTAT

[5] PPP = purchasing power parity

[b] The figures for Greece and Portugal are provisional.
[c] The latest data available for Bulgaria, Poland and Romania regard 2010.

Figure II.2: Per capita GDP in the EU countries[6]

With regard to consumption, which constitutes the primary component of aggregate demand[7], figures show that in 2011 all the countries of the EU, except for Ireland and Luxemburg, registered levels of consumption in excess of 70% of their GDP.

In almost all the countries of Europe, consumption accounted for more than 70% of the domestic GDPs.

The sum total of consumption and investments constitutes domestic demand.

Consumption, in Italy, in 2011 was equal to 82.7% of the GDP, while investments amounted to 19.6%.

It should also be noted that in various countries[8], including Italy, the totals of the percentages of the GDP represented by consumption and investment are higher than 100, indicating that these countries consume and invest more than they produce, and therefore need to draw on foreign markets. A similar situation also exists in southern Italy, whose Regions are forced to import goods and services to sustain high levels of consumption and investment compared to their GDPs.

Within the European area as a whole, average inflation relating to consumption rose in 2011 to 2.7% from the figure of 1.6% for the preceding year. The increase is largely due to sharp price rises for raw materials and to the higher levels of indirect taxation introduced in some countries as elements of programs to reform public finance.

Underlying inflation, measures using an index that excludes food and energy products, remained at a relatively low level (1.4%).

Inflation forecasts over the medium and long term have remained stable, in line with the price stability called for under the Euro System[9].

Exports, driven by trade with emerging markets, have provided support for economic activities, rising above the levels recorded prior to the recession.

Domestic demand, on the other hand has weakened.

Spending on consumer goods has felt the effect of concern over the weak outlook for the employment market and disposable income; investments registered a modest increase, following three years of decline.

As has been the case for more than a decade, in 2011 the productivity of the Italian economy grew at a lower rate than that of Europe's other major economies.

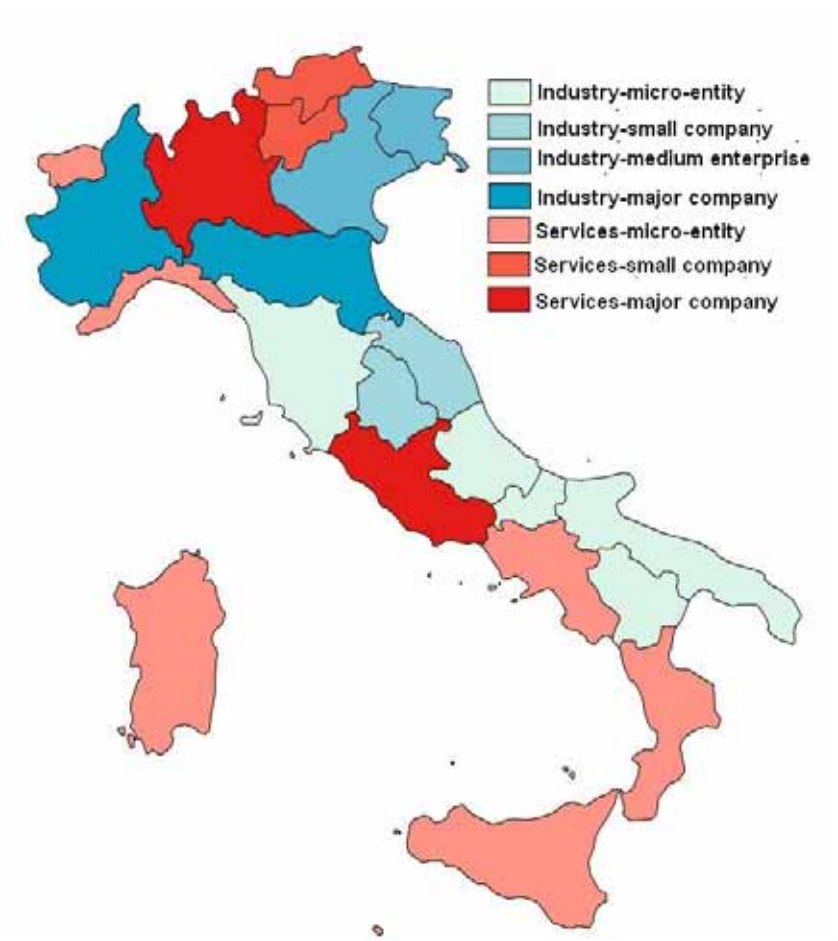
As has been the case for more than a decade, in 2011 the productivity of the Italian economy grew at a lower rate than that of Europe's other major economies.

Contrary to what occurred in the three-year period of 2008-2010, when almost all the different sectors of the economy were affected first by the recession and then by the recovery, in 2011 the performance of the individual sectors varied widely in terms of value added, ranging from the negative results of certain traditional areas of production, which stood in contrast to the more favourable figures for

[6] Source: Eurostat data processed by ISTAT (http://noi-italia.istat.it), *National Accounts*
[7] Eurostat, Database New Cronos
[8] Ibidem
[9] Bank of Italy, Annual Report 2011

sectors of medium-high technological intensity. The enterprise that best dealt with the weak economic outlook were those already geared towards innovation and internationalisation.

Due to the weakening of the international economic cycle, the slowdown in production has been more pronounced, in terms of value added, in the sector of industry in the strict sense (1.2%, compared to 7% in 2010), as opposed to the services (0.8%, compared to 1.4%); the reduction of the construction sector has continued (-3.5%, -5.6% a year in the preceding two years)[10].



The Regions of central Italy showed a greater propensity for services enterprises, while micro-enterprises predominant in southern Italy, medium-size enterprises are more widespread in the northeast, and large-scale is the norm in the northwest.

Figure II.3: Prevalent business sectors and company sizes by region, as compared to the national average (2010)[11]

[10] Bank of Italy, Annual Report on 2011

[11] Source: ISTAT processing (http://noi-italia.istat.it) of ASIA data – Statistical Register of Active Enterprises

With regard to Italy's production structure, based on Eurostat[12] data on structural business statistics and the ISTAT "ASIA" Archive[13] for Italian businesses, it can be observed that the sectoral breakdown of Italy's ISTAT statistics institute, the make-up of the sector in Italy is similar of Germany, even though large-scale industry is prevalent in Germany, as is the case in all the economies of continental Europe.
Within Italy, on the other hand, large-scale service enterprises are more widespread in Lazio, micro-industry is more frequent in Tuscany, and small-scale industry (10-49 employees) is especially popular in the Marche and Umbria Regions.
In southern Italy, micro-enterprises are prevalent, with those engaged in services being particularly widespread in Campania, Calabria, Sicily and Sardinia, while micro industrial concerns are more commonly found in Apulia, Basilicata, Abruzzo and Molise.
In the Regions of northeast Italy, small and medium-size industrial enterprises are the most widespread, while large-scale industry is predominant in the northwest, and especially in Piedmont.

Industry

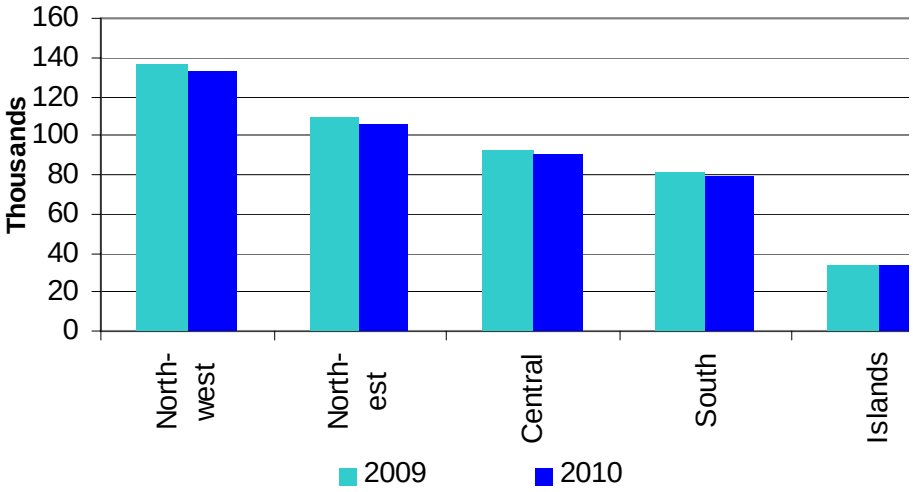
Industry leads to far-reaching transformations and modifications of the environment in which it is established, due to the emission of pollutants into the air, water and soil, the exploitation of natural resources, the waste generation, the side-effect of increased traffic etc.

The pressure generated by industry manifest themselves in direct relation to the number of industrial sites developed, as well as through other factors, such as the hazardous substances utilised.

The pressures manifest themselves in direct relation to the number of industrial sites developed, as well as through other factors, such as the hazardous substances utilised. In Italia, the number of active enterprises in 2010, meaning the number that engaged in production activities for at least six months of the year under examination, was less than 4.5 million, and they employed a total of approximately 17 million workers. Industrial enterprises (meaning industry in the strict sense) numbered approximately 442 thousand and employed 4.3 million workers, specifically 619,606 independent workers (owners, partners, cooperative members, relatives, in-laws etc.) and 3,689,904 salaried employees. Compared to the third sector (services), industrial enterprises have a larger average size, ranging from a maximum of 21.6 employees per company (the sector of the supply of electric energy, gas, steam and air-conditioning) to 9.4 (manufacturing activities).
Between 2009 and 2010, the number of industrial enterprises registered a decrease of 2.4%, with specific figures including drops in almost all areas of manufacturing activity (-2.8%) as well as mining activities (-1.9%), whereas noteworthy gains were recorded among enterprises that supply electric energy, gas, steam and air conditioning (36.8%). The reduction in employment in all areas of industrial activity proved particularly noteworthy in the manufacturing sector, which showed an overall drop of 3.7% in the number of employees. The highest losses were recorded in enterprises

[12] Eurostat, *Structural Business Statistics* (SBS)
[13] ISTAT, Statistical Register of Active Enterprises (ASIA)

involved in textiles, clothing and accessories, at -6.5%. Negative variations, again in terms of employees, were registered in all the geographic zones: -3.4% Northwest, -3.5% Northeast, -3% Centre, -4.3% South and -3.3% Islands.



Between 2009 and 2010, the number of industrial enterprises registered a decrease of 2.4%.

Figure II.4: Industrial enterprises by geographical area[14]

Also of interest is the localisation within the national territory of plants posing Major Accident Hazard (MAH plants), seeing that, on account of the hazardous substances they utilise or the potential accident scenarios they present, they can determine environmentally critical situations brought about by industrial activity.

In Italy, as of 31 January 2012, the number of plants posing major accident hazard (MAH) stood at 1,131.

As of 31 January 2012, the number of MAH plants in Italy stood at 1,131, with 565 classified as such under arts. 6/7 and 566 under art. 8.

The regional distribution shows that 25.2% of the plants are located in Lombardy, while other Regions with a noteworthy presence of MAH plants at risk include Veneto and Emilia Romagna, which account for over 9% of the plants (respectively 108 and 100) and Piedmont, in which 8.6% (98).

These Regions also include a number of areas were such plants are especially concentrated, such as the traditional refining and/or petrochemical hubs of Trecate (Province of Novara), Porto Marghera (Province of Venice), Ferrara e Ravenna, as well as industrial areas in the provinces of Turin, Alessandria, Bologna, Verona and Vicenza.

Chemical and/or petrochemical plants are prevalent within the national territory, along with deposits if liquefied gas (essentially LPG), which, taken altogether, account for approximately

In terms of the types of activities involved, chemical and/or petrochemical plants are prevalent within the national territory, along with deposits of liquefied gas (essentially LPG), which, taken altogether, accounted for approximately 50% of all such plants.

It should also be noted that the Regions of Lombardy, Piedmont, Emilia-Romagna and Veneto were found to hold concentrations of chemical and petrochemical plants.

LPG depots are especially widespread in the southern Regions, in particular in Campania and Sicily, as well as in Lombardy,

[14] Source: ISTAT data processed by ISPRA

Tuscany and Veneto, and in general in the vicinity of urban areas throughout the country, but specifically in the provinces of Naples, Salerno, Brescia, Venice and Catania.

50% of all MAH plants.

In contrast, the refining industry (17 plants in Italy) is distributed rather evenly throughout the country, with the highest concentrations in Sicily and Lombardy, which contain 5 and 3 plants respectively.

Mineral-oil storage facilities are concentrated primarily in the vicinity of the country's major urban areas and in cities with important industrial ports (Genoa, Naples, Civitavecchia).

Almost all the provinces of Italy have at least one plant that presents a Significant Accident Risk.

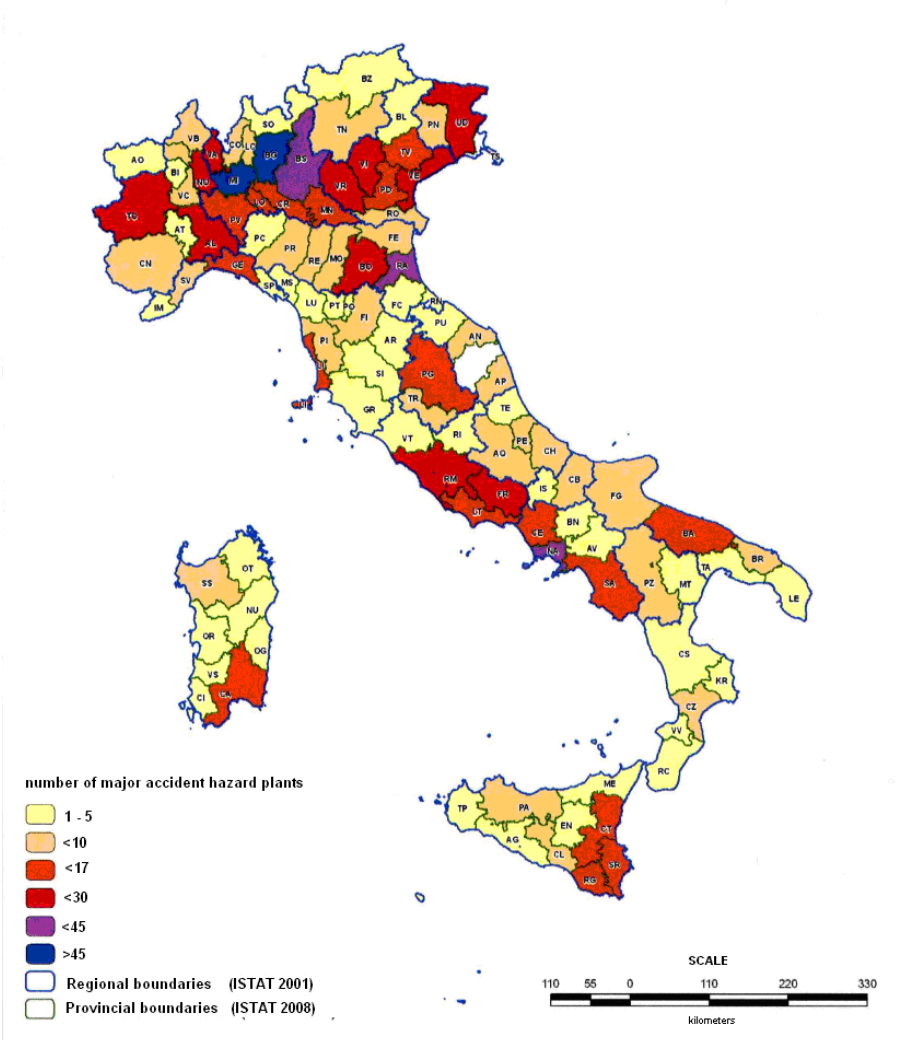


Figure II.5: Distribution by province of plants subject to Legislative Decree 334/99, as subsequently amended[15]

Energy

Italy utilises less energy per unit of product than most of the other industrialised countries. This peculiarity arises from:

Italy utilises less energy per production unit than most of the other industrialised

- the traditional shortage of primary energy sources (import dependency in 2011 was 80.7%), which has favoured the creation of parsimonious forms of behaviour and infrastructures in terms

[15] Source: Ministry of the Environment data processed by ISPRA

of the use of energy, plus a production system that is not excessively energy-intensive;
- the high taxes on energy sources, which push their cost to the final user well beyond the average cost in the EU;
- lower per capita income;
- the relatively mild climate.

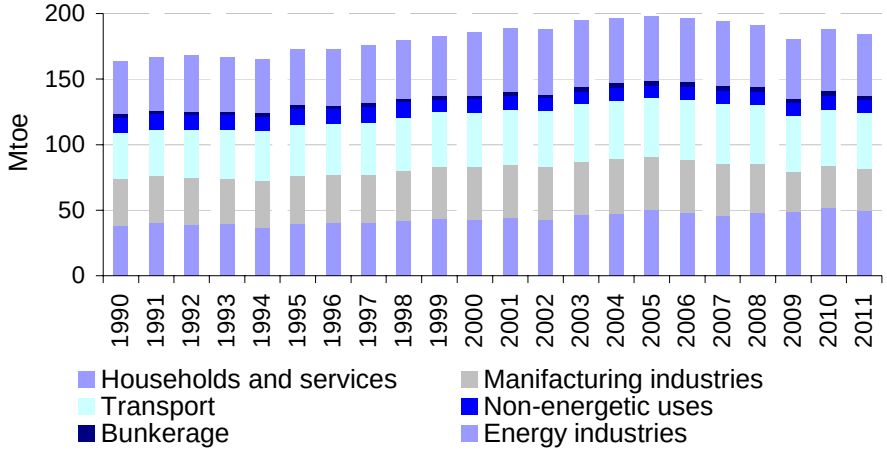
This advantage, which has long been characteristic of our country, has been gradually diminished over the last twenty years.
Still, a comparison with the rest of the European Union shows that energy intensity in Italy remains below the EU average, rating as one of the lowest figures for the 27 countries.

countries.

In 2011, gross domestic consumption of energy resources in Italy was equal to 184.20 Mtoe (millions tonnes of oil equivalent), with more than 81.2% of that demand satisfied by fossil fuels (37.5% by oil, 34.7% by natural gasand 9% by coal and other solids), while the remainder was renewable sources (4.7%) and primary electricity (14.1%).
Since 1990, an upward trend in gross domestic energy consumption was recorded, reaching its peak in 2005 (+21% compared to 1990).
Later this trend was reversed, a development accelerated by the economic crisis.
By subtracting the energy dissipated during transformation procedures from the figure for gross domestic consumption, we arrive at the amount that can be made available to final users (approximately 135 Mtoe in 2011).
Civil uses (household and service sector) and transport (passengers and freight) are two areas that each account for more than 30% of the final uses, while the industrial sector uses slightly less than a fourth, while the remainder is employed in the agricultural sector, for non-energetic uses and in the form of stocks of coal for international maritime transport (referred to as bunkerage).

In 2011, gross domestic consumption of energy resources in Italy was equal to 184.20 Mtoe, with more than 81.2% of this demand being satisfied by fossil fuels.

During the period 1990-2008, industrial demand for energy rose slightly, slowing over time, both on account of a more efficient use of resources and structural factors, such as the diminished incidence of heavy industry. In the wake of the economic crisis of 2008, the sector registered a marked decline.
Annual growth in the transport sector was much more robust, though here too the national economic situation triggered a retrenchment.
Meanwhile the household and services sector, though subject to noteworthy fluctuations on account of the variable of climate, showed a long-term upward trend, essentially traceable to the contribution of services, for which levels of consumption have doubled since 1990.



The demand for primary energy stood at 184 Mtoe in 2011.

Figure II.6: Final domestic energy consumption by economic sector[16]

The incidence of imported oil and gas with respect to energy supplies creates a situation in which domestic energy prices depend on prices on international markets, and especially the price of crude oil.

The average level of energy prices for final users tends to be higher than that registered in other European countries.

The average level of energy prices to final users tends to be higher than that registered in other European countries.

In the case of electricity, the cost per kWh for the average household user in the first six months of 2012, including taxes, was 14.9% higher than the average cost in the EU27, while the cost for medium-size Italian industrial enterprises was 42.1% higher than the equivalent EU27 cost.

Taxes had an incidence of 47.1% on household utility use in Italy, while the figure for the EU27 was 41.6%, and taxes on industrial users accounted for 60.3% of the cost in Italy and 48.9% in the rest of Europe.

This price differential can be traced to the supply structure for the energy sources, the degree of competition on the market, the adequacy of the infrastructures and the level of the tax burden.

The taxation of energy resources meets the dual need of generating revenues while influencing prices, so as to limit consumption.

The elevated tax burden may have contributed to improving energy intensity in Italy.

Agriculture, forestry, aquaculture

Relations between the environment, agriculture and forestry are extremely complex and often enter into conflict.

On the one hand, farmland is subject to the direct impact of other sector of production (such as the consumption of land) or indirect repercussions arising from alteration of the physical or chemical properties of the atmosphere or the occurrence of extreme weather events.

[16] Source: The Ministry of Economic Development

At the same time, agricultural activities - which, in many cases, have involved the intensified, concentrated or specialised use of land or agricultural practices in recent decades - are considered to be among the primary causes of water pollution, land erosion, pollution or acidification, plus increases in the greenhouse effect, loss of biological diversity, simplification of the landscape and diminished wellbeing of livestock.

Agricultural plays an important role in environmental defence.

And yet there is no question that agriculture, in addition to ensuring elevated production of foodstuffs, timber and fibres, can also play an important role (if properly managed) in the environmental defence of the land, as well as the preservation of the biological diversity of ecosystems, in terms of both species and genes, in addition to reducing the pollution and deterioration of soil and water. Indeed, in recent years, relations between the environment, agriculture and forestry have become even more complex, due to the emergence of major challenges, such as the need to produce more foodstuffs, fibres and wood for a growing population that increasingly concentrates itself in urban centres, to the detriment of a shrinking labour force in rural areas, or the opportunity to supply biomass for the production of energy to a potentially enormous market, as well as the chance to contribute to the development of the world's poor countries, which depend to a large extent on agriculture.

Faced with the unceasing globalisation and expansion of international trade, Italian agriculture, forestry and aquaculture cannot avoid addressing these challenges, which will make necessary difficult decisions.

On the one hand, there is the need to meet the growing demand for both "conventional" and "new" products (including bio-combustibles) at elevated levels of quality, while, at the same time, systems of management and production must increasingly take into account considerations of environmental defence and sustainability.

In recent decades Italy has registered a noteworthy reduction in both its agricultural enterprises and (though to a lesser extent) its UAA.

In recent decades, together with a stagnation in demographic growth and in the demand for agricultural products, as well as an exodus of inhabitants from rural areas and an increase in the per-unit productivity of the land, Italy has also witnessed a noteworthy decrease in the number of agricultural enterprises.

The data gathered for the 2010 Agricultural Census shows that there were 1,620,884 agricultural and animal husbandry enterprises in operation (-32.4% compared to 2000), and that the Utilised Agricultural Area totalled 12,856,048 hectares (-2.5% compared to 2000).

While the number of agricultural enterprises has fallen, the size of the average enterprise has grown from 5.5 hectares of UAA in 2000 to 7.9 hectares in 2010.

The most significant decrease was recorded among enterprises with less than 1 hectare of UAA, whose number fell by more than 50% during the decade in question.

More than half the enterprises

More than half of the enterprises (54.6%) are concentrated in the

following 5 Regions: Apulia, Sicily, Calabria, Campania and Veneto.

(54.6%) are concentrated in 5 Regions.

Table II.4: Agricultural enterprises and Utilised Agricultural Area (UAA) by region[17]

Region/ Autonomous province	Enterprises			UAA		
	2010	2000	2010/2000	2010	2000	2010/2000
	number		%	hectares		%
Piedmont	67,148	106,240	-36.8	1,010,780	1,068,766	-5.4
Val d'Aosta	3,554	5,925	- 40	55596	71,109	-21.8
Liguria	20,208	36,987	-45.4	43,784	63,781	-31.4
Lombardy	54,333	70,993	-23.5	986,826	1,039,537	-5.1
Trent-Alto Adige	36,693	51,188	-28.3	377,755	414,092	-8.8
Bolzano / Bozen	*20,247*	*23,043*	*-12.1*	*240,535*	*267,380*	*-10*
Trent	*16,446*	*28,145*	*-41.6*	*137,219*	*146,712*	*-6.5*
Veneto	119,384	176,686	-32.4	811,440	850,979	-4.6
Friuli-Venetia Giulia	22,316	33,076	-32.5	218,443	237,937	-8.2
Emilia-Romagna	73,466	106,102	-30.8	1,064,214	1,129,280	-5.8
Tuscany	72,686	121,177	-40	754,345	855,601	-11.8
Umbria	36,244	51,696	-29.9	326,877	366,393	-10.8
Marche	44,866	60,707	-26.1	471,828	492,459	-4.2
Lazio	98,216	189,505	-48.2	638,602	720,748	-11.4
Abruzzo	66,837	76,629	-12.8	453,629	431,031	5.2
Molise	26,272	31,536	-16.7	197,517	214,601	-8
Campania	136,872	234,335	-41.6	549,532	585,997	-6.2
Apulia	271,754	336,694	-19.3	1,285,290	1,247,577	3
Basilicata	51,756	75,929	-31.8	519,127	537,516	-3.4
Calabria	137,790	174,391	-21	549,254	554,794	-1
Sicily	219,677	349,036	-37.1	1,387,521	1,279,707	8.4
Sardinia	60,812	107,442	-43.4	1,153,691	1,019,955	13.1
Italy	**1,620,884**	**2,396,274**	**-32.4**	**12,856,048**	**13,181,859**	**-2.5**
Northwest	***145,243***	***220,145***	***-34***	***2,096,985***	***2,243,193***	***-6.5***
Northeast	***251,859***	***367,052***	***-31.4***	***2,471,852***	***2,632,288***	***-6.1***
Central	***252,012***	***423,085***	***-40.4***	***2,191,651***	***2,435,200***	***-10***
South	***691,281***	***929,514***	***-25.6***	***3,554,349***	***3,571,517***	***-0.5***
Islands	***280,489***	***456,478***	***-38.6***	***2,541,211***	***2,299,662***	***10.5***

The UAA is used for the following purposes, in descending order of importance: crops, permanent meadows and pastureland, growing of timber, family gardens.
The number of animal husbandry enterprises has also fallen, though their average size has increased.
Almost 60% of the animal husbandry enterprises raise cattle. Roughly 70% of the livestock is found in the Regions of the north, such as Lombardy, Veneto and Piedmont.

The main use of UAA is for crops. Almost 60 % of the animal husbandry enterprises raise cattle. Aquaculture is a growth sector.

In Emilia-Romagna,

[17] Source: ISTAT 6° and 5° General Agricultural Census

Aquaculture is a growth sector that presents multiple instances of interaction with the environment, and can constitute a factor of significant pressure, modifying the quality of the water, the use of water resources and biodiversity.
All the Regions that have coastal zones, with the exception of Basilicata and Tuscany, produce both fish and shellfish. The most important Regions for the growing of shellfish are Emilia-Romagna, Veneto, Apulia and Sardinia.
Trout and shellfish breeding systems are the most widely used.

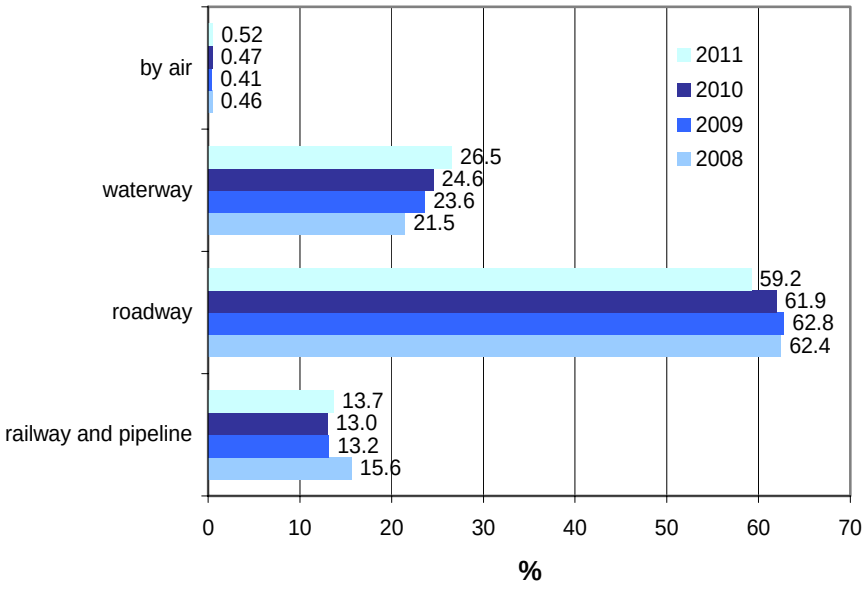
Veneto and Apulia systems for raising trout and shellfish are the most widespread.

Transportation and mobility

An estimate of the domestic freight traffic in Italy for 2011, via all the different modes of transport produces a final figure of roughly 200 billion tonnes-km[18] (approximately 274.9 billion tonnes-km if motor-vehicle transport, by foreign carriers in Italy is also taken into account), pointing to, despite a trend characterised by fluctuation, an overall decrease of 15.7%. This in contrast to the station for passenger transport, which remained steady between 2005 and 2008, before rising in 2009 (+4%) and then falling from 2010 on. Taken as a whole, the sector fell by 2% between 2005 and 2011. An analysis of the data for freight traffic by mode of transport confirms the absolute preponderance of roadway transport, which accounted for 59.2% of the total tonnes-km of freight transported in 2011, though it still registered a decrease of 6.4% between 2005 and 2011 in favour of maritime transport (6.8). The percentages accounted for by the remaining modes of transport, again for 2011, were: 26.5% by waterway; 13.7% by railway and pipeline; 0.52% for air transport, which continues to cover a minimal portion of domestic freight transport, given that it is focussed primarily on international transport (Figure II.7)

An estimate of domestic freight traffic in Italy for 2011, via all the different modes of transport, produces a final figures of roughly 200 billion tonnes-km, pointing to an overall decrease of 15.7%.

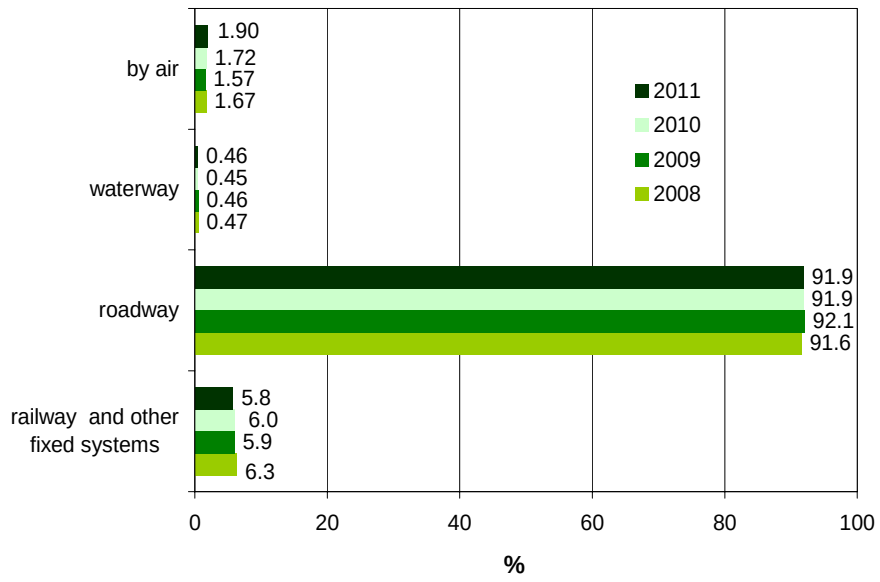
[18] Motor vehicle transport of no less than 50 km was considered, not including that performed by foreign carriers



As in previous years, the figures for 2011 again confirmed the absolute predominance of roadway freight transport (59.2%).

Figure II.7: Percentage breakdown of domestic freight traffic by mode of transport[19]

Taking a detailed look at domestic passenger transport, which neared 883 billion passenger-km in 2011, it can be affirmed that, despite registering a decrease of almost 6% during the years 2009-2011, the percentage break-down by mode of transport remains almost unchanged, with the roadway mode showing a clear-cut predominance, at 91.9%, over the other modes. The percentages registered by the other modes were: 5.8% for transport by rail and other fixed systems; 1.9% for air transport and only 0.46% for transport by waterway (Figure II.8).



The roadway mode also registers a dominant position for domestic passenger transport in 2011, accounting for 91.9%.

Legend
Estimates are given for the "Air" and "Water" modes of transport, in all the years, as well as for the overall figures for 2011

[19] Source: CNT 2010-2011 data processed by ISPRA

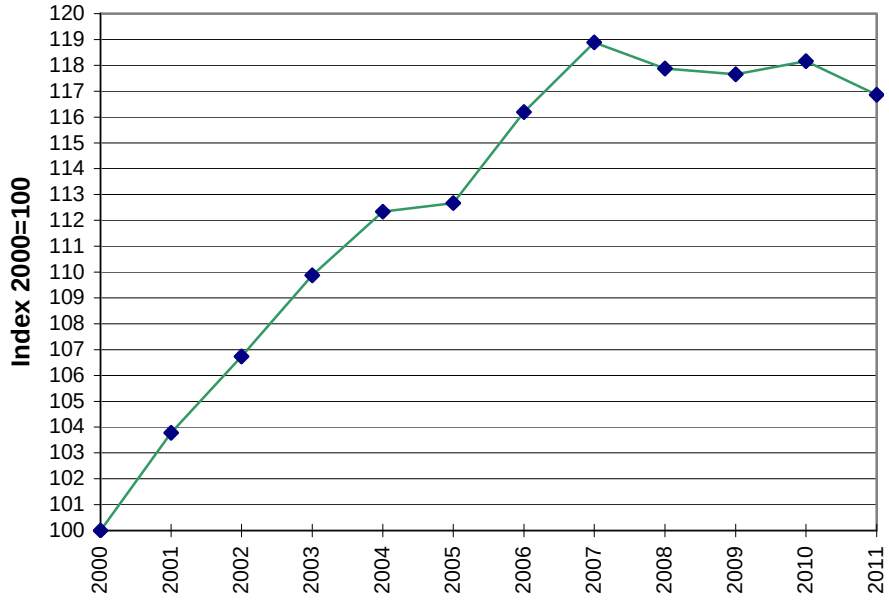
Figure II.8: Percentage distribution of domestic passenger traffic by mode of transport [20]

An analysis of traffic for the various modes of traffic points to a number of different situations. In the case of airport traffic in the years 2005 to 2011, studied in terms of the number of aircraft movements for commercial air transport (domestic and international), the trend was marked by fluctuations.

Airport traffic continued to grow in 2011 as well, but at a lesser rate than the previous year (+1.2%).

After peaking in 2007 (1,532,987 movements), airport traffic fell until 2009 (-9.8%), after which it began to rise once again, growing by 3.7% in 2010 and continuing the upward trend in 2011, though at a lower rate (+1.2% compared to 2010)[21].

Vehicle traffic, analysed over the long-term period of 2000-2011 (Figure II.9), increased by approximately 17% in terms of the kilometres travelled by light and heavy vehicles on Italian highways. This marked growth continued until 2007, at which point the level of traffic remained steady, at around 83 billion vehicle-km, through 2010, followed by a slight decrease (-1%) in 2011[22].



In the years 2000-2011, vehicle traffic, in terms of the kilometres travelled by light and heavy vehicles on Italian highways, increased by approximately 17%. The growth trend persisted until 2007, when it levelled off through 2010, showing a slight decrease from 2011 (-1%).

Figure II.9: Roadway traffic trend registered on the privately managed highway network (2000-2010)[23]

In terms of railway traffic, in 2011 passenger trains accounting for 320.6 million trains-km travelled on the Italian State Railway Network (+2.5% compared to 2005), while there were approximately 41.6 million trains-km of freight transport as well (-31.5% compared to 2005). The year 2009 saw a sharp drop in freight traffic by rail, which fell by 26.7% compared to 2008, due to the economic crisis, a downward trend that continued in 2010, though at a lesser rate (-4%),

[20] Source: CNT 2010-2011 data processed by ISPRA
[21] ENAC data
[22] AISCAT data
[23] Source: AISCAT data processed by ISPRA

with growth resuming from 2011 (+2%).
In the interests of procuring a more complete overview of the topic of "transport and mobility", it is important that any analysis include the pressures that arise in Italy from problems relating to traffic, such as those involving the country's resources and infrastructures. As of 31 December 2010, the size of Italy's primary roadway network (not including municipal roads) had reached 186,419 kilometres, which broke down into 6,668 km of highways, 20,856 km of other roads of national importance and 158,895 km of regional and provincial roads, for an overall increase of approximately 11.1% compared to the year 2000.
Among the statistical information relevant to roadway traffic, are the data provided by AISCAT (The Italian Association of Private Managers of Public Highways and Tunnels) on the volumes of traffic registered on the privately managed highway network subject to continual recording of traffic (5,523.4 km in length as of 31 December 2011), results that show an average daily volume of vehicles on the road for 201 of 40.8 million (down from 41.3 million in 2010), of which 31.5 million were light vehicles (77.2%) and 9.3 million were heavy (22.8%). In terms of the railway network, its total length as of 2010 was approximately 20,392 km, for an increase of 975 km compared to 2000. During the same period, the electrified network and the portion with double tracks were extended by respective figures of 12.3% and 25.3%.

The available data point to a significant presence of port structures within the national territory as well. As of 31 December 2011, there were 270 ports (11 more than in 2010), for an overall wharf length, in terms of the docking points in the ports, of more than 463 kilometres (+11.2 km than in 2010), making for an average of approximately 233 metres per docking point and more than 1.7 kilometres per port.
In terms of maritime transport, 1,992 dockings were registered in 2011, for an increase of 78% compared to 2001.

In 2011 there were 1,992 docking points (+78% compared to 2001).

As for the airport infrastructures distributed throughout the national territory, in 2011 there were 46 airports open only to commercial traffic, making for a distribution of 1 airport every 1.32 million residents.[24]

Tourism

Tourism constitutes an increasingly important element in the lives of people who are willing to travel for both private and professional reasons.
The environment, natural attraction and cultural heritage are all necessary ingredients in the supply and demand of tourism, meaning that they should be safeguarded both through strategic planning and efforts of governance designed to preserve the attractive allure exercised by the tourist destinations while, at the same time, ensuring that the forms of tourism developed prove respectful of the environment and sustainable.

Tourism and the environment are closely connected. Europe is the destination for 51.3% of all international arrivals.

Tourist arrivals

[24] ENAC data

On the international level, the year 2011 saw confirmation, following a period of crisis, of the increase in arrivals already registered the previous year (+4.6%); Europe, where the largest worldwide tourist flow is to be found (51.3% of all international arrivals), showed an increase of 6.1%. Tourist arrivals and presences registered in Italy in 2011 for the sum total of the country's hospitality establishments rose at respective rates of 5% and 3%. The average stay (3.7 days) fell slightly compared to last year, confirming the trend of the last few years towards shorter stays. Climate is one of the main factors that drive the seasonal nature of tourist demand, determining both the length and the quality of operations while playing an important role in the choice of the destination and the amounts spent. In 2011, the seasonal concentration of the tourist flows continued to occur in the third quarter (with 50% of the presences).

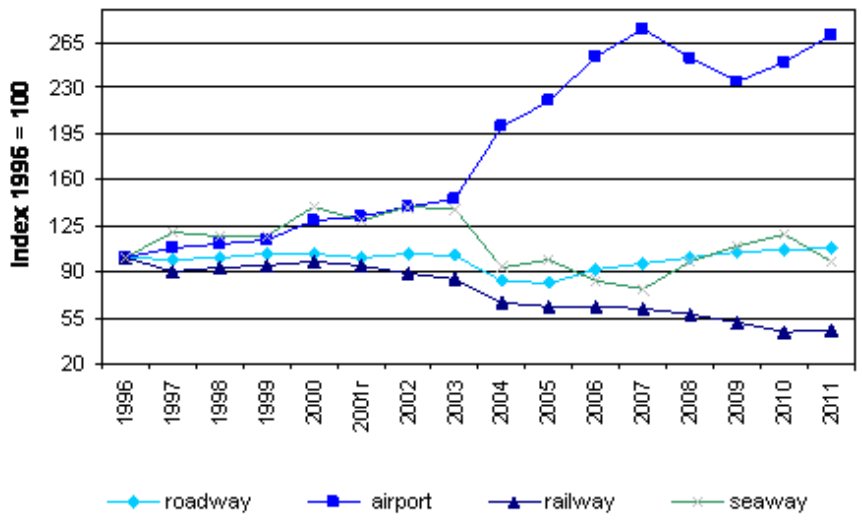
and presences in Italy for 2011 showed respective increases of 5% and 3%.

The climate is one of the main elements driving the seasonal nature of tourism: 50% of the presences registered in 2011 occurred in the third quarter.

The economic crisis has negatively impacted on the overall number of trips taken by Italians, with a decrease of 16.6% having been registered. Nonetheless, 62.9% of these trips were taken by car. The tendency of Italians to travel by plain persists (16.2% of the trips), thanks to the economical and widespread nature of the means of transport, plus in part, the change in people's approach to taking vacations (short breaks). With regard to the means of transport utilised by foreigners to visit Italy, an increase of 3% in the tourist flows passing through border crossings was registered, attributable primarily to air transport (+8.6%) and rail travel (+3.7%) (Figure II.10). Foreigners also continue to chose the automobile as the most frequently used means of transport (65%).

The car is the means of transport most frequently used by Italians to take trips (62.9%).

The car continues to be the main means of transport chosen by foreign visitors (65%).



Legend
r: The figures for 2001 on crossings of the frontier by road and air were revised following a refinement of the research methodology.

Figure II.10: Changes in the number of foreign visitors entering Italy through border crossings[25]

Tourism inevitably brings change; the demand for environmental and

Tourism places a

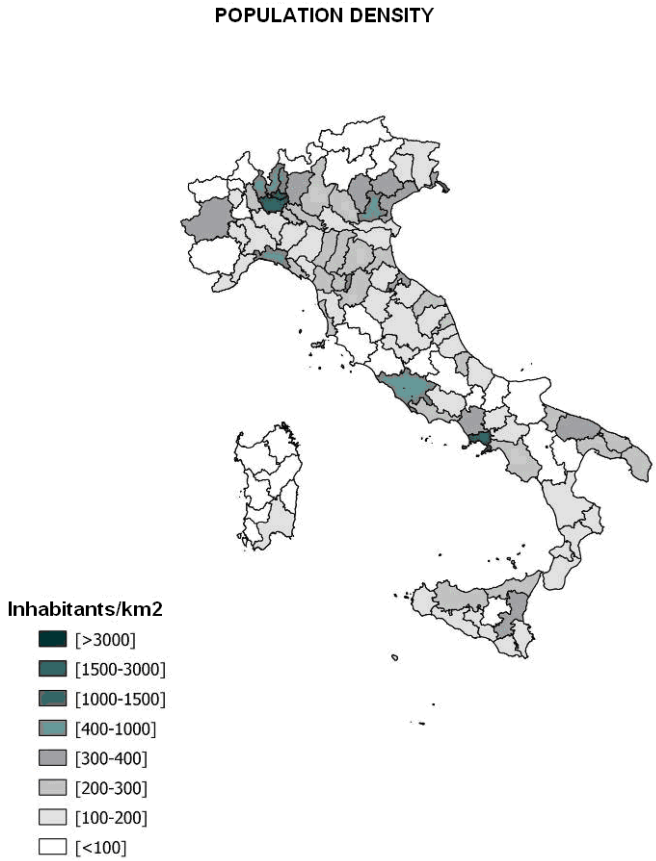
[25] Source: Bank of Italy data processed by ISPRA

cultural resources and the desire to encounter new experiences can alter social and environmental balances.

number of different pressures on the environment.

The factors responsible for the pressures placed on the environment can have a variety of effects, though numerous constants can be observed: large numbers of visitors, seasonal concentrations, the use of the more polluting means of transportation etc.. Furthermore, there is an increasingly noticeable characteristic of tourism in large cities: in addition to the problems for which residents are responsible, consideration must be given to those arising from the fact that these locations are becoming increasingly popular tourist destinations. The arrival of tourist flows radically modifies the inhabited density of certain Italian provinces: Florence, Venice, Rimini and Rome have respective inhabited densities, under normal conditions (taking into account only the resident population), of 277, 343, 374 and 743 inhab./km^2, whereas these figures register noteworthy increases with the arrival of the tourists. In the case of Florence, for example, whose population density is roughly the same as that of provinces such as Livorno, Lodi or Novara, when the tourists are added in, the density (1,544 inhab./km^2) climbs to almost double the normal residential density of Rome (Figure II.11).

Tourist flows radically modify population density, as in the cases of Rimini, Florence or Venice, which reach noteworthy levels with the addition of the tourists.



The map for "inhabitant density" distributes Italy's provinces into eight categories of habitant density; the "total density" map distributes the provinces into the same eight categories, but based on the "total" density (population + arrivals)/surface area of territory.

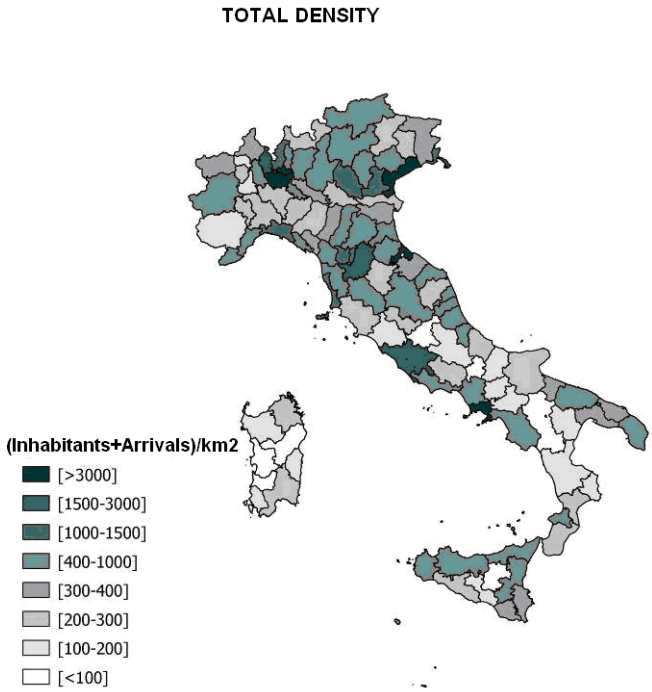


Figure II.11: Changes in the population densities of Italian provinces as result of the tourism flows (2011)[26]

[26] Source: ISTAT data processed by ISPRA