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Take-up of social assistance benefits: The case of homeless

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Take-up of Social Assistance Benefits: The Case of Homeless

ABSTRACT

A considerable number of studies have been interested in measuring and analyzing the phenomenon of non-take-up. The homeless portion of the population is, however, outside the domain of this research, and little is known about their non-take-up behavior. In this paper, we focus on this particular population using a French national survey. We derive measures of non-take-up for the French social assistance program "base" Active Solidarity Income (RSA). We find a substantial rate of non-take-up among the homeless, although it is significantly less than the general population rate: approximately 17% of eligible homeless persons do not claim benefits compared to 35% of the general population. Using a large set of variables, we investigate the determinants of non-take-up. We show that although some determinants are shared with those identified in the literature on the general population, the homeless population exhibits some particularities. We suggest also that an important effect of desocialization is that it increases non-take-up among the poorest homeless.

KEYWORDS: *Take-up. Social assistance. Poverty. Homeless.*

JEL CLASSIFICATION : I38, I32, D31.

1 Introduction

The question of non-take-up, which appeared some decades ago, has taken an important place in the evaluation of social assistance programs. Many studies in various countries have shed light on the fact that a portion of persons eligible for social assistance either do not claim it or, in any case, do not receive it. This phenomenon has an important effect on the redistributional impact of social assistance programs, which can fail in their goal to reduce poverty. This situation also calls into question the compatibility of non-take-up with the rationality of individual behaviors.

Following the distinction of Math & van Oorschot (1996) between non-take-up caused by the absence of a claim from an eligible person and non-take-up caused by the rejection of the eligible person's demand by the program administration, the economic literature has modeled take-up exclusively as an individual behavior. The decision of whether to submit a claim for social assistance reflects a judgement between the costs and the expected benefits. Costs can be due to the difficulty of obtaining information about the program, to the time and money spent during the application process or to the stigma that are caused by the claim.

Estimating non-take-up is a difficult task because those who do not take-up benefits are often not reported in administrative data. Estimations have been conducted using three kinds of data: administrative records, general purpose surveys and surveys specifically designed to measure non-take-up (Hernanz *et al.* , 2004). They have also been conducted by combining two of these three kinds of data, as in the case of the United Kingdom. In most cases, the data covered only households living in individual housing. The Finnish Income Distribution Survey used by Bargain *et al.* (2012); the quantitative survey on Active Solidarity Income (RSA) used by Domingo & Pucci (2012), Domingo & Pucci (2014) and Chareyron (2014); and the German Income and Expenditure Survey used by Riphahn (2001) do not account for people living in non-permanent homes or in institutions. Examining these latest works shows that a portion of the population, which we will call the homeless, fly under the radar of the estimation. To the best of our knowledge, no study has derived accurate measures of non-take-up at a national level for the homeless as has been done for the rest of the population.

These studies fail to evaluate the take-up of a portion of the population which, although relatively small, is of considerable importance because of its poverty. Furthermore, the size of this population has grown in the last ten years countries such as France. Of course, the homeless population is heterogeneous, and definitions of homelessness can differ across studies. Our definition of the homeless includes people living in accommodations such as collective accommodations, hotels and other places not designed for habitation, such as shelters. Obtaining information on this population is difficult, but two surveys have been conducted in France at 11-year intervals – the 2001 Homeless Survey and the 2012 Homeless Survey. According to Yaouancq *et al.* (2013), the population of homeless persons increased in 2012 by 44% compared with that in 2001 in France. In 2012, this population was estimated at 103,000 adults in France. We can wonder whether these living conditions are due to a level of social assistance that is too low or whether the available social assistance is not used by this population, as the public policy conclusions will be very different. In the first case, the program directly fails in its goal to assure that people live with dignity because its level of assistance is too low. In the second case, the program also fails to reach its goal but indirectly for reasons such as the low level of assistance, the application procedure or the complexity of the process. Furthermore, notice that the behavioral aspects of the non-take-up phenomenon has to be economically explained. Why do people with almost no resources refuse to claim a benefit? It is also difficult to asses, a priori, whether the non-take-up rate of homeless is higher than that of the general population. Theoretically, there can be two different effects: Non-take-up may be lower because the homeless are potentially poorer than the eligible households of the rest of the population and could thus gain more utility from the program. However, non-take-up may be higher because access to information about the program may be harder for this population to obtain.

To partially answer this question, we derive measures of the non-take-up rate among the homeless

and provide a sensitivity analysis of these in order to investigate measurement issues, particularly possible error due to the use of income data from surveys. We study the determinants of non-take-up of the French minimum income RSA program among homeless people. To achieve these goals, we use the 2012 Homeless Survey, which was specifically designed to study living conditions among the homeless and to measure the number and non-take-up rate for the RSA of homeless persons. The survey takes account of people older than 18 who live in cities of more than 20,000 inhabitants and who access services of accommodation, such as a hot meal distribution or night stopover facility. This survey permits us to calculate theoretical entitlements and to learn the declared situation of benefit receipts in this population. We focus only on the "base" RSA part of the program and thus include only people who have had no formal employment for the past three months. Monthly earned incomes are not reported for the 3 months required to calculate the "activity" RSA entitlements and may reduce the accuracy of the measure.

Our findings are threefold. Non-take-up of "base" RSA among the homeless is significantly lower, even when considering the same level of income, than that of the general population. We suggest that this difference can be explained by an important difference in the overall resources of the homeless compared with the population living in individual homes. The homeless may have no or very few familial assets, which is not the case for the rest of the population. Second, the behavior of the homeless can be modeled using an economic approach that considers that an individual does not claim benefits when the utility obtained from the program is less than the utility of not claiming the benefit. We confirm the effects of the benefit amount; the expected duration of benefit receipts; and the information, application and stigma costs in the homeless population. Finally, based on nonlinearity between the RSA and income by consumption units (ICU), we identify a particular income effect for the homeless. Incomes have a positive effect, locally, on the probability of claiming RSA. The poorest homeless are less likely to take-up benefits, even when controlling by the living conditions. Along the same line, homeless persons living in the streets exhibit a lower propensity to claim benefits from the program. These results suggest that, at some point, the cost effect more than offset the utility effect associated with low income.

This paper is structured into six parts. In section 2, we review the existing literature on social assistance take-up, emphasizing the few studies conducted on the homeless. In section 3, we present the French minimum income device. Section 4 describes the data and presents the descriptive statistics, non-take-up measures and sensitivity analysis. In section 5, we model the take-up behavior of the homeless to try to better understand the phenomenon, and we compare their behavior to that of the rest of the population. We conclude in section 6.

2 A look at the literature

Evidence of an important non-take-up phenomenon on social assistance programs has been documented in different countries and for different types of benefits among the general population. Blank & Ruggles (1996) estimate a non-take-up rate between 30% and 38% for the Aid to Families with Dependent Children (AFDC) and Food Stamps programs in United States. The Earned Income Tax Credit (EITC), created in 1975 in the United States as a negative income tax, is less affected by non-take-up. Scholz (1994) shows a non-take-up rate of 14% to 20% for this program in 1990, which is confirmed by the IRS estimates that between 13% and 18% of eligible people in 1996 and 19% in 2005 did not receive this benefit (Internal Revenue Service, 2002a, 2009). For the social assistance program in reunified Germany, Neumann & Hertz (1998) obtain a non-take-up rate between 52% and 59%. In England, Duclos (1995) estimates a 20% non-take-up rate for the Supplementary Benefit program. Blundell *et al.* (1988) estimate a 40% non-take-up rate for the Housing Benefit in 1984. The English state's repeated estimated non-take-up for the Working Families' Tax Credit (WFTC) range between 24% and 28%. Using administrative data, Bargain *et al.* (2012) show a non-take-up rate between 43% and 51% for the Finnish social assistance program in 2003. Terracol (2002) estimates a 35% rate for the

former French minimum income program. For the "base" RSA, Domingo & Pucci (2012) estimate a 36% non-take-up rate, but Chareyron (2014), using a variety of sensitivity tests, finds a rate ranging between 29% and 35% for the same program and the same year.

A relatively high level of non-take-up is thus common to all studies, but the rate varies widely by program and measure. It appears that estimation is very sensitive to the data and to the technical estimation. Hernanz *et al.* (2004) show that using general survey data will overstate non-take-up rate compared with administrative data. Theoretical eligibility cannot be calculated in exactly the same way as the administration. Even with (quasi-exact) administrative data, Bargain *et al.* (2012) notice a shift between theoretical and true eligibility.

Take-up measures for the homeless are scarce and less accurate. Most of the time, these measure consists only of counting how many homeless persons did not benefit from social assistance programs, but every homeless person is not obviously eligible for these programs. The results presented first are only participation measures. A study by McCarthy (1995) mentions that between 45% and 34% of homeless youth living in Vancouver were not receiving social assistance. However, Acorn (1993), basing his results on a 1991 survey, reports that 18% of Vancouver's homeless are not receiving benefits. Yet, based on a survey, Schoeni & Koegel (1998) find that 47.4% of the homeless living in Los Angeles who were born in the United State were not receiving Food Stamps in 1990, and 39.8% were not receiving any benefits. According to Begin (1996), in January 1987, 48% of interviewed homeless persons in Canada were not receiving social assistance benefits.

Some studies have, however, calculated non-take-up rates by comparing the number of participants to the number of eligible persons. Avenel & Damon (2003) estimate that in 2001, 36% of potentially eligible single homeless persons were not receiving Minimum Integration Income (RMI) in France. Some of the questions asked to the homeless respondents reduce non-take-up between 5% and 15%. In the Californian county of Amaleda, using panel data survey, Kreider & Nicholson (1997) estimate that 85% of people eligible for SSI/SSDI and 32% of people eligible for AFDC were not claiming these benefits.

3 The French minimum income program

The RSA replaced the RMI and the Single-Parent Allowance (API) on June 1st, 2009 in metropolitan France. The RSA intends to respond to critics of the few incentives to take a job and to reduce poverty created by the RMI. The most important change is the possibility of permanently conserving some part of his earned income when returning to employment. The RSA is administered at the departmental level, and its rules are decided at the national level. The departmental administration has no discretionary power, and thus, the eligibility conditions are similar in any part of the country. The assessment unit is the family household, defined as a single individual or couple, plus all dependent children under age 25. To claim the program benefits, the family has to complete a declaration of resources providing the information required to calculate entitlements. This form has to be completed every three months.

The RSA has two components: the "base" RSA and the "activity" RSA. The "base" RSA is paid to households with no earned income and sufficiently low total income. People with some earned income are eligible for the "base and activity" RSA or "activity" RSA, depending on their income. The earned and unearned income of the past three months is taken into account. The API is replaced by an increase in the RSA for single parents. The increase lasts one year or until every dependent child is more than three years old.

The RSA ensures a minimum level of income for every household. This guaranteed minimum income is composed of a lump sum portion, depending on the family situation, to which 62% of earned income is added. In the case of the "base" RSA, there is no earned income factor, and the guaranteed minimum income is equal to the lump sum portion. In 2011, the minimum income guaranteed by the RSA for a single individual with no earned income was 466.99€ and 599.97€ with the increase for single parents. A childless couple had a guaranteed income of 690.14€ , while those with one child received 828.17€ .

If a household that benefits from a housing allowance owns its home or receives free housing, a housing lump sum is deducted from the guaranteed minimum income. This housing lump sum is 56.04€ for an individual. For a single individual with one child or a childless couple, the amount is 112.08€. The benefit received from RSA is the difference between the guaranteed minimum income and the resources of the household.[1] In general, entitlements are calculated as follows: RSA = (Lump sum+0.62×Earned income)−(All resources+Housing package).

In addition to the income and composition of the household, two other eligibility criteria have to be taken into account. An individual has to be older than 25 years to benefit from RSA, [2] with the exception of single parents who can benefit from the RSA even if they are under 25. There are also special eligibility rules for people who are not French citizens. In addition to the other eligibility conditions, Europeans[3] have to have lived in France for 3 years when they file the claim. They may also be eligible if they are or have been formally employed in France, if they are enrolled in vocational training, or if they are sick or unemployed and registered with the employment center at the moment of the claim. A non-European foreigner must be in possession of a residential card; be holder for 5 years of a residence permit allowing employment in France; or be a refugee, stateless person or under alternative protection.

4 Measuring non-take-up

4.1 Data

We use the 2012 Homeless Survey, also known as "Survey on persons using hosting services and hot meal distribution – 2012". The survey gives valuable information and allows us to clearly delimit the population to measure the RSA non-take-up rate. The study population lives in cities with over 20,000 inhabitants and receives a service of accommodation, such hot meal distribution or night stopover lodging. This population is also older than 18. The survey thus fails to take account of homeless persons who do not access these kinds of services and those who live in smaller cities or rural areas. People in hospitals or prisons are also outside the domain of the survey. The sample of households was selected using three-stage stratified sampling. First, cities were selected by probability proportional to a size index accounting for both the size of the population and the capacity of the city to host people experiencing difficulty. Once the city is selected, the second step is the random selection of services (i.e., accommodation services and hot meal distribution points) from a complete list of services available in each selected city. The probability of being selected is weighted by the attendance of each service (i.e., the number of individuals who use the service). The third step consists of the random selection of 2 or 4 beneficiaries by service (the number of individual selected depends on the service). The survey includes 4,419 individuals. In the survey and, thus, in this study, an individual is considered homeless on a day when he slept the night before in a place that is not intended for habitation or when he is supported by an agency that gives him free or quasi-free housing.

Before measuring the non-take-up rate, some manipulation of the population has to be conducted. Regarding the individuals recorded in this dataset, one important point must be noted: Some individuals use a hot meal distribution service but are living in private accommodations (i.e., they rent or own their house or dwelling). These people cannot be considered homeless and thus are excluded from the analysis.[4] Unlike the 2001 Homeless Survey, foreigners are included in this survey. We even have

[1] Only flows of income are taken into account. The amount of savings is indicated in the declaration of resources but only incomes generated by their assets enter into the entitlement calculation.

[2] There is also a RSA for young people, but the eligibility conditions are specific. An individual must have been employed for two of the last three years. Only 10,000 people were receiving this particular program benefit in 2010. This part of the program will be excluded from the analysis.

[3] That is, citizens of a member country of the European Economic Area (EEA) or Switzerland.

[4] Only households renting permanent houses or houses which are independent from associations are excluded. Thus people one the sample are not always rent free.

information concerning their special conditions for RSA eligibility, and we know for how long they have been in France. However, we do not know their legal situation and thus cannot accurately measure their eligibility. For this reason, we exclude them from the measure although they account for a large portion of the homeless.[5] As we are interested only in the "base" RSA, we include only those people who had not been in formal employment during the previous three months. We also exclude childless people under 25. Finally, we exclude disabled persons because they can benefit from the Disabled Adults Allowance (AAH). This benefit is more interesting and cannot be combined with the RSA; thus, these people are unlikely to request RSA funds. Our final sample consists of 1,152 observations of which 783 are eligible for the "base" RSA.

The survey has still some drawbacks for measuring RSA take-up. The survey data generally suffer from underreporting, which tends to overestimate non-take-up. A specific difficulty occurs because information about unearned income is reported only for the same month as RSA receipts, whereas we need information for the past three months. We suppose that the income of this month is a good approximation of mean income of last three months. The family situation is also known for the month the benefits are received and not for the past months; thus, we have to suppose that there was no change. Second, we make the conservative decision to also exclude people who were employed in December. In fact, it is not very clear for which month the receipt of the benefits is declared. A final difficulty is knowing the composition of the household, which is a particular problem for the homeless. The unit of assessment for the RSA eligibility calculation is the household. Two people can be considered a couple for the computation of RSA rights if they do not live together; thus, we consider the legal familial situation.

Considering these factors and following other studies of social assistance take-up, there might be a difference between calculated and true entitlements. To address that problem, we analyze the sensitivity of our results to variations in income. We also have some information that permit us to eventually correct an incorrect assessment. For example, if an individual previously but no longer benefits from RSA, he can provide a reason for the change. In some cases, this can lead to corrections.

The housing lump sum is deducted from benefits in two cases: when the household receives a housing allowance or resides in free housing.[6] In previous studies of the RMI and RSA, this information was not available; thus, the housing lump sum was deducted in any case. This survey not only permits us to determine the receipt of a housing allowance but also whether the household receives free housing. We can decide whether to deduct the lump sum according to each situation.

4.2 Descriptive statistics

To determine whether a household takes up social assistance, we simulate its eligibility and compare this with the actual situation of the household. Table 4 presents the cumulative distribution function of non-participants and the distribution of the participation rate by share of simulated entitlements. Approximately 33% of non-participants have a simulated entitlements between 400€ and 600€, while approximately 10% have between 200€ and 400€. This important portion of non-participants who have relatively high eligible entitlements shows that there is a phenomenon of non-take-up at a non-negligible level of entitlements. The participation rate by share of simulated entitlements has an original form. Although we notice an increase in participation rate with the level of simulated entitlements, there is a decrease in the participation rate for simulated eligibility between 400€ and 600€.

Place table 4 here.

[5] Almost 40% of individuals in the base survey are foreigners, and 43% of individuals in our sample are foreigners (before being excluded).

[6] A person renting an accommodation which depends of an association is considered homeless and can receive a housing allowance.

The means of the variables that are included in the sample are presented in table 3. They are displayed for the total eligible sample and for the subsample of eligible persons who benefit from the RSA and those who are eligible but do not benefit from the RSA. Some observations can be made. The mean of calculated entitlements from the RSA is lower for participants than for non-participants, albeit not statistically different. This is not very surprising considering the slump in participation among the portion of those with between 400€ and 600€ entitlements. Participants are younger, are more often men and have more children than do eligible non-participants. They reside more often in big cities (except Paris) and less often in Paris than do non-participants. Those who do not receive RSA payments rarely receive other governmental assistance, but they are more likely to have access to non-regular sources of income, such as non-governmental assistance, in-kind assistance or informal earned incomes. Families receiving RSA payments have higher housing costs, as rental expenses, and are, on average, richer (even before receiving the RSA) than families who exhibit non-take-up.

It seems that the phenomenon of take-up among the homeless has a different configuration than among the rest of the population. Studies of the general population usually show that claimant families are poorer than non-take-up families. Here, the reverse phenomenon seems to appear.

Place table 5 here.

4.3 Take-up and sensitivity analysis

To measure the non-take-up rate, we simulate the eligibility of each individual using information from the survey. Then, we divide the number of individuals who benefit from the program by the number of individual who have a positive simulated RSA benefit. The baseline measure of non-take-up is presented in table 6. The rate of non-take-up is 17% for all family types in the baseline configuration. We check the robustness of the result using alternative simulations of entitlements. We can notice whether the result is sensitive to variation in income. As the income data used in the simulations come from surveys, they may be under-reported. Thus, we check whether a +5% or a +15% increase in income can change the results of the simulations. We also examine the effect of a (-5%) reduction of income to test for symmetry around the baseline. We also present the non-take-up estimation for singles for each case. They represent the most important part of the population and are potentially subject to less simulation error. It is reassuring to notice that non-take-up is very stable using these alternatives. Yet, considering the experiences of past studies on take-up, this measure can not be considered absolute. Despite the conservative disposition to exclude those who were wage earners in December, this measure can be considered an upper bound. Because people receiving RSA included the amount of their benefit in their income declarations (in the survey), it would not have been very accurate to simulate their eligibility, as we do not know the exact amount of income without the RSA. We only simulate the eligibility of individuals who do not receive RSA. Thus, it is not possible, as is sometimes done, to examine misclassification (i.e., individuals receiving RSA who are not simulated as eligible) or to compute a lower bound estimation.

Place table 6 here.

Table 2 of Annex B describes the frequency of non-take-up across household types. The rate of non-take-up reaches a high point at each extremity of the distribution of the ICU before RSA.[7] The very poor homeless participate in the program at relatively lower rates than do the richer homeless. Participation increases with the ICU before RSA up to a point after which it decreases again. Figure 2

[7]The income per consumption unit (ICU) permits us to compare standards of living of households of different sizes and compositions. We consider the OECD scale, which weights the first adult by 1, other people aged 14 or over by 0.5 and those under 14 by 0.3.

shows the distribution of the non-take-up rate as a function of income by the consumption unit level. The sample of eligible persons is split into different portions of the same length[8] based on their ICU level. We then calculate a non-take-up rate for each segment. The points constructed in this way are located at the mean ICU of the segment. It confirms that non-take-up follows, broadly speaking, a bell-shaped curve for the homeless. The non-take-up rate decreases until approximately and ICU of 25€, increasing slowly until 200€ and then faster above 200€. Because people receiving RSA included their benefit amount in their declaration of income, knowing their level of income before the RSA payment is difficult. Their income amounts are corrected for the amount of RSA that corresponds to their familial composition and to their housing situation. As we do not take account of the primary level of income in the correction, we probably underestimate the income of individuals who receive RSA and thus the rate of non-take-up on the left-hand side of the graph.

Place figure 2 here.

5 The determinants of participation

5.1 Model

The modeling takes place within microeconomic theory of the consumer. An individual will not claim benefits if he retrieves less utility from participation in the RSA than from not claiming the RSA. [9] A household is modeled as an individual who maximizes a single utility function under the income constraint of the whole household. An individual chooses to claim RSA benefits if the utility Y^* gained is positive. Y^* is the gain associated with the receipt of these benefits less all costs. The gain retired from the participation is a function of the monetary transfers of the program B; of characteristics G_i, which can increase expected monetary transfers as expected benefits duration; and of costs C_i, which vary with the individual. With the assumption of a separable additive form, we have:

$$Y^* = \Delta u(B, G, C). \tag{1}$$

Y^* is not observed, and it is thus a latent variable of the final decision to participate P_i where:

$$Y = \begin{cases} 1 & \text{if } Y^* > 0 \quad (2a) \\ 0 & \text{otherwise.} \quad (2b) \end{cases}$$

With the assumption of an additively separable form, we can write:

$$Y^* = \theta B + \alpha X + \epsilon, \tag{3}$$

where $\epsilon \sim N(0, \sigma_\epsilon^2)$. Here, θ and α are coefficients to be estimated.

Past studies, such as Moffitt (1983), sometimes jointly model labor supply and participation decisions in the case of assistance programs. The participation decision is potentially endogenous to the labor supply. In this case, not taking account of such phenomena will lead to bias in the estimation. For individuals who are potentially eligible to receive benefits, an excessively high labor supply can shift one out of eligibility. The labor supply will thus depend on the difference in utility of both situations, that is, eligibility and non-eligibility. In this case, individuals with the lowest stigma are expected to reduce their labor supply to become eligible for the social program. A bias will appear in the estimation if we study only the households that are eligible for the programs.

[8] Because it is not possible to put people who have no income into different segments, the first segment contains all individuals with no income, and it is not the same length as the other segments.

[9] We suppose here, as in most previous studies, that non-take-up comes from the absence of claims from the eligible and not from improper refusal of the administration.

However, the choice to study only the "base" RSA (also dictated by other considerations, such as the validity of the eligibility simulations) allows us to avoid this stage. Contrary to the "activity" part of the RSA, the population eligible to participate in this part of the program is relatively far from the labor market and farther away from exiting the program. The question of arbitrage between labor supply and eligibility can thus be avoided.

5.2 Specification

This section presents the model specification. Fortunately the survey provides a wide range of information on the homeless. The variables introduced in the model allow us to distinguish among the various determinants of take-up reported in the literature. This will permit us to test the effects of the value of the benefit, of the expected duration of the benefit, and of the costs of non-take-up (Riphahn, 2001). There can be different kinds of costs, and we distinguish between information or application costs and stigma costs.

The expected outcome of the program obviously depends on the calculated amount of benefits. The variable is thus introduced with the needed assumption of adequate calculation of these benefits. The expected outcomes also depend on the expected duration of the receipt. This duration depends on the distance to the labor market. It can be thus approximated by the number of months of employment during the previous year. An individual close to the labour market has more chances to reenter employment soon, and thus, the sum of benefit flows from the program should be lower (Anderson & Meyer, 1997). The fact that the individual is limited in his daily activities (knowing that he is not considered disabled) can also provide an indication of the time that he will remain in the program. The utility obtained from the program also depends of the degree of poverty. The RSA benefit amount is obviously correlated with the degree of the individual's poverty; however, the correlation is imperfect, and the link is not monotonic. For example, the ages of the dependent children are not taken into account in the RSA calculation, whereas the cost of a child varies with age. We can thus identify a poverty effect by introducing the ICU (before the RSA benefit). Other variables can be introduced for this purpose, such as housing costs (Duclos, 1997; Terracol, 2002) or carrying debt. However, as in these studies, the coefficients of these variables are not significant and are thus not included in the final results. The homeless may have non-monetary support that can cover his basic needs and reduce the utility obtained from claiming benefits. Thus, we consider whether the homeless receive non-governmental assistance from associations, public organizations, family members, friends or others. Even if these resources theoretically have to be declared, in-kind assistance or temporary monetary assistance can suffer from under-declaration. Indeed, in-kind assistance includes clothes, food or even going to a solidarity space to wash clothes and bathe. Assistance can also be linked with better access to information and thus an increased probability of take-up. The individual can also have other sources of income, which are not or only partly declared to the administration and to researchers, particularly income from informal employment. We consider an individual to be in informal employment if he claims employment and has no pay slip. In fact, these individuals could have been considered ineligible for "base" because they are employed. However, because there is no official proof of their situation, they are able not to declare their wages and we thus consider them eligible. In any case, this is controlled for in the estimation, and it does not produce an important change in the non-take-up rate.[10] Finally, being in a couple often allows the realization of economies of scale and thus reduces the utility of receiving the RSA.

The individuals who are in contact with the administration or receive another form of governmental assistance are thought to be better informed, to be able to produce economies of scale and, thus, to be more likely to take-up the RSA. Claiming RSA benefits is also easier if the homeless person has a mailbox or phone to receive information and requests from the administration. In fact, communication between recipients and the administration is conducted mostly by mail, but a phone is very useful for accessing information. A particular but potentially very important type of information addresses the homeless

[10]The rate of non-take-up is also 17% if we do not consider these individuals eligible.

housing situation. Living in the streets rather than in collective lodging or in hotels can increase the costs of claiming these benefits. It can in fact be expected that the application process is harder when living in the streets. For example, homeless persons living in the streets have potentially no information support about social assistance programs, and even if they own a mailbox, they have to travel regularly to the mailbox to check it. When living in the street, it is presumably harder to find a pen and a desk in order to complete the form necessary to benefit from RSA every three months.

According to Goldman & Gattozzi (1988) and Zuvekas & Hill (2000), people with mental illnesses and severe alcohol or drug abuse problems are less likely to participate in the program because of enrollment difficulty. To avoid causality questions, we use available information on alcohol, drug and psychiatric disorders that occurred in the family before the respondent was 18 years old. These variables have no significant effects here, and they are not included in the final specifications.

The rate of RSA recipients in the department can be used as a proxy for the level of social interaction. The effect of the channel of social interaction on participation could be through the influence of social networks on stigma (Terracol (2002) and Besley & Coate (1992)) or on information spread. However, as the variable is not significant in any specification, it is not included in the final results. The age and gender of the homeless persons are included in the specification, as stigma is supposed to increase with the age and may vary with gender (Riphahn, 2001). Bramley *et al.* (2000) have shown that the living environment can have an impact on the probability to claim benefits. Living in a town with over 200,000 inhabitants can afford anonymity and reduce the stigma associated with such claims. We also control for the potential effect of different historic paths on participation behavior by introducing the total time of the whole life that the individual has been forced to reside with another person because he has no accommodation. Finally, stigma is expected to decrease with the presence of a child and to increase with the level of education. We consider the fact of having a child regardless of whether the child live with the individual because the fact of having a child is expected to increase responsibility in both cases.

Obviously, some of these variables may be endogenous. Income, the presence of a child in the household or even the education, which are often used in the literature (Pudney *et al.* , 2007), may be correlated with omitted variables that are both correlated with the decision to claim benefits. Researchers have presumably concluded that given the difficulty of examining the endogeneity of an important number of variables, the best option was to draw a global picture of the determinants of claims and to interpret it carefully. In our case, we follow this choice and add three other potentially endogenous variables: living in the streets, having a mobile phone and having a mailbox. However, we also control for an important number of these possible omitted variables of the estimation. We have access, through the survey, to some information related to the childhood of each respondent, such as data on mental illness and alcohol abuse. Only the variables that have significant effects are included in the final stage.

5.3 Estimation results

The estimation results of the two final specifications are presented in table 3 of Annex D. To facilitate interpretation, Column 2 and Column 4 report the elasticities of the covariates on the probability of take-up for each specification. The two specifications model the take-up of the program as the dependent variable. In Column 1, the ICU variable is introduced with a quadratic term to capture nonlinear effects. In Column 3, the ICU variable is introduced in the form of two dummy variables to capture a three-stage effect. In these two cases, the value of the calculated benefits is introduced with 15 other explanatory variables, which are included in the final models. [11]

The benefit amount is slightly significant in Model (2) but not significant in Model (1). The ICU variable is positive and significant in both models. Model (1) rejects the absence of nonlinearity at

[11] For the education variable, 27 values are missing for the sample of eligible persons. Education is an important variable and has to be included in the sample, so the sample size is reduced to 756 observations.

the 1% level. According to Model (1), it appears that income increases participation until an ICU of 210€ and reduces participation after this level. The specification of the ICU variable in Model (2) seems to fit the data better because the information criteria are lower; this is thus the preferred specification.

The different determinants of participation are broadly confirmed by the estimation results. When controlling for income, a higher benefits claim slightly reduces the probability of non-take-up. A ten percent increase in the social assistance program yields a 1.73% increase in the probability of claiming benefits. This result is in line with previous research (Riphahn, 2001) and is close to the elasticity of RSA benefits for the general population.[12] Note that the significance, and even the sign, of this variable is sensitive to the presence of the ICU. Growth in the value of the benefit increases participation up to a given level of ICU, and this is what explains the decrease in participation rates in table 4. Participation increases with income but in a nonlinear pattern. Having a physical limitation, by increasing the expected duration of benefits, has a positive and significant effect on the probability of participation. On the contrary, the number of months spent in employment during the previous year does not significantly reduce the probability of participation. A set of three variables is linked with the utility of receiving benefits by approximating non-declared sources of income or non-monetary income. Receiving non-governmental benefits and being informally employed reduce the probability of participation, which shows that some means for covering basic needs can be substituted for formal income.

In the set of variables that are used as proxies for the costs of application, having a mailbox increases the probability of participating, albeit not significantly. The costs of application are significantly reduced by the possession of a mobile phone. Living in the streets reduces the probability of participation in the program, albeit not significantly in the second model. The effect can be linked to a form of desocialization of the homeless living in the street. Contrary to other homeless groups, these people have no or very little institutional support, which benefits the homeless who live in long-term collective housing (Brousse, 2006). Even controlling for an important number of variables, the effects of the housing situation and the possession of a mailbox or phone may be overestimated. Individual who are less likely to submit claims might obtain a lower utility from owning a mailbox or phone. It is thus not possible to conclude that giving a phone to a homeless person will increase his probability of claiming RSA program benefits.

Contrary to most of the studies on the general population, age has no significant effect on program take-up. Being a man and being educated increase (insignificantly, for education) the probability of participation. The community size effects confirm that individuals living in large cities tend to have significantly higher take-up rates. The time spent in informally shared housing has a positive effect on participation. An interpretation may be that individuals who are hosted for a long time feel like a burden to the host. The benefits program permits him to live by himself and not to feel like a burden to his host anymore. An alternative explanation might be that the duration of hosting is a proxy for the quality of the social network of the individual. An individual with a good social network may have better access to information and could receive help during the administrative process.

5.4 Comparison with the general population

The possession of two surveys on the same program constructed at a one-year interval permits us to compare the features of homeless take-up with those of the general population. The survey conducted on the entire population (except people living in non-permanent homes or in institutions) is the quantitative survey on RSA 2010–2011. It has been used to derive, for the general population, the rate of non-take-up of the RSA in France (Chareyron, 2014; Domingo & Pucci, 2012, 2014) using the same methodology. Information that permits us to simulate eligibility is similar in both surveys, but there may be some small differences. For example, the survey on the homeless permits more accurate imputation of the housing lump-sum, whereas survey on the general population gives more accurate information on the past three

[12] Chareyron (2014) finds an elasticity of 0.11 for the RSA benefit for the general population.

months of resources. This can lead to some differences in the quality of the non-take-up rate estimation, but because the simulation quality is better for poorer households (Bargain *et al.* , 2012), the decision to focus on the "base" RSA reduces the risk of estimation inaccuracy. The variables included in the two models are not exactly the same but the most important and commonly used variables are present in both estimations.

First, some determinants are common to both populations. Receiving other governmental allocations and the population size of the urban area both have a significant effect on these two populations. Second, the size of the benefit has a small, positive effect on participation. In the same way as for the general population, the evidence broadly supports the consistency of the behavior of homeless persons with the theoretical model of Anderson & Meyer (1997).

There are however some important differences in the two populations. We can notice that the rate of non-take-up among the homeless is significantly less than the 29%–35% range for the general population's non-take-up rate for the "base" RSA. Thus, the first theoretical mechanism presented in the introduction seems to predominate. The homeless are poorer and thus gain greater utility from claiming benefits than does the general population. Figure 1 of C shows that even at the same level of ICU, the rate of non-take-up is significantly less for the homeless along the first part of the distribution (except for individuals with no income, where non-take-up among the homeless is significantly greater). This can be explained by the fact that, contrary to the general population, the homeless have potentially no or very few familial assets, which makes them in fact poorer than the population living at home at the same level of income. Riphahn (2001), Bargain *et al.* (2012) and Chareyron (2014) have shown that family resources, such as owning a home, are important determinants of non-take-up among the general population. The only point at which differential access to information dominates the differential in resources seems to be for individuals or households without incomes.

The model estimations and figure 2 show that the rate of non-take-up follows a nonlinear shape relative to income. Furthermore, the important elasticity of the ICU variable indicates that a reduction in income very importantly increases the costs of submitting a claim. It is likely that an excessively low level of income indicates an important level of desocialization, which tends to reduce take-up. They are more remote from the rest of society and are thus more suspicious of and less informed about public policy. Using the survey, we note that the homeless with no incomes declare more often than do homeless individuals with positive income in explaining the absence of a claim that they do not want to depend on the state, that they think they are not eligible for the program or that the procedure is too complicated. This phenomenon, albeit not totally absent in the general population, is more important in the homeless population. Although there is a high point for very low level of income, the rate of non-take-up increases quite steadily with income in the general population.

Another important difference is that the stigma costs of the homeless seem not to be affected much by the thinking of the general population, as indicated by the non-significance of the rate of RSA receipt in the department. This seems to confirm the separation of the homeless from the rest of the population. The effect of the age variable is also insignificant, contrary to the general population. This is not surprising, as Chareyron (2014) has shown that the important effect of the age variable measured for the general population is probably partly due to the missing asset covariate. In the case of the homelessness, the omission of the asset covariate is probably unimportant.

6 Conclusion

Although the body of literature on non-take-up of social assistance programs is now substantial, very few studies have been interested in the homeless. Because of the data construction, this population is generally not included in such analyses. In this paper, we investigate the phenomenon of non-take-up of social assistance among the homeless. We use a quite exceptional national survey on the French homeless, the 2012 Homeless Survey, which allows us to derive the non-take-up rate of the "base"

RSA. We specifically analyze the level and the determinants of non-take-up in this population, and we compare the results with studies on the general population.

We find that the rate of non-take-up among the homeless, although significantly less than among the general population, is non-negligible. Approximately 17% of homeless persons are simulated to be eligible but do not claim benefits compared to 35% for a comparable estimation for the general population. This difference, equally relevant for the same level of ICU, may be explained by the absence of other resources in the case of the homeless. Whereas a household with an individual home may own some familial assets, this is probably not the case for the homeless. The model estimation indicates that the economic modeling of the claim as a tradeoff between the costs and benefits of filing is also broadly relevant for the behavior of homeless persons. The size of the benefit has a positive effect on participation, with a marginal effect of broadly the same level as the general population. The expected duration of benefit payments significantly impacts the probability of filing a claim. A number of take-up determinants are well known for the general population; these are equally valid for the homeless population. The stigma cost is reduced by the number of habitants in the area of residence. Along the same lines, benefits from another governmental assistance programs reduce the information and application costs and thus increase participation.

However, we present evidence of important specificities of homeless behavior. The modeling confirms a separation between the homeless and others. The homeless are nearly unaffected by the way of thinking of the rest of the population, and desocialization has a strong negative effect on participation by increasing information costs. We show, along these lines, a nonlinear non-take-up rate relative to income by consumption unit. The very poor homeless are less likely to take up benefits than are richer homeless individuals, and non-take-up is thus higher on both sides of the ICU distribution. This phenomenon is quasi-exclusive to the homeless and seems to suggest that below a certain point, poverty excludes them from the national solidarity program. More accurately, it excludes them from a portion of the national solidarity program because these people are likely to substitute in-kind assistance or non-governmental assistance for monetary assistance.

These results, particularly the identification of a high level of non-take-up among the very low income has important political implications. They show that it is not enough to offer a social assistance program to ensure that people will not live in poverty or when people are already living in an important degree of poverty. In fact, the amount of social assistance could be increased, which will have an effect on both the poverty of the claimant and the number of claimants. However, the increase has to be considerable for people who are separated to a great degree from the rest of society and for whom the costs of filing a claim are very important. To help the homeless out of poverty in the most efficient manner requires both an increase in social assistance and support for poorer homeless persons, in particular, for the homeless living in the streets. Support often already exists for the homeless, but as in France, these programs may depend of their living conditions and may thus be less concentrated among the poorest and more desocialized homeless.

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Annex A: Education level

Table 1 indicates the levels of education used in the estimation. An equivalent is suggested for a foreign degree.

Table 1: Education level

Code	Level
0	No schooling
1	Diploma for youth leaders and workers
2	Primary schooling
3	Lower secondary (national diploma)
4	Technical (short cycle)
5	Baccalaureate (secondary school leaving qualification)
6	Technical (long cycle)
7	College up to BA
8	BA and above

Annex B: Decomposition of non-take-up

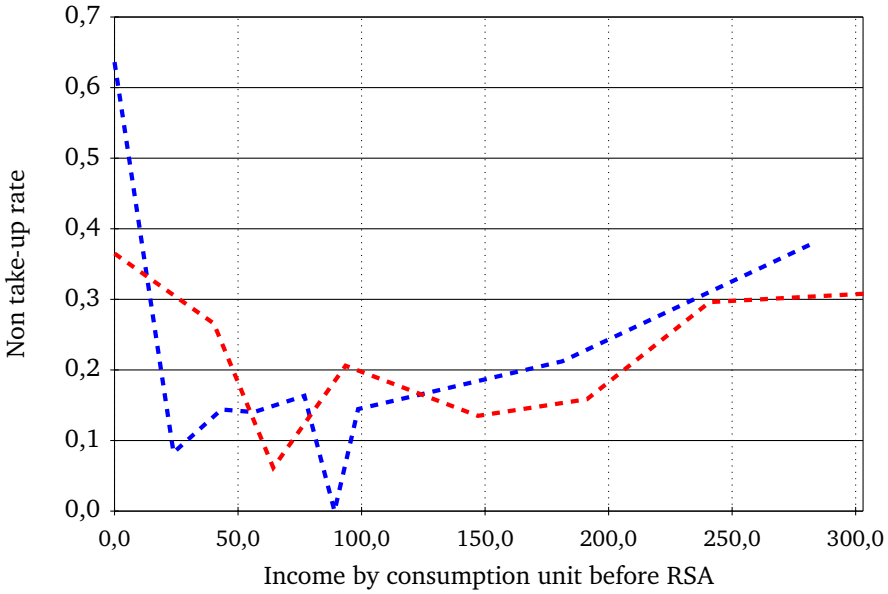
Table 2: Non-take-up rate among the homeless by characteristics

Characteristics	Non-take-up rate	Characteristics	Non-take-up rate
Single individual	0.20	Head < age 30	0.13
Single parent	0.15	Head between age 30 and 40	0.13
Childless couple	0.40	Head between age 40 and 50	14.73
Couple with children	0.18	Head between age 50 and 60	0.26
No child	0.20	Head > 60	0.20
Head of household with college degree	0.22	Head with no schooling	0.16
Towns > 200,000 inhabitants (excluding Paris)	0.16	Living in the streets	0.47
Towns < 200,000 inhabitants	0.34	Household head male	0.20
Paris	0.15	Household head female	0.13
First quartile of ICU	0.33	Second quartile of ICU	0.09
Third quartile of ICU	0.09	Second quartile of ICU	0.16

Source: 2012 Homeless Survey. Note: Rates are weighted.

Annex C: Distribution of non-take-up by ICU

Figure 1: Upper bound of the confidence interval of the distribution of non-take-up rate by ICU for the homeless population (blue) and the lower bound of the distribution for the general population (red)



Sources: 2012 Homeless Survey and quantitative survey on RSA 2010–2011; own calculations. Note: Rates are weighted.

Annex D: Probit estimation of take-up

Table 3: Probit estimation of take-up

	(1) Probit		(2) Probit	
	Coefficient	Elasticity	Coefficient	Elasticity
Take-up				
Benefit Effect				
Calculated benefits	0.001	0.117	0.001*	0.173*
	(0.001)	(0.107)	(0.001)	(0.102)
Duration Effect				
Number of months employed last year	-0.034	-0.012	-0.034	-0.011
	(0.031)	(0.012)	(0.030)	(0.011)
High physical limitation	0.586**	0.016**	0.776***	0.021***
	(0.206)	(0.003)	(0.215)	(0.003)
Low physical limitation	0.367**	0.014**	0.262	0.011
	(0.177)	(0.005)	(0.187)	(0.006)
Ressources Effect				
Income by consumption unit (ICU)	0.017***	0.330***		
	(0.003)	(0.056)		
(Income by consumption unit)^2	-0.000***	-0.174***		
	(0.000)	(0.042)		
ICU positive and lower or equal than 200 euros			1.746***	0.204***
			(0.217)	(0.024)
ICU greater than 200 euros			1.542***	0.046***
			(0.403)	(0.011)
Receipt of non-governmental assistance	-0.521***	-0.098***	-0.534***	-0.105***
	(0.100)	(0.029)	(0.103)	(0.031)
Informal employment	-0.680**	-0.024**	-0.527**	-0.019**
	(0.248)	(0.013)	(0.237)	(0.011)
Couple (1 if in couple)	-0.306	-0.013	0.059	0.003
	(0.272)	(0.014)	(0.256)	(0.011)
Application cost and stigma effect				
Receipt of other governmental allocations	1.061***	0.030***	1.137***	0.031***
	(0.260)	(0.005)	(0.257)	(0.006)
Has a mailbox	0.220	0.030	0.210	0.029
	(0.139)	(0.017)	(0.148)	(0.019)
Owns a mobile phone	0.118**	0.057**	0.113**	0.055**
	(0.042)	(0.018)	(0.042)	(0.018)
Lives in the streets	-0.376*	-0.018*	-0.309	-0.016
	(0.207)	(0.012)	(0.209)	(0.012)
Age	-0.008	-0.110	-0.010	-0.144
	(0.007)	(0.095)	(0.007)	(0.096)
Gender (1 if male)	0.298*	0.065*	0.272	0.060
	(0.164)	(0.034)	(0.168)	(0.036)
Education	0.006	0.005	0.018	0.015
	(0.028)	(0.023)	(0.028)	(0.023)
Gave birth to at least one child	0.196	0.039	-0.153	-0.031
	(0.150)	(0.028)	(0.142)	(0.030)
Living in Paris	0.082	0.006	0.043	0.003
	(0.172)	(0.011)	(0.181)	(0.013)
Living in a big city (excluding Paris)	0.299**	0.038**	0.294**	0.037**
	(0.145)	(0.016)	(0.147)	(0.016)
Time spent in collocation (in months)	0.007**	0.015**	0.007**	0.017**
	(0.003)	(0.003)	(0.003)	(0.003)
Constant	-0.716		-1.101*	
	(0.602)		(0.578)	
AIC	540.402	540.402	498.566	498.566
Number of observations	756	756	756	756

*** p<0.01, ** p<0.05, * p<0.1, Robust standard errors in parentheses
Source: 2012 Homeless Survey.

Table 4: Cumulative distribution function of non-participants and distribution of participation rate by segment of simulated entitlements

Simulated entitlements (€)	Non-participants (%)	Participation rate (%)[a]	Size of the segment
Less than −1 200	1,04	.	5
−1 200 to −1 000	2.08	.	5
−1 000 to −800	6.65	.	22
−800 to −600	8.73	.	12
−600 to −400	20.79	.	70
−400 to−200	42.41	.	111
−200 to 0	64.45	.	113
0 to 200	66.94	86.36	88
200 to 400	76.92	89.16	443
400 to 600	95.84	38.92	149
600 to 800	98.96	84.04	94
800 to 1 000	100	87.5	40

[a] Participation rate is measured by segment of simulated entitlements. It is a division of the number of participants in the segment by the number of individuals who have simulated eligibility and are included in the same segment.
Sources: 2012 Homeless Survey. Note: Rates are non-weighted. Non-participation is not the same as non-take-up: 66.45% of non-participants who are not calculated as eligible are not non-claimants.

Table 5: Descriptive statistics

Variable	All eligible	Participants	Non-participants
Household Characteristics			
Calculated benefit (€)	430.51	427.00	445.61
Couple (1 if in couple)	0.10	0.09	0.13
Number of children	1.08	1.1	1.00
In debt	0.44	0.45	0.40
In receipt of other governmental allocations[a]	0.31	0.38	0.07
In receipt of non-governmental assistance[a]	0.32	0.27	0.50
In-kind assistance[a]	0.63	0.61	0.74
Head of Household Characteristics			
Age[a]	40.83	39.80	45.23
Gender (1 if men)[a]	0.63	0.61	0.72
Education[*]	2.74	2.76	2.65
Employment in the last year	0.11	0.10	0.14
High physical limitation	0.11	0.12	0.08
Low physical limitation	0.15	0.16	0.11
Sickness	0.38	0.39	0.32
Important reading difficulty	0.04	0.04	0.04
Low reading difficulty	0.09	0.10	0.07
Informal employment[b]	0.06	0.05	0.11
Alcoholism problems in the family before age 18 [b]	0.37	0.38	0.29
Substance abuse in the family before age 18	0.08	0.08	0.08
Was hospitalized in psychiatry before age 18	0.09	0.09	0.10
Residence Characteristics			
Rate of RSA receipt in the department	61.16	61.49	60.25
Living in Paris	0.16	0.15	0.22
Living in a Big city (except Paris)[a]	0.51	0.54	0.41
Lives in the street[a]	0.07	0.05	0.17
Time spent in the street (in month)	19.40	17.95	25.62
Time spent in collective housing (in month)	17.90	16.84	22.46
Time spent in collocation (in month)[a]	11.39	12.66	5.92
Rental[a]	56.21	66.43	12.38
Own a mailbox	0.43	0.42	0.43
Number of observations	783	635	148

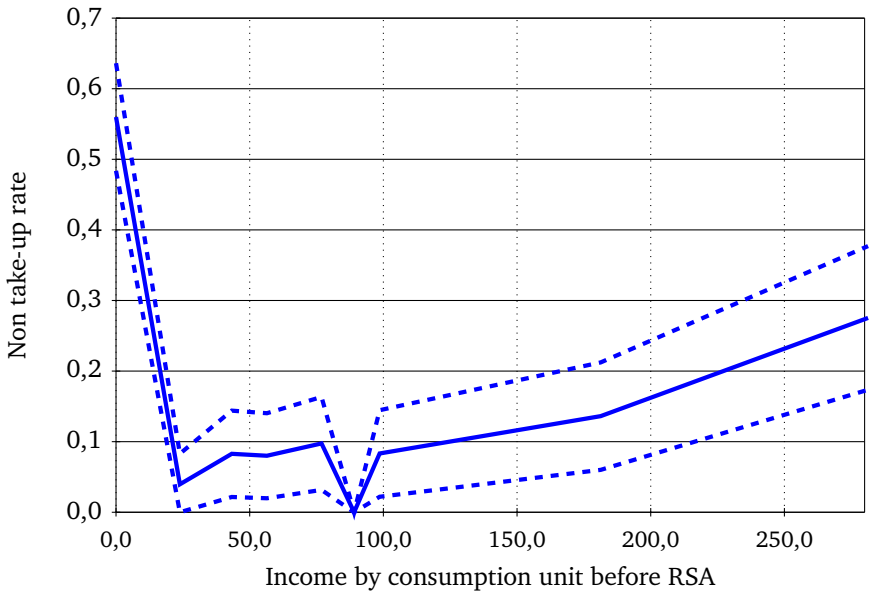
[a] Means are statistically different at the 1 % level.
[b] Means are statistically different at the à 5 % level.
[*] A definition of education level is given in Annex A.
Sources: 2012 Homeless Survey. Note: Means are non-weighted.

Table 6: Non-take-up rate: Baseline and sensitivity analysis

	All family types	Singles
Baseline	0.17	0.17
Unearned income (uniform change)		
-5%	0.17	0.17
+5%	0.17	0.17
+15%	0.16	0.17

Sources: 2012 Homeless Survey. Note: Rates are weighted.

Figure 2: Non-take-up rate and income by consumption unit for homeless



Source: 2012 Homeless Survey. Note: Rates are weighted.

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Nicolas Fleury, Fabrice Gilles

15_1. Why are there so many long-term unemployed in Paris
Yannick L'Horty, Florent Sari

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