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WOMEN AND PENSIONS

Effects of Pension Reforms on Women's Retirement Security

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Abstract

This paper examines how the recent pension reforms in Europe affected the risks falling on women's economic security in retirement. Many reforms implied the passage from a model where survivors' and other derived rights were prominent in guaranteeing women's security to a new approach where actuarial principles are strengthened and benefits are determined according to the capitalized sum of individual contributions. By tightening the link between working career and retirement outcomes, the process exposes women to new risks, and makes crucial the role of their participation in the labor market, the continuity of their working career and their relative earnings with respect to men.

1 – Introduction

In many European countries, women's economic wellbeing in retirement is still very much dependent on their role as *wives*. Although the immediate cause of this situation can be

traced back to their disadvantaged position in the labour market – typically characterised, as compared to men, by lower participation rates, shorter working lives and lower compensation levels – a deeper motivation lies in the roles traditionally attributed to men and women in society, with the latter regarded as the main providers of unpaid caring work.

Caring activities assume a social connotation if one takes into account that they are of vital importance for the wellbeing of the current and future workforce: bearing and rearing children, caring for the elderly and the disabled, carrying out household chores as well as promoting the socialization of the young are complementary, rather than accessory activities, to paid work on the job market.

Two different issues, in this respect, are often mixed: on the one hand, recognizing that these activities should be more equally distributed between men and women and that the right incentives to this purpose should be put in place is a question of equality of opportunity; on the other hand, the social relevance of these activities, irrespective to whether they are carried out by men or by women, is in general a sufficient motivation for acknowledging them in the accumulation of pension rights.

In the (brief) analysis that follows we look at pension systems in the European context from a gender perspective, considering both the public and the private provision, and concentrating on the effects of their changing design – as a result of the reform process under way all over Europe – on women's retirement security.

Section 2 examines, from a general point of view, the changing approach to pension systems, resulting from the reform process.

As a consequence of the shift in the tenets of pension regulations, retirement risks falling on the individual – and on women in particular – have somewhat intensified. Section 3 briefly discusses the main *retirement risks*, and the ways they specifically affect women.

Section 4 turns to how these risks are dealt with within the new pension architecture, based on the individual rather than on the family. Even while imposing a heavier risk burden on women through recent pension reforms, policymakers have become increasingly aware of the gender-related unfairness embedded in pension systems. In order to avoid the radicalisation of women's old-age poverty and the widening of the gap between men's and women's retirement outcomes, more attention has been devoted to retirement security from a gender perspective. At European Union level, the common objective of “*review[ing] pension provisions with a view to ensuring the principle of equal treatment between women and men*” (EC, 2006, p. 140) has been a primary goal since the European Council held in Laeken in

December 2001¹, as a step towards the “*modernisation of pension systems*”, and included in the Open Method of Coordination of pensions among Member States.

It is not clear, however, whether the combination of the new attention towards women and the recent changes to pension systems will produce more or less equitable outcomes across genders.

The general overview carried out here applies to all European countries. A more specific focus is devoted to the Italian case in section 5. Section 6 concludes.

2 – Background changes in family and women participation and their relevance for pension design

In the last decades, different forces have contributed to a new perspective on pension policy design. First, pension systems need to adapt to changes in the age composition of the population, strengthening both the efficiency and the financial sustainability of the systems. Second, ongoing changes in the division of labour between women and men within the household and in the labour market are increasingly taken into account.

Since their creation, pension systems have adopted a view of the family that hinged on the man’s role as breadwinner and on the woman’s role as homemaker. Such a view was certainly representative of the intra-household relationships at that time (early and mid-twentieth century) but by sanctioning it, pension systems reinforced traditional gender roles within the family. The reforms of the last decade of the century tried to adjust to a situation where men and women had begun to share tasks more equally.

Changes in the gender division of labour have been accompanied by parallel changes in the family as an institution. First, the model of the dependent wife has been challenged by higher divorce rates, declining marriages and an increase in the number of one-parent families. Moreover, new styles of relationship, such as civil unions and simple cohabitation, are being adopted by growing segments of the population. This calls for some degree of intervention in the field of pensions, since women’s role of homemakers is increasingly performed outside the scope of traditional marriage and the traditional instruments devised to insure women inside marriage may become obsolete.

¹ In the Laeken Summit (2001), the European Council agreed upon a common agenda on pensions, by setting *eleven common objectives* grouped under three broader headings: *adequacy, financial sustainability and modernization*.

Although female and male working careers have become more similar with respect to fifty years ago, significant differences still persist, with only a few exceptions. Female activity and employment rates are considerably lower than men's in a majority of European countries, even though they increased in many countries in the last decade (Tables 1 and 2). The achievement of the far-reaching objective set in the Lisbon agenda² of an average female employment rate above 60% by the year 2010, now likely at risk, would have had beneficial effects not only on the overall labour market performance but also on the sustainability of pension systems.

Table 1 – Activity rates by gender and different age groups, 1997 – 2007

	Males 15-64		Females 15-64		Males 55-64		Females 55-64	
	1997	2007	1997	2007	1997	2007	1997	2007
Austria	80.3	81.7	61.5	67.8	42.5	51.3	17.4	28.9
Denmark	84.8	83.9	74.7	76.4	66.3	66.9	43.5	54.6
France	75.1	74.9	61.2	65.6	36.2	42.8	27.2	38.1
Germany	79.2	81.8	61.8	70.1	55.1	66.1	34.7	49.1
Greece	77.2	79.1	46.6	54.9	61.1	60.8	25.3	28.2
Hungary	66.2	69.0	49.3	55.1	28.8	43.6	10.8	27.3
Italy	73.2	74.4	43.5	50.7	43.9	46.3	15.5	23.5
Netherlands	81.9	84.6	61.8	72.2	45.3	64.0	20.9	41.4
Poland	73.3	70.0	58.8	56.5	45.5	44.7	27.6	20.6
Spain	76.7	81.4	48.2	61.4	57.4	63.1	20.7	32.5
Sweden	79.0	81.4	74.0	76.8	69.7	76.2	63.4	69.4
United Kingdom	83.4	81.9	67.3	68.9	63.3	69.0	40.0	50.1

Source: Eurostat.

Table 2 – Employment rates by gender and different age groups, 1997 – 2007

	Males 15-64		Females 15-64		Males 55-64		Females 55-64	
	1997	2007	1997	2007	1997	2007	1997	2007
Austria	77.1	78.4	58.6	64.4	40.3	49.8	17.0	28.0
Denmark	80.5	81.0	69.1	73.2	62.7	64.9	40.3	52.4
France	66.9	69.3	52.4	60.0	33.2	40.5	25.0	36.2
Germany	71.9	74.7	55.3	64.0	47.5	59.7	28.7	43.6
Greece	72.1	74.9	39.3	47.9	59.1	59.1	24.6	26.9
Hungary	59.7	64.0	45.4	50.9	27.0	41.7	10.3	26.2
Italy	66.5	70.7	36.4	46.6	42.0	45.1	14.8	23.0
Netherlands	78.8	82.2	58.0	69.6	44.3	61.5	19.9	40.1
Poland	66.8	63.6	51.3	50.6	43.1	41.4	26.1	19.4
Spain	64.5	76.2	34.6	54.7	51.2	60.0	18.0	30.0
Sweden	71.7	76.5	67.2	71.8	65.1	72.9	60.4	67.0
United Kingdom	76.6	77.3	63.1	65.5	58.4	66.3	38.5	49.0

Source: Eurostat.

² Agreed upon by the European Council held in Lisbon on March 2000.

At the same time when the pattern of female participation into the labour market started changing, the financial sustainability of European state pension systems became increasingly under pressure. As a consequence, in many countries the public social security system is progressively handing over part of its role to private bodies and stimulating the workers' participation into funded pension schemes through fiscal incentives. The strengthening of the financial sustainability principles calls for a greater actuarial fairness embedded in the pension formulae, to be reached through a closer link between contributions and retirement age (and thus expected longevity), on the one hand, and the amount of benefits, on the other. This, in turn, places more emphasis on the individual as a single person rather than in the context of the family. As an effect of both changing design of pension systems and increasing female participation in the labour market, women are acquiring independent pensions rather than relying on derived benefits for their needs in old age. At the same time, such a shift changes both the quantity and the quality of risks individuals are exposed to while approaching and during retirement. To address this issue, the next section we will consider the various *risks* concerning retirement and whether women are exposed to a greater extent than men to them.

3 – Gender dimensions of retirement risks

Retirement risks are of various nature. A simple characterization can be done by distinguishing among idiosyncratic and aggregate risks. Among the first, the most important are: *longevity, survivorship, earnings and contribution risks*. While considering them shortly, we will also discuss whether they affect women differently from men and whether the pension reforms that characterised most European countries in the last decades induced changes in the distribution of risks across genders.

Pension systems are meant to cope primarily with *longevity risk*, i.e. the risk of outliving one's resources or, conversely, of leaving undesired bequests. Besides this, they offer insurance against a number of other hazards, according to their specific features. Taken literally, however, retirement security is a chimera: as Shoven and Slavov (2005) point out, no pension system can provide completely safe assets: in fully funded systems, the funds returns depend on market rates of return; in public pay-as-you-go (PAYG) systems, the implicit returns on contributions typically depend on the rate of growth of the wage bill, or, indirectly, of the economy.

Table 3 – Life expectancy at different ages by gender, 2006

	Males			Females		
	60 years	65 years	70 years	60 years	65 years	70 years
Austria	21.1	17.3	13.7	25.1	20.7	16.6
Denmark	20.0	16.2	12.7	23.3	19.2	15.3
France	22.0	18.2	14.6	27.0	22.6	18.4
Germany	21.1	17.2	13.7	24.8	20.5	16.3
Greece	21.4	17.5	13.8	23.9	19.4	15.1
Hungary	16.5	13.6	11.1	21.6	17.7	14.0
Netherlands	20.8	16.8	13.1	24.5	20.3	16.2
Poland	17.7	14.5	11.7	22.9	18.8	14.9
Spain	21.7	17.9	14.3	26.5	22.0	17.7
Sweden	21.8	17.7	14.0	25.2	20.9	16.8

Source: Eurostat.

When considering retirement, uncertainty about the length of life is the first source of risk. Two out of the three commonly quoted *biometric risks* relating to retirement – longevity, survivorship and disability – are likely to affect women more than men, as they expect to live longer (as confirmed by Table 3) and experience widowhood more frequently than men. Among the consequences of higher longevity is a higher risk of outliving one's own resources, a risk which annuities (either public or private) are supposed to insure against, but do so very imperfectly, also given their defective indexation mechanisms.

In systems oriented to actuarial fairness and neutrality, women's higher longevity implies, *all else equal*, reduced benefits. Public pension systems – even when they are of the Notional Defined Contribution (NDC) type, i.e. adopt insurance formulae but are financed on a *Pay as you Go* basis instead of reserves – not only stipulate uniform contribution rates across genders but also typically establish lower retirement ages for women, which result in an disadvantage, particularly when the mortality tables used for calculating pension benefits are gender specific. In many systems (such as the Italian one), however, mortality rates are calculated across genders, which corresponds to a implicit subsidy from men to women and from single persons to couples. These systems take the family as a reference unit and view the provision as an additional benefit bestowed upon the spouse with the longest life expectancy, i.e. a sort of ex post compensation for women. Irrespective of these features, higher longevity and survivorship risks typically entail a higher exposure to poverty risk; de facto, in many countries women are still characterized by a higher poverty rate than men, especially at advanced ages (Table 4) which means that these ex post compensations do not offset the weaker role in the labor market.

Table 4 – Population below the poverty threshold^a, 2006

	Males 18-64	Females 18-64	Males 65+	Females 65+
Austria	10	12	11	20
Denmark	11	11	16	19
France	11	13	14	18
Germany	12	13	11	14
Greece	18	19	23	27
Hungary	15	14	7	11
Italy	16	19	18	24
Netherlands	9	10	7	6
Poland	20	18	6	9
Spain	15	17	28	33
Sweden	12	11	7	15
United Kingdom	15	16	25	30

^a The share of persons with an equivalised disposable income (after social transfers) below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers). Source: Eurostat.

At the individual level, the risks of myopia and of time inconsistency also represent important hazards: at the end of their working lives, myopic individuals risk finding themselves with low resources in retirement due to the lack of financial literacy and poor planning during their working years. On the other hand, farsighted agents are supposed to be able to better smooth their consumption and prevent abrupt discontinuities in their living standards. There is no *a priori* reason why women and men should be differently affected by these shortcomings.

Myopia and time inconsistent behaviour depend ultimately on individual effort and the ability to plan while other factors are less in the individual's control. Poor and discontinuous working careers, with frequent movements in and out of jobs, accompanied by low hourly wages, have a great impact on final earnings-related pension benefits.

The *earning risk*, defined as the possibility of a discontinuous and poor working career, is crucial for women, and not only because of their lower overall participation in the labour market (Tables 1 and 2). Even when they do participate, they take time off from work more frequently and for longer periods than men; they are found more frequently in part-time jobs³; they tend to concentrate in lower-paid jobs, and wage discrimination on a sex basis is still present (see Table 5). All these factors directly place a much higher earning risk on women.

³ Whether this is voluntary or involuntary, it determines less earnings and contributions and therefore lower pensions benefits in DC systems.

Table 5 – Labour market indicators

	Gender pay gap		Part-time workers in % of total employment	
	1995	2005	Males	Females
Austria	22	18	7.2	41.2
Denmark	15	18	13.5	36.2
France	13	12	5.7	30.2
Germany	21	22	9.4	45.8
Greece	17	9	2.7	10.1
Hungary	22	11	2.8	5.8
Italy	8	9	5	26.9
Netherlands	23	18	23.6	75
Poland	15 ^a	10	6.6	12.5
Spain	13	13	4.1	22.8
Sweden	15	16	11.8	40
United Kingdom	26	16	10.9	42.3

Gender pay gap: difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees. The population consists of all paid employees aged 16-64 who are 'at work 15+ hours per week'.

^a 1999.

Source: Eurostat.

Closely linked to the earning risk is the *contribution risk* (the risk of saving too little for retirement), which accounts for the possibility that contribution rates are insufficient to generate an adequate pension level⁴ or. This kind of risk may depend on several factors, such as the mandated payroll tax rates (which can be particularly low in some jobs in order to reduce labor costs and favor employment), individual myopia or the availability of good vehicles for supplementary pensions. As long as women are more often employed in precarious jobs with low payroll tax rates and acquire lower levels of financial literacy (Lusardi and Mitchell, 2007; Banks and Oldfield, 2006), they might suffer more acutely from the risk of insufficient savings/contributions.

The importance of employment (and contributory) history in determining retirement outcomes is documented – for the United States – in Levine, Mitchell and Phillips (1999). They make use the Health and Retirement Study (HRS) to evaluate the role that differences in labour market experiences play in explaining why older women face relatively poor retirement income prospects. Overall, the model indicates that 85% of the retirement income gap would be eliminated if women and men had similar lifetime earnings, years of work and

⁴ There is also the opposite risk of excessively high contribution rates, which can be real particularly at young ages when an individual would possibly like to save less for retirement and more for family formation or for buying a house, but it is not considered here.

occupational attainment, while the remaining 15% of the gap is due to socio-economic factors (such as education, age, the number of children and past marital status characteristics).

The risks related to employment are somehow mitigated – particularly in Defined Contribution systems - by provisions that acknowledge pension rights for the periods individuals (both women and men) spend out of labour for maternity or in order to take care of children and other family members. Such measures include the crediting of *notional contributions* that close gaps due to caring responsibilities in the individual's social security records. These credits usually help towards the achievement of higher benefit levels and/or the completion of a minimum contributory period needed for eligibility. In some countries (e.g. Denmark and the Netherlands) crediting is not necessary as pension benefits accrue on the basis of citizenship and not of paid contributions.

These provisions are less present in privately-managed occupational pension funds; consequently, discontinuous careers and other factors that reduce the individual's ability to pay regular contributions have more detrimental effects on pension benefits. *Portability* is therefore a crucial feature in ensuring an adequate retirement income to those workers – among whom women can be included as a group – who are more likely to experience discontinuous or disrupted careers.

As already mentioned, most European countries used to compensate with lower retirement ages women's disadvantaged working careers – characterized by low pay and low contributions. In PAYG systems where benefits were typically linked to the most recent salaries but not to the entire individual working history, this provision was advantageous to women. On the contrary, in funded (as well in notional defined contribution) systems this risks backfires on them, leading to lower retirement income. The increase in women's retirement age would contribute to higher benefits for women (in addition to strengthening the sustainability of the systems via a higher employment). At present, some countries within the EU maintain different old-age pension eligibility ages (Belgium, Bulgaria, Czech Republic, Estonia, Greece, Italy, Latvia, Lithuania, Malta, Austria, Poland, Romania, Slovenia, United Kingdom) but most of them have already legislated reforms bringing together women's and men's requisites (EC, 2007; Monticone, Ruzik and Skyba, 2008).

In addition to *individual risks*, a number of other risks operate mainly at an *aggregate* level. Both *Demographic factors* (fertility, mortality, immigration rates) and economic factors (rate of growth of the economy, prices and wages affect the sustainability of public pension systems and their ability to deliver adequate benefits. Financial risks specifically pertain to

privately provided pensions, while the political, demographic and annuity risks affect both private and public systems.

At the aggregate level, the *demographic risk* is connected to changes in fertility and in mortality patterns. For example, some cohorts can face the risk of an increasing old-age dependency ratio, connected to increases in life expectancy and decreases in fertility.

The *political risk* of changes in the legislation includes the possibility both of bad regulation and of inadequate supervision. Shoven and Slavov (2005) refer to political risks as the probability of adjustments in the public pension system – through political actions – to compensate for deviations in the demographic or economic spheres.

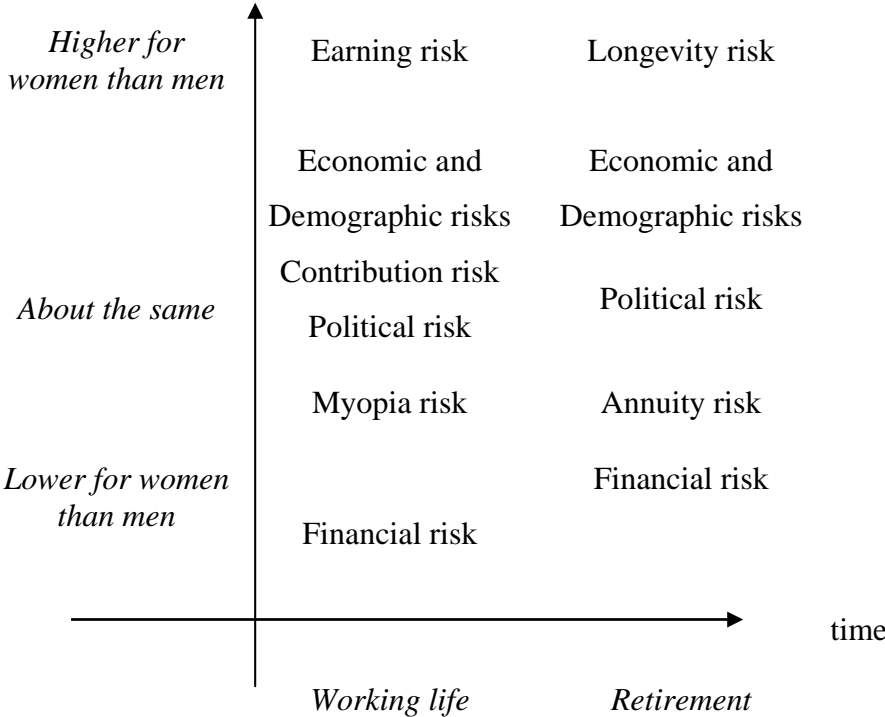
The *annuity risk* has to do with patterns of prices, productivity and returns which affect the transformation of accrued benefits into annuities. Far from being negligible, this kind of risk raises two different concerns. First of all, the indexation method is crucial in determining the living standard of different cohorts of pensioners, and of pensioners *vis-à-vis* workers, thus being responsible for the so-called ‘vintage pensions’ (a phenomenon which generates marked differences in the level of benefits of different cohorts of retirees). Second, as already mentioned, different expected longevity between men and women affects pension benefits, unless unisex life expectancy tables are adopted.

Fully funded systems are mostly vulnerable to the *financial risk* since the success of the fund’s investments depends on its financial performance, which reflects the volatility of the market. The switch from Defined Benefit (DB) to Defined Contribution (DC) systems causes a parallel switch of the financial risk from the fund’s managers to the fund participants. With respect to financial risks, the relative position of women is not so clear-cut. On the one hand, empirical literature shows plenty of evidence about women’s higher risk aversion, also in the specific case of retirement saving⁵. As a consequence of their lower propensity to invest in risky assets, women should be less affected by investment risk. However, one has to remember that less risk is *ex ante* inevitably accompanied by lower expected returns. On the other hand, it is hardly possible for the worker to choose her preferred portfolio composition in the pension fund, and if the degree of risk aversion chosen by the fund manager is higher than the female participant’s, the latter might end up with a portfolio that does not suit her preferences.

⁵ See Hardy and Shuey (2000); Bajtelsmit, Bernasek and Jianakoplos (1999); Sundén and Surette (1998); Bajtelsmith and Bernasek (1996) for evidence concerning the United States and Sève-Söderbergh (2003) for Sweden.

To sum up the various risks, we use a bi-dimensional diagram (Figure 1), as a purely illustrative device (i.e. no measure is provided), highlighting the areas where women’s situation is likely to be more awkward. The diagram illustrates the life cycle (distinguishing between work and retirement) on the horizontal axis and the women-versus-men risk differential on the vertical axis.

Figure 1 – Retirement risks faced by women



The figure induces two observations. First, individual risks appear to affect women more than men, while other risks, such as the economic and demographic ones, seem to have, in general, weaker gender-specific impacts. However, women may be again more heavily affected as a result of their greater economic vulnerability and of their increasing incidence in the elderly population. This vulnerability may increase where pension reforms have put greater emphasis on the individual as the earner of personal pension rights, both through the increasing privatization of the pension sector and the shift from PAYG to notional or effective funding.

As a second observation, while longevity risks are dealt with within pension systems and higher female life expectancy can be counterbalanced by unisex mortality tables and by specific measures against old age poverty, the pension system per se has little or no defence against the risks of poor careers and poor contributory histories. Pension provisions that aim at granting equitable pension outcomes to men and women in their old age are only compensatory measures that do not go to the root of the problem. Given that pensions are, to some extent, the result of a reallocation of resources within the lifecycle, more effective ways of tackling the earning and contribution risks should directly redress inequalities in labour market participation opportunities.

4 – New models of insurance: from the “state plus family” model to a more individualistic and market-oriented approach

It is controversial whether pension systems should aim at redistributing income within cohorts, from high income to low income citizens, or whether – for efficiency reasons – they should leave the task to the fiscal system. If one allows for the possibility of a limited redistribution between income or wealth classes, then there should be a scope for some kind of transfer also between men and women within pension systems. The rationale is that some individuals may find themselves in poverty at an advanced age because they spent all or part of their working age performing socially relevant activities that are not remunerated and do not give right to pension entitlements on their own. These individuals, mainly for cultural reasons (Fernandez 2006), most frequently happen to be the women, but the same reasoning should apply to anyone performing caring activities.

Where the principle of actuarial equivalence has been strengthened, this moved the focus of policies from the family to the individual. Indirectly, as seen in section 3, this put greater risk on women because of their lower engagement in paid work.

The focus on the family has the advantage of providing an insurance to its members that do not have income sources (or limited resources), thus functioning as a poverty prevention mechanism. At the core of family-based insurance there are derived rights (i.e. survivors' benefits and benefits from pension sharing). In the earlier days of social security, survivors' pensions were awarded exclusively to women because they used to live longer than their spouses and had scarcer income sources of their own for maintenance at advanced age. Even though this measure was quite effective in alleviating poverty among elderly women, it had

the major drawback of reinforcing, or at least of freezing, traditional gender roles within the family, thus reducing incentives for the women to work. Even worse, the ‘Anglo-Saxon’ pension systems survivor’s benefits were not always successful in eliminating the risk of poverty among old women.

In today’s systems, the disincentive effects of survivor pensions is lessened, since benefits have been both reduced and made more gender-neutral – in parallel with the general reduction, through reforms, of social security benefits. In some cases, the eligibility criteria have been made more severe by making survivor’s benefits means-tested (as in the Netherlands and Italy) or by limiting their disbursement to a given period (in Germany and Sweden; see Tuominen and Laitinen-Kuikka, 2003).

On the contrary, the regulations concerning survivors’ benefits have made only slight adjustments to the trend towards non traditional families. In the few countries where same-sex marriages are possible⁶, the provision for derived rights applies to homosexuals in the same way it does to heterosexuals, thus reducing discriminations. However, the legal acknowledgement of civil unions (or registered partnerships) and cohabiting agreements (*de facto* couples) has not always resulted in an enlargement of pension rights. In many countries, this is still an open issue, if only for budgetary reasons.

With regard to civil unions provisions, some countries⁷ have recognized them for both opposite-sex and same-sex couples but granted them limited rights (for instance, the French *pactes civils de solidarité* exclude the possibility of survivors’ pensions), while others⁸ regard civil unions as an intermediate step towards homosexual marriages, and therefore limit their application only to same-sex couples (but accord them rights similar to those enjoyed by married couples, including public pensions entitlements).

A further adaptation of derived rights to changing family patterns would thus require action through the recognition of same-sex marriages, with all the pertaining rights, or at least towards the increase of pension rights within civil unions.

Some of the policy reforms enacted in the last decade in Europe in order to foster the sustainability of pension systems ultimately reduced women’s dependence on their spouses.

⁶ The Netherlands (in 2001), Belgium (2003) and Spain (2005) – within the European countries – recognize same-sex marriages.

⁷ Such as the Netherlands (1998), France (1999), Belgium (2000), Portugal (2001) and Luxembourg (2004). The Netherlands and Belgium subsequently legalized same-sex marriages.

⁸ Denmark (1989), Norway (1993), Sweden (1995), Germany (2001), Finland (2002), Switzerland (2005) and the United Kingdom (2005).

However, the departure from a form of insurance that relied on the family – when the woman was not able to gain a decent pension by herself – left women looking for a riskier kind of provision, that is the one supplied by the market.

The emphasis on the individual as a single person, rather than in a family context, embedded into funded schemes, permits to avoid the paternalistic stand inherent in pay-as-you-go systems. However, it is clear that not all women will be able to build careers supporting an adequate pension level, given the family and social tasks they are still largely expected to perform. This evolution is becoming more and more relevant considering that labour market conditions are moving towards a greater flexibility, that is likely to increase precarious permanence in the labour force rather than stable employment.

The focus on the individual implicitly stresses women's role in the work market rather than that as a wife or widow. At the same time, however, this implies keeping into consideration motherhood even outside marriage (single or divorced mothers, as well as births within civil unions or cohabiting agreements). Pension crediting for unpaid periods translates this view into practice. While derived rights are losing importance, the benefits credited for maternity and childcare have improved in several countries (for instance, Austria, Belgium, Germany, Hungary, Latvia, Poland, see Monticone, Ruzik, Skyba, 2008), thus stressing the role of the individual itself whatever her role in the family (if any).

Pension crediting is more important in those countries where pensions are contributions-related, whereas residence-based flat-rate benefits (as in Denmark and in the Netherlands) automatically cover periods spent out of labour for caring responsibilities.

Unfortunately, the emphasis on actuarial fairness is at odds with measures that tend to compensate, at the pension level, inequalities originating from the labour market. As Ginn (2004) puts it, there is a crucial trade-off between a view that advocates actuarial fairness without any kind of redistribution and another one that incorporates principles of social justice into the system, thus attributing to pension systems a role in poverty reduction and resources reallocation.

If no lessening of inequalities is achieved in employment and in household tasks, the permanence of compensatory measures in pension systems becomes justifiable, in spite of the distortion effects they would induce by loosening the link between contributions and benefits.

5 – A case in point: Italian women’s pension entitlements from a rather generous past to an uncertain future

Several European countries have reformed their pension systems by strengthening the correlation between contributions and benefits (according to the actuarial equivalence principle) and/or in implementing a partial privatisation. A general comparison is of course beyond the scope of this paper. The analysis will therefore be limited to Italy as a case study of the generosity of the past system, of the effects of the new Notional Defined Contribution (NDC) system, and of the measures that are taken, within it, in order to mitigate the likely inequitable effects of actuarial fairness on women.

In the past, the earnings-related PAYG Italian pension system has been rather “generous”, specifically towards women, largely as a result of a rather lax overall attitude. High replacement rates and indexation to wages were benefiting the whole retired population.

In addition, specific categories were allowed early retirement, with various privileges, the most conspicuous one concerning female civil servants, whose contribution requirement for seniority pensions could be reduced to 15 years – instead of 20 – for married women, or for mothers⁹.

Solidarity towards low incomes – more heavily represented by women – was obtained by means of survivor’s pensions and minimum pension provision. All this impacted on the risk of poverty among elderly women, by significantly reducing it.

Starting from the Nineties, several reforms progressively changed the principles governing the system. The 1992 reform¹⁰ started a long transition period by increasing the retirement age for private sector employees, though maintaining an age differential for men and women (from 55 to 60 for women; from 60 to 65 for men). At the same time, pensions were indexed to prices and the minimum number of years of contribution required for public-sector employees to be eligible for a seniority pension was raised at the private sector level (35 years). This reform also laid the foundations of second-pillar schemes, by regulating and encouraging pension funds, particularly in the form of occupational schemes.

⁹ It is very instructive to note that in the parliamentary debate that brought the provision to approval the recurrent justification for it was “*let women go back to their family*”.

¹⁰ Reform under the Amato administration (law 421/1992).

It was the 1995 reform which determined a true turning point in pension design¹¹. In order to tackle the chronic deficit of the system, which the previous reform had reduced but not structurally eliminated, it ruled a very gradual substitution of the old PAYG-DB regime with the NDC system, much closer to an actuarially fair standard. The amount of pension benefits was made proportional, instead of to recent final earnings, to the value of accrued social security contributions, notionally capitalized at the GDP nominal growth rate and actuarially linked to average life expectancy at the age of retirement. In fact, the (legally established) retirement age was substituted by a flexible retirement window, allowing men and women to choose the preferred age (and benefit level) between 57 and 65, with benefits varying with age in an actuarially neutral way.

Other minor policy adjustments followed in recent years, mostly revising retirement eligibility criteria. The 2004 reform increased the minimum retirement age – eliminating the flexibility mechanism – and introduced a different age requirement for the old-age pension by gender (65 for men and 60 for women). Even though eligibility requirements (for the generous seniority pension) have been further modified in 2007, the different treatment to women and men for old-age pensions has been maintained.

After about 15 from the (formal) introduction of private pension funds, their take-up was still very limited. To address this issue, in 2007 the development of funded pillars was pursued by granting workers the possibility to transfer deferred wage funds (the so-called TFR, *Trattamento di Fine Rapporto*, currently accumulated by the employers and used as a severance payment) into the new private sector pension schemes.

As far as benefit levels are concerned, all subsequent legislative acts curbed the past generosity and strengthened the dependence of women's pension on their working career. Table 6 shows results from our own simulation computing replacement ratios at retirement for different cohorts so as to capture the effect of the reforms' phasing in (Coda Moscarola and Monticone, 2008). In many cases, women turn out to be worse off in terms of benefit levels. First, replacement rates from public pensions (RR1) are equal for men and women if they start working early because they retire at the same age, while considering individuals starting later (at 25) the differential retirement age for men and women becomes binding, thus causing

¹¹ Reform under the Dini administration (law 335/1995). It must be noted, however, that, owing to a very slow phasing in of the reform, most of the changes will become effective only in a rather distant future, the first fully contributory pensions become eligible only after 2030!

female RR1 to be lower. Further, replacement ratios from private pensions (RR2) are lower for women in any cohort because gender-specific mortality tables are applied.

Table 6 – Simulated replacement rates at retirement, by gender and length of career

Year of birth		Started working at 19		Started working at 25	
		Men	Women	Men	Women
1945	RR 1	61.80	61.80	61.01	58.14
	RR 2	0	0	0	0
1955	RR 1	67.52	67.52	65.55	51.89
	RR 2	2.22	2.12	3.86	2.23
1965	RR 1	59.81	59.81	62.27	47.99
	RR 2	5.31	4.97	7.52	5.01
1975	RR 1	55.30	55.30	59.08	52.82
	RR 2	8.43	7.84	11.14	9.27
1985	RR 1	52.86	52.86	57.31	51.33
	RR 2	11.62	10.76	13.60	11.47
1995	RR 1	51.60	51.60	55.84	50.09
	RR 2	12.46	11.48	13.31	11.22

Note: replacement rates for the compulsory public pensions (RR1) and the voluntary private pension (RR2) are computed as the ratio of pension benefits in the first year of retirement to earnings in the last working year. Workers are assumed to have a continuous career from the age of 19/25 until retirement (retirement eligibility criteria are set in accordance with the 2004 reform; criteria for private sector employees are used); to retire as soon as they become eligible; to contribute to private pension funds the equivalent of 6,91% of their earnings (corresponding to TFR of private employees) from 2007 onward (when reform was implemented). Earnings are assumed to be linear in age and to grow at a nominal rate of 3,5% annually. Contributions are capitalized at 3,5% within the public NDC system and at 4 % within private pension funds.

Source: CeRPSIM model

In spite of the actuarial fairness tightening, some mitigations have been maintained or introduced as a recognition of caring activities. Periods of maternity and childcare leave¹² give right to notional contributions that add to both pensionable income and the number of contributory weeks required for eligibility to seniority pension. Notional contributions for maternity can be credited even if the woman was not working at that time, provided she had previously contributed for at least five years. In addition, a woman – regardless of her employment status – can anticipate her retirement by 4 months for each baby born, up to one year. However, means-testing for minimum pensions and restrictions in survivors' benefits

¹² Notional contributions corresponding to maternity and childcare leaves within the child's six months are automatically credited. Credits for childcare after the child's six months need to be redeemed. Childcare leave cannot exceed 10 months but can be enjoyed by either parents.

were introduced¹³; the latter can be cut by 25, 40 or 50 percent if the survivor's total income exceeds respectively 3, 4, or 5 times the minimum pension. On the other hand, some measures have been improved, as survivor's benefits can be shared with the divorced spouse, but only upon decision of the Court. Finally, the actuarial coefficients of the new NDC system for the conversion of the accumulated contributions into annuities are based on the average life expectancy, without any gender difference. Together with the difference in retirement age that still persists in the new NDC system, this is a further loosening of actuarial fairness in favour of women.

6 – Conclusions

The last decade witnessed the interaction of two forces, one introducing individualistic and market-based elements into pension systems and the other striving to achieve recognition at pension level of the social role performed by women.

Women's position is passing from a model of paternalistic welfare, based on the combination of both state intervention and family support, perhaps generous in terms of results, but not so fair in terms of opportunities, to a new one where market forces and individuals are assigned a greater role, and where women are confronted with more independence and greater risks. Whether this new situation, apart from been more "modern", will prove to be more equitable for women, greatly depends on how labour market participation and remuneration will evolve in the future.

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¹³ Survivor benefits are equal to 60 percent of the deceased's benefit. In case of remarriage of the beneficiary, the right to survivor pension ceases but the beneficiary can anyway receive the equivalent of two years' benefits as a lump-sum.

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