

Do People Forgo Extra Money to Avoid Job Search Assistance?

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Abstract

We use a French reform of the unemployment insurance system to analyze the take-up of active labor market policy (ALMP) programs. On July 2001, registered unemployed workers could choose between (i) staying in an unemployment insurance system without ALMP components and with declining benefits, and (ii) switching to a new system, with automatic job search assistance and flat benefits, without increased risk of sanction. In this article we focus on the selection problem. We aim at rationalizing non participation in the new system, at measuring the non take-up rate and at characterizing the staying and switching populations. We consider three main reasons for non take-up: expectation of a short unemployment spell, the time and psychological costs associated with a participation in a system with ALMP and incomplete information. Using defective duration methods on data extracted from the public employment agency records, we find a significant, but rather small, non take-up rate and evidence of self-selection. Results indicate that for most insured unemployed workers, the costs of declining benefits outweigh those associated with a participation in a system with ALMP components.

JEL: C41; J64; J65

Keywords: non take-up; unemployment insurance; active labor market policies; selection; duration models with long-term survivors.

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1 Introduction

Since the 1980s, unemployment insurance systems combining job search assistance and sanctions have been implemented in most of the OECD countries. Empirical evaluations give unclear conclusions on the effectiveness of the active labor market policy (ALMP hereafter) programs (Kluve [2006]). In the particular case of France, participation in ALMP is shown to have a positive impact on the labour market situation of the participants in the short run and mostly in the long run (Crépon *et al.* [2005]). Whichever the effects of a participation, there are empirical evidence of strategic behaviors of a significant share of unemployed workers as regards participation in ALMP: some unemployed workers increasing their job search intensity or lowering their reservation wage as they learn that they are to participate in an active program (Bjørn *et al.* [2005], Black *et al.* [2003], Rosholm and Svarer [2008]). The reasons for these higher exit rates from unemployment are not clear: do workers refuse to participate in such schemes because assistance is not desired or because they feel threatened by the increase in the control and risk of sanction generally induced by activation? Cockx and Dejemeppe [2007] use regional variations in the combinaison of monitoring and counseling offered to the registered unemployment workers to show that the threat effect, derived from notification of future monitoring, disappear or reverse when individuals are told they will also participate in job search assistance programmes shortly after the monitoring interview. To convey additional results on the attitudes of unemployed workers with respect to job search assistance, we use the major 2001 reform of the French unemployment insurance system which marks a generalization and reinforcement of the job search support without intensified monitoring and sanction.

Studies on the take-up of ALMP programs are still too scarce in comparison with the policy and evaluation implications of this issue. To design ALMP, it is useful to have a measure of the conformity between the needs of the targeted population and the supply of welfare support. This is all the more important that ALMP programs are costly and can only be efficient if the job seekers actively participate. The take-up rate is a natural candidate here. Furthermore, non take-up can affect the econometric evaluation of ALMP. Indeed in presence of selection, the participants, the policy is evaluated on, are not representative of the entitled population. This selection issue may bias the treatment effects estimates. It thus appears important to study the ALMP take-up decision in order to enrich the evaluation of such a policy.

The econometric studies which tackle the take-up issue mostly concern monetary and mean-tested support (Moffitt [2002], Currie [2004], Hernanz *et al.* [2004]). However, any activity which creates fixed costs, monetary or not, can be studied in a take-up framework (Moffitt [1983]). The focus on monetary support may be due to the facts that the refusal of entering in a ALMP is never observed and that the supply of ALMP is constrained, so that any entitled person cannot participate. Here the 2001 French unemployment insurance system reform presents a crucial interest. Because of its implementation it allows to identify the entitled population and to observe the decision to participate in a counseling and job assistance program.

The reform consists in the implementation of a more generous insurance system for the unemployed workers. In this new system, named *Plan d'Aide au Retour à l'Emploi* (PARE hereafter), the unemployment benefits are no longer decreasing over time and the counseling and assistance provided by the public employment agency are generalized to the whole unemployed population. Unlike the similar foreign experiments the French reform is inspired from, counseling, job assistance and non decreasing benefits are not combined with any real reinforcement in monitoring or sanctions. Workers who were unemployed and recorded as such at the employment agency at the moment of the reform had the choice between staying in the former system and switching to the new one¹. By refusing to switch to PARE, the unemployed worker refuses, among others, to benefit from a reinforced support in his job search.

We consider three determinants of non take-up: time and psychological costs associated with the participation in a system with ALMP components and informational problems². We take into account that the reform was more or less attractive according to the labor market past history and

1. The people who entered unemployment after July, 1st 2001 were automatically covered by PARE.

2. The radical change in the conception of the unemployment insurance system and the numerous debates the year before the reform about the reinforcement of sanctions made the understanding of the implications of the reform uneasy.

the entitlement status for unemployment benefits.

We propose a theoretical model to show the economic mechanisms at play in the decision of the choice between the former and new insurance systems: entering into a system with job search assistance may improve the exit from unemployment but may also be costly, as it may be stigmatizing and as it constrains the unemployed worker to allocate more time and effort to the formal search channel. To describe this possibly reallocation of job search effort between the informal and the formal search channels, we consider a stationary job search model in partial equilibrium with endogenous search effort and with two search channels, a private one and a public one (Fougère *et al.* [2005]). The public channel can be with or without counseling and job search assistance. The control variables in the model are the job search intensities and the type of the public search channel. We allow for two types of costs associated with the use of the public channel with assistance (Moffitt [1983]): a variable time cost and a fixed psychological cost.

Empirically, we estimate the non take-up rate and characterize the staying population using duration data with long-term survivors techniques (Maller *et al.* [1996], Addison *et al.* [2003]). We use administrative data extracted from the records of the public employment agency. Because available data do not contain any variable directly describing in which system the unemployed workers are, we do not directly observe the selection decision. To deduce the decision, we use the dates of the newly implemented interviews as only the takers pass such interviews. To deal with the censoring issue, we use duration data with long-term survivors techniques (Maller and Zhou [1996], Addison and Portugal [2003]).

The estimated non take-up rates are significant and accounts for about 3%. This massive enrollment to the new system appears as an *ex post* justification of the orientation taken in the policy dispensed to the unemployed workers and of the financial effort made to fund these ALMP. It indicates that decreasing benefits is more disliked than activation. We identify self-selection: workers who encounter greater difficulties on the labor market and who have longer unemployment spells are more likely to participate in the new system. They are interviewed faster than the rest of the unemployed population. We find evidence of PARE non take-up due to stigma, informational issues and expectation of a short unemployment spell.

The paper is organized as follows: in section 2 the 2001 reform is described and the relevance of the concept of non take-up is discussed. In section 3, we present the theoretical framework. In section 4, we describe the data, the empirical methodology and the descriptive analysis. In section 5, we present the statistical model of competing and defective risks. Section 6 contains our results and comments. We conclude in section 7.

2 The 2001 French Reform

2.1 Introduction of a more generous system

France experienced successively two unemployment insurance systems relying on different instruments to reach the incentive and insurance objectives of the unemployment insurance: Until 2001 the *Allocation Unique Dégressive* (AUD hereafter) used regular decreases in the unemployment benefits (Appendix A - Table 6). On July 2001, France has then followed foreign experiences and introduced the *Plan d'Aide au Retour à l'Emploi* (PARE hereafter). This reform involved two main changes. First, benefits are no longer decreasing over the unemployment spell: the entitled unemployed workers receive constant benefits over six months or more if the eligibility rights allow for it (Appendix A - Table 6). Second, an active labor market policy component is introduced. Before the reform, the public employment agency already provided the unemployed workers with job search assistance. However, most of the time unemployed workers did not meet any caseworker during their unemployment spell. Moreover, training and subsidized jobs were only dedicated to long-term unemployment. The 2001 reform has generalized such active schemes to the whole unemployed population registered at the public employment agency. A meeting is now compulsory for every newly registered unemployed worker: any unemployed worker meets a caseworker during about 30 minutes to evaluate his job search ability and to decide the kind of assistance he should receive regarding his needs, his ability and the global and local situation of the labor market. The meeting concludes with the signing of a contract, labeled *Plan d'Action Personnalisé* (PAP), which

is actualized every 6 months if the person is still unemployed. The unemployed worker is first oriented toward one of the 4 existing levels of services, that are *free access*, *individualized support*, *reinforced follow up* and *social follow up*. Then he can be proposed 5 kinds of schemes: workshops, skill or project assessments and job-search or project support (Crépon *et al.* [2005] and Jugnot *et al.* [2006] for a description of these programs). The unemployed worker can refuse to participate in the offered program. The particularity of the 2001 French reform, in comparison with similar experiments in other OECD countries, is that counseling, job assistance and non decreasing benefits are not combined with any real reinforcement in sanctions or monitoring (Freyssinet [2002]). As a result, PARE appears to be more attractive than AUD for the unemployed workers.

2.2 Implementation

The workers who entered unemployment after July 1st 2001 were automatically covered by the PARE system. On the contrary, those who were registered at the public unemployment agency before July, 1st 2001 and who were still unemployed at this date, switched from AUD to PARE on a voluntary basis³. Starting from June 18th 2001, they received a form they had to fill and return, indicating whether they accepted PARE or preferred staying in AUD. If PARE was chosen, the unemployed person switched from AUD to PARE: from the start of the month following the receipt of their option form by the public employment agency, he benefited from the personalized job search assistance and received, if entitled and until the exhaustion of entitlement, a non decreasing benefit. The amount of the benefit was fixed at the level of the benefit received the day before the switching. On the contrary, if the unemployed individual stayed in AUD, he could not benefit from the ALMP offered in the new system and, in case of eligibility, his benefit declined until the end of the entitlement period. Despite the higher generosity of PARE in comparison with AUD, one can expect to find some unemployed workers who decided to stay under the AUD system. We consider three main explanations for PARE non take-up: the expectation of a rapid return to employment, informational issues and the perception of psychological and time costs associated with evaluation and participation in ALMP.

2.3 The reasons for non take-up

Expectation of a short spell of unemployment. The non decrease in the benefits may not be attractive for the unemployed individuals who expect to exit unemployment before July, 1st 2001 or before their next decrease in the decreasing benefit, or for those who have already reached their last level of compensation (Appendix A - Figure). Anderson and Meyer [1997] use a special Current Population Survey supplement administered in 1989 and 1990 and report that 37% of the unemployed workers, who believe they are entitled and do not apply for unemployment insurance, indicate that they do not apply because they expect to get another job soon or to be recalled. Likewise, a report (Commissariat Général au Plan [2000]) states that more than a third of the entitled people who do not apply for the minimum income benefit think they would soon find a job. Furthermore, the prospect to find a job soon makes participation in an unemployment insurance system with counsel and assistance less attractive or undesirable, except for those who are willing to obtain another job than the one they are preparing to take: notifications and meetings with caseworkers are indeed time costly and act as a “leisure tax”.

Uncertainty about the reinforcement of sanctions. Although the public employment agency sent a note of explanation of the reform, the importance and multiplicity of the change may have damaged the legibility of the reform. Before the final decision, there was an important debate on the definition of “acceptable” jobs and on the extent of sanctions (Freyssinet [2001]), so that unemployed workers could doubt the fact that there would not be any reinforcement in monitoring or sanctions. In particular, doubts could remain about the real motivation behind the compulsory interviews. These interviews organized every 6 months are actually used to reevaluate and adapt the personalized support: among the unemployed workers who signed a PAP contract in 2002, 42%

3. Except for some particular cases, that are job search exempted, beneficiaries of unemployment benefit aged of 59 years and a half or more, beneficiaries in total unemployment without contract breach, beneficiaries entitled for a 4 month benefit and handicapped workers of protected workshops.

were oriented in the free access service following the first interview. Among them, 56% received an update interview. Following this second interview, 2/3 of the considered unemployed workers were reoriented in a higher level of assistance and the remaining third remained in the free access level (Jugnot *et al.* [2006]). However, the update interviews could be perceived by the unemployed workers as a monitoring instrument. As a result, the unemployed workers could understand the choice they were given on July 2001 as a choice between, on the one hand a certain decrease in the amount of the benefits and, on the other hand keeping constant benefits over 6 months but experiencing a risk of a benefit suppression at the end of this period. Thus informational issues are linked with a risk dimension. Elsewhere, giving the people the choice merely let think that the reform is not entirely profitable.

Stigma and private job search methods. The unemployed workers concerned by the PARE take-up decision are already registered, so that they already have accepted to benefit from the support of the public employment agency. Hence, they should have gone beyond this psychological cost. Now, we wonder whether these unemployed workers agree with the reform. The fact that an unemployed worker decided to register during the AUD legislation does not necessarily involve that he would have done the same if the ongoing system at the moment of his job loss were PARE. Studies on welfare program participation indeed reveals that the more visible the assistance is, the lower the take-up rate is (Currie [2004]). The support provided by the employment agency may be considered as more visible within PARE than within AUD because of the new active component and the more frequent contacts with caseworkers.

Job assistance and counseling might be more or less useful depending on the degree of difficulties encountered on the labor market. Some individuals may prefer getting a new job on their own and thus staying in AUD. The job search activity through the public channel is more time consuming within PARE than within AUD, so that the worker has fewer available time for a private or informal search in the new system than in the previous one. Thus job seekers who have a social network or who do not highly value the public channel, either because they challenge the public employment agency efficiency or think their services are not adapted to their needs, may prefer staying under the AUD system. In France, Jugnot *et al.* [2006] reveal that those who encounter greater difficulties on the labor market are those who are the more likely to participate in the scheme they were offered following the interview: the realization rate is higher for uninsured unemployed workers and beneficiaries from means-tested welfare support than for the rest of the unemployed population.

Furthermore, some individuals may be reluctant to be evaluated or to benefit from ALMP. Studies have indeed revealed strategic behavior from some unemployed workers concerning ALMP participation: Besley and Coate [1992] explain that some workfare programs where one ought to actively search a job to receive benefits could bring some entitled people not to apply. Black *et al.* (2003) evaluate in Kentucky the impact of “Worker Profiling and Reemployment Services”, a program where unemployed workers exposed to long spells of unemployment are offered schemes which are similar with those proposed in PARE⁴. An important part of the positive effect of this program comes from the fact that many individuals exit unemployment following the mere receipt of a notification indicating they are to participate in a ALMP scheme. Rosholm and Svarer [2008] also identify in Denmark a “threat effect” of ALMP: the return to employment increases when people get closer to the period during which participation in a ALMP becomes compulsory. Note that this “threat effect” might be interpreted as a fear of sanctions, but not only. If unemployed workers were not unwilling to enroll in ALMP programs, they could actively participate so that they would not be sanctioned.

4. The major difference is that in the Worker Profiling and Reemployment Services system, participation is compulsory once the scheme is offered to the unemployed worker.

3 Theoretical Framework

3.1 The model

We formalize these intuitions in a stationary job search model in partial equilibrium with endogenous search effort and three search channels (Fougère *et al.* [2005]). We are in continuous time and do not allow for on-the-job search. We consider three search channels : a public one without job search assistance (AUD), a public one with job search assistance (PARE) and a private one. Whichever the UI system, any individual can use two job search channels, a public one, which is either with or without job search assistance depending on whether they are in PARE or AUD, and the private one⁵. The public channels are denoted 0 and the private one is denoted 1. The individual decision consists of choosing the type of public insurance. PARE participation means indeed entering into an UI system which explicitly aims at increasing the participants' ability and human capital to improve their future wages and the quality of their future jobs. The starting point of our model is that such considerations guide the unemployed workers in their choice (Heckman *et al.* [1999]): individuals make their take-up decision by comparing the expected utility they have under each UI system. The final decision results from an offset between the increase in job opportunities and the payment of PARE participation costs. We show that the unemployed worker stays in AUD if the PARE participation cost exceeds a threshold value that we define. We assume that individuals decide whether to take up PARE or not at the receipt of the option form. We rule out the situation in which an unemployed worker stays in AUD a few weeks before sending back his option form. This convenient assumption allows us to work in a stationary setting. It amounts to assume that there is no information issues concerning the level of monitoring and sanction⁶.

Individuals have a discount rate ρ . The value function of employment, denoted W_i^R , is different according to the channel i ($i=\{0,1\}$) through which the worker finds the job and according to the public system R ($R=\{\text{AUD}, \text{PARE}\}$) covering the unemployed worker. When employed, the individual receives an instantaneous wage ω drawn from a cdf F_0 (resp. F_1) if the job offer comes from the public (resp. private) channel. Jobs obtained through the private channel are destroyed with intensity $0 < \sigma_1 < 1$, whichever the public system. To take into account that the public system with counseling and assistance allows for better employer-employee matches (Crépon *et al.* [2005]), we assume that the destruction rate for jobs founds using the AUD public channel, noted $0 < \sigma_0 < 1$, is higher than the destruction rate for jobs founds using the PARE public channel, noted $0 < \sigma_0 - \sigma'_0 < 1$, with $\sigma'_0 \geq 0$. If the new job is destroyed, the worker experience a new unemployment spell and systematically enters in PARE⁷. Given these assumptions, an unemployed worker in AUD who finds a job through the i -th ($i = 0, 1$) channel with a wage ω has the following expected value of employment:

$$\rho W_i^{AUD}(\omega) = \omega + \sigma_i(V^{PARE} - W_i^{AUD}(\omega)) \quad (3.1)$$

If the ongoing system at the time of the return to employment is PARE, the value functions of employment for a job paid ω are:

$$\rho W_0^{PARE}(\omega) = \omega + (\sigma_0 - \sigma'_0)(V^{PARE} - W_0^{PARE}(\omega)) \quad (3.2)$$

$$\rho W_1^{PARE}(\omega) = \omega + \sigma_1(V^{PARE} - W_1^{PARE}(\omega)) \quad (3.3)$$

When in AUD, an unemployed worker receives at each period of time an amount of benefit equals to b , with b null for an uninsured individual. For simplicity concerns, we omit the question of entitlement rights lapsing. Moreover, we take into account the change in benefits the reform induced, but do not model the decrease in the AUD benefits. Hence, b is taken as a constant share of the actualized flow of benefits he would receive during his entitlement period. The unemployed

5. Our study deals with unemployed workers registered at the public employment agency so that the use of the public channel is compulsory. We assume for convenient purpose that every individual knows at least one person who can inform him about vacant jobs

6. The uncertainty issue makes the setting non stationary and prevent us from deriving analytical forms and comparative statics.

7. We consider individuals who are registered at the public employment agency on July 2001, so that the obtained job can only be destroyed after the reform.

worker pays a private search effort cost $c_{AUD}(s)$ if he expends a search effort s using the private channel. $c_{AUD}(\cdot)$ is a positive increasing and convex function in s : $c_{AUD}(s) \geq 0$ and $c'_{AUD}(s) > 0 \forall s \geq 0$, $c_{AUD}(0) = c'_{AUD}(0) = 0$. The use of the public channel AUD is assumed to be costless. The unemployed worker receives a job offer from the public employment agency (resp. from his social network) with probability λ_0 (resp. s). In AUD, the global job arrival rate is thus $\lambda_0 + s$ at each period⁸. The job offer is associated with a wage ω drawn from distribution F_0 (resp. F_1). The expected value of an AUD unemployment spell, denoted V^{AUD} , is thus:

$$\begin{aligned} \rho V^{AUD} = b - c_{AUD}(s) &+ \lambda_0 E_{F_0} \left[\max(0, W_0^{AUD}(x) - V^{AUD}) \right] \\ &+ s E_{F_1} \left[\max(0, W_1^{AUD}(x) - V^{AUD}) \right] \end{aligned} \quad (3.4)$$

When in PARE, the worker receives at each period a constant share b' of the expected flow of benefits he is entitled to (with b' null in case of no eligibility). To rationalize PARE non take-up we allow job search through the PARE public channel to be costly. After the fashion of Moffitt [1983], we define two components in this cost - a fixed and a variable component. The fixed cost is the psychological cost due to the mere evaluation and participation in an UI system with personalized follow-up: when in PARE, the individual experiences at each period of time a fixed strictly positive disutility, denoted ϕ . The variable cost may be understood as a time cost and is introduced through the private search effort cost function. The amount of this “leisure tax” effect may depend on the search strategy of the job seeker: the unemployed worker has to devote more time and effort in the job search through the public channel if he is in PARE than if he is in AUD. Elsewhere, the PARE reform aimed at increasing the public channel efficiency. As the public channel becomes more efficient, job seekers may decide to participate in PARE and to devote more time using the public channel. Elsewhere, the introduction of PARE aimed at increase the efficiency of the public search channel. Since the public regime becomes more efficient, unemployed workers may decide to enter the new system and to devote more time and effort in the public search and less in the private one. Thus entering into PARE may increase the opportunity cost of the private channel, and induce a reallocation of the job search effort between the public and the private channels. The cost function for using the private channel in PARE, $c_{PARE}(\cdot)$, shares the same properties as $c_{AUD}(\cdot)$ and is assumed to have a higher curvature than $c_{AUD}(\cdot)$. Thus $c''_{PARE}(s) \geq c''_{AUD}(s) > 0 \forall s > 0$. Lastly, to reflect the possible higher efficiency of the public search channel in PARE than in AUD, we assume that the job arrival rate specific to the PARE public channel is $0 \leq \lambda_0 + \lambda'_0 \leq 1$ with $\lambda'_0 \geq 0$. The global job arrival rate at each period when in PARE is thus $\lambda_0 + \lambda'_0 + s$. Given these assumptions, the expected value of PARE unemployment, denoted V^{PARE} is thus:

$$\begin{aligned} \rho V^{PARE} = (b' - \phi - c_{PARE}(s)) &+ (\lambda_0 + \lambda'_0) E_{F_1} \left[\max(0, W_0^{PARE}(x) - V^{PARE}) \right] \\ &+ s E_{F_0} \left[\max(0, W_1^{PARE}(x) - V^{PARE}) \right] \end{aligned} \quad (3.5)$$

The unemployed worker participates in the PARE system if and only if the expected utility of PARE unemployment is higher than the expected utility of AUD unemployment. We show that there exists a unique threshold value of ϕ , $\underline{\phi}$, underneath which $V^{PARE} > V^{AUD}$ (the details of the solution are provided in Appendix B).

Under parametric assumptions set on the cost functions, the main comparative statics derived from this framework are the following: The unemployed worker reduces his optimal search activity through the private channel when in PARE. The more the reform generates an expected monetary gain or improves the efficiency of the public search channel, either by increasing the future job duration or by increasing the job arrival rate, the higher the probability of take-up. On the contrary, the higher the increase in the private search cost, the lower the probability of entering the new system.

In the following sections, we estimate an econometric model to evaluate the empirical validity of these theoretical predictions on PARE non take-up.

8. We assume that the individual receives at most one offer per period.

4 The Data

4.1 Description

We use longitudinal data extracted from the public employment agency records. We use a 1/12 nationally representative sample of all unemployed workers⁹. These data contain numerous individual socio-demographic and unemployment characteristics back to the first registration in the public employment agency. The sample is followed up to December 31st 2005. Information concerning the unemployment spells are reported on a daily basis. Data on benefits are not easily exploitable because the classification in the data is complex, does not fit in with the classification used by the agency in charge of unemployment benefits (ASSEDIC-UNEDIC) and is not enough detailed (in particular, the amount of the benefits received by the unemployed are not given). We only use these information to determine whether the unemployed worker receives unemployment benefits in July, 1st 2001 and at the moment of the exit from unemployment. We match this data set with another file provided by the public employment agency which contains, the dates of the PARE compulsory interviews, describes the PAP schemes offered by the public employment agency and indicates whether the unemployed worker participates in it.

We select the unemployed workers who are concerned by the choice of the unemployment system, i.e. the people who experienced an unemployment spell starting before and ending after July, 1st 2001. To take into account the few particular categories of unemployed which automatically switched to the PARE even if they were in the stock of the end of June 2001, we also drop the handicapped workers (7,2% of the stock) and the unemployed over 55 and half years on July 2001 (2,0% of the stock)¹⁰. 241 702 unemployed persons satisfy these criterion. The following descriptive and econometric analysis is realized on this selected sample of individuals who can choose between the two unemployment insurance systems.

4.2 Identification of the take-up decision

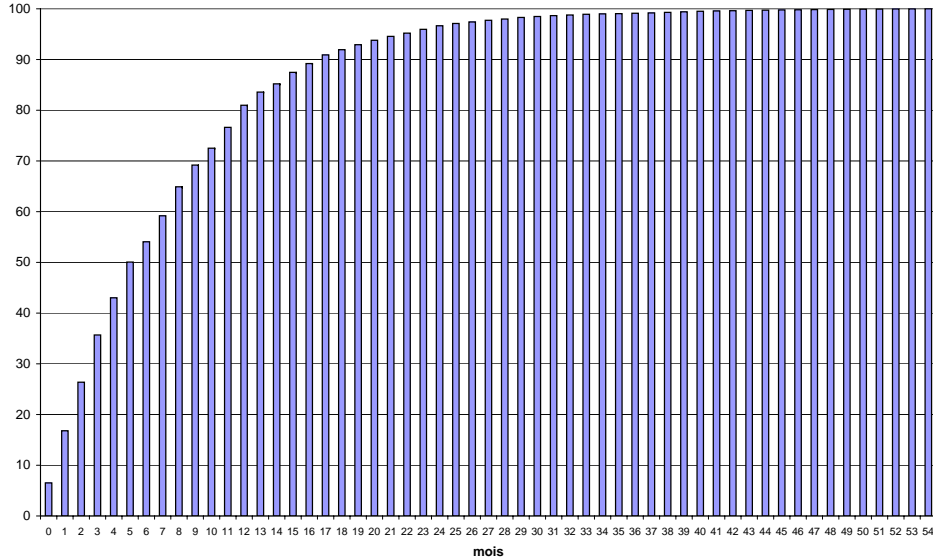
These existing data do not allow us to determine precisely and directly whether the unemployed worker chose to stay in the previous system or decided to move to the new one: there is no variable in the data set describing the system covering the unemployed workers. To deduce the take-up decision, we check whether the unemployed worker had, during the relevant spell, at least one interview, which is compulsory within PARE, but does not exist within AUD. Let P_i^* be the take-up decision of the unemployed worker i and P_i be the observed choice ($P_i = 1$ if an interview is reported, 0 otherwise). Our observational scheme is: if $P_i = 1$, then $P_i^* = 1$.

This indirect method to deduce the value taken by the variable of interest may overestimate the PARE non take-up rate. When PARE was implemented on July 2001, the priority for the interviews was given to the newly registered. Although the workers who became unemployed after July, 1st 2001 were interviewed in the month of their record, those who switched were called later, progressively to lighten the burden of the public employment agency. Moreover, the 2001 reform took place during an important increase in unemployment, which created serious problems in the practical implementation of the interviews and involved delays in the notification of the switching unemployed workers (Rapport thématique de la Cour des Comptes [2006]). As a result, only 54% of the individuals who got an interview had it within the 6 months following July, 1st 2001 (Figure 1). Because of this significant delay, it is thus possible that an unemployed worker who chose the PARE left unemployment before he was interviewed. If so, the person is incorrectly considered as a non taker. Hence, without econometric methods able to take this censoring into account, this misclassification issue would lead us to overestimate the non take-up rate. We thus implement duration analysis methods.

9. Only the unemployed people born in Mars of the odd years and in October of the even years are kept in the sample. We restrict the analysis to the metropolitan France.

10. These filters allows us to get rid of the handicapped workers working in protected areas, the unemployed who are exempted from job search and the insured unemployed workers over 59 and a half years old. The data do not allow us to detect the other unemployed types who are exempted from the choice of regime, i.e. the insured people without contract break and those who are entitled to 4 months of the decreasing compensation.

Figure 1: Distribution of the duration from July 1st 2001 until the first interview among the unemployed workers who got an interview (cumulative %)



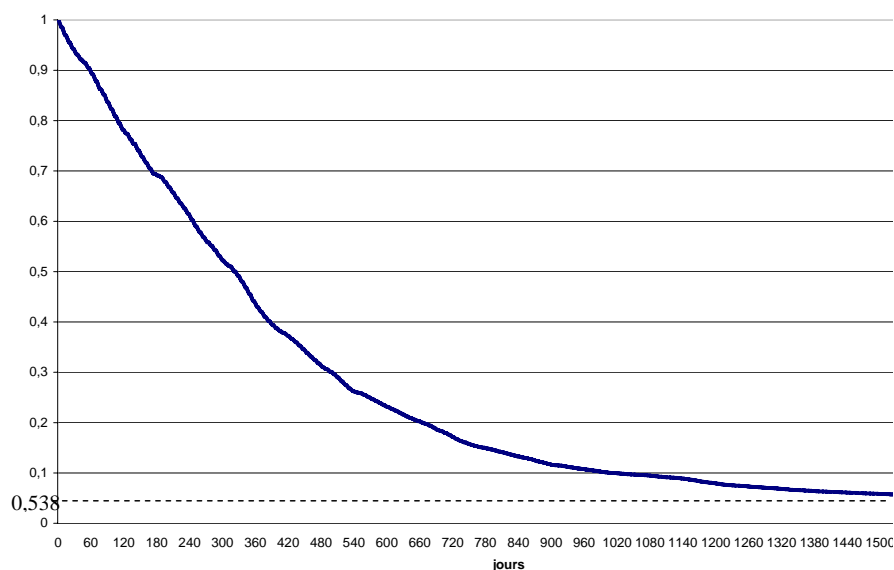
4.3 Descriptive analysis

Non parametric estimates of the PARE non take-up rate. If we ignore the censoring bias and merely look at the proportion of unemployed workers who have an interview during their unemployed spell, we find a PARE non take-up rate of 54,6%. To take into account that an exit from unemployment could occurred before the switching unemployed person was notified for the interview, we produce the Kaplan-Meier estimates of the survival function of the duration from July, 1st 2001 up to the date of the first PAP interview (Figure 2). We consider that this duration can be independently right-censored by an exit from unemployment¹¹. Presence of non take-up is revealed by the convergence of the survival function to a positive non null value at infinite: at the end of the observation period a non null share of individuals did not have any interview but are still unemployed. $\hat{S}_n(t_{(n)})$ is the value of the Kaplan-Meier estimate taken at the highest observed duration in the sample, $t_{(n)}$. In our case, $t_{(n)} = 1644$ (days) is a censored observation. There are in the sample individuals who do non take-up if and only if $p = S(\infty) > 0$. Here p is the proportion of unemployed workers who will never have any interview in their spell of unemployment. Under the assumption of a model of i.i.d. censoring, $\hat{S}_n(t_{(n)})$ is a consistent estimator of p (Maller *et al.* [1996]). To state that a share of the population will always be at risk, we need an observation period long enough (Maller *et al.* [1996]). We can reasonably think that this requirement is satisfied as we observe the individuals up to 54 months, i.e. 4 years and a half after July, 1st 2001. This propriety of sufficient follow-up is crucial in the sense that it assures that $\hat{S}_n(t_{(n)})$ is an unbiased asymptotic estimator of p . $\hat{S}_n(t_{(n)}) = 0,0538$ is significantly different from 0 at 1%. Thus we non parametrically estimate a non take-up rate of about 6%.

Determinants of the decision to participate in PARE. The simple comparison of the subpopulation which had an interview and of the subpopulation which did not reveals a self-selection into PARE (Appendix C): those who encounter higher difficulties on the labor market are more represented in the population with interview. This descriptive result is confirmed by the stratified Kaplan-Meier estimates (Appendix D). Rank tests always reject the null hypothesis of homogeneity of the considered strata.

11. An independent censoring means here that the instantaneous probability to have an interview is the same one among the censored and the not censored individuals. This assumption is loosened in the econometric analysis.

Figure 2: Kaplan-Meier estimate of the survival function of the duration until the first interview



There are small differences according to socio-demographic characteristics (Appendix B): the subpopulation which has a PAP interview is more feminized and is overall older than the subpopulation for which no PAP interview is reported in the data. The stratified Kaplan-Meier estimates confirm that men are more likely than women to non take-up PARE and that the non take-up rate increases with the level of diploma (Table 1 and Appendix C). Differences between the two subgroups of interest are also marked according to labor market past history and attributes of the ongoing unemployment spell on July 2001 (Appendix C): the share of workers entered into unemployment because of lay off or term of conversion contract is higher in the subgroup with PAP interview than in the other one. On the contrary, the newly participants in the labor market are less represented in the observed switching population. The share of job seekers who declare to be not available to work immediately is higher among those who have not any interview. The subpopulation with a PAP interview has been on average registered at the public employment agency for a longer time than the other population (20 months elapsed on average since registration up to July 2001 in the former group and only 15 months elapsed on average for the latter). The share of insured unemployed workers on July 2001 is higher among those who got an interview than among those who do not have any interview: 69% of the unemployed workers who got a PAP interview are insured on July 2001, although 55% of those who have none interview are so. This reflect the financial interest of the PARE reform which is effective for the sole insured unemployed workers. Last but not least, the share of beneficiaries of the minimum guaranteed income (*Revenu Minimum d'Insertion*, RMI) is higher in the population with PAP interview, although the highly qualified (white collars) are less represented in the population with interview than in the other group. These results run along with the hypothesis of a psychological cost associated with participation in ALMP.

The Kaplan-Meier estimates (Table 1) confirm these descriptive results, except for the unemployment benefit entitlement status and the elapsed unemployment duration: $\hat{S}_n(t_{(n)})$ increases with the number of elapsed months since registration. This may reflect the decrease in the financial interest of the reform with the time elapsed in the unemployment spell: the unemployed workers who are registered at the public employment agency for a long time have on average smaller amount of unemployment benefits because they experienced an important number of decrease in their benefits (Appendix A). Elsewhere, the higher non take-up rate for the insured unemployed workers goes along with the uncertainty effect.

Table 1: Stratified non parametric estimates of PARE non take-up rates

$\hat{S}_n(t_{(n)})$		$\hat{S}_n(t_{(n)})$	
gender		receipt of RMI	
male	8,0%	no	5,9%
female	3,0%	yes	1,8%
diploma		elapsed duration on July 1st 2001	
none	2,8%	< 3 months	2,6%
< secondary	4,1%	3-6 months	3,0%
secondary	8,4	6-12 months	3,7%
university	10,0%	> 12 months	7,1%
qualification		insured on July 1st 2001	
white collar	6,4%	no	2,9%
blue collar	5,3%	yes	6,0%

5 Statistical Model

5.1 A competing and defective risks model

To model the decision to participate in the new unemployment insurance system, we implement a competing and defective risks model (Addison *et al.* [2003]). This framework allows us to take into account 3 features: (i) an AUD unemployment spell can end because of a return to employment or because of a switching to a PARE unemployment spell ; (ii) the PARE unemployment destination can be disregarded by some unemployed workers ; and (iii) the employment and PARE unemployment risks are not independent. This model is thus a competing dependent risks framework augmented with a selection equation to take into account that some unemployed workers are not at risk for the PARE unemployment destination state: some unemployed workers would never be observed exiting to PARE unemployment (i.e. getting a PAP interview) because they did not switch to PARE on July 2001.

To model this phenomenon, we could either take a defective distribution for the latent PARE specific duration, or use a “split-population model” (Schmidt *et al.* [1989], Addison *et al.* [2003]). In the former approach, notification date would be a random process and infinite latent PARE unemployment durations would result from successive bad draws. In the latter approach, the sample is divided into two subgroups that are *PARE movers* and *AUD stayers* in relation to their probability of exiting to a PARE unemployment spell. We retained the second modeling as it is more economically intuitive and better fits in with our particular issue.

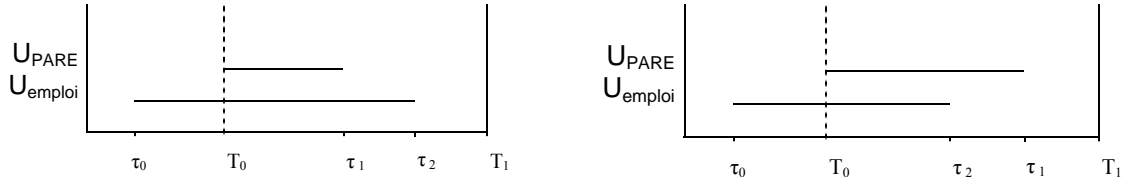
All the unemployed workers in the sample are in an AUD unemployment spell. We allow for two destination states: (1) PARE unemployment and (2) employment. Individuals exit to PARE unemployment at the date of their first interview¹². This choice is imposed upon us by the data and does not reflect reality as non declining benefits are perceived starting from the month following the return of the option form. The available data do not allow us to be more precise, but this choice is legitimated by the fact that it is the interview which marks the entry into an UI system with counseling and job search assistance. July, 1st 2001 is stated as date 0 for the duration to the first interview and the date of registration in the unemployment agency is the starting date for the unemployment duration to any other exit.

Let define 2 latent destination-specific durations T_k , $k = 1, 2$ (see Lancaster [1990] and Van den Berg [2001] for a detailed presentation of competing risks models). Those processes correspond to the elapsed duration between July, 1st 2001, denoted T_0 , and the date of exit to state k , denoted τ_k : $T_k = \tau_k - T_0$. The observed transition is then a transition to state 1 (resp. 2) if the realization of T_1 is inferior (resp. superior) to the realization of T_2 . For example, consider an unemployed worker who enters unemployment at τ_0 . He can exit AUD unemployment to enter into either PARE unemployment or employment, events that in absence of competing risks would respectively occur

12. The risk (1) is thus strictly speaking getting the interview

at τ_1 and τ_2 . If the two latent processes are as represented on the left side (resp. right side) of Figure 3, then the observed transition is a transition from AUD unemployment to PARE unemployment (resp. employment). To take into account of the different initial date for the risk-specific durations, in the following we denoted u_k the AUD unemployment duration with $u_1 = \min(\tau_1, \tau_2) - T_0$ and $u_2 = \min(\tau_1, \tau_2) - \tau_0$.

Figure 3: Examples



State-specific durations are assumed to be governed by intensity functions of the mixed proportional hazard form (van den Berg, 2001): the transition intensity to state k after an elapsed duration u_k in AUD unemployment is defined by:

$$h_k(u_k | \beta_k, X, \nu_k) = h_k^{(0)}(u_k) \exp [X' \beta_k] \mu_k$$

where:

$h_k^{(0)}(\cdot)$ is the baseline hazard function which depends on the destination state k ;

X is a vector of time-invariant variables. β_k is the vector of parameters which measures the impact of individual attributes and of the local labor market situation on the AUD unemployment duration elapsed before an exit to state k ;

$\mu_k = \exp(\nu_k)$ is a positive random variable with repartition function F_k which specification depends on the destination state k . This variable is supposed to capture the unobserved individual heterogeneity effect on the transition to state k : an unemployed worker who would experience an important psychological cost when participating in PARE would have a μ_1 close to 0. We allow for correlation between destination states through a correlation in ν_1 and ν_2 .

We treat as censored a AUD unemployment spell which is not terminated at the end of the observation period (December 31st 2001) or which ends because of a transition out of the labor force, a crossing off, or an unknown reason. These motivations for the end of the AUD unemployment spell are not homogeneous and are not at the center of our interest¹³.

The individual contribution to the likelihood is different from the one in classical competing risks models because of the potentially defectiveness of the PARE risk: if no exit to PARE is observed, it is either because the individual is a “stayer” in AUD unemployment or because he is a “mover” to PARE but has been notified for his interview only after the realization of the employment risk or the censoring. Let $p_{0,i}$ be the probability that the unemployed worker i is a “stayer” in the AUD system. In terms of durations, it is the probability that the duration to the interview $u_{1,i}$ is infinite. When $p_{0,i} > 0$, $\lim_{t \rightarrow \infty} S_1(t) > 0$ and we are facing with a defective risk issue. $p_{0,i}$ may depend on individual attributes and can be estimated using limited dependent variables techniques:

$$p_{0,i} = \mathbb{P}[P_i^* = 0] = \Phi(Z\gamma)$$

13. There is no consensus on the appropriate treatment of the exits because of unknown reason and transitions out of the labor force. The unknown exits account for 19% of deregistrations (Appendix E - Table 6). Three treatments have been considered. First we could have given up of these observations. Second, we could have treated them as i.i.d. censoring. These solutions may lead to biased estimates if some of the factors which determine deregistration are correlated with the employment and interview risks. The more rigorous approach would consist in defining two other risks - “other” and “out of labor force” -, correlated with the two risks already defined. This solution is burdensome and it appears that it gives similar results than the specification where these exits are treated as censoring.

with $P_i^* = 1$ if i choose PARE and $P_i^* = 0$ otherwise. In relation with our theoretical framework, $p_{0,i}$ is the probability that $\phi_i \geq \phi_i$.

If the unemployed worker i has an interview, his contribution to the likelihood is the probability that i is a “mover” to PARE times the conditional density function of the elapsed duration in the AUD unemployment state starting from July 1st 2001, given that this spell lasts u_{1i} months and ends with a transition to state 1:

$$g(u_{1i}, u_{2i} | \beta_1, \beta_2, X_{1i}, X_{2i}, \nu_{1i}, \nu_{2i}) = (1 - \Phi(Z\gamma))h_1(u_{1i} | \beta_1, X_{1i}, \nu_{1i})S_1(u_{1i} | P_i^* = 1, \beta_1, X_{1i}, \nu_{1i}) \times S_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i})$$

where for $k = 1, 2$,

$$S_k(u_{ki} | \beta_k, X_{ki}, \nu_{ki}) = \exp\left(-\int_0^{u_{ki}} h_k(s | \beta_k, X_{ki}, \nu_{ki}) ds\right)$$

are the specific-risk survival functions, and

$$S_1(u_{1i} | P_i^* = 1, \beta_1, X_{1i}, \nu_{1i})S_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i}) = \exp\left(-\int_0^{u_{ki}} \sum_{k'=1}^2 h_{k'}(s | \beta_{k'}, X_{k'i}, \nu_{k'i}) ds\right)$$

Now if the AUD unemployment spell does not end for an observable transition to PARE unemployment, the individual contribution to the likelihood is:

$$g(u_{1i}, u_{2i} | \beta_1, \beta_2, X_{1i}, X_{2i}, \nu_{1i}, \nu_{2i}) = \left(h_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i})\right)^{\delta_{2i}} S_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i}) \times \left[(1 - \Phi(Z\gamma))S_1(u_{1i} | P_i^* = 1, \beta_1, X_{1i}, \nu_{1i}) + \Phi(Z\gamma)\right]$$

where $\delta_{2i}=1$ if there is an exit to employment and 0 otherwise.

5.2 Likelihood function

Stock sampling bias. We correct the estimates for the stock sampling bias we encounter as the paper treats unemployed workers registered as such at the national unemployment agency at the end of June 2001. Sampling from the stock of unemployed people at a given date may induce biased estimates for parameters of the distribution of durations in that state. Stock sampling makes long unemployed workers over-represented in the sample, because the sampling probability of a given spell is generally proportional to its elapsed duration. To correct for this bias, we adopt the method proposed by Ridder [1984] and weigh the unconditional likelihood function by the unconditional probability of being sampled in July, 1st 2001, *i.e.* by unconditional probability that the unemployment spell made by the individual i lasts longer than a_i , a_i being the elapsed duration on unemployment before the reform occurs (see Bonnal *et al.* [1997]; Cockx and Picchio [2009] for examples of applications of this correction strategy.).

Likelihood function. Finally, if we take a discrete distribution for the unobserved heterogeneity components with two-loading factors, the sample likelihood to be optimized is

$$\mathcal{L} = \prod_{i=1}^n \frac{\sum_{p=1}^4 P_p \ell_{pi}}{\sum_{p=1}^4 P_p S_2(a_i | \beta_2, X_{2i}, \nu_{2i}^p)}$$

where ℓ_{pi} is:

$$\begin{aligned} \ell_{pi} &= \left[h_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i}^p) S_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i}^p) \left[(1 - \Phi(Z_i\gamma)) S_1(u_{1i} | P_i^* = 1, \beta_1, X_{1i}, \nu_{1i}^p) + \Phi(Z_i\gamma) \right] \right]^{\delta_{2i}} \\ &\times \left[(1 - \Phi(Z_i\gamma)) h_1(u_{1i} | \beta_1, X_{1i}, \nu_{1i}^p) S_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i}^p) S_1(u_{1i} | P_i^* = 1, \beta_1, X_{1i}, \nu_{1i}^p) \right]^{\delta_{1i}} \\ &\times \left[(1 - \Phi(Z_i\gamma)) S_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i}^p) S_1(u_{1i} | P_i^* = 1, \beta_1, X_{1i}, \nu_{1i}^p) + \Phi(Z_i\gamma) S_2(u_{2i} | \beta_2, X_{2i}, \nu_{2i}^p) \right]^{1-\delta_i} \end{aligned}$$

with $\delta_{ki} = \begin{cases} 1 & \text{if } k \text{ is the observed exit state} \\ 0 & \text{if } k \text{ is not the observed exit state} \end{cases}$

$\delta_i = \delta_{1i} + \delta_{2i}$;
and P_p the probability that $(\nu_{1i}, \nu_{2i}) = (\nu_{1i}^p, \nu_{2i}^p)$, with $0 \leq P_p \leq 1$ for each $p = \{1, 2, 3, 4\}$ and $\sum_{p=1}^4 P_p = 1$.

5.3 Specification and identification

Identification of the effects. We estimate the impact of individual attributes and of the characteristics of the unemployment spell ongoing on July 2001 on the PARE take-up decision. We take into account the local labor market situation using departmental unemployment rates. For the employment specific hazard we set the value of the covariables at the value they take at the beginning of the unemployment spell (except for the benefit receipt for which we set the value when the unemployment spell ends). For the interview specific hazard we set the value of the covariables on July, 1st 2001. In the split-population equation we introduce covariables which should directly determine the take-up decision. In particular, we set the value of the departmental unemployment rate, the unemployment benefit entitlement and the age at the level they reach at the moment of the reform.

Diploma, qualification and means-tested benefit receipt are taken as proxy for the informational issue and the stigma effect. The underlying idea we develop in the theoretical model is indeed that well connected workers could use the informal job search channel and pay a “leisure tax” when participating in an UI system with counsel and job search assistance. Highly qualified workers are more likely to have an active social network than the rest of the unemployed population. Elsewhere, being a means-tested benefit recipient may reflect the predisposition to participate in a socially marked program¹⁴. This is thus taken as a proxy of the stigma effect.

The monetary determinant is approximated with the elapsed duration on unemployment at the time of the reform, rather than with the unemployment benefit receipt. As explained before, the elapsed duration on unemployment is more appropriate to capture the position of the individual in his compensation history and thus the expected monetary gains of the reform.

The mechanisms underlying the PARE take-up decision may be different depending on whether the worker receives a compensation or not. We thus run the estimations separately on the insured and uninsured populations. This stratification allows us to tackle the uncertainty effect, as the fear of an increase in the level of monitoring and sanction is only relevant for the insured workers.

Last, we add family characteristics as instrumental variables in the split population equation. The underlying idea is that the matrimonial status or the presence or not of children in the household may affect the financial incentives and the importance of the “leisure tax”. It thus matters for the individual when deciding to enter or not in the new system. However, it seems reasonable to think that it is not a relevant information for the local unemployment agencies when they choose who they would notify in priority. As a result, it may not affect the interview-specific duration.

Specifications. The error term in the selection equation follows a logistic distribution. We take flexible specifications to model the duration dependence and take piecewise constant baseline hazard functions¹⁵. For the interview risk, we define 1 month intervals for the first 6 months following the reform and then 6 months pieces. For the employment risk, the intervals are of 3 months over the first year of unemployment, of 6 months up to the 36th month and then of 12 months. Last, we assume that the destination specific unobserved heterogeneity terms ν_1 and ν_2 are drawn from a bivariate discrete distribution with two-load factors for each specific destination state term (Heckman *et al.* [1984], Bonnal *et al.* [1997], Terracol [2003]). $\nu = (\nu_1, \nu_2)' = (a_1.w_1 + b_1, w_2, a_2.w_1 + b_2.w_2)$. $w_k, k = 1, 2$, takes its value in $\{w_k^a, w_k^b\}$. The probability associated

14. As the receipt of the minimum guaranteed income is a means-tested benefit, it is important to control for other sources of income variations which can affect entitlement - such as insurance situation, family situation or education - in order to correctly understand the minimum guaranteed income receipt in terms of a more or less important stigma cost.

15. For robustness check, we also estimated a parametric specification *à la* Farewell [1982] with Weibull baseline hazards. The two specifications give similar qualitative results, except for the correlation of the unobserved terms. The corresponding estimations are displayed in appendix D

with each of the four points of support of the distribution are:

$$\begin{aligned}
P_1 &= Pr(\nu = (\nu_1^1, \nu_2^1)') = Pr(w_1 = 0, w_2 = 0) \\
P_2 &= Pr(\nu = (\nu_1^2, \nu_2^2)') = Pr(w_1 = 0, w_2 = 1) \\
P_3 &= Pr(\nu = (\nu_1^3, \nu_2^3)') = Pr(w_1 = 1, w_2 = 0) \\
P_4 &= Pr(\nu = (\nu_1^4, \nu_2^4)') = Pr(w_1 = 1, w_2 = 1)
\end{aligned}$$

For identification, we set $w_1^a = w_2^a = 0$, $w_1^b = w_2^b = 1$ and $a_2 = 0$. We then estimate a_1 , b_1 and b_2 , along with the probabilities.

6 Results

The results (Tables 2 to 5) are consistent with the descriptive analysis, the intuitions that govern our theoretical model and previous results on ALMP non take-up (Rosholm *et al.* [2008]). We present here the results obtained from the full sample and for the sub-samples of insured and non insured unemployed workers at the time of the reform. We focus the comments on the coefficients specific to the interview risk and on the selection equation. The individual attributes have the expected effects on the employment risk hazard. Introducing the selection equation allows us for distinguishing the impact of individual characteristics on the take-up decision on the one hand, and on the time to notification for the interview on the other hand: in the selection equation we measure the impact of the covariables on the decision to take up PARE, although in the interview-specific hazard we measure the impact of the covariables on the waiting period before notification for the interview. The introduction of the selection equation in the competing risks framework and the correction for unobserved heterogeneity do not noticeably change the estimated parameters. However, it increases by far the model log-likelihood.

Impact of the characteristics on the duration until the interview. On the contrary of professional characteristics and level of education, the socio-demographic attributes have no significant impact on the instantaneous probability of being interviewed: age has no effect and only insured women have a higher interview specific hazard. The more the individual has previous unemployment spells, the higher the interview specific hazard. The same, the interview specific hazard is significantly higher for the recipients of the main French means-tested benefit (RMI). Elsewhere, workers entered into unemployment following the end of their contract have a lower interview hazard than the newly entrants on the labor market. These results may reflect the fact that the individuals who experience greater difficulties on the labor market are notified in priority by the local unemployment agencies. An alternative, but not incompatible, explanation would be that these individuals would desire to benefit quickly from the support offered in PARE and would hence have return their option form faster than the others. The instantaneous probability of getting the interview increases with the level of education and decreases with the elapsed duration on unemployment. The informational problem can be considered as less relevant for the highly educated people. The latter would then have return their form sooner. Those who were unemployed for a long time could have been discouraged. They also have a higher probability of being no longer insured or close to the entitlement exhaustion, so that they have a lower financial incentive to enter quickly into the new system. They thus might have delay their switching decision. Last, the significant negative impact of the local unemployment rate on the interview specific hazard, as well as the form of the duration dependence, negative within the first 3 months following the reform and then positive, reflect the capacity constraints the local unemployment agency were facing with when organizing the interviews: a higher unemployment rates indeed means that the unemployment agency has to set up many interviews with a constant number of caseworkers.

Predicted non take-up rates. Once the censoring bias is corrected for, the predicted probability of not entering PARE is significantly positive, but accounts for only 3,03% for the whole sample. The estimated non take-up rate is higher for the insured than for the non insured workers (4,10% vs 2,32%). This difference goes along with the uncertainty and stigma effects, the insured

population being more likely to be concerned by these effects. The unemployed workers who receive the unemployment compensation, have also stabler employment histories and have entered unemployment more recently than the others. As a result, they might be less in need for a support in their job search, and would be less likely to take up PARE than the non insured workers.

The need for job search assistance effect. Women have a higher probability than men to take-up PARE. Age has a non linear effect on this probability: individuals aged between 25 and 40 (resp. over 50) are less (resp. more) likely to choose PARE than younger workers. The motivation for registration has also an impact on the probability to choose PARE: laid off workers have higher probability of entering PARE, but workers entered into unemployment following the end of their contract have a lower probability of choosing PARE than the new entrants on the labor market. Individuals who were out of the labor force the previous 6 months have a probability to choose PARE no significantly different from first-job seekers. These results may reflect the effect of the degree of connection with the labor market: the workers who encounter greater difficulties on the labor market, who are those who would need the more counseling and job search assistance, are more likely to enter a system which provide them with such a support. Moreover, workers who resigned are more likely to enter PARE than the first-job seekers. This runs counter to the connection with the labor market argument, but may reflect the stronger desire of resigning workers to participate in a project assessment. Last, unemployed workers registered for more than three months at the time of the reform have a probability of taking up PARE significantly lower than the newly registered. This may reflect discouragement in job search activity or a doubt in the efficiency of the unemployment agency as a search channel. This negative effect of elapsed unemployment duration is particularly strong for the insured workers and is significant for the uninsured workers only starting from 6 months of elapsed duration. This difference between the two subpopulation comes from the fact that only the insured people have a financial incentive to enter PARE. The monetary gain lowers as the individual is on unemployment for a longer period of time (Appendix A). As a result, the elapsed duration should be more determinant in the take-up decision for insured people than for the others.

The uncertainty effect. The impact of the compensation status runs along with the hypothesis of uncertainty about the increase in the level of sanctions. Being insured on July 2001 indeed lowers the probability of taking up PARE¹⁶. The compensated unemployed workers are precisely those who may fear a reinforcement of monitoring and sanctions. Note that this negative effect of the compensation on the PARE non take-up does not runs counter our theoretical prediction: it is not the mere compensation status which matters in the take-up decision, but the difference in expected gains, which is captured by the elapsed duration on unemployment at the moment of the reform. Moreover, being insured decreases the waiting period before notification for the interview. We can then think that some insured workers do not enter the new system because they fear a reinforcement of the sanctions, but those who do take up PARE do it quickly to fully benefit from the monetary gain.

The stigma effect. The selection equation and the time-event analysis both confirm the existence of a stigma effect. For the uninsured unemployed workers, receiving the main French means-tested benefit increases by far the PARE take-up probability. On the contrary, the highly qualified are less likely to enter the new system. Last, the PARE take-up probability decreases with the diploma, and this all the more that the level of education is high.

The expectation of a short unemployment duration effect. Last, the probability of switching to PARE increases with the local unemployment rate during the second semester of 2001, but

16. In estimations reported in appendix E, we can see that the motivations for registration and the elapsed duration on unemployment are highly correlated with the indicator of benefit receipt. When either elapsed duration or the motivation of registration are omitted in the list of covariables, being insured has no significant effect on the PARE take-up probability. When both variables are omitted, being insured increases the probability. The expected positive effect due to financial incentives would thus be due to a missing variable bias.

just for the insured unemployed workers. This result runs along with the argument of a rapid expected return to employment: when he observes a high level of local unemployment, the individual may think that he will encounter difficulties to find a job.

Correlation of the unobservable terms. The covariance between destination state specific unobserved heterogeneity components is significantly positive for the whole sample and the uninsured subpopulation (respectively 0,784 and 0,944), but negative for the insured workers (-0,71). For the latter, it thus means that individuals who tend to have longer unemployment spells are more quickly notified by the unemployment agency to be interviewed. This negative covariance may reflect the effect of the expectation of a rapid return to employment, the longer the expected unemployment duration, the higher the expected financial gain associated with a quick take-up decision. On the contrary, for the non insured workers, individuals who tend to have longer unemployment spells tend not to be interviewed in priority.

Table 2: Selection equation: impact of explanatory variables on the PARE take-up probability

	PARE take-up probability		
	All	Insured	Non Insured
Intercept	4,722 *** (0,269)	4,538 *** (0,292)	2,714 *** (0,462)
Female	1,033 *** (0,060)	1,065 *** (0,067)	0,678 *** (0,150)
Married	0,401 *** (0,069)	0,425 *** (0,076)	0,181 (0,155)
Number of children	0,179 *** (0,040)	0,196 *** (0,044)	0,055 (0,067)
Age on July 2001 (<25)			
25-30	-0,306 *** (0,107)	-0,431 *** (0,121)	-0,122 (0,215)
30-40	-0,255 ** (0,109)	-0,393 *** (0,122)	0,315 (0,254)
40-50	0,043 (0,115)	0,656 *** (0,153)	0,342 (0,246)
≥ 50	0,665 *** (0,136)	0,656 *** (0,153)	0,515 * (0,297)
Diploma (none)			
< secondary	-0,263 ** (0,110)	-0,456 *** (0,127)	0,934 *** (0,202)
secondary	-1,209 *** (0,115)	-1,447 *** (0,131)	0,300 (0,197)
> secondary	-1,592 *** (0,116)	-1,906 *** (0,131)	0,388 * (0,215)
White collar	-0,049 (0,096)	0,044 (0,108)	-0,705 *** (0,233)
RMI receipt	-0,472 ** (0,200)	-	2,765 *** (0,643)
Motivation for registration (first-job seeker)			
lay off	1,091 *** (0,169)	1,149 *** (0,197)	0,375 (0,404)
resignation	0,428 ** (0,202)	0,511 ** (0,236)	0,140 (0,422)
end of contract	-0,438 *** (0,128)	-0,454 *** (0,160)	-0,376 (0,228)
end of inactivity > 6 months	0,038 (0,213)	0,123 (0,256)	-0,486 (0,339)
other	-0,015 (0,136)	0,007 (0,169)	-0,455 ** (0,237)
Elapsed duration on unempl. (< 3 months)			
3-6 months	-0,472 ** (0,200)	-0,664 *** (0,209)	-0,299 (0,328)
6-12 months	-1,074 *** (0,167)	-1,008 *** (0,185)	-0,592 * (0,314)
12-24 months	-1,329 *** (0,164)	-1,349 *** (0,181)	-0,545 * (0,316)
≥ 24 months	-2,276 *** (0,157)	-2,344 *** (0,172)	-0,996 *** (0,310)
Insured on July 2001	-0,401 *** (0,088)	-	-
Local unempl. rate	0,014 (0,011)	0,032 *** (0,012)	-0,005 (0,030)
$\Phi(\hat{\gamma}Z)$	3,03% *** (0,003)	4,10% *** (0,017)	2,32% *** (0,023)

Note: number of observations: total sample: 241702 / insured: 138886 / non insured: 93705.
 lecture:***=significant at 1%; **=significant at 5%;*=significant at 10%.

Table 3: Impact of the explanatory variables on the interview and employment hazards

Transition from AUD unempl. to:	All		Insured		Non Insured	
	Interview	Empl.	Interview	Empl.	Interview	Empl.
Intercept	-22,112 (13,685)	-6,413 *** (0,043)	-21,290 * (11,152)	-7,066 *** (0,077)	-10,970 *** (0,239)	-5,070 *** (0,063)
Female	0,009 (0,007)	-0,072 *** (0,011)	0,018 ** (0,016)	-0,071 *** (0,014)	-0,010 (0,013)	-0,111 *** (0,018)
Age on July 2001 (<25)^(a)						
25-30	-0,016 (0,012)	-0,155 *** (0,016)	-0,008 (0,016)	-0,080 *** (0,022)	0,030 (0,021)	-0,142 *** (0,026)
30-40	-0,006 (0,012)	-0,171 *** (0,016)	-0,017 (0,015)	-0,042 ** (0,021)	0,029 (0,021)	-0,225 *** (0,026)
40-50	0,000 (0,012)	-0,269 *** (0,017)	-0,005 (0,015)	-0,142 *** (0,023)	0,011 (0,021)	-0,322 *** (0,028)
≥ 50	0,011 (0,013)	-0,770 *** (0,025)	0,005 (0,017)	-0,727 *** (0,032)	0,032 (0,025)	-0,507 *** (0,043)
Diploma (none)						
<Secondary	0,023 *** (0,009)	0,267 *** (0,018)	0,022 ** (0,011)	0,144 *** (0,019)	0,043 *** (0,015)	0,219 *** (0,024)
Secondary	0,024 ** (0,011)	0,267 *** (0,018)	0,033 ** (0,014)	0,283 *** (0,024)	0,029 (0,020)	0,285 *** (0,029)
>Secondary	0,042 *** (0,012)	0,409 *** (0,019)	0,033 ** (0,016)	0,440 *** (0,025)	0,053 *** (0,021)	0,410 *** (0,030)
White collar	-0,014 (0,016)	0,117 *** (0,023)	-0,026 (0,019)	0,073 ** (0,029)	-0,041 (0,032)	0,090 ** (0,042)
RMI receipt	0,040 *** (0,010)	-0,283 *** (0,018)	-	-	0,093 *** (0,014)	-0,375 *** (0,023)
Nb of previous registrations at the unempl. agency	0,012 *** (0,001)	-0,155 *** (0,016)	0,013 *** (0,002)	0,086 *** (0,002)	0,012 *** (0,002)	0,072 *** (0,003)
Motivation for registration (first-job seeker)						
lay off	-0,018 (0,018)	0,110 *** (0,025)	0,064 * (0,037)	0,029 (0,057)	-0,045 (0,028)	0,361 *** (0,039)
resignation	-0,034 (0,021)	0,186 *** (0,031)	0,037 (0,041)	0,086 (0,063)	-0,028 (0,030)	0,301 *** (0,040)
end of contract	-0,064 *** (0,017)	0,202 *** (0,023)	-0,005 (0,037)	0,119 ** (0,056)	-0,037 * (0,021)	0,287 *** (0,029)
end of inactivity > 6 months	-0,031 (0,023)	0,006 (0,037)	0,063 (0,045)	0,065 (0,072)	0,012 (0,030)	-0,028 (0,048)
other	-0,074 *** (0,017)	-0,100 *** (0,024)	-0,001 (0,038)	-0,112 ** (0,057)	-0,075 *** (0,020)	-0,106 *** (0,030)
Elapsed duration on unempl. (< 3 months)						
3-6 months	-0,135 *** (0,012)	-	-0,069 *** (0,014)	-	-0,061 *** (0,022)	-
6-12 months	-0,104 *** (0,011)	-	-0,112 *** (0,013)	-	-0,228 *** (0,020)	-
12-24 months	-0,122 *** (0,011)	-	-0,109 *** (0,013)	-	-0,153 *** (0,020)	-
≥ 24 months	-0,145 *** (0,011)	-	-0,126 *** (0,013)	-	-0,179 *** (0,020)	-
Searching for a long-term contract		0,430 *** (0,018)		0,591 *** (0,023)		0,236 *** (0,033)
Insured on July 2001	0,077 *** (0,008)	-	-	-	-	-
Insured	-	-0,997 *** (0,016)	-	-	-	-
Local unempl. rate	-0,007 *** (0,001)	-0,082 *** (0,002)	-0,013 *** (0,002)	-0,097 *** (0,003)	-0,029 *** (0,003)	-0,076 *** (0,004)

^(a): at the time of the reform for hazards to the interview and at the time of registration for hazard to employment.

Table 4: Parameters of duration dependence

	All	Insured	Non Insured
Parameters of the interview-specific baseline hazard (month 0-1 set at 0)			
month 1-2	-0,674 *** (0,014)	-0,738 *** (0,017)	-0,749 *** (0,024)
month 2-3	-0,121 *** (0,013)	-0,398 *** (0,016)	-0,151 *** (0,023)
month 3-4	1,803 *** (0,013)	0,026 (0,017)	1,816 *** (0,024)
month 4-5	15,369 (13,685)	1,943 *** (0,018)	8,467 *** (0,236)
month 5-6	15,226 (13,685)	14,557 (11,152)	16,148 *** (1,480)
months 6-12	17,578 (13,685)	16,811 (11,152)	18,179 *** (1,480)
months 12-18	22,096 (13,686)	21,479 * (11,153)	19,498 *** (1,480)
months 18+	38,450 (27,371)	36,784 * (22,305)	24,987 *** (1,535)
Parameters of the employment-specific baseline hazard (months 0-3 set at 0)			
months 3-6	-0,921 *** (0,022)	-0,773 *** (0,031)	-0,965 *** (0,034)
months 6-9	-1,416 *** (0,023)	-1,275 *** (0,031)	-1,435 *** (0,036)
months 9-12	-1,768 *** (0,023)	-1,707 *** (0,032)	-1,715 *** (0,036)
months 12-18	-1,363 *** (0,023)	-1,324 *** (0,032)	-1,290 *** (0,036)
months 18-24	-1,820 *** (0,025)	-1,816 *** (0,034)	-1,774 *** (0,039)
months 24-30	-1,873 *** (0,027)	-1,893 *** (0,037)	-1,841 *** (0,043)
months 30-36	-2,171 *** (0,030)	-2,142 *** (0,041)	-2,284 *** (0,049)
months 36-48	-1,697 *** (0,029)	-1,723 *** (0,040)	-1,673 *** (0,045)
months 48-60	-2,106 *** (0,035)	-2,123 *** (0,048)	-2,024 *** (0,056)
months 60-72	-2,552 *** (0,044)	-2,652 *** (0,061)	-2,389 *** (0,069)
months 72-84	-2,798 *** (0,055)	-2,928 *** (0,073)	-2,605 *** (0,088)
months 84-96	-3,109 *** (0,070)	-3,279 *** (0,090)	-2,923 *** (0,115)
months 96-108	-3,420 *** (0,087)	-3,462 *** (0,105)	-3,522 *** (0,169)
months 108-120	-3,686 *** (0,113)	-3,813 *** (0,135)	-3,863 *** (0,229)
months 120-132	-3,823 *** (0,143)	-4,289 *** (0,191)	-3,213 *** (0,221)
months 132-144	-4,432 *** (0,216)	-4,653 *** (0,252)	-4,259 *** (0,414)
months 144+	-2,072 *** (0,141)	-2,311 *** (0,160)	-2,204 *** (0,324)

Table 5: Parameters of unobserved heterogeneity

	All	Insured	Non Insured
b_1	-22,082 (13,686)	-21,223 * (11,153)	-19,398 *** (1,480)
a_1	17,692 (13,685)	16,659 (11,152)	6,770 *** (0,234)
b_2	-0,065 * (0,035)	0,373 *** (0,062)	-1,679 *** (0,035)
P_1	35,12% *** (0,002)	27,78% *** (0,003)	5,67% *** (0,001)
P_2	23,70% *** (0,002)	24,65% *** (0,003)	22,60% *** (0,003)
P_3	22,80% *** (0,001)	29,40% *** (0,002)	22,22% *** (0,002)
P_4	18,38% *** (0,002)	18,17% *** (0,002)	49,52% *** (0,003)
$cov(\nu_1, \nu_2)$	0,784 *** (0,046)	-0,771 *** (0,045)	0,944 *** (0,008)

7 Conclusion

The decision to participate in the PARE UI system is of major interest in terms of policy design and evaluation. We have proposed a theoretical framework to model the PARE take-up decision. This model takes explicitly into account the disutility ALMP participation may induce. We have assumed that the unemployed individuals made their decision depending on the consequences PARE participation would have on their job opportunities and on their job search strategy. Empirically, we use defective duration techniques that allow for the presence of long-term survivors in the data. These methods are shown efficient to correct for the right-censoring we encounter. The descriptive analysis realized using Kaplan-Meier estimates and the results obtained from a competing and defective risks model give evidence of a PARE non take-up phenomenon. The estimated PARE non take-up rate is significantly different from 0 and is around 3%. This massive enrollment to the new system appears as an *ex post* justification of the orientation taken in the policy dispensed to the unemployed workers and of the financial effort made to fund these ALMP. We find a self selection to PARE. The workers who experience greater difficulties on the labour market are more likely to take up PARE. They are also more quickly interviewed. Highly qualified unemployed individuals who are not recipient of the main French means-tested benefit are less likely to choose the PARE system. Hence, our results support the underlying ideas of our theoretical model and tend to confirm the presence of stigma, as well as time cost associated with the participation in an UI system with counseling and job search assistance. Moreover, the estimated non take-up rate is higher for the insured unemployed workers than for the others, which runs along with the uncertainty effect. However, for most of the unemployed workers, these costs were not large enough to prevent from taking up PARE. These results runs along with the idea that the “threat effect” measured on non French data are due to sanctions, rather than to a dislike of job search assistance.

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Appendix A: The reform

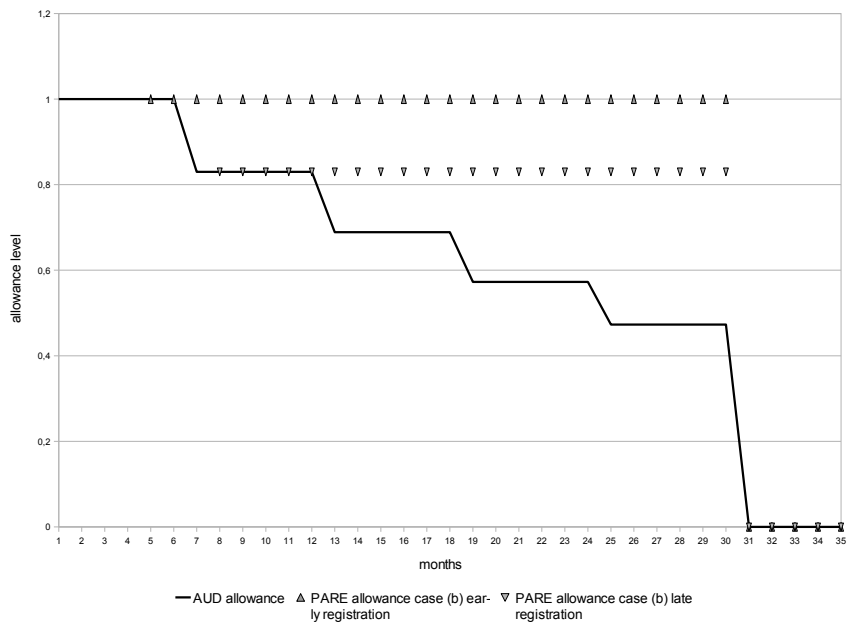
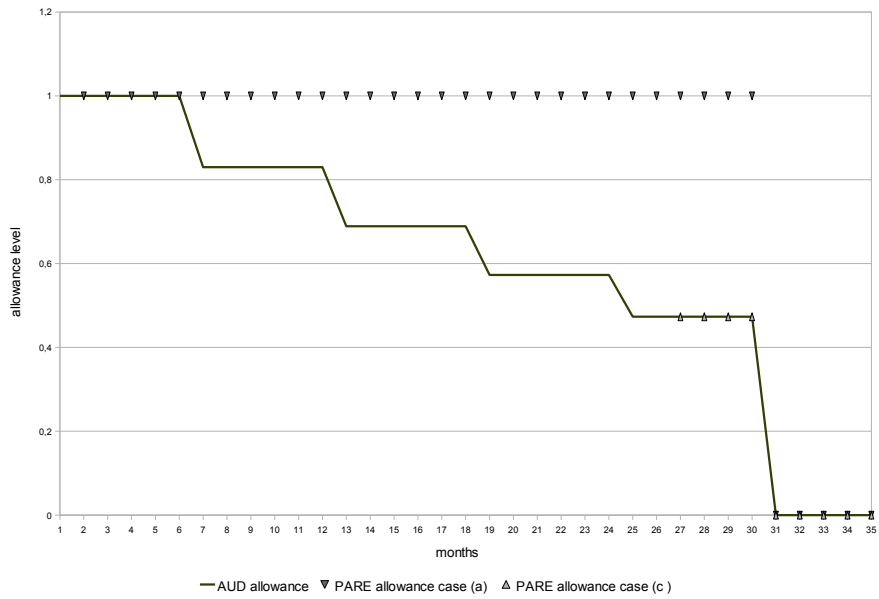
Concerning the unemployment compensation, the reform just consists in suppressing the decrease in the amount of the benefit. Entitlement criterion and durations are the same before and after the reform. Details on the compensation are displayed in Table 6. In AUD, the benefit is first given at full rate and is then diminished by a cut-off rate. This rate and the period of full amount receipt differ according to the unemployed worker characteristics. In PARE, the cut-off rate is null and the period of full amount receipt covers the whole period of entitlement.

Table 6: Types of compensation between 1997 and 2003

Type of insurance and entitlement in AUD and PARE (1997-2003)		Parameters of decrease in AUD (1997-2001)			Total entitlement duration in AUD and PARE (1997-2003)
Type of insurance	Work requirements and age conditions	Duration at full rate	Cut-off rate	Frequency of cut-off	
1	4 months within the 18 previous	0 months	25%	none	4 months
2	6 months within the 12 previous	4 months	15%	1	7 months
3	8 months within the 12 previous and - 50	4 months	17%	each 6 months	15 months
4	8 months within the 12 previous and + 50	7 months	15%	each 6 months	21 months
5	14 months within the 24 previous and - 50	7 months	17%	each 6 months	30 months
6	14 months within the 24 previous and + 50	9 months	17%	each 6 months	45 months
7	27 months within the 36 previous and between 50 and 54	20 months	15%	each 6 months	45 months
8	27 months within the 36 previous and + 55	27 months	8%	each 6 months	60 months

Figures 4 show the importance of compensation history for monetary incentives associated with PARE take-up. Consider 4 individuals entitled to the type 5 of compensation. In AUD (continuous line), they receive the full amount of benefit during 7 months and then experience 3 cut-off of 17% (at the 13th, 19th and 25th months of unemployment). After 30 months, the entitlement rights to the compensation are expired. For these individuals, only the moment at which the reform occurs is different: On July 2001, both individuals (a) and (b), who have spent respectively 2 and 6 months on unemployment, are in the period of full benefit, but (b) is closer than (a) to the date of the first cut-off. Individual (c) has spent 27 months on unemployment when occurs the reform. Thus, he receives the last possible amount of benefit before exhaustion of his rights. The compensation profile c) could have is exactly the same whether he enters PARE (clear triangles) or not. As a result the reform has no impact for (c) on a financial point of view. On the contrary, the difference between the decreasing profile in AUD and the flat profile in PARE shows that (a) (reverse dark triangles) and (b) have a financial incentive to take up PARE. The bottom figure shows individual (b) gains all the more than he switches quickly.

Figure 4: PARE take-up and compensation profile



Appendix B: Solution of the Theoretical Model

To solve the theoretical model, we first calculate the reservation wages and the optimal search efforts. We then determine the threshold value of ϕ below which $V^{PARE} > V^{AUD}$, *i.e.* for which the unemployed worker choose PARE.

Let ω_i^{AUD*} (resp. ω_i^{PARE*}) be the reservation wage for the offers obtained through the i -th channel, $i = 0, 1$, when the individual is in AUD (resp. PARE). The reservation wage is the wage which makes the worker indifferent between staying on unemployment and accepting the offer. According to this definition, (3.1), (3.2) and (3.3) give

$$\omega_i^{AUD*} = (\rho + \sigma_i)V^{AUD} - \sigma_i V^{PARE} \quad \text{for } i = 0, 1 \quad (7.1)$$

and

$$\omega_0^{PARE*} = \omega_1^{PARE*} = \rho V^{PARE} \quad (7.2)$$

(3.4) and (7.1) give:

$$\rho V^{AUD} = (b - c_{AUD}(s)) + \frac{\lambda_0}{\rho + \sigma_0} H_0(\omega_0^{AUD*}) + \frac{s}{\rho + \sigma_1} H_1(\omega_1^{AUD*}) \quad (7.3)$$

where

$$H_i(\omega_i^{AUD*}) = \int_{\omega_i^{AUD*}}^{\infty} (x - \omega_i^{AUD*}) dF_i(x) \quad \text{for } i = 0, 1$$

The same, (3.5) and (7.2) give:

$$\omega^{PARE*} = (b' - \phi - c_{PARE}(s)) + \frac{\lambda_0 + \lambda'_0}{\rho + \sigma_0 - \sigma'_0} H_0(\omega^{PARE*}) + \frac{s}{\rho + \sigma_1} H_1(\omega^{PARE*}) \quad (7.4)$$

where

$$H_i(\omega^{PARE*}) = \int_{\omega^{PARE*}}^{\infty} (x - \omega^{PARE*}) dF_i(x) \quad \text{for } i = 0, 1$$

Equation (7.4) defines an implicit function $\psi(s, \omega^{PARE*})=0$ between s and ω^{PARE*} . The theorem of implicit function gives:

$$\frac{\partial V^{PARE}}{\partial \phi} = - \left[\rho \left(1 + \frac{\lambda_0 + \lambda'_0}{\rho + \sigma_0 - \sigma'_0} (1 - F_0(\omega^{PARE*})) \right) + \frac{s}{\rho + \sigma_1} (1 - F_0(\omega^{PARE*})) \right]^{-1} < 0$$

The higher the participation cost associated to PARE, the lower the value function of PARE unemployment. Thus, there exists a unique value $\underline{\phi}$ below which there is PARE participation. $V^{AUD} > V^{PARE}$ if and only if the fix participation cost is higher than $\underline{\phi}$.

To determine the value of $\underline{\phi}$, we fix the level of utility for which the individual is indifferent between the two types of unemployment insurance. We have¹⁷:

$$\begin{aligned} \underline{\phi} = (b' - b) - c_{PARE}(s^{PARE*}) + c_{AUD}(s^{AUD*}) + \frac{(\rho + \sigma_0)\lambda'_0 + \sigma'_0\lambda_0}{(\rho + \sigma_0)(\rho + \sigma_0 - \sigma'_0)} \lambda_0 H_0(\omega^{PARE*}) \\ + \frac{s^{PARE*} - s^{AUD*}}{\rho + \sigma_1} H_1(\omega^{PARE*}) \end{aligned}$$

where s^{AUD*} and s^{PARE*} results from optimization programs specific to each unemployment insurance system. If the individual invests in the private search when in $R, R = \{AUD, PARE\}$, he

17. We use here that if $V^{PARE} = V^{AUD}$, then $\omega_0^{AUD*} = \omega_1^{AUD*} = \omega^{PARE*}$

chooses his search effort by maximizing the expected utility associated with R ¹⁸. If the inverse of c'_R , $(c'_R)^{-1}$ exists, we have:

$$s^{AUD*} = c'^{-1}_{AUD} \left[\frac{1}{\rho + \sigma_1} H_1(\omega^{AUD*}) \right] \quad \text{et} \quad s^{PARE*} = c'^{-1}_{PARE} \left[\frac{1}{\rho + \sigma_1} H_1(\omega^{PARE*}) \right]$$

To derive analytical results, we now specify the cost function parametrically as follows: we assume $c_{AUD}(s) = \gamma s^2$ and $c_{PARE}(s) = (\gamma + \gamma')s^2$ with $\gamma > 0$ and $\gamma' \geq 0$. We then get:

$$s^{PARE*} = \frac{1}{2(\gamma + \gamma')(\rho + \sigma_1)} H_1(\omega^{PARE*}) \quad \text{and} \quad s^{AUD*} = \frac{1}{2\gamma(\rho + \sigma_1)} H_1(\omega^{AUD*}) \quad (7.5)$$

The threshold value under which the individual chooses *PARE* then becomes:

$$\underline{\phi} = (b' - b) + \frac{(\rho + \sigma_0)\lambda'_0 + \sigma'_0\lambda_0}{(\rho + \sigma_0)(\rho + \sigma_0 - \sigma'_0)} H_0(\omega^{PARE*}) - \frac{\gamma'}{4\gamma(\gamma + \gamma')(\rho + \sigma_1)^2} [H_1(\omega^{PARE*})]^2$$

Under the specification assumptions we set on the cost functions, the main comparative statics obtained from this framework are the following:

Monetary incentives. The more the reform generates an expected monetary gain, the higher the probability of take-up:

$$\frac{\partial \underline{\phi}}{\partial (b' - b)} = 1 > 0.$$

Job search strategies. The more the reform improves the efficiency of the public search channel, either by increasing the future job duration or by increasing the job arrival rate, the higher the probability of take-up:

$$\frac{\partial \underline{\phi}}{\partial \sigma'_0} = \frac{\lambda_0 + \lambda'_0}{(\rho + \sigma_0 - \sigma'_0)^2} H_0(\omega^{AUD*}) > 0 \quad \text{and} \quad \frac{\partial \underline{\phi}}{\partial \lambda'_0} = \frac{1}{(\rho + \sigma_0 - \sigma'_0)} H_0(\omega^{AUD*}) > 0.$$

On the contrary, the higher the increase in the private search cost, the lower the probability of entering in the new system.

$$\frac{\partial \underline{\phi}}{\partial \gamma'} = -\frac{\gamma^2}{\gamma'(\gamma + \gamma')^2(\rho + \sigma_1)^2} [H_1(\omega^{AUD*})]^2 < 0$$

Moreover, equations (7.5) imply that the unemployed worker reduces his optimal private search when entering in *PARE*.

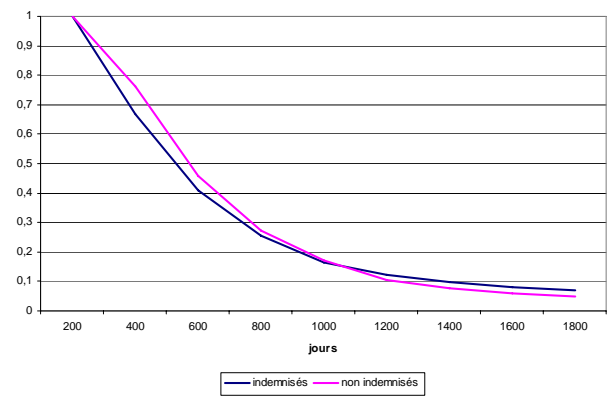
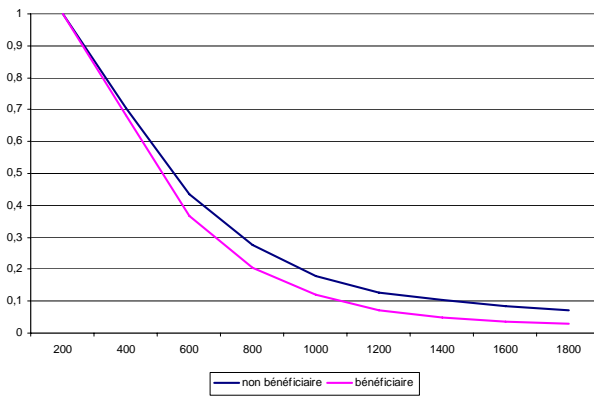
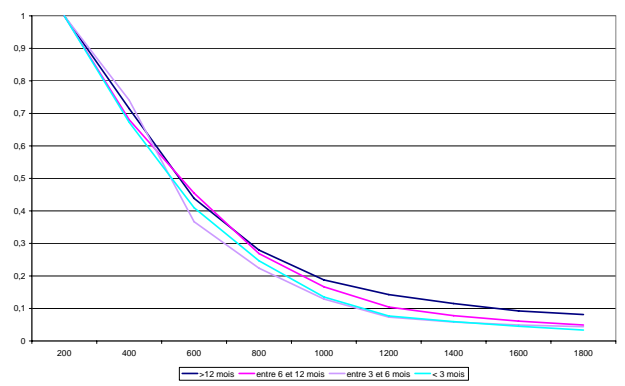
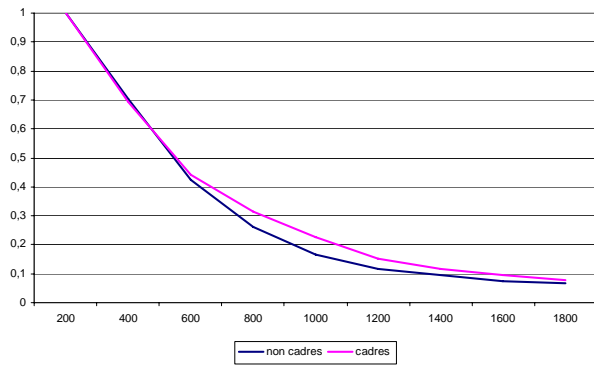
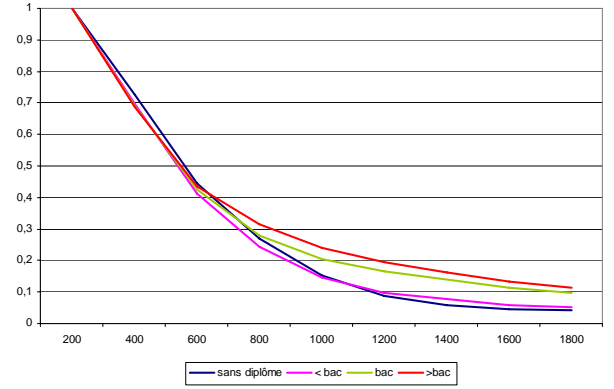
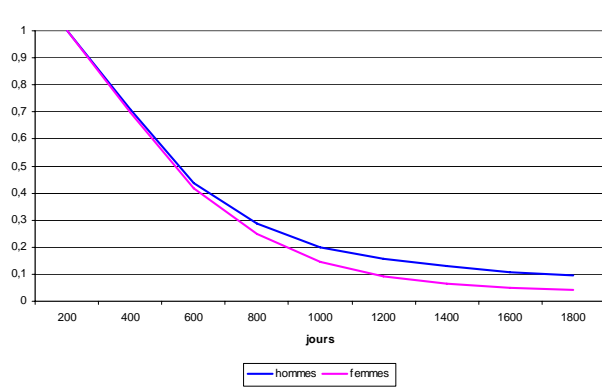
18. If the worker does not use the private channel when in *AUD*, then he does not use it neither in *PARE*. The private search is indeed more costly in *PARE* given a same level of efficiency. This directly comes from our assumptions on the first and second derivatives of the cost functions.

Appendix B: Descriptive Analysis

	total sample	sample without interviews	sample with interviews
Motivation for registration (%)			
economic firing	7,2	6,1	8,5
other lay off	12,8	11,2	14,6
resignation	5,2	5,3	5,1
end of contract	28,5	28,9	28,1
end of temporary contract	6,4	7,0	5,7
end of contract of conversion	2,2	1,7	2,9
first entry on the labor market	6,2	6,8	5,4
re-entry on the labor market*	3,4	3,3	3,6
other	28,2	29,7	26,3
total	100	100	100
Elapsed duration from registration up to July 1st 2001 (months)			
mean	20	15	20
1 st quartile	4	3	4
median	9	8	11
3 rd quartile	22	38	25
Type of unemployment (%)			
Immediately available for work searching			
- a long-term full-time job	69,7	70,1	69,2
- a long-term part-time job	16,1	13,6	19,2
- a temporary job	10,2	9,2	11,3
Not immediately available for work because of			
- training, maternity, sickness...	4,0	7,1	0,3
% of insured on July 2001	61,2	55,1	68,6
% of RMI recipients during the spell	13,4	12,0	15,1
% of female	58,4	57,5	59,5
Age at July 1st 2001			
mean	35	34	37
1 st quartile	26	26	28
median	34	32	36
3 rd quartile	44	42	46
Diploma (%)			
none	23,8	23,3	24,5
< secondary	46,7	46,1	47,3
secondary	14,9	15,3	14,4
> secondary	14,6	15,3	13,8
total	100	100	100

note: * after having been out of the labor force for at least 6 months.

Appendix C: Stratified Kaplan-Meier Estimates



Appendix D: Statistical Model

Table 7: Frequency of the types of exit from AUD unemployment

destination	frequency	percentage
PARE	109 743	45,4
Employment	38 373	15,9
Censuring	93 586	38,7
among which		
- inactivity		
<i>sickness, pregnancy, accident on the workplace</i>	8 241	8,8
<i>exempt from job search activity</i>	3 495	3,7
<i>retirement</i>	107	0,1
<i>military service</i>	47	0,1
<i>other</i>	5 396	5,8
- crossing off		
<i>no show at a control</i>	40 988	43,8
<i>no show following a notification</i>	9 588	10,3
<i>other administrative crossing off</i>	916	1,0
- unobserved end	1020	1,1
- other	18 114	19,4
<i>change of local agency</i>	5 202	5,6
<i>file non updated</i>	472	0,5