

# Pension indexation for retirees revisited – Normative patterns and legal standards

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## Abstract

Maintaining adequate pension levels throughout the entire retirement phase is a persistent challenge in old-age protection. Most public pension schemes in OECD (Organisation for Economic Co-operation and Development) countries provide for some form of indexation in payment. These mechanisms have been object of frequent revisions for different purposes, in particular across Europe. This article explores the social and financial policy objectives linked to standard indexation parameters in public pension schemes, and offers a rough taxonomy of additional factors used to modify traditional indexation arrangements, with a special focus on changing rules and practices adopted in the European Union (EU) area after the 2008 international economic and financial crisis. Analysis suggests that early responses were mainly driven by cost containment ideas, whereas more recently, a subtle shift towards adequacy-oriented interventions can be noticed. The article argues that restrictive pension indexation rules in combination with overall retrenchment of public pension provision fail to take into account the increasing duration of retirement and corresponding pension erosion. Such failure calls into question not only income security during retirement as a major objective of old-age pensions but also compliance with international standards of social security set by the International Labour Organisation (ILO) and the Council of Europe. More social policy research is needed in view of the increasing complexities of indexation rules, as shortfalls in indexation can cause significant impairment in the living conditions of older pensioners, predominantly women.

## Keywords

Indexation, minimum standards, pension adequacy, pension reform, social law

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## Why indexation mechanisms matter

The way in which pensions in payment are indexed is an important feature of public pension systems, with fundamental effects not only on sustainability but also on long-term adequacy of pensions in payment. In Europe, adequacy of old-age pensions has returned into a major social policy concern (European Commission, 2018a, 2018b). After an extended period of pension retrenchment reforms which had focused almost exclusively on the financial sustainability of public pension systems, adequacy considerations seem to be gaining ground again. New emphasis is given to the effectiveness of public pension schemes regarding their protective functions, namely, providing income security in old age as well as preventing or alleviating poverty risks during retirement.

Up to a recent past, adequacy debates referred mainly to the decline of replacement rates of the initial pension after retirement. However, poverty risks are not only linked to cuts in entry pension levels. In many countries, older pensioners, in particular those aged 75 and over, are at a higher risk of poverty and have lower incomes than younger retirees. This can be attributed to various social factors, including insufficient pension indexation. Although the indexation mechanism is a highly sensitive issue for the long-term adequacy of pensions in payment and their ability to prevent poverty among older pensioners, indexation rules are rarely a prominent topic in social policy debates. Very few studies have been dedicated to indexation issues (Piggott and Sane, 2009; Whitehouse, 2009) or explicitly included indexation rules into broader policy reform analysis (for some discussion, see, however, Hinrichs, 2015; Immergut et al., 2007; Natali and Stamati, 2013). Global reform debates have centred around the parametrical and structural reforms prompted by the challenges of ageing societies, with a strong emphasis on the financial sustainability of pension systems and on systemic issues, such as the establishment of multi-pillar systems and the shift towards private, capital-funded pension schemes (see, for example, Barr and Diamond, 2009; Drahokoupil and Domonkos, 2013; Ebbinghaus, 2015; Holzmann, 2013; Orenstein, 2011; Schwarz and Arias, 2014). Changes to indexation rules for pensions in payment – understood as an automatic adjustment of pension benefits to prices or wages to ensure income security throughout retirement – were often overlooked (Brimblecombe, 2013). The scant attention for the long-term guarantee of adequate pension benefits may be primarily due to a general consensus on the principle that benefits in payment should be indexed to some extent, and to the idea that indexation is a more technical issue, to be left to actuarial experts. Yet the practical relevance of adequate pension indexation rules for the living conditions of older pensioners and their income situation in view of increasing life expectancies and a tendency towards protracted pension payment terms can hardly be overestimated.

How income security is achieved and how different indexation options impact income security at higher ages depends to a great deal on the structure and design of the different national pension systems (for a description of pension systems in the European Union [EU], see European Commission, 2018b): Public pension schemes can be basic, flat-rate pensions, either means-tested or universal, providing benefits that depend on a certain vesting period (contributions or years of residence) and are usually financed out of general tax revenue. They can also be organised as contributory social insurance schemes aimed at income replacement, so that the pension benefit depends largely on past

earnings and contributions. A few countries have introduced pre-funded mandatory schemes where contributions are invested in pension funds managed by private administrators. Occupational pension schemes as well as voluntary saving schemes where pension funds or private insurance companies pay out a lump sum or annuities at retirement are out of the scope of this article.

The reason why indexation issues have reappeared on the social policy agenda is linked to several factors. On one hand, most industrialised countries are facing persistent and unprecedented increases in life expectancy for men and women (Organisation for Economic Co-operation and Development [OECD], 2017a: 120f; European Commission, 2017) accompanied by more extended retirement and pension payment periods. Between 1970 and 2014, the average duration of pensions in payment in Europe rose from 15 to 22 years for women and from 11 to 18 years for men, with peaks of over 28 years for women and over 24 years for men in France and Italy (European Commission, 2018b; OECD, 2017a). On the other hand, European countries enacted pension reforms in order to improve financial sustainability in view of rapid population ageing. The sustainability-driven pension reforms in earnings-related pension schemes cut down pension levels and reduced the so-called replacement rate which is defined as the initial pension expressed as a percentage of the last wage of the beneficiary. It is a standard indicator measuring which percentage of purchasing power is retained on reaching retirement. Pension reforms tightened eligibility conditions, for instance, by shifting the pensionable earnings reference to a full or close to full career parameter instead of a limited number of best years. Further cutbacks on the initial level of old-age pensions are due to various sustainability mechanisms or automatic balancing factors (European Commission, 2017: 148), including demographic factors that tie the pension term or pension access age with the increases in life expectancy, for example, in Italy, Latvia, Norway, Poland and Sweden, or with changes in the old-age dependency ratio, for example, in Germany, Portugal and Sweden (OECD, 2017a: 25). The overall outcomes of these retrenchment policies are smaller entry pensions for a growing number of pensioners. Other reform elements, such as raising the standard retirement age and incentives to extend working lives, may increase pension adequacy for some pensioners. But this barely compensates for the overall reduction in the scope of protection by public pension schemes.

In order to safeguard long-term adequacy of the pension benefits, lower entry pension levels therefore require a stricter focus on adequate indexation rules, as insufficient indexation bears the risk of substantial pension erosion and massive loss of purchasing power over time. Older pensioners aged 75 and over are at a higher risk of poverty and have lower incomes than younger retirees (European Commission, 2018a: 15f., 27ff.; OECD, 2017a: 134ff.). Model calculations of the prospective theoretical replacement rates (TRRs) in 2066 of pensions in payment for 10 years – adjusted according to indexation rules for pensions currently in force – showed substantial decline in comparison to the replacement rates of new entry pensions (based on a standard male career), indicating dramatic tendencies of pension erosion in several EU countries. The largest pension erosion, of 10 percentage points or more, has been projected for Portugal, Hungary, Belgium and Austria (European Commission, 2018a: 121).

Neglecting adequacy of pension indexation is undermining income security at older ages, especially among low-income pensioners as a social group of high vulnerability.

Whereas younger old-age pensioners may supplement a low pension by economic activities, the capacity to generate additional earned income is likely to decrease at higher ages, especially beyond the age of 75 or 80. Although, on average, poverty risks may have shifted from the old to the young, poverty rates among the elderly aged 75+ are still high in many countries, including Japan, Latvia, Turkey, Israel, Estonia, the United States, Switzerland, Australia and Mexico, with a peak of almost 60% in Korea (OECD, 2017b: 121). In almost all OECD countries, poverty rates (defined as half of the median-equivalised income) among the age group 76+ are higher than for the elderly aged 66 to 75. This result is confirmed in the context of EU data which use a threshold of 60% of the national median-equivalised disposable income after social transfers (European Commission, 2018a).

The poverty risks among older pensioners can be attributed to various factors. In earnings-related pension schemes based on social insurance contributions, insufficient pension income can result from contribution gaps or largely incomplete and insufficient employment biographies (due to part-time work, low wages, reduced earnings capacity, etc.). But one major factor for lower pension adequacy among older pensioners is insufficient pension indexation. Poverty risks are affecting especially pensioners with low initial pension benefits. As female pensioners tend to have lower initial pensions than men on average, insufficient indexation adds to the poverty risks associated with persistent gender pension gaps in many EU and OECD countries (European Commission, 2018a; OECD, 2017b). Moreover, increased poverty risks are attested for those aged 80+ living alone, another characteristic found most often among women (OECD, 2017b).

Against this background, this article emphasises the importance of appropriate indexation mechanisms for statutory pensions in payment as part of the pension promise, with a special focus on the objectives of different indexation mechanisms ('Objectives of indexation rules' section). The 'Indexation parameters for pensions in payment' section explores the evolution of indexation patterns, including some newly emerging factors and their implications. A closer look on the changes affecting indexation rules across the EU after the onset of the global financial crisis will shed some more light on the implications of different adjustment rules ('Changes in European indexation rules to match the 2008 crisis' section). The 'International minimum standards for pension indexation' section discusses possible infringement of international legal standards for the adjustment of pensions in payment, as set by International Labour Organisation (ILO) and Council of Europe instruments. The 'Concluding remarks' section emphasises the implications of different indexation mechanisms for statutory pensions in payment in the context of overall pension reforms, and suggests further research on the complex challenges linked to the provision of social security throughout retirement.

## **Objectives of indexation rules**

From a historical perspective, the introduction of statutory indexation rules for pensions in payment is not a matter of course. Concerns against automatic indexation rules arose mainly from macroeconomic or budgetary considerations (Whitehouse, 2009). Before the 1970s, few public pension schemes had automatic adjustment for pensions in

payment. High inflation rates following the oil price crisis in the early 1970s were the main driver for indexation arrangements in almost all industrialised countries.

Many countries have experienced periods of dramatical decreases in purchasing power and a rapidly deteriorating real value of pensions in payment. Even low inflation rates can lead to a considerable loss in the real value of old-age pensions over a longer period of time. Indexation rules are thus an indispensable part of public pension policies supporting income maintenance and redistribution as well as alleviating poverty risks.

Although some states have relied on alternative instruments to improve the economic condition of old-age pensioners, such as general subsidies for basic foodstuffs, or individual provision of benefits in kind for basic needs (e.g. in Iran),<sup>1</sup> almost all OECD states seem to consent on the advantages of indexing: It is a mechanism that allows to shift from the political to the legal arena the decision on whether and how to raise pensions in payment. If there are no binding legal rules on indexing benefits in payment, adjustment decisions are left to the overall discretion of governments with uncertain outcomes. However, even when automatic indexation rules do exist, states are not prevented from ad hoc deviations from statutory provisions, either by reducing or suspending pension adjustments or by granting additional uprates to pensions in payment.

In most states, pensions are adjusted according to the two traditional indexes, either prices or wages, or to some combination of both (mixed or hybrid indexing). The choice between price and wage indexing is determined by a variety of policy objectives pursued for the post-employment phase, including distribution policies linked to the pension type in question: While basic pensions are mainly aimed at poverty alleviation, earnings-related social insurance pensions based on past contributions may combine the objectives of income replacement and protection against poverty risks. If contributory social insurance pensions are to be paid for a consistent part of the population, the financial dimension of adjustments can be considerable. For instance, the 2015 expenditure for annual indexation in Spain amounted to 22% of total pension expenditure (down from 30.8% in 2008; Suárez Corujo, 2016).

Depending on the pension promise, pension indexation rules can pursue various goals. A first major objective is to prevent losses in purchasing power over time which is normally achieved through price indexing. A second objective is to allow pensioners to participate in rising living standards of the active population, normally achieved through wage indexing. As wages tend to increase faster than consumer prices (except in periods of massive economic downturn), wage indexing will also maintain purchasing power of retirees. Both indexing mechanisms serve to maintain income security in old age, albeit to a different extent, and help to reduce poverty risks among the very old (Schmähl, 2010). An indexation rule that is lower than wage indexation reduces the pension benefit in relation to average earnings. By contrast, if average earnings shrink while inflation is on the rise, wage indexation would result insufficient to maintain purchasing power over time.

In the past decades, additional objectives have emerged that modify the effects of traditional indexing measures. Earnings-related pension schemes with huge differences in individual benefit levels may pursue redistribution objectives between high- and low-income pensioners, by indexing high pensions at a less favourable rate than lower pensions. Such degressive (or graduated) indexation arrangements are also used to avoid

unaffordable increases in pension expenditure. The objective of controlling pension cost has gained momentum in times of rapid population ageing. In this context, the objective of a fair sharing of financial burdens across generations, and of limiting rising contributions to pension insurance schemes, can explain the emergence of demographic and other sustainability factors built into the indexation arrangements.

Indexation is a forceful leverage to maintain and to improve the real value of pensions, which serves the overall objective of safeguarding income security in older ages. Whether and to what extent this objective is met will depend on how indexation rules reflect a changing economic environment, such as high inflation rates or economic downturn. Economic downturn producing negative developments in the chosen indexes led some countries to adopt special guarantee clauses. France, Italy and Germany have introduced such clauses that protect the nominal value of pensions in payment. However, some downward adjustments have taken place in the past, for example, in Japan (Whitehouse, 2009: 20).

### **Indexation parameters for pensions in payment**

Almost all OECD countries now have legal mechanisms in place to ensure a certain degree of income security during the retirement period. A pioneer in this regard is France, which introduced regulated indexation of existing pensions already in the late 1940s, followed by Germany and the Netherlands in the late 1950s (Whitehouse, 2009: 10). Over time, many countries have shifted from one basic parameter for indexation to another. The rationale underlying these changes included sociopolitical reasons for improving the income position of pensioners, and fiscal reasons for controlling pension expenditure, in particular in response to population ageing. Indexation policies also affect the income situation of older women relative to men. Women's longer life expectancy in combination with lower pension benefits (amounting to an average gender pension gap of about 37% across Europe) suggests that women tend to benefit more from adequacy-oriented indexation mechanisms.

In 1975, pension adjustment regulations existed in only 34 countries. The vast majority of these countries (20) provided for price indexation, just under one-third (11) for wage indexation and three others for minimum wage indexation (Tracy, 1976). Meanwhile, a large number of European countries switched to mixed models combining price and wage indexation, originally introduced by Italy, Norway and Uruguay (McArdle, 1978). The variety of solutions reflects different social and financial policy priorities and objectives.

At a first glance, price and wage indexation as the traditional benchmarks may appear to be clear, yet in terms of their configuration in detail, complexities rapidly turn up. Many countries have modified the traditional benchmarks by adopting additional factors, conditions and alternative solutions. As analytical research on these complexities is still missing (Piggott and Sane, 2009), only some general implications of statutory choices in indexing mechanisms can be pointed out.

#### ***Price indexation***

Indexing to prices relates to changes in the cost of living. This traditional benchmark, usually based on the Consumer Price Index (CPI), is the most frequently chosen form of

adjustment internationally (among others, by Australia, New Zealand, Canada, the United States, Israel, Korea, Brazil, Chile, Colombia and Mexico) albeit somewhat less by European countries (European Commission, 2018b; Mutual Information System on Social Protection [MISSOC], 2018; OECD, 2016: 164). In terms of fiscal burdens, price indexing is considered as the most economical option and a useful leverage for relieving the pressure of adverse demographic change on the financing of pension systems (Disney and Johnson, 2001). It can produce substantial savings in the long run, with relatively little visibility in the short term (Bonoli, 2000). However, in periods of low inflation price indexation may trigger declining benefit levels, with pensions lagging behind wages. CPI indexing thus tends to widen the gap between the actual benefits and real wages over the duration of retirement. As the gap gets wider the longer the retirement period lasts, it will affect predominantly women who are overrepresented among the eldest group of pensioners. Financial constraints led several European countries to switch from some kind of wage indexing to pure price indexation (Italy in 1992, France in 1993, Austria in 2004).

The design of price indexation as basic parameter also raises the question of what the appropriate basket of goods should contain. In practice, there are some variations linked to price indexing. Most countries use a single CPI that does not take into account the particular needs of pensioners, for example, a higher share of energy price expenditure. Some countries switched to a modified CPI to adjust pensions. Belgium, for example, excludes tobacco, alcohol and petrol, while France only excludes tobacco from the CPI relating to pensioners. The exclusion of these items implies an attempt towards cost saving based on moral considerations rather than on age-based consumption needs. Whether consumption of the elderly differs significantly from the general population is still controversial and may depend also on the age, the housing condition, the availability of health care and other services for the elderly. A modified CPI for retired households is still not very common, albeit this option has gained some attraction most recently (see below).

### *Wage indexation – a rare species?*

Under the assumption that earnings tend to grow faster than prices, wage growth indexing is usually leading to more consistent adjustment outcomes than price indexing, or than any mixed model. As wage indexing follows changes in living standards of the active population, it allows retirees to participate in productivity growth of the community. It is usually the more costly indexation arrangement, except in times of economic downturn with shrinking wages, vast sectors of low-income workers and average earnings lagging behind inflation.

The choice of the appropriate wage index as a benchmark for the evolution of the general living standards is more complicated than the price index. Most countries are using average wages, but there are numerous variations, including conventional wages (from collective agreements), means or median wages, gross or net wages, or wages subject to mandatory social security contributions or wages in specific sectors of the labour market. The implications of different options can be substantial, especially between gross and net wages. Indexation on gross wages is considered to be the most

costly and also the least fair in terms of intergenerational equity, as active workers have to support higher pension expenditure and will face increasing contribution rates. By contrast, shifting from gross to net wages implies that increases in contributions will automatically entail lower pension benefits, resulting in greater burden sharing between pensioners and active workers.

From a social policy perspective, linking basic or minimum pensions to wages is consistent with the objective of poverty alleviation aimed at preventing relative poverty and not just mere survival. Accordingly, wage indexation is prevailing in non-contributory and contributory basic pension schemes: The Danish national pension (Folkepension) is adjusted to the increase in wages of the 2 preceding years (minus an allocation to the social security reserve fund if the adjustment is more than 2%); the Dutch basic pension is adjusted twice a year according to the average development of wages set in collective agreements (contract wages). Ireland is a special case as one of the few countries within the EU without any legislative commitment to index the contributory state pensions. But over many years, successive governments have agreed to increase the basic pension benefit by the rate of the average earnings growth (or more) in the context of annual budgets. This informal indexation has insured that pensioners' living standards will not fall behind the general living standards of workers throughout retirement (European Commission, 2018b).

By contrast, in contributory pension schemes, the exclusive use of wage developments as the basis for pension adjustments in statutory pension insurance is an exceptional approach. In the EU context, wage indexation without any link to price indexation is currently found in employment-related pension schemes in Germany (modified by additional cost-mitigating factors; Roßbach, 2017), Sweden (reduced by 1.6 percentage points) and Norway (reduced by 0.75 percentage points). This development shows that even wage-based indexation is now linked explicitly to notions of sustainability, albeit with somewhat more emphasis on intergenerational equity. In the Netherlands, quasi-obligatory supplementary occupational pensions are usually adjusted to wages although there is no legal obligation to do so. In the United Kingdom, indexation to wages is one of three possible options (so-called triple lock, see below). Hence, a vast majority of EU countries are not committed to adjust pensions in payment to increasing living standards in a consistent way (European Commission, 2015a: 60).

Outside the OECD area, some Latin American countries preferred wage indexation or comparable parameters. In Argentina, old-age insurance pensions used to be adjusted according to two alternative wage-related indicators (whichever parameter was more favourable): changes in the collection of social insurance contributions and to changes in the salary index of the National Statistical Office or a special wage index (the average wage subject to social contributions of workers) of the national social security system (Law No. 24.241/2009, in force up to the end of 2017; Bossio, 2014: 35; OECD, 2014: 72).<sup>2</sup> In Uruguay, pension indexation is based on the Median Salary Index since 1989 (Murro, 2014: 171).

### *Mixed models combining price and wage indexes*

Across the EU, a majority of countries have opted for mixed indexation models with some combination of price and wage indexation. These mixed models present huge



variations as to the relative weight of either index. The rationale of mixed indexation models is to profit from the advantages of both benchmarks while limiting their inherent disadvantages. A typical example is Switzerland where pensions are adjusted every 2 years according to the arithmetic average of changes in wages and prices. To safeguard purchasing power, early adjustment takes place when the CPI has increased by more than 4% in 1 year, suggesting a slight precedence of CPI growth over wage growth.

Most mixed models have deviated from the Swiss model of a 50/50 share and give more weight to price indexation, for example, by providing full price indexation topped up by some wage indexation at a reduced rate. This combination not only allows for pension adjustments above pure inflation compensation but also limits the costs of wage indexation, as, for instance, in Belgium (price indexation combined with ad hoc adjustments to living standards by collective agreements). The indexation of most contributory earnings-related pensions in Europe is thus above the level of a mere price indexation, whereas exclusive wage indexation has lost significance (OECD, 2017a: 91).

### *Additional factors, elements and conditionalities in indexation arrangements*

To a growing extent, European countries have integrated modifying factors or conditionalities to their indexing arrangements. The underlying rationale is to limit or mitigate the impact of the chosen index parameter in order to support financial sustainability or inter-generational equity of the pension scheme. This type of reform can be identified as part of more general retrenchment policies, associated with population ageing, but it has spread more visibly in the context of the 2008 crisis.

Thus, some pension schemes with a price indexation mechanism will fully adjust pensions to the inflation rate (or above a certain percentage of the inflation rate) only under specific circumstances linked to sustainability, namely, during periods of gross domestic product (GDP) growth: Greece has linked indexation to 50% prices and 50% of GDP, limited by a maximum indexation of 100% CPI growth. Portugal's indexation formula of the 2006 pension reform involves CPI inflation, real GDP growth and pension levels. If GDP growth is below 2%, pensions are indexed to the past 12-month-average CPI (excluding housing). A slightly different approach can be found in Hungary where price indexation (albeit calculated from a special pensioners' consumer basket) can be topped up by an extra premium in years of GDP growth of more than 3.5%, under the condition that the state budget is in balance (European Commission, 2018b). Some countries link conditionality within the indexation mechanism directly to the revenue or budget of the pension scheme. Luxembourg, for instance, has CPI indexation, with additional increases if the revenues from pension insurance contributions show a surplus (Caisse Nationale d'Assurance Pension [CNAP], 2018: 20). Similar concerns, exacerbated by financial constraints resulting from the 2008 crisis, may explain the specific indexation conditionalities linked to a balanced pension budget, as those adopted in Lithuania in 2018 (European Commission, 2018b; Law No. 1-549 of 29 June 2016). Linking indexation to the sum of social insurance contributions works as a safety valve for scheme consolidation, and constitutes a rather radical solution in terms of pension adequacy, as it shifts the

risks associated with late labour market entries, expansion of low wage sectors, precarious jobs, unemployment and so on, on to the retirees.

By contrast to such cost control elements, some pension schemes have implemented alternative options enhancing adequacy of pensions in payment by offering ‘most-favourable-solution’ choices. Within the EU, the United Kingdom is known for one of the least generous state pension systems in the developed world. Under statutory indexation rules, the basic state pension and the new state pension should be indexed at least in line with earnings. Based on a government commitment in budget laws, the United Kingdom has adopted a new model known as triple lock, providing for three variants of indexing pensions in payment as of 2011: The state pensions are uprated alternatively on CPI growth, average earnings growth or on the guaranteed minimum rate of 2.5% each year, whichever leads to a higher increase. Although the triple lock is not enshrined in law, it has considerably increased the real value of the basic state pension, especially in comparison with earnings (European Commission, 2018b). The motivation of this approach is thus to improve adequacy of state pension income.

A third modifying element in national indexation mechanisms is the differentiated adjustment according to pension levels. This option combines distribution policy with fiscal policy aspects, as the example of Italy shows. Already the Italian pension reform of 1975 had introduced an indexation mechanism for pensions in payment that raised low pensions to a proportionally greater extent than higher pensions (Klammer, 1997: 181f.). From 1983 onwards, only pensions up to the amount of three minimum pensions have been indexed at the full rate, while higher pensions were indexed at a lower rate (90% or 75%). The differentiated rates are not only a means to redistribute pension income but serve also as a saving measure in light of very generous calculation rules in the past that account for wide differences in monthly old-age pension benefits up to the present: The 10 highest old-age pensions in the statutory pension insurance system in 2013 ranged between €41,700 and €91,300 per month (European Commission, 2015b: 162). As there is still a consistent number of so-called ‘golden pensions’, Italy has not only maintained a differentiated pension adjustment formula but has even refined the degressive graduation mechanism. Reduced indexation of higher pensions entails a general alignment of pension levels over time and is an instrument of cost containment which should not affect pension adequacy. Portugal is another country that used differentiated indexation rates according to pension level for contributory old-age pension, with more favourable rules for the lowest pensions (MISSOC, 2018; Whitehouse, 2009: 32).

## **Changes in European indexation rules to match the 2008 crisis**

In times of financial crisis, many countries resort to short- or even longer term derogations from the general indexation mechanism. Suspension of regular indexation rules (‘freezing’ nominal pensions) or reduced (partial) indexation may result in drastic losses in purchasing power of pension income and risk to erode pension adequacy among older retirees, in particular if those measures continue over a longer period of time. Suspending

indexation rules in a period of crisis is not a new phenomenon but has been a common practice in times of economic pressure long before the 2008 crisis (Whitehouse, 2009: 14). The changes adopted after 2008 can be divided into two types pursuing different objectives: (1) fiscal policy measures to consolidate pension budgets and to reduce pension expenditure, and (2) social policy measures aimed at supporting adequacy and alleviating poverty risks. While austerity-driven interventions prevailed in the early crisis period, a reversal of this tendency and even a slight shift towards more adequacy-oriented solutions during the post-crisis period (2014–2017) can be noticed (European Commission, 2018a: 99ff.).

### *Temporary interventions aimed at cost containment (2009–2015)*

Due to the need to increased cost containment during the economic and financial crisis, consolidation measures were generally prevailing up to about 2015, with a clear focus on limiting and/or suspending pension indexation. A total of 15 EU countries decided to reduce the real value of pensions through emergency measures, in general by ‘freezing’ pension benefits in payment or by partially limiting the standard indexation mechanism, including Belgium, Bulgaria, the Czech Republic, Greece, Finland, France, Hungary, Ireland, Italy, Latvia, Portugal, Romania, Slovenia, Spain and Sweden (European Commission, 2015a: 176). In times of severe budgetary constraints, policy makers often rely on such interventions in order to achieve rapid short-term savings in pension expenditure. The volume of savings in pension expenditure can be significant, while the effects on purchasing power become visible only in the long run. At any rate, non-adjustment of pensions in payment is less intrusive and often less controversial than direct cuts to the nominal value of pensions in payment.

However, many EU countries were constrained to adopt extended ‘freezing periods’ that lasted for more than 2 years, for example, Latvia 2009–2013, Greece 2010–2014, Romania 2010–2012, Portugal 2011–2015 (European Commission, 2018a; Hinrichs, 2015). The adequacy of pension levels for older pensioners may be seriously hampered in case of protracted temporary suspension of the ‘normal rules’ of pension indexation (European Commission, 2018b).

Emergency interventions that continue for several years undermine the pension promise. Moreover, they bear the risk that pensioners seek judicial redress. Frequent repetition of cutting or limiting pension adjustments can be at odds with constitutional law as in the case of Italy with its long tradition of restricting pension adjustments (cf. Corte Costituzionale No. 316/2010). While previous cuts affected only better-off retirees, the 2011 pension reform adopted a more drastic suspension of pension adjustments, which exempted only pensions up to three times the minimum pension (gross pension of about €1400). The Italian Constitutional Court ruled that this massive cut was unconstitutional and called on the government to pay the withheld adjustments (Judgement No. 70 of 30 April 2015). Due to financial constraints, the Italian legislature granted only partial relief which left some pensioners without indexation (Decreto Legge No. 65/2015), yet further court actions in Italy remained unsuccessful (Judgement No. 250 of 25 October 2017; Ordinanza No. 96 of 11 May 2018). In 2018, a trade union for retirees lodged a collective

complaint before the European Committee of Social Rights alleging violation of the European Social Charter [ESC] (Complaint No. 167/2018).

As of 2015, many EU countries became aware that indexation suspension and less favourable indexation formula during the economic crisis had contributed to a persistent decline in the real value of pensions. Several countries therefore lifted the freeze on pension indexation, granted ad hoc payments to compensate for the losses in pension income or took other measures to reverse or mitigate a negative impact of cutbacks on indexation rules: While the regular adjustment would have led to a pension reduction of 3.5% in Sweden, the government could avoid most of the benefit cuts by partially reducing taxes on pension benefits in 2010 (European Commission, 2015a: 176). France had reduced the pension adjustment by lowering the relevant CPI (deduction of 1 percentage point), but introduced a clause to protect the nominal value of the pension benefits in payment (OECD, 2017a: 34). The Slovak Republic used a higher adjustment rate of 2% in 2017 instead of the regular indexation, the latter of which would only have resulted in an increase of 0.3% (OECD, 2017a: 25). Extraordinary uprating to compensate the loss of purchase power has been practised, for example, by Bulgaria in 2013, Portugal in 2017 and Slovenia in 2016/2017 (European Commission, 2018b).

### *Shifting towards less generous indexation rules*

In the post-crisis period since 2015, states have been resorting also to permanent changes instead of temporary interventions. In several cases, this implied a shift towards less generous indexing options.

A variety of such austerity-oriented reforms to indexation arrangements can be found across the EU: From 2016 onwards, Italy introduced new calculation modalities for the degressive indexation of higher pension benefits. While the traditional degressive adjustment rates had been applied only to the corresponding pension bands, the revised rules extended degressive adjustment rates to the whole monthly pension amounts exceeding a certain income limit: While modest pensions up to three times the minimum pension continue to be adjusted to 100%, higher pensions are indexed only in part – for instance, at rates descending in four steps from 95% to 45% in 2018, and in six steps from 97% to 40% (the latter rate being applied to pensions of more than nine times the minimum pension, €) as of 2019. Due to the low inflation rate in 2017–2018, the staggered indexation measures had not impacted pension levels significantly, but most recent reforms for 2019 have increased the differentiation according to pension level.

Other countries, too, tended to downsize indexation over time: Finland had switched from wage indexation to a mixed model already by 1978, later changing from a 50%/50% weight to 80% of CPI and 20% of wage growth. In the wake of the 2008 crisis, Finland further reduced the indexation rate for work-related pensions to 0.4% (instead of previously well over 1%) of the basic parameter (European Commission, 2015b: 329). France has postponed the date of the annual adjustment from April to October (OECD, 2017a) and shifted to an under-indexation – 1% below the inflation rate – in occupational pension schemes, based on the inter-professional agreement of October 2015 (European Commission, 2018b). Slovakia is shifting from a mixed indexation model to a less favourable price indexation as of 2018, albeit mitigated by some minimum adjustment guarantees (European Commission, 2018b). The 2013 pension reform of Slovenia shifted

indexation from wage growth to a less generous mixed model (60% of salary growth and 40% of price increases), but further reform proposals point towards mere inflation compensation (Macjen, 2016) which will exclude pensioners from increasing living standards. In Greece – the EU country most heavily exposed to external pressure from international economic organisations – current and future pensioners have to face drastic cuts in pension income, including a permanent retrenchment in indexation rules in 2016, after several temporary cuts (European Commission, 2018b; MISSOC, 2018): The reform introduced new indexation rules for primary pensions in payment, which will become effective as of January 2022. Annual indexation is based on a coefficient, 50% of which is determined by the variation of GDP and 50% by the variation in the CPI of the preceding year, but the variation in CPI may not be exceeded (Art. 14, Para. 3a, Act No. 4387/2016). In addition, pensions are adjusted every 3 years under the condition that long-term sustainability of the social security system is ensured (Art. 14, Para. 4, Act No. 4387/2016). Moreover, indexation of supplementary pensions under the National Social Security System (financed exclusively by contributions) is suspended at nominal values until 2021, while future adjustments will be precluded if the balance between expenses and revenue of the pension fund is negative or less than 0.5% of contributions (Law No. 4336/2015). The limitations inherent in setting the CPI as the maximum level for the standard indexation while linking additional increments to a conditionality test emphasise the overall focus on sustainability, which is also underpinned by various direct cuts for all pensions in payment (of up to 18%) as of January 2019 (European Commission, 2018b). Finally, Romania has adopted legislation to shift from the current mixed model (100% of average inflation rate and in addition 50% of the real growth of the average gross salary) to a less generous indexation, only in line with prices by 2030.

In 2013, Spain experienced a hard downward shift in pension indexation rules by linking indexing to severe conditionalities of financial sustainability, as part of a comprehensive pension retrenchment reform (Act No. 23/2013 of 23 December 2013). The reform involved a complete departure from the traditional price indexing that had been introduced after the years of high inflation in the 1990s. The 2013 reform created a new pension adjustment index *sui generis*. The adjustment was limited by a minimum of 0.25% and a maximum of 0.5% of the CPI (Suárez Corujo, 2014: 293f.). The new formula abolished the goal of maintaining the purchasing power, and made indexation conditional on the financial stability of the pension system instead. According to estimates, the revised pension adjustment index would have led to an 11% decline in pension benefit levels over the course of a decade (Suárez Corujo, 2017: 97) and to shrinking replacement rates (European Commission, 2018b: 92). In 2014–2017, a substantial loss of purchasing power was prevented due to a very low inflation rate. However, in 2018, pensioners were granted additional increments (amounting to 2.75% for minimum pensions and 1.35% for other pensions). Moreover, the new government elected in 2018 decided to correct the 2013 adjustment formula in order to safeguard purchasing power of pensioners and to avoid poverty risks among older pensioners.

### *Shifting towards more adequacy-oriented indexation rules*

Meanwhile, several countries have shifted towards post-crisis improvements in indexation regulations aimed at counterbalancing sustainability-driven measures. A very

cautious measure to this end was the introduction of a guaranteed minimum flat-rate indexation in Slovakia, so that pensions in payment can be increased either on the inflation affecting pensioner households or by a given fixed amount (European Commission, 2018b). The Czech Republic chose to adopt a series of subtle adequacy-oriented measures in 2016–2017 to improve income adequacy at older ages (European Commission, 2018b). The first change allowed the government to top up existing pensions if the regular indexation formula would increase pensions by less than 2.7%. A second change provided for a most favourable solution approach regarding the basket of goods to be considered for price indexation: It can be based either on the increase in consumer prices for households of pensioners or on the increase in consumer prices of all households, whichever is higher. The last change approved in 2017 introduced a stronger link to wage development within the mixed formula: The wage-related parameter has been upgraded to a 50% rate of real wage growth (instead of previously only 33% of wage growth). This last reform should mitigate an expected drop in the replacement rate of almost 5 percentage points by 2030 and thus help to prevent increasing poverty rates among pensioners (European Commission, 2018b; *Prague Daily Monitor*, 28 July 2017).

More or less subtle improvements in the adjustment formula have been adopted in several other Eastern European countries. An interesting novelty is the emergence of a ‘most favourable solution’ principle. This principle can be found regarding the selection of the relevant price index (general CPI or special CPI for pensioners) as in the Czech Republic or in Poland. The principle is also used for selecting the weight of indexing parameters in mixed indexation models: Croatia introduced a new variable formula for biannual adjustments in which the variation of prices and wages is taken into account in different proportions of 70:30, 50:50 or 30:70, whichever is more favourable (European Commission, 2018a; MISSOC, 2018). Resorting to a ‘most favourable solution’ approach indicates a rebalancing between adequacy and financial sustainability in pension policy. Another way to enhance adequacy is to strengthen the role of real wage growth within a mixed indexation model, an option followed by Latvia as of 2018: It combined in a mixed model CPI and an increase of the normal rate of wage indexing of 0.5% of real wage growth, with more beneficial rules for pensioners with longer insurance periods (0.7% for pensioners with 40 or more years, 0.6% for pensioners with 30–39 years of insurance or arduous work record).

## **International minimum standards for pension indexation**

As the overall tendency of pension reforms across Europe is still towards retrenchment, the issue arises as to whether international legal standards enshrined in ILO and Council of Europe conventions could be infringed.

### *International and European legal framework*

The first minimum standards for old-age provision, including the upgrading of periodic payments, were set by ILO Convention No. 102 (1952) on Minimum Standards of Social Security. Twenty-two of the current EU member states (including Great Britain) ratified this instrument, in force internationally as of 1955. The Baltic States, Malta and Hungary

did not join. A total of eight EU member states as well as Norway and Switzerland acceded to the more specific Convention No. 128 (1967) on Invalidity, Old-Age and Survivors' Benefits, which contains stricter minimum standards.

In the European context, the minimum social security standards developed within the Council of Europe are more relevant. The most important Council of Europe convention on this subject is the European Code of Social Security (ECSS) of 16 April 1964, which replicated the minimum standards laid down in the ILO Conventions. A total of 18 EU member states (including Estonia), plus Norway, Switzerland and Turkey, have ratified the ECSS, while Austria, Latvia, Lithuania, Slovakia as well as Moldova and Ukraine have signed but not ratified this treaty. The ECSS is supplemented by an Additional Protocol of 16 April 1964 providing for higher protection standards. Six EU member states (Belgium, Germany, Luxembourg, the Netherlands, Portugal and Sweden) and Norway joined the 1964 Protocol by ratification, whereas another five EU countries have signed it without ratification. Latvia adhered to the ECSS minimum standards by ratifying the revised ESC of 1996, a human rights instrument of the Council of Europe which links the right to social security to the ECSS standards (Art. 12(2) ESC). Lithuania, Malta and Hungary are the only EU member states that have not committed to any international minimum standards for old-age pensions.

### *Minimum standards of the conventions*

Two minimum standards are relevant with regard to the indexation of old-age pensions: The standards for social security in old age are set out in Part V (Art. 25ff.), in Part XI (Art. 65ff.) and in the table following Part XI (Dijkhoff, 2011): First, a minimum rate of benefits is fixed as a percentage of total wage in respect of the contingency of old age for a so-called 'standard beneficiary'. In the case of old-age pensions, the standard beneficiary means a male insuree with a (dependent) wife of retirement age. If the national pension system provides for individualised pension entitlements, a proportional adjustment of the minimum standard can be made. To assess whether the required standard of living is guaranteed, the conventions envisage various calculation models that are based on different national models of statutory provision for old age: In the case of social security schemes for employees or gainfully employed persons, the determination is based on the previous earnings of the beneficiary, on the wage of a skilled male worker, or on the average earnings in the territory of the respective state. The benefit must be at least equal to the fixed percentage of the gross salary of a standard pensioner within the meaning of the conventions. For old-age pensions, this minimum level has been fixed at 40% of the reference value (45% under the Additional Protocol). For the assessment of compliance, the benefit rate does not only apply to the initial old-age pension but must be guaranteed throughout retirement (Art. 30 ECSS). As regards the provision of long-term benefits, the ECSS requires only that the rates of old-age pensions and other types of pensions are to be reviewed following "substantial changes in the general level of earnings where these result from substantial changes in the cost of living" (Art. 65 (10) ECSS; also ILO C102). The standard does not prescribe any automatic indexation arrangement, nor any specific method, but points out two changing parameters that need to be kept in mind: the general development of wages (earnings) and the cost of living (prices). This is a very

soft provision, which leaves a wide margin of discretion to the states. It reflects the historic context of the conventions: At the time when the minimum standards were prepared, indexation as automatic adjustment of pensions in payment was still rather uncommon.

Another requirement relates to the period for the calculation of the reference value and the calculation of the benefit: Both must be calculated on the same time basis (Art. 65(4) ECSS) as time lags will entail reduced adjustments. In practice, some European countries do not take sufficient account of this requirement and resort to time lags also as a cost saving measure (for Estonia and the Czech Republic, see Dijkhoff, 2011).

Given the prevailing reform trends in the adjustment of pensions in payment, in most cases there does not seem to be, at first glance, any infringement in relation to the international minimum standards, as they provide for a rather low replacement level for old-age pensions. However, a problematic constellation could arise due to the following aspects: First, the stronger shift towards price indexation (or less than price indexation as in Spain) could lead to the reference value of 40% (or 45% if the higher standard is applicable) being undercut at some point during the retirement period, particularly in the case of a low entry pension level. This problem has increased over time due to the general decline in initial pensions induced by sustainability-driven pension reforms combined with additional austerity measures after the 2008 global economic and financial crisis. Second, the use of different time bases to determine the benefit adjustment and the calculation of the index values, too, can undermine the minimum level of pensions in payment to be guaranteed. Third, measures adopted in the wake of the 2008 crisis, such as a multiple suspension of pensions in payment, should be viewed critically as they could entail a cumulation of downsizing effects on the replacement rate to be guaranteed. Particularly problematic are indexation rules that are neither geared to price nor to wage developments, and therefore obviously do not guarantee the minimum standards of the ECSS.

## Concluding remarks

Indexing of pensions is a pension design feature directly affecting income security at older ages, with important social policy and fiscal policy implications. While governments and international economic organisations have been ready to capture the saving potential of indexation mechanisms, the impact of this instrument on pension adequacy is rarely dealt with. The need to safeguard and maintain income security throughout the entire retirement phase has been recognised in ILO Conventions as early as 1952 and later in European Council conventions on minimum standards for social security. Reforms of adjustment parameters should bear in mind these international minimum standards instruments. Although the standards are not very ambitious, reduced first pension payment levels in combination with indexation rules neglecting adequacy could entail non-compliance with international minimum standards at some point of time. In the contemporary context of cutting down on pension levels for new pensioners, the risk of non-compliance in terms of indexation arrangements should therefore be taken more seriously by policy makers.



Indexation rules have been frequently revised in the course of the past decades. In the wake of the 2008 economic and financial crisis, diversified normative patterns of indexation have emerged across the EU. On one hand, a consistent part of the revisions to indexing parameters implied a shift towards less generous indexation rules, in line with general pension retrenchment objectives aimed at cost containment. Repeated adjustment moratoria, partial indexation and the introduction of modifying factors and conditionalities are used to save a significant part of public funds without reducing nominal pension values. Such interventions are seen as less intrusive and generally provoke less resistance than direct benefit cuts. On the other hand, some of the recent reforms have used the leverage of indexation to improve the real value of pensions and overall pension adequacy during retirement. These more subtle improvements reflect a slight reversal from the previous sustainability-driven reform initiatives: They seek to avoid or mitigate pension erosion, and recognise that indexation represents a key element of the right to pension as a social security right.

Numerous austerity-driven interventions in pension systems have raised the issue of cumulative negative effects in reducing entry pension levels and restricting adjustment of pensions in payment over time. The overall emphasis on financial sustainability has largely neglected increasing risks of poverty and social exclusion among the very old – a social group of high vulnerability, predominantly women. It is therefore paramount to consider indexation as leverage for improving adequacy and income security among older pensioners. Adequate indexation will become even more important in coming decades as a consequence of fundamental changes in the labour market, with a growing number of shorter, discontinuous and non-standard employment biographies, entailing lower social insurance contributions and smaller pension entitlements. In view of growing inequalities in labour market participation, pension reforms should strive to consider more adequacy-oriented solutions within indexation arrangements, including redistributive elements and best solution alternatives.

Conditionality factors linked to indexation are a recent phenomenon that needs further study, in particular as to the interaction with feedback elements linking pensions to longevity changes. The idea of sharing the burdens of pension expenditure in contributory systems between pension recipients and the active generation is based apparently on equity considerations. However, it is difficult to assess whether it serves to establish a fair balance between financial and social sustainability with public pension schemes, or whether it is just another means to justify pension retrenchment policies. Recent interventions in indexation mechanisms have contributed to increase complexities and to diminish transparency of indexation rules across Europe. Further research is thus needed to understand the impact of these complexities in light of the combined challenges stemming from population ageing, labour market transformations and the legal standards to be guaranteed.

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## Notes

1. In Iran, certain civil servants received a generous monthly ration of sugar and wheat in addition to their pensions, which could be sold if they did not use it for their personal consumption, thereby increasing the disposable income of the household.
2. Until the Act on Indexation No. 26.417/2008 (Ley de Movilidad) was passed, no automatic pension adjustments took place for one entire decade. In an unprecedented wave of lawsuits, pensioners successfully claimed their right to pension indexation, but the controversies surrounding the additional payments owed continued over another decade. Since 2018, a mixed system consisting of 70% of price developments and 30% of average wage developments in the formal sector has been in force (Law No. 27.426/2017). The intention to curb pension expenditure can be derived from the much lower proportion of wage indexation and the deferred adjustment lagging behind the index changes by 6 months instead of 3 months as before.

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