Economic-financial literacy and (sustainable) pension reforms: why the former is a key ingredient for the latter

by

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Summary

Financial literacy has important implications for economic reforms. Reforms are meant to change people's behavior and their effectiveness crucially depends on the ability of citizens to recognize and generally approve, their necessity, their general design and their "sense of direction". Without basic understanding by citizens, reforms risk having little or no effect or even being reversed. Informed judgment about economic reforms requires information and numeracy as well as literacy. This is particularly true of pension reforms because of their profound impact on people's life plans. The 2011 Italian pension reform is a case in point.

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1. The role of reforms in the present market-oriented societies

The overall worsening of government finances in advanced countries during the last 2-3 decades as well as emergency situations stemming from the financial/economic crisis that started in 2008, have prompted international institutions such as the OECD, IMF and WB to insistently pressure developed countries to undertake wide-ranging reforms of their welfare systems, labor markets and public sector. In spite of urgency, in a democracy reforms must comply with the fundamental principle that governments are ultimately accountable to their citizens. While citizens may not be called upon to approve reforms directly through referendums, they are nonetheless the indirect drivers of the political process, as politicians are aware that their electoral prospects depend on voters' evaluation of their track record and proposed agenda. This evaluation looms large in economic policy in general, and economic reforms in particular.

In a market economy, policy makers set the "rules of the game" that establish the framework within which market forces operate. Economic reforms modify outdated, ineffective and misapplied rules. They do so mainly by altering individuals' incentives and ultimately their attitudes, decisions and actions. Such reforms have thus a great impact on people's lives and, as an investment, entail immediate and easily computable costs against uncertain future benefits.

It is a duty of political parties, especially those that receive majority support, express the government, or see themselves as a viable alternative to the government of the day, to explain to citizens why old rules must be modified and along what lines; to illustrate the mechanics of possible reforms; to receive feedbacks; to adjust and modify the original project taking these feedbacks into account. Political parties, however, tend to look at social problems through ideological lenses and to underestimate their more "technical" aspects and constraints. It is thus the task of experts to help politicians design reforms by offering qualified/scientific advice, while leaving to them the framing of those reforms into a set of values (or "ideology") that the electorate can recognize, give credit to and possibly help to correct in order to take account of the complications of everyday life. An economic reform, therefore, is usually a mix of political and technical elements, the former in the forefront of communication, the latter mostly backstage.

It sometimes happens, however, that this scheme weakens or simply breaks up. This is more frequent when exceptionally severe reforms are necessary in an emergency (as was the case of Greece in the financial crisis that started in 2008 and in Italy in November 2011), but political parties lack the stamina to introduce them for fear of losing the electorate's favor. It is no wonder that in times of financial crises reforms are wildly unpopular since they imply belt tightening and sorely resented changes in most people's way of life.

In these situations, experts tend to play a major role. This role can be *indirect* (as it happens for example, when countries receive international support for recovery programs, on condition that they introduce very stringent austerity measures[1]) or *direct,* when experts are asked to take up key government positions or even to form a "technocratic" government. There is hardly any other justification for a technocratic government in a democracy than as an antidote to the weakness and electoral fear of the most representative political parties. Indeed, such a government is normally appointed precisely to carry out unpopular reforms in turbulent times, when "technical" constraints become dominant with respect to political preferences, i.e. when "sacrifices" can no longer be put off.

Such a government may find it very difficult to convey a positive message about reforms, because technocrats do not normally rely on ideologies to communicate and they normally communicate with each other rather than with the public. It is then very difficult for them to convincingly explain the future benefits that the reform is expected to bring about in exchange for the current sacrifices. This was the case of Italy in November 2011 when, in dramatic financial circumstances, a government led by the former European Commissioner Mario Monti was appointed precisely to honor the previous government's internationally given pledge to introduce reforms (although lacking the political strength or the political willingness to do so). Prominent among these were the pension and the labor market reforms (the former analyzed in section 6).

In circumstances like these, citizens' support for the reforms crucially depends on how much they know about them, and how capable they are to assess their overall long-run effects[2]. If citizens and technocrats do not share the basic conceptual framework, citizens might not be able to work out the future positive consequences of structural reforms and will thus be more prone to oppose and refuse change. *In the absence of a recognized ideological message and of sufficient political stability, financial-economic literacy may therefore be crucial to the success of economic reforms*.

2. Financial literacy: an essential instrument for sensible individual choices

Lack of financial literacy is typically associated with poor personal-finance decisions such as inadequate saving and participation in pension funds, excessive personal debt, bad or whimsical investment choices, and gullibility (Lusardi and Mitchell 2008, 2011, 2014). The cost of such behavior has increased as personal financial responsibilities have expanded, due to the retrenchment of the welfare state, on the one hand, and to the greater sophistication of financial/insurance markets, where ordinary citizens can – and sometimes indeed must – be players, on the other.

[1] The interventions of the Troika (EU, BCE and IMF) in Greece during the euro zone crisis in 2011-13 are a recent prominent example.

[2] As Mario Draghi publicly recognized at the ECB meeting in Naples (Oct 1st, 2014): "*The demonstrations announced for tomorrow, close to where we will meet, remind us all of the difficulties we are facing to overcome the many facets of this crisis, which is being felt particularly acutely in some regions of Europe. And it underlines why explaining our policies to the citizens of the euro area remains so important*."

Financial literacy has been extensively measured through surveys exploring three key concepts of basic numeracy and understanding: (i) interest rates, including compound interest; (ii) inflation and (iii) risk diversification (Lusardi and Mitchell 2011). The analysis of the results has led to a number of interesting findings, which can be summarized as follows:

i. financial illiteracy is widespread in almost all countries, regardless of their economic development stage; knowledge of inflation is correlated to individuals' experiences of inflation; risk diversification is the most difficult concept;

ii. financial knowledge generally has a hump-shaped age profile over the life cycle (Lusardi and Mitchell, 2011); it is highest among the 45-55 age groups and lower at younger and older ages;

iii. gender differences are significant and pervasive, with women in a comparatively worse position than men and thus more likely to make - or to suffer the consequences of - wrong/myopic/imprudent choices. It is implausible that biological diversities have to do with these differences; it is much more likely that the traditional division of roles both within the family and in society, widespread stereotypes and a predominantly "masculine" financial language are responsible for them (Sunden and Surette, 1998; Lusardi and Mitchell, 2008; Bertocchi, Brunetti and Torricelli, 2012; Bücher-Koenen, Lusardi, Alessie and van Rooij, 2012; Boggio, Fornero, Prast and Sanders, 2014);

iv. a strong positive correlation between financial and economic literacy and human capital indicators has been observed, despite a substantial heterogeneity in financial and economic literacy across countries (Jappelli, 2010);

v. an inverse correlation between financial literacy and the generosity of social security systems has also been detected, in the sense that less financially literate individuals are more likely to be found in countries with more generous pension rules (Jappelli and Padula, 2013).

The negative consequences of financial illiteracy on people's welfare, particularly after the damages of the financial crisis, have determined a growing concern among governments, financial institutions and regulators (OECD, 2013a). The 2013 G-20 Summit (OECD, 2013b) has recognized financial literacy as a key element in the achievement of greater financial inclusion, and various governments have organized and implemented financial education programs, particularly in schools but also for adult groups supposedly more at risk. Although the evidence on these programs is still scanty and does not allow firm conclusions, some studies confirm positive effects. Cole, Paulson and Shastry (2014) show that an exogenous increase in education increases individuals' savings and participation in financial markets, while reducing the probability of personal bankruptcy.

It therefore stands to reason that, in our societies, financial literacy should be crucial not only in the personal but also in the public sphere, facilitating the introduction of better economic policies through democratic processes and laying the foundations for the political sustainability and the effectiveness of reforms. The public role of financial literacy has, however, received much less attention in research than its role in individual decision making, possibly because it requires a broader definition of financial literacy than was common in the initial research on the subject, focused on the individual money making and wealth management. These aspects of literacy should not be considered more important than the collective basic understanding of financial and economic mechanisms. They require some basic notions of how the economy works as well basic notions of how the financial world works. We should thus talk of economic-financial literacy rather than of mere financial literacy.

3. Economic-financial literacy (EFL): a new frontier for responsible citizenship and more effective reforms

Let us consider the OECD definition of financial literacy (OECDb 2013): "*Financial literacy is knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, <u>and to enable participation in economic life</u>*[3]". If one interprets the last sentence not merely from an individual point of view (making a purchase or deciding to save part of one's income are indeed examples of "participation in economic life") but also as a contribution to democracy and policy making in market-oriented economies, it is easy to conclude that citizens are called upon to evaluate and endorse public policy in various economic contexts.

In a pioneering paper, George Stigler advocated not just financial but *economic literacy* and wrote (1970, p. 78-79): "*Why should people be economically literate, rather that musically literate, or historically literate? If we are to give economics some special position, and ask that most people learn at least a modicum of economics, it must accordingly fall into one of two classes of knowledge: 1) as a means of communication among people, incorporating a basic vocabulary or logic that is so* frequently *encountered that the knowledge should be possessed by everyone; 2) as a type of knowledge frequently needed and yet not susceptible to economical purchase from experts*". And further on: "*Economic logic does not tell us what to do, but it teaches us to look for the non-obvious costs and benefits of various policies*".

[3] The role of financial literacy in sustaining reform processes has been explicitly stressed by OECD Secretary-General Angel Gurría, who writes (OECD, 2013b, p. 5): "*Financial education is also critical to restore trust and confidence in the financial system, promote financial stability and provide the necessary public backing to financial reforms*".

It therefore stands to reason that EFL should be crucial to the democratic transformation processes of our societies. However, in spite of swift intensification of research on financial literacy and education, little has been done up to now to include it in existing political-economy models that study why governments often fail to deliver and implement economic reforms, even when both experts and politicians agree that they would be welfare-improving. Several explanations of this failure have been put forward in such models. In most cases, they involve distributional conflicts focused on the preservation of the *status quo* (Alesina and Drazen 1991). Interest groups hurt by the reform process may succeed in blocking the reforms (Grossman and Helpman 2001). Lack of knowledge about the distribution of costs and benefits of the reform may spoil citizens' chances to benefit from them if they are risk-averse (Fernandez and Rodrik 1991).

While distributional tensions certainly play a key role, citizens' awareness of what is involved in a reform can be an equally important determinant of its viability. Bonfiglioli and Gancia (2013) move a step in that direction. They assume that short-run costs of reforms take the form of a transitory decrease in output. This causes a decline in political support for the incumbent politicians, along the lines of the conventional wisdom expressed by Jean Claude Juncker's dictum: "*We all know what to do, but we don't know how to get re-elected once we have done it.*" They also argue that politicians tend to introduce politically costly reforms in times of exceptional economic volatility when voters are unsure of the impact of government policy on economic outcomes, so that the short-run costs of the reform translate less precisely into a decline in the incumbents' chances of re-election.

EFL could become a new, more transparent alternative to concealing from citizens the unpleasant consequences of reforms, a potentially key element in a relationship between citizens and politicians. Since such literacy is primarily a result of education, government policy could thus indirectly induce long-run support for virtuous reforms.

EFL is not *per se* a sufficient condition for the success of reforms; illiteracy can, conversely, thwart their effectiveness by exerting sufficient pressure on politicians to either establish an excessively long phase in period or undo reforms approved by a previous government. This is because reforms are not "*deus-ex-machina*" problem solvers but rather "*social drivers*" meant to change people's plans, behavior, attitudes, requiring acceptance and "care" by the (majority of) the people. The ordinary citizen must be able to use the basic tools for the evaluation of reform-related costs and benefits, now and in the future, for him-herself/his-her family. This is particularly true of reforms intended to alter individuals' life cycle, like those which re-design the pension system and the labor market. EFL can help viewing the reform as an investment project involving immediate costs in exchange for likely future benefits. Of course, like all social investments, reforms have a public goods component: EFL will thus not be enough to convince the complete egoists. Complete egoists, however, are hopefully a minority, and both theoretical and empirical research confirms the presence of a certain commitment to the common good in individuals' attitudes (Eskander 1998; Kangas 1997).

4. Can EFL overcome the "unpleasantness" of a pension reform?

To make the argument more specific, let us consider the *pension reform*, often advocated in Europe as a key remedy to the public financial distress caused by population aging.

Why is a reform needed? What is it supposed to achieve? The answers to these questions are more or less clear and uncontroversial to experts (see par. 5). However, judging from public opinion polls as well as from researchers' experiments, this is in sharp contrast to the citizens' uncertain and contradictory views of pension reforms[4].

To understand why, a rapid overview of pension systems' main characteristics and actual inadequacies can help. In most countries (and practically in the whole of Europe), the social security system is still by far the most important pension provider; indeed, the standard of living of the elderly still depends largely or exclusively on it (Fornero, Lusardi and Monticone, 2013). The system is normally financed on a Pay-as-you-Go basis (PayGo), with revenues (contributions/payroll taxes on wages and other labor incomes) immediately used, year-by-year, to finance pension expenditure, with

[4]Boeri, Boersch-Supan and Tabellini (2002) analyzed public opinion on pension reforms in Italy and Germany. The questionnaire asked questions like: "*Are citizens aware of the unsustainability of the pension systems and informed of its costs? Are reforms opposed by a majority or by a powerful minority? What reform options seem politically more feasible and why? What groups of citizens are more likely to favor reforms? Do citizens' opinions reflect their economic self-interest, as presumed by the literature on political economics?*" It emerged that the majority of respondents was aware of the unsustainability of the system, but that they only had a vague idea of the real costs of the PAYG system. Those favoring reforms rarely supported more than one reform option (later retirement in Italy as opposed to lower pensions in Germany). Quite contradictorily, many of those aware of the system's unsustainability were against further reform. Favoring one policy option over another appeared to be determined by short-term self-interest and by one's normative view about the role of the state. See also Boeri and Tabellini (2012) who find "*a huge misinformation about the true costs of public pensions*".Janky and Gàl (2007) analyzed attitudes towards the role of funded pillars, retirement age, labor market participation of older workers, gender equality, immigration and preferences on intra/intergenerational redistribution in the EU 15 countries. They found generalized opposition – although of varying intensity - to pension reforms. Rejection of specific policy options depended on income, age and labor market position, but was uncorrelated to being aware of the unsustainability of the system. Funded pillars were not very popular, except as a mandatory complement to the public pillar. Only 23% of respondents were ready to accept an increase in retirement age, and opposition was greater in countries with a more generous system. Framing effects resulted to have a significant impact on the attitudes to policy options. On the whole this research confirms that opposition to reforms derives from poor understanding of the characteristics of welfare institutions, such as the functioning of the PAYG system. See also: Butler and Marechal, 2007 and Scheubel *et al*. 2010.

little or no accumulation of funds and often with a top-up from the public budget to cover the deficit[5].

This apparent "tax and transfer" feature tends to conceal the underlying "intergenerational contract" that supports the scheme: the young/active population pays for the current elderly/retirees holding the belief that the same stipulation will apply when they will be retired. The system typically combines with a Defined Benefit (DB) type of formula, which calculates pensions as a predetermined proportion of (an average of) the final salary/labor income. The formula is normally quite generous, in terms of replacement ratios, rates of returns and indexation but this occurs at the price of weakening the connection, at the individual level, between contributions paid in and benefits received, thus further obscuring the insurance/saving properties of the program and contributing to an interpretation of pensions in terms of "acquired rights" (with little consideration of "*who pays the price*" for them).

PayGo financing thus implicitly encourages politicians to be rather generous towards the more mature and older workers, at the expense of younger and future generations, while population aging reinforces the mechanism by increasing the age of the median voter, who has a decisive weight in determining policies. In its turn, the DB formula not only tends to favor high-salary/labor income recipients but can easily be tailored, through political lobbying, to meet the expectations of the most influential pressure groups, such as officials, public employees, and managers (not to mention the politicians themselves). In practice, more often than not the combination "PayGo plus DB" encourages rather shortsighted political choices that favor the accumulation of public liabilities (the so-called "implicit debt", Holzmann *et al*., 2004); inefficiency (i.e. encouragement to early retirement, irrespective of longer life expectancy) and unfairness (a "perverse redistribution" from poorer to richer workers).

A contradiction has thus emerged: while economists have long interpreted the PayGo system as an intergenerational insurance contract – endowed, when properly designed, with efficiency properties (Samuelson, 1958; Lindbeck and Persson, 2003; Diamond, 2004; Barr and Diamond, 2008) – its political economy characteristics are such that politicians have, in practice, systematically favored older generations and created, also through the fragmentation of the system in various schemes, an unjustified differentiation of rules, which has reduced the its overall transparency.

5. Convergence in pension reforms: a result of financial constraints rather than political farsightedness?

These elements of financial unsustainability reinforce each other, exacerbating the inability of badly designed schemes to effectively respond to the challenges posed by the demographic transition and the economic slowdown. When instability becomes

[5] When, as it frequently happens, contributions are not enough to cover pensions in payment and increasing the payroll tax rate is hardly feasible for competitiveness reasons.

manifest, an urgent need for reforms arises in order to consolidate public finances. Tradeoffs become more severe and significant increases in retirement ages and/or cuts in pension benefits, possibly through a change in the pension formula, become unavoidable.

From the *technical* point of view, there has been a growing shift, both among researchers and policy makers, from a redistributive view of welfare programs to an insurance one, based on an analysis of individual and macroeconomic risks in order to better respond to their transformation and distribution across ages, generations and genders. Requirements for a good pension system (the idea of having a "perfect" one has no scientific basis, given the unavoidable second best nature of any pension design), have entered policy and determined, at least partially, the course of reforms. These requirements can be summarized as follows.

a) A better diversification of risks supports a *mixed systems*, partly public and PayGo and partly private and funded (pension funds). The Pay-Go system is to be maintained on both theoretical and practical terms. Under a theoretical framework, a well-designed PayGo system is a plus, not a minus, as it allows a compact between generations which is not attainable by market mechanisms. In practical terms, even a modest scaling down of an unfunded system[6] generates difficult and subtle transition problems which can jeopardize the reform, by imposing an excessively long shift. It is thus imperative to redress badly designed PayGo systems. This can be done through "notional funding", a method under which workers (including the self-employed) have their own pension account, where their contributions are reported, summed up and notionally rewarded at a rate of return which is a variant of GDP or wage bill growth rate. This system makes it possible to tailor pension benefits to individual workers' contributions without actually having to capitalize and invest the sums paid in.

b) A better correlation at individual level, between contributions and benefits, and between benefits and the retirement age, is obtained through the Defined Contributions (DC) type of formula. The application of the actuarial principles embedded in the formula enhances the "saving" role of a pension scheme, increases its transparency, avoids the "implicit taxation" of the pension wealth that occurs with the DB formula when retirement is postponed, favors the pension portability required by a more dynamic labor market and makes the political manipulation of the system more difficult. Combining the notional funding with the DC formula gives the NDC system that Sweden originally adopted, later followed by many countries.

c) The automatic adjustment of retirement ages to longevity help avoiding the social tensions that usually accompany parametric changes of the system, provided the quality of life of the extra years is good and the increase of longevity is somehow split

[6] As would be the introduction of an opting out clause, restricted to the young and for few percentage points of the payroll tax rate)

between an increase of working life and an increase of expected pensionable years rather than assigned solely to an increase in working life.

d) A better integration between the labor market and the pension system is both crucial and required by both the DC formula itself and the new features and challenges of the labor market[7].

The DC formula exposes the individual to much greater retirement risks and thus requires that all risks over his/her entire life cycle (education, active life, retirement) be considered in a unified framework. In the labor market, three demographic segments are particularly at risk of not being able to accumulate, through their contributions, an adequate pension: the young, women, older workers.

Younger generations nowadays experience much greater employment/earning risks than their elders: unemployment spells and income discontinuity are taking the place of the uninterrupted and ever-increasing earning profiles which were the norm for their fathers. Solutions have gone in the direction of "*flexicurity"*, a formula combining *job* flexibility with higher *work* probability or higher security at family level (one full time and one part time job per family). Actual solutions, however, have often resulted in too much flexibility (with frequent out of job periods) and too little security.

Women (of all ages) also are at risk. Women's changing role and position in society, as well as increased participation in the labor market have increased their direct responsibility for their own income security, both in their active life and in retirement, but this is not yet fully recognized by pension systems. Consequently, women are still up against a difficult choice between greater equality of opportunities (same retirement age as men and lesser career discrimination) and the continuation of ex-post compensation (lower retirement ages and relatively generous survivor's benefits) for unequal treatment in the labor market and in public life, as well as unequal share of family duties. Older workers, finally, are at risk of experiencing a jobless period before retirement, their prospects of being hired getting worse as age increases.

These changes in the labor market and in society require some redistribution to be maintained, and made transparent, in an NDC system. In particular, this should allow for coverage through general taxation of lost contributions for out of work periods, for unemployment and for care activities.

e) Uniformity of rules avoids the fragmentation of the system and the formation of privileges, while allowing, as said above, explicit tax financed exceptions, directed at

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[7] As Franco Modigliani's life cycle hypothesis has taught us long ago, work and retirement are two matching segments of our life and it does not make sense to treat them separately in analysis or policy making. What happens in the latter is very much dependent of what takes place in the former. It is no wonder, then, that labor markets reforms have often been advocated by the same international institutions demanding pension reforms.

those workers who could not reach an acceptable retirement income during their working lives.

f) Finally, although the system is necessarily mandatory, a more balanced combination of obligations, choices and responsibilities would increase citizens' awareness of the features, options and costs of the programs, and allow them to better clarify the still widespread notion of "acquired rights". In particular, gradual retirement and more flexible retirement ages should be part of a good pension system.

Reforms have indeed been introduced, in the last couples of decades, inside and outside Europe. Countries have relied on differently motivated governments and followed diverse reform paths, with varying speed and socio-political obstacles. A convergence – dictated more by financial constraints than by strategic political choice - has emerged. Everywhere pension promises have been downsized and often redesigned. Retirement ages have been raised and in certain cases made more flexible. Replacement ratios have been reduced and there has been a shift from the indexation of benefits to wages to the indexation of benefits to prices. The link, at the individual level, between benefits and contributions has been strengthened; actuarial corrections have been introduced, through variations of benefits in line with expected longevity at retirement and indexation of retirement ages to longevity. Access conditions to early retirement and disability schemes have been tightened; gender differences have been reduced; transparency has been improved; pre-funding, through participation in (mainly occupational) pension funds, has been fiscally encouraged; pension portability among EU countries has been enhanced.

Are these developments – in many cases still in progress – enough to guarantee the financial sustainability and the adequacy of the system as well as the political sustainability of reforms? While from a technical point of view the answer to the former question can be a tentative yes, more doubts seem justified for the latter, which requires, among other things, a deep cultural change.

While easily understandable to specialists, these technical requirements are hard for public opinion to grasp. Expressions like "financial emergency requires austerity measures" do not help, as they sound obscure and clumsy to a layman. They risk exasperating public opinion and reinforcing the conviction that what is proposed is simply an unacceptable retrenchment of the welfare system, a reduction of "acquired rights" which workers, often erroneously, believe "they paid for". This conviction tends, however, to dominate the public debate and to conceal the medium-long term goal.

In the case of pension reforms this goal mainly consists of the *re-balancing of financial and economic relationships between generations*. This aspect, if properly emphasized, could make the same reform less painful for citizens, clearly showing the reward for current sacrifices. It is however often ignored by the media – whose technical ignorance is often matched by a desire to overdramatize - so that there is hardly room anywhere – except in technical discussions – for unbiased and unemotional evaluation. Yet, if reforms are not understood, they cannot be shared, if they are not shared any attempt to nullify them as soon as possible will find sympathetic ears in all political parties (box 1 offers examples of reform reversals). On the contrary, when people understand that their pension "entitlements" were, at least in part, built on debt to be honored by future generations, i.e. by their own children and grandchildren, they can become less hostile to pensions restructuring.

Box 1. The weight of public opinion: partial or total reversals of pension reform attempts in Europe – 2004-2014

Italy. *Reversal in 2008 of the reform adopted in 2004 to improve the pension system's sustainability.* An agreement reached by the Government and the Trade Unions in July 2007 prevented the indexation to life expectancy mechanism from becoming effective, at the beginning of 2008 (this would have sharply increased the retirement age. A much smaller increase in pensionable age was instead introduced

France. *Retirement age moves back and forward* In 2010 the government raised the retirement age, from 60 to 62 (to be reached by 2018, therefore at a rate of four months per year). A partial rollback was introduced in 2012 by restoring the possibility to retire at 60, for early starters who had started working at age 18-19 and had paid 41.5 years of contributions, (More than 110,000 people took advantage of this reversal). In December 2013 access conditions to retirement were restricted again and payroll tax rates increased. According to the Council of the European Union (Recommendation 2014/C 247/09) this recent measures *"will only halve the system's total deficit to some 0,5% of GDP by 2020".*

Germany. *A rethink in the land of reforms.* The pension reform approved by Parliament in May 2014 (as part of the Grand Coalition agreement signed after the latest political elections) relaxed the access conditions to early retirement to 63 years of age or even, in some cases, to age 61 for certain groups of workers. A pension supplement was also included for parents of children born before 1992 (about 9.5 million workers). This law rolled back the reform, introduced in 2007, that had introduced gradual increase of the official retirement age by two years to 67 between 2012 and 2029. The Council of the European Union (Recommendation 247/05, July 2014) warned that the "*reform puts an additional strain on the sustainability of the public pension system and is planned to be financed by a higher pension contribution rate".*

Poland. *State versus private pensions.* On December 2013, Parliament voted to redirect part of the contributions paid into private pension funds into the state's Social Insurance Institution (ZUS). This is a sharp reversal of the 1999 reform when the Polish pension system was re-shaped in favour of the second pillar and workers were given freedom to choose where to invest a part of the social contributions. When this reform took effect in February 2014, 51.5% of open pension fund portfolios (€37 billion as at 6 March 2014) were transferred to the ZUS.

6. Lessons from the 2011 Italian pension reform

Italy started her pension "homework" in the early Nineties. 1992 marks a watershed: before 1992 all changes to the pension system had been in the direction of increased generosity. Since the pension benefits were already overly generous, extremely favorable conditions were applied to retirement ages, pension guarantees, and benefit indexation[8].

In 1992 a serious monetary crisis, and the exit from the European Monetary System forced the government to reign in public expenditure, and the pension deficit was the obvious target. An NDC system, Swedish style was adopted, in 1995 but social resistance forced an exasperatingly slow phasing in of the new rules, transferring all the adjustment burden on the young generation[9]. This very long transition coupled with swift population ageing reduced the effect on public finances as well as the credibility of the reform and proved to be inconsistent with the sovereign debt crisis that hit the euro area - and in particular Italy - in Summer/Autumn 2011[10].

When the technocratic government took office in November 2011, public finances were near collapse and politics in a stalemate. Financial operators were turning their backs on Italian sovereign debt auctions and the few who took part were demanding exaggerated interest rates, so that interest paid by Italy on its new 10-year bonds exceeded interest paid by Germany on similar type bonds by 500 basis points. This was three times as much as the same difference (also called the “spread”) in October 2014. Italy has on average to refinance public debt amounting to one billion Euros a day of its huge public debt, and its well-tested system for doing so was under massive attack. It is not just rhetoric to say that financial breakdown was around the corner. The possibility that interest might not be paid and that expiring bonds might not be reimbursed was very real; pensions and civil service salaries might have been at risk, while central and local administrations were already unable to pay suppliers, whose claims exceeded 70bn Euros. The plea “*FATE PRESTO*!” (act immediately) that the Italian economic daily *Il Sole 24Ore* splashed on its front page in capital letters on November 16th of that year reflected the common gloomy mood (Fornero 2013).

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[8] The Italian DB formula granted an accrual rate of two per cent of the “last” salary for each year of seniority, which translated into a replacement ratio of 70-80 per cent for the typical 35-40 years of seniority. The basis for pension calculation for the DB fraction of the pension benefit is now an average of the last ten years, but it used to be the very last salary for public employees, with an implicit incentive to ask for, and obtain, a promotion/salary increase in the last month of work.

[9] The new formula was applied entirely only to new entrants, partially (i.e. on a pro-rata basis) to workers having less than eighteen years of seniority while elder workers with eighteen or more years of seniority were excluded.

[10] According to OECD (Pensions at a glance, 2009), Italy stood out, a couple of years before the reform, for: i) a record highs pension expenditure/GDP ratio (near 15 per cent) and its rate of increase in the decade 1995-2005; ii) an excessively long transition period for the implementation of reforms; iii) the burden of adjustments essentially left to young and future generations. The same opinion was given in the IMF Country Report (IMF 2011), which said that despite the reforms, the Italian pension system remained generous and generationally inequitable, given the slow transition to the notional defined contribution scheme, which transfered a large burden of the reform to future generations.

The financial crisis, however, was only one side of the coin. The other was a slow industrial decline that had afflicted the country for about twenty years, reducing Europe's once most buoyant economy to a shadow of its former self. Italy cut its R&D expenditure, got out of high productivity sectors like electronics, chemicals and drugs, concentrating on labor intensive fashion-oriented "made in Italy" products where it encountered increasingly stiff competition from developing countries.

In my new role as Minister of Labor, I was asked to prepare a restructuring of the pension system harsh enough to convince both European partners and financial markets that Italy deserved to be trusted as a debtor, but still sensible enough to get a (reluctant) approval from the majority of Members of Parliament and from public opinion. I had studied pensions systems for more than 20 years; I was now charged with reshaping the Italian one in less than 20 days.

The reform had to be radical, with practically no phasing in period; it had to realize immediate and significant savings in pension expenditure to be automatically increased in the coming years and decades and provide for the demographic transition by reducing the burden on the young and future generations. It had to cancel or drastically reduce the distortions still embedded in the system after twenty years of reasonable but all too gradual reforms. Due to the financial emergency, there was little time for social dialogue, parliamentary debate (the reform was presented to Parliament as a Government decree and approved in a couple of weeks with a vote of confidence) and the transition period that is customary in pension reforms. The absence of a transition period caused a problem to workers already displaced from their job, or in a mobility scheme, in expectation of retiring within a few years, or who had, at some point of their working life, voluntarily left their job expecting pension laws to remain unchanged. The reform established a safeguard clause for 65,000 workers, according to an estimate by the INPS, the national pension office. It turned out later that the number was largely under-estimated: many individual and some collective agreements between workers and employers had been concluded without any formal registration. The press and public opinion lumped all cases together, called this group "Esodati", which refers to a forced exodus from the labor market, and considered all of them as equally deserving to be safeguarded, irrespective of the heterogeneity of their situations and in particular that many of them had voluntarily left their job, often in exchange for a lump sum to be added to their severance pay. In a couple of subsequent provisions, the government added other 65,000, making a total of 130,000 safeguarded workers. The subsequent government further increased the number to almost 150.000.

The reform speeded up the transition to the NDC system by extending to all workers (including MPs), as of January 1st 2012, the DC method of benefit calculation. This was very important in order to restore to the formula, still largely unfamiliar to the people and considered “too severe” by politicians[11]. In terms of parametric changes, the reform significantly raised the statutory retirement ages and almost canceled the so-called seniority pensions, awarded on the basis of years of work, almost irrespective of age[12]; it aligned, as of 2018, the retirement ages of women to those of men; it indexed all retirement requisites to changes in life expectancy. To regain some fairness on past excessively generous pensions, it established a “solidarity contribution” on very high pensions[13]; on the other hand and, regrettably, given the country’s critical situation, the reform also had to freeze the indexation of pensions to prices for two years, excluding only pensions under 1,400 Euros per month.

As a result, according to an international evaluation (IMF 2012, OECD 2013c), the Italian pension system is now financially sustainable. Most families had to revise lifetime strategies downwards to take account of the new situation. Despite widespread protests, no general strike was called by the trade unions. The reform not only reduced the implicit pension debt[14] but also challenged the “lump of labor fallacy” (see par 7), an undeclared basis of past pension legislation and still a frequent claim in public debate, claiming that the reform would have reduced the number of jobs available to the young by keeping older workers longer at work. Obviously, the extension of working life requires additional measures to stimulate the demand for older workers, and this is more difficult in a recession.

Political debate concentrated on short term effects and almost disregarded the generational rebalancing in favor of the young. Taking the long view, however, this is the true value added of the reform. The to clearly convey this message of a structural change in both the pension remains for me a cause for regret and was certainly one of the shortcomings of government action.

Short-term effects were certainly not absent. The approval of the “Rescue Italy” decree, of which the pension reform was a fundamental part, resulted in a marked

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[11] A common opinion among politicians, widely reflected in the media, was that the DC formula is good enough for the financial sustainability of the pension system, but delivers “too” small benefits, implying that politics can do better than mathematics. Of course, while “doing better” is possible for workers that would not accumulate enough contributions to have an adequate pension, “doing better” in general only means to increase the implicit pension debt, and to burden young and future generations.

[12] Indeed, seniority pensions as such have been abolished as the system now contemplates, in line with most European systems, only anticipated pensions (with penalization) and old age pensions.

[13] This was later cancelled by the Constitutional Court, who considered the “solidarity contribution” equivalent to an ordinary income tax, ignoring that the DB formula implicitly favors higher pensions and thus realizes a regressive redistribution, favoring high income earners. Regrettably, this decision deprived the reform of one of its most noticeable traits of fairness.

[14] According to the official projections made by the Ragioneria Generale dello Stato (the Central Government Budget Office, in charge of managing public accounts), the net saving from the pension reform will amount to 80 billion Euros in the decade 2012-2021. See RGS (2012).

reduction of the spread and was a fundamental factor behind the European Commission to close (in May 2012) the infraction procedure for excessive deficit, opened in 2009.

7. A new paradigm: i. Reform; ii. Inform and iii. Educate

In Italy as in other European countries, the task of restoring sustainability, adequacy, credibility and fairness to the pension system is not finished yet and it is not just a technical matter. The (remaining) technicalities of reform implementation must be complemented by cultural change, supported by unbiased information and by economic-financial education of the kind described above. Reforms require a solid backing by public opinion, which is possible only if people are informed and economically and financially literate.

It is thus important to adopt a new paradigm that can be summarized as follows: *reform, inform and educate*.

1. **Reform.** The reform process has to be completed, according to consistent insurance principles, coupled with a fair amount of transparent redistribution in the right direction, i.e. from richer to poorer. Adequate old age insurance, inclusive not only of retirement income but also of long term care in old age, requires individuals to be safeguarded against market and personal failures affecting their pre-active and active life: lack of education, unemployment, sickness and invalidity After seven years of recession, the main challenge to the pension system remains, therefore, the way in which the labor market actually works. Dynamic and inclusive labor markets are the best premises for adequate pension systems. Pension and labor market reforms have to be better integrated and long term employment-enhancing policies, such as apprenticeship and lifelong learning, must be given more importance and more resources. Moreover, in a transparent system, privileges are more difficult to conceal and true solidarity easier to be implemented.

2. **Inform**. The accumulation of pension wealth is a long and complex endeavor. Workers must have an idea, as precise as possible, of where they stand on pension wealth and retirement options so that they can make clear, rational retirement choices. This knowledge is essential - particularly in DC schemes - for individual planning, e.g. to decide whether to retire sooner or later, consume more or less; whether to participate in a supplementary pension plan, decide on how to invest this part of their pension wealth. This should help avoid mistakes/big disappointments such as shortfalls of actual versus expected pension benefits, and ensuing painful lifestyle adjustments. Information is also fundamental for the reforms' political sustainability: as shown in par. 5, widespread misinterpretation of reforms will lead to attempts to reverse them. The reluctance of governments and political parties to provide information for fear of losing consensus has to be overcome, possibly with the aid of international institutions who obviously do not share from the same fear.

3. **Educate.** Understanding the basic elements of reforms requires not only good information, but also EFL. Research has shown widespread financially illiteracy.

Citizens must be made aware that pensions are not the result of the generosity of politicians, but of the efficient management of their own savings; that they accumulate their own "pension wealth" – through their own "notional" account in an NDC system - by paying contributions (as part of the labor cost) on their labor income: each euro paid into their "retirement account" will contribute to determine the sum out of which their pension benefit will be paid and the longer the period, the higher the accumulated wealth. They should also be aware of the direct correlation, for a given amount of pension wealth, between the benefit and the retirement age. The knowledge of compound interest is crucial to the understanding of how pension wealth accumulation works.

Another fundamental concept is that the postponement of retirement contributes twice to benefit increase: through more contributions and lower expected longevity as a pensioner. The core concept of risk diversification could help people make up their minds about participating in a pension fund, as a way to combine both an unfunded and a funded pension, as they are characterized by different risk/returns combinations (see par 4). People should also be aware that an efficient pension system is certainly not unsuited to solidarity. On the contrary, efficiency and transparency support the right redistribution while lack of transparency is usually associated to privileges. It is important to try and convey these essential concepts in a few simple messages.

Lack of EFL is also at the basis of erroneous beliefs, such as the "lump of labor fallacy" so that early retirement is thought to be a good policy to increase the employment of the young. In some countries, this misconception has long dominated the public debate in the field of pension reforms and brought about policies directed at reducing the retirement age. This belief creates hostility towards the reform and obscures its generational rebalancing by making people believe that if retirement age is postponed there will be fewer opportunities for youths (and/or for women). However, while there is no theoretical ground for the claim, empirical analysis shows just the opposite: i.e. the employment rate of the young is higher where the (average) retirement age is also higher.

The concepts of tradeoffs and their time dynamics, pervasive in our life, should also be part of EFL: there is a cost to be paid for any benefit and the two are not necessarily synchronized. Choices today have effects in the future. This is also reflected in public budgets, so some basic knowledge of public finance (concepts of deficit and debt) should be included in EFL. This means, of course, that politicians and the media, should also be economically and financially educated.

8. Information and EFL : an alternative to both paternalism and populism

The mix of technical and political aspects in economic reforms varies according to each country's situation, with the former tending to dominate in emergencies, since financial constraints become more stringent. In an emergency, the politicians' degrees of freedom are reduced and policy measures from either right or left tends to look alike. Political parties hate having to adopt them as they imply comparatively higher present sacrifices in exchange for uncertain, collective future benefits. Populist temptations increase, with the offer of relatively easy and painless solutions to complex problems, and these certainly find a more fertile ground in less literate citizens.

If reforms only consisted of rigid obligations and prohibitions, technocratic governments could then be a viable *ad hoc* solution. Technocrats could be temporarily "hired" to make the reforms, which Parliament would approve "out of necessity", so that the former would take all the blame for the current sacrifices, while leaving to politicians, returning to power after the crisis, to reap the harvest of future benefits.

Very often, however, reforms involve a complex incentive structure, meant to change individual behavior in order to make it more inter-temporally consistent. They thus need a solid backing by the public opinion. A question thus arises: how can we expect people to be able to look into the future when they have their hands full of present-day losses and worries? More specifically: how can public opinion be convinced that reforms involving sacrifices are generally not a choice but a necessity, an indispensable step to regain the prospect of a worthwhile future for the young generations? How can people be persuaded to accept that, with reforms, *"things get worse before they get better"*[15]*?*

A credible answer can hardly come from the same political parties who lacked the courage to devise and implement the reforms. It can instead come from citizens' personal conviction, stemming from knowledge and awareness. Information and EFL have the potentiality to create this knowledge and awareness.

It cannot, of course, be expected that educated citizens are the successful answer to all economic and financial problems; "nudges" can encourage people to make wise choices (Talher and Sunstein, 2014). Politics will thus always be needed. EFL can help improve politics by providing antidotes to the populist tendencies in difficult situations. EFL is neither an easy solution nor a miraculous one, but a firm basis for high social payoffs.

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