EXIT FROM SHORT-TERM CONTRACT

A FRENCH EMPIRICAL ANALYSIS, 1990-2002

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Abstract :

This paper test the determinants of the transition out of short-term contract by means of competing risk form of the semi-parametric Cox proportional hazard model. We use three labor market states distinguishing between exit into long-term contract, another short-term contract, and unemployment. For each type of exit, we define a separate hazard function that we'll call a type-specific hazard. The estimates are carried out from dataset recording individual labor market histories, the French Labor Force Survey (LFS) collected by the French National Statistical Institute (INSEE). The competing risk model is estimated for all the individual as well as separately for men and women. Our results show that, for men and women, the conditional probability of exiting STC into LTC decreases after 12th months. Moreover, staying in the same firm after a STC increases the chances of getting stable jobs in the future.

Keywords : Short-Term Contracts, Duration model, Competing risk hazard model,

Classification JEL : J41, J24, C10, C41

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1. **INTRODUCTION**

The type of labour contracts was a basic matter of discussion during the last decades, especially in the developed countries. Whereas, the short-term contracts had been the dominate pattern in this major. Accordingly, the European advanced importance in this point, and especially the France one, had pushed us to take it as a real case of study in our research.

Recent studies had focused on short-term contracts, which considerably the preferable choice for the employers decision-taking, due to its restrictions flexibility which also could increase the economic mobility and reduce inequalities between unemployers and employers and wouldn't create a dual labour market, which is described in the literature (Hunt, 2000; Maurin, 2000). However, employers prefer the short-term contracts in their recruitment strategies due to a lot of reasons. First, costs reason, due to which the temporary contracts are less costly on them with respect to the permanent ones (see Bentolila and Bertola, 1990; Bentolila and Saint-Paul, 1994; and Booth, 1997). Second, where as the short-term contracts have a high flexibility in filling the job's vacancies. Third, absorption-tendency for the demand fluctuations adjustment's costs. Fourth, reducing uncertainty in matching value.

Whereas, the matching theory, that had been suggested by Jovanovic (1979), constitutes the model of reference integrating this dimension of the labour market. Moreover, they added that it is necessary to install a mechanism making it possible to produce an optimal pairing in order to reach an efficient production. In fact, the Firms current strategies are to ease initially short-term contracts as a probationary stage. Then, according to the applicant abilities and labour demand, long-term contracts would be proposed. Furthermore, as pointed out by Loh (1994), and Lazear (1995) probationary periods may induce self-selection of those workers with higher ability because they have a higher probability to obtain permanent contracts.

Thus, we'll try focus in this study short-terms contracts effects. We'll take the mission of illustrating the "stepping stone" principle or arriving to a new methodology. Moreover, to what extent does a short-term contract (STC) increase the probability of finding a long-term contract (LTC)?

Existing theory suggests different answer to this question. On the one hand, Booth et al. (2002b) examined whether temporary contracts deserve to be considered as ''stepping stones.'' The authors confirm for their United Kingdom sample that over a period of 7 years, about 38% of all workers observed on short-term contracts move on to permanent employment after the STC expires with higher wages and fringe benefits. They also show that

high effort among temporary workers is positively correlated with the probability of career advancement. On the other hand, the "dead-end" suggestions had been presented in the discussion table, where Güell and Petrongolo (2001) were the most believers on "dead-end" in studying the duration pattern of short-term contracts in Spain and the determinants of their conversion into permanent ones. Addio and Rosholm (2005) study transitions out of temporary jobs using the waves 1994–1999 of the European Community Household Panel. The authors confirm that very short contracts provide higher chances of labour market exclusion especially for men. While, the empirical works available for Italy (Adam and Canziani, 1998), France (Abowd, Corbel and Kramarz, 1999), and Germany (Hagen, 2003) all indicate that short-term contracts are stepping stones to permanent forms of employment rather than dead-end jobs.

2. The French Regulation of Short-Term Contracts

French labor laws[1] allow firms to hire workers on two types of regular employment contracts: Indefinite-Term Contracts (*Contrats à Durée Indéterminée,* CDI) and Fixed-Term Contracts (*Contrats à Durée Déterminée,* CDD). The current architecture of CDDs, introduced in 1979, dates back to an agreement signed in March 1990. Under this agreement, CDDs can be offered by firms for only very precise reasons: CDD cannot be used to fill a job that would exist under normal and permanent business conditions for a given firm (Article L.122).

The use of fixed term employment contracts is covered by the detailed employment legislation set out in the *code du travail*. This specifies the situations in which employers may use fixed term contracts and places tight restrictions on their duration and renewal. The french government has made clear its view that employers should not make excessive use of fixed term contracts, particularly short-term contracts, which have been cited as a key factor in the development of social exclusion.

Fixed term contracts can be used in five different situations: to replace absent employees; if a company grows temporarily and needs extra employees for a limited period of time; for seasonal work; to fill a vacant post until a permanent employee starts the job; and in specified jobs and sectors where permanent contracts are not appropriate.

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[1] For more details about French Labor Laws, see Abowd and Kramarz [2003] for an executive summary in english, and Lamy [1992] for an explanation of the text of the law.

A short-term contract must be in writing, otherwise it will be judged to be a permanent contract. It must state the reason for a fixed term contract being concluded, which must correspond to the reasons outlined above. It must state the duration of the contract, which may be either for a fixed length of time or until a specified event happens (including the completion of one or more tasks). The contract may not be broken before this finishing point unless both the employer and employee agree to it.

Generally, successive fixed term contracts may last no longer than 18 months in total and a fixed term contract cannot be renewed more than twice in this time. However, fixed term contracts concluded for urgent safety work may not last longer than nine months. There must be a gap between successive contracts that is at least a third as long as the contract it follows, for example an employee on a nine month fixed term contract must be laid off for three months before being hired on another fixed term contract by the same employer. Fixed term employees must receive the same legal, contractual and collective rights as comparable permanent employees. At the end of a fixed term contract, employees generally receive a payment worth at least 6% (10% since January 2002) of their total gross earnings during the period covered by the contract and compensation for any paid annual leave not taken.

Although their use is formally restricted, CDDs are the most common method of hiring. For example, in 1990, 58% of all hires were through CDD, they were 68% in 1996 and 75% in 1999 (Coutrot [2000]). On the other hand, during the 1990's, more than 90% of the stock of employees in private for-profit or semi-public establishments were on CDIs. For those hired under CDD approximately one in three is eventually converted to CDI (Abowd, Corbel and Kramarz [1999]).

3. The econometric model

In our analysis, we develop a competing risk form of the semi-parametric Cox proportional hazard model (see Cox and Oakes, 1988). This type of model allows controlling for all the standard determinants, as well as for duration dependence, which is the pure effect of time spent in temporary employment on the probability of moving to another state. For each type of exit, we are going to define a separate hazard function that we'll call a type-specific or cause-specific hazard.

The hazard model utilizes data on the sequence, timing, and the state in which an individual occupies; the probability of the type of exit is a function of time. This is referred to as the hazard rate or function. The hazard rate is the dependent variable, and the relationship

between this rate and a variety of observed and unobserved variables is modelled. The hazard model has been widely used in biomedical and social science research, by Cox (1972), Kalbfleish and Prentice (1980), Heckman and Singer (1984), and Kiefer (1988).

We will distinguish three labor market states: long-term contract in private and public establishments (state 1), short-term contract, including fixed-term contract, intermediaries and seasonal workers (state 2) and unemployment (state 3). For each type of exit, we are going to define a separate hazard function that we'll call a type-specific or cause-specific hazard.

As before let Ti be a nonnegative random variable denoting the length of short-term contract for individual i. In the competing risk model the choice set is specified by a discrete-state space and the choice and switching between labor market states are formalized through transition rates, while the time spent on activities is estimated by a distribution function (see, Flinn and Heckman 1982, Heckman and Singer 1984). Let ki be a random variable denoting the type of exit that occurred to individual i. We now define $h_{ik}(t)$, the hazard for death type k at time t for individual i, as follows:

$$h_{ik}(t) = \lim_{\Delta t \to 0} \frac{\Pr\{t \leq T_i \leq t + \Delta t, J_i = j / T_i \geq t\}}{\Delta t}, \qquad k = 1,2,3$$

Thus, the conditional probability in this equation, is the probability that individual exit occurs between t and $t + \Delta t$, and the exit is of type k, given that the person had not already died by time t. The overall hazard of exiting is just the sum of all the type-specific hazards, that is,

$$h_i(t) = \sum_k h_{ik}(t)$$

You can interpret type-specific hazards in much the same way as ordinary hazards. Their metric is the number of events per unit interval of time, except now the events are of a specific type. Based on the type-specific hazards we can also define type-specific survival function:

$$S_k(t) = \exp\left\{-\int_0^t h_k(u)du\right\}$$

In order to estimate the transition rates of short-term contract and the effects of independent variables on these, we need to specify the functional form of the hazard model. The most widely used specifications are the accelerated time model and the Cox proportional hazard model. According to the Cox proportional hazard model (Cox 1972) covariates have a

multiplicative relationship with the hazard function (the proportionality assumption), causing them to shift the hazard function up or downward. Therefore, covariates do not have a direct impact on the duration of an activity. In contrast, the accelerated time model (Cox and Oakes 1984) assumes that covariates act multiplicative on time rather than on the hazard function. Covariates, therefore, increase or decrease the time spent on an activity.

As the current paper studies the impact of explanatory variables on the exit of short-term contract, Cox proportional hazard model is used. The competing risk accelerated time model is specified as follows:

$$h_k\left(t_i \mid X\right) = h_{0k}(t_i)\exp\left(-x_i\beta_k\right)$$

where t_i is the elapsed duration of short-term contract for individual i, $h_k\left(t/X\right)$ denotes the hazard rate for exit k conditional on a vector of covariates, X; $h_{0k}(t)$ denotes the baseline hazard function measuring the effects of the time passed since the previous labor market state (STC) on the probability moving to another state k; and $x_k\beta_k$ denotes the covariates and parameter estimates for exit-specific k.

The overall likelihood function can be partitioned into the product of the k-specific likelihoods. To see this, suppose that there are n observations at risk of failing in one of k ways. The individual contribution of the ith individual failing by event k is given by

$$L_i = f_k\left(t_i \middle| X_{ik}, \beta_k\right)\prod_{k \neq r} S_r\left(t_i \middle| X_{ir}, \beta_r\right)$$

where the subscript k denotes the kth event and r in the product term implies that the product is taken over the survivor times for all states except k. The joint density for the probability density function and survivor function for all activities are obtained by integrating $h_k(t)$. The overall likelihood function for the full sample is then given by

$$L = \prod_{i=1}^{n}\prod_{k=1}^{r} f_k\left(t_i \middle| X_{ik}, \beta_k\right) S_k\left(t_i \middle| X_{ik}, \beta_k\right)$$

This partitioning is easier to see if we define a censoring indicator such that:

$$\delta_{ik} = \begin{cases} 1 & \text{if } i \text{ failed due to } k \\ 0 & \text{otherwise} \end{cases}$$

when $\delta_i = 1$ the observation is observed failing due to risk k; when $\delta_i = 0$, the observation is right-censored. Incorporating δ_{ik} into the likelihood function, the likelihood of the sampled duration times may be expressed as

$$L = \prod_{i=1}^{n} \prod_{k=1}^{r} f_k\left(t_i | X_{ik}, \beta_k\right)^{\delta_{ik}} S_k\left(t_i | X_{ik}, \beta_k\right)^{1-\delta_{ik}}$$

Importantly, for this model, the assumption must be made that the *K* risks are conditionally independent. Given the covariates, the survival times for risk *k* are independent of the survival times for risk *r*.

4. Data

In this instance, we use a longitudinal micro dataset recording individual labor market histories, the French Labor Force Survey (hereafter: LFS), *Enquête Emploi*, collected by the French National Statistical Institute (INSEE). We consider the cohorts that were sampled from 1990 to 2002. The households in the cohorts are interviewed in March of three consecutive years. The survey is representative of the French population aged 15 and up. The sampling fraction is approximately 1/300. Large samples of about 150,000 individuals aged 15 or more, in 75,000 households, can thus be interviewed three times, in March of three subsequent years, about various aspects of their employment histories.

At each interview date, each individual is asked to describe her actual labor market state, and is also asked to provide some retrospective information on her labor market history. Concentrate for example on individuals interviewed in March 2000. At the first interview, they are request to retrace month by month, their labor market history between March 1999 and March 2000. At the second interview, they are request to recall (again month by month) the period between March 2000 and March 2001, and at the third interview, the period between March 2001 and March 2002. The following standard information is completed for each interview: sex, age, education, job tenure, industry, working hours, private and public sector.

We had to distinguish this a complete trajectories $\left(y_t, y_{t+1}, y_{t+2}\right)$, where *t* is the date of the first recorded observation. For the estimation of the empirical model, the sample is restricted to individuals responding three consecutive waves and individuals who still in the short-term contract at *t*, that means to households entering the survey between 1991 and 2000. Households that are not interviewed three times generate incomplete labor market histories[2].

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[2] We excluded households that are only interviewed once or twice. This can occur for two reasons. First, if a household moves to another address no attempt is made to find this household's new address. The household that is lost is simply replaced by the INSEE by the new inhabitants occupying the original address. As a consequence, a household that have moved between the first and the second interview date, is interviewed only once. A household that have moved between the second and the third interview date, is interviewed only twice.

Excluding such households from the cohort does not bias our results under the assumption that non-participation phenomenon (panel attrition) is exogenous.

5. An overview of Short-Term Contract in French

5.1 The Aggregate Picture

In studying the evolution of the short-term contract proportions with respect to the total French employment contracts (Figure 1), a gradual increase for the benefit of the short-term contracts had effectively appeared between 1990 to 2000 (2.86% to 6.67%). Otherwise, the new millennium were considerable the pick of the percentage of the short-term contract.

Figure 2 shows the share of short-term contract in total employment according to the variable of sex. Although the share of STCs in total employment increases for both men and women. Generally, the share of women in short-term contract is higher than of men especially in the years between 1990 and to 2000. After 2000 the share of short-term contract continued to decline marginally and it reached in 2002 6.6% for women and 6.3% for men. The occurrence of this type of employment have peaked in 2000 at 7.06% for women and 6.62% for men.

Figure 3 shows that the share of short-term contract in total employment is more frequent in some age groups than in others. We note that there is a greater proportion of short-term contract among youth [15-24] with respect to the old ages [50-59], whereas, the graph shows an increase in the gap difference from (5.09% in 1990 to 8.53% in 2002). Thus, normally we can conclude that the short-term contract are also more related to the first working step for the employers way, while the increase in the age-group gap could be related to the experience level.

An analysis of the share of short-term contract in total employment by four sectors confirms the development of the short-term contract in particular sectors of economy. Figure 4 shows that the share of STC's is roughly increasing in all sectors during the 90's. While the biggest occupations specifically STC's are found among service and construction sectors. Since 1993, the share of STC's in total employment increased sharply in service sectors. While in 1993, 5.55% of STC's were active in the service sector, by 2000 this percentage has

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Second, even if a household remains at the same address during the whole observation period, it can refuse to participate at the second and/or third interview date. Households that are not interviewed three times generate incomplete labor market histories.

increased to 11.73%. We should note, however, that the construction and services sector still accounts for large part of all short-term contracts in the labour market. In this is related to the kind of the services working structure and the seasonable activities.

By looking at the activity rate for our sample of workers for the period from the 1990 to 2002, tow facts are immediately evident (see table 1). The first one is that working as employee with a long-term contract remains by far the most important form of employment but it continues to decrease during the period. This decrease is reflected in the corresponding increase in the percentage of short-term contracts and unemployment, while the percentage of those who are in education or job training remains roughly constant during the same period. The second fact is that working as an employee with a short-term contract remains by far the smallest form of employment but it continues to increase by approximately four percentage points. However, the share of short-term contract in total employment has increased from 3.95% in 1990 to 8.72% in 2002. When looking at the average annual growth in long-term and short-term contract concerning the period from 1990 to 2002, fluctuations in short-term contract over all periods are much more developed than for long-term contract.

Table 2 shows one-year transition of short-term contract between the six economics statuses in consideration for the period 1990 to 2002. It is interesting to point out when comparing the mid-1990 to the beginning of 2000. During the 90/91, around 35% of workers on a short-term contract are still in the same status one year later, with 38% of them managing to obtain a more stable form of employment but around 15% of them are not employed. Approximately 2% of these STC are still in education or training one year later. Looking in more details at the transition between 2001 and 2002, there is a high degree of persistence for people under short-term contract: around 57% of individuals are still in the same situation of labor contract one year later, but only 22% of STC stepping-stones with a long-term contract. During the period from 1990 to 2002, the proportion of short-term contract that led to with a long-term contract has decreased and at the same time, the share of short-term contract that led with a new STC has increased monotonically.

Table 3 shows the percentage of transition between different economic activity statuses differ according to the personal characteristics of the individuals. Looking at the gender dimension, the share for men on short-term contracts to move to long-term contracts is around tow percentage points higher than for women. This suggests that men having a temporary job are more likely to obtain a stable employment, while for women, this is more likely to represent a period of work in a rather more intermittent career path. Considering the

different age group, it should be noted that the lowest degree of transition in long-term contracts (20.43%) is for those aged 16-24. Since the majority of young people have no professional experience on the labour market, they accept even short-term contract (61.29%). The workers aged between [40-49], represent the highest percentage in the transition towards the long-term contract. The analysis of transition by levels of qualification highlights once more the importance of education for labour market outcomes. The percentage of temporary workers to move to long-term contract increases with the level of qualification, from 20.28% for the low-qualified to 31.85% for the high qualified. Also, regardless of the economic activity statuses, the percentage that workers loosing or leaving their job decreases with level of qualifications of the individual.

5.2   The hazard function into Long-term and Short-term contract:

We have represented graphically in Figure 5, Figure 6 and Figure 7, the hazard functions for men and women, into long-term contract, short-term contract and unemployment.
We notice that both of them are non-monotonic. When considering the conditional probability of exiting STC into LTC, we note that for men and women it decreases after 12th months. The analysis of hazard ratio confirms, men as well as for women, that court duration of STC increases significantly their chances to reach job stability through LTC.

The hazard rate measuring the conditional probability of exiting STC to another STC, reported in the Figure 6 shows that women with longer short-term contracts are more likely to get another STC. The hazard rates into STC clearly confirm this situation, by suggesting that temporary jobs have the same effects for men and women respectively. Transition rate into unemployment (Figure 7) is decreasing after the first year for both men and women.

We should ask the following question does the fact of obtaining a LTC after a STC related to the fact of staying in the same firm in another word does the fact of moving to another firm increase or decrease the probability of exiting in a LTC?

The hazard function is decreasing whatever the type of firms of transition. One can compare hazard in long-term contract (Figure 8) for the two types of firms (transition in the same firm; transition to another firm). The hazard function into LTC of the individuals with transition in the same firm is always higher that of the individuals with transition to another firm. The probability of exiting to STC in the same firm (Figure 9) is higher than that of obtaining STC in another firm until the 12th month. But afterwards, two hazard functions are decreasing monotonically. This can be explained by the fact that STC is a probationary period in the first

year to test the individual's skills. Then, according to the applicant abilities and labour demand, long-term contracts would be proposed.

6. Results of estimation

The estimation results of the competing risk model out of short-term contracts confirm what has been observed by descriptive statistics. Related to transitions into LTC, we notice that the age, the human capital, the labour market conditions (modelled here through the unemployment rate), being occupied in some kind of elementary tasks, sector of activity, and finally the private/public type of employment, affect the hazard rate of men and women in the same way.

6.1 Results for the whole set of the individuals

Table 4 report our results for the determinants of transitions probability from short-term contract to three economic activity statuses for the period 1990 to 2002.

First, younger workers aged between 16-24 relative to the base of individuals aged between 40-49 have a low probability of finding a long-term contract. Older workers aged between 50-59 have also a higher risk of exclusion from the labour market after a short-term contract. Since the majority of young people have no professional experience on the labour market, they accept even precarious working conditions. This result is confirmed by Booth, Francesconi and Frank (2002a) on English data.

Men have a negative and significant probability of getting another short-term contract or exit into unemployment. The chances of having an established position under long-term contract are higher for Europeans than for non-European people.

The results show that workers with low human capital with technical education hold more long-term contract than the workers with first cycle degree. The result found suggests that when short-term contract are held by individuals with high skilled (university degree), this is not an efficient way to get promoted into the labour market, but a powerful tool to put them out of the labour market. It is clear from the results associated with the exit into unemployment that those holding high skilled positions have lower risks of facing exclusion after the experience of a short-term contract.

Occupational levels variables indicate that executives or professionals have a positive and significant probability to transitions into long-term contract relative to workmen. On the other

hand, holding a short-term contract with intermediary professions reduces the probability of finding a long-term contract.

Exit from short-term contract varies according to the size of firms. Compared to small firms, workers in firms with 50 to 499 employees can also worsen the chances of getting stable jobs in the future.

Having temporary jobs in the public sector is associated with an increased risk of becoming non-employed. The negative sign associated with this variable in the transition into long-term contract points at the risk of such a practice. After a short-term contract in the public sector (compared to private), workers are more likely to fall again into unemployment or short-term contract.

Transitions probability between different economic activity statuses differs according to the experience in labour market. The probability of holding a long-term contract is greater when individuals have a less experience in short term contract. On the other hand, people on short-term contract with a professional experience in the labour market find difficulties of having an established position and their moving into unemployment.

The introduction of time work effects shows that full-time workers have a positive and significant probability to obtain an LTC compared to those in part-time.

Considering the type of short-term contract, it should be noted that the individuals under fixed-term contract have a higher probability of holding long-term contracts. Therefore, individuals under fixed-term contract improve their chances of stabilization in an employment position compared to people with seasonal or intermediaries contract.

The local rate of unemployment tends to increase the probability of transitions short-term contract or unemployment. Persistence of unemployment obviously makes the recourse to this situation of employment much more frequent.

6.2   Results for men and for women

Table 5 and table 6 report our results for the determinants of transition probability form short-term contract to three economic activity statuses for men and women alike.

Concerning the age, for men as well as for women, young people occupying an STC are more likely to obtain another STC. On the other hand, for older men of more than 50 years old, their age is an obstacle that leads them to unemployment.

The marital statute has the same significant and positive effect for men and women. Indeed, being married has an effect of increasing the probability of having a LTC.

By examining the results of the variable of the level of education, it should be noted that we have a significant difference between men and women related to their types of exiting after a STC. Indeed, men with higher education have a positive and significant probability to hold LTC. On the other hand, women having the same level of education find difficulties to obtain an LTC. This same phenomenon is observed for workers with technical education (having a technical curriculum). The results show the latter hold more LTC while women encounter more difficulties in having an established position and their moving to another STC.

Women working in large firms have a higher probability of finding a long-term contract. On the other hand, men working in large firms have also higher risks of exclusion from the labour market after a short-term contract.

Working in the public sector under a short-term contract has the same effect on men and women alike. Both sexes find difficulties to move to an LTC.

The time of work (full-time / part-time) doesn't have a significant effect on the types of exiting from an STC for men. On the other hand, women having full-time jobs are more likely to obtain an LTC. It should be noted too, that women having a part time job plays a significant and negative effect on the probability of moving to an LTC and doesn't increase the probability of exiting to another STC or to unemployment.

As to the wages, they have the same positive and significant effect on the probability of transition towards an LTC for both men and women.

6.3   Results for type of firm transition

Table 7 and table 8 report our results for the determinants of transition probability form short-term contract to long-term contract or another short-term contract statuses by type of firm transition (in the same firm / in another firm).

Men have a positive and significant probability of stepping-stones to another long-term contract in the same firm. The chances of having an established position under long-term contract after a short-term contract in the same firm are higher for married than for executives or professionals workers.

Transitions probability between different statuses differ according to the type of short-term contract in labour market. The probability of holding a long-term contract is greater when individuals have a fixed-term contract and staying in the same firm. On the other hand, people staying in the same firm or moving to another firm, on intermediaries or seasonal contract find difficulties of having an established position and their exiting into short-term contract.

7. Conclusion

This paper test the determinants of the transition out of short-term contract. Moreover, does a short-term contract (STC) increase the probability of finding a long-term contract (LTC)? In our analysis, we develop a competing risk form of the semi-parametric Cox proportional hazard model This type of model allows controlling for all the standard determinants, as well as for duration dependence, which is the pure effect of time spent in temporary employment on the probability of moving to another state. We will distinguish three labor exiting: long-term contract in private and public establishments (state 1), short-term contract, including fixed-term contract, intermediaries and seasonal workers (state 2) and unemployment (state 3). For each type of exit, we are going to define a separate hazard function that we'll call a type-specific or cause-specific hazard.

The estimates are carried out from a longitudinal micro dataset recording individual labor market histories, the French Labor Force Survey. We consider the cohorts that were sampled from 1990 to 2002.

When considering the hazard functions for exiting into LTC, we note that for men and women it decreases after 12th months. The analysis of hazard ratio confirms, men as well as for women, that court duration of STC increases significantly their chances to reach job stability through LTC. One can compare hazard function in long-term contract for the two types of firms (transition in the same firm; transition to another firm), we noted that the hazard function into LTC of the individuals with transition in the same firm is always higher that of the individuals with transition to another firm.

The competing risk model is estimated for all the individual as well as separately for men and women. The estimation results confirm what has been observed by descriptive statistics. Related to transitions into LTC, we notice that the age, the human capital, the labour market conditions (modelled here through the unemployment rate), being occupied in some

kind of elementary tasks, sector of activity, and finally the private/public type of employment, affect the hazard rate of men and women in the same way.

Literature

Abowd, J.M. and F. Kramarz (2003), «The Costs of Hiring and Separations », *Labour Economics*, vol. 10, pp. 499–530

Abowd, John M., Patrick Corbel, et Francis Kramarz (1999) «he Entry and Exit of Workers and the Growth of Employment: An Analysis of French Establishments» *Review of Economics and Statistics*, vol. 81, pp. 170-187.

Adam and Canziani (1998), «Partial De-Regulation: Fixed-Term Contracts in Italy and Spain» *CEP Discussion Papers from Centre for Economic Performance.*

Bentolila, S. and Bertola, G. (1990) «Firing costs and labour demand: how bad is Eurosclerosis», *Review of Economic Studies*, vol. 57, pp. 381–402.

Bentolila and Saint-Paul 1994 Bentolila, S. and Saint-Paul, G. (1994), « A model of labour demand with linear adjustment costs », *Labour Economics*, vol. 1, pp. 303–26.

Booth, A.L., Dolado, J.J., Frank, J., (2002b) « Introduction: symposium on temporary work» *Economic Journal* 112 (480), F181–F189.

Booth, A.L. (1997) «An analysis of firing costs and their implications for unemployment policy», in *Unemployment Policy*, Cambridge: Cambridge University Press, pp. 359–88.

Booth, A.L., Francesconi, M., Frank, J., (2002a) « Temporary jobs: stepping stones or dead ends? » *Economic Journal* 112 (480), F189– F213.

Coutrot, T. (2000), «Les Facteurs de Recours Aux Contrats Temporaires», *DARES, Premières Synthèses*, 2000, 25.3.

Cox, D.R. (1972), «Regression models and life tables» *Journal of Royal Statistical Society*, vol 34, pp. 248-275.

Cox, D.R. and Oakes, D. (1988) «*Analysis of Survival Data*» London: Chapman and Hall

Flinn, C. and J.J. Heckman (1982), «Models for the analysis of labour force dynamics», in R. Baseman and G. Rhodes (eds), *Advances in Econometrics*, Vol. 1, Greenwich: JAI.

Güell, M. and Petrongolo, B. (2001), «Worker transitions from temporary to Permanent employment: the case of Spain.», *Centre for Economic Performance*, LSE, 0438

Hagen, T., (2003) « Do fixed term contracts increase the long-term employment opportunities of the unemployed? »ZEW Discussion Paper, 1– 56 (03-49, ZEW Mannheim / Germany).

Heckman, J.J. and B. Singer (1984), «A Method of Minimizing the Distributional Impact in Econometric Models for Duration Data», *Econometrica*, vol 52, pp. 271-320.

Hunt et Jennifer (2000) « Firing Costs, Employment Fluctuations and Average Employment: An Examination of Germany » *Economica*, London School of Economics and Political Science, vol. 67(127), pp. 177-202.

Jovanic B. (1979) «Job Matching and the Theory of Turnover», *Journal of Political Economy*, vol 87 n 5 p 972-990

Kalbfleisch, J.D., Prentice, R.L. (1980) «*The Statistical Analysis of Failure Time Data*» John Wiley & Sons, New York

Kiefer, N. (1988) «Economic duration data and hazard functions», *Journal of Economic Literature*, vol 26, pp. 646–679

Lamy (1992), *Lamy Social*, Droit Du Travail, Paris: Lamy S.A. editeur, 1992.

Lazear E.P. (1995) « Hiring Risky Workers » *NBER Working Paper*, 5334

Loh, E. S. (1994), « Employment Probation as a Sorting Mechanism », *Industrial and Labor Relations Review* 47 (3), 471-486.

Maurin, E. (2000), The European Paradox : Do Flexible Contracts Create Rigid Labor Markets?, *Institut National de la Statistique et des Etudes Economiques*, Papers 2000-07
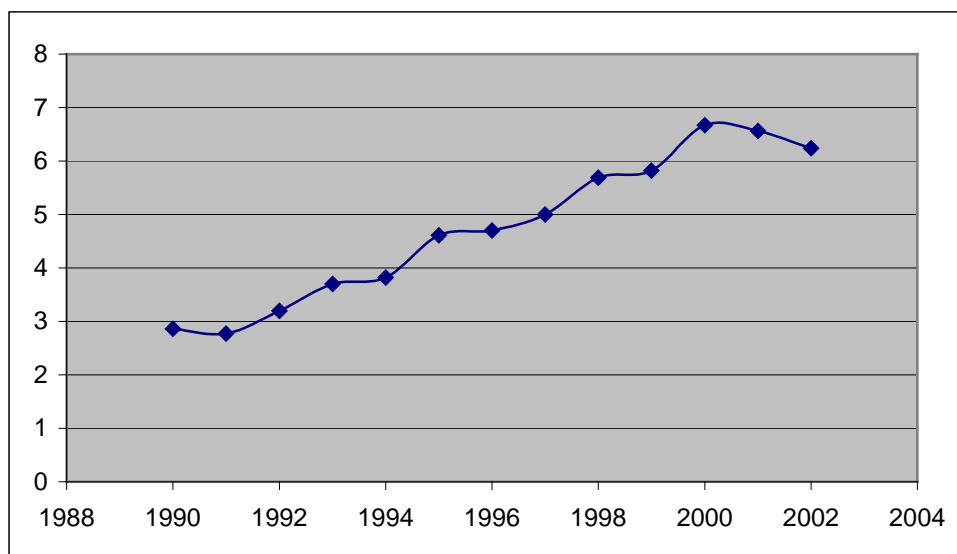
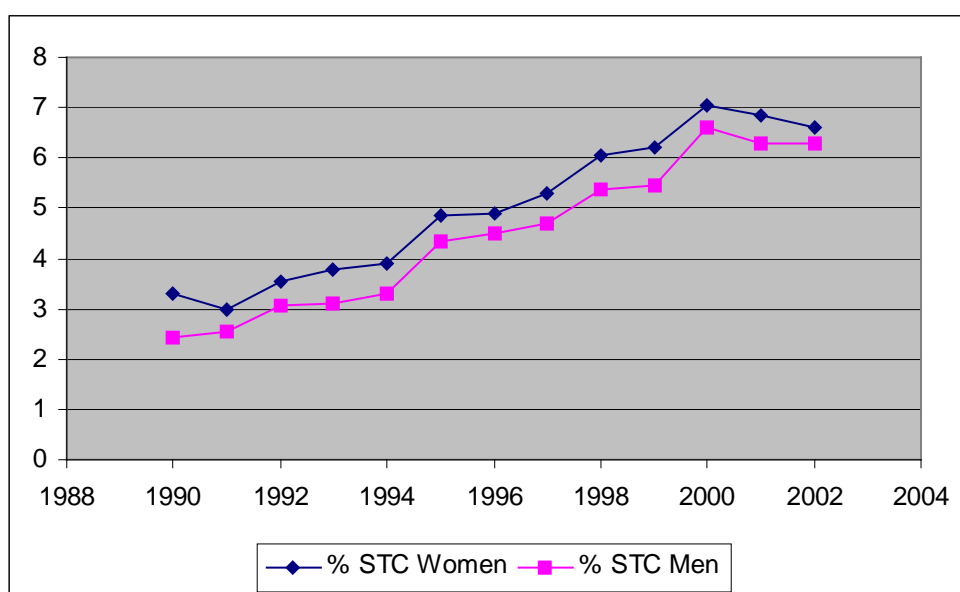Figure 1: The share of Short-Term Contract in total employment, 1990-2002

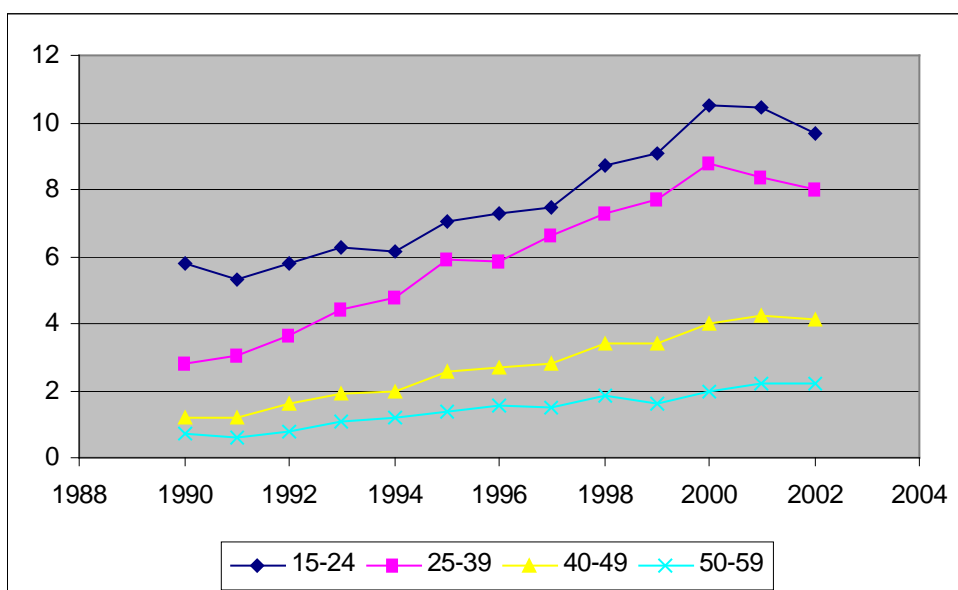Figure 2: The share of Short-Term Contract in total employment by sex, 1990-2002

Figure 3: The share of Short-Term Contract in total employment by age groups, 1990-2002
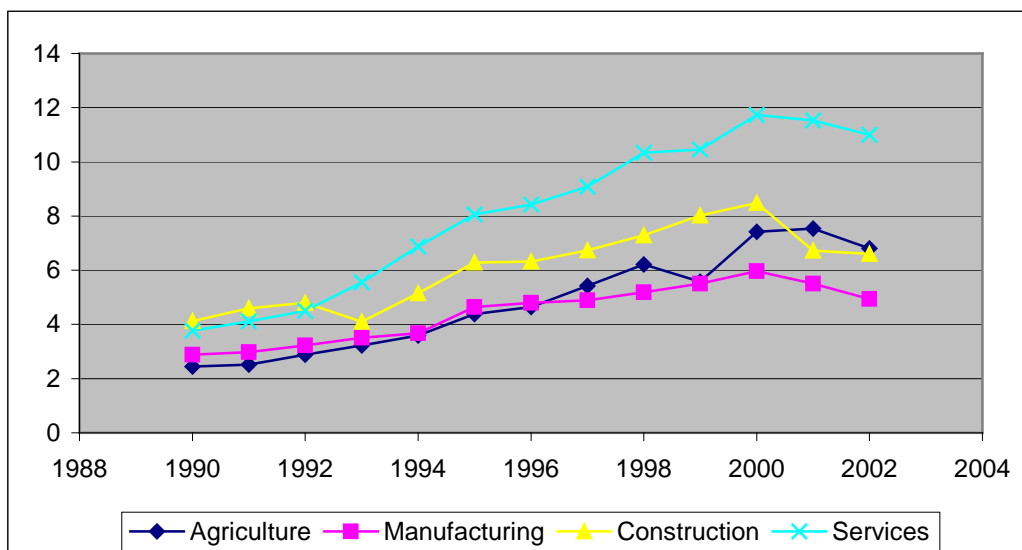

Figure 4: The share of Short-Term Contract in total employment by sectors, 1990-2002

Table 1: Main activity status by year

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Long-Term Contracts	50.79	51.24	50.09	48.13	48.46	48.31	47.9	47.89	47.05	47.54	48.55	49.33	49.63
Self-Employed	7.97	7.98	7.97	8.22	8.14	8.13	7.87	7.42	7.53	7.19	7.81	6.66	6.53
Short-Term Contracts	3.95	3.9	4.41	5.07	5.17	6	5.94	6.22	6.82	7.54	7.59	7.71	8.72
Unemployment	6.81	6.76	7.58	8.31	8.65	8.89	9.54	9.70	9.45	9.55	8.57	8.71	8.21
Education / Training	15.55	15.49	15.57	15.74	15.84	16.13	16.54	16.62	16.66	16.56	15.83	15.74	15.43
Out of Labour Force	14.93	14.63	14.38	13.54	13.74	12.54	12.21	12.15	12.49	11.62	11.65	11.85	11.48

Table 2: One-year transitions by main economic status

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
To Long-Term Contracts	38.24	32.79	25.53	24.21	22.83	25.95	22.48	22.37	21.35	23.69	26.59	22.81
To Self-Employed	0.83	0.51	0.27	1	1.09	0.64	0.32	0.85	0.62	0.4	0.4	0.54
To Short-Term Contracts	35.88	48.88	49.12	51.96	56.68	52.02	56.76	56	57.16	56.01	55.17	57.97
To Unemployment	15.91	10.89	12.77	12.84	9.85	11.72	10.40	10.41	12.19	9.52	9.22	10.28
To Education / Training	2.85	1.85	7.80	7.23	5.98	6.41	6.79	7.56	6.72	7.91	6.99	6.79
To Out of Labour Force	6.29	5.08	4.52	2.77	3.57	3.27	3.23	2.8	1.96	2.46	1.64	1.61

Table 3: One year transitions by main economic status and by personal characteristics

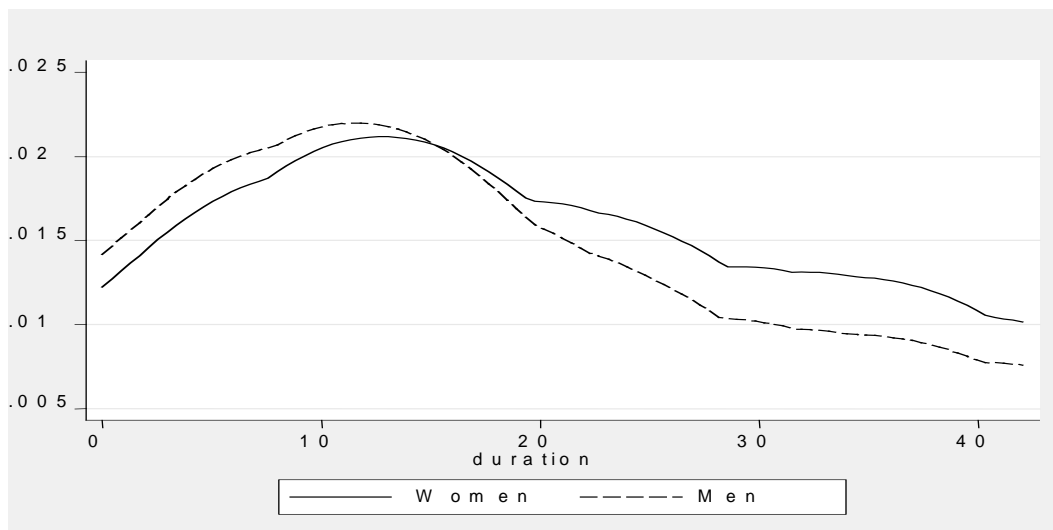|	Long-Term Contracts	Short-Term Contracts	Unemployment	Education / Training	Out of Labour Force
Total					
1-year transition (t+1)	45.22	32.79	14.21	3.83	3.95
2-yaer transition (t+2)	33.06	49.71	10.19	3.16	3.88
By Personal Characteristics					
Male	25.26	53.49	10.64	6.48	4.13
Female	23.49	56.36	10.87	7.17	2.11
[16-24]	20.43	61.29	9.58	3.85	4.85
[25-39]	26.55	57.37	10.01	3.48	2.59
[40-49]	28.19	59.16	10.3	0.03	2.32
[50-59]	27.12	58.16	12.37	0.03	2.32
[60-64]	24.88	58.04	10.92	0.08	6.08
Low qualified	20.28	55.21	13.69	7.66	3.16
Medium qualified	24.57	54.48	11.01	6.66	3.28
High qualified	31.85	52.67	6.45	6.21	2.82

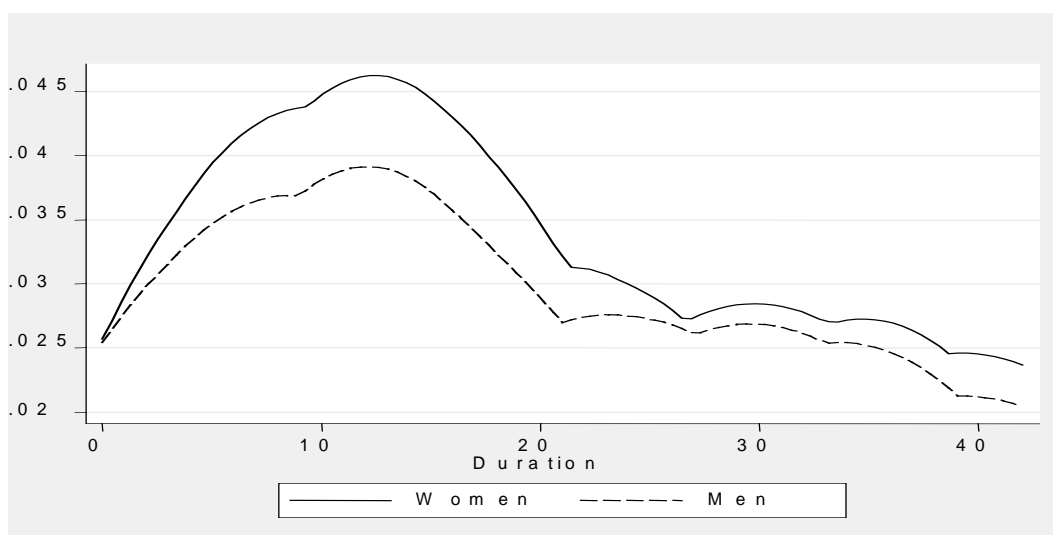Figure 5: Transition to Long-Term Contract by genders

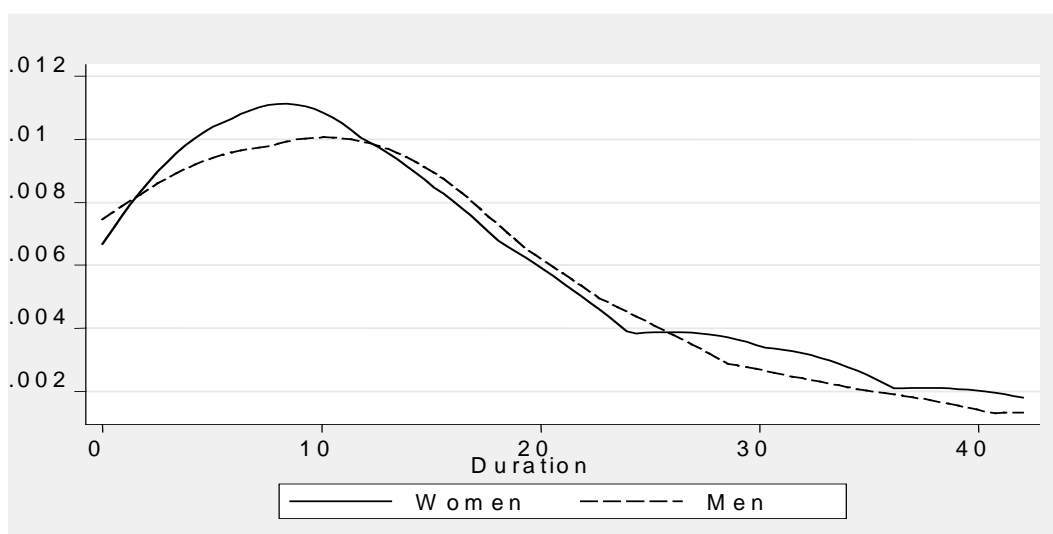Figure 6: Transition to Short-Term Contract by genders

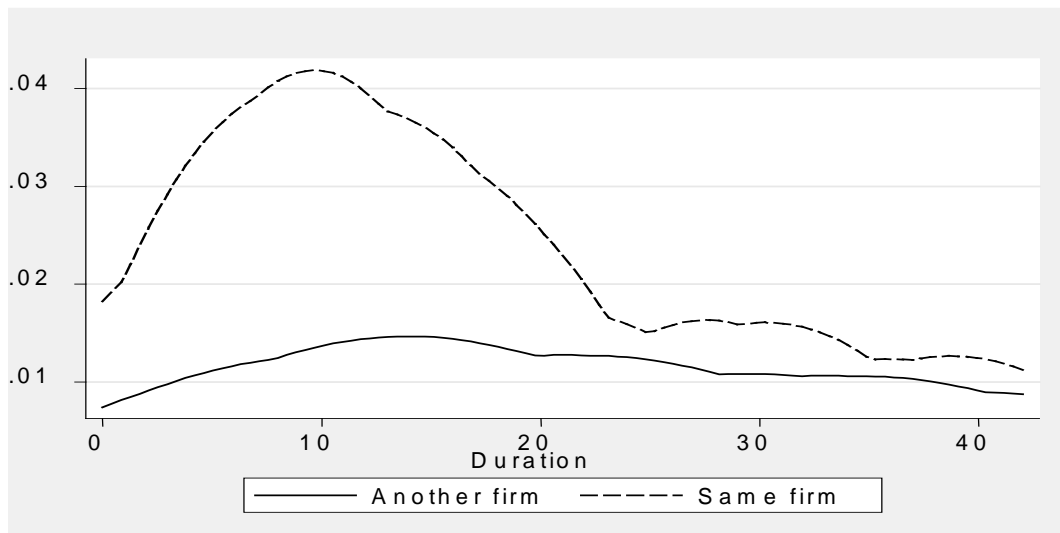
Figure 7: Transition to Unemployment by genders

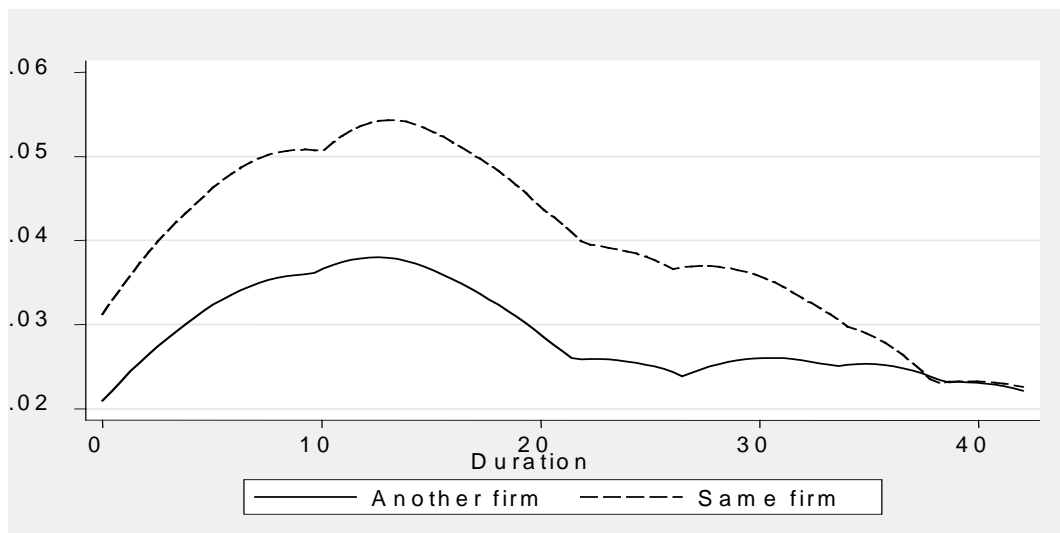Figure 8: Transition to Long-Term Contract by firm

Figure 9: Transition to Short-Term Contract by firm

Table 4 : Transition from Short-Term Contract Cox Competing Risk Model

	Transition to Long-Term Contract		Transition to Short-Term Contract		Transition to Unemployment	
AGE16-24	-0.1066**	(0.0563)	0.1733***	(0.0408)	-0.0881	(0.0789)
AGE25-39	-0.0672	(0.0469)	-0.0791**	(0.0329)	-0.0230	(0.0681)
AGE50-59	-0.1261	(0.0788)	-0.0523	(0.0525)	0.2497**	(0.1045)
AGE60-64	-0.3236	(0.2712)	0.0187	(0.1439)	0.3551	(0.2855)
Men	-0.0538	(0.0374)	-0.1767***	(0.0266)	-0.2014***	(0.0543)
European	0.4668***	(0.1362)	-0.0136	(0.0493)	-0.1794**	(0.0840)
Married	0.1474***	(0.0357)	-0.0761***	(0.0249)	-0.0970	(0.0499)
University degree	-0.0059	(0.0775)	0.1403***	(0.0537)	-0.4468***	(0.1301)
Bachelor degree	0.2219***	(0.0629)	0.1885***	(0.0473)	-0.2185**	(0.0969)
Technical Education	0.0834**	(0.0420)	0.0833***	(0.0305)	-0.0366	(0.0559)
General Education	0.0351	(0.0556)	0.1177***	(0.0395)	-0.1047	(0.0771)
Agricultural	0.4647	(1.0046)	0.4461	(0.4508)	0.6968	(1.0074)
Executive or Professional	0.5250***	(0.0890)	-0.2674***	(0.0611)	-0.6651***	(0.1561)
Intermediary Profession	-0.2615***	(0.0585)	-0.2087***	(0.0431)	-0.3896***	(0.0882)
Employee	-0.2012***	(0.0462)	-0.2192***	(0.0340)	-0.1991***	(0.0642)
Firm Size2: [50 , 99]	0.1382**	(0.0625)	0.0647	(0.0472)	0.1419	(0.0867)
Firm Size3 : [100 , 499]	0.1940***	(0.0454)	0.1835***	(0.0323)	0.0271	(0.0675)
Firm Size4 : [500 , +]	0.0697	(0.0430)	0.0153	(0.0304)	0.1530**	(0.0609)
Public sector	-0.4567***	(0.0421)	0.2169**	(0.0987)	0.6610***	(0.0689)
Experience1 : [0 , 1[	0.6907***	(0.1294)	0.1496***	(0.0550)	0.7143***	(0.1931)
Experience2 : [1 , 5[	0.1056	(0.0883)	0.1274**	(0.0626)	0.0130	(0.2348)
Experience3 : [5 , 10[	0.0612	(0.1025)	-0.0446	(0.0725)	-0.5282***	(0.1246)
Full-Time	0.3054***	(0.1181)	-0.1816***	(0.0617)	-0.5195***	(0.1575)
Partial-Time 1: [30h, + [/ Week	-0.1198	(0.0951)	-0.1573**	(0.0756)	-0.2900**	(0.1245)
Partial-Time 2: [15, 29h [/Week	-0.0488	(0.0971)	-0.0674	(0.0619)	-0.4120	(0.2838)
Fixed-Term Contract	0.1324***	(0.0462)	-0.2331	(0.1616)	0.1487	(0.2980)
Seasonal Contract	0.2056	(0.2433)	0.9178***	(0.1671)	0.2948	(0.2841)
Intermediaries Contract	0.3230	(0.2251)	0.7944***	(0.1614)	0.0661	(0.0521)
Monthly Wage	0.1598***	(0.0362)	-0.0298	(0.0260)	-0.0881	(0.0789)
Rate of Unemployment	-0.0627***	(0.0122)	0.0399***	(0.0089)	0.0343***	(0.0175)
Number of Observations (Risk)	13543	(3922)	13543	(7689)	13543	(1932)
Log-Likelihood	-33360.96		-65500.75		-16503.51	
Restricted Log-Likelihood	-33009.38		-66344.48		-17254.81	
Wald chi-2 (30)	1230.42		1927.51		1249.07	

Coefficients are Cox Competing Risk model estimates. Ref AGE40-49, Women, First Cycle Degree , Workman, Firm Size1: [0 , 49], Experience4 : [10 , +[, Partial-Time 3: [0, 15h [/ Week

Table 5

Men's transition from Short-Term Contract: Cox Competing Risk Model

	Transition to Long-Term Contract		Transition to Short-Term Contract		Transition to Unemployment	
AGE16-24	-0.0886	(0.0855)	0.2811***	(0.0625)	-0.2232**	(0.1171)
AGE25-39	0.0143	(0.0705)	-0.1471***	(0.0506)	-0.2596**	(0.1021)
AGE50-59	-0.2117	(0.1197)	-0.1855**	(0.0810)	0.2655*	(0.1459)
AGE60-64	-0.4516	(0.4528)	-0.0138	(0.2300)	0.7400***	(0.3678)
European	0.3248***	(0.1224)	-0.0293	(0.0611)	-0.1162	(0.1105)
Married	0.2002***	(0.0533)	-0.1137***	(0.0381)	-0.3062***	(0.0760)
University degree	0.2803**	(0.1215)	0.1778**	(0.0881)	-0.3973*	(0.2235)
Bachelor degree	0.4650***	(0.0940)	0.1360*	(0.0785)	-0.0806	(0.1579)
Technical Education	0.1255**	(0.0564)	0.0608	(0.0420)	0.0074	(0.0773)
General Education	0.1162	(0.0827)	0.0733	(0.0606)	0.0862	(0.1132)
Agricultural	-7.9234	(101.677)	0.6938	(0.7142)	1.8209*	(1.0321)
Executive or Professional	0.6951***	(0.1283)	-0.1292	(0.0910)	-0.5629**	(0.2242)
Intermediary Profession	-0.3282***	(0.0788)	-0.2287***	(0.0610	-0.3770***	(0.1212)
Employee	-0.3045***	(0.0790)	-0.2364***	(0.0583)	-0.3180***	(0.1201)
Firm Size2: [50 , 99]	0.1131*	(0.0650)	0.0626	(0.0698)	0.05291	(0.1289)
Firm Size3 : [100 , 499]	0.1280	(0.0882)	0.1966***	(0.0476)	-0.02642	(0.0979)
Firm Size4 : [500 , +]	-0.1280**	(0.0630)	-0.0208	(0.0449	0.06880	(0.0873)
Public sector	-0.7187***	(0.0708)	-0.1358***	(0.0477)	0.6472***	(0.1166)
Experience1 : [0 , 1[	1.0011***	(0.1351)	0.5670***	(0.0880)	1.7691***	(0.2977)
Experience2 : [1 , 5[	0.1149	(0.1350)	0.2499***	(0.0857)	0.7577**	(0.2993)
Experience3 : [5 , 10[	-0.0313	(0.1553)	0.1172	(0.0971)	-0.2155	(0.3776)
Full-Time	0.2654	(0.1976)	-0.1484	(0.1136)	-0.3677	(0.2274)
Partial-Time 1: [30h, + [/ Week	-0.0387	(0.2574)	-0.0804	(0.1497)	-0.3486	(0.3096)
Partial-Time 2: [15, 29h [/Week	0.3151	(0.2159)	0.0610	(0.1279)	-0.1250	(0.2533)
Fixed-Term Contract	0.1780	(0.3042)	-0.1516	(0.2119)	-0.3890	(0.3995)
Seasonal Contract	0.3109	(0.3304)	1.1063***	(0.2213)	0.0673	(0.4287)
Intermediaries Contract	0.3470	(0.3038)	0.9405***	(0.2121)	0.4247	(0.4001)
Monthly Wage	0.1809***	(0.0528)	-0.0896**	(0.0394)	0.0620	(0.0752)
Rate of Unemployment	-0.0488***	(0.0176)	0.0404***	(0.0132)	0.0306***	(0.0253)
Number of Observations (Risk)	6410	(1944)	6410	(3532)	6410	(934)
Log-Likelihood	-14973.97		-27179.48		-7244.71	
Restricted Log-Likelihood	-15418.82		-27761.91		-7627.65	
Wald chi-2 (29)	789.71		1248.59		604.43	

Coefficients are Cox Competing Risk model estimates. Ref AGE40-49, Women, First Cycle Degree, Workman, Firm Size1: [0 , 49], Experience4 : [10 , +[, Partial-Time 3: [0, 15h [/ Week

Table 6

Women's transition from Short-Term Contract: Cox Competing Risk Model

	Transition to Long-Term Contract		Transition to Short-Term Contract		Transition to Unemployment	
AGE16-24	-0.0517	(0.0764)	0.1018**	(0.0550)	-0.0401	(0.1099)
AGE25-39	-0.1060**	(0.0642)	-0.0292	(0.0439)	0.1720**	(0.0924)
AGE50-59	-0.0610	(0.1052)	0.0128	(0.0694)	0.2012	(0.1515)
AGE60-64	-0.3985	(0.3406)	-0.0500	(0.1857)	-0.0536	(0.4579)
European	-0.1303	(0.1127)	0.0575	(0.0859)	-0.2818**	(0.1316)
Married	0.0980**	(0.0491)	-0.0322	(0.0336)	0.0863	(0.0692)
University degree	-0.1729**	(0.1031)	0.1108	(0.0688)	-0.5184***	(0.1620)
Bachelor degree	0.0591	(0.0856)	0.2057***	(0.0609)	-0.3400***	(0.1246)
Technical Education	0.0153	(0.0636)	0.0981**	(0.0447)	-0.1004	(0.0820)
General Education	-0.0425	(0.0761)	0.1382***	(0.0530)	-0.2771***	(0.1057)
Agricultural	1.0324	(1.0098)	0.3479	(0.5829)	-1.3895	(1.0497)
Executive or Professional	0.3709	(0.4809)	-0.3374***	(0.0864)	-0.7723***	(0.2225)
Intermediary Profession	-0.1652**	(0.0913)	-0.1782***	(0.0635)	-0.3951***	(0.1297)
Employee	-0.0693	(0.0670)	-0.1581***	(0.0479)	-0.1306	(0.0830)
Firm Size2: [50 , 99]	0.1478**	(0.0890)	0.0542	(0.0642)	0.2200**	(0.1181)
Firm Size3 : [100 , 499]	0.2703***	(0.0637)	0.1711***	(0.0441)	0.0881	(0.0937)
Firm Size4 : [500 , +]	0.2592***	(0.0591)	0.0601	(0.0416)	0.2341***	(0.0854)
Public sector	-0.3106***	(0.0540)	0.0999***	(0.0369)	0.6737***	(0.0867)
Experience1 : [0 , 1[	0.8526***	(0.1191)	0.3553***	(0.0751)	1.8156***	(0.2512)
Experience2 : [1 , 5[	0.07725	(0.1182)	0.0717	(0.0727)	0.6275**	(0.2539)
Experience3 : [5 , 10[	0.15187	(0.1371)	0.1511***	(0.0823)	0.1691	(0.3011)
Full-Time	0.2551**	(0.1149)	-0.2076***	(0.0764)	-0.6124***	(0.1576)
Partial-Time 1: [30h, + [/ Week	-0.3979***	(0.1373)	-0.2183**	(0.0903)	-0.6606***	(0.1896)
Partial-Time 2: [15, 29h [/Week	-0.17516	(0.1112)	-0.1205*	(0.0725))	-0.3848***	(0.1473)
Fixed-Term Contract	0.23060	(0.3347)	-0.2843	(0.2466)	-0.3652	(0.3907)
Seasonal Contract	0.28407	(0.3570)	0.8493***	(0.2531)	0.2507	(0.4060)
Intermediaries Contract	0.37740	(0.3301)	0.6264**	(0.2460)	0.1839	(0.3916)
Monthly Wage	0.1908***	(0.0499)	0.0351	(0.0356)	0.0985	(0.0734)
Rate of Unemployment	-0.0717***	(0.0173)	0.0474***	(0.0121)	0.0453***	(0.0245)
Number of Observations (Risk)	7133	(1978)	7133	(4157)	7133	(998)
Log-Likelihood	-15617.13		-33008.52		-7893.06	
Restricted Log-Likelihood	-15865.95		-33313.09		-8290.03	
Wald chi-2 (29)	495.03		718.27		689.82	

Coefficients are Cox Competing Risk model estimates. Ref AGE40-49, Women, First Cycle Degree, Workman, Firm Size1: [0 , 49], Experience4 : [10 , +[, Partial-Time 3: [0, 15h [/ Week

Table 7

Transition from Short-Term Contract to Long-Term Contract: Cox Competing Risk Model

	Transition to Long-Term Contract			
	In the same firm		To another firm	
AGE16-24	-0.0810	(0.0728)	-0.1065	(0.0929)
AGE25-39	-0.0942	(0.0639)	-0.0066	(0.0698)
AGE50-59	-0.2028*	(0.1202)	-0.0670	(0.1054)
AGE60-64	-1.0593*	(0.5811)	-0.1282	(0.3110)
Men	0.1104**	(0.0498)	-0.2639***	(0.0584)
European	0.0409	(0.0848)	-0.3643***	(0.1064)
Married	0.2367***	(0.0467)	0.0326	(0.0557)
University degree	-0.0547	(0.1047)	0.0062	(0.1180)
Bachelor degree	0.2268***	(0.0786)	0.1543	(0.1065)
Technical Education	0.1325**	(0.0539)	0.0224	(0.0682)
General Education	0.0353	(0.0731)	0.0619	(0.0872)
Agricultural	-7.5996	(110.837)	0.6758	(1.0072)
Executive or Professional	0.5222***	(0.1232)	0.4925***	(0.1330)
Intermediary Profession	-0.1586**	(0.0738)	-0.3439***	(0.0965)
Employee	-0.0290	(0.0600)	-0.3621***	(0.0747)
Firm Size2: [50 , 99]	0.1039	(0.0772)	0.1602	(0.1073)
Firm Size3: [100 , 499]	0.1765***	(0.0590)	0.1837**	(0.0717)
Firm Size4: [500 , +]	-0.0324	(0.0580)	0.1745***	(0.0645)
Public sector	-0.4071***	(0.0610)	-0.4141***	(0.0596)
Experience1 : [0 , 1[	0.0986	(0.5818)	1.0827***	(0.2079)
Experience2 : [1 , 5[	-0.4203	(0.5903)	0.1108	(0.0916)
Experience3 : [5 , 10[	1.3269	(0.8258)	0.0639	(0.1042)
Full-Time	0.4074**	(0.1647)	-0.2413*	(0.1365)
Partial-Time 1: [30h, + [/ Week	-0.2113	(0.1728)	0.0175	(0.1360)
Partial-Time 2: [15, 29h [/Week	-0.0416	(0.1417)	-0.0130	(0.1354)
Fixed-Term Contract	0.1245**	(0.0546)	0.4604	(0.5336)
Seasonal Contract	-0.3409	(0.2984)	1.0949**	(0.5451)
Intermediaries Contract	0.1291	(0.2638)	0.7660	(0.5318)
Monthly Wage	0.2385***	(0.0436)	0.0498	(0.0574)
Rate of Unemployment	-0.0946***	(0.0158)	-0.0091	(0.01961)
Number of Observations (Risk)	7102	(2313)	6441	(1609)
Log-Likelihood	-18344.76		-12568.53	
Restricted Log-Likelihood	-18520.02		-12713.91	
Wald chi-2 (30)	332.62		311.98	

Coefficients are Cox Competing Risk model estimates. Ref AGE40-49, Women, First Cycle Degree, Workman, Firm Size1: [0 , 49], Experience4 : [10 , +[, Partial-Time 3: [0, 15h [/ Week

Table 8

Transition from Short-Term Contract to another Short-Term Contract

	Transition to Short-Term Contract			
	In the same firm		To another firm	
AGE16-24	0.1643***	(0.0609)	0.1825***	(0.0575)
AGE25-39	-0.0848	(0.0536)	-0.0651	(0.0421)
AGE50-59	0.0910	(0.0936)	-0.1080**	(0.0637)
AGE60-64	-0.1483	(0.2934)	0.0199	(0.1666)
Men	-0.1285***	(0.0407)	-0.2095***	(0.0356)
European	0.0813	(0.0684)	-0.1119	(0.0715)
Married	-0.0847**	(0.0375)	-0.0636**	(0.0336)
University degree	0.0841	(0.0848)	0.1793**	(0.0701)
Bachelor degree	0.1044	(0.0688)	0.2461***	(0.0655)
Technical Education	-0.0072	(0.0451)	0.1540***	(0.0417)
General Education	0.0922	(0.0586)	0.1310**	(0.0539)
Agricultural	0.7628	(0.7131)	0.2537	(0.5817)
Executive or Professional	-0.2518***	(0.0976)	-0.2642***	(0.0798)
Intermediary Profession	-0.2449***	(0.0640)	-0.1753***	(0.0594)
Employee	-0.2156***	(0.0505)	-0.2058***	(0.0474)
Firm Size2: [50 , 99]	0.0976	(0.0653)	0.0302	(0.0687)
Firm Size3 : [100 , 499]	0.1709***	(0.0495)	0.1998***	(0.0429)
Firm Size4 : [500 , +]	-0.0074	(0.0472)	0.0329	(0.0400)
Public sector	0.1025**	(0.0467)	-0.0286	(0.0369)
Experience1 : [0 , 1[	0.9480	(0.7092)	0.2448	(0.1837)
Experience2 : [1 , 5[	0.5542	(0.7135)	0.1434**	(0.0564)
Experience3 : [5 , 10[	-8.5996	(79.3710)	0.1225*	(0.0630)
Full-Time	-0.0476	(0.1031)	-0.2660***	(0.0780)
Partial-Time 1: [30h, + [/ Week	-0.0259	(0.1288)	-0.2290**	(0.0944)
Partial-Time 2: [15, 29h [/Week	-0.0616	(0.1050)	-0.0561	(0.0773)
Fixed-Term Contract	-0.2569	(0.1904)	-0.2169	(0.3573)
Seasonal Contract	0.7321***	(0.2019)	1.1032***	(0.3605)
Intermediaries Contract	0.7888***	(0.1904)	0.7752**	(0.3566)
Monthly Wage	-0.0103	(0.0403)	-0.0364	(0.0343)
Rate of Unemployment	0.0558***	(0.0133)	0.0272***	(0.0120)
Number of Observations (Risk)	7102	(3373)	6441	(4316)
Log-Likelihood	-26595.63		-33988.31	
Restricted Log-Likelihood	-26966.61		-34416.64	
Wald chi-2 (30)	830.44		1012.11	

Coefficients are Cox Competing Risk model estimates. Ref AGE40-49, Women, First Cycle Degree , Workman, Firm Size1: [0 , 49], Experience4 : [10 , +[, Partial-Time 3: [0, 15h [/ Week