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# Using short-term jobs as a way to find a regular job. What kind of role for local context? <sup>1</sup>

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## Abstract

In this work, we analyze the role played by the local context in job seekers' use of atypical jobs. We use French employment agency data for the period 2012-2013, population census data, and the permanent equipment dataset provided by the French National Institute of Statistics and Economic Studies for 2010. We mobilize a zero-inflated negative binomial (ZINB) regression model to estimate the number of months spent in short-term jobs over a given period while taking account also of the fact that there is a certain number of job seekers who do not take short-term jobs. We distinguish the different sub-populations of job seekers in part-time unemployment (with or without partial unemployment benefits). We highlight the different profiles of those who take short-term jobs and show that all other things being equal, the local economic context seems to be significantly associated with a greater use of short-term jobs.

**Keywords:** Unemployment; Short-term jobs; Count data regression models.

**JEL Classification:** C25; J64 ; J68.

## 1. Introduction

Numbers of job seekers in France involved in non-standard employment (short term full-time jobs or part-time jobs) have grown significantly; they have tripled since the mid-1990s and doubled since the onset of the economic crisis in 2008. At the end of 2020, more than 2.1 million people were categorized by the French public employment agency as job seekers doing short-term or part-time work while actively seeking employment, while 3.5 million people were registered as full-time unemployed.

Like many other European countries, the French unemployment insurance system allows for receipt of some proportion unemployment benefit for those who take on short-time jobs through the mechanism of “reduced activity” (*activité réduite*). In other words, it is

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possible to combine partial unemployment benefit with the income received from an atypical job (short-term or part-time). Over time, the number of short-term and part-time jobs and the idea that individuals should be encouraged to return to work, have increased use of this reduced activity mechanism. Under this scheme, the recipient of unemployment insurance receives a percentage of the benefit due which must not exceed a certain cumulation threshold. Beyond this threshold, despite seeming eligibility for unemployment insurance benefits, the compensation will be withdrawn. Therefore, not all job seekers who work part-time receive unemployment benefit – either because they have exceeded the accumulation threshold or because despite being registered with the French employment agency they are not eligible for unemployment insurance. The accumulation mechanism is not unique to unemployment insurance; it applies also to the French social benefits system (French Active Solidarity Income - RSA, Specific Solidarity Allowance - ALS) which impose their own accumulation limits.

Understanding this system is essential at a time when the number of job seekers in non-standard employment is increasing constantly. Existing research on the case of France and other countries focuses mainly on the impact of reduced-time work or the income received from such activity combined with unemployment insurance benefits for eligible job seekers who return to permanent employment (COCKX and PICCHIO, 2012; FONTAINE and ROCHUT, 2014; FREMIGACCI and TERRACOL, 2013; GERFIN *et al.*, 2005; GILLES and ISSEHNANE, 2017; KYRÄ, 2010). On the one hand, a non-standard job can be a “stepping stone” to full-time employment for some job seekers (AURAY and LEPAGE-SAUCIER, 2021; FREMIGACCI and TERRACOL, 2013). On the other hand, it can have a “lock-in effect” by reducing the time available to look for and obtain a regular job. The practice of taking up repeated short-term jobs can lead to lock-in to a precarious trajectory or atypical jobs and recurrent unemployment (EPEL and MAHRINGER, 2019; FREMIGACCI and TERRACOL, 2013; GILLES and ISSEHNANE, 2017). The results of these studies are mixed. In the short run, part-time unemployment can give rise to lock-in effects, and increase the period of unemployment until a regular job is obtained. In the long run, it can increase the probability of finding a full-time job. These effects depend on the duration of the atypical jobs and the period analyzed. These studies highlight the complex and heterogeneous effects depending on the socio-demographic characteristics of individuals.

The present study complements the existing literature by investigating what determines job seekers' decision to take up an atypical job and become part-time unemployed. Specifically, we are interested in the effect of the local context on the job seeker's decisions about employment-unemployment, controlling for individual characteristics. We are interested also in the link between the local context and the intensity of recourse to short-term full-time jobs or part-time jobs for job seekers in partial unemployment.

We employ a zero-inflated negative binomial (ZINB) model (LAMBERT, 1992; GREENE, 1994) to understand the decision to take up an atypical job for job seekers and to determine the factors influencing greater or lesser use of atypical jobs. This estimation strategy allows us to model the number of months of employment in atypical jobs during 2012-2013, and to take account of excess zeros (job seekers who do not practice any short-time job). The estimation results from the different regression models, distinguishing between compensated and non-compensated job seekers show that among job seekers who take up short-term jobs while registered with a job search agency and receiving unemployment benefits profiles differ. We also highlight the significant influence of the individual's place of residence. We show that it is necessary to consider the characteristics of the labor supply (the local labor force), labor demand (employment characteristics in the local territory), and the presence of job search agencies.

The contribution of this work is threefold. First, we mobilize the detailed French Statistical Historical File of Job Seekers (*Fichier Historique des Statistiques-Pôle Emploi - FHS*) available from the French Employment Agency which allows us to observe individuals who entered the French Employment Agency lists between January and December 2012 and were followed up until December 2013. Second, to our knowledge, this is the first study to consider what determines the use of a scheme such as part-time unemployment, and the role of the local context in particular. While the consequences for subsequent careers of previous non-standard employment are well documented, the explanatory factors have been somewhat overlooked. Third, we are interested in confirming the extent to which local characteristics in terms of jobs and socio-economic composition might influence uptake of an atypical job by a job seeker. Several studies investigate the role of the local context on individuals' return to or exit from unemployment (IHLANFELDT and SJOQUIST, 1990; ROGERS, 1997; IMMERGLUCK, 1998; MARTIN, 2004; KORSU and WENGLANSKI, 2010; MATAS *et al.*, 2010; ASLUND *et al.*, 2010; ALIVON and GUILLAIN, 2018 for instance) but few discuss its effect on use of particular mechanisms.

The paper is organized as follows. Section 2 provides a brief review of the literature on the influence of the local context on individuals' labor market outcomes. Section 3 describes the empirical approach and Section 4 presents the results of the estimations. Section 5 concludes the paper.

## **2. Literature review**

Several labor and urban economics studies examine the extent to which the individual's place of residence affects individual behaviors and outcomes.

### **2.1 Local context and labor market outcomes**

Among the works that analyze the role of neighborhood effects, is VARTANIAN (1999) who examines how the conditions when adolescent affect young adult labor market outcomes. Vartanian finds that adolescents living in the most disadvantaged neighborhoods are more likely to have lower labor incomes. PAGE and SOLON (2003) show that neighborhood has an influence on the adult's future location and hence future wages. HOLLOWAY and MULHERIN (2004) confirm that the adolescent's neighborhood environment is a source of long-term labor market disadvantages due to limited ability to accumulate early work experience. The study by GALSTER *et al.* (2007) estimates and compares the importance for children of family, residential stability, and neighborhood characteristics on their outcomes at the ages of 25 and 31 years. They find that the level of poverty in the neighborhood during childhood affects high school attainment and earnings in later years. Using Swedish data, ANDERSSON *et al.* (2007) examine the mix of household characteristics that matters for individual outcomes and find that the presence of a high proportion of low-income neighbors has the strongest effect. GALSTER *et al.* (2008) examined the relationship between neighborhood income and individual earnings and found significant neighborhood effects. They found also that the relationship appears to be non-linear and varies by gender and employment status.

There is a substantial stream of work on the effect of physical disconnection between place of residence and job centers. This phenomenon of *spatial mismatch* is firstly introduced by KAIN (1968, 1992) who argued that being disconnected from jobs can have important consequences for the unemployment process. IHLANFELDT and SJOQUIST (1990) tested their hypothesis by analyzing the links between proximity to job opportunities and employment probabilities for young people in different American cities. The results show that living close

to areas with good availability of jobs has positive effects on employment. Using data for respectively Pittsburgh and Chicago, ROGERS (1997) and IMMERGLUCK (1998) show that proximity to jobs is an important determinant of unemployment duration and employment rates. WEINBERG (2004) and MARTIN (2004) find that black residential concentration is an important determinant of black employment status in metropolitan areas, and that job centralization increases black employment relative to white employment rates. COVINGTON'S (2009) proposes a different analysis. Using United States data for the 1990s, he argues that decentralization of jobs reduces the access to jobs for most workers and especially poor workers. Although most of this work focuses on the United States, there are some European country cases. For example, MATAS *et al.* (2010) find support for the hypothesis that in the metropolitan areas of Madrid and Barcelona availability of public transport to travel to a job is a significant determinant of the female employment probability. ASLUND *et al.* (2010) analyze a Swedish refugee dispersal policy and find that placement in a location with poor access to jobs has a negative effect on the labor market outcomes of refugees.

## 2.2 Spatial features and unemployment in France

Several studies on the case of France focus also on the role of peer effects and the spatial organization of cities in accounting for differences in situations and performance among the inhabitants of different neighborhoods or spatial areas.

One of the studies which focuses on peer effects is MAURIN and MOSCHION (2009) who show that the labor force participation decision for women with multiple children depends partly on participation of peers. SARI (2012) highlights the negative effect of residing in a neighborhood considered “disadvantaged” on the probability of being employed, and on the length of time it takes to find a job. More recently, SOLIGNAC and TO (2018) show that the magnitude of these effects can vary according to the duration of exposure to the neighborhood or the level of education. Finally, KAMIONKA and VU NGOC (2016) studied the impact of geographic location at the end of schooling on transitions between labor market states, to account for the process of integrating young people into the workforce. They observe that the neighborhood of origin has a significant and negative impact on insertion into the labor market and particularly access to precarious jobs.

Other works focus more directly on the role of the characteristics and configurations of the territories in which individuals are located. For instance, CAVACO and LESUEUR (2004) show the influence of spatial constraints such as proximity to employment areas and distance from employment agencies on the job search process. DETANG-DESSENDRE and GAIGNÉ (2009) also highlight the importance of physical distance to jobs and competition in local labor markets for explaining unemployment duration. They show also that better accessibility to employment agencies improves the probability of finding a job for individuals resident in the outskirts of an urban area or in a rural area. GOBILLON *et al.*'s (2011) estimates show that 30% of the spatial disparities in unemployment in the Paris region can be explained by individual characteristics with the remaining 70% explained by the characteristics of the territory in which the individual is located. Finally, ALIVON and GUILLAIN (2018) examine the case of Aix-Marseille and show that proximity to an area with low job density or a segregated area has a significant impact on the risk of unemployment.

We consider the local context in order to get a better understanding of the factors that increase the likelihood of using non-standard employment by part-time unemployed individuals. We are interested in whether, in addition to individual characteristics, the

characteristics of the job seeker's place of residence influences their use of part time jobs or temporary labor contracts.

### **3. Data, variables, and empirical strategy**

#### **3.1 Data sources and sample**

We use FHS French Employment Agency data on job seekers and the D3 file on those individuals who benefited from unemployment allowances between January 2012 and December 2013 (1/10th files). The FHS provides information on spells of unemployment and whether or not the job seeker was employed in an atypical job, the job seeker's individual characteristics (*e.g.* age, education, gender, qualifications, marital status, number of children), place of residence, and characteristics of the previous job before registration with the French Employment Agency. Segment D3 provides information on the type of unemployment compensation which includes consideration of the job seeker's status when working in a short-term full-time job or a part-time job. Our sample is composed of the entire population of job seekers in metropolitan France, regardless of their compensation scheme (*i.e.* back-to-work allowance or *ARE*, the most frequent unemployment benefit category, other unemployment insurance compensation, solidarity scheme). Eligibility for compensation depends on the existence of an open claim for compensation throughout the relevant month. The data allow us to follow a sample of almost 400,000 individuals who registered the French Employment Agency between January and December 2012. The sample job seekers are followed to December 2013, over a period ranging from one year (for those who registered at the end of 2012) to two years (for those who registered at the beginning of 2012).

We exploited different databases to characterize the geographical area in which the individuals are located. First, we use data from the population census conducted by the National Institute of Statistics and Economic Studies (INSEE) for the year 2010. The census gathers exhaustive information on number of dwellings, number of inhabitants, and some of their characteristics (*e.g.* age, housing conditions, modes of transportation, occupation, daily trips). These data are used to characterize the municipality of residence of the job seekers in our sample. They provide information on the local labor supply and demand. Second, we use the 2010 permanent database of equipment produced by INSEE which allows us to count the number of facilities and the services provided in a given territory. It covers various business sectors such as market and non-market services, shops, health care and social assistance, education services, tourism, sport and leisure, and transportation. In both cases, the data refer to the year 2010 which avoids problems of simultaneity and retroactivity with the characteristics of job seekers measured over the period 2012-2013.

#### **3.2 Variables used**

Our aim is to measure and describe use of atypical jobs among a sample of job seekers. We are interested in the number of months spent in short-term employment over the two years observed. The number of months of employment can vary between 0 and 24. The choice to model the number of months spent in short-term jobs rather than the duration of short-time job spells takes account of the different use made of opportunities for short-time employment. Some job seekers take up short-term employment occasionally, and either repeatedly or not; others engage in continuous periods of different short-term employment over several months. In addition, since time of registration with the French Employment Agency differs the length of time that job seekers can be followed varies and affects the number of months observed. Therefore, we constructed a variable which takes into account the variation in this observation

window. Its values range between 12 to 24 months depending on the date of registration with the French Employment Agency (*i.e.* between January and December 2012).

We employ different sets of variables to measure the use of atypical jobs by job seekers in part-time unemployment. They describe the situations of these individuals, and the characteristics of the municipalities and geographical areas corresponding to their places of residence.

The first set of variables provides information on the socio-economic characteristics of individuals. FHS data provide information on job seekers' gender, age, marital status, nationality, number of children, qualifications and training and the reasons for registering with the French Employment Agency, type of compensation for which they are eligible, type of benefits received, and business sector of jobs being sought. This set of variables potentially explains the probability of using short-term jobs and the extent of their use. The second set of variables measures the job seeker's municipality of residence or employment area. We characterize these geographical areas from the perspectives of labor demand, labor supply, and availability of public employment service infrastructures. Local labor supply and socioeconomic composition are derived from information such as share of people aged between 15 and 24 years, share of people with higher education, and percentage of workers in the municipality of residence. We use labor supply information at the employment area level to estimate share of employees in temporary employment and unemployment rate. This takes account of the economic specificities of the territory and the potential difficulties faced by job seekers. We include the percentage of job seekers who experienced atypical employment in the first month of observation (*i.e.* in January 2012). We use this variable to measure peer effects on job seekers' observed outcomes. We can assume that *ceteris paribus*, that individual engagement in a short-term job will be more likely if neighbors and peers also take up short-term employment. We characterize job seeker's place of residence from the perspective of labor demand by considering the share of jobs in each of the main business sectors (agriculture, forestry, fishing and hunting; manufacturing; construction; market and non-market services). We also take account of public employment services based on number of temporary employment and job search agencies in the job seeker's municipality of residence.<sup>5</sup>

### 3.3 Empirical strategy

We are interested in the number of months spent in employment in short-term jobs within a given time window. These variables can be modeled *a priori* by regression models for count variables, such as Poisson regression models and negative binomial regression models. Poisson regression models are based on an equi-dispersion hypothesis which means that the relevant variable (number of months in short-term employment during 2012-2013) is equal to its variance (EL-SAYYAD, 1973). In the cases of over-dispersion (variance is greater than the mean) or under-dispersion, a negative binomial regression model is preferred (CAMERON and TRIVEDI, 1986). The particularity of this model makes it possible to capture variables characterized by a significant degree of heterogeneity which can result from the presence of a large number of zero values. Our variable for number of months practicing a non-standard job is characterized by a large number of zeros and greater than average variance. We therefore employ a negative binomial regression model.

The probability function for the negative binomial model is defined by the following relation:

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<sup>5</sup> Some descriptive statistics of the final sample are displayed in Appendix.

$$P(Y = y_i/X_i) = \frac{\Gamma(y_i + \frac{1}{\alpha})}{\Gamma(y_i + 1)\Gamma(\frac{1}{\alpha})} \left(\frac{1}{\alpha}\right)^{\frac{1}{\alpha}} \left(\frac{\lambda_i}{\frac{1}{\alpha} + \lambda_i}\right)^{y_i}$$

The expectation and variance of the variable  $Y$  are defined by:

$$\begin{aligned} E(Y_i/X_i) &= \lambda_i = e^{X_i\beta} \\ &\text{and} \\ \text{Var}(Y_i/X_i) &= \lambda_i(1 + \alpha\lambda_i) \end{aligned}$$

Where  $\alpha$  is the parameter of over-dispersion (or under-dispersion). This suggests that the variance is different from what was expected. Note that if  $\alpha = 0$ , the negative binomial regression model coincides with the Poisson regression model.

However, it is likely that the data include more zeros than predicted by either a Poisson or a negative binomial regression model. It is likely also that the zero values of the dependent variable  $Y$  could have different explanations. In our context, a zero value for number of months spent in short-term jobs could be explained by the fact that job seekers do not set out specifically to use this arrangement. However, it could be explained also by the fact that some job seekers do not find short-time jobs although they are willing to accept them.<sup>6</sup> This must be taken into account since non-engagement in short-term employment can be voluntary or involuntary.

While the standard negative binomial regression model does not allow us to differentiate between these behaviors, the ZINB regression model does not assume that zero values are generated by the same process (GREENE, 1994). Thus, use of the ZINB allows us to model simultaneously the decision to experience atypical jobs and the determinants of the duration of this practice. The ZINB regression model is comprised of two parts: one part is related to a count data model and allows us to account for the number of months spent in short-term jobs; the other part is related to a logit model and explains the probability of not engaging in short-term employment. If  $q_i$  is the probability of non-engagement in short-term employment and  $1 - q_i$  is the probability of engagement in short-term jobs, the probability distribution can be defined as:

$$P(Y = 0/X_i) = q_i + (1 - q_i) \left(\frac{1}{\alpha}\right)^{\frac{1}{\alpha}} \left(\frac{\lambda_i}{\frac{1}{\alpha} + \lambda_i}\right)$$

For  $y_i$  not zero, we obtain:

$$P(Y = y_i/X_i) = (1 - q_i) \frac{\Gamma(y_i + \frac{1}{\alpha})}{\Gamma(y_i + 1)\Gamma(\frac{1}{\alpha})} \left(\frac{1}{\alpha}\right)^{\frac{1}{\alpha}} \left(\frac{\lambda_i}{\frac{1}{\alpha} + \lambda_i}\right)^{y_i}$$

In what follows, the expectation and the variance are defined as follows:

$$\begin{aligned} E(Y_i/X_i) &= (1 - q_i)\lambda_i \\ &\text{and} \\ \text{Var}(Y_i/X_i) &= \lambda_i(1 - q_i)(1 + \alpha\lambda_i + \lambda_i q_i) \end{aligned}$$

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<sup>6</sup> If they choose not to participate, the dependent variable takes the value 0. However, if they choose to participate, the dependent variable can take values that potentially may be zero, if they do not find a labor contract.



where  $\alpha$  always represents the over-dispersion (or under-dispersion) parameter which allows us to determine whether the Poisson regression model with inflated zeros (ZIP - LAMBERT, 1992) or the negative binomial regression model with inflated zeros (ZINB model - GREENE, 1994) is the most appropriate. In addition, the choice between a zero-inflated model (ZIP or ZINB) and a classical model (Poisson or negative binomial) can be determined using the VUONG (1989) test.<sup>7</sup>

## 4. Results

### 4.1. Use of short-term jobs: individual determinants vs. local determinants

Before analyzing the determinants of greater or less use of short-term jobs (in the case of the ZINB model), we need to understand job-seekers' use of this arrangement. Table 1 presents the results of the logit regression modeling the decision to engage in an atypical job. This is the first step in the estimation of ZINB model (Section 3.3). We distinguish between job seekers who receive benefits and those who do not.

The results of the models presented in Table 1 reveal, in particular, that *ceteris paribus* age is negatively associated with the probability of taking an atypical job. The older the individual, the less likely will be engagement in short-term employment. We find also that women are more likely than men to engage in atypical jobs: all other (relevant) factors being equal, women are 5.6% more likely to do so. Generally speaking, job seekers with French nationality are more likely than job seekers from Sub-Saharan Africa (4.2%) to take up short-term employment. However, job seekers who do not receive benefits, have children, or are single are also more likely to make use of atypical jobs. Single job seekers are 1.2% less likely to do so. This might be due to the problems related to reconciling work and family life in the case of job seekers with children. Again, there are differences between job seekers eligible for benefits compared to those who are not: *ceteris paribus*, for job seekers entitled to benefits being single is negatively associated to the probability of taking a short-term job (2.4% less) but has no effect in the case of those not eligible for benefits. It might be that the financial constraints of unemployment are less severe for people living alone, and especially if they are entitled to unemployment benefit.

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<sup>7</sup> The statistic associated with this test is written as follows (VUONG, 1989):

$$V = \frac{\sqrt{N \left[ \frac{1}{N} \sum_{i=1}^N m_i \right]}}{\sqrt{\frac{1}{N} \sum_{i=1}^N (m_i - \bar{m})^2}}$$

Where:

$$m_i = \ln \frac{P_1(Y = y_i)}{P_2(Y = y_i)}$$

$P_1(Y = y_i)$  and  $P_2(Y = y_i)$  refer respectively to probability functions for ZINB and negative binomial models, and  $\bar{m}$  represents the average of  $m_i$  (where  $i = 1, \dots, N$ ). The statistical test is:

$$H_0: E[m_i] = 0 \text{ VS. } H_1: E[m_i] \neq 0$$

The VUONG statistic tends asymptotically to the normal distribution. We note that:

- if its value is greater than 1.96 the ZINB model gives a better estimate;
- if its value is less than -1.96 the negative binomial model gives a better estimate;
- if its value is between -1.96 and 1.96, the test gives preference to neither model.

Education level and professional qualifications produce contrasting results. A higher level of education increases the probability of taking up short-term employment. Thus, compared to a job seeker with the French A-level (*baccalauréat*) qualification, a job seeker with the French BEPC (baccalaureate of 3 years or more) is 10.7% (respectively 4.2%) less likely (respectively more likely) to take a short-term job. In the case of professional qualifications, we find that executives are 5.3% less likely to resort to short-term employment. Use of short-term jobs appears to be more frequent in the intermediate category of qualified employees (4.2% more likely), and particularly among job seekers who are not eligible for unemployment compensation which show strongest correlation.

When we analyze the reasons for registering with the French Employment Agency we find that redundancy is the least likely to result in the job seeker entering part-time unemployment. However, unemployment due to the ending of a subsidized contract, a fixed-term contract, or a temporary job is more likely to result in take up of part-time unemployment (respectively +16.7% and +19.7% more likely). This is also characterized by short-time and part-time jobs, and thus “lock-in” to this trajectory is somewhat inevitable. This would suggest that the job seeker can become trapped into a pattern of recurring precarious contracts. Temporary workers and intermittent workers are the most likely to be in part-time unemployment. Also, being in receipt of partial unemployment benefit seems to be correlated positively with the probability of using short-term jobs: *ceteris paribus*, compensated job seekers are 6.2 times more likely than other job seekers to use atypical jobs. The very nature of the “reduced activity” arrangement allows job seekers to combine unemployment benefit with income from a professional activity which suggests that this mechanism is aimed mainly at these individuals. Finally, type of business sector in which a job is sought appears also to be an important determinant. Those seeking employment in the personal services industry are the most likely to take up short-term employment or engage in part-time unemployment while this is much less likely in business sectors such as banking or firm management industries.

**Table 1. Determinants of engagement in short-time jobs.**

	All job seekers	Job seekers receiving unemployment benefits	Job seekers with no unemployment benefits
<b>Individual characteristics</b>			
<i>Age (ref.: people aged between 25 and 49 years old)</i>			
Younger than 25 years old	0.212***	0.066***	0.044***
50 years old or more	-0.114***	-0.131***	-0.081***
<i>Men</i>	-0.056***	-0.055***	-0.058***
<i>Nationality (ref.: French)</i>			
Other European countries	-0.016***	-0.021***	-0.009
Maghreb	-0.006	-0.030***	0.003
Sub-Saharan Africa	0.042***	0.008	0.060***
Asia and others	-0.035***	-0.060***	-0.020*
<i>Marital status (ref.: Couples)</i>			
Single	-0.012***	-0.024***	-0.005
Divorced, widowed	0.025***	0.007***	0.035***
<i>Number of children (ref.: 1 or 2 children)</i>			
No child	0.016***	-0.004	0.035***
Three children	-0.009**	-0.006	-0.015**
<i>Disability</i>	-0.193***	-0.171***	-0.210***
<i>Training (ref.: French A-level)</i>			
No formal education	-0.091***	-0.047***	-0.109***
School certificate; middle school (including French BEPC)	-0.107***	-0.060***	-0.127***
Second- or first-year classes of high school	-0.085***	-0.056***	-0.089***
French youth training (CAP) or BTEC First Diploma (BEP)	-0.044***	-0.027***	-0.060***
First two years of BA	0.041***	0.018***	0.052***
BA and higher	0.042***	0.013**	0.053***
<i>SPC (ref.: Supervisors)</i>			
Blue collar workers, Skilled Workers and Tradesmen	0.020***	0.023***	0.010*
Unskilled employees	-0.010**	-0.016***	-0.006
Skilled employees	0.042***	0.027***	0.042***
Executives	-0.053***	-0.049***	-0.048***
<i>Reason for registration (ref.: Economic dismissal)</i>			
Other kind of dismissal	0.078***	0.106***	0.035***
Resignation	0.164***	0.144***	0.128***
Termination of contract	0.094***	0.134***	0.014
Fixed-term contract, assisted contract	0.167***	0.198***	0.112***
End of interim	0.197***	0.207***	0.158***
Newcomer on the job market	0.096***	0.224***	0.051***
End of illness, maternity	0.017**	0.064***	-0.031**
End of self-employed activity	0.113***	0.156***	0.048***
Exit from the internship	0.113***	0.188***	0.036***
Other cases	0.073***	0.142***	0.010
<i>Type of compensation (ref.: French ARE-return to work allowance)</i>			
Other (specific solidarity allowance, insurance and pre-retirement)	-0.026***		
Not compensated	-0.062***		
<i>The French Active Solidarity Income (RSA)</i>	-0.092***	-0.047***	-0.119***
<i>Unemployment Insurance Plan (ref.: General scheme)</i>			
Interim	0.113***	0.104***	0.118***
Intermittent	0.229***	0.235***	0.010
Other (including unknown)	-0.131***	0.001	-0.114***
<i>Business sector of the job sought (ref.: service to the person)</i>			
Agriculture and fishing, animal care	-0.035***	-0.054***	-0.029***
Arts, entertainment, and recreation	-0.110***	-0.156***	-0.086***
Banking, insurance, real estate	-0.102***	-0.143***	-0.088***
Trade and sales	-0.078***	-0.113***	-0.060***

Communication and information	-0.053***	-0.085***	-0.040***
Construction	-0.030***	-0.076***	-0.011*
Hotels, restaurants and tourism	-0.044***	-0.064***	-0.032***
Manufacturing	-0.031***	-0.079***	-0.005
Installation and maintenance	-0.044***	-0.084***	-0.026***
Health	-0.038***	-0.070***	-0.015**
Show	-0.001	-0.064***	0.021
Business support	-0.088***	-0.118***	-0.069***
Transportation and logistics	-0.017***	-0.048***	-0.005
<b>Duration of observation of individual in the lists</b>	<b>0.010***</b>	<b>0.010***</b>	<b>0.009***</b>
<b>Local context</b>			
<b>Category of municipalities (ref.: UA &gt; 500,000 inhabitants)</b>			
Outside the urban area	-0.001	0.001	-0.001
Urban area < 50,000 inhabitants.	-0.016***	-0.006	-0.021***
Urban area between 50,000 and 200,000 inhabitants.	-0.021***	-0.016***	-0.021***
Urban area between 200,000 and 500,000 inhabitants.	-0.001	0.006	-0.003
Paris urban area	-0.041***	-0.026***	-0.048***
<b>Characteristics of the municipalities</b>			
% of university graduates in the population	-0.021	0.004	-0.031
% of blue-collar workers in the active population	0.094***	0.066**	0.123***
% of people aged 15 to 24 years old in the population	-0.330***	-0.191***	-0.393***
Number of temporary employment agencies	0.000**	0.000	0.000*
Number of <i>Pôle Emploi</i> agencies	-0.003***	-0.003***	-0.003***
<b>Characteristics of the employment areas</b>			
% of job seekers in atypical jobs on 01/2012	0.573***	0.476***	0.621***
% of employees on temporary contracts	2.120***	2.727***	1.627***
Unemployment rate in the employment area	-0.830***	-0.703***	-0.823***
<b>Industry in the employment zone (ref.: Manufacturing)</b>			
% of jobs in Agriculture	0.492***	0.523***	0.455***
% of jobs in Construction	-0.229***	-0.260**	-0.254**
% of jobs in the Commercial service sector	0.107***	0.081**	0.126***
% of jobs in Non-market services	0.228***	0.231***	0.227***
<b>Log-likelihood</b>	<b>-204,330.62</b>	<b>-86,140.68</b>	<b>-110,643.17</b>
<b>LR Test</b>	<b>42,569</b>	<b>16,358.8</b>	<b>19,031.9</b>
<b>Pseudo R2</b>	<b>0.094</b>	<b>0.087</b>	<b>0.079</b>
<b>Observations</b>	<b>326,396</b>	<b>142,561</b>	<b>174,540</b>

*Sources:* panel constructed from the 1/10th FH-D3 and DPAE from January 2012 to December 2013, 2010 Population Census (INSEE) and 2010 Permanent Equipment Base (INSEE).

*Scope:* individuals who had a registration with *Pôle Emploi* (The French Employment Agency) between January and December 2012.

*Notes:* significance: \*\*\* at the 1% level; \*\* at the 5% level; \* at the 10% level.

The influence of the employment area reveals important peer effects. We observe a positive and significant effect of number of job seekers with experience of non-standard employment at the beginning of the period, over the entire period under consideration. *Ceteris paribus*, recourse to atypical jobs is 0.57% higher in employment areas where the share of job seekers is 1 percentage point higher in January 2012 than in other employment areas. This result confirms mechanisms already highlighted in other contexts and / or behaviors (e.g. MAURIN and MOSCHION, 2009; SARI, 2012; SOLIGNAC and TO, 2018). However, it is difficult to distinguish whether these effects are related to a form of mimicry among job seekers or whether the local context leads to similar behavior<sup>8</sup>. *Ceteris paribus*, the percentage of temporary workers is another important determinant: recourse to short-term jobs for job seekers in part-time unemployment is 2% higher in industries where the proportion of temporary employees is

<sup>8</sup> We refer here to the distinction between correlated, exogenous, and endogenous neighborhood effects proposed by Manski (1993).

1 percentage point higher. This suggests that part-time unemployed individuals who take up short-term jobs often reside in employment areas where use of temporary jobs is common and where the local economic activity seems to favor the emergence of this category of workers. The sign of the unemployment rate in the employment area shows that atypical jobs are not necessarily mobilized in territories with the most severe economic difficulties. On the contrary, a high rate of unemployment in the employment area tends to be associated to a reduction (0.83% for a 1 percentage point higher unemployment rate) in the probability of short-term full-time employment or part-time employment.

Finally, we find that the more developed the agricultural industry the less likely job seekers will take atypical jobs. The most favorable employment areas seem to be those with well-developed tertiary business sectors: in particular, location in a municipality with a 1 percentage point higher number of commercial services sector jobs compared to manufacturing industry jobs is associated with a 0.11% higher probability of atypical employment. This positive “effect” is mirrored in the business sectors in which job seekers search for employment.

#### **4.2. Understanding the variation in take up of atypical jobs by job seekers**

Intensity of take-up of atypical jobs varies greatly among job seekers. First, the proportion of job seekers who engage in atypical jobs varies significantly depending on the benefit scheme (Table 2); almost 53% of all job seekers had been employed in a short-term job during the period of observation. This rises to more than 62% for job seekers in receipt of employment benefit. Among both these populations, between 15% and 20% used atypical jobs intensively (*i.e.* more than 50% of the time they were registered with the employment agency).

Second, among the population of job seekers considered, the number of different short-term jobs (spells of employment) varies between five and six. In our data, an employment spell corresponds to one month. We therefore consider that job seekers spend an average of six months in short-term jobs. However, since we do not take account of the timing of these employment spells, we do not know whether these six months of short-term employment is continuous or occur over distinct time periods. Third, we find that among the 10% of job seekers who make the most intensive use of atypical jobs there are wide differences with cumulative durations of more than 12 months compared to barely 1 month for the 10% who use them the least. Since the median is always lower than the average, the average number is driven by the high numbers of months for some job seekers. However, it is clear that there are wide differences in the number of months of short-term jobs observed. This finding combined with the large number of job seekers who never take up short-term employment (*i.e.* the large number of zeros in our outcome variable) shows that we need to use negative binomial and/or ZINB models to explain more or less intensive use of this scheme. The results in Table 2 reveal strong differences in this context. We therefore use ZINB regression models to explain uptake of atypical jobs by job seekers.

**Table 2. Intensity of use of atypical jobs.**

	All job seekers	Job seekers receiving unemployment benefits	Job seekers with no unemployment benefits
<i>Practicing atypical jobs</i>			
Percentage of people who experiment atypical jobs	52.7	62.2	44.8
Percentage of job seekers with majority atypical jobs	18.4	21.2	15.2
<i>Number of atypical job spells</i>			
Average	5.6	6.1	5.1
Ninth decile (P90)	13	14	12
Third quartile (P75)	8	9	7
Median (P50)	4	4	3
First quartile (P25)	2	2	1
First decile (P10)	1	1	1
Standard deviation	5	5.2	4.7
(P90-P10)/P50	3	3.3	3.7
(P75-P25)/P50	1.5	1.8	2.0
<b>Observations</b>	<b>351,658</b>	<b>152,633</b>	<b>189,103</b>

*Sources:* panel constructed from the FH-D3 at 1/10th and the DPAE from January 2012 to December 2013.

*Scope:* individuals who registered with the *French Employment Agency* between January and December 2012 and were followed up until December 2013.

Table 3 presents the estimation results. Estimation of this model (see Section 3.3) involves two steps: estimation of a logit model to explain participation (non-participation) of job seekers in atypical jobs, and a count data model to explain the extent of this participation (non-participation). The results of the logit model are presented in Section 4.1; here, we present the results of the count data model.

The VUONG test of our estimate for all job seekers (Table 3, column 1) gives a value of  $z$  equal to 86.25 (significant at the 1% level). Thus, it shows that the ZINB model is preferred to the negative binomial regression model. In addition, the parameter  $\alpha$  corresponds to the dispersion parameter in the count data model. If  $\ln \alpha = 0$  (the null hypothesis is not rejected), the ZIP model is appropriate. In our case, the ZIP model is rejected (p-value smaller than 0.001).

The determinants of the extent of the use of short-term jobs are different from the determinants of the decision to engage only in atypical jobs. The age group with the highest number of spells of atypical employment is those aged 50 years and over although the under 25s seem to make greater use of this arrangement than those aged between 25 and 49 years. In terms of job seeker nationality, although French job seekers use atypical employment the most, job seekers from the Maghreb and Sub-Saharan Africa exploit it the most frequently and particularly if they are not eligible for unemployment compensation. The highest number of spells of atypical employment are found among those with the highest levels of education (above French A-level) jobs and especially those with two years of higher education. However, in the case of job seekers receiving unemployment benefit, atypical employment is more frequent among job seekers with only French A-level. It would seem that unemployed people categorized as qualified employees who do not receive unemployment benefit are the main users of atypical jobs. However, among job seekers who receive partial unemployment benefit, those exploiting atypical jobs also include manual (less qualified) workers.

**Table 3. Describing the number of short-time jobs' spells. Estimation of a ZINB model.**

	All job seekers		Job seekers receiving unemployment benefits		Job seekers with no unemployment benefits	
	Coeff.	$\sigma$	Coeff.	$\sigma$	Coeff.	$\sigma$
<b>Intercept</b>	0.908***	0.086	1.641***	0.141	0.404***	0.147
<b>Individual characteristics</b>						
<i>Age (ref.: people aged between 25 and 49 years old)</i>						
Younger than 25 years old	-0.005	0.007	0.032***	0.011	0.092***	0.012
50 years old or more	0.134***	0.011	0.121***	0.013	-0.053***	0.018
<i>Men</i>	-0.184***	0.007	-0.159***	0.009	-0.248***	0.011
<i>Nationality (ref.: French)</i>						
Other European countries	0.040**	0.016	-0.009	0.021	0.132***	0.025
Maghreb	0.110***	0.015	0.024	0.022	0.218***	0.022
Sub-Saharan Africa	0.160***	0.018	0.145***	0.028	0.319***	0.026
Asia and others	0.035	0.028	0.021	0.046	0.064*	0.037
<i>Number of children (ref.: 1 or 2 children)</i>						
No child	-0.020***	0.008	-0.028**	0.01	0.044**	0.018*
Three children	0.027**	0.011	0.02*	0.010	-0.041**	0.018
<i>Disability</i>	-0.164***	0.017	-0.135***	0.022	-0.633***	0.025
<i>Training (ref.: French A-level)</i>						
No formal education	0.013	0.017	0.037	0.022	-0.159***	0.026
School certificate; middle school (including French BEPC)	-0.059***	0.011	-0.015	0.014	-0.275***	0.017
Second- or first-year classes of high school	-0.095***	0.022	-0.077**	0.033	-0.184***	0.032
French youth training (CAP) or NVQ level 1-2 (BEP)	-0.036***	0.007	-0.019*	0.011	-0.147***	0.012
First two years of BA	0.022**	0.01	-0.018	0.014	0.092***	0.017
BA and higher	0.014	0.01	-0.026*	0.019	0.121***	0.021
<i>SPC (ref.: Supervisors)</i>						
Blue collar workers, Skilled Workers and Tradesmen	0.080***	0.012	0.056***	0.016	0.071***	0.021
Unskilled employees	0.034***	0.012	0.036**	0.016	-0.003	0.019
Skilled employees	0.078***	0.01	0.054***	0.013	0.104***	0.018
Executives	-0.209***	0.016	-0.186***	0.02	-0.265***	0.027
<i>Type of compensation (ref.: French ARE-return to work allowance)</i>						
Other (specific solidarity allowance, insurance and pre-retirement)	-0.009	0.014				
Not compensated	-0.174***	0.018				
<i>The French Active Solidarity Income (RSA)</i>	-0.161***	0.011	-0.107***	0.021	-0.403***	0.014
<i>Unemployment Insurance Plan (ref.: General scheme)</i>						
Interim	0.221***	0.011	0.216***	0.011	0.379***	0.059
Intermittent	0.276***	0.065	0.320***	0.07	0.328	0.343
Other (including unknown)	-0.081***	0.014	-0.003***	0.04	-0.057***	0.02
<i>Industry of the trade sought (ref.: Service to the person)</i>						
Agriculture and fishing, animal care	-0.274***	0.016	-0.322***	0.021	-0.223***	0.027
Arts, entertainment, and recreation	-0.243***	0.043	-0.306***	0.059	-0.323***	0.062
Banking, insurance, real estate	-0.389***	0.024	-0.433***	0.03	-0.3410***	0.043
Trade and sales	-0.324***	0.009	-0.359***	0.013	-0.313***	0.015
Communication and information	-0.190***	0.022	-0.180***	0.03	-0.234***	0.034
Construction	-0.186***	0.013	-0.224***	0.017	-0.128***	0.021
Hotels, restaurants and tourism	-0.305***	0.011	-0.350***	0.015	-0.245***	0.018
Manufacturing	-0.157***	0.013	-0.187***	0.016	-0.097***	0.021
Installation and maintenance	-0.194***	0.016	-0.235***	0.021	-0.159***	0.027
Health	-0.200***	0.015	-0.183***	0.02	-0.192***	0.024
Show	0.162***	0.029	-0.013***	0.046	0.259***	0.044

Business support	-0.305***	0.011	-0.312***	0.014	-0.347***	0.018
Transportation and logistics	-0.137***	0.012	-0.173***	0.016	-0.071***	0.021
<i>Duration of observation of individual in the lists</i>	0.018***	0.001	-0.004	0.003	0.011***	0.001
<b>Local context</b>						
<i>Category of municipalities (ref.: UA &gt; 500,000 inhabitants)</i>						
Outside the urban area	-0.018	0.011	-0.051***	0.016	0.019	0.019
Urban area: < 50,000 inhabitants.	-0.034**	0.013	-0.068***	0.018	-0.020***	0.021
Urban area: between 50,000 and 200,000 inhabitants.	-0.016*	0.010	-0.033**	0.015	-0.043**	0.016
Urban area: between 200,000 and 500,000 inhabitants.	0.008	0.009	-0.006***	0.014	0.003	0.015
Urban area of Paris	-0.043***	0.011	-0.028***	0.017	-0.101***	0.019
<i>Characteristics of the municipalities</i>						
% of university graduates in the population	-0.106*	0.060	-0.107	0.090	0.048	0.099
% of blue-collar workers in the active population	0.407***	0.061	0.398***	0.088	0.562***	0.107
% of people aged 15 to 24 years old in the population	-0.245***	0.086	-0.176	0.130	-0.964***	0.139
Number of temporary employment agencies	0.001***	0.000	0.001*	0.000	0.001***	0.000
Number of <i>Pôle Emploi</i> agencies	-0.004**	0.001	-0.002	0.002	-0.008***	0.002
<i>Characteristics of the employment areas</i>						
% of job seekers in RA on 01/2012	-2.679***	0.220	1.093***	0.135	1.682***	1.163
% of employees on temporary contracts	4.517***	0.761	3.744***	1.199	6.170***	1.366
Unemployment rate in the employment area	-0.178	0.138	0.141	0.203	-1.871***	0.233
<i>Industry in the EZ (ref.: Manufacturing)</i>						
% of jobs in Agriculture	0.626***	0.161	0.467*	0.243	1.004***	0.277
% of jobs in Construction	-2.649***	0.257	-2.894***	0.372	-2.209***	0.409
% of jobs in the Commercial sector	-0.079**	0.082	-0.270*	0.121	0.244*	0.138
% of jobs in Non-market services	0.272***	0.104	0.083	0.153	0.750***	0.179
<b>ln <math>\alpha</math></b>	0.067***	0.008	-0.136***	0.011	0.819***	0.006
<b>A</b>	1.069	0.008	0.873	0.009	2.268	0.014
<b>Log-likelihood</b>	<b>-690,134.7</b>		<b>-323,898.3</b>		<b>-301,768.9</b>	
<b>Observations</b>	<b>326,396</b>		<b>142,561</b>		<b>174,540</b>	

*Sources:* panel constructed from the 1/10th FH-D3 and DPAEs from January 2012 to December 2013, 2010 Population Census (INSEE) and 2010 Permanent Equipment Base (INSEE).

*Scope:* people who had a registration with *The French Employment Agency* between January and December 2012.

*Notes:* we only represent here the results of the second stage of the ZINB model, which is a count data model. The first stage consists of a logit model, the results of which are outlined in the previous subsection. Significance: \*\*\* at the 1% level; \*\* at the 5% level; \* at the 10% level.

Job seekers in receipt of return-to-work allowances and/or those registered as temporary workers or entertainment workers are the most frequent users of atypical jobs during unemployment. Among job seekers not in receipt of benefits, temporary workers are the most likely to engage in short-term employment. The business sector where the highest number of spells of short-time jobs was observed is the entertainment sector. Thus, while those traditionally job seekers most likely to take up an atypical job are those seeking employment in the field of human services, those with the highest number of spells atypical employment are those seeking employment in the entertainment sector. This applies in particular to job seekers who are not eligible for benefit.

We next examine whether local characteristics influence uptake by job seekers of atypical jobs in the period 2012-2013. First, *ceteris paribus*, job seekers engaging more frequently in longer periods of atypical jobs are located in more often in small urban areas (smaller numbers of inhabitants) and less often in the Paris region. Second, they live in cities with higher proportions of blue-collar workers and lower proportions of young people, and cities with fewer job-search agencies and more temporary work agencies. Third, it seems that the characteristics of the job seekers' home areas matter indicating a dominant role of the local context. In particular, we find that the percentage of job seekers with experience of employment



in an atypical job (at the beginning of the period) determines the number of months of atypical employment during the period of observation. Again, it is likely that those known to the given job seeker (peers, network members, etc.) partly determine the job search behavior. Knowing people in a similar situation, *i.e.* with experience of working in an atypical job, can influence the decision to also take up atypical employment. The percentage of employees in temporary employment has a particularly strong and significant effect. It seems that in certain employment areas the economic context is conducive to non-standard employment. The presence of a large number of temporary jobs in an employment area increases their use by job seekers. Temporary work favors part-time unemployment because it is generally associated with low-paid, part-time jobs. However, the local unemployment rate seems not to be linked directly to more or less intense use of atypical jobs by job seekers. We find a negative effect only for the category of job seekers not in receipt of benefits. Finally, in relation to the local characteristics of employment, we find that areas where agricultural employment is relatively well developed are those with the highest participation by job seekers in atypical jobs and conversely, in areas employment in building and construction is high, we find less participation of job seekers in atypical jobs.

## 5. Conclusion

Our research was aimed at investigating which leads job seekers to experience at least one spell of employment in an atypical job and the intensity of use of atypical jobs. We had three objectives. First, to test the role of local characteristics (job seeker's place of residence) beyond the traditional individual characteristics. In particular, we sought to highlight the roles of the local labor supply and labor demand and public employment services. We focused also on the role of peer effects. Second, to verify whether the determinants of use of atypical employment diverges from those the determinants of intensity of use of such employment. Those individuals who resort most frequently to short-term and part-time employment might differ greatly from those who use it only occasionally. Third, we were interested in the different job seeker profiles (eligible/ineligible for unemployment benefits) to check whether profiles and behaviors vary.

To address these issues, we used count data models to consider the number of short-term employment spells over a given time period, and to take account of excess zeros in the data. A large number of the job seekers in our sample who had registered with the French employment agency between January and December 2012 and were followed to the end of 2013 had never taken up atypical employment. We therefore modeled the probability to exploit or not short-term jobs and the extent of their use. The ZINB regression model takes both these aspects into account. The count data part of the model allows us to account for the number of months of atypical jobs, and the logit model highlights the probability of not using this mechanism.

The results of the logit model and the count data model, separately, reveal a primary role played by individual characteristics and especially administrative status at the time of registration on the employment agency. They show also that municipality of residence and job seeker's employment area are also significant. We found that the individual characteristics increasing the likelihood of at least one spell of atypical employment may be different from those affecting the intensity of use of such employment. For example, older job seekers have a lower probability of atypical job experience but after experiencing atypical employment are more likely than other groups to engage in an atypical job on a long-term or repeated basis. Being a woman increases the probability of taking an atypical job and the duration of the short-time job. Job seekers with foreign nationality, especially Maghreban and Sub-Saharan African

have a higher probability of more spells of atypical employment. We found that there are other variables which influence use of short-term jobs including the benefit system, the job seeker's qualifications, and the reason for becoming unemployed. Finally, we show that the situations (in temporary employment or with experience of short-time employment) of other workers (employed or not) in the applicant's environment have an impact on use of atypical jobs.

While most work on atypical jobs taken up by job seekers analyzes job seekers' return to regular employment following this experience, we were interested in what determines the take up of atypical jobs. Several studies show that short-term employment can be a stepping stone to full-time employment for some job seekers which makes it important to distinguish the profiles and characteristics of those who take up atypical jobs in order to support them in their job search. We highlight the importance of the local context in studies of short-term unemployment. We found that the local economic context and the characteristics of the resident workforce have a significant effect on the decision to resort to an atypical job. Identifying those territories with a higher availability of atypical jobs could help to reduce the inequalities in the labor market and the spatial disparities in the return to work.

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## Appendix. Descriptive statistics of job seekers.

	All job seekers	Job seekers receiving unemployment benefits	Job seekers with no unemployment benefits	Most of the time in atypical jobs
<b>Individual characteristics</b>				
<i>Age</i>				
Average age	32	32.6	31.4	34.3
Younger than 25 years old	34.4	33.9	34.8	26.4
Aged 25 to 49 years old	55.2	53.3	56.9	61
50 years old or more	10.4	12.7	8.3	12.5
<i>Men</i>	50.5	52.6	48.1	40.5
<i>Nationality</i>				
France	87.4	85.6	89.1	88.5
Maghreb	3.9	4.5	3.4	3.5
Sub-Saharan Africa	4.4	4.9	3.7	3.9
Asia and others	2.8	2.9	2.6	3
Other European countries	1.2	1.5	0.9	0.8
<i>Marital status</i>				
Single	56.2	55.9	56.3	46.2
Divorced, widowed	7.9	8.8	7.2	8.4
Married, cohabiting	35.9	35.3	36.4	45.4
<i>Number of children</i>				
No child	66.3	66.5	66	58.1
1 or 2 children	25.9	25.4	26.3	31.6
Three children	7.9	8.1	7.6	10.3
<i>Disability</i>	4.2	5.4	2.7	2.9
<i>Training</i>				
No formal education	4.2	4.8	3.4	4.5
School certificate; middle school (including French BEPC)	11.2	13	9	10.5
Second- or first-year classes of high school	2	2.4	1.6	1.5
French youth training (CAP) or NVQ level1-2 (BEP)	33.3	32.9	33.9	35.5
French A-level	22.8	21.7	24	23.3
First two years of BA	11.7	10.5	13.2	12.1
BA and higher	14	13.7	14.4	12.3
<i>SPC</i>				
Blue-collar workers, Skilled Workers and Tradesmen	20.9	20.6	21.2	21.8
Unskilled employees	21.4	23.6	18.9	18.2
Skilled employees	42	39.4	45.1	48
Technicians and supervisors	8	7.5	8.6	7.8
Executives	6.5	7.4	5.4	3.6
<i>Reason for registration</i>				
Economic dismissal	2.9	2.9	3	3.5
Other kind of dismissal	11.7	12	11.3	14.1
Resignation	4.2	4	4.5	4.5
Termination of contract	6.8	6.6	6.9	6.8
Fixed-term contract, assisted contract	25.4	20.2	31.5	29.4
End of interim	5.1	3.3	7.2	8.8
Newcomer on the job market	10.4	12.2	8.4	6.8
End of illness, maternity	1.9	1.8	1.9	2.3
End of self-employed activity	1.1	1.3	1	0.8
Exit from the internship	1.2	1.2	1.2	0.9
Other cases	25	28.2	21.3	20.1
<i>Type of compensation</i>				
Allocation of assistance to return to work	53.8	60.3	46.1	38

Other (specific solidarity allowance, Insurance and pre-retirement)	43.4	37.1	50.8	59.1
Not compensated	2.8	2.6	3.1	3
<b>The French Active Solidarity Income (RSA)</b>	8.9	10.7	6.8	5.9
<b>Unemployment Insurance Plan</b>				
General scheme	42.7	37.9	48.4	52.6
Interim	4.2	2.1	6.7	9.9
Intermittent	0.1	0	0.2	0.8
Other (including unknown)	52.9	60	44.7	36.6
<b>Business sector of the job sought</b>				
Agriculture and fishing, animal care	3.6	3.5	3.8	3.1
Arts	0.5	0.6	0.4	0.4
Banking, insurance, real estate	1.5	1.6	1.5	0.9
Trade and sales	17.5	18.4	16.4	12.5
Communication and media	2.1	2.2	2.1	1.8
Construction	10.3	10.5	10.1	9.2
Hotels, restaurants and tourism	10.2	10.2	10.1	7.5
Manufacturing	7.3	6.9	7.9	8.8
Installation and maintenance	4.1	4.3	3.9	3.2
Health	3.8	3.5	4.1	4.1
Human and community services	17.2	16	18.6	27.7
Show	1.1	0.9	1.3	2.3
Business support	11.8	12.5	11	9.5
Transport and logistics	8.1	8	8.2	8.5
<b>Local context</b>				
<b>Category of municipalities</b>				
Outside the urban area	13.1	11.6	14.7	16
Urban area: < 50,000 inhabitants.	12.6	11.8	13.4	13.7
Urban area: between 50,000 and 200,000 inhabitants.	16.6	16.7	16.4	16.4
Urban area: between 200,000 and 500,000 inhabitants.	15.9	15.7	16.1	16.7
Municipality of an urban area: > 500 000 inhabitants.	24.9	25	24.9	24.6
Urban area of Paris	17	19.1	14.5	12.6
<b>Characteristics of the municipalities</b>				
Percentage of university graduates in the population	13.5	13.9	12.9	12.3
Percentage of blue-collar workers in the active population	17.5	17.2	17.8	18.5
Percentage of people aged 15 to 24 years old in the population	15.7	16	15.5	15.3
Number of temporary employment agencies	15.5	16.3	14.5	13.7
Number of <i>Pôle Emploi</i> agencies	1.8	1.9	1.7	1.6
<b>Characteristics of the employment areas</b>				
Percentage of job seekers in atypical job on 01/2012	19.3	18.9	19.7	20
Percentage of employees on temporary contracts	2	1.9	2	2
Unemployment rate in the employment area	11.8	11.9	11.7	11.6
Percentage of jobs in agriculture	3	2.8	3.2	3.3
Percentage of jobs in manufacturing	13.9	13.7	14.2	14.6
Percentage of jobs in construction	7.2	7.2	7.3	7.3
Percentage of jobs in the commercial sector	44.4	44.9	43.9	43.4
Percentage of jobs in non-market services	31.4	31.4	31.4	31.4
<b>Observations</b>	<b>351,658</b>	<b>189,561</b>	<b>151,641</b>	<b>34,014</b>

*Sources:* Panel constructed from the FH-D3 at 1/10th and the DPAEs from January 2012 to December 2013, 2010 Population Census (INSEE) and 2010 Permanent Equipment Base (INSEE).

*Scope:* individuals who had a registration with *The French Employment Agency* between January and December 2012. The table compares individuals who were in atypical job with those who were not. “Most of the time in atypical jobs” corresponds to individuals whose atypical job spells constitute the majority of their time registered with *The French Employment Agency* (duration of atypical jobs > 50% of time).

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