PENSION POLICY AND POVERTY IN ITALY: RECENT DEVELOPMENTS AND NEW PRIORITIES

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Abstract: Ensuring adequate living standards to a growing number of elderly while restraining the growth of pension spending represents the main challenge for Italian pension policy. There is a need for an in-depth analysis of the economic conditions of the elderly which can help targeting resources in the coming years to the more needy groups. Using micro-data from the Bank of Italy Survey of Household Income and Wealth (SHIW), we document that the incidence and intensity of poverty among pensioners in Italy are far below those concerning other citizens. This is mainly attributable to the generous rules which governed, until very recently, the public pension system. However, the economic conditions of pensioners vary a lot with age, gender, region and family characteristics. Some groups present high poverty risks. Moreover, the pension reforms implemented since 1992 will curb the benefits paid to younger generations, which also suffer from relatively low wages and increased job flexibility. As a result, for such cohorts the poverty risk after retirement has sharply risen. Changes in the social insurance pension schemes can mitigate some of these risks, but the goal of poverty reduction should be primarily pursued through other expenditure programs.

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1) Introduction

The standard of living of Italian retirees has markedly improved over the last decades. The poverty rate among pensioners is now below the population average. Such an improvement has been accompanied by a rise in public pension expenditure, which at the beginning of the nineties reached 15% of GDP. Without reforms, outlays would have increased up to almost 25% of GDP. To prevent such an explosive path, since 1992 the rules of the Italian pension system have been changed several times. Eligibility requirements have been tightened. Formulas to determine pension benefits at re-

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tirement as well as post-retirement indexation rules have been made less generous (Franco, 2002).

In recent years, while the debate on the reform of the pension system has continued and eligibility criteria have been further tightened, the economic situation of some groups of pensioners has raised some worries. This reflects, inter alia, the fact that over the last 15 years pensions have been adjusted only to price increases. In 2002 and in 2007 ad hoc measures have been introduced to increase the amount paid to pensioners receiving relatively low benefits.

Restraining the growth of pension spending while ensuring adequate living standard to a growing numbers of elderly represents one of the main challenges for social policy in Italy as well as in many other developed countries (OECD, 2000 and 2006). This may call both for further reforms of the pension system and for changes in other welfare instruments. The relative importance of these two lines of actions depends on the structure of the pension system. In the countries where the primary aim of the pension system is to redistribute resources through the life cycle of each individual (so that the pension paid to each individual basically reflects her/his contributions), the goal of poverty reduction is pursued through other expenditure programs. This is now the case of Italy, which is gradually implementing a notional defined contribution system which does not foresee any vertical redistribution.

In a context in which public resources are limited, also in view of the pressures that ageing is exerting on health and long-term care spending, there is a need for an in-depth analysis of the economic conditions of the elderly which can help targeting resources in the coming years to the more needy groups and can help selecting the most efficient policy tools.

This paper provides a thorough analysis of the distribution of income and the incidence of poverty among retirees in 2004, using the latest data available from the Bank of Italy's Survey of Household Income and Wealth (SHIW). The findings for 2004 are then compared with the results of Cannari e Franco (1990), which provided a snapshot of the well-being of Italian pensioners in 1987. The older paper used the same data source (SHIW) and referred to a period which is immediately prior to the start of the lengthy pension reform process. We also track the evolution of several poverty indicators both for pensioners' households and for the population at large over the whole 1987-2004 time span.

While other studies have focused on the well-being of the Italian elderly as such,[2] we examine the conditions of pensioners. As a matter of fact,

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[2]   Monographic sections specifically devoted to the study of poverty among the elderly can be found in Commissione d'indagine sulla povertà (1985) and Commissione

many Italian pensioners are relatively young (however, we also provide figures concerning older age brackets, independently of their main source of incomes).

The well-being of the Italian elderly has recently been examined by Baldini e Mazzaferro (2001) and Ministero del lavoro e delle politiche sociali (2005). Both papers use SHIW data. With respect to them, we use a different equivalence scale,[3] provide a more detailed demographic breakdown of our reference population, and supplement descriptive statistics with econometric evidence. In any case, these papers also point to a marked increase in the relative well-being of pensioners.

Our aim is to evaluate the extent to which the Italian social security system guarantees an adequate post-retirement income, and to highlight the effects of reforms on the living standard of pensioners. However, since the impact of the reforms introduced since 1992 is still partial and the labour market is undergoing large changes, the analysis of the current situation of pensioners does not allow to infer their future situation. Further work is required to examine these future developments.

Section 2 briefly surveys the pension reform process in Italy. Section 3 examines the methodological aspects of the empirical analysis. Section 4 examines the economic condition of pensioners and of the households they belong to. Section 5 evaluates the incidence of poverty among pensioners. Section 6 concludes and points to further research directions.

2) Social Security Reforms

The economic conditions of Italian pensioners in 2004 reflects the evolution of the pension system in the previous decades. Between the fifties and the early seventies, pension coverage considerably expanded and the generosity of benefits increased. These legislative changes, together with an increase in the average length of service at retirement and with a higher ratio of the elderly on the overall population, induced a fast increase in expenditures, from 5.0% of GDP in 1960, to 7.4% in 1970, to 10.2% in 1980 and to 13.8% in 1990 (Franco, 1993). As a result, the relative economic well-being

d'indagine sulla povertà e l'emarginazione (1996). See also Rovati (2007) and Berloffa and Villa (2007). In their reports both the Commissione di indagine per l'esclusione sociale and its successors assess poverty using official survey data on consumption. International comparisons are included in Dang *et. al.* (2006) and Disney and Whitehouse (2002). All find a significant improvement over time in the economic condition of the elderly.

[3]   They deflate family incomes by simply taking the square root of the number of components.

of the elderly improved fast. The poverty rate among the households with an older-then-65-years-old head of household (HH) significantly declined.[4]

In spite of its Bismarkian origins, in this period the Italian pension system has been extensively used to contain poverty among the elderly. Pensions played an important role as an all-encompassing welfare instrument (Fausto, 1978; Ferrera, 1984). This reflects the fact that Italy historically suffered from an underdeveloped unemployment-benefit scheme, and from the lack of universal welfare programs. Three main benefits were introduced in the pension system with a view to curb poverty. In 1952 a minimum guaranteed pension level was introduced for INPS (the National Social Insurance Institute) pensioners. In 1966 welfare disability pensions were introduced to support persons suffering a permanent work disability. In 1969 the "social pension" was introduced to provide subsistence living to poor persons over 65.[5] Moreover, in the 1960s and 1970s social insurance disability pensions were extensively used to support low income levels, especially in specific regions and sectors.

Social security reforms started in the summer of 1992, in the aftermath of an exchange-rate crisis, with a highly deteriorated public finances outlook. Three where the main challenges: curbing expenditure growth, reducing labour market distortions, correcting the perverse intra-generational redistributive effects of the system. Indeed, different groups of workers were awarded very different internal rates of return for their participation to social security (Gronchi and Aprile, 1998). The rules to calculate pension benefits at retirement favoured those with a steeper age-income profile.[6] Public sector employees and the self-employed clearly enjoyed more favourable rules.[7]

The 1992 reform entailed: (1) a gradual increase of the minimum age to be eligible for old-age pensions to 65 years for man and 60 years for women; (2) a gradual lengthening of the contribution period relevant for the calculation of benefits (at the end of the transition period, it would include the whole working career); (3) the requirement of a minimum of 20 years of service to be eligible for the old-age pension; (4) the introduction of uniform

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[4]   See Cannari and Franco (1990 and 1997). Data on the distribution of pension incomes are presented by Baldacci and Inglese (1999) and Peracchi (1999).

[5]   See Franco and Morcaldo (1989 and 1990). Monacelli (2007) focuses on the social pension and highlights its role in setting an implicit poverty line. She shows that the amount remained always below the poverty-line leaving a poverty gap open.

[6]   This reflects the fact that only the contributions of the last five years of one's career (the last month, in the case of public sector employees) entered the calculation.

[7]   Castellino (1996) and Peracchi and Rossi (1998). The latter show that internal rates of return for the self-employed were 2-to-3 times bigger than those for private sector workers.

rules for all kinds of workers; (5) benefit indexation to prices instead of wages. As the 1992 reform did not change the rules for the seniority pensions, its effectiveness was somewhat limited. The losers from the reform were mostly concentrated among those which did not have enough years of work to qualify for early retirement. They were typically poorer than the average worker.

The 1995 reform was especially aimed at addressing the perverse redistributive features of the system and at reducing social-security-induced labour market distortions. The reform strengthened the link between contributions and benefits, and transformed the system into a Notional Defined Contribution (NDC) scheme.[8] The reform is being phased-in very slowly: the new rules do not apply to those workers with at least 18 years of service in 1995, and apply pro-rata for those with less than 18 years of service. Only the new entrants are fully under the new rules.

Other less far-ranging reforms have been implemented in the following years. The 1998 budget speeded up the harmonization of the rules across different categories of workers, tightened the rules for early retirement, and temporarily suspended price indexation for high-income pensioners. In 2004 the minimum age requirements were raised both for seniority pensions (the change was however postponed until 2008) and for future NDC retirees (the threshold becomes 65 years for men; between 60 to 65 years for women). In 2007 the tightening of the requirement for seniority pensions was postponed.

As reforms are phased-in very slowly, their effects at present are far from full. This applies in particular to: (1) the introduction of the NDC rules; (2) the use in the benefit formula of all the contributions paid during a worker's career; (3) the shift from wage to price indexation.

According to Ragioneria Generale dello Stato (2006), pension expenditure over GDP would increase from 14.1% in 2005 to 14.2% in 2020 and 15.1% in 2040. In a context of pronounced ageing, the increase in the expenditure ratio would be contained by the expected reduction in average pension benefits in terms of per-capita GDP (from 16.8% in 2005, to 16.3% in 2020 and 13.1% in 2040). The ratio of pensioners to workers would instead rise from 83.9% in 2005 to 87.3% in 2020 and 115.4% in 2040.

As a result, without other countervailing reforms and/or the increase in supplementary pensions and non-pension incomes, economic conditions of tomorrow's retirees are deemed to be worse than today's. Their incomes will be more dependent on means-tested welfare programs (such as social

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[8]   The system remains on a pay-as-you-go basis; Notional Defined Contribution schemes are examined in depth in Holzmann and Palmer (2006).

pensions) which the 1995 reform established to keep outside the social security budget.

3) Definitions, criteria and measurement issues

The 2004 Bank of Italy survey concerns a representative sample of the Italian population, consisting of 20,581 individuals (8,012 households).[9] Retirees represent slightly more than a quarter of the whole sample. 32.2% of the people in the sample belongs to a household with a retired HH, while households with a retired HH are 42.3% of the total (Table 1).[10] 70.6% of retired HHs are older than 65.

The number of pensioners in 2004 estimated using SHIW data is around 13.2 millions[11], whereas official estimates based on administrative data are of about 16.6 millions (Istat, 2006).[12] This problem was also present to a similar extent in previous waves, and should not bias our comparisons across time.

We take into account that larger households can exploit economies of scale in housing and in the consumption of goods and services. To capture this effect, we deflate household resources by the number of equivalent members. This is computed on the basis of the equivalence scale used by Cannari and Franco (1990), which in turn was the one used by the Parliamentary Commission for the Study of Poverty (Commissione di indagine sulla povertà, 1985).[13] It is also used by Istat for its regular assessment of

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[9]   Among them, 13,341 earn some form of income, 5,728 receive pension benefits. Details about the interviews and data collection procedures are reported in Banca d'Italia (2006).

[10]   We use the survey definition of "pensioner", which basically counts as a pensioner someone for whom pension benefits are the main source of income. We define as HH the person with the highest income. Among the households with a retired HH, 35% are single-member households, 44.5% have two members, 13.1% have three members, and 7.4% have four or more. Among two-person households, the largest group (23.2% of the total of households with a retired HH) is that of married couples, in which both spouses earn some income; married couples with a single earner are 13.8% of the total; two-person households in which the second person is a child without income are 2.4% of the total.

[11]   The weighting method that we use throughout the paper to estimate population parameters is described in detail in Faiella and Gambacorta (2007).

[12]   The "Casellario centrale dei pensionati" (managed by INPS, the main social security agency in Italy) has data on pension benefits paid by all social security agencies. Each pensioner has on average 1.4 pensions; 46.8% of pensioners are male; 66.8% live on the Centre-North; 67.6% are older than 65.

[13]   The number of equivalent adults for households with 2 to 7 components are: 1.67, 2.23, 2.73, 3.18, 3.59, 4.01. The scale – also used in OECD (1976) – was constructed

relative poverty in Italy (Istat, 2007).[14] To check the robustness of our conclusions, we also use the modified OECD equivalence scale.[15]

Even controlling for family composition, other problems remain. First of all, for a given level of income and for a given household composition, well-being also depends on personal characteristics, such as health, education, and the amount of available leisure time.[16] Secondly, we ignore in-kind transfers, which in many countries are quite sizable (Commission of the European Communities, 2002; Smeeding, 2006; however, in the Italian case in-kind welfare programs are small and not specifically targeted towards the elderly). Thirdly, we do not take into account the flow of benefits stemming from the ownership of durable consumption goods and real assets (however, we do try to capture some of the effects of real-asset ownership by taking into account imputed rents[17]). Finally, we use a national poverty line and ignore differences in the cost of living, which is higher in the northern regions of the Country (on the other hand, we also neglect north-south differences in local public services provision).

As it is typical in poverty studies in rich countries, we endorse a relative concept of poverty. This is not incompatible with an "absolute" view of deprivation, as long as the minimum amount of resources which are necessary to avoid social exclusion rises with general prosperity (Sen, 1983 and 1987). In particular, consistently with the so-called international poverty standard, we define a two-person household as "poor" if and only if its net income is lower than per-capita net income[18], as measured by the Survey, and we calculate the poverty lines for the other kinds of households accord-

according to the Engel method (see Deaton, 1997 for details), which assumes that two households experience the same level of welfare if they have the same share of food expenditures on total expenditures.

[14]   ISTAT calculates poverty indices based on the distribution of consumption expenditure, whereas in this paper we use the distribution of net income. Both indicators have advantages and shortcomings (Deaton, 1997), and both are widely used.

[15]   It gives a unitary weight to the HH, 0.5 to other components older than 13 and 0.3 to each of the other members. We do not report the results of this exercise in the text as the main findings do not change.

[16]   These aspects are examined in Cer-Area (1989) and Frey (2003).

[17]   On the importance of home-ownership see Lyberaki and Tinios (2005).

[18]   Net income tracks disposable income more closely than gross income. The same choice was made by Cannari and Franco (1990), which in many ways represents our benchmark. As for the poverty line, in the literature both per-capita and median income are used as a benchmark. There are no compelling conceptual reasons to prefer one over the other. In several official EU publications, for example, the 60% of the median is chosen and, as a matter of fact, such value is close to 50% of per-capita income in most countries and in our dataset as well. Furthermore, our choice of per-capita income for calculating the poverty line allows us to compare our results with those in Cannari and Franco (1990).

ingly.[19] Finally, a person is considered poor if he or she lives in a poor household.[20]

The choice of a relative poverty line implies that in a context in which pensions are adjusted only to price increases and retirement periods are usually very long, a significant number of pensioners can gradually move to and below the poverty thresholds.

As pensions are frequently clustered near certain values (in particular, the amount of the legislated minimum pension benefit, and the amount of the social pension) small changes in the poverty line may have a big impact on poverty ratios. To tackle this problem we also consider two alternative poverty lines, set at 1.2 and 0.8 times per-capita net income, respectively.

4) The economic conditions of Italian pensioners

To examine the well-being of Italian pensioners, in this chapter we perform two exercises: first, we examine the economic condition of individual pensioners; second, we examine the situation of the households with a retired HH (we differentiate households according to their composition and the age of the HH).

The economic conditions of pensioners. – The average pension income for males is €13,100 (average earnings for male workers amount to €18,600). It rises with age up to the 61-to-65 years bracket (€14,900)[21], then diminishes steadily, to reach €11,400 for those which are older than 75 (Table 2). The upward-sloping part of the age-income profile is due to the fact that very young pensioners are typically survivors or disabled, whose pensions are less generous than the standard old-age or early retirement treatment. The downward-sloping part of the profile is due in part to price indexation, which makes older pensions relatively smaller, and also to the fact that very old pensioners typically had shorter contributory records.

The average pension income for females is €8,900. The age-income profile is similar to that of male retirees: the average amount increases up to the

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[19]   If one fixes the poverty line for a two-person household at a level PL(2), the poverty line for a n-person household is given by PL(n)=PL(2)*s(n)/s(2), where s(n) is the number of equivalent members of a family with n-members. The poverty line expressed in equivalent income is then the same for all kinds of families and is given by PL(n)/s(n)=PL(2)/s(2).

[20]   To ensure that incomes and the poverty threshold are fully consistent, we use the SHIW 2004 average income instead of national per capita income. The former definition is slightly less comprehensive than the latter.

[21]   Pensions are considered net of the personal income tax. Obviously if one used gross pension incomes differences would widen.

56-to-60-years group, then decreases. The slope of the profile along the downward-sloping branch is less pronounced than for man. This could be explained by a relatively greater number of minimum pensions - due to relatively short work careers - and by a relatively high number of survivors benefits.

The ratio of the average pension amount paid to men with an age between 61 and 65 and the amount paid to men older than 75 is 1.31 (it was 1.28 in 1987). The ratio of the average pension paid to women with an age between 56 and 60 to the pension paid to women which are older than 75 is 1.21 (1.23 in 1987).

The average pension treatment for males is 1.47 times the average pension amount for females (it was 1.37 in 1987). The gender gap is less pronounced in the Centre-North (1.25 times) than in the South (1.98 times). The gap is mainly due to the fact that survivors pensions, which are mainly concentrated among women, are relatively less generous, and to the fact that female workers have on average lower wages and shorter careers.

Male and female pensioners in the Centre-North receive respectively 24.9% and 19.8% more than those in the South (in 1987 it was 18.2% for men and 20.6% for women).

The group with the highest average benefits is that of male pensioners, living in the Centre-North, which have retired in relatively recent years. On average, they receive benefits which are in the range of 80% to 85% of the average earnings of male workers.

The reforms implemented from 1992 onwards do not seem to have dented the amount of new pensions. The average pensions paid to males and females in the 61-65 age range represent 90.7% and 71.4% of the average labour income of males and females respectively, as against 64.3% and 59.3% in 1987. The negative effect of the lengthening of the contribution period relevant for computing the benefits has been offset by the positive effect of the tightening of the age and contributory requirements. On the other hand, the shift to price indexation has reduced the amount paid to older pensioners.

Household conditions according to their composition. – In order to evaluate the overall economic situation of pensioners we expand the analysis in two directions: we consider non-pension income and at the same time we shift the focus from the individual to the household.

The average income for households with a retired HH is €26,400, while it is €36,400 for the other households (Table 3).[22] However, as the former have on average fewer members (1.9 against 3), the difference disappears

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[22]   Income in SHIW is net of personal income taxes and of imputed rents.

when looking at per-capita income; actually that of pensioners' households is slightly higher: €11,800 against €11,300. On the other hand, if we hold family composition constant, households with a retired HH typically show a lower net income.[23]

The North-South divide gets bigger if we consider per capita household income instead of individual pension benefits. Indeed income per capita in families headed by a retiree amounts to almost €14,000 in the North and to just €8,300 in the South. On the other hand, the gender-gap is not significant anymore (again this is due to the fact that male HH who are retired live in larger households).

All such ratios have markedly increased over time. For example, in 1987 the income of households with a retired HH was 50% of that of the other households in the case of single-person households and 59% in the case of couples with a single income earner without children. Overall, the ratio between net family income in households with a retired HH and the income in the rest of the sample has increased from 60% to 73%.[24] This reflects the fact that net incomes of households with a retired HH have increased much faster than that of the other households (50% against 25% in real terms between 1987 and 2004). This development reflects the dynamics of gross income. The improvement in the relative condition of pensioners would be even more pronounced if we looked at gross incomes.[25]

In 2004, 76.6% of households with a retired HH owned a house, against 64.7% of the other families; in 1987 the figures were 66.2% and 59.1%, respectively.

Household conditions according to the age of the HH. – Income conditions of households with a retired HH vary significantly with her/his age. Their overall income is highest when the HH is 56-to-60 years old (€29.900; Table 4). In per-capita terms, it is highest when the HH is 61-to-65 years old

[23] Their income is indeed 68% of that of the other households if we consider single-person households, 82% if we consider couples with a single income earner without children, 60% for couples without children in which both spouses earn some income, 81% for couples with two earners and children without income, 75% for single-parent families with children without income. There is no difference in income if there are children with earnings in the household.

[24] When interpreting such comparisons, one should keep in mind that pensioners need to spend comparatively less on many items which are needed for the working activity, such as travelling, formal clothing and nursing services (Hurd and Rohwegger, 2006). On the other side, they probably have higher health-related expenditures.

[25] One can have a preliminary indication of this development by considering that the tax rate for an individual (without dependent relatives) with an income equal to the average income of pensioners was 10.0% in 1987 and 15,9% in 2004. The tax rate for an individual (without dependent relatives) with an income equal to the average income of non-pensioners, was 18.3% in 1987 and 18.0% 2004.

(€14,400); it then decreases monotonically for older as well as for younger HH).[26] In the 1987 survey, the relationship between per-capita income and the age of the HH had the same inverted-U shape.[27]

Transfers (mainly public pension benefits) account for 63.6% of the overall income of households with a retired HH. Such amount can be decomposed as the number of pensions per household times the average pension amount. The former rises with the age of the HH until the 66-to-70-years bracket (where it reaches 1.4); after that age, it remains about constant (Table 6). Average pension benefits grow with age until the 61-to-65-years bracket and decline thereafter.

Incomes other than transfers represent 36.4% of total incomes; the most important sources are capital income (24.1%), labour income (9.8%) and income from self-employment (2.5%). The ratio of incomes other than transfers to overall income rises with the age of the HH up to the 51-to-55 years bracket (43.9%), and then declines to 29.3% for those older than 75. The negative slope is mainly due to the decrease in labour income. The relative importance of capital income initially tends to rise with age; at older ages, it does not show a clear pattern. Homeownership has a similar profile: it rises at first, and shows a maximum between 56 and 60 years at 87.8% (Table 4).

With respect to the 1987 survey there are significant differences: the average number of components per household decreases; the average age of the HH increases; the relative importance of transfers and of capital income rises, that of labour income and income from self-employment diminishes.

5) Poverty among pensioners

The elderly, the disabled and the survivors constitute groups of citizens with potentially very high risk of poverty. To assess the extent to which the Italian social security system limits such risk, we calculate and compare poverty indices, based on the distribution of "equivalized" income, for individuals and for households, with and without a retired HH. In this paper we do not try to assess the duration of poverty (transient versus chronic poverty).[28] However, when it comes to pensioners this measure is less relevant than for other groups of citizens.

Poverty at the individual level. – Poverty among pensioners is 8.1%, less than half than for non-pensioners, which is at 19.4% (Table 9). This is partly

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[26] For those 51-to-55 years old and for those older than 75, income per-capita is €12,000 and €12,200, respectively.

[27] However the highest per-capita income was recorded in the age bracket from 66 to 70 years (Table 5).

[28] This aspect is examined in Monacelli (2007) on the basis of SHIW panel data.

due to the fact that pensioners which are less well-off tend to live with other persons, exploiting household-level scale economies and intra-family transfers.[29] With respect to the 1987 survey, the condition of pensioners has improved, that of non pensioners has worsened (in that year, the poverty rate was 11.0% for the former, 13.4% for the latter).

The poverty rate is much lower for the pensioners that live in households in which the HH is not a pensioner (2.8%, as opposed to 9.1%). The same is true, but to a lesser extent, for the poverty gap, defined as the difference between the income of the poor family and the poverty line, expressed as a percentage of the latter, and averaged among poor families.[30] While the headcount ratio tracks the incidence of poverty, the aim of the poverty gap is to capture to some extent its intensity.

Poverty rates for pensioners differ markedly across regions: in the South the poverty rate is around 2.3 times the national figure (Table 10); the poverty gap is also worse in the South (22.6%, as against 12.4% in the Centre-North). However, in the South as well as in the Centre-North poverty is both less common and less intense among pensioners than among non pensioners. More generally, the elderly (65 or older) have a poverty rate which is lower than that of the other citizens (7.8% versus 18.8%, Table 11). They also have a lower poverty gap (20.6% versus 29.5%). Among the elderly, the poverty rate is relatively low for those in the 70-74 bracket (7.1%); it is higher for the 80-84 years old (9.3%).

Poverty among different groups of households. – The percentage of poor households among households with a retired HH is lower than in the rest of the sample (Table 7): 12.9% against 18.4%. The overall poverty rate increased from 13.0 per cent in 1987 to 16.8 in 2004.

The incidence of poverty among the first group of households is roughly unchanged with respect to 1987, while it has strongly increased for the other group (indeed, it was 10.7% in 1987). Such result is robust to different poverty lines. If we use a poverty line which is 1.2 times the baseline, the poverty rates for households with a retired HH is 21.2% against 26.2% in the

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[29] Individuals 65 or older living in a household with a HH 65 or older have a poverty rate of 9.7%; individuals 65 or older living in a household with a HH younger than 65 have a poverty rate of 2.3% (Table 11). Lyberaki and Tinios (2005) confirm the use of cohabitation as a social protection mechanism in Southern Europe and note that the propensity to live with one's children is associated with poverty status.

[30] The poverty gap is 18.3% for pensioners living in households in which the HH is not a pensioner, 20% for those living in the other households. The sum of pension and labour income for pensioners who live in poor households with a retired HH is €6,800 on average; the average for the other poor pensioners is €4,400. The difference remains significant even if one splits equally pension and labour incomes of the household among its members (€4.000 vs €3.200).

rest of the sample. If we use a poverty line which is 0.8 times the baseline, these figures become 6.4% and 10.5%, respectively.

If we replace the median to the average income in defining the poverty line, the poverty rates for the two groups of households are significantly lower (6.1% and 9.9%, respectively) but the difference remains.

The incidence of poverty among households with a retired HH varies in relation to family composition: it is very small for two income-earners couples both if they have children which are income earners (1.1%) and if they do not have children (2.5%). It is much bigger for two income-earners couples with children without income (24.3%) and for one income-earner couples with no children (15.3%). It is the biggest for single-parent households with children without income (57.7%) and for one-income-earner couples with children without income (31.3%).

For most family compositions (in particular for single-person households, for couples with no children, and for single-parent households) the incidence of poverty among households with a retired HH is higher than the incidence among the other households. However, the former are relatively less present among those kinds of households with the highest poverty rate. In particular, just a few of them are households in which there are children without incomes.

The incidence of poverty among households with a retired HH varies also in relation to the age and gender of the HH (Table 8). Incidence is highest when the HH is younger than 50, then it gradually declines, and reaches its minimum in the age bracket between 61 and 65 years, then it goes up again. Poverty incidence is 11.4% if the HH is a man and 16.4% if the HH is a woman. This is mainly due to higher pension benefits for male pensioners, and also to the fact that households with a HH which is a male pensioner typically can count on more than one income earner. While poverty risk among households in which the HH is a male pensioner is lower than for households in which the HH is a male non-pensioner (11.4% against 19.2%), the contrary is true among households with a female HH (16.4% against 14.8%). The poverty rate for households in which the HH is older than 65 is lower than the average (12.8 per cent against 16.8).[31]

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[31]   According to Istat (2006), the overall poverty rate in 2004 was 11.7 per cent; that for households headed by a person older than 65 was 15.1 per cent. Istat (2007) indicates for 2006 a decrease in both poverty rates: to 11.1 per cent for the overall population and to 12.2 per cent for the households with a retired HH. Differences with respect to our results are mainly due to the fact that, as we remarked above (footnote 14), in this paper we use the distribution of net income whereas Istat calculates poverty ratios using the distribution of consumption expenditure taken from Istat consumption survey. Furthermore, discrepancies are clearly associated with differences in the definitions adopted and in the survey design and its implementation. The fact that the two meth-

In the Centre-North, households with a retired HH and those with a non-retired HH display a poverty risk of 5.0% and 7.6%, respectively (Table 7). In the South, those indices are 25.8% and 38.5%, respectively. The average net income of households with a retired HH in the North is 46.0% higher than in the South (the difference is even bigger for incomes gross of taxes).

The large differences in the poverty ratios across the country reflects the use of a national poverty line in a context in which income levels are very different. Not surprisingly, if we calculate two different poverty lines for the Centre-North and the South, the differences in poverty rates become much smaller.[32] Among households with a retired HH, the poverty rate would be 7.8% in the Centre-North and 8.4% in the South; for the other households it would be 12.8% and 14.8%, respectively. Of course, this approach implicitly disregards any redistributive concern across regions with different economic conditions. Ideally, one should differentiate the poverty line to capture only regional differences in the cost of living.[33]

odologies produce different results was already acknowledged by Commissione d'indagine sull'esclusione sociale (2005). In particular, the Commission noticed that the poverty rates are in general higher when one uses the Bank of Italy data on household incomes. Moreover, when using data on incomes the poverty rate of the elderly tends to be higher than the one relative to the whole population, while the opposite applies when using data on consumption expenditure (see Table 6.1 in the above quoted report of the Commission). Both income and consumption are widely used to assess poverty and the choice between them has theoretical and practical reasons. Consumption is a good candidate to study absolute poverty given that it can be used to define the minimum expense necessary to fulfil primary needs; income is instead widely used to measure relative poverty since it can give a more general idea of the well being of individuals (looking at the resources at their disposals). Furthermore, consumption expenditure has the advantage of being more stable along the life cycle, given that income varies in correspondence with life events such as job losses, the exit from the labour market and retirement.

[32] One can use region-specific poverty lines not only to control for differences in prices, but also for "normative" reasons, namely to account for the fact that people feel member of their regional community more than they do of their national community. This point, however, is usually made for between-nation comparisons, as in Atkinson (1998) and Brandolini (2007).

[33] However, this also raises several problems. First, price differences within macro-regions are likely to be quite big (for example between urban and rural areas). Second, data concerning regional price levels may not be available. For Italy, attempts in this direction have been made by Campiglio (1996) and Declich and Polin (2005): the latter paper measures prices in a wider group of cities, but is concerned with a narrow basket of goods. All in all, it seems that the cost of living in southern cities is about 25% less than in northern cities; the price of housing is one of the most important determinants of such differences. An hybrid approach is advocated by Mogstad *et al*. (2007), which construct several poverty lines based on territorial as well as on price data.

The average poverty gap for families with a retired HH is 23.9% (Table 7). In particular, the poverty gap is relatively high if the retired HH is the only income-earner in a couple without children, or with children without incomes[34]: the poverty gap for those families ranges between 20.1% and 39%. Single pensioners have a 10.8% poverty gap[35]: such a small gap can be partly explained by the circumstance that the minimum pension granted by Social Security is below but close to the poverty line.[36] The poverty gap among the households in which the HH is not a pensioner is on average much higher (29.9%).[37]

An econometric analysis. – In this section we try to assess to what extent our main findings are robust to a more formal econometric approach. As a first exercise, we estimate a logit model in which the probability of being poor is regressed on several household characteristics (Table 12a): it turns out that the probability of being poor is significantly lower if the HH is a pensioner, if there are no children in the family, and if the family lives in the north. Neither an older-than-64 HH nor a female HH significantly affect the risk of poverty. These results are robust to different model specifications (we also estimated a probit model) and to different estimation methods (in particular, results do not change if we use the survey weights; see Table 12b[38]). To get a sense of the magnitude of these effects, one can look at the estimated odd-ratios: it turns out that, *ceteris paribus*, living with a retired HH reduces by 30% the probability of being poor; living in a couple with children increases such probability by 140% if the household has a spouse, and by 350% if she/he is a single parent; living in the south increases the probability of being poor by 610%.

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[34] Among these household typology, 30.2% of the households are poor and have a retired HH.

[35] These households make up for the 12.3% of the households which are poor and have a retired HH.

[36] For a single person the poverty line is at €6,851 (remember that we consider net income). In 2004 the social pension, granted to those older than 65 and that pass a means-test, granted a yearly income net of taxes of €4,800. If the person is older than 70 (older than 65 if the candidate has contributed to social security for a sufficient number of years) the social pension is supplemented by a second provision (so called "integrazione al minimo").

[37] By way of example, the poverty gap is 34.7% for a couple without children and with a single, non-pensioner, income earner, while the same kind of household, if the single income-earner is a pensioner, has a poverty gap of 20.1%. The poverty gap for single-member households is 38.7% if the individual is not a pensioner, 10.8% otherwise.

[38] In the un-weighted case, the only difference is that the gender of the HH is significant (being in a household with a female HH somewhat decreases the poverty risk). Using weights in regressions on survey data has both pros and cons (a thorough discussion can be found in Deaton, 1997 and Wooldrige, 2002).

A second group of regressions focuses on the sub-sample of individuals living with a retired HH (Table 13). Among them, those who live in a household headed by a single adult with children have a significantly higher risk of poverty; the same is true for those living in the south, and for those which have a young HH (younger than 45-years-old).[39] Looking at the estimated odd-ratios for this subsample, we find that, *ceteris paribus*, living in a single-parent household increases the probability of being poor by 370%; living in the south rises it by 480%.[40] We performed the same exercise on the 1987 dataset (Tables 14 and 15).[41] The most interesting difference with respect to 2004 is that in 1987 the probability of being poor was higher if the HH was retired.

While these results must be taken with a grain of salt (the very parsimonious specifications that we bring to the data surely lack several variables that are important to explain poverty), our main points seem to be confirmed. First, even controlling for several intervening variables, pensioners are more protected from poverty than non-pensioners. Second, there are significant differences in poverty risks among pensioners: the presence of children, the region to which the family belong, as well as other characteristic of the household matter a lot.

The evolution of poverty in the period 1987-2004. – In this section we look more closely to the dynamics of poverty, using the data of all the SHIW waves between 1987 and 2004. As we have noted above, while at the beginning of the sample period pensioners' households were facing an higher-than-average risk of poverty, as of 2004 the opposite was true. Looking at the different SHIW waves it becomes apparent that the turning point took place in the early nineties (Figure 1).[42]

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[39] The dummy which is equal to one if the HH has both a spouse and children, as well as the gender dummy (which is equal to 1 if the HH is a woman), are only significant in the un-weighted estimation.

[40] The results are similar to those obtained by estimating a probit model.

[41] We do not report results of un-weighted estimates as they are similar to the baseline ones.

[42] A jump in the overall poverty rates among the working-age population in the time span between the mid-eighties and the mid-nineties has been recorded in most OECD countries (Forster and Mira d'Ercole, 2005).

The improvement of living standards of pensioners' households with respect to the other households is also apparent if we consider the overall poverty gap for the two groups (Figure 2a). In 1987 the gap for the two subgroups was roughly the same: 3.6% for pensioners' households and 3.7% for the rest of the households (note that we consider here the poverty gap as averaged over the entire reference population[43]). In 2004 the poverty gap of the first subgroup was lower than in 1987 (3.1%) while that of the second subgroup was higher (5.5%). Similarly to the poverty ratio, the poverty gap for households headed by a non pensioner jumped between 1991 and 1993, then continued to increase to reach 6.7% in 1998. Interestingly, there is some sign of improvement after this date.

The outlook does not change very much if we consider another index of poverty, i.e. a version of the so-called Forster-Greer-Thorbecke index (FGT2)[44]. As with the poverty gap, this index can be seen as a weighted sum of the households' poverty gaps. The difference is that the weights are not equal for all households: instead, in the summation the gaps of the very poor households have bigger weights. When it comes to our data, the post-1998 recovery in the economic situation of the poor households in which the HH is not a pensioner seems more pronounced if one looks at the FGT2 index than if one looks at the poverty gap. This points to the fact that most of the improvement has been enjoyed by the poorest poor (Figure 2b).

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[43]   In previous chapters we have defined the poverty gap as the average gap among the poor. Here we use the average gap among the whole reference population (non-poor have obviously a gap of 0). This is quite advisable when doing intertemporal comparisons involving several population subgroups: indeed the latter measure does not satisfy some desiderable monotonicity properties (for example, if one of the richest among the poor gets out of poverty, the index may well increase); besides it is not decomposable among subgroups (see the next footnote). It is easy to show that the latter measure can be obtained as the product of the former times the headcount ratio:

$$\frac{\sum_i gap(i)}{Population} = \frac{\sum_i gap(i)}{\#Poor} \frac{\#Poor}{Population}.$$

[44]   Foster-Greer-Thoerbeke indices are calculated as

$$\frac{\sum_i gap(i)^a}{Population}$$

where a is greater than or equal to 0 (if a=0 one has the headcount ratio, with a=1 one has the poverty gap). The poverty indices which are used more frequently in applied work belong to two main families: the family of Sen indices, which have the nice property to be sensitive to inequality among the poor, and the Foster-Shorrocks indices, which have the property of being decomposable among population subgroups. The poverty ratio and the poverty gap (averaged over the whole population) belong to the second family but not to the first. Foster-Greer-Thoerbeke indices with a>1 share both set of properties. In our calculation we set a=2 (for references on poverty indices a classic reference is Sen, 1997).

Policy action to reduce poverty among pensioners. – All in all, the effectiveness of public pensions in reducing the poverty risk is quite high: the first and foremost sign of such effectiveness is that the poverty rate and the poverty gap among pensioners are lower than among non pensioners. The amount of resources which would be needed to lift all the poor pensioners out of poverty is equal to 1.6% of pension expenditure as recorded in the SHIW (about €2.4 billions).[45] This would imply targeting the additional funds to each pensioners on the basis of his/her poverty gap.

Obviously, a flat increase in the amount paid to some groups of pensioners would not be as effective. As an example, we consider an additional transfer of €300 per year, to be given only to pensioners 64 and older with a net income of less than €7,000.[46] Those eligible for the program are some 3,150,000 subjects; the overall cost would be of €0,95 billions (0.6% of the pension expenditure according to survey data). As a result, the overall poverty rate among the households with a retired HH would drop from 12.9% to 12.0%. The corresponding poverty gap would be virtually unchanged.[47]

The effectiveness of the Italian social security system in protecting from the risk of poverty largely depends on the large amount of expenditure. It may be interesting to assess to what extent pensions are targeted toward those who are most in need. A very rough indicator is given by the fraction of pension expenditure that is allocated to households below the poverty line. In our sample, such fraction is just 4.9% (it was 5.1% in 1987).[48]

One can also look at the widely used "vertical expenditure efficiency" index (first developed in Beckerman, 1979): it is obtained by identifying those households that would be poor without pension benefits, and then calculating what fraction of pension expenditure goes to these households. In our sample, it is equal to 52.3% (it was 60.6% in 1987).

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[45] The estimate of 2004 pension outlays from our sample is lower than that recorded by the national accounts (it amounts to 10.9% of GDP, instead of 15%): this is due to the fact that in our sample pensions are reported net of taxes and pensioners are under-represented.

[46] The scheme recently announced by the Italian government is similar, but it is not explicitly targeted to reducing the poverty rate. For instance, it also aims at increasing the purchasing power of the pensioners which have longer contributory records.

[47] Actually, it rises slightly from 23.9% to 24.5%: this counterintuitive effect is due to the non-monotonic properties of the poverty gap (as some households formerly poor are lifted from poverty, the average poverty gap among the others might well increase). If one uses a version of the index averaged over the whole population, this strange effect disappears.

[48] Monacelli (2007) examines the role of the "social pension" in curbing poverty among the elderly. She shows that in about 25% of the cases the social pension takes the household out of poverty, in about 10% of the cases it fails to do so, in about 60% of the cases it is paid to individuals who do not live in a poor household.

While the former indicator is likely to underestimate the extent of targeting, the latter is certainly an upper bound: indeed, it overestimates the amount of pre-transfer poor as it does not take into account the behavioural responses of individuals (which in the absence of pensions would have saved more). Overall, this figures reaffirm the low targeting efficiency of the Italian pension system in terms of poverty control (Boeri and Perotti, 2002).[49]

7) Conclusions and policy issues

The evidence included in this paper indicates that the relative economic position of Italian pensioners has significantly improved over recent decades. This is reflected in a poverty risk of households with a retired HH which is significantly lower than that of the other households. The decline in the poverty rate among pensioners from 1987 to 2004 contrasts with the sharp increase among the other citizens.

Italian pensioners seem to fare relatively well also in a comparative perspective.[50] According to Eurostat (2004), while the Italian overall poverty rate stands 4 percentage points above the EU average, the poverty rate for the retired is 4 points below the EU average (Table 16).[51] This reflects the large share of social spending devoted in Italy to pensions and the lack of a universal income support scheme for the non-elderly.[52]

Our results suggest that the impact of reforms on pensioners' living standards has so far been offset by countervailing factors. Three points are worth mentioning.

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[49] Förster and Mira d'Ercole (2005) and Dang (2006) show that the poverty risk of pensioners does not primarily depend on the size of public spending on old-age pensions, rather it depends on specific features, such as the presence of basic or minimum pensions.

[50] It should be kept in mind that cross country comparisons of incomes and poverty are notoriously questionable (Atkinson, 1998, and Brandolini, 2007),

[51] The figures refer to the 2001 wave of the European Community Household Panel (ECHP), a EU-wide survey managed by Eurostat. They are based on a slightly different poverty line: 60% of the median, instead of 50% of the average income (in the case of Italy, these two values are close to each other). They are also based on a different equivalence scale (the so-called modified OECD scale). Unfortunately, after the 2001 wave the ECHP has been discontinued. However, poverty rates for the different groups of households should be released soon by Eurostat. Such measures are indeed part of the so-called Laeken indicators meant to capture the risks of poverty and social exclusion in the EU population (Atkinson *et al.* 2004).

[52] Commissione per l'analisi delle compatibilità macroeconomiche della spesa sociale (1997).

First, in the period under consideration growth in real wages was relatively low (slightly less than 1.0 per cent per year on average). Therefore, the 1992 change in the indexation of post-retirement benefit from wages to prices did not harm very much the relative economic condition of pensioners. Second, the increase in the age and contributory record at retirement for old-age and seniority pensions increased the average amount paid to new pensioners.[53] One can see that in the growing share of seniority and old-age pensions and in the decline in the share of disability pensions. Third, the deterioration of economic conditions among some large groups of non-pensioners influenced the results. In particular, the increase in the poverty rate among workers makes the relative condition of pensioners appear rather favourable. Indeed, households headed by a person in working conditions represent a big share of all the poor households both in 1987 (77.4 per cent) and in 2004 (78.4 per cent). Among them the poverty ratio increased from 12.0 per cent in 1987 to 18.4 per cent in 2004; in particular, the percentage of poor households among those headed by young workers (i.e. those aged less than 41) rose from 14.1 per cent to 22.4 per cent.[54]

In the 1990s the pension debate in Italy mainly focused on the budgetary risks posed by high and rising pension expenditures and on labour market distortions. The problems of the re-distributive properties of the public pension system, and of its adequacy in preventing poverty and social exclusion, received comparatively less attention. In recent years, both the issue of the pension expenditure control and the issue of the adequacy of pensions have drawn large attention. One can see that in the measures addressed to the two purposes, such as the further tightening of eligibility requirements introduced in 2004 and the increase of some categories of pensions decided in 2001 and 2007.

The paper shows that there is indeed a need to move further along the two directions: while many pensioners are relatively young and enjoy relatively good incomes, many other pensioners are in problematic economic conditions. The paper shows that the economic conditions of pensioners vary a lot with age, gender, region and family characteristics. The incidence of poverty is particularly high for one income-earner households in which a retired HH lives with children and/or a spouse; for households with a retired HH which is relatively young or relatively old; for female pensioners and pensioners living in the South.

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[53]   The average education level among pensioners in 2004 is much higher than in 1989: 17 per cent of pensioners have in 2004 at least secondary school degree as opposed to only 11 per cent in 1989 (the 1987 figures for educational attainment are available only for the HH).

[54]   A detailed analysis of the diffusion of poverty among the non-pensioners is outside the scope of this paper.

This points to the need to examine policies which may allow to support the pensioners in difficult economic conditions without jeopardizing financial sustainability. In the future the need for such policies will be further increased by the impact of pension reforms and labour market developments. In the long run, the changes in the rules for computing the new pensions will gradually translate into a marked reduction of the average pension with respect to per-capita GDP (Ragioneria Generale dello Stato, 2006).

The changes in the relative economic condition of pensioners and non-pensioners that we have highlighted in the paper point to relevant issues in terms of intergenerational equity. Many of those who were among non-pensioners in 1987 were among the 2004 pensioners: these cohorts were relatively better-off with respect to the other citizens both in 1987 and in 2004.

On the contrary, younger cohorts, which are now in the labour force, are the most affected by the pension reforms, and are also affected by the changes taking place in the labour market. In a context of increased earnings inequality (Boeri and Brandolini, 2005), these generations are experiencing a reduction in entry wages (Rosolia and Torrini, 2007) and in average job tenure. It is likely that the joint impact of pension reforms and labour market changes on the lifetime welfare of younger cohorts will soon become a crucial social and political issue.

From a normative point of view, it is important not to interpret our results as a *post-mortem* praise of the pre-1992 framework. First, protecting against the risk of poverty is not the only (and not even the main) goal of the Italian pension system. Second, the old system had several questionable redistributive features. Moreover, it was also financially unsustainable and it induced significant distortions on the labour market (Franco, 2002). Therefore, a reform of the pre-1992 framework was badly needed. But the reform can be successful only if it does not raise large social problems.

Looking at the future, the policy indications stemming from the analysis of the current economic situation of Italian pensioners and its likely evolution seem to us rather straightforward: one should raise the average effective retirement age, which is now relatively low, and use the public resources made available to supplement the pensions and the welfare benefits paid to the oldest old and the other groups of retirees with a high poverty risk. The scope of such an operation is quite large: about 30% of pension spending is now allocated to individuals who are younger than 65.

A quick development of the funded pension pillar would also help. In particular, it is important that institutional investors provide cheap, easy-to-understand, and relatively safe financial products, which can be attractive for low-wage workers.

Some solutions can be implemented within the social insurance pension scheme. In order to increase the effective retirement age, it would be advisable to fix a minimum retirement age higher than that introduced in 1995 (57 years) and higher than that now foreseen for women (60 years); one could also increase the minimum level of pension benefits which allows for early retirement under the system (which is presently set at 1.2 times the welfare pension). At the same time, one can consider introducing partial indexation of pensions to increases in real wages compensated by a reduction in the replacement rate at retirement (the overall stock of implicit pension debt would be unchanged).

One can also consider increasing the vertical redistribution within the social insurance scheme: the defined-contribution framework introduced in 1995 could also cover the disability risk and the risk that the worker dies leaving a spouse and children. This would require allocating a part of the contributions to supplementing disability and survivors pensions. This solution would be consistent with the past practise of considering these supplements as part of social insurance. It would imply reducing the contributions allocated to old-age pensions, which would further point to the need to increase retirement age.

Some solutions can only be implemented in the non-contributory, means-tested pillar of the pension system. This may require merging and reforming the schemes currently targeted to poor retirees. The minimum benefit guarantee should be updated automatically, in order to follow the dynamics of the poverty line. Of course, increasing the flat rate component of the system distorts incentives: it creates poverty traps due to high marginal tax rates around the income level at which means-tested benefits phase-out. Moreover, as indicated by the simple policy exercise included in the previous section, the pension system is not the most efficient tool to pinpoint the most needy households.

To improve the economic condition of poor households, especially those with a large number of components, changes to the pension system should be accompanied by changes to other features of the tax-benefit system. Policy action aimed at tackling poverty among pensioners should obviously be part of a more general effort to curb poverty among all citizens. This could imply reconsidering the structure of family allowances and their eligibility conditions.[55] One can also consider substituting tax credits with a system of

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[55] This would imply rebalancing social protection expenditure towards non-pension benefits which are much below the European average. According to Eurostat (2007), in 2004 the old-age and survivors functions represented 61.3% of Italian social benefits (15.4% of GDP) as against 45.7% in EU15 countries (12.2% of GDP); spending for family, unemployment and housing benefits represented in Italy 6.7% of social benefits (1.7% of GDP) as against 17.9% in EU15 countries (4.8% of GDP).

means-tested subsidies (or a means-tested negative tax), and putting them together with family allowances in a unique instrument to be applied also to the self-employed.[56]

While this paper focuses on the economic conditions of pensioners, the size of poverty among non-pensioners clearly indicate that there is a need to modify the allocation of social spending. A greater welfare support to individuals and households in poverty necessarily requires gradually curbing the resources now allocated to relatively young pensioners.[57]

The large differences in the poverty ratios across the country raises the issue of introducing different poverty thresholds. These could take into consideration differences into the cost of living at the regional level.

The analysis of the current situation of pensioners does not allow to infer their future situation. This points to the need to develop models which would allow to evaluate the overall future standard of living of the elderly retired. In particular, they should specify the public pensions paid to various groups of citizens according to age, sex, place of residence and family status. The data on public pensions should be supplemented by those on private pension plans and other incomes to produce an assessment of the overall economic situation of retirees.[58] Obviously, public pension programmes interact with public action in other areas of social protection. A reduction in public retirement provisions not offset by an increase in other incomes could trigger stronger demand for action and also for certain types of health care services. Only if these aspects are taken into account can one truly judge the social sustainability of social security rules or reforms.

[56] Of course, the shift of focus from individuals to family (or households) would require some thoughts on which definition of income to use and the inclusion of self-employed would necessitate to address the problem of tax evasion.

[57] Along these lines see Commissione per l'analisi delle compatibilità macroeconomiche della spesa sociale (1987) and Boeri and Perotti (2002).

[58] See, for instance, Ministry of Economic Affairs of Denmark (2000) and IFS (2007).

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Tab. 1

NUMBER OF HOUSEHOLDS BY THE HH WORK STATUS

	Retired	**Non-retired**
By age class		
Up to 50	41	3,201
51 – 65	955	1,286
65 and above	2,396	133
Total	3,392	4,620
By household composition		
1 component	1,188	697
2 components	1,511	911
3 components	443	1,232
4 components	188	1,296
5 components	51	373
6 components	7	90
7 components	1	13
8 components	2	6
9 components	1	2
Total	3,392	4,620

Tab. 2

PENSION INCOME BY SEX AND GEOGRAPHIC AREA

Age	Pension income in 1987 (in 2004 euro)									Pension income in 2004 (in 2004 euro)								
	North - Center			South – Islands			Italy			North - Center			South - Islands			Italy		
	M	F	M-F	M	F	M-F	M	F	M-F	M	F	M-F	M	F	M-F	M	F	M-F
Up to 40	5,408	4,539	4,732	6,084	6,084	6,084	5,698	5,119	5,312	6,256	5,529	5,982	5,825	5,608	5,684	6,099	5,580	5,831
41 – 50	7,436	8,306	7,919	6,664	8,209	7,533	7,147	8,209	7,823	9,534	9,286	9,376	7,794	6,228	7,303	8,254	7,987	8,136
51 – 55	10,624	7,726	9,078	9,078	7,340	8,016	10,141	7,630	8,692	14,853	10,726	13,243	12,341	7,194	10,657	14,127	9,892	12,547
5 6 – 6 0	11,879	7,823	9,658	8,789	5,891	7,050	10,913	7,147	8,885	15,170	10,793	13,666	13,115	9,730	11,936	14,661	10,526	13,235
61 – 65	11,203	7,630	9,078	9,368	6,181	7,823	10,527	7,243	8,692	15,560	9,692	12,730	12,766	8,455	10,739	14,893	9,398	12,245
66 – 70	10,624	7,533	9,175	8,595	5,988	7,050	10,044	6,954	8,499	14,686	9,096	11,994	11,342	7,844	9,774	13,605	8,727	11,306
71 – 7 5	9,368	7,147	8,209	8,402	6,181	7,243	9,078	6,857	7,919	13,362	9,234	11,381	10,441	7,723	9,125	12,319	8,689	10,571
above 75	8,306	6,857	7,436	7,823	5,891	6,664	8,209	6,567	7,243	11,858	9,248	10,276	10,596	7,752	8,876	11,404	8,710	9,773
Total	**10,044**	**7,340**	**8,595**	**8,499**	**6,084**	**7,147**	**9,561**	**6,954**	**8,113**	**13,965**	**9,424**	**11,705**	**11,178**	**7,866**	**9,524**	**13,072**	**8,922**	**11,005**

Tab. 3

ECONOMIC STATUS OF HOUSEHOLDS WITH RETIRED AND NON-RETIRED HH BY TYPE AND GEOGRAPHIC AREA

	Net family income in 1987 (1) (in 2004 euro)			Net family income in 2004 (1) (in 2004 euro)			Home ownership in 1987 (percentages)		Home ownership in 2004 (percentages)	
	Retired HH (A)	Non-retired HH (B)	A/B	Retired HH (A)	Non-retired HH (B)	C/D	Retired HH (A)	Non-retired HH (B)	Retired HH (A)	Non-retired HH (B)
Single person	9,284	18,750	0.50	15,493	22,806	0.68	55.5	32.0	67.7	48.2
One-earner couples without children	13,116	22,213	0.59	21,669	26,468	0.82	72.2	50.0	81.9	52.2
One-earner couples with non-earning children	16,507	22,739	0.73	22,983	23,416	0.98	57.4	56.8	78.3	53.7
One-earner couples with earning children	31,706	41,861	0.76	34,329	38,130	0.90	71.8	63.0	84.5	72.9
Two-earner couples without children	17,743	34,541	0.51	26,403	43,840	0.60	72.3	50.0	83.5	71.2
Two-earner couples with non-earning children	24,474	35,972	0.68	31,627	39,078	0.81	75.5	63.0	93.7	73.3
Two-earner couples with earning children	37,711	45,371	0.83	44,551	49,867	0.89	74.6	70.0	90.6	87.0
Single parent households with non-earning children	11,768	18,932	0.62	16,167	21,642	0.75	65.7	47.5	70.2	59.4
Single parent households with earning children	23,015	34,083	0.68	34,661	33,136	1.05	68.9	58.9	62.3	56.1
Total	**17,541**	**29,131**	**0.60**	**26,428**	**36,441**	**0.73**	**66.2**	**59.1**	**76.6**	**64.7**
North and center	18,815	32,305	0.58	29,585	40,270	0.73	64.6	60.5	77.7	66.2
South and islands	14,981	22,408	0.67	20,270	25,352	0.80	69.6	56.1	74.6	61.2

(1) Net of inputed rents

Tab. 4

ECONOMIC STATUS OF HOUSEHOLDS (BY AGE AND WORK STATUS OF THE HH)

	Net family income in 1987 (1) (in 2004 euro)		Net family income in 2004 (1) (in 2004 euro)		Home ownership in 1987 (percentages)		Home ownership in 2004 (percentages)	
	Retired HH	**Non-retired HH**	**Retired HH**	**Non-retired HH**	**Retired HH**	**Non-retired HH**	**Retired HH**	**Non-retired HH**
Up to 30	-	21,199	-	28,832	-	31.0	-	53.0
31 – 40	-	27,426	-	30,309	-	48.2	-	58.9
41 – 50	20,917	29,077	18,162	34,095	55.1	66.0	52.0	66.2
51 – 55	22,486	32,726	32,661	38,625	59.5	72.2	71.9	73.1
56 – 60	20,730	34,696	29,860	40,125	74.4	74.3	87.8	79.8
61 – 65	18,487	38,082	28,920	38,208	67.6	76.7	80.5	76.6
66 – 70	19,734	32,634	24,411	26,692	72.7	75.0	79.6	65.5
71 – 75	15,506	-	22,110	-	65.6	-	74.6	-
above 75	12,848	-	17,444	-	57.1	-	72.9	-

(1) Excluding imputed rents.

Tab. 5

PER-CAPITA INCOME FOR HOUSEHOLDS WITH RETIRED HH

Age class of the HH	1987		2004	
	Per-capita income (1)	Per-capita income adjusted for economies of scale (1)(2)	Per-capita income (3)	Per-capita income adjusted for economies of scale (2)(3)
51 – 55	89.8	95.7	83.1	98.0
56 – 60	87.7	92.4	83.9	87.7
61 – 65	92.4	92.9	100.0	100.0
66 – 70	100.0	100.0	95.8	94.4
71 – 75	90.2	87.1	90.8	88.4
Above 75	86.2	80.2	84.6	77.8

(1) Per-capita income of individuals in households with a HH aged between 67 and 70 years = 100. – (2) Carbonaro's equivalence scale (cfr. par. 2). – (3) Per-capita income of individuals in households with a HH aged between 61 and 65 years = 100.

Tab. 6

COMPOSITION AND INCOME OF HOUSEHOLDS WITH A RETIRED HEAD IN 1987
(in 2004 euro)

Age class of the HH	Weight (percentages)	Average number of components	Average number of pension treatments	Income from transfers	Employed labour income	Self-employed labour income	Capital income (1)
Up to 40	1.1	3.4	1.1	5,436	9,274	3,515	428
41 – 50	2.3	3.0	1.2	7,435	7,058	5,222	1,203
51 – 55	4.5	3.0	1.3	9,323	9,075	1,974	2,114
56 – 60	11.9	2.7	1.3	10,724	6,693	1,679	1,635
61 – 65	19.3	2.2	1.5	11,622	3,634	1,281	1,950
66 – 70	22.4	2.1	1.5	11,935	4,093	1,460	2,246
71 – 75	16.6	1.8	1.6	10,448	1,864	1,134	2,061
above 75	22.0	1.6	1.5	9,687	1,130	636	1,395
Total	**100.0**	**2.1**	**1.5**	**10,709**	3,645	**1,350**	**1,850**

COMPOSITION AND INCOME OF HOUSEHOLDS WITH A RETIRED HH IN 2004
(in 2004 euro)

Age class of the head of household	Weight (percentages)	Average number of components	Average number of pension treatments	Income from transfers	Employed labour income	Self-employed labour income	Capital income (1)
Up to 40	0.6	3.6	1.4	14,441	463	417	2,220
41 – 50	1.4	2.8	1.2	12,343	631	655	3,990
51 – 55	4.7	2.8	1.1	16,292	6,435	219	6,073
56 – 60	7.3	2.8	1.2	17,836	4,552	890	6,914
61 – 65	10.6	2.2	1.3	17,955	2,641	1,111	7,223
66 – 70	10.2	1.9	1.4	16,446	1,112	381	6,595
71 – 75	16.6	1.8	1.4	14,857	588	235	6,083
above 75	48.6	1.6	1.3	13,150	318	161	4,975
Total	**100.0**	**1.9**	**1.4**	**16,810**	**2,590**	**663**	**6,365**

(1) Excluding imputed rents.

Tab. 7

CHARACTERISTICS OF HOUSEHOLDS IN POVERTY CONDITION IN 1987

	Poverty rate (1)		Poverty gap		Distribution of the poverty rate (1)	
	Retired HH	Non-retired HH	Retired HH	Non-retired HH	Retired HH	Non-retired HH
Single person	14.7	6.0	10.6	81.2	33.9	2.6
One-earner couples without children	17.3	5.9	22.5	20.6	10.8	3.3
One-earner couples with non-earning children	47.2	21.7	26.3	22.3	19.2	73.0
One-earner couples with earning children	4.4	2.5	16.8	12.1	2.0	2.1
Two-earner couples without children	2.5	0.3	11.6	26.8	3.9	0.1
Two-earner couples with non-earning children	13.4	1.9	17.1	11.9	4.2	3.7
Two-earner couples with earning children	1.8	0.9	13.8	15.1	1.0	0.4
Single parent households with non-earning children	43.8	20.4	25.4	55.5	15.3	4.1
Single parent households with earning children	9.5	3.3	12.0	32.0	4.5	0.3
Total	**12.9**	**10.7**	**18.7**	**28.2**	**100.0**	**100.0**
North and Center	7.5	4.4	17.3	27.9	38.7	28.1
South and Islands	23.8	24.0	19.6	28.3	61.3	71.9

CHARACTERISTICS OF HOUSEHOLDS IN POVERTY CONDITION IN 2004

	Poverty rate (1)		Poverty gap		Distribution of the poverty rate (1)	
	Retired HH	Non-retired HH	Retired HH	Non-retired HH	Retired HH	Non-retired HH
Single person	8.4	4.7	10.8	38.7	12.3	1.5
One-earner couples without children	15.3	14.2	20.1	34.7	15.1	2.0
One-earner couples with non-earning children	31.3	47.1	39.0	28.3	14.0	48.5
One-earner couples with earning children	6.4	14.1	8.1	24.1	3.6	6.2
Two-earner couples without children	2.5	0.7	7.1	16.0	4.5	0.2
Two-earner couples with non-earning children	24.3	14.7	22.1	32.2	11.2	26.3
Two-earner couples with earning children	1.1	3.3	26.5	38.1	0.8	2.2
Single parent households with non-earning children	57.7	34.2	35.4	31.7	16.2	5.7
Single parent households with earning children	20.7	11.9	18.2	32.9	6.7	2.9
Total	**12.9**	**18.4**	**23.9**	**29.9**	**100.0**	**100.0**
North and Center	5.0	7.6	12.5	24.3	27.3	29.0
South and Islands	25.8	38.5	27.5	32.0	72.7	71.0

(1) Percentages; Carbonaro's equivalence scale (cfr. par. 2); poverty line calculated on the basis of per-capita average income.

Tab. 8

CHARACTERISTICS OF HOUSEHOLDS IN POVERTY CONDITION IN 2004

Age of the head of the household	1987				2004			
	Poverty rate		Poverty gap		Poverty rate		Poverty gap	
	Retired head of household	Non-retired head of household	Retired head of household	Non-retired head of household	Retired head of household	Non-retired head of house-hold	Retired head of household	Non-retired head of house-hold
Up to 30	-	10.9	-	39.0	-	16.9	-	30.0
31 – 40	-	10.0	-	29.1	-	15.9	-	29.0
41 – 50	16.1	12.2	33.0	24.2	37.5	14.4	35.2	27.8
51 – 55	10.8	10.8	29.1	29.5	10.7	11.9	27.2	30.2
5 6 – 6 0	19.1	8.2	22.5	28.3	13.3	8.9	23.7	35.3
61 – 65	11.8	8.7	18.4	18.5	6.3	10.3	24.1	54.1
66 – 70	8.9	14.4	20.0	36.5	10.2	12.5	16.5	58.8
71 – 7 5	13.8	-	15.5	-	9.5	-	18.4	-
above 75	13.4	-	13.8	-	11.4	-	18.7	-
Male	10.2	10.6	21.7	27.2	11.4	19.2	24.1	29.3
Female	17.9	12.3	15.6	40.8	16.4	14.8	23.7	30.5
Total	**12.9**	**10.7**	**18.7**	**28.2**	**12.9**	**18.4**	**23.9**	**29.9**

(1) Percentages; Carbonaro's equivalence scale (cfr. par. 2); poverty line calculated on the basis of per-capita average income.

Tab. 9

INDIVIDUALS IN POVERTY CONDITION BY WORKING STATUS OF THE HEAD OF THE HOUSEHOLD

	1987						2004					
	Individual labour and pension income (1)	Per-capita family labour and pension income (1)	Total family income per-capita (1)	Poverty rate	Poverty gap	Distribution of individuals	Individual labour and pension income (1)	Per-capita family labour and pension income (1)	Total family income per-capita (1)	Poverty rate	Poverty gap	Distribution of individuals
Households with retired head:												
Retired	8.1	7.1	8.2	12.4	18.1	15.7	6.8	4.0	4.6	9.1	20.0	19.1
Non-retired	4.6	6.2	7.1	21.3	27.8	9.5	0.3	3.0	3.6	20.7	27.5	9.1
Total	**6.8**	**6.8**	**7.8**	**15.8**	**23.1**	**25.2**	**3.4**	**3.4**	**4.1**	**12.9**	**23.9**	**28.2**
Households with non-retired												
Retired	7.0	8.7	10.0	3.5	11.9	2.8	4.4	3.2	3.6	2.8	18.3	3.7
Non-retired	7.8	7.8	8.7	12.4	22.3	72.0	2.6	2.7	3.3	19.2	30.0	68.0
Total	**7.8**	**7.8**	**8.7**	**12.0**	**22.1**	**74.8**	**2.7**	**2.7**	**3.3**	**18.4**	**29.9**	**71.8**
Total households:												
Retired	7.9	7.3	8.5	11.0	17.8	18.5	11.1	9.6	13.0	8.1	19.9	22.9
Non-retired	7.4	7.6	8.5	13.4	23.3	81.5	8.4	8.9	11.0	19.4	29.7	77.1
Total	**7.5**	**7.5**	**8.5**	**13.0**	**22.4**	**100.0**	**9.0**	**9.0**	**11.4**	**16.8**	**28.6**	**100.0**

(1) In 2004 euro. – (2) Thousands euro.

Tab. 10

INDIVIDUALS IN POVERTY CONDITION BY GEOGRAPHIC AREA

	1987		2004	
	Poverty Rate	**Poverty gap**	**Poverty rate**	**Poverty gap**
Center – North				
Retired	6.6	14.7	3.2	12.4
Non-retired	5.5	18.7	8.1	23.1
Total	**5.7**	**17.8**	**6.9**	**22.0**
South				
Retired	20.1	20.0	18.4	22.6
Non-retired	27.2	24.9	38.9	32.0
Total	**26.0**	**24.3**	**34.7**	**31.0**
Italy				
Retired	11.0	17.8	8.1	19.9
Non-retired	13.4	23.7	19.4	29.7
Total	**13.0**	**22.4**	**16.8**	**28.6**

Tab. 11

INDIVIDUALS IN POVERTY CONDITION BY AGE

	1987		2004	
	Poverty rate	**Poverty gap**	**Poverty rate**	**Poverty gap**
Up to 64	13.3	23.0	18.8	29.5
≥ 65	10.5	17.2	7.8	20.6
65 – 69	8.8	20.4	7.8	19.1
70 – 74	10.1	17.6	7.1	23.8
75 – 79	11.4	13.1	8.1	20.1
80 – 84	11.4	16.6	9.3	19.5
≥ 85	18.7	16.9	8.0	15.8
Individuals aged more than 64 in households with an head aged more than 64	11.3	16.6	9.7	20.2
Individuals aged more than 64 in households with an head aged less than 65	6.8	21.2	2.3	28.9

Probability of being poor in 2004 (Logit)

Tab. 12(a)

	Coefficient	Standard error	Odds ratio
HH	-0.355930 ***	0.0977246	0.70052
Couplewithout	-0.172382	0.1646900	0.84166
Couplewith	0.882578 ***	0.1451823	2.41712
Adultwith	1.510293 ***	0.1618121	4.52806
Sexhh	-0.131545	0.0870986	0.87674
Area	1.963891 ***	0.0649861	7.12700
Oldhh	0.074900	0.1168479	1.07778
Constant	-5.201817 ***	0.1786706	

Estimation method: ML. Weighted. Dependent variable = Poverty rate.
N. obs. = 18942
Log Pseudolikelihood = -7220.1831
Wald $\chi^2(7)$ = 1219.05. P-value = 0.000
Pseudo R^2 = 0.1671
***   Significant at the 1% level.
**   Significant at the 5% level.
*   Significant at the 10% level.

Tab. 12(b)

	Coefficient	Standard error	Odds ratio
HH	-0.291334 ***	0.0752318	0.74727
Couplewithout	-0.090693	0.1241867	0.91330
Couplewith	0.751500 ***	0.1126895	2.12018
Adultwith	1.325448 ***	0.1199616	3.76387
Sexhh	-0.222178 ***	0.0653195	0.80077
Area	1.977478 ***	0.0474233	7.2245
Oldhh	0.074005	0.0907139	1.0768
Constant	-5.265447 ***	0.1357337	

Estimation method: ML. Unweighted. Dependent variable = Poverty rate.
N. obs. = 18942
Log likelihood = -6816.2744
LR $\chi^2(7)$ = 2597.26. P-value = 0.000
Pseudo R^2 = 0.1600
***   Significant at the 1% level.
**   Significant at the 5% level.
*   Significant at the 10% level.

Probability of being poor in households with retired HH in 2004 (Logit)

Tab. 13(a)

	Coefficient	Standard error	Odds ratio
Couplewithout	-0.195538	0.2202103	0.822392
Couplewith	0.138475	0.2329996	1.375030
Adultwith	1.550051 ***	0.2186151	4.711712
Sexhh	-0.007322	0.1815184	0.992705
Area	1.759280 ***	0.1274640	5.808252
Oldhh	-0.050366	0.1392117	0.950882
Younghh	1.605668 ***	0.3868913	4.981186
Constant	-4.965646 ***	0.3234354	

Estimation method: ML. Weighted. Dependent variable = Poverty rate.
N. obs. = 5959
Log Pseudolikelihood = -1816.3741
Wald $\chi^2(7)$ = 354.66. P-value = 0.000
Pseudo R^2 = 0.1696
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Tab. 13(b)

	Coefficient	Standard error	Odds ratio
Couplewithout	0.115359	0.1685796	1.122277
Couplewith	0.544459 ***	0.1755612	1.723676
Adultwith	1.579506 ***	0.1637725	4.852560
Sexhh	0.033475	0.1355725	1.034041
Area	1.808003 ***	0.0985975	6.098258
Oldhh	0.044747	0.1058399	1.045763
Younghh	1.280761 ***	0.3320188	3.599378
Constant	-5.359254 ***	0.2362520	

Estimation method: ML. Unweighted. Dependent variable = Poverty rate.
N. obs. = 5959
Log likelihood = -1714.6768
LR $\chi^2(7)$ = 643.69. P-value = 0.000
Pseudo R^2 = 0.1580
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Tab. 14

Probability of being poor in 1987 (Logit)

	Coefficient	Standard error	Odds ratio
HH	1.450705 ***	0.107181	4.266119
Couplewithout	-0.627772 *	0.342146	0.533779
Couplewith	0.935532 ***	0.291978	2.548560
Adultwith	1.246757 ***	0.312766	3.479044
Sexhh	-0.332160 ***	0.120834	0.717372
Area	1.976748 ***	0.078024	7.219231
Oldhh	-0.923042 ***	0.148590	0.397309
Constant	-5.986834 ***	0.333544	

Estimation method: ML. Weighted. Dependent variable = Poverty rate.
N. obs. = 22984
Log Pseudolikelihood = -6978.0038
Wald $\chi^2(7)$ = 866.9. P-value = 0.000
Pseudo R^2 = 0.1616
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Tab. 15

Probability of being poor in households with retired HH in 1987 (Logit)

	Coefficient	Standard error	Odds ratio
Couplewithout	-0.596218	0.405893	0.550890
Couplewith	0.913773 ***	0.345233	2.493715
Adultwith	1.772056 ***	0.344493	5.882938
Sexhh	-0.259374	0.240954	0.771533
Area	1.327630 ***	0.179851	3.772114
Oldhh	-0.712467 ***	0.159792	0.490432
Younghh	-0.149291	0.689897	0.861317
Constant	-3.688400 ***	0.472324	

Estimation method: ML. Weighted. Dependent variable = Poverty rate.
N. obs. = 3560
Log Pseudolikelihood = -1239.41
Wald $\chi^2(7)$ = 129.31. P-value = 0.000
Pseudo R^2 = 0.1937
*** Significant at the 1% level.
** Significant at the 5% level.
* Significant at the 10% level.

Tab. 16

POVERTY RATES IN THE EU IN 2001

	Poverty rate for the whole population	Poverty rate for the retired
EU15	**15**	**17**
Belgium	13	21
Denmark	10	23
Germany	11	13
Greece	20	32
Spain	19	18
France	15	17
Ireland	21	39
Italy	19	13
Luxembourg	12	8
Netherlands	11	3
Austria	12	16
Portugal	20	25
Finland	11	20
Sweden	9	16
United Kingdom	17	24

Fig. 1

TRENDS IN POVERTY
(1987-2004)
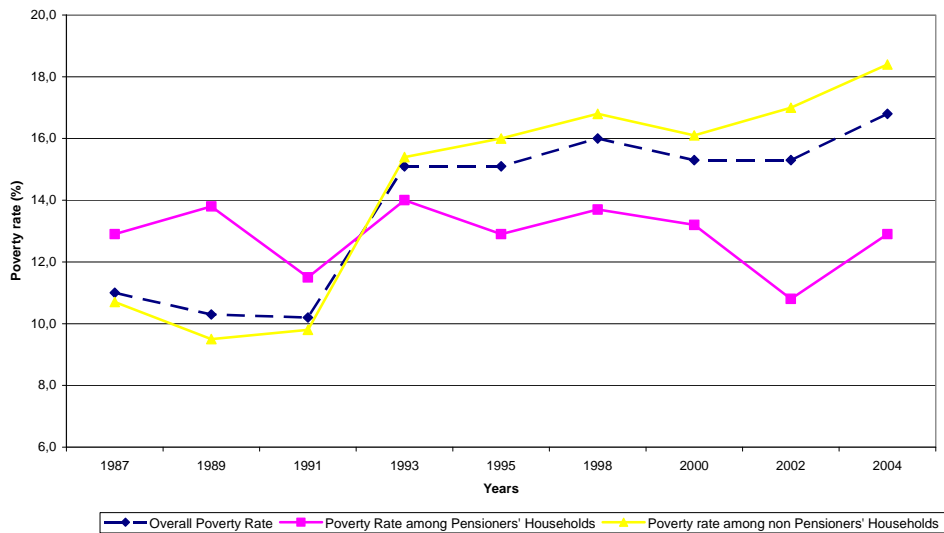
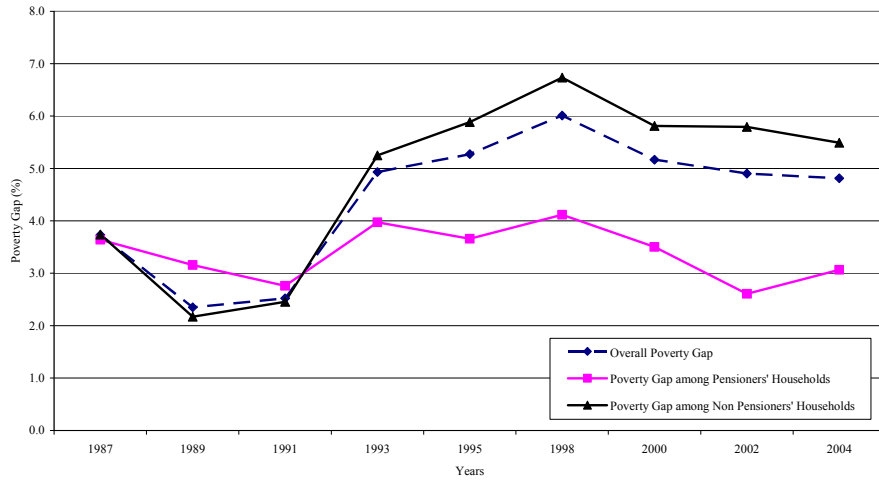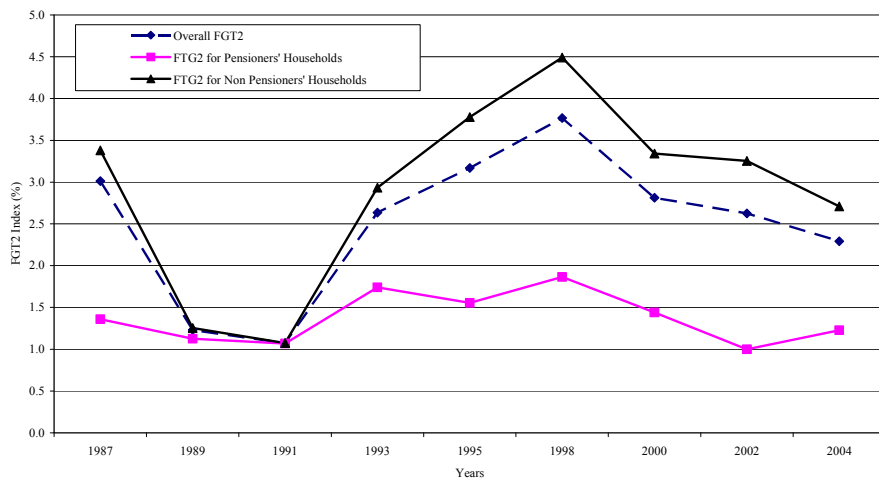**TRENDS IN THE INTENSITY OF POVERTY**
(1987-2004)

Fig. 2 (a)

Fig. 2 (b)

The poverty gap is averaged over the entire reference population (poor and non poor). FGT2 is the Forster-Greer-Thorbecke index with a = 2. It is a weighted sum of the households' poverty gaps.