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LABOUR MARKETS?
FIRMS RESTRUCTURING
AND EARLY RETIREMENT IN FRANCE

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Abstract

Retirement from the labour market is a critical transition on which the political debate has focused in many European countries during the last few years, raising the issue of the sustainability of pension systems. One of the most striking features of the French labour market is the very low participation rate of older workers. This coincides with the intensive use of early retirement public funded schemes (ERS) – which are usually considered as “bad transitions”. But the necessary reform does not rely only on the suppression of ERS. One must analyse why firms so intensively used early exits in the past years, i.e. what economic – and also social – factors contribute to explain the use of ERS.

The paper intends to provide both theoretical insights and empirical evidence on this issue – referring to the French case. It relies on both quantitative and qualitative (i.e. case studies) empirical work. It claims that changes in technology, in organisational practices and more globally in internal labour markets are key factors to explain the low employment rates of older workers. These changes were facilitated by ERSs, but, in turn, they also increased the demand for these schemes. This path dependency phenomenon may reveal hard to counter.

Key words: *Aged Workers, Employment Rate, Early Retirement, Technical Change, Internal Labour Markets.*

JEL: J14, J24, J26, J3, J58.

Des marchés internes aux marchés transitionnels ? Mutation des entreprises et préretraites en France

RESUME

Les modalités de transition vers l'inactivité en fin de vie active sont un enjeu essentiel, notamment dans la perspective d'assurer la « soutenabilité » des systèmes de retraite. La France se caractérise par une sortie précoce, et par là un taux d'emploi très faible des seniors. Ce fait coïncide avec l'utilisation massive dans le passé de dispositifs publics de préretraites. Mais supprimer ces derniers ne suffira sans doute pas. Il faut comprendre pourquoi les entreprises ont autant recouru aux préretraites, ou encore analyser quels sont les facteurs économiques et sociaux qui expliquent cet usage.

Le présent travail essaie d'apporter des éléments de cadrage théorique, ainsi que des éléments empiriques permettant d'éclairer cette question pour le cas français. Il repose aussi bien sur des matériaux qualitatifs (enquêtes de terrain) que quantitatifs. Il montre que le progrès technique, les nouvelles formes d'organisation du travail ainsi que plus largement les mutations des marchés internes des entreprises contribuent à expliquer les transitions des seniors vers l'inactivité. L'usage des préretraites apparaît aussi comme un mécanisme auto-renforçant, et par là pose un problème de « dépendance de sentier » difficilement réversible.

Mots-clefs : Travailleurs âgés, taux d'emploi, préretraites, retraite, progrès technique, marchés internes du travail.

**Ce texte n'engage que les auteurs et non les institutions
qui les ont financés, ni le CEE.**

INTRODUCTION

Retirement from the labour market is a critical transition on which the political debate has focused in many European countries during the last few years, raising the issue of the sustainability of pension systems. One of the most striking features of the French labour market is the very low employment rate of older workers. In 2002, only 44.2% of males aged 55-64 were employed (compared to 47.2% in Germany, 62.1% in the United Kingdom, 66.3% in the USA, 70.7% in Sweden and 76.8% in Japan – see OECD, 2004). The decline of the employment rate has been particularly sharp during the last two decades.

This coincides with the intensive use of early retirement public funded schemes (ERS). This use has been stigmatized both at the European and more recently at the national level as a bad practice. The priority is now to promote an “active ageing” policy, in order to increase the employment rate of older workers and meet the target defined at the European Summit of Stockholm in 2001 (i.e. to increase the employment rate of the 55-64 years old to 50 % by 2010.) In the same line, the “Transitional Labour Markets” (TLM) approach¹ promotes sustainable employment for the whole working age population, as well as progressive and chosen transitions to retirement.

The removal of public funded ERS is not that simple. One must analyse why firms so intensively used early exits in the past years, i.e. what economic – and also social – factors contribute to explain the use of ERS. In particular, one must address the issue of technical change and new work organisations and their impact on the competitive advantage of older workers. In a broader perspective, our view is also that a good understanding of restructuring “internal labour markets” (ILMs) is a precondition for thinking of implementing “transitional labour markets” (TLMs).

Section 2 gives an overview of the evolution of the labour market of older workers in France during the last two decades. Section 3 scrutinizes the impact of technical change and new work organisations. Section 4 analyses the consequences for older workers of the changes undergone by ILMs. Section 5 turns back to the early retirement issue, and section 6 draws some conclusions.

The empirical evidence provided here relies heavily on several empirical studies based on both statistical firm data and on in depth case studies interviews – box 1.

¹ The concept of TLM was introduced by Gunther Schmid a decade ago. It promotes a new form of full employment, based on securing transitions “around” the traditional full time employment, between other status as sabbatical or training leaves etc.

Box 1: Empirical Data

The COI survey (Behaghel and Greenan, 2005)

COI (“Changements organisationnels et informatisation”) is a survey on organisational change and informatisation. It is a matched employer-employee survey. Behaghel and Greenan worked with a random sample of about 2500 manufacturing firms that completed a self-administered questionnaire on the use of information technologies and new managerial tools in 1994 and 1997. Small samples of employees (2 or 3) have been randomly selected and interviewed on workplace organisation, technology use and training (distinguishing training in the main task, in computer, management and teamwork).

Case studies (Alexandre-Bailly et alii, 2004)

Alexandre-Bailly, Gautié, Guillemard and Jolivet (2004) have run in depth case studies in 4 big companies – of at least 1000 workers – in order to scrutinize the restructuring of ILMs. Two firms were chosen in the manufacturing sector – one in the glass industry (GLASS) the other in the steel sector (METAL). The two other come from the service sector – one in the gross and retail trade industry (TRADE) the other in the financial industry (BANK). The research is based on the documentation provided by the firms as well as on in-depth individual interviews (1h30, some times more) with managers, workers representatives and a sample of workers (chosen according to their occupation, age and tenure). Overall, from 25 to 40 interviews have been held in each firm.

1. OLDER WORKERS ON THE FRENCH LABOUR MARKET: AN OVERVIEW

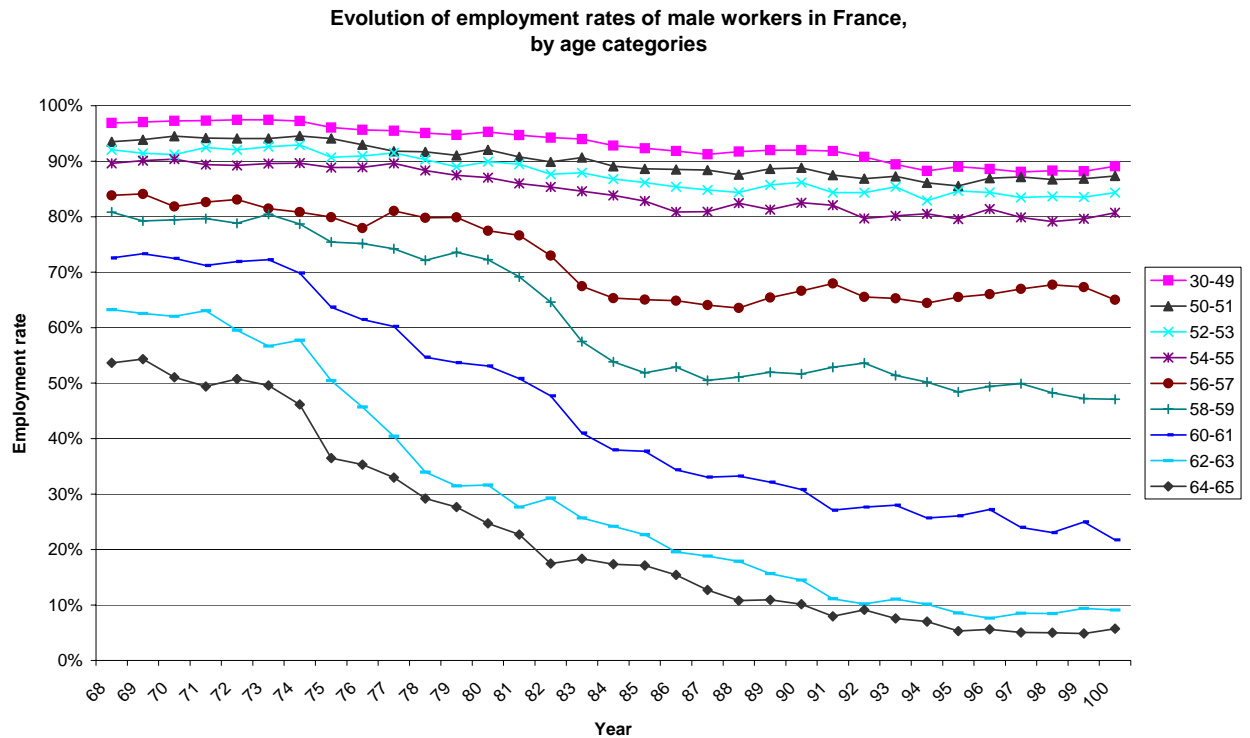
1.1. Employment and unemployment during the last two decades

The decline in the participation and employment rates of older workers in France has been one of the sharpest among OECD countries. The timing of this decline among male workers² by narrow age categories evidences three interesting features – figure 1.

First, the employment rate of workers up between 50 and 55 closely parallels the evolution of prime-aged workers (30 to 49 years old). Second, the employment of workers above 60 shows a sharper but continuous trend downward, from 1975 on. This trend seems barely affected by the change in the legal age for retirement (from 65 to 60) that took place in 1982. Third, and most interestingly, there is a specific, non-continuous evolution for workers aged 56 to 59 who experienced a sharp decline in employment at the beginning of the 1980s, with employment rates falling by more than 10 points in two years, and then stabilising.

² Focusing on men avoids cohort effects due to the progressive generalisation of women’s work. As a reminder: in 2003, the employment rate of women aged 55-64 was 32.5% in France, as compared to 32.3% in the EU 15.

Figure 1



Source: French Labour Force Survey (*Enquêtes Emploi*).

The 1981-1983 fall in the employment rate coincides with the surge in early retirement schemes (cf. section 4) which was an explicit attempt to shift employment from older to younger workers. The access to ERS, widely opened in January 1982, was narrowed in 1983. Understanding the exact role of such labour market policies – did they cause the fall in employment of older workers, or did they obey to underlying economic forces? – is thus the key question that stems from this first glance at employment rates.

Perhaps surprisingly given the low employment rate, the unemployment rate appears smaller for older workers than for the other age groups (table 1): the low employment rate mainly stems from a low participation rate – another evidence of the early exit from the labour market in France. However, unemployment duration is positively correlated with age. In 2002, almost 54% of the unemployed over 50 had been unemployed for more than one year.

Table 1
Unemployment rate and duration by gender and age (France, 2002)

	Unemployment rate (%)	Average unemployment duration (in months)	% unemployed for more than 1 year
Men			
15-24 year old	18.2	6.3	13.4
25-49 year old	7.3	11.7	29.7
Above 50	5.7	21.2	53.1
Total	7.9	12.2	30.2
Women			
15-24 year old	22.8	7.2	17.8
25-49 year old	9.6	12.6	32.3
Above 50	7.1	23.5	53.9
Total	10.1	13.4	33.1

Source: French Labour Force Survey, 2002.

Note: (i) Unemployment rate: ILO definition

(ii) The number of unemployed may be biased downward due to self-reporting errors by workers above 50 (some of them declaring being in a pre-retirement scheme while registered as unemployed by the unemployment insurance system)

However, international comparisons of labour markets have drawn the attention upon the fact that similar employment (or unemployment) *rates* may hide significant differences in terms of employment *flows*. Indeed, compared to prime-aged workers, workers above 55 face both a higher probability to transit from employment to unemployment or inactivity, and a lower probability to transit from non employment to employment³. For example, in 2000, the yearly probability to transit to employment is divided by 7 for a man aged 56 as compared to prime-aged male workers (aged 30 to 49); it is divided by about 2 for a man aged 50⁴. Rising exit rates and decreasing hiring rates both contributed to the fall in employment rates after the age of 55 in the past two decades. However, the increase in exit rates played the biggest role and the rising difficulties in finding a job when losing it after 50 had a second-order impact.

1.2. Distribution of employment and transitions across industries

Older workers in France are not evenly distributed across industries, nor across types of firms. In 2000, workers aged 50 and more represent 18.4% of the workforce on average; but they are particularly over-represented in real estate activities (more than 30% of the

³ On the basis of annual transitions computed from the Labour Force Survey (Enquête Emploi).

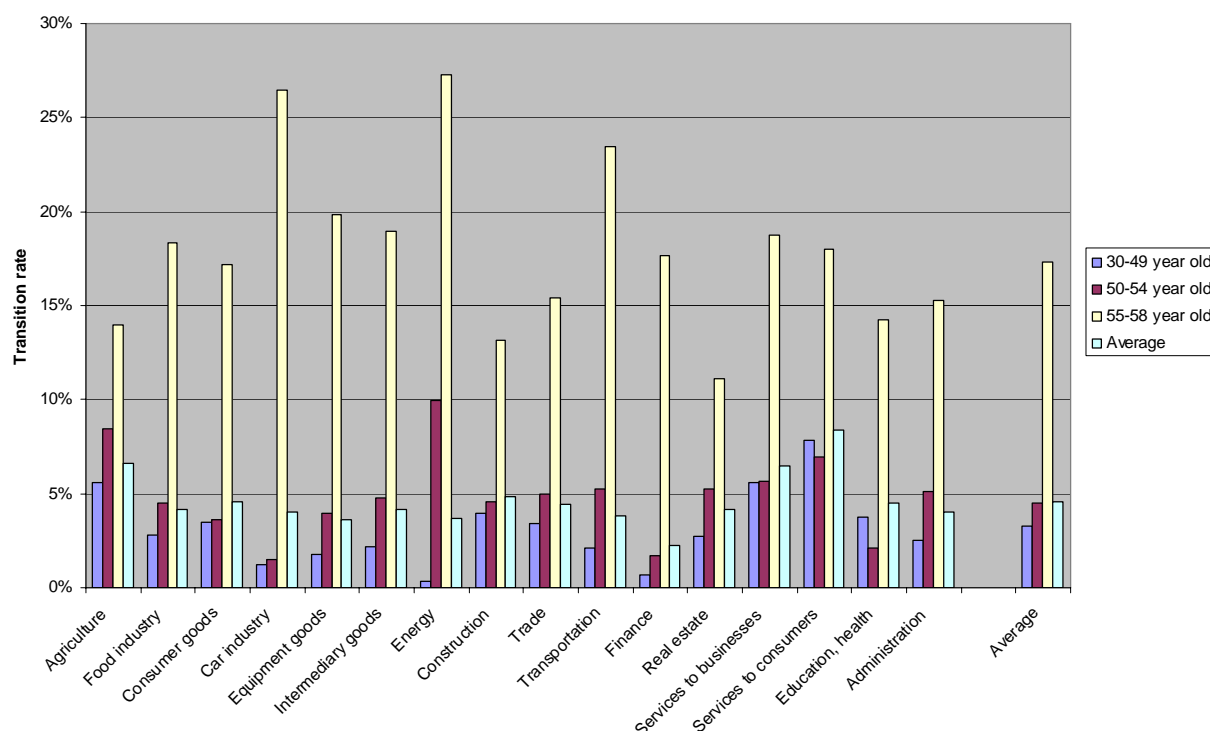
⁴ This can only partly be related to the incentives stemming from unemployment benefits, which favour unemployed workers aged 56 and above, but note those aged 50 (see section 4).

workforce), in R&D, construction, car industry, education, finance; they are under-represented in services like retail, hotels and restaurants (less than 15% of the workforce). They are also over-represented in larger establishments (Aubert, 2003). This should however not be interpreted too quickly in terms of differences in labour demand: a significant part of the differences stems from internal demographic evolutions. The financial services (banking and insurance) or the car industries are typical examples where the large share of older workers is the result of the “stop-and-go” recruitment policies during the previous decades.

Cross-industry differences in the behaviour towards older workers are better illustrated by differences in the eviction of older workers. Industries vary a lot in the share of older workers leaving each year for non employment (figure 2a) or for unemployment (figure 2b).⁵ Yearly transition rates to non employment are on average higher in the manufacturing sector (with a peak at more than 26% for the car industry). Strikingly, the hierarchy is quite modified when looking at transition toward unemployment: for example, the car industry has one of the lowest transition rates, whereas the services to consumers (e.g., hotels and restaurants) display the highest transition rate. This illustrates the heavy reliance of (large) firms of the manufacturing sector on early retirement schemes.

Figure 2a

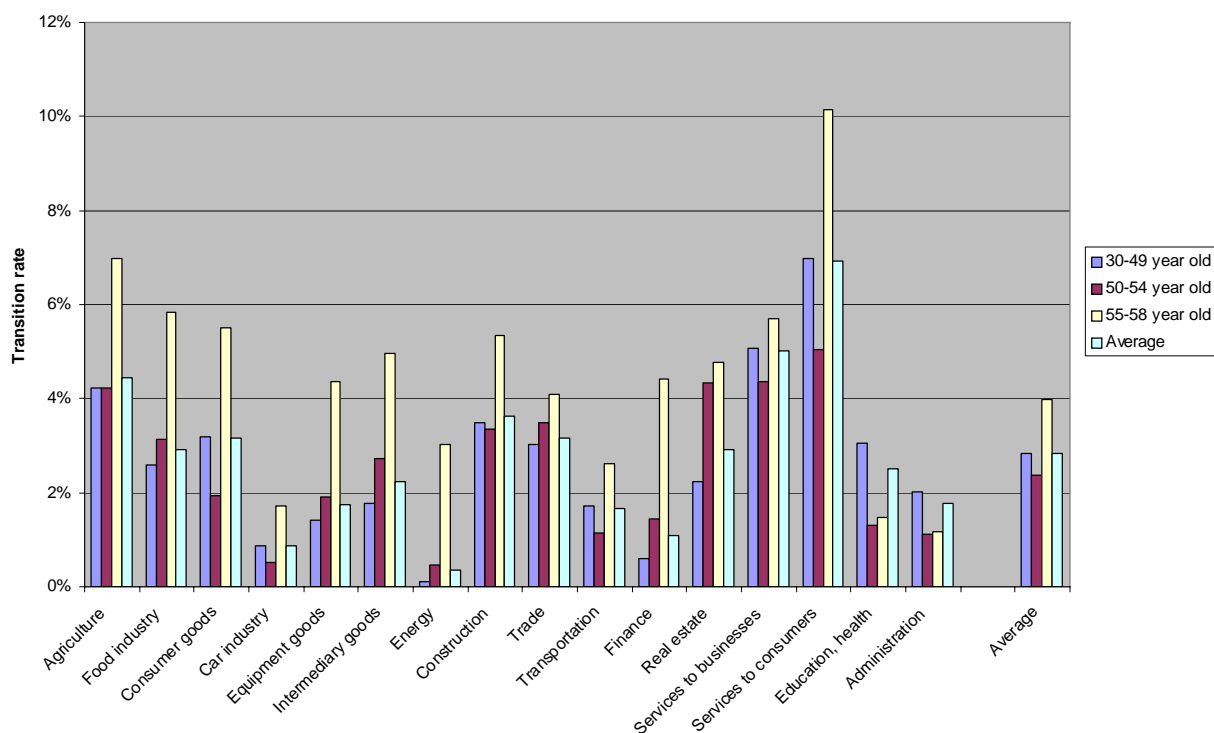
**Yearly transition rate of male wage earners
from employment to non employment, by industry, 1998-2001**



⁵ The difference between non employment and unemployment consists in other forms of inactivity, e.g. pre-retirement. It is particularly large for workers above 55, due to the extensive use of early retirement schemes.

Figure 2b

**Yearly transition rate of male wage earners
from employment to unemployment, by industry, 1998-2001**



Focusing on transitions toward non employment (probably one of the best proxies for the labour demand behaviour in the different industries), it is useful to control for differences in the skill of the workforce and the size of the firm, and to check for the evolutions between the end of the 1970s and the end of the 1990s. A *ceteris paribus* analysis (see appendix in Behaghel and Gautié, 2003) shows that transitions to non employment are more frequent in larger firms for 55-58 year old workers, and more frequent in smaller firms for 50-54 year old workers. Moreover, transitions to non employment concerned predominantly unskilled workers of the manufacturing sector at the end of the 1970s, consistently with the restructuring this sector underwent at that time. By the end of the 1990s, this specificity no longer holds: the transitions to non employment (for 50 to 58 year old workers) are not significantly more frequent for unskilled workers in manufacturing than for skilled workers, or than for unskilled workers in the service industry. Overall, the early departure of older workers is a widespread phenomenon across industries and skills (Behaghel, 2003).

1.3. French firms and older workers: training, promotions and workpost adjustments

Globally, French firms seem to lag behind in terms of specific personnel policies for older workers (Guillemard, 2003). A 2001 survey of around 1800 French establishments from the private sector (*Enquête sur les salariés selon l'âge*, ESSA⁶) illustrates their policies toward older workers (above 50) along three dimensions: training, promotions and workpost adaptation.

Most of the managers answering the survey declare they provide older workers with training as frequently as to other workers. However, 23% say that they provide them with less training, and only 6% declare they adapt the training according to the age of the trainees. Access to training is extremely uneven in transportation, and more even in construction industry. There are also large differences depending on the size of the establishment: only 17% of establishments with more than 200 workers declare to provide less training to older workers, whereas they are 28% in establishments with less than 200 workers.

Declared promotion opportunities also strongly depend on the size of the establishment, with cross-industry differences playing a minor role.

Eventually, the share of establishments having made specific recent⁷ adjustments to older workers' workplace seems low on average: 13%. Part of the difference between smaller and larger establishments may be a statistical artefact: if workposts are adapted periodically, larger establishments are more likely to have adapted at least one in the previous year, even if they adapt them at the same periodicity as smaller establishments.

Overall, human resource practices do not appear to be very "senior friendly" in France. Beyond this global overview, the firm practices deserve a closer look, in order to disentangle the various factors which may impact on older workers employability.

2. TECHNICAL CHANGE, NEW WORK ORGANISATIONS AND THE COMPETITIVE ADVANTAGE OF OLDER WORKERS

2.1. Technical and organisational changes and the selection of older workers

Two decades of intense restructuring and changes in the production processes (not only in manufacturing but also in many branches of the service sector) may have impacted negatively on the employment of older workers. Aubert, Caroli and Roger (2004), for instance, find that *ceteris paribus*, in the manufacturing sector the share of workers above 50 in the wage bill is negatively correlated with the degree of computerisation and of innovative organisational practices of firms. Moreover, highly computerised and innovative firms tend to dismiss more and hire fewer older workers than other firms. The finding on hires is particularly interesting. The fact that a disproportionate share of older workers leave the firms in the wake of technical and organisational change does not mean that older workers

⁶ For a presentation of the survey, see Minni and Topiol (2002).

⁷ The survey asks for adjustments that took place within the previous year.

have a disadvantage to face these changes, but may be due to the fact that ERSs make it easier to reduce the workforce by the eviction of older workers. Indeed, downsizing may accompany organisational change. But ERSs can explain why modern firms lay more older workers off, not why they hire fewer of them. Thus, this finding is the most direct evidence of a decrease in the relative demand for older workers due to technical and organisational change. The results in Behaghel and Greenan (2005 – see box 1) tend to confirm but also complement these findings. Indeed, it appears that older workers who remain in firms with advanced IT tend to be highly selected. Older workers in these firms are not only fewer, as shown by Aubert et al. (2004), but they have better records, *ceteris paribus*, in terms of both past wage and past employment duration than those at the same age in firms with less advanced IT. This is consistent with the view that only the most productive older workers could stay in modern firms – or that a large share of (less selected) older workers impedes innovation in the production process.

The two case studies in the manufacturing sector (see box 1) provide a good illustration of these phenomena. Both firms have undergone severe downsizing and restructuring (with implementation of new techniques and new work organisations) since the second half of the eighties. In both cases, these changes were correlated with dismissals of older workers – mainly through ERSs, but not only, see section 5. The eviction of older workers appeared explicitly as a consensual way to downsize – as the exit conditions were rather generous; it was especially the case for METAL, where a collective agreement was signed. Technical and organisational changes were not the first reason of concentrating lay-offs on older workers. But at the same time, those dismissals were a facilitating factor of these changes – and it appears that, at least in GLASS, the least employable older workers were selected in priority to be evicted.

2.2. Assessing the decline of the comparative advantage of older workers

Overall, empirical evidence tends to support the view that technical change and innovative work organisations may be directly “age biased” – i.e. they may have a negative impact on the productivity of older workers compared to their younger counterparts.

One channel is the work intensification associated with the new production processes. The four firms we have studied witnessed such work intensification which makes it harder for older workers. Moreover, a factor, more specific to France, has also to be mentioned here: the working time reduction. It has impacted on the work organisation, because the firm required an increase in the hourly productivity to compensate for the additional cost.

Another channel is the decline of specific human capital and the increase in knowledge codification.

Indeed, skill-biased technical change and new forms of work organisation require human capital that is both higher and more general in nature. This contributes to devalue traditional specific human capital – inducing a negative impact on the productivity of older workers, especially in big firms where the accumulation of such a capital was highly correlated with seniority.

In addition to the opposition between general and specific human capital, Caroli (2003) contrasts the tacit competencies embedded in individuals with the codified (or at least “codifiable”) accumulated competencies at the firm level. The new information and communications technologies made it possible to develop the latter (codified competencies)

to the detriment of the former (tacit individual-based competencies). It made it easier to fill skilled job vacancies by (external) recruitment rather than by (internal) upward mobility, and to use numerical flexibility – workers of different ages becoming more substitutable because of knowledge codification.

The four case studies (see box 1) provide interesting empirical evidence of such phenomena. As expected, the average educational level of employees increased notably in all four firms during the last two decades. Moreover, the share of general human capital increased at the expense of specific human capital. “On the job training” tended to be replaced by formal training, internal (i.e. firm-provided) as well as external.

All firms underwent a codification of knowledge. This process was facilitated – but not necessarily induced – by the use of new technologies of information and communication (NTIC). This codification seems to have increased the substitutability between different categories of workers, and notably between low and high seniority workers. All these changes seem to have weakened the competitive advantage of older workers.

It is important to notice that this did not only occur in the manufacturing sector. TRADE is a striking example. It has about 20,000 employees, distributed in hundreds of shops all over France – from one to 80 employees. “Idiosyncratic” knowledge used to play an important role until the first half of the eighties, at all occupational level (from warehousemen to sellers). At that time, according to a shop manager who had been recruited as a simple warehouseman, “*older workers used to be the kings*”, and they were very “stingy” with their knowledge, “*like peasants with their lands*”. But nowadays it is no more the case. The standardisation of procedures and the induced codification took place from the beginning of the nineties. It was correlated with the adoption of new technologies (computers) and also with the implementation of quality procedures with the ISO norms. A “Taylorian” method was used: at each occupational level, about 5 older workers from all over France were gathered to write a guide of the “best practices” in their occupation. The standardised procedures are now put together in a “book of procedures” which is available in each shop. New entrants receive training based on this guide, and are less dependent on the transmission of knowledge from the older workers. Moreover, new work organisations, as well as the implementation of the laws on the reduction of working time (and the resulting work intensification) made more difficult this traditional transmission – based on tutorship and “on the job training”. In turn, work intensification and new organizational practices increased the incentive to knowledge codification.

Nevertheless, beyond the specific case of TRADE, the decline of the value of experience as well as the virtues of codification seem to have been overestimated in several firms by top managers. Because it is a top down process, promoters of standardisation and codification often tend to overlook the role of local and tacit knowledge. This was acknowledged by some managers in GLASS or TRADE: they reported growing concern about the transmission of knowledge between older workers and new entrants in GLASS or TRADE for instance. More generally, it is a striking result of the interviews that in a given firm, managers could have very different views of what could be considered as the competitive advantage/disadvantage of experience and seniority. In some cases, trade-offs between young and older workers may rely partly on prejudices more than on objective elements.

2.3. Adaptation to changes and the training issue

When assessing the comparative disadvantage of older workers, the training issue is crucial. Indeed, it may be harder and more costly to train older workers – and this could be another source of the eviction – as innovations in the production process require more training.

Behaghel and Greenan (2005) find that training of the workforce is higher in modern firms regardless of age, except for computer training, which increases in firms with more advanced IT for all age groups but not for blue collars above the age of 50. These results confirm that advanced computerisation had a negative impact on older workers in the nineties in France: some older workers lost their jobs, and the others did not receive additional computer training, in contrast with younger workers. These negative outcomes do not seem to be due to the shortness of the older workers' horizon to get the return from training investments; otherwise, training incidence would not rise as it does in response to organisational change. The results rather point toward something specific to computers and older workers, that impacts both employment and training outcomes. A likely culprit is accelerated skill obsolescence, that may well be more acute for computer skills in an advanced IT environment. Such an interpretation is consistent with the claim by Heckman (2002) that “learning begets learning”: older blue collars may lack the learning skills (and not only “directly productive” skills) to use advanced IT tools. This may be related to a generation effect, as older workers in the nineties were educated in a world without computers, and may thus lack the computer literacy required for work on new IT systems and for further computer training.

However, the results do not support the idea that older workers cannot adapt to change in general. In particular, the fact that training can increase as a response to change at all age is confirmed on longitudinal data. During the last two decades, for those older workers who remained employed there has been no systematic increase in training “discrimination” (in the manufacturing and service sectors). In France as in the other OECD countries, firm-provided training according to age displays a “bell-curve” – i.e. it significantly declines at the end of careers. But the relative access of employed older workers (i.e. compared to the average) to firm-provided training has not declined dramatically between the end of the 1970s and the first half of the 1990s – while the overall access to this kind of training considerably increased during the period (see Behaghel, 2002). A possible interpretation is that the pay-back period for training investments is quite short, making it worthwhile to train well beyond the age of 50.

The global result concerning access to firm-provided training holds for the case studies, especially in the manufacturing sector. In GLASS, for instance, it appeared very clearly that there was no correlation between age and access to training: workers even close to (early) retirement could benefit from heavy training if necessary. This tends to confirm that the pay-back period of training is often rather short. However, training at older age is not only an opportunity; it is also the result of a constraint: as “soft” end-of-career jobs tend to disappear (see also below), the older workers who remain employed are kept on very productive jobs which require continuous adaptation.

Overall, the evidence tends to show that older workers are not systematically disadvantaged for training, as for instance a shorter pay-back period seems to imply. However, training may well be, in some cases, simple short-term adaptation. In particular, less educated older workers may lack the learning skills to increase their computer skills up to the level of an

advanced IT environment. This may explain why 42% of the managers of the ESSA survey sample (see section 2.3) declared that an ageing workforce would have a negative impact on the introduction of new technologies⁸.

2.4. The generational skill gap and the younger/older workers substitution

The “demand side” factors (i.e. technological change and new work organisation) mentioned in the previous sections may have played the same role in many countries, but we can assume that they had a particular impact in France because of their interplay with “supply side” changes which took place during the same period.

Indeed, an important French characteristic until the beginning of the 1980s, was that the majority of labour market entrants (especially those who became blue-collar workers or clerks) had no diploma or vocational training at all. The only skill they could acquire was human capital accumulated inside the firm, and thus a (mainly) non-transferable skill. Seniority was thus crucial to get access, mainly by internal upward mobility, to skilled jobs.

From the mid-eighties, the educational level of school leavers has risen sharply. This trend contributed to widen the educational gap between the new entrants on the labour market and the old generations, which is important compared to other OECD countries – see table 2. It also helped to lower the price of external training – i.e. of skills acquired within the educational system – compared to the price of internal - i.e. firm-provided - training. As a result, firms were induced to substitute younger workers for older ones, to meet the challenges related to technical change⁹ and new work organisations, as depicted above.

Table 2

Population that has attained at least upper secondary education (2002)

(% by age group)

Countries	25-34	55-64
France	79	48
Germany	85	77
United Kingdom	70	56
Sweden	91	67
Japan	94	64
United States	87	84

Source: OECD, *Education at a Glance*, 2004.

⁸ This is the most frequently perceived negative effect of ageing according to the results of this survey.

⁹ According to Acemoglu (2002), the increase of skilled labor supply may be the causal factor in the first place of skilled-biased technological change. In the case of France, it has been at least a facilitating factor of the adoption of innovations.

3. THE DESTABILISATION OF INTERNAL LABOUR MARKETS (ILMS) AND THE CONSEQUENCES FOR OLDER WORKERS

3.1. The progressive dismantlement of age related subsidies: an overview

We saw (section 2) that big firms used intensely early retirement schemes (and other form of dismissals). We believe that technical change and new work organisations was only one factor, and one aspect, of a wider phenomenon – which can be labelled as the “destabilisation” of ILMs (Gautié, 2004). As already mentioned, ILMs (as depicted in the seminal work of Doeringer and Piore, 1971) used to play an important role in the French context: workers used to integrate the big firms when still relatively young (but often after a transition through smaller firms), and seniority was a key factor of the career. ILMs may have been underpinned by age-related “implicit subsidies” from which older workers benefited. This system has been under big strain during the two last decades – and this may have impacted negatively on the employment of older workers.

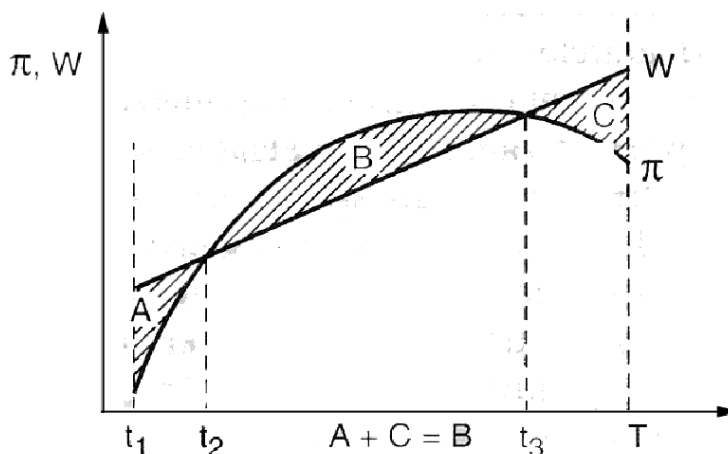
As Doeringer and Piore noted, “when a permanent relationship is established [...] profit maximizing no longer compels the firm to equate the wage and the marginal product of labour in every pay period” (op.cit., p.75-76). Indeed, ILMs were based on job classifications defining the wage hierarchy. As a result, the wage (attached to a job) could be decoupled – to some extent - from the productivity of the individual worker holding this job. If we assume that a firm’s total wage bill is equal to the marginal product of all its workers, this means that some workers (those who were paid less than their productivity) did “subsidise” others (those who were paid more than their productivity). ILMs were a nexus of such “implicit subsidies”, and thus, had (potentially) important distributional effects.

Seniority-based wage profiles may have underpinned age-related implicit subsidies in traditional ILMs. This can be illustrated by Figure 3 where W and Π represent wages and (marginal) productivity, respectively. During the initial phase, (from t_1 to t_2), young workers are paid in excess of their productivity. During the second phase (from t_2 to t_3), the by-now ‘middle-aged’ workers are paid less than their productivity. During the final phase, older workers are again paid more than their productivity. In a longitudinal perspective, these wage and productivity profiles derive from an inter-temporal equalization process for each individual worker throughout his career, (represented as $B = A + C$ in Figure 3¹⁰) – that is: his (actualised) cumulated wage equates his (actualised) cumulated productivity. But, in a transversal perspective, at any given period, middle-aged adults ‘subsidize’ both younger and older workers inasmuch as the former group is paid below its productivity, whilst the latter two groups are paid above theirs.

10 For purposes of simplification, the discount rate is not taken in account here.

Figure 3

Seniority-related wage and implicit subsidies to younger and older workers



Several factors can explain the wage-productivity profiles during the first two stages, that is from t_1 to t_2 and from t_2 to t_3 :

- The accumulation of specific human capital which, as we have seen, plays a major role in internal labour markets. Becker (1964) has shown that it is in both the firm's and worker's interests that the latter be paid above his/her productivity at the beginning of his/her career (the firm partially covering the cost of training) and below his/her productivity later on as the firm recovers part of its initial investment¹¹.
- For low skill jobs, institutional constraints, like minimum wage, can force firms to pay new entrants more than their productivity. Of course, firms will claw this back later by raising wages less than proportionately to the workers' increased productivity as experience accrues. This may explain the peak at the minimum wage level in the wage distribution (Card and Krueger, 1995), and why wage profiles of minimum wage workers are rather flat in countries where the minimum wage is relatively high and binding, as it is the case for France.

Similarly, the last two stages (the curves from t_2 to t_3 and then from t_3 to T) are based on a variety of factors:

- The excess wage paid during the final period (funded by the lower wage during the preceding phase) can correspond to "a delayed payment" which serves as an incentive device (Lazear, 1979). Workers have an incentive to perform better because they will lose out should they be fired before their careers come to an end (T). This is because the cumulated wage-productivity differential remains negative until T .
- This 'delayed payment' might also correspond to a 'forced savings' mechanism (Frank and Hutchens, 1993). Workers might want their wage increases to match the

¹¹ Although the worker is earning less than her productivity in the firm, she still has a wage that is higher than that which another firm would be paying, since by definition her training is not transferable.

rise in their family-related expenditures which reach a maximum when children are teenagers and/or young adults enrolled in higher education. This may have particularly played in Japan.

- Lastly, and independently of seniority-based wage profile, during phases two and three, the wage-productivity differentials might actually reflect an insurance mechanism. Workers want to be protected against the risk that their productivity may decrease during the last phase of their career, due to a deterioration in their physical aptitudes and/or the obsolescence of their human capital resulting from technical changes. In a “spot market”, such negative impacts on productivity should be matched by equal wage decreases. Workers agree to pay an insurance premium¹² during phase 2 ($W - \Pi < 0$), in order to maintain their wage during phase 3, even if productivity has decreased ($W - \Pi > 0$). Indeed, in France as in many other industrialised countries, many large firms, especially in the manufacturing sector, used to allocate their older workers to “soft” (low productivity) jobs at the end of their career, where they could wait for retirement without any wage decrease.

Delayed payment mechanisms (as well as insurance mechanisms) presuppose that the final term of the contract (T) be known, or at least be foreseeable (in probability), at the time of recruitment, both by the worker and by the firm¹³. Here we see why it was easier to implement such mechanisms during the post-war period, when firms, the largest ones at least, evolved in a relatively stable environment. But since the eighties, this was no more the case.

As Cappelli puts it, “*several important developments combined to create an environment that substantially reduced the benefits derived from internalised employment systems*” (1995, p.566-7). These changes include the slowdown of growth, globalization and increasingly intense competition on product markets, but also changes in financial systems and corporate governance. As for technical change and new forms of work organisation, they were causes as well as consequences of this process.

On one hand, compared to the post-war period (1945-1975), growth rates since the late seventies have been much lower in European countries and Japan. This slowdown has contributed to the destabilization of ILMs, because of the demographic imbalance faced by the seniority-based wage system, deriving from the decrease, or even the freeze, of recruitments. Implicit subsidies systems within ILMs were not sustainable anymore given the changes in the firms’ age pyramids, for reasons similar to those that require pay-as-you-go pension systems to be adapted to major demographic changes¹⁴.

12 Note that in this case ($B > A + C$), because of the risk premium due to risk aversion.

13 Note that it is not in the firm’s interest to keep the worker beyond T . If it does, cumulated wages (paid throughout the whole career) will exceed the worker’s cumulated productivity – it is the reason why many firms implement mandatory retirement rules (Lazear, 1979).

14 Indeed, keeping in mind Figure 3, an analogy can be made here with the retirement pension system. In a longitudinal perspective, the delayed payment system should imply that workers in phase 2 save (which corresponds to $W - \Pi < 0$) in order to fund the “excess” wages of phase 3 (where $W - \Pi > 0$) – like in a retirement funding system. In fact, it did not function like this. Because of capital market imperfections, and also because growth rates were higher than real interest rates (i.e. ILMs tended to expand), ILMs functioned rather like a pay-as-you-go system: at each period, workers in phase 2 were paying contributions (i.e. implicit subsidies) to finance the excess wages of workers in phase 3. Of course, because a seniority wage-scale was based on a stringent rule, this system was sustainable only if the required balance could be maintained between the number of workers in phase 1, 2 and 3. With the crisis and the hiring freeze, the cost burden of an ageing staff became less and less sustainable in the medium run.

On the other hand, changes in the role of financial markets and increased competition on the market for goods also had an important impact on labour markets. The expanding role of financial markets since the end of the seventies led to a new form of corporate governance, promoted by some pension funds, more focused on short term profits¹⁵. As for the globalization of the market for goods and services has created increased competition¹⁶, and therefore growing uncertainty for firms. It put pressure on specific human capital accumulation and on both delayed payment system and insurance mechanisms, something that may have also contributed to the destabilization of ILMs in industrialized countries (Rodrik, 1997, and Bertrand, 1999, for empirical evidence).

Overall, as Summers noted, “*market forces have tended to pay everyone like salespersons – on the basis of what they produce*” (1999, p.102), and at each stage of his/her career. Spot wage tended to equate spot productivity. Competencies and performance began to play an increasing role in wage determination, whereas general rules – like job classification, and seniority premium – tended to fade. This impacted also on older workers’ employment: they tended to appear too costly, as long as their wages were still based on tenure.

Some countries tried to compensate the induced dismantlement of age related subsidies. Public (explicit) subsidies – through labour market policy - tended to replace the former “implicit” private subsidies – it was the case in France for youth. Public funded early retirement schemes can also be considered as a way of dismantling the former system without betraying the older workers.

3.2. Some empirical evidence from case studies

In the four firms under scrutiny (see box 1) the ILM has undergone important changes concerning both the career paths and the wage compensation system – which are closely connected. Indeed, the traditional ILM was characterised by the two main features Doeringer and Piore (op.cit.) had mentioned in their seminal work: “ports of entry” for clerks and blue collars were mainly restricted to the lowest level in the job classification; higher level jobs were mainly filled by internal upward mobility through “chains of mobility”.

This typical model has declined – more in the manufacturing sector than in the service sector. “Ports of entry” in low skill jobs are now filtered by contingent work (fixed term contracts and temporary employment) with high turnover. But “ports of entry” are no longer restricted to the lowest levels of the job classification; more educated workers are directly recruited at higher levels; as a consequence, “chains of mobility” are shortened. Job skill upgrading has induced, mainly in the manufacturing sector, the suppression of the lowest levels of the job classification. The most striking illustration is provided by GLASS: within the blue collar category there were 11 different levels twenty years ago (2A, 2B, 2C, 3A, etc. to 5B); nowadays, all the blue collars are distributed among only 6 levels (from 4A to 5C, newly created), and 80% are concentrated in only three levels (4C, 5A, 5B)¹⁷.

¹⁵ In USA, this “short termism” revealed itself also during the big wave of mergers and take-overs in the early eighties. According to Shleifer and Summers (1988), hostile take-overs often led to the elimination of implicit long-term contracts, and thus undermined the foundations of ILMs (like delayed payment systems), older workers being the first victims (see also Gokhale, Groshen and Neumark, 1995, for empirical evidence)

¹⁶ In many countries deregulation has played a similar role in some industries.

¹⁷ As a consequence career paths are shorter; but as the wage career is faster for the new entrants than they were for the old generation, a lot of young workers are at the same wage level as older workers, who feel frustrated.

In METAL until the end of the 1980s, GLASS, BANK until recently and – in a lesser extent – RETAIL, the wage compensation system was also illustrative of the typical ILM functioning. The wage was attached to the workpost, which is classified in the job classification (the “qualification”) defined at the branch level, but with some adaptations at the firm level. Wage increase used to be connected to inflation and the average productivity growth: it applied to every employee. As a consequence, the only way to get an individual wage increase was the seniority premium or the upward mobility to another workpost classified in a higher level of the job classification.

In all the firms, but in the manufacturing firms first, METAL being a forerunner – wage compensation tended to move from a “qualification” collective based system to a “competency” individual based system, which is much less rigid. Wage tends to be attached more and more to the worker (through the recognition and valuation of defined “competencies”) and less and less to the workpost. It is a way of decoupling wage mobility from upward job mobility – which is reduced nowadays as we have noticed above. Collective annual wage increases tend to be replaced by individual annual wage increases based on individual achievements and results. Moreover, as expected, the seniority premium is under high pressure, and it has been reformed in METAL and even suppressed in BANK for new entrants. However there is a strong resistance from the trade unions who are still very supportive of the seniority premium. Eventually, more “funded” systems of delayed payment are expanding, like firm based saving accounts (*Compte d'Épargne Entreprise*) - whereas seniority premium played as a sort of “pay-as-you-go” system (as mentioned in the theoretical framework depicted above).

Eventually, another change affecting ILMs is that “soft jobs” to which older workers could be affected at the end of their career tend to disappear because of the “lean production” process – especially in the manufacturing sector firms like GLASS and METAL. As a consequence, there are less and less (internal) “bridge jobs” to retirement. It is another symptom of the dismantlement of “implicit subsidies” older workers could benefit from.

4. EARLY EXITS: FROM CONSENSUS TO PATH DEPENDENCY?

4.1. A widespread phenomenon

As already mentioned, early retirement schemes (ERS) were intensely used in France during the last two decades - see box 2 for an overview of the main schemes. As ERS were very costly for public finance, it was decided at the end of the 1980s to curb the number of ER beneficiaries by decreasing the financial incentives. Nevertheless, the number of new entrants did tend to decrease in the main (ASFNE) scheme, but new schemes appeared during the 1990s (like the ARPE and CATS – see box 2), so that the total number of entrants did not really decline. At the beginning of the 2000s new restrictions were implemented on ERS. The result was an increase of long term sickness leaves and of regular individual dismissals of older workers. Indeed, individual dismissal may play as functional equivalent (even if more costly for the firm) of early retirement in France, because of the unemployment compensation system. Since 1997, unemployed workers who are less than 60 years and have paid at least 40 years' contributions to their pension fund can benefit from the “Older Worker Allowance” (*Allocation Chômeur Agé, ACA*) or the “Special Waiting Allowance” (*Allocation Spéciale d'Attente, ASA*) until they reach the legal age of retirement (60). Moreover, if they are more than 57 and a half, they can be allowed not to actively search for a new job. In this

case, they disappear from the official statistics of unemployment (based on the ILO unemployment definition). At the end of 2000, about 350 000 persons were in that case, compared to the 195 000 beneficiaries of all the early retirement schemes, and they represented about 13,5% of the 55-59 year old cohort.

Box 2: Early Retirement Schemes in France

The first early retirement schemes (ERS) have been implemented in France at the beginning of the sixties (1963, for the workers of some specific sectors, like mining and steel, undergoing severe restructuring). At that time was created the National Fund for Employment (*Fonds National pour l'Emploi*, FNE), funded by the government. ERS were expanded drastically from the beginning of the 1980s to offset the social effects of the huge downsizing in traditional sectors such as mining, shipbuilding, textiles, iron and steel. During the last two decades, several ERS have been implemented. The main ones are the following.

- *L'allocation spéciale du FNE licenciement (ASFNE)*. In the context of a collective lay-off, a firm can sign an agreement with the FNE allowing some displaced workers to take ER. They must be at least 57 years old (special authorisation can be requested for those aged 56). They must have paid social security contributions for at least ten years and have a minimum of 12 months' service with the present employer. They must also agree not to take any kind of remunerated job while (early) retired. The pension is 65 % of the previous wage under the threshold of about 2300 €, and 50 % under 4600 €. The pension is co-financed by the firm (severance pay), FNE and UNEDIC (unemployment compensation system). The FNE contribution to be paid by the firm is negotiated on a case by case basis by the firm and the government. This margin of discretion provides FNE with a very powerful tool for influencing the collective lay-off process. The government contribution depends on the quality of the measures proposed by the firm to help its displaced workers. The size of the firm and its financial situation are also taken into account. As a result, the firm's contribution is usually between 12 and 15 % if it has less than 500 employees, and between 15 and 23 % if it is bigger. This contribution has been raised in 2001 (between 17,5% and 20,5% for small and medium size firms, and between 28 and 31% for the big ones). [
- *L'allocation de remplacement pour l'emploi (ARPE)* (“*Replacement allowance for employment*”): in 1995, the employers' organisation and the trade unions signed an agreement (renewable every year) allowing workers who are 58 years old and who have paid at least 40 years' contributions to their pension fund, to take early retirement. Their pension is financed by the unemployment insurance system (UNEDIC). The condition is that the firm has to maintain the total number of working hours with one or several new hires. This scheme was not renewed after 2001.
- *Cessation anticipée d'activité de certains travailleurs salariés (CATS)* (“*Early retirement for selected workers* »); since 2000, some workers can benefit from early retirement (from 55) if they have undergone hard working conditions (assembly-line, night work) or if they have a disability; the amount of public funding by FNE depends on the age at which the worker enters the CATS (20% if 55, 35% if 56, 50% if 57 or more).
- *La préretraite progressive (PRP)* (“*Progressive early retirement*”): This is another approach to early retirement. To avoid dismissals, and/or to hire new employees, the firm can propose that its older workers transform their full-time job into a half-time one. The conditions are the same as for the ASFNE, except that beneficiaries can be younger (55 years old). They generally earn 80 % of the previous wage. If the firm resorts to this scheme in order to hire new workers, half of them have to be “hard-to-place” unemployed, and two-thirds have to be youth. The cost of partial ER is shared between: 1) the employer, who, since May 1997, has to pay a financial contribution which depends on the size of the firm and the proportion of “hard-to-place” unemployed people hired; 2) the UNEDIC which gives older part-time workers an allowance amounting to 30 % of the previous wage; 3) the older part-time workers who accept a reduction of 20 % of their monthly wage. The PRP has been suppressed at the end of 2004.

Of course, these possibilities open the way to moral hazard. Employers and older workers can agree on dismissal (without using the costly collective lay-off procedure), the worker knowing that she can reach the retirement age without working and without losing a lot in terms of income (depending on the severance pay she has negotiated). GLASS, for instance, offers a striking illustration. In 1995, out of 900 employees, more than 30% were aged 50 or more; between 1995 and 2002 only two employees retired. Meanwhile, the firm did not use ERS during this period (whereas it had been the case at the beginning of the nineties). In fact, regular dismissals were used to get rid of older workers¹⁸. Interviews have revealed that those dismissals were made by consensual agreements, with financial compensation for the worker even higher than within existing ERS.

4.2. The micro-foundations of path dependency

The great difficulty to curb the number of early exits in France may reveal a “path dependency” phenomenon. Our research helps understand better the “micro-foundations”, at the firm level, of such a phenomenon. More precisely, we have uncovered several microeconomic mechanisms that create path dependencies.

The first one is a kind of coordination failure. Indeed, one must keep in mind that early exit was, and still is, very consensual at the microeconomic level: both the employers and their employees – and their trade-unions – consider that it is a very “social cost minimizing” way to reduce payroll when needed. But behaviours which are rational at the individual level are not efficient at the collective level. Public incentives have then to be modified in order to make the individuals (workers as well as employers) take into account the collective cost of early exit practices. It is not only a matter of ERS: as we have seen, in the case of France, long term sickness leaves as well as unemployment compensation can play as functional equivalents.

The second one is the durable impact on mentality induced by the intensive recourse to early exit during the two last decades. According to Guillemard (2003), a “*culture of early retirement*” is now deeply rooted into the minds of both employers and workers. This is a particularly striking result of our case studies. When interviewed, many workers of the firms which used ER in the past declare that they consider ER as an entitlement. In the Lazear type implicit contract (see above, Figure 3), ER is now the functional equivalent of delayed payment. As for the employers, they seem not to have taken fully into account the challenges of an ageing workforce: according to the ESSA survey few declare to care about their age pyramid, and even less implement special human resources strategy to cope with the related issues (adapting work conditions to older workers etc.) – see section 2.3, and Minni, Topiol, 2002, for a global perspective. The use of early exit prevented the employers from thinking of a real “age policy”.

The third one derives from the impact of early exits on technical and organisational choices – which may have induced a “*lock-in effect*”. As we have noticed, the new work organisation reduces the margin of manoeuvre to adapt the conditions of work to the specific needs of ageing workers. The choice has been made in France of a very “high wage/high productivity” model. In 2003, for an average index of 100 for the hourly productivity in the European Union, France scored the highest among the OECD countries, with an index of 123

18 For instance, between 1999 and 2002, there were 66 dismissals: only 5 workers were less than 50; 3 were aged between 50 and 54; and the remaining 58 were 55 or more (i.e. more than 85% of all the dismissed workers).

(compared to 116 for the USA, 104 for Germany and Italy, 90 for the UK, 84 for Spain, 78 for Japan). ERS probably facilitated the adoption of very productive production processes. But may be a vicious circle here: in return, those processes have perhaps reinforced the demand for ERS – through the intensification of work and the selection process depicted above (see section 3)¹⁹.

CONCLUDING REMARKS

ERS are often presented as the “cause” of early exits of older workers. Our hypothesis is that ERS mainly met the needs of the firms, and that economic as well as some social factors were the driving forces. The restructuring of firms during the last two decades, both with the implementation of new techniques and work organisation and the changes in the functioning of internal labour market (and especially the compensation system) played against older workers. On the one hand, their competitive advantage has been eroded by the decline of the role of tacit knowledge and specific human capital – correlated with the increasing standardisation of procedures and the codification of knowledge. On the other hand, they benefit less and less from “implicit subsidies” underpinning the seniority wage premium – the disappearance of “soft” less productive jobs which could serve as internal “bridge jobs” to retirement being another aspect of the same process.

Recent attempts to curb the early exits of older workers tend to show that it is not easy to escape from the early retirement trap, and to turn to more sustainable (at the individual as well as at the global level) transitions – in the line of the “transitional labour markets” approach. Nevertheless, some lessons may be drawn from our work.

Sociologists usually stress the role of individual and collective expectations and representations. Indeed, case studies reveal that in some firms – those which used intensely ERS in the past – the “*culture of early exit*” is important, even among young workers. Another interesting result is that the valuation of experience and seniority – and therefore of the comparative advantage of older workers – can differ notably from one manager to another: stigmatization and discrimination are not excluded. As a consequence it can be necessary to try to change representations – for instance by public funded advertising which value seniority, as in Finland.

Representations are far from being the whole story. Incentives are a key factor. The suppression of public funded ERS is not enough as long as other “functional equivalents” remain (invalidity schemes of different kinds). Exit also depends on the retirement pension system. Overall, an institutional reform must be coherent and comprehensive to be efficient.

But, as we emphasised, early exit schemes are as much a consequence as a cause: technical and organisational changes seem to have been “age-biased” during the two last decades. A reform must also think of incentives to promote the adoption of more “age friendly” production processes – and the correlated human resource management. Rigid compensation system based on seniority may have also had a negative impact on older workers. This

19 Another negative impact of ERS is often mentioned. As Pisani-Ferry (2001) phrases it, “the very existence [of ERS] leads firms to reduce training for workers at the end of their career, which in turn validates ex post the opinion that their productivity has become too low to justify that they remain employed”. Empirical evidence on this view is however mitigated. As we have seen - referring to Behaghel’s (2002) empirical work – during the eighties, while ERS were intensely used, the access to firm-provided training has increased at all age, and in the same magnitude for older workers as compared to the average – once controlled for compositional effects.

implies a global reflection on the optimal earning career through the whole life-cycle. This “life-long earning” perspective is a core aspect of the TLM approach.

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