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POSSIBLE POLICY RESPONSES TO POPULATION AGEING AND POPULATION DECLINE. THE CASE OF ITALY *

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Possible policy responses to population ageing and population decline. The case of Italy[i]

1 - It is widely known that population ageing is a demographically inevitable process, since it is linked to the demographic transition and therefore the fall in births and in mortality rates, above all in the older ages as is presently occurring in the more developed countries. According to the starting time, speed and rate of the demographic transition, the ageing process will vary both in speed and extent on a geographical basis, both at the international level and within each country. It is likewise known that ageing is the positive result of two victories which humanity has sought for centuries and is still seeking: the victory over unwanted births and over premature death.

Because of the sharp, prolonged fall of the fertility rates, and consequently of births, that has coincided with a sharp, prolonged rise in longevity, Italy has now become the "oldest" country in the world, recording the highest proportion of population aged 65 and over, and the lowest proportion of people aged under 15. Up to now, the fall in fertility and the increase in the mean length of life have almost perfectly compensated one another in the population dynamics, since for many years the number of births - approximately 530-550,000 per year - has been more or less the same as the number of deaths. The number of the deaths has exceeded the number of the births for just a few years, and the Italian population is undergoing a natural decline that is very modest for the moment. For the near future, we can expect that the speed of population ageing will be greater than the rate of increase in the length of life. Therefore, over the next decades the number of deaths should rise drastically, reaching the possible figure of 750-800,000 deaths per year in 2050, compared to a possible number of 200-300,000 births, and thus to a possible deaths/births ratio equal to 2.5-4.0.

For the Italian population, it is a matter of a process of ageing and decline already announced. According to United Nations projections, the population will fall from 57.3 million in 2000 to a number ranging from 36.8 and 46.8 million in 2050 according to either the low (continuation of the current level of 1.1-1.2 children per woman) or the high (recovery to 2.1) estimate of fertility. At the same time, the percentage of over-60s would rise from the current 24.2 to a percentage of between 46.2 and 36.3 (Population Division, 1999). As we know, the faster the decline in the population, the faster the ageing process and vice versa. Thus, in any case, there would be an extraordinary upsetting in the population, which would be all the greater if fertility remains very low, all other factors being equal.

2 - The ageing process is very widespread and involves individuals, households, populations and sub-populations (in the first place, the one consisting of the elderly and another one of the working-age population). This will produce a series of consequences on the micro level, for individuals and households, and on the macro level, for populations and sub-populations, ranging from specifically demographic consequences to psychological, cultural, economic, social and environmental ones (Golini, 1999). Obviously, the more significant the process of population ageing and decline becomes, the greater and more profound the consequences will be; the faster the process takes place, the greater the necessity of a prompt and adequate response. Therefore, the difficulties deriving from ageing, and to a lesser extent those derived from the population de-

cline, are linked with the *intensity* and *speed* of the process; in other words, society finds it hard to face these problems since it does not always fully perceive this type of demographic change which takes place silently and unseen. Our society does not always manage to find the right solutions, because they regard the long term and because in any case the decision-making processes in Western democracies are long, complex and the fruit of negotiations and compromises that sometimes fail to achieve the fairest solution, which is hard to identify also because the ageing process is something absolutely new in human history.

Therefore when the process is intensive and fast, there is a need to dynamically "restructure" the whole of society in relation to the sharp fall in the number of young people and the simultaneous sharp increase of the elderly and older population. Figure 1 shows the data in the past 50 years and the possible ones in the next 50 years for the change rates of young people and older people in a population like Italy's between 1950 and 2050. There have been periods, for example around 1985, when young people decreased at an average annual rate of over 3% and at the same time the elderly increased at a rate of 3%. It is obvious that a population will have serious difficulties if it has to shift financial, physical and human resources from one segment of the population to another in just a few years. It is a fact that demographic transition necessarily involves different changes of the various population segments. We can see the following rates in the Italian population[1] between 1950 and 2000:

- **the total population** **from 100 to 122;**
- the young population aged 0-19 from 100 to 68;
- the working-age population aged 20-59 from 100 to 130;
- the elderly population aged 60 and over from 100 to 241.

If we look at the average annual rates of increase of the various age groups of a population used in a simulation[2] (Figure 2), it is clear that the differential trend in the young population compared to the old population depends on three values identified in the segments called *a, b, c*:

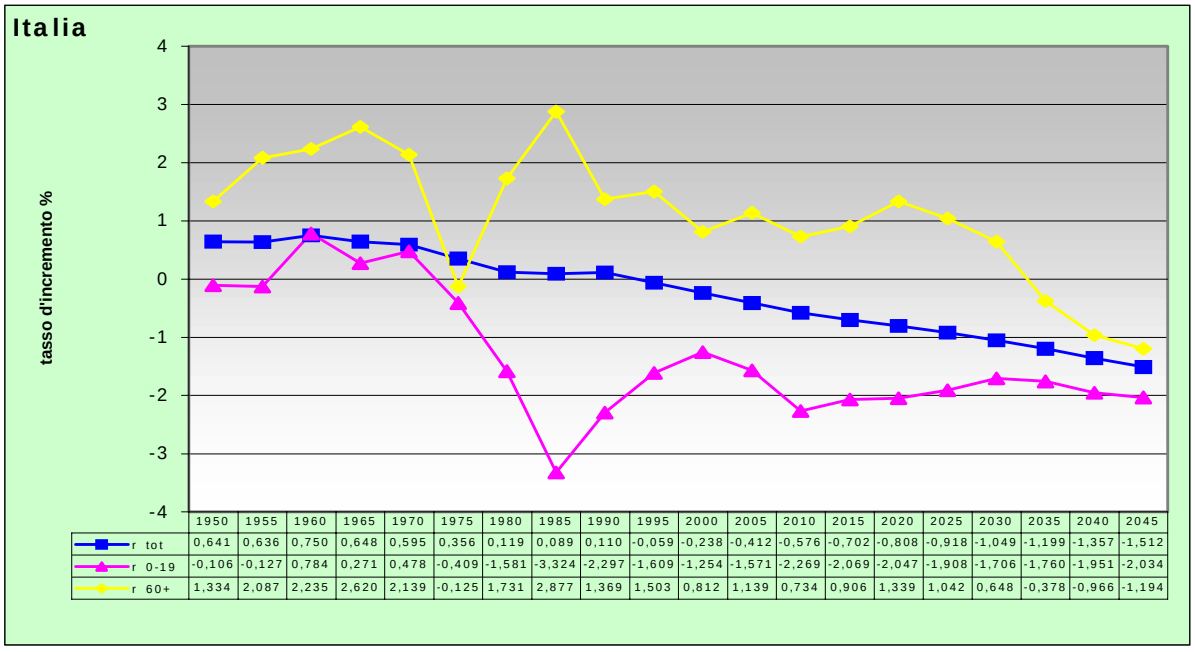
- segment *a* indicates how much more the older population grows than the younger population when the latter, due to the fall in fertility rates, reaches a growth rate of zero;
- segment *b* indicates how long the older population continues to grow once the younger population starts to decrease;
- segment *c* indicates how much more the younger population decreases than the older population once the latter is about to decrease, having reached a growth rate of zero.

The differences in the growth rates at any given time and the time lag between the start of the decline of the young population and start of the decline of the old population produce the various demographic transitions of the three population segments, with highly differentiated rates appearing as clearly shown in Figure 3. Figure 4 shows how this mechanism is linked with the ageing of all the sub-populations with different timing and rates; the latter should be basic elements for formulating and implementing the political responses.

[1] Data from the Population Division (1999, *medium variant*).

[2] The simulation starts from a stable population in which over 200 years, the fertility rate has fallen from 4.2 to 1.2 children per woman, and the mean length of life has increased from 45 to 75 years.

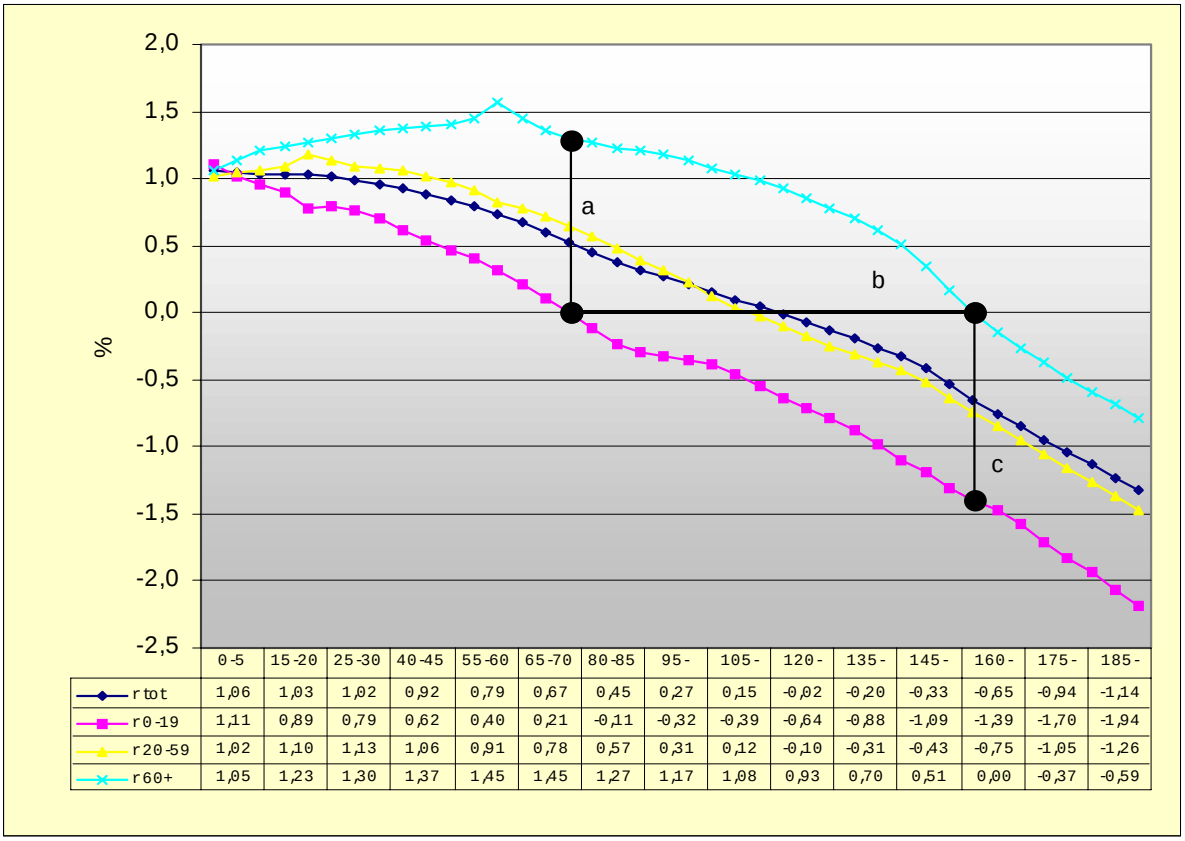
Figure 1 – Growth rate by major age groups (population aged 0-19, 60 and over, and total population), Italy, 1950-2050 low variant



	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
r tot	0,641	0,636	0,750	0,648	0,595	0,356	0,119	0,089	0,110	-0,059	-0,238	-0,412	-0,576	-0,702	-0,808	-0,918	-1,049	-1,199	-1,357	-1,512
r 0-19	-0,106	-0,127	0,784	0,271	0,478	-0,409	-1,581	-3,324	-2,297	-1,609	-1,254	-1,571	-2,269	-2,069	-2,047	-1,908	-1,706	-1,760	-1,951	-2,034
r 60+	1,334	2,087	2,235	2,620	2,139	-0,125	1,731	2,877	1,369	1,503	0,812	1,139	0,734	0,906	1,339	1,042	0,648	-0,378	-0,966	-1,194

Source: own elaborations on data from *World Population Prospects: The 1998 Revision*, UN

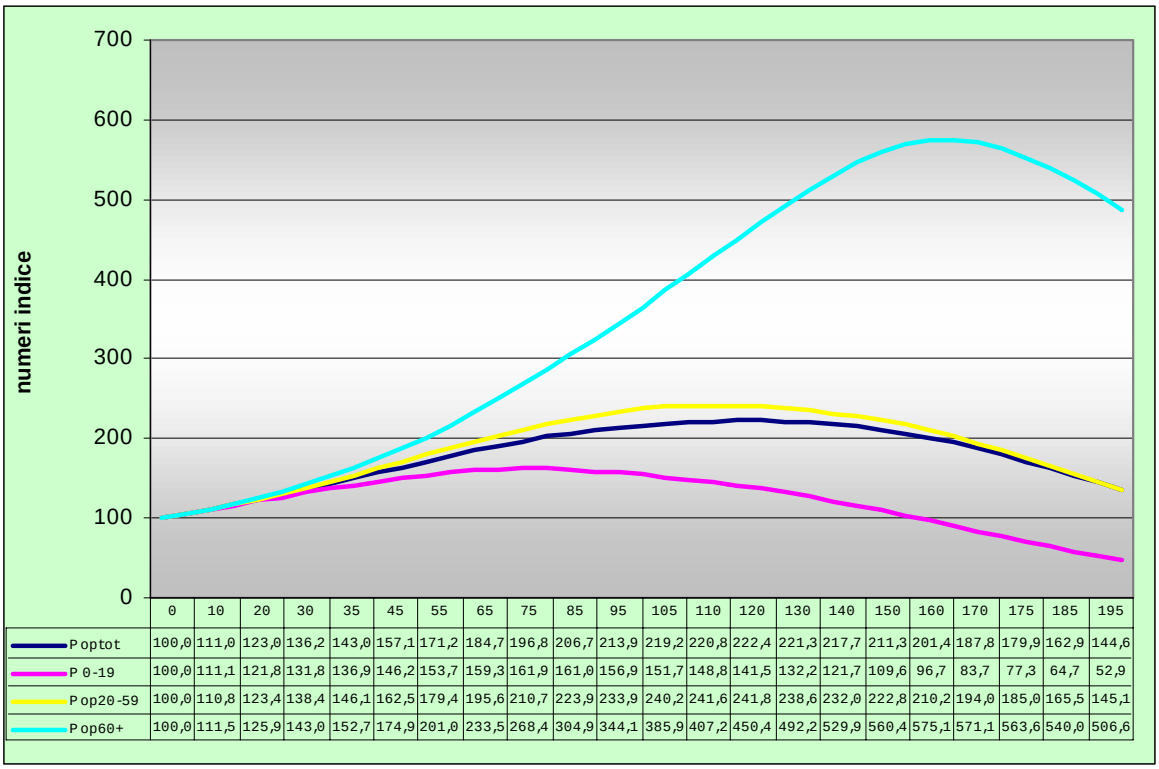
Figure 2 – Growth rate by major age groups (population aged 0-19, 20-59, 60 and over, and total population). Simulation along 200 years



	0-5	15-20	25-30	40-45	55-60	65-70	80-85	95-	105-	120-	135-	145-	160-	175-	185-
rtot	1,06	1,03	1,02	0,92	0,79	0,67	0,45	0,27	0,15	-0,02	-0,20	-0,33	-0,65	-0,94	-1,14
r0-19	1,11	0,89	0,79	0,62	0,40	0,21	-0,11	-0,32	-0,39	-0,64	-0,88	-1,09	-1,39	-1,70	-1,94
r20-59	1,02	1,10	1,13	1,06	0,91	0,78	0,57	0,31	0,12	-0,10	-0,31	-0,43	-0,75	-1,05	-1,26
r60+	1,05	1,23	1,30	1,37	1,45	1,45	1,27	1,17	1,08	0,93	0,70	0,51	0,00	-0,37	-0,59

Source: own elaborations starting on data from*:* Coale & Demeny, (model Sud), 1983

Figure 3 – Index numbers (years zero = 100) of total population and sub-populations (population aged 0-19, 20-59, 60 and over, and total population). Simulation along 200 years



	0	10	20	30	35	45	55	65	75	85	95	105	110	120	130	140	150	160	170	175	185	195
Poptot	100,0	111,0	123,0	136,2	143,0	157,1	171,2	184,7	196,8	206,7	213,9	219,2	220,8	222,4	221,3	217,7	211,3	201,4	187,8	179,9	162,9	144,6
P 0-19	100,0	111,1	121,8	131,8	136,9	146,2	153,7	159,3	161,9	161,0	156,9	151,7	148,8	141,5	132,2	121,7	109,6	96,7	83,7	77,3	64,7	52,9
Pop20-59	100,0	110,8	123,4	138,4	146,1	162,5	179,4	195,6	210,7	223,9	233,9	240,2	241,6	241,8	238,6	232,0	222,8	210,2	194,0	185,0	165,5	145,1
Pop60+	100,0	111,5	125,9	143,0	152,7	174,9	201,0	233,5	268,4	304,9	344,1	385,9	407,2	450,4	492,2	529,9	560,4	575,1	571,1	563,6	540,0	506,6

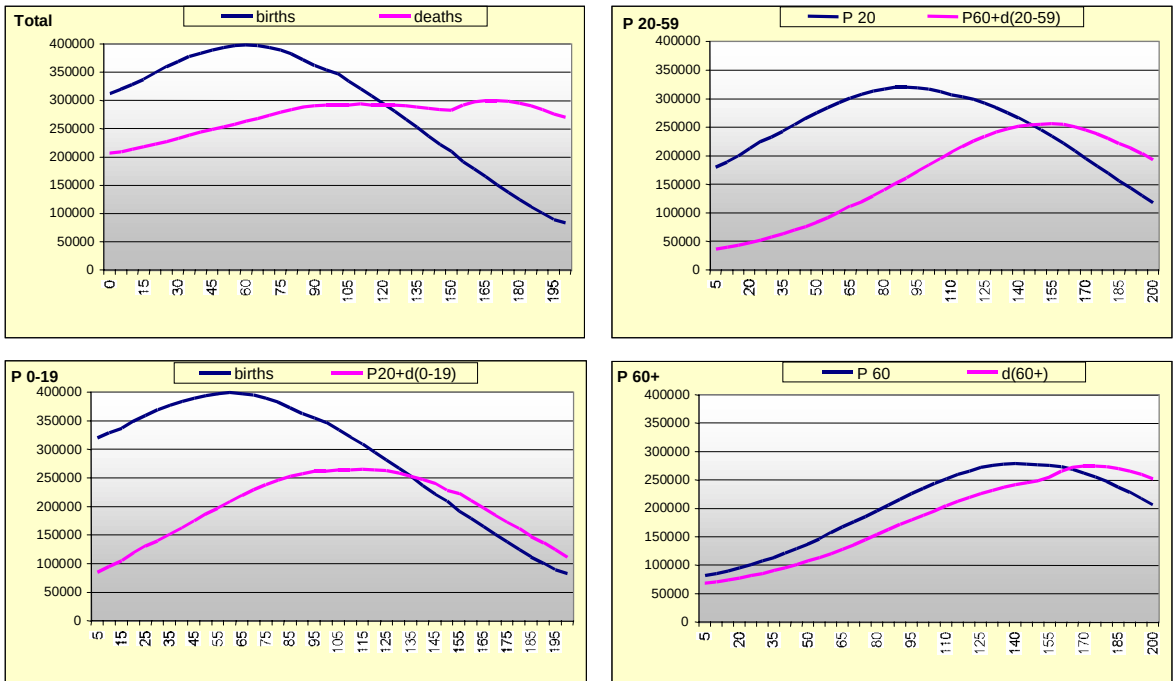
Source: see Figure 2

Trends in the elderly segment of the population in the simulation are reflected in the projections for the population of an Italian region, Liguria[3]. Figure 5 clearly shows that while the proportion of the elderly on the total population continues to rise, the absolute number of elderly people starts to fall after reaching a peak. This different trend between the increasing *proportion* of the elderly and the falling *absolute number* of elderly people creates additional problems in the management of the elderly, since starting from a certain point, the physical, financial and human resources dedicated to the elderly will have to be reduced, while up to a few years ago these resources should have been growing.

3 - In relation to the various phases of the demographic transition of the sub-populations, something absolutely new is appearing in the Italian population: for the Working Age Population (WAP), a considerable fall and a significant ageing are forecast. The data mentioned in the previous paragraph show that between 1950 and 2000 the moderate increase of the working-age population enabled the country to face (from the demographic, economic and social points of view) the sharp increase of the older population.

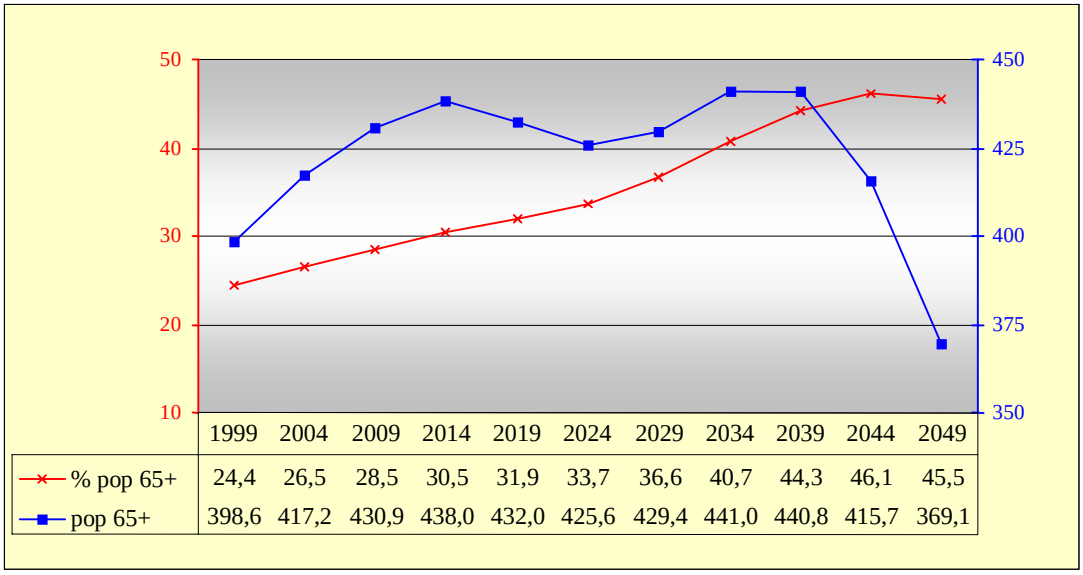
[3] Liguria is in the Northwest part of Italy and its capital is Genoa; in 1999, it had a population of 1,633,000. With 24.4% of people aged 65 and over and 10.3% of the population under 15, it is Italy's "oldest" region; in 1998, it recorded 11,000 births and 22,000 deaths.

Figure 4 - Births and deaths in total population, and entrance and exit flows to and from various sub-populations (aged 0-19, 20-59, and 60 or over)



Source: see Figure 2

Figure 5 – Size (thousand) and proportion of total popolation aged 65 or over, Liguria, 1999-2049



	1999	2004	2009	2014	2019	2024	2029	2034	2039	2044	2049
% pop 65+	24,4	26,5	28,5	30,5	31,9	33,7	36,6	40,7	44,3	46,1	45,5
pop 65+	398,6	417,2	430,9	438,0	432,0	425,6	429,4	441,0	440,8	415,7	369,1

Source: see Table 1

However, referring to the data for the period 2000-2050[4], we could expect the following changes:

- **the total population** **from 100 to 72;**
- the younger population aged 0-19 from 100 to 61;
- the working-age population aged 20-59 from 100 to 54;
- the elderly population aged 60 and over from 100 to 122.

For a more detailed analysis, we should refer to national sources also enabling us to examine the trends at sub-national level. Between 1999 and 2029, the working-age population, considered here to be aged between 15 and 64, could vary as shown in Table 1.

Some brief observations:

1. The fall of the working-age population is very consistent, with a rising trend over time: over 8 million in 30 years, which means an average of 275,000 per year (-173,000 in the first decade, -248,000 in the second and -404,000 in the third);
2. The fall is much sharper in North-Central Italy (27-29 per cent), i.e. in the part with the greatest economic development and the lowest unemployment;
3. A decrease (7.5 per cent) is also expected in the economically most backward part of the country with high unemployment, especially among youth. This means that we cannot imagine filling the gaps created by demographic trends in North-Central Italy with domestic South-North migrations, as occurred in the 1950s and 60s, when about 4 million people emigrated from the South, half to the rest of Italy and half abroad. The South was thus largely deprived of its human capital. In any case, in 1999, 64% of the total of the WAP in Italy lived in the North-Central area, while in 2029 this rate should fall to 58%;
4. The expected decrease is slightly greater for women (4.3 million) than for men (4.0 million), i.e. for the gender which in recent years has recorded sharp increases in employment rates compared to considerable falls for males;
5. The expected decrease is much greater for the younger segment of the WAP (6.8 million, -42 per cent), than for the older segment (1.4 million, -6 per cent). The lack of young people will therefore be highly serious and the ageing of the WAP will therefore be considerable.

Table 1 - Working Age Population in 1999 (000) and expected changes between 1999 and 2029

Division/Gender/ Age groups	Value in 1999	Change 1999-2029	
		Absolute	Percentage
North, M+F, aged 15-64	17,578	-5,151	-29.3
Central, M+F, aged 15-64	7,497	-2,055	-27.4
South, M+F, aged 15-64	13,993	-1,051	-7.5
Italy, M+F, aged 15-64	**39,068**	**-8,257**	**-21.1**
Italy, M, aged 15-64	19,534	-3,959	-20.3
Italy, F, aged 15-64	19,534	-4,298	-22.0
Italy, M+F, aged 15-34	16,362	-6,815	-41.7
Italy, M+F, aged 35-64	22,706	-1,442	-6.4

Source: own processing on unpublished projections by A. Golini and A. De Simoni (constant fertility, slight reduction in mortality, nil migration)

[4] Data from the Population Division (1999, *medium variant*, forecasting an increase of the total fertility rate from 1.2 to 1.7 and a moderate immigration falling to nil in 2020-2025).

In the medium term, the most serious problem for the Italian population, society and economy will stem from this sharp fall and ageing of the WAP, with the persistence of the decrease of the older population and the increase of the older population.

4 - A study recently conducted by the Population Division of the United Nations (2000) has helped highlight all the weaknesses of the Italian population structure, as well as having a greater impact in the press and among politicians than all the numerous and frequent analyses conducted in Italy on the same topic and with the same results. The sharp fall in fertility over recent decades has brought Italian births down from 1 million in the mid-60s to just over 500,000 in the mid-90s. After about 30 years, the potential parents will also fall by half and at that point, the population decline will become inevitable and very intense. At the same time, the mean length of live has extended beyond all expectations (1 woman out of 3 could reach up to 90) and thus the increase of the elderly and the very elderly, deriving from the old cohorts with numerous births, is significant and currently unstoppable. As we have said, Italy is therefore already the "oldest" country in the world.

In order to ensure less demographic, and therefore economic-social imbalances in the Italian system (as well as in other countries with very low fertility rate), one solution could be "replacement migration", with a substantial annual immigration, ranging from 235,000 (if we wanted to keep the total population constant) to 357,000 (if we wanted to keep the WAP constant) for all the years from 1995 to 2050[5]. If we wanted to maintain a constant ratio between the WAP and people aged 65 or more, then annual immigration would have to be 2,176,000 people for the entire period (Population Division, 2000). In my view, these figures, proposed from the demographic point of view *alone*, have reached a substantial goal: as we have said, to make politicians and public opinion realise how negative the Italian demographic panorama is for the near future.

However, from the professional and political point of view the consideration to be made and the responses to give to population decline and ageing can and must be more articulated.

1. The first political response should consist in the attempt to raise the fertility rate of Italian women and couples, now very low and stable at 1.1-1.2 children per woman for many years (Golini, 2000). The most recent surveys have once more shown that the number of children wanted by Italian women is just over 2, i.e. the replacement level, and that the four main reasons why they do not plan for and procreate a child or one more child are economic (18%), job (17%), because they don't feel ready (17%) and because they are satisfied with the number of children they have (17%)[6]. But if the structural problems mentioned in point d) below

[5] Similar conclusions were already reached previously by Italian researchers, e.g. Gesano (1994).

[6] The average number of wanted children per woman is 2.17, falling to 1.99 for women in Northern Italy and rising to 2.38 for those in the South. It is 2.05 for working women and 2.38 for housewives. It is therefore not a particularly large variability. These data, like all the others appearing in the text, refer to the results of a survey conducted in January 2000 on a sample of just over 1,500 by the *IRP-Istituto di Ricerche sulla Popolazione* (National Institute for Population Research). The survey is not yet available and the information shown is that published in a magazine (*L'Espresso*, July 2000; website: www.espressoedit.kataweb.it). These results substantially confirm the findings of the Fertility and Family Survey conducted in 1996-97 (De Sandre, Pinnelli and Santini, 1999).

are not solved, Italian women will necessarily continue to keep the number of their children low or very low; the desire for motherhood is therefore satisfied with the first child and very often stops there. In order to achieve a total fertility rate of 1.7-1.8 children per woman, at least 30% of women would have 3 or more children. In present conditions, this goal seems difficult to pursue, since in the recent survey cited, only 4% of couples with two children are thinking of having a third child within the next two years; and this is not only for economic reasons (just two children already drastically reduce a couple's standard of living), but also for cultural reasons. Today, a couple with four children is seen as being unusual and eccentric[7]. The policy makers should therefore try to remove all the elements penalising women and couples who decide to have a child or another child. This action would, amongst other things, also have the advantage of showing that society is concerned with the social value of procreation and children, which for some time have been considered exclusively as "something" absolutely private pertaining to women and to couples.

2. The second response must be to favour immigration, which for Italy is advantageous and actually necessary from the economic and demographic point of view, and is in any case unstoppable, considering on the one hand the extraordinary and in many cases growing population pressure in the countries of origin, especially in Africa, and on the other the vulnerability of our country's borders which provide access not only to Italy but also to the rest of rest of the European Union. However, from the social point of view, immigration would be highly unlikely to reach the levels mentioned in the Report on *Replacement Migration*. All the European countries, and therefore also Italy, host *historical ethnic minorities* which have fought for centuries, and in some cases are still fighting, to gain autonomy and independence and to obtain full recognition of their ethnic identity[8]. The immigrant flow will necessarily be relatively modest and in any case gradual in order for these *new minorities* to be able to coexist in the best possible conditions with the older ones. Even if Europe is based on migrations, which have played an absolutely vital role for the continent's development and history, it should be recalled that Europe today is a continent with long-established populations and not, like the Americas, a continent that was populated by migrations.

   Italy is a country of recent immigration, which started in the 1970s. In the 90s, there were approximately 50-70,000 immigrants per year, but despite this moderate inflow there were already problems with xenophobia. An increase to 300,000 immigrants per year could lead to the outburst of serious racism and could further foster the political growth of the reactionary right as has already happened in France, Germany and Austria.

3. The third response could be to favour a complete re-absorption of the high youth unemployment in Italy (among young people aged 15-24 years, the unemployment rate in 1998 was 33% for Italy as a whole and 57% for the economically most backward regions of the South). Therefore, the expected and forecast fall of the young segment of the working-age population

[7] In a recent letter to a weekly magazine, a father of four children complained about being "made fun of" because he had four children and didn't manage to stop before (*Famiglia Cristiana*, no. 30, 2000).

[8] Just to cite some examples, we can mention the bloody fighting undertaken in Spain by the Basques, who demand their autonomy, or the struggles in a war of religion in Northern Ireland; then, there is the tragic situation in the Balkans. But even when matters have been wholly agreed and peaceful, as in the case of the recent formation of two separate states, Czech and the Slovak Republics, there has been a net reaffirmation of ethnic and cultural identity. In Italy, the German-speaking minority living in South Tyrol (the Italian region called Alto Adige), has been ensured with wide-ranging autonomy and guarantees for preserving its ethnic identity, so that an Italian who wants to settle in Alto Adige has to reside there for at least four years before obtaining the right to permanent residence.

(aged 15-39) could, in the short and medium term, proves to be an advantage and the fall of the workforce and of the employed could therefore be much lower than that in the working-age population. However, in the long term this fall could prove to be a serious blow to the country's international competitiveness, unless there is a considerable increase in the human capital of this decreasing amount of young people, who must therefore be much better educated and trained from the cultural and vocational point of view.

A profound overhaul of the entire training system is necessary; the sharp fall in the number of young people and students could provide a positive opportunity to utilise the surplus of teachers that will occur in upper secondary schools and above all in the universities for the following: i) a better quality of schools, in order to ensure that the majority of students reach the levels reached today only by an excellent minority; ii) serious refresher courses for teachers; iii) cultural and vocational retraining courses for adults, "young" old people expelled early from the labour market; iv) to accept a considerably higher and growing number of foreign students; v) to address the efforts of researchers who obtain significant research funds exclusively to scientific research.

4. The fourth response lies in a significant optimisation of the role of women from the job point of view, all the more so today since they are more likely than men to obtain a school-leaving certificate or a university degree, and are increasingly being inserted on the labour market[9]. In Italy, women, together with young people, undoubtedly represent the most important resource as human capital, and are still extensively under-used. However, they must also be able to work and to advance in their career; they must therefore be able to count on men who fully share the work of taking care of the family and the home, on public and private facilities for the necessary help in caring for children and the elderly, on a much more family-oriented labour market and on new instruments, including taxation, to provide economic support to the family.

5. The retirement age must necessarily be raised above the present levels[10], also providing for a gradual retirement process to take place, as far as we can imagine today, between 65 and 70; there must be full compatibility between any type of further work and pensions. This could be another way of overcoming the strident contrast between the need to raise the retirement age and the trend in companies and among many people to early retirement, so that the real retirement age is falling. However, a different cultural outlook is required in the population. Among other things, this could help dampen the increasingly widespread and unsustainable mystique of leisure time in favour of growing social responsibility, also for a full implementation of the response mentioned in point 7.

6. The sixth response, closely connected to the three previous ones, could involve an increase of work productivity and of the entire Italian economic system. This must certainly be the road to take, although the weaknesses of the infrastructures (in particular, the transportation system), the weight of bureaucracy and the often rigid response of the trade unions often block an adequate increase of productivity in Italy. This year, in his traditional public speech at the

[9] Between 1994 and 1998, the proportion of women graduates on total graduates rose from 52 to 54%; between 1995 and 1999, employed males aged 15-54 years increased by 141,000 and employed females by 482,000, in with a ratio of 1 to 3.4.

[10] Currently, there are moves towards a retirement age of 65 for men and 60 for women. But those who have 35-40 years of pension accumulation could also retire earlier, for example at 57 for men.

end of May - the most important one of the year - the Governor of the Bank of Italy stressed the difficulties of the Italian economy in keeping up with the growth pace of the world and European economy, also due to the slowdown in the increase of productivity in the 90s; this increase was 2.1% in Italy compared to 3.7% in France, 3.0% in Germany and 3.4% in the United States.

7. The seventh response may lie in substantial, increasing and voluntary social and health support for the elderly who have physical and/or psychological, and/or cognitive problems, by other wholly self-sufficient older people who will therefore have to commit time and energy for the less fortunate (as already occurs today in very many small, outlying towns with very old populations). One can imagine also the creation of a compulsory civil service for young people of both sexes, for instance six-twelve months, which could substitute the compulsory military service where it is still in force. This service again should be in favor of elderly and oldest old people who need assistance (and also in favor of the environment). The service could have several positive aspects: to reduce the wave of individualism and increase the spirit of sacrifice and the team-spirit; to reinforce or to recreate intergenerational links not in a family environment, but in a societal one; to bring, through an enormous amount of low or zero cost work, relief to the welfare expenses. In the future, this support cannot be provided, as it is today, almost exclusively by these people's children, also because in the near future there will not be enough children. Making a rough estimate to gain an initial idea of the numerical ratio between parents and adult children, in about twenty years the number of the people aged 75 and over, i.e. the generation of elderly parents, could greater than that of the people aged 50-64, i.e. the generation of their adult children.

The first two responses are the structural ones from the demographic point of view, and which therefore substantially affect population trends. However, the first solution, *though necessary*, still requires (assuming that it can be implemented) a long period of time before it can have any significant effect, also because it is unlikely that the Italian fertility rate will rise very much, although this would be desirable. At the same time, it is unlikely and undesirable that the length of life will stop increasing[11]. The second solution, *though necessary*, must be gradual and requires "reasonable dosage". This means that if it is applied, it may not be able to substantially change current and future demographic trends, already mostly determined by the past trends.

In the short and medium term, education and the labour market therefore seem to be the key areas for governing these difficult demographic trends, which threaten to upset the structure of Italy's society and economy. The politicians have the difficult task of finding the right formulas for handling a challenging present and a no less challenging near future.

5 - In order to assess the impact of the three possible responses stated in c), d), and e), a simula-

[11] A further option for slowing down the population decline and ageing, i.e. a significant and prolonged increase in mortality, especially in the adult and very elderly age groups, has not even been taken into consideration here. This type of measure has been "tested" in the former communist European countries, in particular in the first half of the 1990s. The hard transition stage towards a market economy, in fact, led to a collapse of individual and social defence against disease, so that the mean length of life underwent drastic reductions. Socio-economic crises and the epidemiological crisis due to AIDS are playing an extraordinarily negative role in Sub-Saharan Africa, where a drastic reduction of the mean length of life is occurring.

tion has been made based on the hypothesis of constant rates of activity and present-day employment levels, on the one hand, and their sharp growth over the next 30 years[12].

The criteria used for this simulation involve the following trends: the activity rates of the Central and Southern regions converge towards those of the Northern regions which already have almost full employment; the female rates converge towards male rates; and finally, the significant rise in the rates of "young" old people, which in practice means the raising of the of retirement age. In particular, the hypothesis states that:

1. For the young population aged 15-24, the especially low rates in the southern areas will converge towards those of the northern regions, though still remaining around 43-47% for the rates of activity and 40-44% for the employment rates. This is to take into account that in this age group, the rates should not be particularly high, considering the need to raise educational standards;
2. For the female population of the mid-age group, from 25 to 54 years, the rates - though rising considerably compared to the present ones -, will reach 76% for the activity rates and 72% for the employment rates. This is to take into account both the current situation in the South with its very low rates that would be likely to rise gradually, and the fact that women will devote a certain number of years of their lives to procreation. In any case, with regard to the higher rates of activity among women in Northern Europe, we could certainly imagine that the rates of activity will also rise further among Italian women;
3. The population aged 55-64 will record a very sharp increase, bringing male rates of activity from the current 37-52% towards 70%, and female rates from 15-19% towards 55%. Also in this case, the hypotheses are prudential and therefore even higher rates could be hypothesised.

The overall situation, current and future projections, of the activity and employment rates is shown in Tables 2a and 2b. The complete results of the simulation are shown in Tables 3a, 3b and 3c. These tables highlight with extreme clarity the absolutely unsustainable nature of the current situation with low activity rates when associated with a sharp decrease of the working-age population. In particular, it can be seen that:

- In the hypothesis of constant employment rates (*hypothesis A*), the number of employed males would fall between 1999 and 2029 by 3 million (from 13.0 to 10.0 million), i.e. 32%; the number of employed women would fall by 2.3 million (from 7.5 to 5.2 million), i.e. 30%. The situation seems totally unsustainable from the economic point of view, also because for the males and females as a whole the ratio between the population aged 65 and more and the employed would rise from 50 to 97% (*line l* of Table 3c);
- In the hypothesis of rising employment rates (*hypothesis B*), in 2029 there would be an additional number of employed males totalling 2.1 million and of employed females totalling 4.2 million. Nevertheless, for the males and females as a whole the ratio between the population aged 65 and more and the employed would rise all the same, though less with respect to hypothesis A, from 50 to 68% (*line m* of Table 3c).

[12] The complex balance between population factors, affecting the WAP, and socio-economic factors, affecting the workforce and workers, are analysed for Europe in the current situation and for the future in Punch and Pearce (2000).

These simulations clearly show the need for a labour policy contributing to a massive rise in the activity and employment rates. This objective must be pursued not only for many macroeconomic reasons, some of which have been mentioned here, but also for microeconomic reasons regarding the well-being of individuals and families. This is not all; moves towards much lower unemployment and continuous economic growth would most probably lead to the dampening of all or most xenophobic feeling towards foreign immigration. I am convinced that only the full perception of the need for immigrants to maintain economic prosperity will lead to their full acceptance.

6 - To conclude, it should be stressed that the more complex and developed a society and an economy become, the more their growth and adaptation - harmonious, prompt and continuous - to changing structural conditions depend on a complex balance and interaction of factors and policies related to administration, education, politics (in the broad sense), culture and individual and collective psychology, and therefore also to the system of expectations, as well as the economy, of course. Population factors remain part of the background in the long and very long term, but like all structural factors, they certainly cannot be ignored. If these trends continue unchecked, they would in the end unhinge all the social and economic structures.

Table 2a – Activity rates by sex, age groups, and division: observed 1999 and projected 2009-2029

Age groups	Males				Females			
	1999	2009	2019	2029	1999	2009	2019	2029
Northern regions								
15-24	47,1	47,0	47,0	47,0	43,0	43,0	43,0	43,0
25-35	91,5	91,5	91,5	91,5	76,3	76,0	76,0	76,0
35-54	92,5	92,5	92,5	92,5	60,7	65,8	70,9	76,0
55-64	36,6	47,7	58,9	70,0	15,0	28,3	41,6	55,0
Central regions								
15-24	37,4	40,6	43,8	47,0	31,4	35,3	39,1	43,0
25-35	85,9	87,7	89,6	91,5	64,2	68,1	72,1	76,0
35-54	93,0	93,0	93,0	93,0	59,2	64,8	70,4	76,0
55-64	45,5	53,7	61,8	70,0	19,3	31,2	43,1	55,0
Southern regions and Islands								
15-24	37,0	40,3	43,6	47,0	26,9	32,3	37,6	43,0
25-35	82,1	85,2	88,4	91,5	44,3	54,9	65,4	76,0
35-54	91,2	91,6	92,1	92,5	42,5	53,7	64,8	76,0
55-64	52,1	58,1	64,0	70,0	14,9	28,3	41,6	55,0

Source: own calculations

Table 2b –Employment rates by sex, age groups, and division: observed 1999 and projected 2009-2029

Age groups	Males				Females			
	1999	2009	2019	2029	1999	2009	2019	2029
Northern regions								
15-24	41,4	42,3	43,1	44,0	34,8	36,5	38,3	40,0
25-35	87,9	88,3	88,6	89,0	69,3	70,2	71,1	72,0
35-54	91,0	91,0	91,0	91,0	57,3	62,2	67,1	72,0
55-64	35,6	46,4	57,2	68,0	14,3	27,2	40,1	53,0
Central regions								
15-24	28,2	33,5	38,7	44,0	20,2	26,8	33,4	40,0
25-35	77,3	81,2	85,1	89,0	53,1	59,4	65,7	72,0
35-54	90,6	90,7	90,9	91,0	54,8	60,5	66,2	72,0
55-64	44,0	52,0	60,0	68,0	18,5	30,0	41,5	53,0
Southern regions and Islands								
15-24	18,2	26,8	35,4	44,0	9,5	19,7	29,8	40,0
25-35	63,3	72,0	80,6	89,0	25,9	41,3	56,6	72,0
35-54	83,2	85,8	88,4	91,0	35,3	47,5	59,8	72,0
55-64	48,3	54,9	61,4	68,0	13,7	26,8	39,9	53,0

Source: own calculations

Table 3a – Population aged 65 or over, working age population (WAP), labor force, employed and indicators, Males, Italy, 1999-2029 (thousands)

Populations Indicators	1999	2009	2019	2029	Change 1999-2029 absolute	 absolute per year	 Percen-tage	 rate
Populations								
a - Population 65 or over	4141	4984	5668	6352	2211	73,7	53,4	1,44
b – WAP (aged 15-64)	19535	18757	17573	15575	-3960	-132,0	-20,3	-0,75
c –Labor force hypothesis A	14300	13881	12763	10951	-3349	-111,6	-23,4	-0,89
d –Labor force hypothesis B	14300	14320	13679	12393	-1907	-63,6	-13,3	-0,48
e – Employed, hypothesis A	13026	12707	11692	10003	-3023	-100,8	-23,2	-0,88
f – Employed, hypothesis B	13026	13416	13085	12072	-954	-31,8	-7,3	-0,25
Indicators								
g - 100 a/b	21,2	26,6	32,3	40,8	19,6	0,7	92,4	
h - 100 a/c	29,0	35,9	44,4	58,0	29,0	1,0	100,3	
i - 100 a/d	29,0	34,8	41,4	51,3	22,3	0,7	77,0	
l - 100 a/e	31,8	39,2	48,5	63,5	31,7	1,1	99,7	
m - 100 a/f	31,8	37,1	43,3	52,6	20,8	0,7	65,5	

Notes:

- WAP = Working age population with no migration (unpublished projections by Golini and De Simoni, base 1999).
- Labor force and employed, hypothesis A: constant 1999 rates
- Labor force and employed, hypothesis B: projected activity and employment rates assuming a raise in the retirement age, a convergence of Central and Southern regions rates towards Northern regions rates, and a convergence of females rates towards males rates (see tables 2a and 2b).

Source: own calculation

Table 3b – Population aged 65 or over, working age population (WAP), labor force, employed and indicators, Females, Italy, 1999-2029 (thousands)

Populations Indicators	1999	2009	2019	2029	Change 1999-2029 absolute	 absolute per year	 percentage	 rate
Populations								
a - Population 65+	6049	6995	7711	8370	2321	77,4	38,4	1,09
b - WAP (aged 15-64)	19534	18578	17281	15236	-4298	-143,3	-22,0	-0,82
c-Labor force hypothesis A	8883	8262	7380	6167	-2716	-90,5	-30,6	-1,21
d-Labor force hypothesis B	8883	9654	10091	9952	1069	35,6	12,0	0,38
e - Employed, hypothesis A	7479	7006	6265	5212	-2267	-75,6	-30,3	-1,20
f - Employed, hypothesis B	7479	8601	9332	9452	1973	65,8	26,4	0,78
Indicators								
g - 100 a/b	31,0	37,7	44,6	54,9	24,0	0,8	77,4	
h - 100 a/c	68,1	84,7	104,5	135,7	67,6	2,3	99,3	
i - 100 a/d	68,1	72,5	76,4	84,1	16,0	0,5	23,5	
l - 100 a/e	80,9	99,8	123,1	160,6	79,7	2,7	98,6	
m - 100 a/f	80,9	81,3	82,6	88,6	7,7	0,3	9,5	

Notes and source: see Table 3a

Table 3c – Population aged 65 or over, working age population (WAP), labor force, employed and indicators, Males and Females, Italy, 1999-2029 (thousands)

Populations Indicators	1999	2009	2019	2029	Change 1999-2029 absolute	 absolute per year	 percentage	 rate
Populations								
a - Population 65 or over	10190	11980	13378	14722	4532	151,1	44,5	1,23
b - WAP (aged 15-64)	39068	37336	34853	30811	-8257	-275,2	-21,1	-0,79
c-Labor force hypothesis A	23183	22143	20143	17118	-6065	-202,2	-26,2	-1,01
d-Labor force hypothesis B	23183	23974	23770	22344	-839	-28,0	-3,6	-0,12
e - Employed, hypothesis A	20505	19713	17957	15215	-5290	-176,3	-25,8	-0,99
f - Employed, hypothesis B	20505	22016	22417	21523	1018	33,9	5,0	0,16
Indicators								
g - 100 a/b	26,1	32,1	38,4	47,8	21,7	0,7	83,2	
h - 100 a/c	44,0	54,1	66,4	86,0	42,0	1,4	95,7	
i - 100 a/d	44,0	50,0	56,3	65,9	21,9	0,7	49,9	
l - 100 a/e	49,7	60,8	74,5	96,8	47,1	1,6	94,7	
m - 100 a/f	49,7	54,4	59,7	68,4	18,7	0,6	37,6	

Notes and source: see Table 3a

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