

Combining Work and a Pension – Individual Determining Factors and Combiners' Profiles

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Abstract – Combining work and a pension is one of the ways of extending ones working life that is being encouraged under the 2003 pension reforms. In 2019, 3% of retirees under the general scheme were thus in paid employment in the private sector and, of individuals having retired under the general scheme since 1 January 2004, 10% were in paid employment in the private sector between 2005 and 2016. This article seeks to identify the key characteristics of these employed retirees, or “combiners”, prior to any changes in the legislation. The analysis, carried out using administrative data gathered by the CNAV (the French national old-age insurance), shows that the two factors which contribute most to a decision to return to work after retirement are having been in employment before retiring and having the length of insurance cover required for a full pension. Three typical combiner profiles are identified: a profile of men who have had long careers and taken early retirement (24%), a profile of executives (45%) and a profile of women with spells out of work (31%).

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The question of “active ageing”, particularly “in employment”, has been receiving increasing attention in the European Union since the 1990s, as is reflected in various communications from the Commission (see Guillemard, 2013). In 2000, the Lisbon Council stressed the weakness of employment levels and participation in the labour market by older workers and, at the same time, the effect of ageing on the financing of social protection systems (Lisbon European Council, 2000, points 4 and 23 respectively). In line with this, several countries have systems encouraging the seniors to stay in employment and to postpone their retirement: there are no restrictions on combining work and a retirement pension in the United Kingdom, Sweden and Italy. Germany, Belgium and Spain allow the combining of work and a pension but this may be subject to restrictions depending on the age of the individual and their level of pay (Retirement Guidance Council, 2018).

In France, the 2003 pension reform was intended to “extend people’s working lives through national mobilisation in favour of work for employees over the age of 55” (National Assembly, 2003). It established a premium to encourage people to stay in employment, phased retirement allowing people to receive a proportion of their retirement pension whilst holding one or more part-time jobs. It relaxed the system for combining work and a pension. Unlike other systems, combining work and a pension does not result in any postponement of retirement, but allows retirees to return to work once they have started receiving their pension. It also allows the pension system to receive contributions from workers who, in most cases, cannot increase the level of their pension: this is because, since 2015, an individual who has a job which falls within the pension scheme from which they receive a pension does no longer accrue their pension rights under that scheme.¹ Combining work and a pension thus contributes both to increasing the activity of seniors and to improving the financial situation of pension schemes.

Nearly 11% of people who retired under the general scheme in 2015² return to paid employment following retirement and, among retirees as a whole under the general scheme, 3% are employees in 2019 according to CNAV data;³ the proportion is similar according to labour force survey data (Minni, 2019). In 2016, based on the EIR (*Échantillon interrégimes de retraités*, a sample of retirees from several pension schemes), 16.4% of retirees from the 1950 generation combined a pension in their main pension scheme with at least one job since their retirement (DREES, 2019).

This article seeks to provide a picture of retirees who combine their pension and a job prior to any possible change to the system. Indeed, an article in the bill aimed to establish a universal pension system would enable “combiners” to claim new pension entitlements from 2022 onwards irrespective of the future system. (National Assembly, 2020, Article 26⁴).

The study presented here is an extension of the work carried out by Bridenne & Mette (2012) on retirees under the general scheme who return to work as employees in the private sector (excluding agricultural labourers). Combiners appear therein as people who were in employment prior to their retirement, have substantial lengths of insurance cover, are usually unmarried and have sometimes experienced greater career vicissitudes than average retirees. The 2009 law relaxing the combining of work and a pension (*infra*, Box 1) and the significant increase in combining work and a pension among new retirees has probably led to different people being attracted to this system compared to those identified by Bridenne & Mette.

This study also supplements the combiner profiles drawn up by Musiedlak (2017), covering a slightly different population, that of employed people aged 53 or over who are drawing a retirement pension and live in France and based on data from the labour force survey which provides information for all of the possible situations in which work and a pension are combined. He identified three profiles of retirees in regular jobs: elderly executives, self-employed men and young retirees. He also distinguished between two profiles of irregular or part-time jobs. However, data from the labour force survey do not enable the characteristics of combiners to be studied in detail because the size of the sample is too small for a detailed analysis.

In a first section, we study the characteristics of combiners between 2004 and 2016 and the individual factors determining the combining of work and a pension, using the same data as Bridenne & Mette (2012). In a second section, we draw up typical profiles of retirees under the general

1. *Beforehand, an individual having a job covered by a scheme other than that under which they drew their pension could still accumulate pension rights under the combination scheme. This is no longer possible since 1 January 2015.*

2. *Several years pass between retirement and a return to work. It is therefore not yet possible to establish the proportion of combiners among more recent waves of retirees.*

3. <https://www.statistiques-recherches.cnnav.fr/cumul-emploi-retraite.html>

4. *“...the improvement of the system for combining employment and retirement is planned from 1 January 2022, without waiting for the universal system to come into force: new pension rights can be acquired after having met the conditions of age and length of insurance specific to the full combination of employment and retirement.” (National Assembly, 2020, p. 25 [translated]).*

scheme who combine their pension and a job (as employee) in the private sector. They represent 80%⁵ of the combiners (within the general scheme, which relates to 350,000 people in 2016).

Throughout the study, combiners are defined as those who have retired under the general old-age insurance scheme and for whom information concerning the holding of a paid job (excluding agricultural labourers) is recorded on their career statement in *N*+1 or thereafter. The population analysed relates to individuals who retired under the general scheme in 2004, 2009 or 2014, and combiners are those earning a salary at least once in the years following their retirement (observable up until 2016, the last year available). The study relates exclusively to individuals retiring between 2004 and 2014 so that any returns to work within at least two years following retirement can be observed. We exclude combiners for whom a single of the salaries observed after the

retirement is lower than that enabling a quarter to be validated in the pension scheme. Combiners who retired under the phased retirement system are also excluded.

1. Data and Descriptive Overview

Among those individuals under the general scheme who retired in 2004, 9.4% of men and 7.1% of women earned at least one salary between 2004 and 2016 (53,000 people). Owing to the increased burden on the system and to the 2009 Law – so-called law of liberalisation of the system for combining work and a pension (Box 1) –, the proportion of combiners increased: among retirees under the general scheme in 2010, 12% of men and 11.2% of women returned to work between 2010 and 2016. Among more

5. Cf. Programme de Qualité et d'Efficienc e « Retraites », Projet de Loi de financement de la Sécurité Sociale 2018, indicateur de cadrage n°6.

Box 1 – Main Legislative Changes Relating to Pensions Under the General Scheme

Legislation on combining work and an intra-general scheme pension (retirees under the general scheme and employee in the private sector)

Since 1 April 1983, combining work and a pension has enabled a retired person who is receiving a personal pension under the general scheme, providing they meet the conditions required, to carry out professional activities and combine their professional income and their pension. This system was relaxed on 1 January 2009, the main change being the full and unlimited combining of all means.

From 1 January 2004 onwards, combining a retirement pension under the general scheme and a paid activity has been limited by maximum earnings which cannot be exceeded (the most advantageous to the individual of either an average of the last three salaries or 1.6 times the French minimum wage). In addition, if the professional activity is carried out for the same employer they had when they retired, the individual has to wait at least 6 months before returning to work.

From 1 January 2009 onwards, it is possible to combine work and an intra-general scheme pension without being subject to any upper limit or to any period of inactivity between retirement and returning to work (called “full combination”). To do this, the individual has to have requested all pensions which they can claim, have the length of cover required for a full pension and be of legal retirement age (60 to 62 years of age depending on the generation). If they do not have the length of insurance cover necessary to receive a full pension, the individual must at least be old enough to cancel the reduction (65 to 67 years of age depending on the generation). If these conditions are not met, combining work and a pension remains subject to 2004 legislation (called “limited combination”).

In 2015, a reform modified the rules relating to stopping work, but it does not affect the combining of work and an intra-general scheme pension (CNAV, 2018).

Whatever the legislation in force, combining paid employment in the private sector and a pension under the general scheme does not give the person concerned new pension rights.

Main legislative changes relating to pensions under the general scheme since 1993

Extension of the length of insurance cover: In the 1993 reforms, the first increase in the contribution period: from 150 to 160 quarters at a rate of one quarter per generation between the 1933 and 1943 generations. Then, a series of extensions of the length of insurance cover until the 2014 reforms which incorporated the increase in the length of insurance cover at a rate of one quarter every 3 generations to reach 172 quarters for the 1973 generation.

Gradual raising of the legal age: from 60 to 62 years of age, at a rate of 4 months for individuals born between 1 July 1951 and 31 December 1951, then 5 additional months up until the 1955 generation (2010 reforms).

Gradual raising of the retirement age without a reduction: from 65 to 67 years of age, at the same rate as the raising of the legal age (2010 reforms).

Early retirement after long careers (*Retraite anticipée pour les carrières longues*, RACL): Introduction of a system for long careers (2003 reforms) enabling individuals who started working at a young age to take early retirement (before the legal age). Then, relaxation of conditions for accessing the system in 2012 and 2014.

recent waves of retirees, the time span is too short for returns to work after retirement to be observed.⁶ However, we show that combining a pension and a job is on the increase among individuals who retire after reaching the legal age with the length of cover required to receive the full pension (cf. Online Appendix – see link at the end of the article). Barring changes in the legislation, it is therefore the extent to which retirees meet these characteristics which will determine the rise in combining work and a pension.

To define the characteristics of individuals who have a job alongside their pension, this first section seeks to identify who the combiners are based on career indicators and retirement under the general scheme. The characteristics of people who return to work after retirement are compared with those of retirees as a whole. We are using administrative data gathered by the *Caisse nationale d'assurance vieillesse* (CNAV, the national old-age insurance) and, more particularly, the “historical database of combiners” (Box 2). It allows a detailed description of the characteristics of combiners, particularly their career paths and the conditions for their retirement and their return to work.

Based on data from 2012, Bridenne & Mette (2012) identified two types of combiners: firstly, individuals who have been in continued employment, resulting in a high pension level; secondly, individuals who have had long careers and experienced interruptions which have impacted upon their pension level. The study was carried out using the same database as that used here, covering retirees from 2004 to 2007 who returned to work between 2005 and 2008. We continue by studying the change in the

characteristics of combiners in respect of those retiring between 2004 and 2016.

To make the reading easier, we present results only for people who retired in 2004, 2009 and 2014. 2004 and 2009 are the first years affected by the major changes made to the system, i.e. the overhaul of the system of combining work and a pension (2003 Law) and the “liberalisation” of the system for combining work and a pension (2009 Law) (cf. Box 1). The wave of retirees in 2014 corresponds to the last data available, allowing to observe returns to work in 2015 and 2016.

1.1. Combiners’s Career and Earnings Before Retirement

People combining work and a pension have built up large numbers of quarters associated with long professional careers. Half of men combining work and a pension have at least 170 quarters accrued across all schemes irrespective of their year of retirement. The differences in career length between combining men are modest: 90% of those who retired in 2004 then returned to paid work had accrued between 157 and 180 quarters, and 90% of combiners whose retirement began in 2014 had accrued between 152 and 182 quarters. By way of comparison, the average number of quarters is about the same for all retirees and combiners, but it is more dispersed the dispersion is wider among retirees. The gap between the longest and the shortest length of cover (inter-decile ratio) is of about 60 quarters.

6. More than a fifth of combiners return to work at least 4 years after they retire.

Box 2 – The CNAV Historical Database of Combiners

The Historical database of combiners is made up of retirees who have retired under the general scheme since 2004 and who earned a salary in the years following their request for a pension and up until 2016. Those who retired longest ago retired in 2004; the maximum historical depth is therefore 12 years including 2016.

The information contained in the CNAV management databases does not show whether the amount received by the retiree corresponds to a regular activity salary or a one-off bonus payment associated with a job held before retirement. However, those who retire can still receive bonus payments some time after retirement, even the following year. Beneficiaries for whom this is the case are therefore included in our database in the same way as people who have jobs after they have retired. They inflate the numbers of actual combiners.

Consequently, to limit this confusion, retirees who have a salary, exclusively in the year following their retirement, which is lower than an annual salary accruing a quarter for a pension under the general scheme (that is to say € 1,450.50 in 2016) have been excluded from the population of combining retirees. Following this logic, an average of nearly 10% of retirees a year who earn a salary exclusively indicated in the year following their retirement are excluded.

Moreover, to make the results easier to understand, we have excluded from the analysis retirees who used the phased retirement system and who return to paid work after finally retiring. They represent 1.05% of combiners who retired under the general scheme between 2004 and 2014 (7,700 people).

A total of 778,200 combiners under the general scheme are retained for analysis.

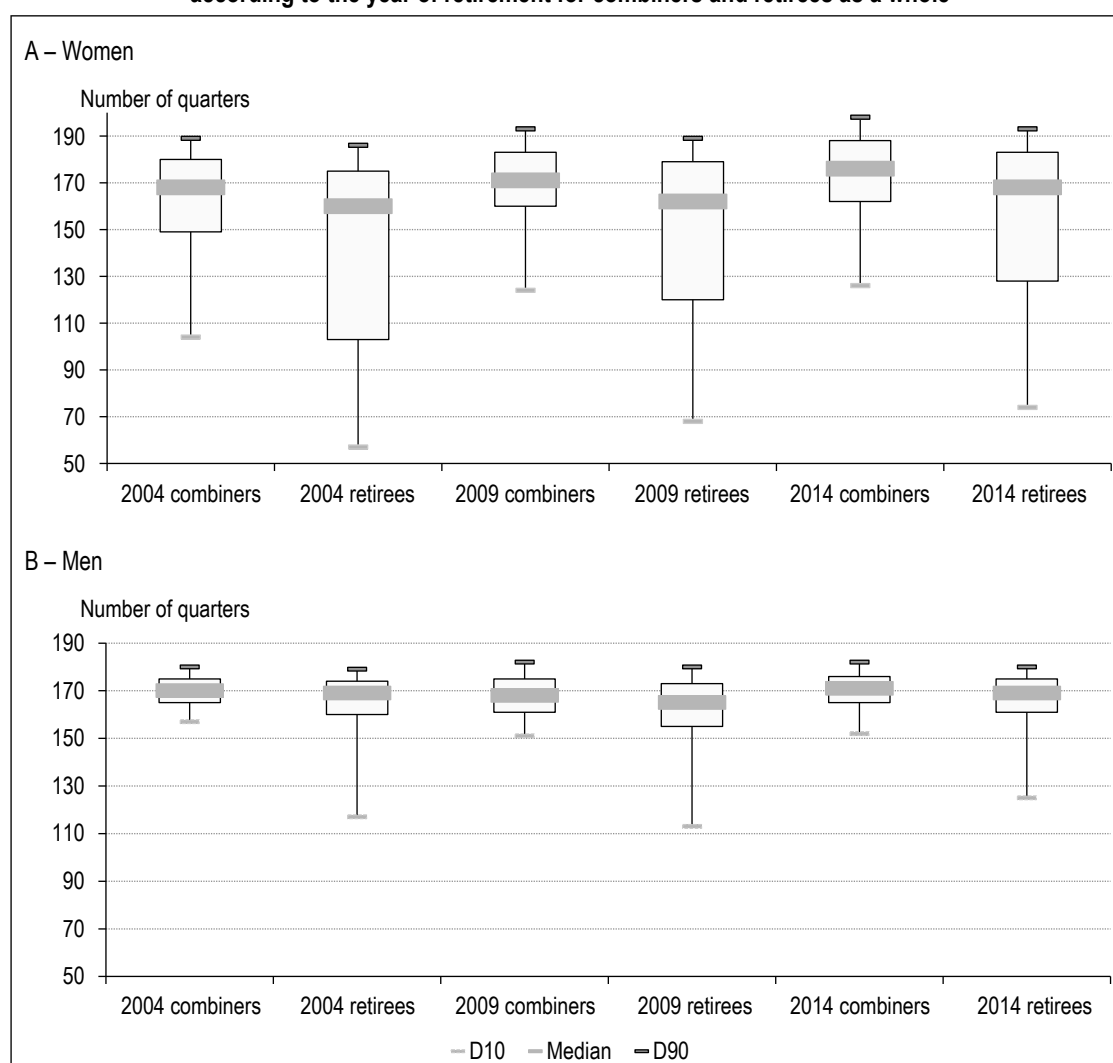
Women who combine work and a pension have greater lengths of cover accrued than retired women as a whole. Three quarters of female combiners who retired in 2014 have at least 162 accrued quarters across all schemes whilst, among this 2014 flow as a whole, a quarter have less than 128 quarters. In addition, women who combine work and a pension accrued, on average, as many quarters as men in the same situation, and combiners who retired in 2014 had even more (the median length of cover is 176 for women and 171 for men in 2014, Figure I). Nevertheless, work and a pension are not just combined by people who have had long careers because a tenth of women who combine work and a pension have accrued

lengths of cover of less than 105 or 126 quarters depending on the years of retirement.

Since 2004, for female retirees and combiners, the accrued length of cover has grown significantly owing to the improvement in career opportunities for women and better account being taken of breaks associated with looking after children.⁷

7. Old-age benefits for dependent relatives (Assurance vieillesse des parents au foyer, AVPF), established in 1972, affords pension rights if a person stops working entirely or partially during the course of their career. It covers (subject to the resources available to the household and the receipt of benefits paid by the Family Allowance Fund (Caisse d'Allocations Familiales, CAF)) pension contributions equal to the minimum salary for parents who have stopped or reduced their professional activities in order to look after their children.

Figure I – Dispersion of the length of insurance cover accrued across all schemes according to the year of retirement for combiners and retirees as a whole



Reading Note: The "box and whisker plots" represent the dispersion of the length of insurance cover accrued across all schemes. The median is represented by the grey bar, the first quartile by the lower bar in the rectangle, the last quartile by the upper bar in the rectangle. The light grey dash corresponds to the first decile and the dark grey dash to the last decile. As a result, the longer the rectangle and the longer the "whiskers", the greater the dispersion of the length of insurance cover. Of the combiners who retired in 2004, half of women accrued less than 168 quarters (median) and 90% accrued more than 104 quarters (first decile).

Sources and Coverage: CNAV, Historical database of combiners 2004-2016 and database of retirees 2004-2016. Combiners: individuals having retired under the general scheme in 2004, 2009 or 2014 and earning a salary at least once in the years following their retirement (observable up until 2016, last available year). Combiners earning a single salary below that enabling a quarter to be accrued in the years following the request for a pension are not included in the coverage. Combiners who retired under the phased retirement system are also excluded. Retired population: individuals who retired under the general scheme in 2004, 2009 or 2014.

To study the earlier wage levels of retirees and facilitate comparisons between years, we use a measure of the wage earned in the private sector between the ages of 35 and 44 expressed as a function of the social security ceiling.⁸ Combiners have had levels of pay close to those of retirees as a whole. On average, whether they combined work and a pension or not, men who retired in 2004 had a salary equal to 77% of the social security ceiling between the ages of 35 and 44 (Figure II). In this same age range, new retirees in 2014 had an average salary corresponding to 70% of the social security ceiling.

Conversely, female combiners have a level of pay ever so slightly below that of women as a whole. Among female retirees in 2014, the average salary between the ages of 35 and 44 was 47% of the social security ceiling for women as a whole and 44% of the social security ceiling for female combiners.

This apparent closeness between combiners' and other retirees' pay between the ages of 35 and 44 must nevertheless be qualified since, a larger proportion of retirees (more women) had no job when in this age group.

1.2. At Least Three Quarters of Combiners Are In Employment Before Retiring

Retirees who return to paid work are very often employed, whether their job is covered by the general scheme or another scheme,⁹ in the year preceding retirement. This is the case for nearly three quarters of combiners who retired in 2004 (Figure III). Furthermore, this proportion has

increased over the years. When the population of combiners is restricted to those who returned to work within two years following their retirement, the proportion of people in employment increased by 6 points in ten years (82% for combiners who became retirees in 2004 and 88% for those in 2014).

By way of comparison, for retirees under the general scheme in 2004 as a whole, only 45% were in employment before retiring. The proportion employed before retirement has nevertheless increased to a little over one in two retirees (52%) among people who retired in 2014. Nearly a third of retirees were not working before retirement (established from the data on the basis of the absence of a career statement), whilst it was marginal among combiners.

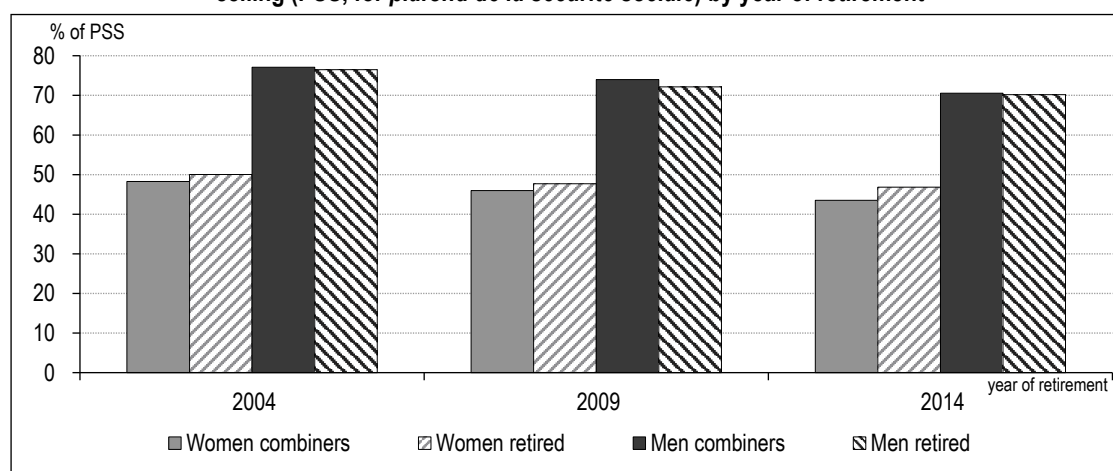
Since 2004, the age of retirement under the general scheme has risen substantially for all retirees owing to the raising of the legal retirement age and the extension of the length of insurance cover (cf. Box 2). Half of those who retired in 2004 are no older than 60. Ten years later, half of those retiring in 2014 are over 61 and a half (Figure IV).

Of those retiring in 2004, combiners retired at a lower age than other retirees. A quarter of combiners thus benefited from their retirement pension before the age of 60, vs. only 18% of

8. The social security ceiling is a reference amount taken into account when calculating the maximum amount of certain social benefits.

9. The other pension schemes mainly relate to civil servants, the self-employed and farmers or agricultural labourers.

Figure II – Average salary between the ages of 35 and 44 expressed as a function of the social security ceiling (PSS, for *plafond de la sécurité sociale*) by year of retirement

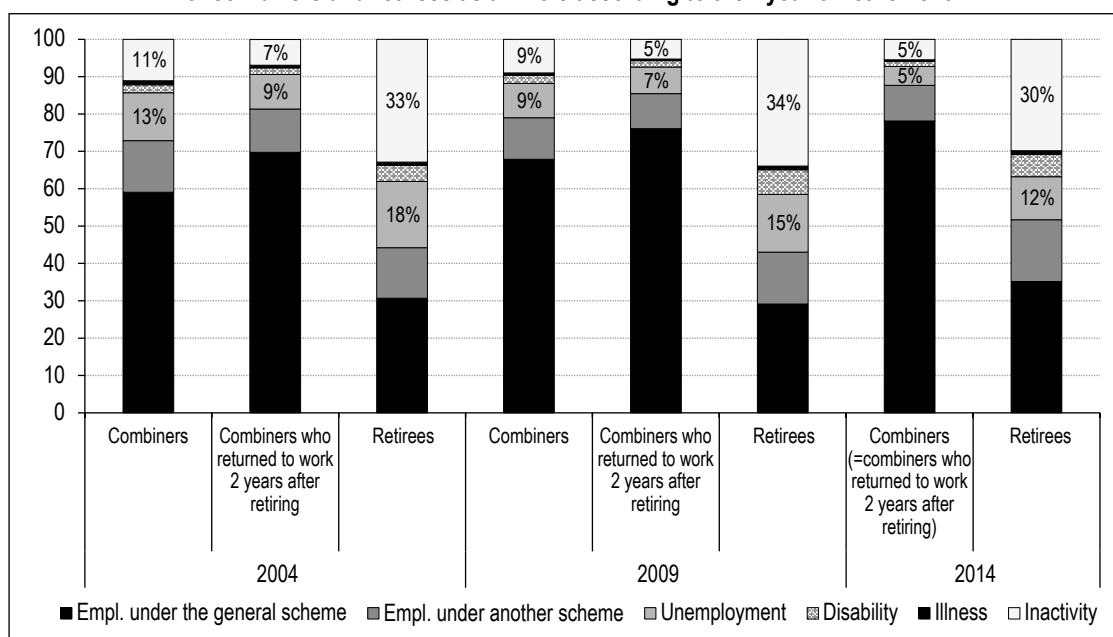


Notes: Only people born after 1912 having accrued 2 salaries under the general scheme between the ages of 35 and 44 are taken into account (around 20% of combiners and 30% of retirees being excluded); zero salaries are not included in the calculation of means.

Reading Note: Men who retired under the general scheme in 2009 and who returned to work during their retirement earned an average salary equivalent to 74% of the social security ceiling between the ages of 35 and 44.

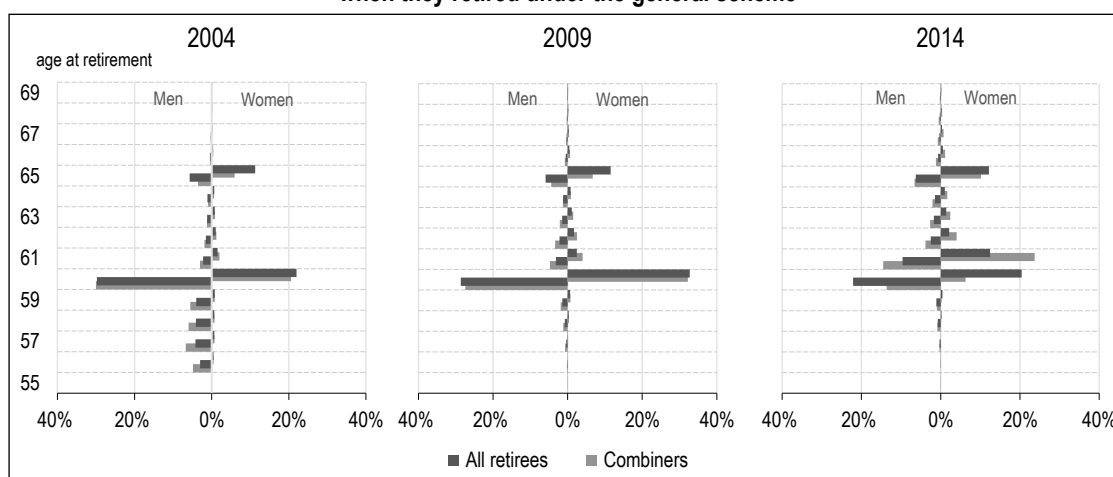
Sources and Coverage: See Fig. I.

Figure III – Activity status in the year preceding retirement under the general scheme of combiners and retirees as a whole according to their year of retirement



Notes: The situation before requesting a pension is determined based on salaries and accrued quarters. Where an individual encounters a number of situations in the same year, only one situation is retained according to the order of priority set out in the legend.
 Reading Note: Of the combiners who retired in 2014, 78% had a job that was covered by the general scheme in the year preceding their retirement. Given that professional activities have been observed up until 2016, combiners who retired in 2014 all returned to work within 2 years following their retirement (people who return to work subsequently are not yet known about). In order not to distort the comparison of employment levels, the population of combiners who retired in 2004 and 2009 is restricted to people who returned to paid work within 2 years following retirement. As a result, of the individuals who retired in 2004 and started combining work and a pension in 2005 or 2006, 70% had a job that was covered by the general scheme before they retired.
 Sources and Coverage: See Fig. I.

Figure IV – Distribution of combiners and retirees as a whole according to their age when they retired under the general scheme



Reading Note: Of the retirees in 2004, 11% are women who were 65 years of age when they retired. Among the combiners who retired under the general scheme in 2004, 6% are women who were 65 years of age when they retired.
 Sources and Coverage: See Fig. I.

retirees. This reflects that combiners accessed their pension under the “early retirement after a long career” (RACL) system more often than other individuals.

Over more recent years, combiners have been retiring later than other retirees. In 2014, combiners more often retire at the age of 61 or over compared to 60 for retirees as a whole. This

is because those who prefer to combine work and a pension are people who have retired with the length of cover required for a full pension (excluding RACL). To gain this length of insurance cover, people do not always retire as soon as they reach the legal age.

Overall, people who work in addition to drawing their pension have a higher pension under the

general scheme than retirees as a whole,¹⁰ partly thanks to their contribution period which is itself long (Figure V). Whatever their year of retirement, male combiners receive an average of € 10,300 a year under the general scheme and female combiners receive an average of € 8,300 a year whilst retirees as a whole receive an average of € 8,900 and € 6,700 a year respectively.¹¹ It is mainly in relation to individuals who have the lowest pension sums that the difference between combining and non-combining retirees is greatest. Thus, for men, combiners whose retirement pension under the general scheme is the lowest (the first third of combiners) may have an annual pension of up to € 8,000. Conversely, for retirees in this same group, the pension under the general scheme may be up to € 5,200 a year. The same difference between female combiners and female retirees as a whole can be seen among women in the first pension distribution group under the general scheme.

The pension sum paid under the general scheme has increased, especially among women,

between the different waves of retirees, mainly owing to the growing presence of women on the labour market. The average pension under the general scheme thus rose from € 6,400 to € 6,900 a year for female retirees as a whole between those retiring in 2004 and those retiring in 2014. For female combiners, over the same period, the average annual pension under the general scheme increased by 12.5% (from € 7,700 to € 8,800).

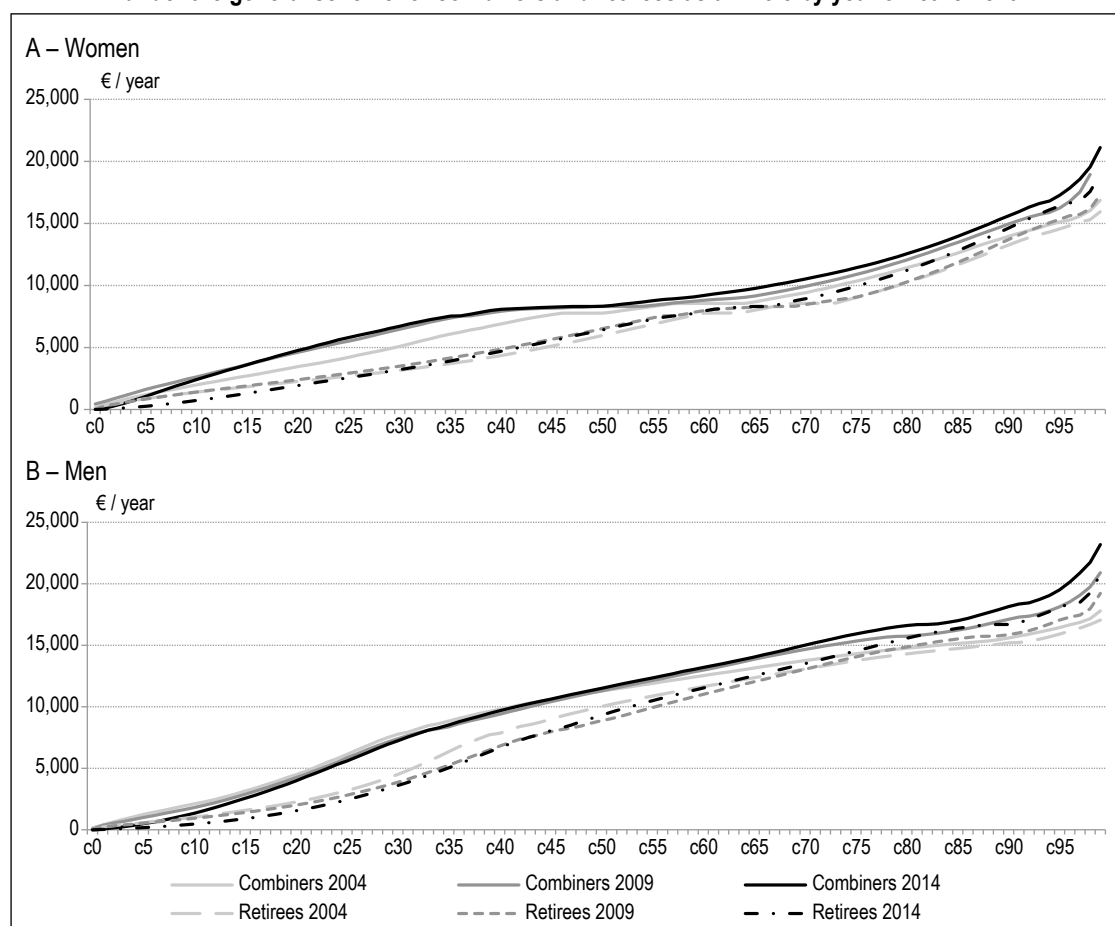
1.3. Returning to Work after Retirement: Different Factors for Men and Women

Based on this initial description, those who combine work and a pension seem to differ from retirees as a whole mainly through having had a fuller career, having a job before retirement and

10. The pension under the general scheme is representative of the level of the combiners' pensions. This is because, even if half of combiners are multiple-pension claimants, the length of insurance cover accrued under the general scheme represents an average of 80% of the total accrued length of insurance cover.

11. All pension amounts are in Euro at their 2014 value.

Figure V – Cumulative distribution of the overall pension amount (in € 2014) under the general scheme for combiners and retirees as a whole by year of retirement



Reading Note: A third of men who are combining work and a pension and retired in 2004 receive a pension (own right) of less than € 8,482 a year under the general scheme (€5,567/year for all retirees). Two thirds of combiners who retired in 2004 receive at least €13,282/year (€12,507/year for all retirees).

Sources and Coverage: see Fig. I.

receiving a slightly higher retirement pension. Nevertheless, this does not tell which factors are determining their decision to combine work and a pension. Being in employment before retiring is linked to having a substantial length of insurance cover, and this is one of the elements taken into account when calculating the pension sum. That is why, based on the indicators presented above, it is impossible to identify which one per se influences the decision to return to paid work after retirement.

To go any further, we turn to a statistical model to construct a fictional situation in which retirees are in comparable situations. It is thus possible to eliminate all but one of the differences between retirees in order to determine its role in any return to work after retirement. In the model, we retain the following variables, which characterise an individual's career and the situation they are in when they retire:

- Their family circumstances at the time of retirement (whether they are single or in a couple): This is important because, as Blanchet & Debrand (2007) have shown, those in couples have a greater desire to retire (and therefore probably not to work again after retirement). We also control for the country of birth since individuals born abroad may have had a career which started late depending on their age when they arrived in France.

- The situation the individual was in when they retired: We use the average annual salary used to calculate the retirement pension under the general scheme. This offers the advantage of being an estimator of the pension level used by the general scheme which is less closely linked to the length of time worked in this scheme than the pension sum. We also include the activity status of the individual in the year preceding retirement. Rapoport (2012) concluded that, from the age of 50 onwards, those who were unemployed, ill or inactive rarely manage to find another job. Being in employment before retirement is therefore probably a strong factor in determining whether a person combines work and a pension.

- Their career: We retain the age of the individual when they accrue 4 quarters of employment in a calendar year for the first time, as an indicator of the person's age when they started working. If they were under 20 years of age, it often indicates early retirement after a long career. We have also retained the distance away from the length of cover required to get a full pension as a proxy of the length of insurance cover accrued. This is in line with descriptive statistics on the one

hand, and Bridenne & Mette's (2012) results, who show that combiners have long careers. As an indicator of the level of pay, the average annual salary also provides information on the individual's career since it corresponds to the average of their highest salaries.

We have chosen to estimate the model separately for women and men in order to highlight gender specificities of combining work and a pension.

The reference situation used in the model is a person who is in a couple when they retire, born in France, and who started working between 19 and 20 years of age. They were in employment in the year preceding their retirement and have always been employed in the private sector (being single-pension claimants under the general scheme). They have acquired a length of insurance cover at least equal to that required to get a full pension and earned (under the general scheme) an average annual salary falling in the second quartile of the distribution.

For both sexes, the first thing that the model confirms is the link between combining work and a pension and having a job the year before retiring (Table 1). In addition, combining work and a pension appears to attract both people who started working at an early age and those who, conversely, started working when they were rather older. Retirees who have an accrued length of insurance cover at least equal to the length of cover required for a full pension are the most likely to combine work and a pension.

As for the influence of the amount of pension on the probability of having a paid job once retired, the estimation does not say the same thing for both sexes: For men, the higher the average annual salary, the more likely the retiree is to combine work and a pension. For women, those having a pension around the median are most likely to return to work after retirement.

Having identified the factors influencing why people combine work and a pension, we select those associated with the greatest differences. The results shown in Table 1 cannot tell us this because it is not enough simply to categorise conditions as a function of the absolute value of the parameters estimated by the model. To put factors in order of significance, we calculate the net effects of variables on the combining of work and a pension. This involves converting the estimated values of parameters into percentage points and, based on these, for all of the modalities of the variables, calculating the corresponding net differences so that they can be compared with gross differences (Table 2).

Table 1 – Characteristics of people combining work and a pension and retirees who do not combine work and a pension (logistic model)

Variable	Modalities	Reference	Estimated parameter	
			Women	Men
Constant			-1.734***	-1.909***
Family circumstances	Single	Couple	0.34***	0.047***
Age when started working	Aged under 17	Aged 19-20	0.109***	0.086***
	Aged 17-18		0.01*	-0.067***
	Aged 21-23		0.046***	0.056***
	Aged 24 or over		0.155***	0.138***
Situation before requesting a pension	Other	Employed	-1.506***	-1.314***
	Unemployed		-1.229***	-1.004***
	Inactive		-1.909***	-1.149***
Average annual salary	q1	q2	-0.336***	-0.259***
	q3		0.232***	0.12***
	q4		-0.117***	0.163***
Multiple-pension claimant	Multiple-pension claimant	No	-0.105***	0.224***
Country of birth	Abroad	France	0.01*	-0.235***
Distance away from full pension	More than 50 quarters	Full pension period	-0.203***	-0.549***
	Less than 50 quarters		-0.09***	-0.236***

Significance thresholds: *** = 1%; ** = 5%; * = 10%.

Notes: The analysis excludes 1.6% of observations corresponding to people not having accrued at least 4 quarters of activity or those whose family circumstances have not been recorded.

Sources: CNAV, historical database of combiners 2004-2016 and database of retirees on 31 July 2016.

Table 2 – Gross differences and net differences from the logistic model (percentage points)

Variable	Modalities	Reference	Women		Men	
			Gross differences	Net differences	Gross differences	Net differences
Family circumstances	Single	Couple	3.49	2.83	-0.72	0.44
Age when started working	< 17	Aged 19-20	-0.65	0.89	1.48	0.81
	Aged 17-18		-0.08	0.08	-0.62	-0.59
	Aged 21-23		0.36	0.37	-0.39	0.51
	Aged 24+		0.4	1.7	-2.93	1.87
Situation before requesting a pension	Other	Employed	-11.78	-11.75	-10.81	-9.58
	Unemployed		-10.42	-10.54	-9.09	-8.17
	Inactive		-13.98	-13.05	-11.17	-8.88
Average annual salary	q1	q2	-2.59	-2.49	-2.95	-2.12
	q3		4.59	2.1	2.2	1.13
	q4		3.98	-0.94	3.96	1.56
Multiple-pension claimant	Multiple-pension claimant	No	0.4	-0.85	1.15	2.04
Country of birth	Abroad	France	-0.43	0.09	-4.51	-2.05
Distance away from full pension	More than 50 quarters	Full pension period	-9.22	-1.58	-9.24	-4.29
	Less than 50 quarters		-5.14	-0.73	-5.74	-2.08

Notes: The analysis excludes 1.6% of observations corresponding to people not having accrued at least 4 quarters of activity or those whose family circumstances have not been recorded.

Reading Note: The proportion of combiners who are men born abroad is 4.51 points lower than the proportion of retirees born in France. Where the retirees in these two groups share the same characteristics (apart from their country of birth), the difference is reduced to 2.05 points.

Sources: CNAV, historical database of combiners and database of retirees on 31 July 2016.

The first finding is the reduction in the size of the differences once the model is estimated. For example, estimated parameters have shown that it is those people having the length of cover required for a full pension who are most likely to combine work and a pension. An analysis of the gross and net differences enables us to go further. For men, where individuals are more than 50 quarters short in terms of reaching the

length of cover required for a full pension, the gross difference is -9.2 points. Controlling for the other variables taken into account, the difference is no more than -4.3 points. As a result, nearly 54% of the differences observed are associated with structural effects (measured by variables taken into account in the model), and 46% are explained by the difference in the length of insurance cover.

For women, looking only at combiner rates shows that those who do not have the length of insurance cover required are less likely to combine work and a pension (gross differences are -9.2 points and -5.1 points). However, the net difference becomes virtually zero for women who are less than 50 quarters short. The gross difference observed therefore simply corresponds to structural effects. As a result, women who have a length of insurance cover that is slightly less than that required for a full pension (less than the maximum of 50 quarters) are just as likely to combine work and a pension as women having the length of insurance cover required for a full pension. On the other hand, a short length of insurance cover always has a negative influence on the probability of combining work and a pension.

As has just been shown, it is often not exactly the same factors which influence the decision to return to work after retirement for men and women. For example, being single means that you are more likely to combine work and a pension only if you are a woman (a net difference of 2.8 points). On the other hand, the family circumstances of men do not seem to influence their decision to return to work after retirement (a net difference of 0).

To supplement the analysis of the hierarchy of variables in the model as a function of their degree of influence on returning to work after retirement, we use an information criterion, in this case the Schwartz information criterion (Table 3).

The situation before retirement (whether or not the person is working) is the variable most likely to determine whether that person combines work and a pension. The second factor having a very considerable influence on the probability of combining work and a pension is their average annual salary, even if this is not equally significant for men and women (see above).

Depending on the person's sex, the other factors have varying importance in their decision as to

whether or not to combine work and a pension. For women, family circumstances and their age when they started working are the other variables having the greatest influence on whether or not they combine work and a pension. For men, it is whether they are multiple-pension claimants and have a full pension under the general scheme.

2. Three Typical Profiles of Combiners Under the General Scheme

Combiners differ from retirees as a whole through a few key characteristics such as being in employment before retiring and, for men, having a high pension or, for women, being single. The logistic model also shows differences among combiners underlining the influence of conflicting factors, such as the attractiveness of combining work and a pension for people who started working early or late in life. As a result, the estimation suggests that not all combiners are the same. In this second section, we aim to explore this very aspect by studying the profiles of combiners in more detail. We continue the work carried out by Musiedlak (2017) who identified five combiner profiles based on the labour force survey: elderly executives, self-employed men and young retirees, and two profiles of people holding irregular or part-time jobs. With the administrative data gathered by CNAV, which contain a wealth of information on careers, we are able to draw up profiles of retirees under the general scheme who return to a paid activity in the private sector and analyse them in detail.

To do so, we use multiple correspondence analysis (MCA)¹² which enables us to summarise the situation of combiners in terms of their career and retirement, and we supplement this with a

12. MCA involves creating new variables which are linear combinations of variables from the database. It allows a scatter diagram that is initially situated in a large area to be represented in an area of smaller dimensions which best preserves the wealth of initial information.

Table 3 – Classification of variables used in the model according to their influence on the likelihood of combining work and a pension according to the Schwartz information criterion

Women		Men	
Range based on the information criteria	Variables	Range based on the information criteria	Variables
1	situation before requesting a pension	1	situation before requesting a pension
2	average annual salary	2	average annual salary
3	family circumstances	3	multiple-pension claimant
4	age when started working	4	distance away from full pension
5	distance away from full pension	5	country of birth
6	multiple-pension claimant	6	age when started working
7	country of birth	7	family circumstances

Sources: CNAV, historical database of combiners 2004-2016 and CNAV, database of retirees 2004-2016.

classification in order to obtain profiles. Based on a limited number of qualitative variables describing the retired at the time of their retirement, MCA creates “summary” variables. The variables retained relate to elements which are known at the time of retirement. To describe a person’s career, we use their age when they first reported a salary on their career statement, the length of contribution to the insurance cover and the average salary during the person’s career in the private sector, expressed as a percentage of the social security ceiling. Three indicators are used to summarise the individual’s situation at the time of their retirement: the reason for their retirement, their conjugal status and the CSG (*Contribution sociale généralisée*) rate applied to the pension. These variables are set against variables relating to the industry of the job combined with a pension and the pension received under the general scheme. These two variables are only included as supplementary variables. The active variables of the MCA all have 4 or 3 modalities and the observations within the various modalities are well balanced so as to prevent any variable carrying too much weight compared to the others. Only the first two axes are used in MCA: these allow use almost all the inertia (i.e. the information contained in all of the initial variables).

Summary variables of the characteristics of combiners have been constructed using the factorial analysis of multiple correspondences. The first variable, represented by axis 1 in Figure VI, compares men who have had long

careers (modalities *totcont_q4* and *totcont_q3*) and comparatively high salaries (*meansal = 55-75%* and *meansal = min 75%*) with women who are more often single and have had shorter careers (*totcont_q1*) and low pay (*meansal = 35-55%*). On axis 2 (the vertical axis), which corresponds to the second summary variable, there are, at the top, those who started work at a young age (*start work = before 15*) associated with the reason for early retirement after a long career (*ralc*) and, at the bottom, those who started later (*start work = 17-19* and *start work = after 19*) associated with a reason for departure being the length of cover (*length*, departure having the length of insurance cover required for a full pension).

We use these summary variables to identify three groups of combiners using a method of rising hierarchical classification combined with automatic classification.¹³ Three groups of combiners are thus determined such that each group contains combiners with the most similar characteristics and each group differs as much as possible from the other two.

13. A mixed classification has been used to ensure the most robust method of classification. Unlike automatic classification, it means that there is no need to start the classification algorithm by choosing individuals randomly. Mixed classification involves first of all establishing an ascending hierarchical classification (AHC) to define the number of classes to be determined and to obtain the barycentre of the classes obtained. Then, in a second step, automatic classification is carried out based on the barycentres obtained through the AHC. In addition, owing to the large number of combiners, this mixed classification has been preceded by a first automatic classification.

Figure VI – Multiple correspondence analysis, representation of the modalities on the first two axes



Reading Note: As the information is clearly provided by the two axes represented, the modalities represented can be read as a function of their proximity or opposition to one another. As a result, combiners who retire having obtained a full pension thanks to the age of cancellation of the reduction (“age” condition on the graph) often also have a contribution period which is in the first quartile of combiner periods. Sources and Coverage: See Fig. I.

Table 4 – Characteristics of combiners by class

	Class 1 Men-RALC	Class 2 Executives	Class 3 Women–stop-start career
Number of Observations	168,490	314,190	220,170
Distribution	24%	45%	31%
Socio-demographic situation at the time of retirement	63% men in a couple 21% men single	70% in a couple 60% of men	38% women in a couple 41% women single
Pension amount under the general scheme (in € 2014)	10,344	10,917	6,718
Annual pension amount across all schemes (in € 2014)	19,485	26,022	10,601
Average annual salary earned while combining work and a pension (in € 2014)	6,480	11,197	4,952
Proportion of people returning to work within days of retirement	23%	30%	44%
Average length, in months, before returning to work after retirement	18.9	15	13
Age when started combining work and a pension	61.1	63.4	64
Median length, in months, of combined work and pension by people who started combining in 2012 at the latest (*)	39	37	42.5
Age at the end of combined work and pension for people who started combining in 2012 at the latest	64.2	65.8	66.6

(*) The length of time that work and a pension are combined is measured for combiners who started combining work and a pension before 2013 in order to observe a sufficiently long combination period. People who died during this period have been taken into account. The length of time spent combining work and a pension is studied using duration models which make it possible to estimate the likelihood of the person ceasing to combine the two by taking into account individuals for whom ceasing to combine work and a pension has not yet been observed. A non-parametric model using the actuarial method has been applied (see Dardier, 2016).

Sources: CNAV, historical database of combiners 2004-2016.

Over 80% of Class 1 (Men – RALC), which represents 24% of combiners, is made up of men, most of them being in a couple (Table 4). They started working at the youngest age: 92% starting working before the age of 17 (Figure VII). They have been in employment virtually throughout their working lives: between the ages of 18 and 56, the proportion of people who have accrued 4 quarters of employment varies between 85% and 96%. Unemployment appears in this population around the age of 25 and increases with age. However, it is still very marginal, affecting a maximum of 6.8% of the population at any given age. It is also only unemployment over a very short period where the rest of the year is spent in employment. Throughout their careers, combiners in this age category have earned salaries between 70% and 80% of the social security ceiling. Because of their long careers without any interruption, individuals in this group have retired under the general scheme either taking “early retirement after a long career” (72%) or as soon as they reach the legal age with the length of insurance cover required for a full pension (26%). They receive an average annual pension from all schemes of € 19,500.¹⁴

Class 2 (Executives), the largest with 45% of combiners, includes more men (60%) and people in couples (70%). Compared to Class 1, people in this category started working later in life.

At least 85% of the population is in employment at every age between 25 and 55. These combiners have therefore tended to be untouched by unemployment or illness even though both are more common than among members of Class 1. Conversely, they have enjoyed better paid careers. Between the ages of 30 and 50, the median salary is equivalent to at least 90% of the social security ceiling. Consequently, they retire with a full pension having the length of insurance cover required (93%) and they receive total annual pension from all schemes that are the highest among combiners (an average of € 26,000 a year).

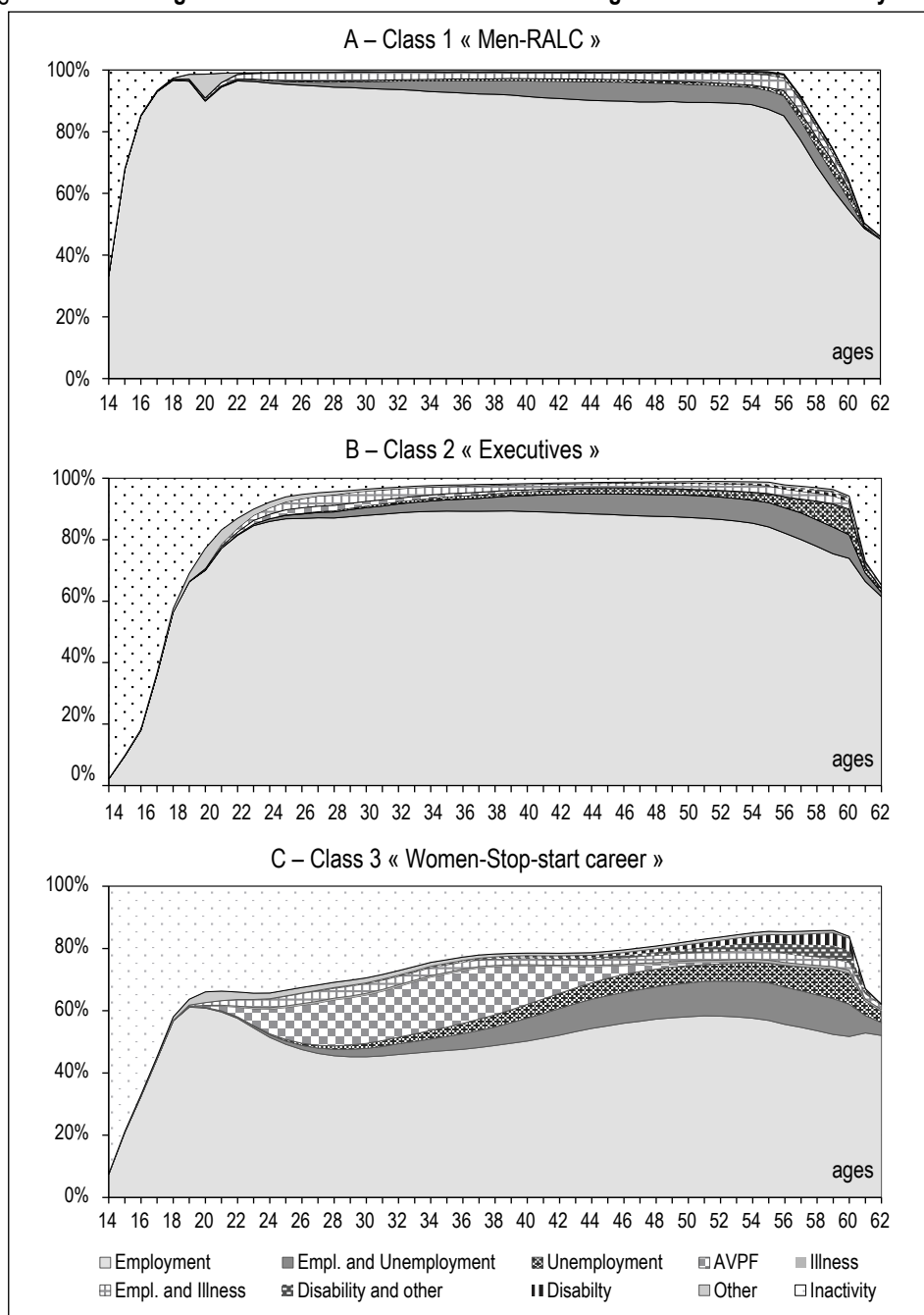
The last class (Women–Stop-start career), to which 31% of combiners belong, is quite different from the other two classes. It is essentially made up of women (79%). The combiners in this group typically had much less employment than those in the other groups since, between the ages of 25 and 50, only between 45% and 60% of this class managed to accrue 4 quarters of employment in any one year. This is because, whilst 62% of combiners in this group are in employment at 19 years of age, the proportion of people in employment falls from the age of 20 onwards without ever managing to rise again.

14. For comparison purposes, all pension sums and salaries of all combiners are given in EUR at their 2014 value.

This result is largely explained, as far as women are concerned, by childbirth. Old-age benefits for having raised children (*Assurance vieillesse des parents au foyer*, AVPF) are received by between 10% and 17% of women in this class at every age between 25 and 40. The men in this class (21%) have not reduced their professional activities following the birth of their children. On the other hand, from the age of 30 onwards and up until they retire, they sometimes suffer long periods of unemployment. In parallel with this lower level of employment, the combiners

in this group have also earned lower pay (on average less than 35% of the social security ceiling). They are also often people who live on their own or in low-income households. As a result, they have less often retire with the length of cover required for a full pension (41%) and they have more frequently obtained a full pension by waiting until they reach the age when the reduction is cancelled (28%). About 30% of them retired with a pension cut by a reduction. The pension from all schemes in this group is the lowest at an average of € 10,600 a year.

Figure VII – Chronogram of the careers of combiners according to the class to which they belong



Reading Note: At the age of 38, 92% of individuals in Class 1 are employed throughout the year and 4.5% are employed and unemployed during the course of the year.

Sources and Coverage: See Fig. I.

Given that the three classes of people identified have had different professional careers which translate into distinct retirement pension sums and retirement conditions under the general scheme, it is likely that these three groups have not the same interest in combining work and a pension.

After retiring under the general scheme, retirees in Class 1 (Men–RALC) start combining work and a pension at the lowest ages (61 on average) in line with their retirement at a young age (cf. Table 4). Nevertheless, they wait longer before returning to paid work. Only 23% returned to work within a few days of retirement. On average, people in this class start combining work and a pension 19 months after retirement. This comparatively long period before returning to any professional activity may be explained by the legislation: 60% of combiners in this class retired before 2009 and a number retired under the system of early retirement after a long career without therefore having reached the legal age of retirement. They were therefore subject to the rules on the limited combining of work and a pension (cf. Box 1), obliged to wait at least 6 months after retiring before returning to any activity with the same employer they had before retiring. Individuals combining work and a pension under said limited conditions are also subject to a limit on earnings. That is why, alongside their pension, they receive on average a rather modest salary of € 6,480 a year. Combiners in this group are more often employed in the primary or secondary sector than other combiners. They combine work and a pension for the shortest period of all combiners since half of the people in this group stop the work they are doing during retirement within 39 months (3 years and 3 months) of combining the two. Individuals who started combining work and a pension before 2013 and who ceased all professional activities were on average about 64 years of age when they stopped combining work and a pension, this being the earliest that combiners stopped their professional activities.

30% of combiners in Class 2 (Executives) are in employment within days following their retirement under the general scheme. On average, they return to work 15 months after retiring, that is to say at an average age of 63.4 (cf. Table 4). They therefore start combining work and a pension sooner after retirement than individuals in Class 1. After retirement, they mainly work in the tertiary sector and are paid about € 11,200 a year. The combiners in this class all retired at the legal age with the length of cover required for a full pension and can therefore fully combine work and a pension,¹⁵ not being subject to any

restriction on earnings or the period before returning to work. Among those who started combining work and a pension before 2013, the average combination period is 3 years and 1 month.

Combiners in Class 3 (Women–Stop-start career) return to work after retirement sooner than other combiners. 44% have a job within days of retiring under the general scheme and the entire group takes an average of a little over 1 year (an average of 13 months) to get a job after retiring (cf. Table 4). These combiners have an average age of 64 when they return to work. This is the latest compared to the other classes, owing to their later retirement. The activity carried out after retirement is probably a small-scale activity, as shown by the remuneration earned: only an additional € 4,950 a year, and often from service vouchers (*chèque emploi service*), which suggests personal service jobs. On the other hand, these modest jobs are carried out for quite a long period of time (at least 3 and a half years in the case of half of combiners), which is the longest period seen among combiners. Those who started combining work and a pension before 2012 and ceased their professional activities retired from the labour market at the age of 66.6.

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The draft Law establishing a universal pension system presents combining work and a pension as a way of facilitating the transition between work and retirement and advocates its expansion (Assemblée nationale, 2020, Article 26). By 2022 and irrespective of the introduction of such universal pension system, combining work and a pension could enable activities carried out alongside retirement to create new pension rights for people fully entitled to combine the two.

For men, a high level of pension and a length of insurance cover at least equal to that required for a full pension are strong factors in determining whether they decide to work after retirement. For women, the level of pension is less important than whether they are living on their own when they retire. Nevertheless, for both sexes, the main factor influencing a return to work after retirement is whether they had a job before

15. Apart from 42% of individuals in this class who were subject to the capped combining of work and a pension in force between 2004 and 2009 for all combiners. From 2009 onwards, they have been fully able to combine work and a pension like the rest of those in the class who retired after that date.

retiring. As a result, expanding the practice of combining work and a pension, as sought by the legislators, will rely in part on the capacity of individuals to be in and around the labour market after they have reached the age of 60.

Beyond these characteristics, combiners constitute a heterogeneous population. Our study has identified three groups. A first, representing a third of combiners, mainly women, with careers interruptions primarily through breaks associated with children, but also through long periods of unemployment or illness. They therefore appear to use the option of combining work and a pension as a way of supplementing their resources after retirement. However, the vast majority of people who return to work after retirement have had long careers. They may be executives who have earned high salaries and who have a well-paid job alongside their pension; this second class makes up 45% of combiners. The last group, corresponding to 24% of combiners, consists of men who started working at a young age and retired early after a long career.

The profiles of combiners may change in the years to come. The draft Law proposes that the work carried out during retirement should enable a person to increase their pension in the same way as any professional activities for individuals who retire when they reach the legal age with the length of insurance cover required for a full pension. In that case, it would be in the interest of any individual in employment and meeting these conditions to request their retirement pension. The new legislation could create a windfall effect for those who have hitherto been working beyond the legal retirement age without wishing to retire.¹⁶ We can therefore expect an increase in the number of combiners and a change in the characteristics of this population.

Acquiring pension rights while combining work and a pension removes a key advantage in terms of financing the pension system. At present, combining the two allows pension schemes to receive contributions without engendering

additional expenditure for the scheme (the contributions do not afford additional pension rights). However, this will no longer be the case with the new legislation being proposed. Combining work and a pension is still a system which helps keep elderly people in employment, but it is no longer a means of improving the financial equilibrium of the pension scheme.¹⁶

However, expanding the combining of work and a pension within the population and the benefit of this system as far as the legislators are concerned should not hide the fact that it faces serious obstacles. Firstly, combining work and a pension runs counter to the meaning given to retirement. As noted in the 2003 pension reform, a pension is replacement income, supposed to allow a reasonable standard of living (Assemblée nationale, 2003). Carrying out work alongside a pension brings into question the function of replacement income in retirement. Moreover, during National Assembly debates, some deputies raised concerns that combining work and a pension was a way of avoiding having to upgrade pensions by encouraging retirees to find other sources of income (Assemblée nationale, 2008). Finally, as being in employment before retiring is one of the factors having the greatest influence on a return to work after retirement, not all retirees would have the same options when it comes to returning to work. As already noted by Bridenne & Mette (2012, p. 152), “Increased recourse to combining work and a pension could ultimately contribute to a widening of the disparities between retirees in terms of their options for the diversification of income during retirement and, consequently, an accentuation of the disparities in resources between retirees”.

With the perspective of a change that would make combining work and a pension more attractive, the monitoring of the scheme will continue, in particular to carry out work on the profiles of new combiners. □

16. These are particularly individuals who benefit from the premium system, i.e. around 14% of new retirees under the general scheme in 2016.

Link to Online Appendix: https://www.insee.fr/en/statistiques/5396142/ES-524-525_Dardier_Online_appendix.pdf

BIBLIOGRAPHY

- Assemblée nationale (2003).** Projet de loi portant réforme des retraites – Exposé des motifs. <https://www.assemblee-nationale.fr/12/projets/pl0885.asp>
- Assemblée nationale (2008).** Débats parlementaires autour du PLFSS – Discussions des séances publiques d'octobre 2008.
- Assemblée nationale (2020).** Projet de loi instituant un système universel de retraite, article 26. https://www.assemblee-nationale.fr/dyn/15/textes/l15b2623_projet-loi.pdf
- Blanchet, D. & Debrand, T. (2007).** Souhaiter prendre sa retraite le plus tôt possible : santé, satisfaction au travail, et facteurs monétaires. *Économie et Statistique*, 403-404, 39–62. https://www.persee.fr/doc/estat_0336-1454_2007_num_403_1_7087
- Bridenne, I. & Mette, C. (2012).** Le cumul emploi-retraite des salariés : constats et enjeux. *Revue française des affaires sociales*, 4, 136–159. <https://doi.org/10.3917/rfas.124.0136>
- Conseil Européen de Lisbonne (2000).** Conclusion de la présidence. 23-24 mars 2000. https://www.europarl.europa.eu/summits/lis1_fr.htm
- Dardier, A. (2016).** Durée du cumul RG/RSI : une application des modèles de durée. *Les cahiers de la Cnav* N° 10. <https://www.statistiques-recherches.cnnav.fr/les-cahiers-de-la-cnnav-n-10-janvier-2016.html>
- Dardier, A. (2018).** Prendre sa retraite : incidence des dispositifs de prolongation d'activité sur les parcours individuels, -annexe- évolution de la législation sur le cumul emploi-retraite. *Les cahiers de la Cnav* N° 11. <https://www.statistiques-recherches.cnnav.fr/les-cahiers-de-la-cnnav-n-11-juin-2018.html>
- DREES (2019).** Le cumul emploi-retraite. DREES, *Les retraités et les retraites*, Fiche 19. <https://drees.solidarites-sante.gouv.fr/sites/default/files/2020-10/panorama-retraite-2019.pdf>
- Guillemard, A.-M. (2013).** Le vieillissement actif : enjeux, obstacles, limites. Une perspective internationale. *Retraite et société* N° 65. <https://www.cairn.info/revue-retraite-et-societe1-2013-2-page-17.htm>
- Minni, C. (2019).** Emploi et chômage des seniors en 2018. *DARES Résultats* N° 13. <https://dares.travail-emploi.gouv.fr/publications/contraintes-physiques>
- Musiedlak, Y. (avec la participation de Senghor, H.) (2017).** Cumul emploi-retraite : deux personnes sur trois travaillent à temps partiel. *Études et résultats* N° 1021. <https://drees.solidarites-sante.gouv.fr/etudes-et-statistiques/publications/etudes-et-resultats/article/cumul-emploi-retraite-deux-personnes-sur-trois-travaillent-a-temps-partiel>
- Rapoport, B (2012).** Des fins de carrière toujours marquées par de l'inactivité pour les femmes. *Retraite et Société*, 63, 79–108. <https://www.cairn.info/revue-retraite-et-societe1-2012-2-page-79.htm>
- Conseil d'orientation des retraites (2018).** L'activité des seniors et les transitions emploi-retraite à l'étranger. Document N° 12. Séance du groupe de travail « Transition emploi-retraite et niveau de vie » du 14 novembre 2018. <https://www.cor-retraites.fr/sites/default/files/2019-06/doc-4357.pdf>
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