



Exit from and non-take up of public services

A comparative analysis: France, Greece, Spain, Germany, Netherlands, Hungary

[MEASUREMENT OF "NON-TAKE-UP"]

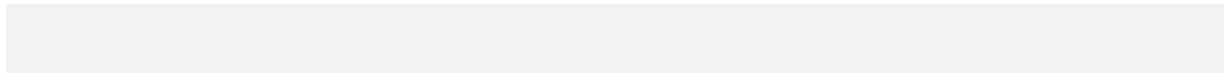
EXNOTA consortium

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METHODOLOGIES AND TOOLS FOR MEASURING NON-TAKE-UP

This part is a synthesis of the EXNOTA Consortium's work on measuring the NTU phenomenon. It is introduced by a brief review of the US and British literature by a member of the French team, undertaken as part of her PhD research. The presentation of these studies completes the bibliographic research of each of the teams. Its main aim is nevertheless to present debate on the measurement of NTU which, by nature or definition, is a phenomenon that is particularly difficult to identify and to measure. This helps to explain the origin of the theoretical grid for classifying surveys and data, proposed by the EXNOTA Consortium for application to the NTU of social benefits in Europe.

The creation of this grid has been influenced by the need to standardise estimation and measurement procedures - something that other authors, like Mike Brewer for instance, have previously tried to do. The grid has been applied to varying degrees in different countries. Each national report presents detailed statistical data available on NTU, arranged according to the nature of the information sources and the type of calculation.

In the synthesis the grid is presented without figures because a "comparative" presentation of statistical data collected in each country is too difficult. Due to the volume of information, it is impossible to combine it all. Above all, due to the particularities of data production in each country (the wide diversity of sources and significant differences between data bases), we cannot really compare the large quantities of statistic results in the national reports. Moreover, these country-specific results concern social benefits that all have particular contents and conditions of access, so that the rates of NTU found in different countries cannot be used for classification by type of benefit.

The grid presented here therefore has an essentially theoretical value since it shows which calculations and types of available information can be used to estimate or measure rates of NTU. This type of tool (which remains amendable) is useful for presenting and classifying results. Apart from the Consortium's work, it could also serve in gradually setting up comparable measurements of NTU in Europe, especially once a project has been launched to create statistical indicators of access to social benefits, possibly in the framework of the National Action Plans against poverty and social exclusion (NAPs/incl).

In this perspective the synthesis argues that *a lasting statistical approach to access to benefits* could serve to identify and format available data on NTU in each European country (as initiated with the EXNOTA project) and to facilitate the most intensive

observation possible at a national and local level. This could then serve to draw up "operating reports" of the multiple statistical expressions of NTU. For a subject as complex as access to social rights¹, no standardised measurement in terms of rate of NTU can reasonably be envisaged. Thus, even before conceiving of the construction of such rates for "European social benefits" which do not yet exist, the most urgent task seems to be to reinforce approaches to NTU in each country despite their differences. That is why our main recommendation concerns the need to organise, country by country, at different territorial levels, an inventory of sources of information and administrative and associative data bases that could be tapped.

1. STUDYING NON TAKE-UP IN THE UNITED KINGDOM AND THE UNITED STATES OF AMERICA: A LITERATURE REVIEW²

Some researchers have tried to estimate the Non Take-Up (NTU) phenomenon on the basis of surveys and administrative data, and have often tried to test some hypotheses concerning the causes of this public policy problem.

For most of the authors who have worked on NTU indicators, those estimations may be a sign of the ineffectiveness of public policies, and especially of the fact that targeted policies are not able to reach all of those for whom they have been designed. The estimation of NTU rates and the identification of its causes allow for the evaluation of policies, for a better conception of related programmes, and for the anticipation of the costs associated with a change in the amount of a benefit or with a change in eligibility criteria. NTU estimations can help to fight poverty and exclusion. Knowing the rates and sources of NTU can help us to target the units who may really need help, to facilitate their access to services and to raise their incomes.³

This report aims to provide an overview of "empirical" studies on NTU. We have chosen to concentrate on studies undertaken in the USA and the UK simply because most of the literature comes from those countries. A recent OECD report notes: *Estimates are available for a very limited number of OECD countries, and mainly refer to the United Kingdom and the United States.*⁴

¹ DALY M. 2002. *Access to Social Rights in Europe*. Report to European Council: October, ISBN 92-871-4985-2.

² This presentation is proposed by Marie-Pierre Hamel, member of the French EXNOTA team and PhD student at the IEP in Paris.

³ We notice that for the income implications of NTU, one of the important questions is: "If take-up were 100 per cent (or some other target level), how far would this contribute to reducing the problems of those with low incomes?" This question is complex and can be illustrated by two aspects that we need to know. The duration of NTU is important here. If it is relatively short, it may be regarded as a less serious issue than if some of those eligible do not claim at all. It is also important to know of the non-claimants are the heads of households or whether they are living with others. We also note that the measurement of poverty is not straightforward. The take-up of some benefits may raise the income of an individual, but it does not tell us about that person's quality of life, about his or her social links, about the form of state assistance that this person would prefer, etc. ATKINSON A. B. 1989. "The Take-up of Social Security Benefits" in ATKINSON A. B (ed.) *Poverty and Social Security Benefits*. London: Harvester Wheatsheaf: 194.

⁴ Note that "few government agencies regularly compile and publish data about how many eligible people eventually take-up welfare benefits... The British Department of Work and Pensions (DWP) being a notable

First, we briefly try to explain why NTU has been studied mainly in those countries. We then explain the general approaches that have been used to analyse NTU. Finally, we distinguish between different types of estimations related to NTU rates. After those introductory elements, we propose an analysis grid to facilitate the literature review. To conclude, we present the lines of research that seem to be worth developing most.

1.1. Explaining differences between countries

Briefly, we can advance some hypotheses to explain the importance of research on the subject in the USA and UK, compared to the situation in France and some other European countries. First, this interest could be explained in part by the importance of means-tested policies in those liberal countries. A large part of the US social security system is, for example, based on means-tested programmes. As regards means-tested policies, a British report on pensions, published in 2003, notes that: *There is nothing inherently wrong with a means-tested approach which focuses available resources on the poorest pensioners if the issue of take-up is adequately addressed.*⁵

We also note that the question of the evaluation of public policies is more developed in those countries than in France, for example. This may explain why those countries have paid more attention to developing indicators of the efficiency of public policies like NTU. Co-production of public services, between users and the administration, has often taken place in those countries. With this co-production, and the difficulties discussed by the users, the recognition of NTU as a public policy problem may have appeared more easily. In the UK for example, users have been consulted about their use of those benefits and services, and the Government has used NTU data to cut some under-utilized services (although it could of course have tried to facilitate access instead of cutting the services). The question of fraud can also be pointed out. This subject has been treated very seriously in those countries. Studying the problem of fraud can easily lead to the study of its counterpart, NTU.

Overall, the lack of estimations and studies in many countries partly reflects: *the huge volumes of data required for the production of reliable estimates of take-up rates. Large-scale micro datasets, containing information on individual incomes, and data of adequate quality are not available for many countries.*⁶

exception: it regularly publishes accurate estimates of take-up rates for various benefits since 1997". See: HERNANZ V., MALHERBET F., PELLIZZARI M. 2004. "Take-up of Welfare Benefits in OECD Countries: A Review of the Evidence". *OECD Social, Employment and Migration: Working Papers* no 17: 13.

⁵ House of Commons, Work and Pensions Committee, «The Future of UK Pensions. Third Report of Session 2002-2003», *Vol.1: Report and Proceedings of the Committee. HC 92-1* (London: The Stationery Office, 2003), para. 63. Cited in HANCOCK R., PUDNEY S., BARKER G., HERNANDEZ M. and SUTHERLAND H. 2003. «The Take-up of Multiple Means-tested Benefits by British Pensioners: Evidence from the Family Resources Survey», *University of Leicester Website. Department of Economics*, [In line], <http://www.le.ac.uk>, 8.

⁶ HERNANZ V., MALHERBET F., PELLIZZARI M. 2004. «Take-up of Welfare Benefits in OECD Countries: A Review of the Evidence». Op. Cit.: 9.

1.2. Two general approaches for studying NTU

For studying NTU, two approaches seem to coexist in the literature. It seems that research initially tried to identify the different variables affecting take-up. By the late 1970s it was generally admitted that NTU was the consequence of ignorance, stigmatisation, and administrative complexity. The problem was that the interactions between those variables were not well understood, and that it was difficult to know how those factors really affected and made the difference in the choice of claiming or not.⁷

What can be called "Models of the Claiming Process" were developed at that time to try to further understanding of the choices made by the groups eligible for a benefit or service. One important model, developed principally by Scott A. Kerr, consists basically in asking people directly, by means of surveys or interviews.

Research example

Scott A. Kerr wrote a paper entitled *Deciding About Supplementary Pensions: A Provisional Model*, published in 1982. In this paper he presented the results of research that aimed to construct and to determine the empirical validity of a cognitive model. The model defined six general cognitive factors that could be used to explain the phenomenon of NTU of means-tested benefits. More precisely, the aim of Kerr's paper was to: *construct a theoretical model using concepts culled from the literature on take-up problems, and to test its effectiveness in predicting claiming behaviour within a prospective research design.*⁸

This research is a classical example of "claiming process" studies. *The model incorporates the more important findings of previous research. [...] Kerr distinguished his approach from others on two counts. Firstly, it incorporated a specific theory of decision making which would allow for the interpretation of the relationship between attitudes and behaviour. Secondly, it could be used to predict claiming behaviour rather than just interpret past claiming decisions [...]. S. Kerr's was not the only attempt in the early 1980s to organise the factors thought to explain claiming decisions into a coherent model of the claiming process. It has been Kerr's model, though, that has had most influence on subsequent research.*⁹

The author firstly differentiates the general reasons for not claiming into six variables. Those reasons are the following: (1) the perceived need; (2) the basic knowledge about the benefit; (3) the perceived eligibility; (4) the perceived utility (that the individual has for the benefit to meet his or her specific needs); (5) the beliefs and feelings about the application procedure ("all negative and positive forces exerted by an individual's beliefs about the application procedure and how he or she feels about those beliefs"); (6) the perceived stability of the situation (if an individual thinks that his or her situation is unstable, it can prevent him or her from claiming until it stabilises). Those "variables" are directly based upon expectancy-value theories of motivation and decision-making. The decision of a pensioner to apply or not is considered here as the sum of the products of the strength of his beliefs and feelings about the consequences of applying.¹⁰ The variables, according to previous research, appear to be highly interrelated: to apply, a pensioner has to achieve all six. It is also suspected that a pensioner must achieve all the variables in succession in order to claim. In this process, we must finally consider that only a sub-group of all eligible pensioners actively makes decisions. There are some citizens who decide not to apply and others that simply do nothing. Changes to the application procedure must be conceived of for those who think of applying (those people can be identified with the model), while other types of measure can be developed who those who are far from this decision-making process.

To test this model, the author first selects a sample of eligible non-claiming pensioners (the study was undertaken in Edinburgh on 120 people). Secondly, he informs them in an in-depth interview of the existence of the benefit, of their eligibility and of the application procedure, and records their attitudes towards claiming. He then uses the measurements to predict their claiming behaviour during the ten weeks following the interview. Finally, he tries to demonstrate the model's predictive validity by comparing predicted with actual behaviour and its constructed validity, by showing the independence of the main constructs. He notices that a certain bias can appear. Rather than confounded prediction by informing the pensioners of their eligibility at the

⁷ CRAIG P. 1995. «Costs and Benefits: A Review of Research on Take-Up of Income-Related Benefits». *Journal of Social Policy* 20 (4): 543.

⁸ KERR S. A. 1982. "Deciding about Supplementary Pensions: A Provisional Model". *Journal of Social Policy* 11 (4): 506.

⁹ CRAIG, P. 1995. "Costs and Benefits: A Review of Research on Take-Up of Income-Related Benefits". Op. Cit.: 544-548.

¹⁰ KERR S. A. 1982. "Deciding about Supplementary Pensions : A Provisional Model". Op. Cit. : 507.

end of the interview, they were informed prior to discussing their beliefs and feelings. In fact the author was ethically bound to inform the pensioners about their eligibility and about how to apply before the interviews.¹¹

As a result, the predictions made by the model were the more accurate than those of any other method. Using inter correlations among the keys concepts, the author has also showed that the constructs were independent. He notes, in the conclusion, that: *Over the entire sample, pensioners had no strong feelings about specific aspects of the application procedure; in contrast, their feelings about the benefit being charity were uniformly strong and negative.*¹²

Instead of asking citizens directly why they claim or not, some economists have used data from continuous surveys, or administrative databases, to examine the relationship between sets of observed variables (age, income and housing tenure for example) and differential probabilities of claiming. They have applied multivariate techniques to those surveys.

We note that there has been almost no "exchanges" between the two approaches: *As Atkinson suggests, economic and special survey approaches are best seen as complementary. Econometric analyses on the relationship between observed variables such as age, income, household composition, tenure and level of entitlement on the one hand and claiming benefits on the other can define areas where research on the motivational factors affecting take-up would be best focused. Special surveys, in turn, are the only way of establishing the reasons for the differential probabilities of take-up, associated with observed variables. One implication of successful econometric work on take-up might be that claiming decisions can be modelled in the same way as other economic choices facing households, rather than by way of models designed to relate exclusively to take-up issues.*¹³

We also note that those two "schools", the main problem in take-up research is the difficulty of identifying a population of eligible non-recipients, for which no suitable sampling frame exists. Those people are, for example, not known by the administration. Furthermore, and as Antoine Terracol has noted, it is never possible to know if an individual is truly eligible to a benefit. That is why we implicitly talk about "estimated NTU" when we refer to NTU rates, or why we defined NTU as the *probability* of not receiving a benefit even if eligible.¹⁴

1.3. Different rates related to NTU

First, NTU studies can be undertaken at a national level but also at a regional or local level. The choice depends of what we want to explain. For example, we may be interested in NTU and its causes for a specific "poor" neighbourhood, or we may want to know if a national benefit has reached the targeted population. The level of analyse may

¹¹ *Ibid.*, 510.

¹² *Ibid.*, 516.

¹³ *Ibid.*, 556.

¹⁴ TERRACOL A. 2001. "Coût de perception et taux de non-recours aux prestations sous conditions de ressources. Working paper, TEAM, Université de Paris I (version préliminaire)", *Site du laboratoire Théorie et Applications en Microéconomie et Macroéconomie (TEAM)*, [En ligne], <http://team.univ-paris1.fr>.

also depend on the sometimes divergent policies of some municipalities in the allocation of services and benefits, or simply on available information.

Secondly, confusion can exist about some estimations that may seem to be almost the same as NTU rates. In the literature, some authors refer to *NTU rates* but also to *Participation rates* or *Take-up rates*, and to *Service rates*:

- *NTU "classic" rates* correspond to the standard definition of NTU: *Not receiving a social benefit even though you are entitled to it, whatever the reasons may be*. To estimate NTU, one must divide the population N into two categories: the entitled population (Ne) and the non-entitled population (Nne). One citizen cannot be both: he/she is or is not eligible according to the law. "Discretionary" benefits cannot be analysed in terms of NTU. NTU corresponds to the eligible population who is not receiving a benefit: Ne_NTU. The NTU rate T will be the ratio of eligible people who are not receiving a benefit over the total number of people who are receiving a benefit: $T = Ne_NTU/Ne$.¹⁵

- *Participation rates* refer to the share of the total population that receives a given benefit.¹⁶ In other words, they measure the extent of welfare programmes. Many studies refer to those participation rates, or to *Take-up rates*. Often, they use those rates "to refer" to the rest of the people who are not receiving what they should. In that way, participation rates or take-up rates are almost equivalent to NTU rates. Nevertheless, we must not forget that some people may receive a benefit while not being entitled to it, because of fraud or administrative errors.

- Finally, we note that some authors refer to *Service rates*. This can reflect the number of people who have no access to what they are entitled to, possibly because of financial constraints on the side of the State:

*In some cases, the number of individuals who receive a benefit is limited by some physical or financial constraint on the supply side. For example, in the case of childcare, available places for free or subsidised childcare are limited and filled on a "first-come, first-served" basis...The ratio of served individual or households, over the total number of eligible cases, is called the service rate.*¹⁷

1.4. Proposition to classify studies on NTU

With the objective of identifying rates of NTU, or developing indicators, researchers have tried to understand the phenomenon better. The proposed grid will allow us to analyse the different studies of NTU, identified with a partial review of the literature on NTU.¹⁸

¹⁵ MATH A. 2003. "Les méthodes utilisées pour mesurer le non-recours aux prestations sociales en France (Note réalisée dans le cadre de EXNOTA)". *Site de l'Institut de Recherches Economiques et Sociales (IRES)*, [on line], <http://www.ires-fr.org>.

¹⁶ HERNANZ V., MALHERBET F., PELLIZZARI M. 2004. "Take-up of Welfare Benefits in OECD Countries: A Review of the Evidence". *Op. Cit.*: 8.

¹⁷ *Id.*

¹⁸ For this grid we were inspired by the works of Antoine Math and of Mike Brewer.

A. Classic NTU

a. NTU rates calculated on the basis of *ad hoc* inquiries

The studies in this category are those which use survey data that were especially created to calculate NTU. They are *ad hoc* studies. A representative sample of the population is identified. In this sample, the population is divided into the people entitled and those not entitled to a benefit or service. A survey created for the study with questions related to eligibility conditions allows the researcher to divide the sample. A specific question about the actual take-up of the benefit, or a comparison with administrative data, then allows the inquirer to know if the eligible people effectively receive the benefit or service.

With this type of study it is also possible to evaluate temporary NTU to benefits. The inquirer can ask the people who are already or newly eligible to a benefit "how much time" it took before they effectively asked for the benefit, once eligible.

We can classify the "models of claiming process" studies, or "special surveys studies" here. Those studies are not necessarily done to evaluate precise rates of NTU, but they try to understand the process of claiming by directly asking citizens about their behaviours. Economic research based on surveys created specially for the studies, and which applied multivariate techniques to the sample, can also be put here.

Research example

In 1976, a paper by Peter F. Taylor-Gooby entitled *Rent Benefits and Tenants' Attitudes. The Batley Rent Rebate and Allowance Study* was published. In this article the author describes a study that aims to investigate potential factors affecting the take-up of rent benefits.¹⁹

The experiment was performed in the city of Batley. The idea was to ascertain how far a locally-based education and publicity campaign could affect the take-up of some social benefits. The author advanced three possible causes of NTU. He believed that ignorance and misconception about the benefits and about entitlement could affect take-up. Carrying through an application procedure, that sometimes has to be "repeated" periodically, could also be an obstacle to take-up. Finally, stigmatisation may also deter people from claiming. The experimental local action conducted in Batley tried to tackle all three.

*Local publicity campaigns would complement national and council efforts. The counselling services and support of welfare rights workers, propaganda among social workers and the activation of community groups would simplify claiming. Urging the right to benefit would minimize stigma.*²⁰

To test his hypotheses, the author carried out a 20 % sample survey of two low-income wards, containing some 43 % of the town's population of 42,000, in December 1972 and January 1973. With this survey, he was able to calculate entitlement and take-up, and to identify eligible households. In the second part of his "experiments" he compared, after a local publicity campaign, the patterns of claiming between Batley and some "control" towns. The towns of Keighley, Brighouse and Morley, comparable to Batley and where no special publicity was done, agreed to supply appropriate data. The publicity campaign that was done in Batley included, for example, the mailing to 2,600 private tenancies of standard council leaflets. In a second campaign, all rented properties,

MATH A. 2003. "Les méthodes utilisées pour mesurer le non-recours aux prestations sociales en France (Note réalisée dans le cadre de EXNOTA)". *Site de l'Institut de Recherches Economiques et Sociales (IRES)*, [on line], <http://www.ires-fr.org>.

BREWER M. 2003. "Estimating Models of Benefit Take-up". *Institute for Fiscal Studies. Site of Inland Revenue*, [on line], <http://www.inlandrevenue.gov.uk>.

¹⁹ TAYLOR-GOOBY P. F. 1976. "Rent Benefits and Tenants' Attitudes. The Batley Rent Rebate and Allowance Study". *Journal of Social Policy* 5 (1): 33.

²⁰ *Ibid.*, 35.

both private and local authority, received "appropriate specially designed leaflets". The entitled tenants were finally interviewed again to try to find out what factors had prevented the non-claimers from applying.²¹

The author found no firm grounds for suggesting that publicity had improved rebate take-up. With interviews, he then tried to understand the attitudes and behaviours of claimers and non-claimers. More precisely, the 35 claimers and the 36 non-claimers in the cohort were asked why they thought that some other tenants had not claimed, and the non-claimers were asked why they had not claimed themselves. With that exercise, the author tried to obtain a picture of the social meaning of take-up of a means-tested benefit, and to understand the subjective motives of non-claimers. The main reasons for not claiming given by the non-claimers were ignorance and misconception, as well as stigma, pride and dislike of charity. Others reasons included fear of refusal, experience with other benefits, picture of the means-test built up from other tenant's experiences, or traditional budgeting arrangements (e.g. some did not want to reveal their income to their partner).²²

The author also attempted to understand the importance of stigma in the depth-interviews. *Ten tenants suggested that stigma was a major obstacle to claiming in their case, but others referred to it simply as a factor contributing to non-take-up [...] viewpoints seem related to socialization into the values appropriate to the market system [...] Take-up is not a simple function of publicity. Some disincentives are related to basic values of our society, and our understanding of the place of welfare in it...*²³

b. NTU rates calculated on the basis of existing inquiries

Some studies that were not specifically created to calculate NTU allowed researchers to estimate NTU rates. They were mainly "economic studies" that applied multivariate techniques to the data. In this category of studies, we can distinguish between:

- Inquiries that contain no specific question about the perception of the considered benefit:

The number of people eligible to a benefit is estimated on the basis of a non specific survey and compared with the other administrative data that allow the number of people who are receiving the benefit to be known.

- Inquiries that contain at least one question about the perception of the considered benefit:

The number of people eligible to a benefit is estimated on the basis of a non specific survey and compared with the answers to the question(s) about perception of benefit. (Eligibility for the benefit will also be estimated on the basis of a survey; it is a deduction from certain characteristics.)

It is sometimes difficult to see in the articles reviewed whether there is a direct question about participation in the surveys considered, since the authors do not always mention it.

The studies that "estimated NTU" are sometimes of that kind, but they often have specific goals. The different studies that try to estimate NTU rates have also often tried to know more about the causes of NTU, to understand better the effects of different variables that can affect the decision to take-up or not.

²¹ *Id.*

²² *Ibid.*, 44-45.

²³ *Ibid.*, 46-47.

One of the fundamental assumptions of microeconomics, as regards the consumer's behaviour, is that "more is better than less". Consequently, NTU can be seen as a puzzle for economists, because with it, "more is not always better than less". As a solution and in accordance with the microeconomic paradigm, some economists have suggested that the perception of social benefits has involved costs for the beneficiaries. In these cases the potential beneficiaries receive the benefit only if the utility supplement derived from the income supplement compensates for the disutility derived from those perception costs. Those costs can stem from stigmatisation, information problems, complexity of the social benefit system etc.²⁴ R. Moffitt was one of the first analysts to point out that: *People do not take up benefits if the disutility of claiming and receiving the benefit outweighs the utility gain of the extra income.*²⁵

Related to this logic, some researchers have tried to show a connection between take-up choices and different variables such as age, educational level, marital status, housing tenure, rural or urban context, disabilities, ethnic origin etc.

Research example

Richard Blundell, Vanessa Fry and Ian Walker published a research article entitled *Modelling the Take-up of Means-Tested Benefits in the United Kingdom in 1988*.²⁶ According to them, studying take-up is important because it has government revenue implications (changes to benefit levels may give rise to changes in take-up that significantly affect the revenue implications), and because NTU relates to the welfare of both individuals who claim and individuals who fail to claim their entitled benefit.

In this paper the authors investigate the relationship between the take-up of a benefit, individual socio-economic characteristics, and the level of entitlement. They do not study stigma because their data do not cover individual attitudes towards benefits. They can, however, comment those issues to the extent that "real" costs and the stigma of claiming are more likely to outweigh the benefits if the level of entitlement is small: *Evidence that shows a positive relationship between take-up and the level of entitlement provides support for the view that there may be significant costs of one kind or another associated with claiming.*²⁷

They study take-up for the Standard Housing Benefit (HB). HB is a means-tested social security payment designed to subsidise the rent and rates (taxes) of people on low incomes. The entitlement depends on the relationship between incomes, needs and housing costs. For this benefit, official estimates of take-up rates in 1979 were between 50 and 72% for the rent components and 70% for the rates element (suggesting that over 2 million families may be in a situation of NTU). The authors use the 1984 Family Expenditure Survey (FES) data. This survey provides annual information on benefit receipts for approximately seven thousand households and a large number of incomes and demographic variables on which to base calculation of benefit entitlement levels.

Blundell *et al.* identified an important problem to be faced before any econometric analysis of the relationship between take-up and its determinants: the reliability of the data source. Clearly, administrative statistics on recipients only give a censored view of take-up and the resulting data would be unlikely to throw much light on its determinants. A survey like the one they use is a better solution, but the computation is subject to errors. The FES, for example, gives little information on recent incomes and other changes in household characteristics. For this and some other reasons, they note that the HB entitlement calculation is most accurate for individuals whose circumstances have been relatively stable over time.²⁸

²⁴ TERRACOL A. 2003. "Essai sur la perception des minima sociaux en France. Thèse: Université de Paris I 'Panthéon Sorbonne'. UFR de Sciences économiques", *Site du laboratoire Théorie et Applications en Microéconomie et Macroéconomie (TEAM)*, 2003, <http://team.univ-paris1.fr>:57.

²⁵ This passage refers to the article of:

MOFFITT R. 1983. «An Economic Model of Welfare Stigma». *American Economic Review* 73 (5): 1023-1035. But is outline in: Mike Brewer, «Estimating Models of Benefit Take-up».

²⁶ BLUNDELL R., FRY V., WALKER I. 1988. «Modeling the Take-up of Means Tested Benefits: the Case of Housing Benefits in the United Kingdom». *The Economic Journal* 98 (390), Supplement: Conference Paper: 58-74.

²⁷ *Ibid.*, 59.

²⁸ *Ibid.*, 63.

The receipt of HB is not recorded directly in the FES, but as the difference between gross and net rent and rates. After some manipulation, the authors present a table of those who are entitled and receiving, those who are entitled and not receiving, and those who are receiving and are not entitled, and make links. They found, for example, that the higher the entitlement, the greater the chance of it compensating for the cost of claiming. Those in local authority rented accommodation are much more likely to take up than those in private rented and rent-free accommodation (stable situation and access to information can explain that). Those under retirement age are less likely to take up than those over that age. For the people who are employed, age and education have a negative effect on take-up. For education, the more educated people may be more sensitive to stigma than the others. They also look at characteristics like number of children, length of time that households have already been or are expected to remain eligible to receive the benefit, duration of eligibility, fluctuation of income, "frequent changes of circumstances", and work situation (part-time etc). They conclude that the results show that in addition to certain household characteristics, both entitlement and incomes are significant explanatory variables for the take-up probability.²⁹

- Some researchers have tried to estimate a value of stigma costs of receiving a benefit:

Research example

Robert Moffitt, in an article published in 1983 and entitled *An Economic Model of Welfare Stigma*, is one of the first authors to have attempted to model the welfare stigma linked to participation in welfare programmes.³⁰

This implies that individuals are not indifferent to the composition of their incomes, and that it is not true that "income is income". The disutility of participation may simply be a flat amount arising from participation, or it may vary with the size of the benefit. By modelling non-participation in a utility-maximizing decision, he addresses the three following questions:

*When is the disutility participation strong enough to prevent participation? Shouldn't we expect individuals to weigh the disutility of participation against the potential benefit in their decisions? What is the elasticity of participation with respect to the potential benefit?*³¹

He starts with the assumption that in the population, tastes for work and distaste for welfare both exist. Only those with relatively low distaste for welfare or low tastes for work will participate in the programme. This has implications for the labour-supply response to welfare.

For his study, he uses the data from the 1976 wave of the Michigan Panel Study of Income Dynamics. The model is estimated for the Aid to Families with Dependent Children (AFDC) means-tested programme. In the sample that he uses for the study (there is restriction on assets, on household structure and on family incomes for eligibility to the programme), he takes only female heads, with non-wage incomes low enough for them still to be eligible to benefits, and with no missing data. He estimates the eligibility for the AFDC on the basis of the information he has, such as weekly hours worked, family size, age of the younger children, etc. Approximately 35% of the sample is on AFDC. Among the non-participants, about 2/3 are eligible for benefits.

In his study, Moffitt looks at some socio-economic characteristics and their influence on participation. Distaste for welfare increases and participation decreases with age, smaller family sizes, and lower levels of unemployment rates. He advances some explanation for those situations. For example, he writes that maybe those with more education have developed greater feelings of stigma than those with less education. It is also possible that high employment rates reduce stigma temporarily because welfare reciprocity becomes more widespread and reaches further up into the income distribution.³²

In the conclusion he notes that:

*This paper has demonstrated that the decision not to participate in a welfare programme despite a positive potential benefit can be successfully modelled as a utility-maximizing decision resulting from stigma.*³³

However, he insists on the fact that stigma appears to arise mainly from the act of welfare reciprocity per se, and not to vary with the amount of the benefit once on welfare. He also observes that the probability of participating varies with the size of the potential benefit.³⁴

²⁹ *Ibid.*, 72.

³⁰ MOFFITT R. 1983. "An Economic Model of Welfare Stigma". Op. Cit.: 1023-1035.

³¹ *Ibid.*, 1023.

³² *Ibid.*, 1032.

³³ *Ibid.*, 1033.

³⁴ *Ibid.*, 1034.

- Some studies have aimed to model take-up of benefit simultaneously with labour supply behaviour:

*Entitlement to means-tested benefits will generally depend upon labour supply behaviour, and labour supply incentives will be altered by the value of means-tested benefits. This simultaneity implies that, even if preferences for working and claiming benefits are uncorrelated, individuals working and claiming some in-work benefit will have lower propensities to work than those working and not claiming, ceteris paribus. Conversely, it means that those observed not working must have relatively high stigma costs, c. p.*³⁵

Research example

-An article entitled *A Structural Model of Multiple Welfare Program Participation and Labour Supply*, by Michael Keane and Robert Moffitt, was published in 1996. For the authors, the possible work disincentives and other inefficiencies created by the existence of multiple transfer programmes is one of the most important issues in the economics of transfer programmes in the United States.³⁶ However, there have been almost no studies of the labour supply effects of multiple programme participation. This situation can be explained by at least two factors. The existence of self-selection into different programme combinations on the basis of unobserved heterogeneity such as welfare stigma and other factors implies that the labour supply elevation must be estimated jointly with a set of programme participation equations ("Yet the joint estimation of a large number of equations with limited dependent variables has until recently been computationally unfeasible").³⁷ Secondly, *imposing a utility structure on the problem results in a choice problem whose analytical solution is intractable because the regions of the error space within which different programme combinations are optimal are too complex to be derived.*³⁸

Simulation estimation methods are applied in the paper to try to solve the problem. They use a four-equation model, analysing the problem for three means-tested transfer programmes, AFDC (AFDC automatically gives access to Medicaid), Food Stamps and subsidized housing, together with the labour supply equation. The programme participation combination choice is treated jointly with the labour supply choice, and the labour supply equation itself must be estimated jointly with a set of programme participation equations.

For the study, the authors use the First Panel of the SIPP, a representative sample of the US population that was especially designed to elicit accurate information on incomes and participation in various transfer programmes. The panel gives participation rates to the programmes. Within the S.I.P.P, for 1984, they select all female heads of family aged between 18 and 64 with children under the age of 18. They also exclude families with high asset levels (over 4,500\$) because they are far off the transfer programme asset limits.

They simulate effects of changes in budget constraints and policy parameters on labour supply and programme participation, in order to illustrate the implications of their estimates for the cumulative marginal tax rate problem in multiple programmes. They also conduct an out-of-sample comparison by comparing the actual change in labour supply and programme participation in an historical event (a major increase in the AFDC tax rate in 1981).

As a result and among other things, Keane and Moffitt found that many types of wage subsidies and related types of wage rate increases have both significant positive labour supply effects and decreased programme participation effects.³⁹

- Some studies have tried to understand better the effects of information problems on take-up, by studying the effects of publicity campaigns on take-up, for example, or the effects of the complexity of administrative procedures:

³⁵ BREWER M. 2003. "Estimating Models of Benefit Take-up". Op. Cit.: 13.

³⁶ KEANE M., MOFFITT R. 1996. "A Structural Model of Multiple Welfare Program Participation and Labor Supply. Institute for Research on Poverty. Discussion Paper no 1080-96", *University of Wisconsin-Madison Social Science Computing Cooperative Website*, [on line], <http://www.ssc.wisc.edu>: 1.

³⁷ *Ibid.*, 2.

³⁸ *Id.*

³⁹ *Ibid.*, 38.

Research examples

- An example of this type of research is the work done in 1976 by Peter F. Taylor-Gooby, published under the title *Rent Benefits and Tenants' Attitudes. The Batley Rent Rebate and Allowance Study*, explained above.

- In a paper published in 2002, entitled *Pensioners and the Minimum Income Guarantee: Observations from Recent Research*, Eileen Evason, Lizanne Dowds and Paula Devine review the data on levels and sources of income, health and receipt of core disability benefits, and the extent of non-take-up of the Minimum Income Guarantee, using the data collected via the 1999-2000 Northern Ireland Life and Times Survey (NILT).⁴⁰

About the policy context in which this research was produced, we read that:

*It might be argued that, after so much effort to maximize take-up rates generally, it would be more sensible to abandon what has turned into social policy's equivalent of the Holy Grail. Government cannot do this, however, because take-up has been pinpointed [by the Social Security Committee] as the Achilles heel of current pension policy. In consequence, unprecedented efforts have been made since 1999 to get pensioners to claim the Minimum Income Guarantee. The NILT was primarily concerned with the extent of non-take-up rather than its causes. Nevertheless, the data we discuss below reinforce recent evidence on the difficulties of maximising take-up and add to decades of research on this topic.*⁴¹

The NILT contains three main themes. It gives information about provisions being made for retirement and related matters among persons under pensionable age, about the extent and causes of premature withdrawal from the labour force, and about the financial allied circumstances of persons of pensionable age. About 2,200 face-to-face interviews were done for the survey. For their research, the authors used a sample of 505 persons, augmented with a booster sample provided by the Northern Ireland Department of Social Development, bringing the total number of pensioners interviewed to 818. With this, they have information about the pensioners' income, their entitlement, and the benefits they receive (although they note that some people do not know or are not sure about the benefits they receive). Frequent changes in the names of the benefits are pointed out as responsible for this situation).

The people who seemed to be entitled to the Minimum Income Guarantee (MIG) (a means-tested support for pensioners) but were not receiving it were advised about that, and some information about the benefits and assistance were proposed to them. As a result, the authors found that 13 % of interviewees appeared to be entitled to the MIG, but were not claiming it. Among those people, 47 % of those advised of possible entitlement said that they wished to claim. Most of them justified their choice by saying that they did not want to fill out forms and disclose information. Even those who were interested in claiming said that those "factors" bothered them. Some others said that asking for income support was a blow to their pride, somewhat like taking charity.⁴²

- Some other studies have tried to understand the take-up decision of some people who are eligible for more than one benefit but do not ask for all of them:

Research example

In 2003 Ruth Hancock and al. wrote a paper entitled *The Take-up of Multiple Means-Tested Benefits by British Pensioners. Evidence From the Family Resources Survey* in which they study the take-up of the three main means-tested benefits to which pensioners may be entitled in the UK: the Income Support (IS), the HB and the Council Tax Benefit (CTB). They think and try to confirm that:

*Where there is more than one benefit to which people may be entitled and claims for partial entitlement are not uncommon, take-up rates for individual benefits are inappropriate measures of the effectiveness of the means-tested benefit system in reaching those most in need. Addressing the issue of take-up involves something different from simply maximizing individual benefit take-up rates.*⁴³

⁴⁰ EVASON E., DOWDS L., DEVINE P. 2002. "Pensioners and the Minimum Income Guarantee: Observations from Recent Research", *Social Policy and Administration* 36 (1): 36.

⁴¹ *Ibid.*, 38.

⁴² *Ibid.*, 43.

⁴³ HANCOCK R., PUDNEY S., BARKER G., HERNANDEZ M. and SUTHERLAND H. 2003. "The Take-up of Multiple Means-tested Benefits by British Pensioners: Evidence from the Family Resources Survey", *University of Leicester. Department of Economics Website*, [on line], <http://www.le.ac.uk>: 8.

Knowing the proportion by which claiming all available benefits can increase the income of the non-claimant can be considered as a more useful indicator than the one for individual take-up of one benefit. Examining the extent to which pensioners claim for one, two or all of the benefits, the authors relate take-up to the marginal benefit from claiming. They discuss factors underlying take-up such as poor information about eligibility or the social stigma.

This analysis is based on the FRS data for the period of April 1997 to March 2000. The FRS is a survey of British households, carried out by the Department of work and pensions. There are questions in this survey about take-up of a comprehensive set of social security benefits and, where relevant, about the amounts last received. (The survey provides information about take-up of the three benefits studied.) There are detailed questions about private incomes, relevant to calculating the entitlement to means-tested benefits. For this study, the sample was restricted to households containing only a single pensioner at least five years above the state pension age, or to a couple where both were in this situation (men: 70 years old and more, woman 65 years old), for a total sample of 9,449 pensioners. Finally, the data used for the present study were subjected to an extensive error detection and correction procedure to minimize the potential for errors.⁴⁴ Note that the results of the study are presented in a specific section for different groups of pensioners, distinguishing for example between those who were renting a house from local authority/housing associations, or from owner-occupiers, or between couples, a single man or a single women, including age variables.

The authors found that the take-up rate of those entitled is 90% for the HB, 74% for the CTB, and 66% for the IS. For example, they also observe that 3/4 of the pensioners entitled to CTB are also entitled to HB or IS or both. More precisely, 36% of pensioners do not take-up at least one of these benefits, and 16% of non-claimants fail to claim amounts worth more than 10% of their incomes.

As a conclusion, they affirm among other things that there would be a strong argument for a claims process in which a claim for one means-tested benefit automatically triggers assessment of entitlement to other benefits.⁴⁵ We notice that studies of multi-benefit NTU are still rare.

- Some researchers studied the effects on take-up of changes in the amount or conditions of entitlement to some benefits:

*The positive correlation between the potential amount of the welfare benefit (and its duration) and take-up is probably the single most robust result in the literature.*⁴⁶

Research examples

-In 1995, Brian P. McCall studied *The Impact of Unemployment Insurance Benefit Levels on Reciprocity*.⁴⁷ More precisely, he asked the following question: "Do changes in Unemployment Insurance (UI) benefit levels affect the UI reciprocity". According to him, the cost of a change in benefit rules to an unemployment insurance system depends on several factors, such as how a change affects the lay-off policies of the firms, the take-up among those who are laid off, and the expected duration of benefit receipt among those who receive UI benefits.

He uses data from the 1984-1992 Current Population Survey's (CPS's) Displaced Worker Supplement (DWS). The DWS asked respondents whether or not they received UI benefits after losing their jobs, but did not ask them about their eligibility status or their benefit levels. He also notes that the DWS did not survey all individuals potentially eligible for UI benefits, such as those who were laid off and subsequently recalled. The author calculates the number of eligible people, in relation to the number who actually received the benefit (as answered in the survey), to estimate a take-up rate. We notice that white-collar and blue-collar workers are analysed separately: in the preliminary estimates, the explanatory variables were found to have significantly different effects on the expected "long joblessness" of white-collar and blue-collar workers.⁴⁸ The other

⁴⁴ *Ibid.*, 3.

⁴⁵ *Ibid.*, 13.

⁴⁶ HERNANZ V., MALHERBET F., PELLIZZARI M. 2004. "Take-up of Welfare Benefits in OECD Countries: A Review of the Evidence". Op. Cit.: 18.

⁴⁷ MCCALL B. P. 1995. "The Impact of Unemployment Insurance Benefit Levels on Reciprocity". *Journal of Business and Economic Statistics* 13 (2): 189-198.

⁴⁸ *Ibid.*, 191.

variables used were, for example, reasons of displacement, female/male, marital status, educational level, presence of young children, ethnic origin, year of displacement, industry of lost job etc.

Each US State administrates the UI. The benefit of receiving UI depends on the level of weekly benefits, the duration of the benefits, and the probability distribution of unemployment duration. The time costs associated with filing a claim and the stigma also affect the benefit of receiving. However, McCall focuses primarily on the effect on take-up of changing the benefit amounts. Regressors are included in the model to control other factors that may affect take-up. He says that the cost impacts of take-up responses to an increase in weekly benefit amounts are found to be larger in low-replacement rate States than in high-replacement rate States:

*To summarize, the results [...] suggest that changes in take-up behaviour can have a substantial cost impact when a State increases its maximum benefit level or when a low-replacement-rate State, such as Indiana, increases weekly benefits directly. For high-replacement-rate States such as New Jersey, however, the cost impact of take-up response to a direct increase in weekly benefits is small.*⁴⁹

In the conclusion he suggests modelling the UI reciprocity and unemployment durations conjointly, because unobserved determinants of take-up and unemployment durations may be correlated.

-A paper by Regina T. Riphahn, *Rational Poverty or Poor rationality? The Take-up of Social Assistance Benefits*, was published in 2000. In this article the author first presents a review of international and German literature about NTU. Testing the model proposed by P. Anderson and B. Meyer, she then tries to determine whether a household takes up income support.⁵⁰ It is interesting to note that in the author's opinion, NTU can be synonymous with "hidden poverty".

The author explains the importance of take-up rates, bearing in mind that the fact that individuals could not collect benefits available to them appears to oppose the following economic logic "Much is better than less". The study of take-up behaviours is driven by an interest in explaining this economic puzzle.⁵¹ She thinks that low take-up rates may be the sign that transfer programmes do not reach their objectives. Take-up rates estimates can be useful for calculating potential expenditure effects of policy reforms. Finally, the attention given to take-up rates can be justified by the fact that:

*If social assistance programmes effectively eliminate poverty when transfers are received, then the rate of non-take-up provides a relevant measure of post-transfer poverty.*⁵²

Calculating the take-up of income support, the author uses the German Income and Expenditure Survey (EVS) data from 1993. This survey yields potentially more precise information and suffers less item non-responses than comparable set-data. The EVS gives information for a large number of households (40,230 households). It provides continuous annual data about property and wealth information. The households that participate have to continuously note major incomes and expenditures during the year. The sample is not totally representative of the population, for households are selected according to certain characteristics. Certain households do not participate because of the survey requirements, and some richer families prefer not to answer questions about detailed incomes and expenditures. Lastly, individuals who are living in institutions or who do not have a permanent home are not sampled.⁵³

To determine whether a household takes up income support, its eligibility has to be determined and linked to the real "reception" of the benefit. With those statistics, the author can confirm the assumption of P. Anderson and B. Meyer, or of R. Blundell and al., according to which take-up increases with expected benefits and is lowest among households with small claims.⁵⁴ She looks at some characteristics of the households like East or West German households ("East German households appear to be more likely to remain in hidden poverty than their West German counterparts"), foreign households (it seems that the foreigners have higher take-up levels), urban and rural differences in take-up rates, degree of schooling (the take-up levels are higher among those with either little education or high qualifications), age (take-up rates decline over the life cycle), marital status or number of children (households without children usually have high rates of NTU).⁵⁵

After observing those statistics, the author extends the analysis of NTU to a multivariate framework. With their model, P. Anderson and B. Meyer have shown that the cost of applying for income support benefits, the amount and the duration of the expected benefits, as well as factors affecting individually perceived stigma, are likely

⁴⁹ *Ibid.*, 197.

⁵⁰ *Ibid.*, 913-937.

⁵¹ RIPHAWN R. T. 2000. "Rational Poverty or Poor Rationality? The Take-Up of Social Assistance Benefits". *Institute for the Study of Labour (IZA). Discussion Paper Series no 124*: 1.

⁵² *Id.*

⁵³ *Ibid.*, 12.

⁵⁴ See: BLUNDELL R., FRY V., WALKER I. 1988. "Modeling the Take-up of Means Tested Benefits: the Case of Housing Benefits in the United Kingdom". *The Economic Journal* 98 (390), Supplement: Conference Paper: 58-74.

⁵⁵ RIPHAWN R. T. 2000. "Rational Poverty or Poor Rationality? The Take-Up of Social Assistance Benefits". *Institute for the Study of Labour (IZA). Discussion Paper Series no 124*: 17.

determinants of NTU. Referring to those authors, R. Riphahn tests the effects of benefit amounts, of variables that approximate benefit duration, of application cost and of stigma.⁵⁶ The results indicate that: *A rise in expected benefits by 20% would increase the rate of benefit take-up by about 6%. Expectations of long benefit duration increase the tendency to take-up the available provisions. Foreign households, whose application cost likely exceed those of natives, have (insignificantly) lower rates of take-up, and individuals, who by living in a small community might be subject to stigmatisation, are also less likely to claim the transfers.*⁵⁷

Nevertheless, those results cannot explain the shifts in take-up rates over time. That is why the author suggests estimating NTU by homogenous procedures for all available EVS datasets over the last three decades (for instance to evaluate potential determinants of take-up over time).⁵⁸

-Mike Brewer, Maria Jose Suarez and Ian Walker published an article entitled *Modelling Take-up of Family Credit and Working Families' Tax Credit in 2003*. In the UK, the take-up rates for the Family Credit (FC), an in-work benefit available to those with children, who work at least 16 hours a week, were low. In 1999 this benefit was replaced by the Working Families Tax Credit (WFTC), which was more generous and delivered in a different way than the FC. The authors aim first to analyse the decision to take-up FC, and secondly to understand take-up changes during the initial six-month phase-in period of the WFTC

Before presenting their empirical results, the authors review some of the possible mistakes that can take place when studying take-up. According to them, *a study of take-up typically takes a household survey that both records receipt and provides enough information to allow entitlement to be estimated, usually using a micro-simulation model. The estimation can be compared to the data on recorded receipt.*⁵⁹

The modelled and the actual take-up can diverge for several reasons. For example, differences can exist between the time period the agency requires to decide whether the individual is entitled to the benefit and the time period in which the survey took place. Differences in the definition of earnings and incomes, used to calculate entitlement, can exist between the agency and the analyst. The agency can make mistakes or use imperfect information when assessing whether a unit that has applied for the benefit can receive it. Changes in personal circumstances can also take place between the time that the unit asks for a benefit and the time that the agency processes the file. Finally, a unit can be eligible for a benefit but can choose not to claim because of the social stigma, the time and/or financial costs that are often involved. The latter situation can be considered as an optimal decision.⁶⁰

The empirical analysis first presents some descriptive statistics about take-up rates of FC and WFTC using three household surveys. The Labour Force Survey (LFS), the Family Resources Survey (FRS) (the data-set most frequently used to analyse NTU of means-tested and tax credits in the UK) and the first wave of the Families and Children Study (FACS) are used. Note that those three surveys ask about the amount of FC or WFTC received by the benefit units. The authors find that take-up depends positively upon entitlement, and negatively upon education, earnings and non-labour incomes. According to LFS, 53.6% of eligible families received FC, whereas for FRS and FACS this percentage is 56.5 and 62.7%, respectively. Those differences can be explained by the different time periods.⁶¹

After presenting those statistical results, the authors try to model take-up economically with all three data sets in order to compare the results. The programme decision participation is modelled following Moffitt (1983) and in a simple way:

*We assume that there is an index [...] which depends on a set of individual variables and on a random term. If this index is positive, the benefit unit claims the benefit, otherwise they decide not to: the index can therefore be thought of as the net utility for claiming.*⁶²

-The model they use includes the following explanatory variable: age, education level, number of children under the age of five, total earnings net of taxes and national insurance contributions, entitlement to FC/WFTC, and weekly non-labour incomes. They found that there are differences between the three data sets in the effect of individual and family characteristics on the probability of taking up FC. The probability of claiming FC increases with the amount of entitlement, while non-earned incomes and years of education have negative, though not always significant, influences.⁶³

⁵⁶ The stigma is approximated by four measures here. The author looks at the sex and age of the household head, the size of the community (stigmatization may be more presents in a small community where everybody knows everyone else), the West or East German "factors" (it appears that the individuals have the obligation to work in East Germany and that this can make social assistance less attractive) and, finally, the presence of children (individuals responsible for others may be more motivated). *Idem.*, 19.

⁵⁷ *Idem.*, 22.

⁵⁸ *Idem.*, 23.

⁵⁹ BREWER M., SUAREZ M. J., WALKER I. 2003. "Modeling Take-up of Family Credit and Working Families' Tax Credit". *Inland Revenue website*, [on line], <http://www.inlandrevenue.gov.uk>: 9.

⁶⁰ *Ibid.*, 9.

⁶¹ *Ibid.*, 13.

⁶² *Ibid.*, 14.

⁶³ *Ibid.*, 17.

In the second section the authors focus on the determinants of FC/WFTC take-up using only the FRS (this survey provides data until 1999 so that they can compare FC and the first months of WFTC). The objectives of the section consist first in studying whether the individuals value FC in the same way even when there are offsetting reductions in HB, and whether there is an additional impact on take-up from the assistance with childcare costs provided by FC (those are changes that have affected the benefit).⁶⁴ They also want to know whether FC take-up behaviour changes before the introduction of WFTC, and what the immediate impact of WFTC on take-up behaviour was. They add a number of variables to the model presented above: number of disabled adults, dummies for house tenure and regional dummies. They find that the fact of living in a region and housing tenure is strongly associated with take-up.

*There is no evidence that support for childcare had an impact on FC take-up, and the loss of HB due to take-up to FC does not seem to be valued in full. We find no evidence of a seasonal pattern to take-up, or a change in this pattern in the months immediately before the introduction of WFTC. In the first 6 months of WFTC, take-up rates were lower than they would have been otherwise-identical amounts of FC.*⁶⁵

- Some studies have tried to understand how changes in tax policies may affect the take-up of welfare programmes through changes to the effective amounts of benefits⁶⁶:

Research examples

-In 1983 O. Ashenfelter published an article on *Determining Participation in Income-tested Social Programs*.⁶⁷ According to the author, participation in public programmes is an important factor in public discussion for the initiation and modification of social programmes. On the basis of income distribution, it proposes a statistical framework to estimate "biases" if the programme induces incentive effects or if some eligible participants do not pursue their application. Those biases can be of different kinds. Some workers who would normally have incomes in excess of the programme income may reduce their labour supply to make themselves eligible for the programme participation. The incidence of information, reporting or other unobserved non pecuniary costs are also identified as biased.

*The empirical strategy is to construct a statistical framework that treats the cross-sectional heterogeneity of incomes as an inevitable determinant of some correlation between programme generosity and programme participation, but that allows the data to confirm the presence or absence of both economic incentives and unobserved non-pecuniary participation costs. The basic goal is to set out a convenient and tractable scheme for organising the relevant data that nests all of the relevant hypotheses to be tested.*⁶⁸

The data used in the study are drawn from the Seattle and Denver Income Maintenance Experiments. Apparently, the experiment was created to calculate participation in a negative income tax programme. With the Seattle and Denver Income Maintenance Experiments, it is possible to look at the incomes of a group of families and then the proportion of families who will participate according to their revenue, assuming that there is no other cost of participation than "more (\$) is preferred to less". In this sample some groups were randomly selected from the pool whose log income is normally distributed, and these groups were offered negative income tax plans with varying income guarantee and tax rates. Participation was then observed. The people who dropped out of the programme are noted as non-participants. We can see that higher incomes and lower tax rates are associated with greater participation.

Constructing a statistical framework, the author then tries to see the effects of economic incentives and non-pecuniary participation costs. The framework is applied to white, black and "Chicanos" families, and separated between the Detroit and Seattle areas. The results of the study suggest that differences in participation across negative income tax plans are due primarily to differences in programme generosity. Tax rate variations have only small additional effects on participation, although estimates of elasticity of labour supply are certainly consistent with previous research. The study also suggests that for this experiment, the receipt of the benefits was not affected by welfare stigma or other non-pecuniary participation costs.

⁶⁴ One of the possible reasons why Housing Benefit recipients might not claim FC or WFTC is that FC and WFTC act to reduce entitlements to Housing Benefits. / Under FC, help with childcare was through an earnings disregard, whereas for WFTC, there was a payable credit equal to 70% of eligible costs. *Ibid.*, 8 and 19.

⁶⁵ *Ibid.*, 24.

⁶⁶ HERNANZ V., MALHERBET F., PELLIZZARI M. 2004. "Take-up of Welfare Benefits in OECD Countries: A Review of the Evidence". Op. Cit.: 18.

⁶⁷ We note that this research was carried out at Princetown University, with the help of Robert Moffitt, among others, well-known in the area of participation indicators.

⁶⁸ ASHENFELTER O. 1983. "Determining Participation in Income-tested Social Programs". *Journal of the American Statistical Association* 78 (383): 518.

-In 1997 an article was published by Patricia M. Anderson and Bruce Meyer, entitled *Unemployment insurance take-up rates and the after-tax value of benefits*. The authors use administrative data to study the determinants of individual take-up decisions and to examine directly whether recent changes in the tax treatment of UI benefits can help to explain the decline of UI take-up rates in the 1960s.⁶⁹ The sources of the decline were primarily due to demographic and programme changes. In the 1980s the take-up rates also declined. UI benefits became subject to income taxes and the authors believe that this change is the main reason for the new decline.

To obtain the UI benefits, a claimant must meet a monetary eligibility requirement; he or she must not have quit his or her last job without good cause, must be available for work, and must not have been fired:

*We suppose that a potential applicant maximizes expected utility, which is taken to be a function of income and the stigma or transaction costs of applying for UI. The worker weighs these costs of applying against the benefits, which are determined primarily by the level and duration of benefits and the distribution of possible spell lengths that the worker believes he or she faces. This emphasis on expected spell length is motivated by the large fraction of applicants who indicate that they do not apply because they expect a short spell.*⁷⁰

The analysts use data from the Continuous Wage and Benefit History (CWBH) for the years 1979 to 1987. Those data are administrative records on individuals from the UI systems of six States. The authors study the situation in those six States: Georgia, Idaho, Louisiana, Missouri, New Mexico and South Carolina. Two records from the CWBH are available: quarterly wage records and UI claim records. The persons and the firm identifiers are provided, and the UI records include weekly information on UI benefits received. They follow State rules to determine monetary eligibility and to calculate the weekly benefit amount and the potential duration for which each individual would be eligible. Based on the UI claims records, they then note whether a person who was monetarily eligible and separated from his or her employer received UI benefits. They also look at the income tax on earnings and on UI benefits to explain whether or not someone received UI benefits.⁷¹

They found that the phased-in taxation of benefits, which began in 1979 and was completed in 1987, contributed to the decline in take-up. The estimations suggest that a 10% increase in the weekly benefit level would increase the take-up rate by between 2 and 2.5%, as might be expected. As predicted by the model, they found a smaller effect of the potential duration of benefits (for example, a 10% increase corresponds to a rise in take-up of 0.5 to 1%). They also found that individuals respond to the tax treatment of UI benefits, with their estimates implying that a tax change which lowers the after-tax value of UI benefits by 10% would decrease take-up by 1 to 1.5%. They concluded that the phase-in of benefit taxation is totally responsible for the previously unexplained portion of the decline in UI take-up in the early 1980s.⁷² Since they determine the cost of programme changes and their effects on unemployment, those estimated behavioural effects are important for the design of UI programmes.⁷³

- Some studies have tried to understand why delays exist between the time an individual is eligible to a benefit and the time he or she takes the decision to take-up (temporary NTU):

Research example

When Do Women Use AFDC and Food Stamps? The Dynamics of Eligibility vs. Participation, an article by Rebecca M. Blank and Patricia Ruggles, was published in 1993. The AFDC programme is a means-tested benefit for parents of a minor child, often single parents. The eligibility to this benefit depends on cash income calculation and an assets test. The eligibility to the Food Stamps Program, which gives access to reductions on food in supermarkets, also depends on cash incomes and assets tests. The authors start by a dynamic model of how participation decisions are made among eligible persons and use this as the basis for their empirical work. They focus on the following three questions:

⁶⁹ ANDERSON P., MEYER B. 1997. "Unemployment Insurance Take-up Rates and the After-tax Value of Benefits". *The Quarterly Journal of Economics*, August: 916.

⁷⁰ *Ibid.*, 918.

⁷¹ *Ibid.*, 921.

Note that the survey used did not provide information about individual characteristics like age or education that might affect the likelihood of filing for UI. To remove these characteristics and their influence on take-up, they use a "fixed-effects logic model" (921).

⁷² *Ibid.*, 936.

⁷³ *Ibid.*, 916.

*What are the differences in the patterns and the determinants of spells of eligibility versus spells of programme participation? Do public assistance participation spells start concurrently with the opening of an eligibility spell or do newly eligible women enter the programme after some lag? (What explains these opening patterns?) Do public assistance participation spells end concurrently with the end of an eligibility spell?*⁷⁴

The data used in the paper come from the Survey of Income and Program Participation (SIPP), a longitudinal data set collected on a random sample of the US population. This survey provides monthly information on household composition, labour market behaviours, and income sources. The authors study the 1986 and 1987 data. They note that the S.I.P.P was explicitly designed to collect better income information, particularly on public assistance income categories. This survey contained a direct question on the receipt of the studied benefits. Looking only at single mothers with children, the authors calculate spells of continuous AFDC usage and Food Stamp usage, as well as spells of AFDC and food stamp eligibility.⁷⁵ They mention that some errors may occur in their results because of under-reporting of programme use and incomes by survey respondents, as well as errors in their eligibility calculations. They then compare this eligibility with the "real" receipt of the benefit to estimate take-up rates. They also compare the take-up for these two programmes. The application process for these two programmes is typically linked, and the authors want to know if the women who are receiving one of the benefits are also receiving the other. They compare the spells of eligibility with the spells of participation, to see if they correspond. They also look at some of the characteristics of the participants and non-participants when eligible (ethnic origin, age, children's age, level of education).

As results, they estimate that single mothers use AFDC in 62 to 70% of the months in which they are eligible. Food Stamp participation rates are somewhat lower, ranging from 54 to 66% of all eligible months. They also learn that most women who become eligible do not participate: only 28% of AFDC eligibility spells observed to start ever show AFDC receipt, and only 24% of Food Stamp eligibility result in Food Stamp utilisation.⁷⁶ We read that:

*While our choice-based model implies that women may rationally choose not to participate in welfare, an alternative model would suggest that needy women simply do not know about these programmes. If most non-participants are persons with either higher costs or lower benefits, this supports the "choice" model of non-participation and suggests we should be less concerned about low take-up rates. The evidence in this paper is generally supportive of that claim. The non-participating eligible in both programmes have lower average expected benefits [...] There is also evidence throughout the duration estimates that locational and policy parameters, such as benefit levels, availability of offices, and rural location affect the length of eligibility and participation spells[...]. All of this supports a choice-based mode of participation decisions.*⁷⁷

They also calculate the monetary costs of a possible full participation in the programme. For example, the AFDC costs would have been 21.1 billion in 1989 instead of 15.9 billion.

In conclusion, we can read that the fact that many people choose not to use these programmes even if they are eligible can induce two different attitudes on the side of the administrative and political decision-makers. Those who want to discourage programme use can increase the costs of the programmes (psychological as well as direct). If they want those programmes to serve as a short-term safety net, however, these results may indicate that policy-makers should work harder at reducing participation costs.⁷⁸

- Some researchers, besides these different goals, have tried to allow for modelling errors when estimating NTU:

One may face many difficulties trying to estimate NTU. For instance, to evaluate NTU we need to know if a person is eligible to a benefit. But the elements that allow us to estimate if a person is eligible to the benefit or service are typically given by the person him- or herself. When the eligibility to a benefit relies on simple factors, like for example the number of children in the household, the approach can be reliable. But when a number of criteria must be known, the result can be more hazardous. For example, irrespective of what their incomes are, people almost always underestimate them. They will not think of including in their income the amount of a benefit they receive, for

⁷⁴ BLANK R. M., RUGGLES P., 1993. "When Do Women Use AFDC and Food Stamps? The Dynamics of Eligibility vs Participation". *National Bureau of Economic Research Working paper series no 4429*: 1.

⁷⁵ *Ibid.*, 10.

⁷⁶ *Ibid.*, 36.

⁷⁷ *Ibid.*, 38.

⁷⁸ *Ibid.*, 39.

instance, or the amount of some voluntary work they do. This can lead to substantial over-estimation of NTU rates, because we consequently consider people as eligible when they are not.⁷⁹ Note also that it may be difficult to find people prepared to give detailed information about their incomes, a thing that people usually do not feel comfortable about.

Note that studies about NTU are often based on surveys for which cooperation is voluntary, and with sometimes high levels of non-response. This level of non-response can affect the estimation of NTU rates, if we suppose, for example, that a part of those who do not answer are the same as those that do not take-up.

The utilisation of administrative information can also be important when trying to estimate NTU. With that information, we can for instance know how many people are receiving a benefit. We must not forget that this information is likely to have mistakes: sometimes individuals do receive benefits to which they are not entitled. Those mistakes, as well as the possible mistakes of the analysts of NTU and of the units, can be modelled when evaluating take-up, as in the model proposed by J.-Y. Duclos.⁸⁰

Administrative data can also be used to draw conclusions about NTU trends over time. It is important to note here that this kind of study is valid only if *there are not factors, such as an up rating of the benefit scales, which could be expected to lead to an increase quite independently of any improvement in take-up.*⁸¹

The combination of administrative data with other surveys or data can also lead to errors. The same operations must be done with each data source. We can, for example, try to take into account the errors likely to affect both sources of data but then we must apply this model to each source.⁸² Problems can also come from the difference between the data. Information about incomes, for example, can be given in different ways: one source can give the incomes by month and the other by weeks, and without including the same things, etc.

Research example

In 1995 an article was published by Jean-Yves Duclos, entitled *Modelling the Take-Up of State Support*.⁸³ According to him, the modelling of take-up necessarily involves three agents: the welfare agency responsible for the state benefit, the units who claims or not, and the take-up analyst who seeks to understand the units' claiming. With this paper, the author aims to go beyond the standard analysis by recognizing that the take-up analyst can make errors in assessing entitlement, as can the welfare agencies. He wants to create a model of take-up that includes those potential errors and the "costs" of claiming.

With administrative errors, not all of those who were originally supposed to receive a state benefit may receive it, while the State also supports some people whom it did not intend to support. Such errors can be seen as the consequence of the imperfect information that the State can gather on the true incomes and characteristics of households. The author also insists on the fact that the government benefit offer comes with some take-up or

⁷⁹ ATKINSON A. B. 1989. «The Take-up of Social Security Benefits». Op. Cit.: 195.

⁸⁰ DUCLOS J. Y. 1995. "Modeling the Take-up of State Support". *Journal of Public Economics* 58: 391-415. DUCLOS J. Y. 1997. "Estimating and Testing a Model of Welfare Participation. The Case of Supplementary Benefits in Britain". *Economica* 64: 81-100.

⁸¹ ATKINSON A. B. 1989. "The Take-up of Social Security Benefits". Op. Cit.: 196.

⁸² *Ibid.*, 197.

⁸³ Note that the author did his PhD under the supervision of Anthony Atkinson, who previously worked on NTU.

participating cost.⁸⁴ The presence of these imperfections can have several consequences. Take-up costs might explain a large part of NTU situations. For those who are claiming, those costs can make it less attractive to be state dependent. In the presence of imperfect targeting, take-up costs can also deter the non-poor from disguising themselves as poor and thus from claiming state support. Those costs can provide a self-selection mechanism that can enhance the efficiency of state support. The actual equity and redistributive impact of the state support is different from the expected one when welfare rules cannot apply perfectly. A risk of biases exists in the simulation of the tax and benefit impact of government policy.⁸⁵

Trying statistically to explain how entitlement perception and take-up costs contribute separately to the claiming decision involves some problems. If we know, for instance, who is claiming and who is not, and have an *a priori* knowledge of true entitlement, it is less easy to know if it is entitlement perception (entitlement ignorance or uncertainty) rather than pure costs of claiming which generates the claiming decision. Some other problems come from the fact that it is hard for the take-up analyst to measure true entitlement. The analyst often must rely on household surveys not specifically done for take-up investigation. The concept of time, for example, or incomes, units of analysis or relevant socio-demographic characteristics easily differ between surveys and frameworks of particular State or social security benefits, etc.⁸⁶

J.-Y. Duclos take as an example the modelling of the take-up of Supplementary Benefits (SB) in Britain for 1985, allowing for the presence of entitlement errors made jointly by the analyst and the agency responsible. The SB is a means-tested benefit for the non-working poor. He looks at the true unit entitlement to SB (not possible to really know), the level of entitlement assessed by the Department of Social Security (DSS), and the SB entitlement level calculated by the 1985 British Tax and Benefit Model, using a sample of the 1985 Family Expenditure Survey Data (which contains questions about the perception of the benefit). He also looks at the costs. He includes in his calculation some characteristics that can have an effect on perceived costs, such as the fact of having children, of being pensioners or disabled, age, the fact of being a single-parent family, educational level etc. The fact of having children, for example, can be seen as having a positive effect on claiming, by reducing the sense of guilt and stigma attached to receiving state support, or as having a negative effect, for instance by increasing the physical and time costs of going to the DSS office.⁸⁷

To conclude, we read that:

*Richer data than those used above would naturally enhance our understanding of the determinants of take-up. Accurate or detailed checks of eligibility by interviewers for randomly selected sub-samples would allow us to separate identification of agency and analysts errors – information on claiming behaviour and recipient status could indirectly reveal the pre-claiming perception of entitlement by units. Even more direct information on such perception would be revealed by specific questions on perceived benefit entitlement and important dynamic structure of the take-up process would be properly revealed by longitudinal data.*⁸⁸

Another version of the 1995 article written by Jean-Yves Duclos and entitled *Estimating and Testing a Model of Welfare Participation: the Case of Supplementary Benefits in Britain*, was published in 1997.⁸⁹ In the conclusion the author notes that by applying his model (that included costs, errors that can be committed by the analyst, by the "units" and errors on the side of the administration) to the case of the Supplementary Benefit for 1985, it is possible to raise the participation rates from 50% to around 80%, with obviously important consequences for understanding the efficacy of British social policies.⁹⁰

B. Others Types of Inquiries

Some other types of studies about NTU do not calculate NTU directly, but identify its existence in a quantitative way or give us some information related to it. An example is studies undertaken by charitable organisations on the number of people among their "clients" who receive or use a service.

⁸⁴ Costs that may stem from searching information, from a dislike of entitlement uncertainty, from queuing, filing forms, losing one's dignity, reporting to the welfare agency, feeling stigmatized, sending unfavorable "signals" to prospective employers, bank managers or landlords etc.

⁸⁵ DUCLOS J. Y. 1995. "Modeling the Take-up of State Support". Op. Cit.: 392.

⁸⁶ *Ibid.*, 397.

⁸⁷ *Ibid.*, 404.

⁸⁸ *Ibid.*, 414.

⁸⁹ DUCLOS J. Y. 1997. "Estimating and Testing a Model of Welfare Participation. The Case of Supplementary Benefits in Britain". Op. Cit.: 81-100.

⁹⁰ *Ibid.*, 96.

Research examples

-In 1982 Sara McLafferty published a paper entitled *Urban Structure and Geographical Access to Public Services*. Through a series of simulations this author investigates "the effect of urban form on the accessibility of alternative services-location patterns to income groups".⁹¹ She sets out to determine if low-income groups have more or less geographical access to public services than high-income groups. Linked to this aim, one question is to know to what extent the location pattern is the result of constraint factors and to what extent it is the result of particular locational objectives, either discriminatory or not. We classify this study in "other inquiries" because it attempts to explore a certain type of cause of NTU, but with simulation and no "sample" or "rates" of NTU. The author uses the correlation analysis to address this question: *Median income levels of small areas such as census tracts are correlated with their corresponding distances to the nearest service facility [...]* The purpose of the simulations is to analyse how that set of values differs for cities with different spatial patterns of income groups and for varying numbers of service centres.⁹²

To make the simulations she uses two hypothetical models of cities (the concentric city model, with low-income areas located in the city centre, and the sector model, with different income groups living in each sector), and the "real" example of the town of Cedar Rapids (Iowa). She informs the reader about some weakness of the study. The measurement of the distance between the areas of the cities and the services give information about the physical distance only. It does not give information about important factors such as public transportation facilities, or factors of time and monetary constraints on travel. It also gives no information about important social, economic or psychological barriers that a citizen can encounter.⁹³

In the conclusion, we read that the spatial configuration of typical western cities makes most public services more accessible to low-income groups than to high ones, but that incorporating factors other than physical distance could produce different results.

-In 1998 Gideon Yaniv studied *Welfare Fraud and Welfare Stigma*.⁹⁴ According to him, both fraud and stigma imply that participation has a cost (or disutility) to participants, besides costs like applying for the programme and complying with some rules. Stigma involves feelings of shame and disrespect related to the fact of being on welfare. The cost of stigma may prevent participation. On the other hand, fraud involves the risk of getting caught and punished, but the cost may be weak enough to induce participation. Although this study explores potential causes of NTU, it is more in the field of psychology and does not attempt to provide the rate of NTU.

More precisely, it is possible to identify different types of stigma. Referring to the work of R. Moffitt, stigma can manifest itself in welfare programmes as a flat amount of disutility arising from the mere fact of participation itself, and as a variable amount that changes with the size of the benefit.⁹⁵ Some forms of stigma are called *self-inflicted stigma*, induced by the fact that someone recognises themselves as being engaged in an action which can be viewed as diminishing. Another form of stigma is called *social stigma* and results from people's disapproval and resentment of those who choose to go on welfare. Welfare programmes often set periodic controls, reporting, active job-searches, training or public-work requirements which involve contacts with staff, other claimants and familiar community members, and which can be a source of social stigma since people are ashamed of this exposure, etc. With this paper, the author aimed to:

*Set up a simple model of welfare take-up, which allows for both benefit-related and public exposure stigma. It is shown that benefit-related stigma plays the same role as the expected punishment in a welfare fraud model, enabling therefore a comparative investigation of fraud and stigma behaviour.*⁹⁶

With his model (he does not present an empirical precise test), he reaches the conclusion that public exposure stigma, or work requirement (an example that he uses in his model), may constitute a stronger deterrent to participation than the expected punishment for dishonest claiming. An "amoral utility maximize", who is ineligible to participate in the programme but whose expected penalty for dishonest claiming is low enough to induce participation, might participate in the programme more intensively than he or she would have if he or she were eligible but afraid of the stigma.⁹⁷ A potentially dishonest claimant who is not employed elsewhere might avoid participation in a welfare programme, either because the reporting etc. linked to participation is too "severe" relative to the paid benefit, or because the wage is greater than the stigma "adjusted" effective benefit. The results emphasise the fact that a work requirement might not be harsh enough to stop dishonest claiming, but that it can create stigma that prevents the employable needy from claiming.⁹⁸

⁹¹ McLAFFERTY S. 1982. "Urban Structure and Geographical Access to Public Services". *Annals of the Association of American Geographers* 72 (3): 348.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ YANIV G. 1998. "Welfare Fraud and Welfare Stigma". *Paper presented at the 2nd International Research Conference on Social Security. Jerusalem. 25-28 January 1998*. See also: YANIV G. 1998. "Welfare Fraud and Welfare Stigma". *Journal of Economic Psychology* 18 (2): 435-451.

⁹⁵ MOFFITT R. 1983. "An Economic Model of Welfare Stigma". *Op. Cit.*: 1023-1035.

⁹⁶ YANIV G. 1998. "Welfare Fraud and Welfare Stigma". *Op. Cit.*: 3.

⁹⁷ *Ibid.*, 10.

⁹⁸ *Ibid.*, 4.

C. Estimated other forms of NTU

Studies that aim to calculate Quasi-NTU also exist. Quasi-NTU is used for benefits for which at least one criterion of eligibility is related to the behaviour of the potential beneficiary. This beneficiary can adopt or not the behaviour necessary for entitlement to the benefit. Instead of a simple division of the population between eligible and non-eligible people, there is a division between three categories: already fully eligible people, non-eligible people who would be eligible if they knew they could, and other non-eligible people. Quasi-NTU corresponds to the second category. To estimate Quasi-NTU it is necessary to have information on knowledge that individuals have about the benefit. Only ad hoc inquiries allow estimations of Quasi-NTU.⁹⁹

There may also be studies that aim to calculate NTU due to conviction or personal reasons. For example, an individual may refuse to sign the "insertion contract" that is required to obtain the RMI (minimum income support) because he thinks that this limits his freedom.

1.5. Conclusion

This part has attempted to review some of the main and representative research on NTU in the UK and the USA. As a conclusion, we present some questions on the subject that can be considered more fully.

It has been pointed out that future inquiries should investigate publicity effects on take-up more fully. It seems, for example, that publicity campaigns should focus more on ways of sharpening perceptions of eligibility, and not just on informing people about the existence of benefits and services. Encouragement to claim and provision of informed advice should also be developed.¹⁰⁰ We also note that very few studies have been undertaken on delays in claiming and NTU. We think that the effects of "one-stop shops" – where individuals who apply for one benefit are informed about the existence of other benefits – on take-up should be studied in the future. As suggested in a recent report of the OECD: *The effect of the tax system of the incentives of take-up welfare should also be carefully considered.*¹⁰¹

Finally, it seems that there is a real lack of comparative work: *The difficulties in producing reliable estimates of take-up rates for welfare benefits as described above, raise problems of comparability of those estimates along several dimensions: over time, across countries and across programmes [...] These studies raise a range of comparability*

⁹⁹ MATH A. 2004. "Proposal for Comparing Mechanisms and Tools of Measurement of Non-Take-Up Phenomena (to be discussed)". EXNOTA internal document.

¹⁰⁰ CRAIG P. 1995. "Costs and Benefits: A Review of Research on Take-Up of Income-Related Benefits". Op. Cit.: 537-565.

¹⁰¹ HERNANZ V., MALHERBET F., PELLIZZARI M. 2004. "Take-up of Welfare Benefits in OECD Countries: A Review of the Evidence". Op. Cit.: 23.

problems due to changes in programme rules (over time and across region), changes in individual characteristics etc.¹⁰²

In general, it seems that statistical samples of eligible non-recipients are lacking. Nevertheless, those surveys can be very expensive to create. Perhaps some local and original experiments could provide answers, or maybe we should consider a way to develop institutional sharing of data that can help to identify those people. It seems that although investment in this direction involves costs, it could help governments to prevent some situations that would be even more costly for our society, or to identify some benefits and services that are expensive but are not achieving their goals.

1.6. Abbreviations

AFDC	Aid to Families with Dependent Children
CPSs	Current Population Surveys
CTB	Council Tax Benefit
CWBH	Continuous Wage and Benefit History
DSS	Department of Social Security
DWS	Displaced Worker Supplement
EVS	German Income and Expenditure Survey
FACS	Families and Children Study
FC	Family Credit
FES	Family Expenditure Survey
FIS	Family Income Supplement
FRS	Family Resources Survey
HB	Housing Benefit
IS	Income Support
LFS	Labour Force Survey
MIG	Minimum Income Guarantee
NILT	Northern Ireland Life and Time Survey
NTU	Non-Take-Up
SB	Supplementary Benefit
SIPP	Survey of Income and Program Participation
UI	Unemployment Insurance
UK	United Kingdom
USA	United States of America
WFTC	Working Families Tax Credit

¹⁰² *Ibid*, 17.

2. A THEORETICAL GRID FOR CLASSIFYING SURVEYS AND DATA ON NTU

To examine the methods used to measure NTU of social benefits in France, the Consortium has choice to distinguish two types of NTU of social benefit: regular NTU (A) and the other forms of NTU (B).

2.1. Measuring regular NTU of social benefits

Regular NTU corresponds to the standard definition of NTU of benefits: *not receiving a social benefit even though you are entitled to it, whatever the reasons may be.*¹⁰³

With regular NTU, the population N is divided into two strictly exclusive categories without any ambiguity: on the one hand the eligible group (Ne) and on the other the non-eligible group (Nne) for the benefit (e = eligible; ne = non-eligible). There are no uncertain situations; a person is either eligible or not, he/she meets all the conditions or not, and these conditions are objectively verifiable. This type of definition immediately eliminates benefits paid on the basis of an agent's discretion and subjective assessment.

Thus, regular NTU corresponds to the eligible population which does not receive the benefit: Ne_NTU (NTU = non-take-up, TU = take-up).

The NTU rate T is therefore equal to the ratio of the number of eligible individuals who do not receive the benefit, over the total number of individuals who do:

$$T = Ne_NTU / Ne$$

Or

$$T = (Ne - Ne_TU) / Ne, \text{ with } Ne_TU = \text{the eligible population that receives the benefit.}$$

The problem is that in general, neither Ne_NTU nor Ne are known. What is known is usually the number of people who receive the benefit (N_TU), most often through the administrative sources of organisations responsible for paying the benefits. Often, to estimate NTU it is assumed that all recipients are eligible (or that the number of recipients who are not eligible is negligible), that is, N_TU = Ne_TU, and thus that $T = (Ne - N_TU) / Ne$.

To measure NTU it is necessary to have representative surveys of the group under study, in which it will be possible to find cases of NTU (people who are eligible but not receiving benefits).

¹⁰³ It is important to be able to define NTU without assuming its causes. First, they are not always known and, second, existing research shows that NTU has no single causal explanation. It is the product of many factors related not only to the beneficiary and his/her behaviour, but also to the agencies responsible for paying the benefit and, finally, the way the benefit has been designed.

We can distinguish between measurements made on the basis of ad hoc surveys to evaluate and measure the extent of NTU, and measurements obtained from other studies.

A. Measurements based on ad hoc surveys

Ad hoc surveys on a representative group to measure and evaluate NTU are probably the most reliable method, especially in the case of benefits that combine complex conditions of eligibility.

Based on a representative sample, precise questions in the survey make it possible to verify the conditions of eligibility for a benefit and to separate the representative sample into those who are eligible (Ne) and those who are not (Nne). Finally, another question or possibly a comparison with administrative files shows whether those who are eligible receive (Ne_TU) or do not receive (Ne_NTU) the benefit in question. Calculation of the NTU rate T is immediate with estimations of Ne_NTU and Ne.

If we extend the observation beyond the system of legal benefits to aid defined locally, we discover the possibility of obtaining other ad hoc measures. Although ad hoc surveys on groups representative not of the population as a whole but of people who are already beneficiaries do not enable us to show NTU of a benefit as such (non-beneficiaries being implicitly unknown), they can give a minimum evaluation of the extent of "temporary NTU" in the form of delays in applying for the benefit. Some estimations of temporary NTU based on an ad hoc survey are therefore available.

B. Measurements based on existing surveys not designed to evaluate NTU

It is possible to use existing surveys on representative groups to measure NTU. Unlike ad hoc surveys, they are not designed specifically to estimate NTU and are therefore limited in this respect, which can result in approximations.

For those benefits that are means-tested, these surveys have to include questions on income, which limits the number of usable surveys.

Two types of case exist:

- a. The survey has no specific question on the benefit under consideration

Most surveys such as the survey on tax revenue or living conditions in France contain information on income but not specifically on benefits. NTU can be estimated – possibly with simulation methods that are extremely complex to use – by comparing the number of eligible persons calculated from the survey, and the number of persons who actually receive the benefit, from administrative sources.

One is thus *indirectly* estimating the number of eligible persons (Ne) based on the data given in the survey (income, household composition, etc.).

By assuming that the beneficiaries (N_{TU}) are all eligible ($N_{TU} = Ne_{TU}$), one then takes the known number of beneficiaries (N_{TU}) provided by administrative sources to estimate the NTU rate.

$$T = N_{TU} / Ne$$

The denominator Ne is therefore 'estimated' from the questions in the survey, while the numerator is drawn from outside administrative sources. The estimation of Ne from the survey is tricky, to a greater or lesser degree, depending on the benefit. The simplest case is that in which the eligible population Ne is equal to the total population N (e.g. health insurance).

The fact of comparing very different data can be a substantial source of errors when income is taken into account in the decision to grant a benefit. When the number of beneficiaries of a means-tested benefit is estimated on the basis of an inquiry on income, the results are spoiled by a significant bias due to the fact that people of all income levels tend to under-state their income. This means that the survey will find more people or households eligible for a means-tested benefit than those who really are entitled to it. Consequently, if these data are compared to the real number of beneficiaries, the NTU rate will probably be over-estimated.

In the case of benefits that are not means-tested, it is less risky to compare administrative data relative to the number of beneficiaries with survey data without information on income, such as data from the census or other representative surveys on households. Statements made in surveys on the number of children or their age, for example, are obviously very reliable compared to statements on income.

It should also theoretically be possible in this way to estimate NTU of family allowance benefits that are not means-tested (NTU is probably very low here). Yet comparison between administrative data, often split between the different socio-professional schemes comprising the social security system, and survey or census data, is not easy.

- b. The survey contains (at least) one question on the payment of the benefit under consideration

For example, these would be questions on certain benefits contained in the European Community Household Panel (PCEM / ECHP), or on the RMI.

In this case it is possible to use simulation methods to estimate the number of people eligible (Ne). The survey then provides data on people who say they do or do not receive the benefit (N_{TU} and N_{NTU}). Of the latter, there will be those in a NTU situation (Ne_{NTU}), i.e. belonging to both the eligible population (Ne), estimated from the survey results, and the population that says it does not receive the benefit (N_{NTU}).

The NTU rate is theoretically immediate. However, for complex benefits such as Minimum Income and for survey data containing certain approximations, calculations based on

simulation of income and eligibility for benefits are generally very difficult to perform. Raw data can thus be corrected by means of statistical methods. Even supposing that the difficult simulation of benefits based on survey data contained no errors, this kind of approach largely over-estimates the number of eligible people due to the under-statement of income by the households questioned.

C. Other quantitative approaches to regular NTU

Many other types of studies and surveys exist which, without providing estimated NTU figures, can nevertheless highlight its existence in quantified terms. Often these are surveys on particular groups, non-representative of the population.

Examples are the NGOs' annual reports which evaluate the NTU rate in certain places within the population that these NGOs have met during the year. The advantage of this approach is that it proves that the phenomenon is considerable, especially since this type of survey covers several hundred thousand people.

That is why the statistics produced by powerful NGOs (that have competent services) should be more widely known. From this point of view there are certainly more sources than we think, so that it would be well worth organising an inventory.

2.2. Measuring other forms of NTU of social benefits

Research has identified cases of complex social benefits leading to situations that correspond not to regular NTU, in the strict sense of the term, but to really problematical situations.

We find these situations corresponding to other forms of NTU of benefits related to the beneficiary's behaviour. This question of other forms of NTU will be studied in greater depth in follow-up research. These other forms of NTU are not exceptional. They are increasingly frequent due to the emergence of highly complex social benefits. They also appear in the framework of increasingly tailor-made social policies, which make payment of benefits contingent on obligations for the beneficiary, with such obligations themselves being judged in a variable or discretionary manner.

A. Quasi-NTU

The notion of quasi-NTU was proposed and defined for benefits for which at least one of the conditions of eligibility can be decided by the potential beneficiary him/herself.

For all benefits, relatively objective conditions of eligibility exist, on which the beneficiary has no power of decision, at least not easily or immediately: age, sex, number and age of children, handicap, past and present occupation, marital status, income level, type and location of housing, amount of rent, etc.

For a benefit of which the eligibility rules consist entirely of such conditions – such as family allowances paid to all families with at least two children – NTU is theoretically easy to define. In the total population, it is possible to distinguish eligible people (or households) from those that are not. In the eligible group, there are those who do not receive (all or part) of the benefit, which corresponds to regular NTU. The NTU rate is the ratio of eligible people who do not receive the benefit, over eligible people.

Yet there are benefits which, apart from being granted on the basis of straightforward unbiased conditions, are also contingent on one or more conditions concerning the person's behaviour and which may therefore involve a certain choice by the person. These behaviours are usually related to employment.

In this case, we will first find regular NTU: people (or households) fulfilling all these conditions but not receiving the benefit. But there will also be people who meet all the conditions except those related to a modifiable behaviour by the beneficiaries. So, we can define cases of *quasi-NTU*:

- This concerns situations of people who meet all the conditions except those related to a behaviour (and therefore who are not in a situation of regular NTU) *and* who, if they had been (fully) aware of the benefit (had known that they could be eligible and had known to what amount and in what conditions they were entitled), would have had the right behaviour in order to qualify, e.g.: reducing or interrupting their work to receive a father's allowance, etc.

The population is divided into three categories:

- the eligible population N_e comprising people who meet all the conditions of eligibility
- the non-eligible population N_{ne} , subdivided into two other groups:
 - the non-eligible but "potentially" eligible population N_{npe} , comprising people meeting all objective conditions of eligibility and who would also meet the conditions of an employment-related choice (reducing or suspending their employment to receive the APE) if they knew about it;
 - the rest of the non-eligible population ($N_{ne} - N_{npe}$).

Regular NTU is measured by:

$$T = N_{e_NTU} / N_e \text{ ou } T = (N_e - N_{e_TU}) / N_e$$

Quasi-NTU is measured by:

$$Q = N_{npe} / (N_e + N_{npe})$$

In order to be able to measure quasi-NTU, one has to have information such as people's level of knowledge concerning the benefit. It follows that only surveys designed ad hoc enable one to measure quasi-NTU.

B. Other forms of NTU

In follow-up research it would be necessary to consider NTU in relation to the way in which benefits are delivered, and to consider situations that do not strictly correspond to regular NTU but that reflect another form of NTU.

Situations of people who meet all the conditions to receive a benefit but for whom the fact of receiving the benefit has particular consequences that cause them not to apply for it, are closely bound to the issue of NTU and/or exit from, albeit very formally. We could argue, as many officials do, that this is not NTU (in the absence of the last condition that the person refuses to comply with).

Well-known examples often concern the guaranteed minimum income for the aged. Traditionally, many people, especially former farmers or people who had had their own small business and therefore had a small inheritance, refused this benefit because the government could recover the amounts paid out from the person's inheritance after their death (above a certain amount). This is not strictly-speaking regular NTU since the person does not meet all the conditions stipulated by law, but it is another form of NTU since eligible individuals do not receive the benefit.

It is therefore necessary to consider measuring other forms of NTU corresponding to people who have chosen not to receive a benefit and people who have been excluded from a benefit.

3. STATE OF AVAILABLE INFORMATION SOURCES AND MEASUREMENT APPARATUS

As indicated in the introduction to this section, in all the countries studied we are confronted with a wide diversity of sources of information for estimating or measuring NTU rates. This problem would of course be compounded if even more countries were taken into account. The disparities between information sources have known reasons, identified in internal discussions in the Consortium during the preparation of the theoretical classification grid presented above. The three main reasons are: the state of national and local administrative and statistical apparatus; the complexity of welfare systems which are decentralised to a greater or lesser degree; and, lastly, the highly variable existence of regular population surveys that serve to estimate more or less accurately the groups potentially eligible to different categories of welfare benefit. These reasons are interrelated since they are rooted in the construction of each State (administrative State and welfare State) (see Box). But in countries like Hungary where these aspects are particularly important, and to a lesser degree in Greece or Spain, the difficulties in identifying and measuring NTU are also related to the state of the welfare

rights issue. This is clearly apparent in the Greek report, for instance, which shows that attempts to measure NTU focus on issues adjacent to NTU *stricto sensu*.

That is why any attempt to standardise sources of information on access to welfare benefits in Europe depends first and foremost on the results achieved in the development of social policies and the alignment of national administrative systems. In other words, it is a lengthy process. That is why, in our discussions in the Consortium, we agreed that we had to avoid considering that NTU could be a subject of sufficiently constructed observation everywhere.

Despite strong disparities between countries, and in light of information on some ad hoc apparatus for measuring NTU, it seems possible to suggest some apparently quicker and less costly ways of facilitating "a measurement of NTU". Even in those countries that have made the most progress in this respect, the methods proposed have serious limits and can be improved considerably.

Box

"Depending on the European Union country, national statistical system measurements have different forms, resulting from the country's administrative, political and social history. The diversity of national social welfare, education or tax systems implies differences in the way of conceiving of and measuring objects such as poverty, income, living conditions, etc. In addition to this difficulty there is a wide variety of organisations and methods involved in national statistical systems. Incomes are not measured in all countries by means of the same statistical methods. In some countries, especially in Scandinavia, a single data bank based on administrative records has been created. In other countries, including France, Spain and Italy, the main data source is questionnaire surveys on households. The statistics produced in each Member State are historically and geographically situated conventions of equivalence that need to be reconstructed if they are to be used on a different scale. For instance, should the household incomes measured on an EU scale take into account social contributions included in gross salaries? If not, the measured income does not contain the resources procured in France by the social security system. In countries which do not have a comparable social welfare system, health expenditures are paid from household incomes. In this respect, the measured living standards are not comparable: some contain resources in the form of health services and others not. Yet taking social contributions into account in a household's income amounts to considering that the gross income is equivalent in all countries, irrespective of the share paid out. Whether the household actually receives all this income is overlooked. Moreover, practical problems are involved in interviews with households as a means for collecting data on incomes that include all social contributions. Few households know what their gross income is, and even if this figure does appear on their salary sheets, there is no guarantee that a majority of households will agree to show their salary sheets to the researcher."

NIVIERE D. 2005. "Comment se construit une statistique européenne sur les revenus et la pauvreté ?" *Genèses*, 58, June, Forthcoming.

3.1. Diversity of information sources and available data, and disparity between countries

A. Registering individuals as an answer to the major problem of a reference population

Among the countries studied, only the Netherlands has regular surveys on NTU relative to certain categories of benefit. It also has a local census system that provides adequate information on the characteristics of the residents of a municipal area, from which potentially eligible groups can be deduced. In this country, as in a few other northern European countries, there is thus a statistical system partially based on the registration

of individuals in local administration files. This system has the advantage of allowing a comparison between the population of eligible beneficiaries and the total population (or "theoretical" population, in current statistical terms). The thorny issue of the eligible group (Ne) can thus be dealt with more satisfactorily. From this point of view, as the Dutch report clearly shows, it is possible to monitor trends in NTU of benefits such as the Housing Benefit (HIS).

But there are also two other advantages. First, the data thus constituted are territorialised, something that is more difficult with survey approaches. It is therefore possible to compare results between areas with regard to their demographic and socio-economic characteristics and the policies implemented locally. Furthermore, we know that the registration of individuals facilitates longitudinal studies (measurement of flows) whereas surveys or occasional studies focus on short reference periods (measurement of stocks). It is therefore possible to monitor trends in NTU rates over time, and thus to identify variations relative to the worsening or improvement of overall situations. These advantages have already been highlighted with regard to counting the homeless in Europe¹⁰⁴. We can thus suggest a deliberate development of registration systems and their generalisation in other countries. This is the position of the Netherlands in the European Federation of national associations working on the homeless, but here too, the path to take is filled with obstacles¹⁰⁵.

B. The advantages of NGO sources

The advantages of a territorialised longitudinal approach to NTU can be seen in other information sources as well. The Dutch, Spanish and especially French reports show how the charity sector or, more generally, the non-profit sector, can produce quality information. In some cases they afford access to data bases in which NTU statistics are directly available, mainly from rates calculated in collaboration with health and social services. In reports by NGOs and charitable organisations, we see that problems of precariousness and poverty, sociologically identified as processes of de-socialisation and dis-affiliation¹⁰⁶, are introduced de facto in terms of NTU. The overall problem of exclusion, treated from the angle of access to benefits, rapidly defined NTU as a possible indicator. Right down to descriptive categories defined by NGOs, we see that the NTU phenomenon is taken into account. This is notably the case in the health and education fields, where "exit from" and "delayed" care, or "exit from school before obtaining a qualification" (where NTU is equivalent to a withdrawal) are seen as possible rates of NTU. In France, large-scale apparatus for evaluating "rates of delayed care or NTU of care" and "rates of unclaimed health insurance" are being developed nationally. Scores of precariousness and NTU (probabilistic approaches) are being developed to locate and target the groups concerned. This approach, initiated by the research and statistics agency of the 99 national health insurance medical examination centres is being applied

¹⁰⁴ ATKINSON T., CANTILLON B., MARLIER E., NOLA B. 2001. *Social Indicators. The EU and Social Inclusion*. Oxford: Oxford University Press.

¹⁰⁵ BROUSSE C. 2005. "The Production of Data on Homelessness and Housing Deprivation in the European Union: Surveys and Proposals". *Eurostat Working Paper*, Forthcoming.

¹⁰⁶ When there is a pronounced weakening of integration in a formal network (work, associations, etc.) but also of basic solidarity (family, neighbourhood, family networks).

by NGOs providing mainly – but not only – healthcare to groups in situations of precariousness or exclusion.

The objective is to identify sources of information, to be aware of existing data, and to use these effectively, that is, as possibilities for measurement based on ad hoc surveys (see our grid). If we look closely at the data produced by certain NGOs, we see another major advantage compared to public statistics: several dimensions of the social reality of the groups in situations of NTU are taken into account. In other words, NGOs' data often have a greater explanatory value than administrative information, even if their data concern specific populations, that is, the groups served by these organisations, and are generally based on statements by their "clients"¹⁰⁷. >From this point of view, the particularity of NGO data bases is that they facilitate (or can facilitate) the description of situations of NTU, whereas ad hoc inquiries produced on the basis of administrative data (generally by surveys) usually count situations of NTU. While NGOs lack the resources to undertake large statistical inquiries (that extend further than their own publics), statistics institutes do not seem able to organise on-going data collection.

The NGOs have to want to and be able to organise their data sufficiently. This depends on their resources, the philosophy underlying their action, and the institutional context in which they operate. The latter can introduce requirements, to varying degrees, to present their actions and results. Behind that we find the question, among others, of the public regulation of the activities of the non-profit sector involved in the fight against exclusion¹⁰⁸.

C. Administrative data: the main source

The presentation below of available information by country shows that in those countries in which local public authorities are the main social welfare actors, the statistics services of public administrations play a key part in the production of information used in ad hoc measurements or estimations of NTU. These measurements or estimates are calculated by the services themselves or by research centres which occasionally tap their information. This does not preclude collaboration with NGOs (e.g. in the Netherlands) or the creation of possibly rival systems of information or surveys (France). These configurations can also evolve, as shown in the case of Spain where public statistics are emerging. For its first survey, the national statistics institute was inspired by the method developed by Caritas and the Pontifica Comillas University in Madrid.

Despite the importance of statistical research services in certain countries (Germany, the Netherlands, France), the approach to NTU is indirect everywhere. It is based on very rare ad hoc surveys and usually requires secondary analytical studies of which the methodology (generally by simulation of rights) remains uncertain and unsuited to generalisation. One of the main difficulties encountered is the quality of basic available information, that is, its relevance to the NTU subject. Work often concerns "household"

¹⁰⁷ A problem of reliability is often compensated for by the quality of social assistance within organisations, which makes it possible to sum up individual situations accurately.

¹⁰⁸ BRINKERHOFF D.-W., BRINKERHOFF J (eds) 2002. "Government-Nonprofit Relations in Comparative Perspective". Special Issue: *Public Administration and Development*, 22 (1), February.

surveys that lack specificity, in which very few variables are available for constructing an estimation, let alone measurement, of NTU. Moreover, these surveys are difficult to match up to one another or to data relative to household incomes (often held by tax services) for the purpose of identifying eligible and non-eligible groups.

By comparison, use of administrative data seems more reliable. But the same types of difficulty are apparent in all countries, i.e. essentially a focus on beneficiary groups and therefore on types of NTU, mainly "temporary" and "frictional", which tend to overshadow the question of potential beneficiaries not known to the welfare services. Two other significant problems are also identified in the reports: first, the administrations or public services concerned are far from exploiting their own data bases efficiently to further their knowledge of NTU (existing statistical treatments are very often well below the potential of computerised treatment of the NTU issue); second, administrative partitioning precludes the matching up of different data bases (e.g. between administrations) which could serve to highlight discrepancies in measurement of potential beneficiaries and thus to identify possibilities of exit from benefits. Close examination of these difficulties indicates clear institutional intentions not to facilitate the approach to problems of access to rights, mainly for budgetary reasons. To balance their accounts some services prefer to maintain temporary NTU, of which potential beneficiaries are not aware, or a partial view of a group that is known fully to another administration. Considering the financial state of the social welfare systems, no service is beyond such practices which protect budgets but cause NTU. In this respect, Belgium is an exception in Europe with the creation of the *Crossroads Bank for Social Security (CBSS)*, a national bank of social data supported by laws stipulating that an administration may not request information from an individual that it or another administration already has (see below).

D. Available data sources in the countries under study: an overview

a. In the Netherlands

The availability and access of the data is a very important aspect of the identification problem. In general the use of existing data is preferred to an independent survey because of advantages in both time and budget. If surveys or administrative data-files with relevant information for the identification are available, the (first) identification can be more precise. Four kinds of data sources can be distinguished:

1. An independent survey in the Dutch population
2. Secondary analysis of available survey data
3. Comparison between administrative databases at aggregated level
4. Using administrative databases at an individual level.

Of course a combination of the possibilities mentioned above is also possible and often even inevitable if one wants to examine all three of the aspects of non-take up.

A large independent survey in the Dutch population will in theory offer the most valuable information. In such a survey detailed information about the respondents social and financial position and the use of the different kinds of social benefits could be gathered to

determine if there is a case of (partial/temporary) non-take up. Such a survey can also provide information about the reasons of non-take up or exit. In the ideal situation the respondents in the survey will be followed for a number of years, so giving insight into the effect of specific policy changes or of changes in the personal situation of the respondent concerning the use of social benefits.

Another possibility for obtaining information about the non-take up of social benefits is the use of available survey data. The use of existing survey data is a relatively simple and cheap way of identifying research entities.

A third possibility for obtaining information about non-take up is the use of administrative databases or a combination of administrative and survey data. Central and decentralised databases of governmental organisations can provide information about the use of social benefits on the population level. Other administrative databases or surveys can give an indication as to which part of the population, once again on an aggregated level, is entitled to the use of some social benefits. Comparing the two may give a rough indication of non-take-up.

A fourth possibility involves the use of administrative databases at an individual level. The problem with administrative databases is that usually only persons that use social benefits are registered and the data therefore do not provide any information about non-take up. However, an administrative database of users of one type of social benefit may be used to draw a sample of possible non-users of a related kind of social benefit. Instead of using administrative databases only for drawing a sample or to compare figures at an aggregated level, another possibility is to link together administrative databases that provide information on both the use of benefits and the person's eligibility. Inhabitants of the Netherlands and other European countries are registered in more and more (administrative) databases such as municipal population registers, registration of compulsory school attendance, recordings of benefit agencies, recordings of the Tax and Customs Administration and so on. Since the advent of computers, these databases are not only registered but are also stored increasingly in an automated system. In the Netherlands, for example, since 1994 all municipalities have been legally obliged to automate their administration with personal data of the population. The automated records, initially set up for administrative purposes, make the data (at least in theory) more accessible and available for other purposes. In some cases they can be used, for example, for research. If we focus on the use of administrative data to obtain information about non-take-up, the information in one data file will in most cases not be enough to be able to draw conclusions about the use and non-use of certain benefits. To be able to derive relevant information on non-take-up it will almost always be necessary to link several sources of information.

In the Netherlands all of the above-mentioned methods/data sources have been used to measure non take-up.

b. In Germany

Most German studies dealing with the "measurement" or calculation of NTU are related to the non-take-up of German Social Assistance. Empirical surveys that are designed and conducted especially for this purpose tend to be an exception; the majority of the studies are based on publicly financed and organised samplings, the most significant of which are the German Income and Expenditure Survey (EVS), the Socio-economic Panel (SOEP), and lately also the Low-income Panel (NIEP). Based on these data sources, most surveys attempt to determine the number of eligible persons by means of the so-called "micro-simulation" procedure (Engels), in order to calculate the NTU quota on the basis of these figures.

The main problem of this procedure is that the data sources never provide for all numbers which are necessary for the complex calculation of eligibility. Due to the principles of individualisation and subsidiarity, Social Assistance is designed in a way which basically rules out an exact calculation of the Social Assistance claim (on its merits and with respect to the amount) on the basis of the aggregated data. Furthermore, the respective Social Assistance Clerk's decisions about an individual case cannot actually be "simulated". When calculating the NTU quota, researchers are therefore forced to partially fall back on estimations, assumptions and rounding off, which may have an essential influence on the result. This also explains why the numbers stated by different authors with regard to the NTU quota, vary considerably.

Empirical surveys which are specific to the research on non-take-up, and comprise a detailed analysis of individual households, establish the only possibility to get this problem - at least partially - under control.

However, such studies are - with one exception - only available with respect to specific population groups (Caritas-clients, employed, old people). It can therefore be stated that there is a definite demand for research in Germany, both to obtain more reliable data, and to better understand the NTU phenomenon in terms of reasons and motivations for this behaviour pattern.

There are also isolated studies of non-take-up of other public benefits and services - although most are "labelled" differently (e.g. "class-specific take-up", "spreading effects of social benefits", "effects of social benefits" or similar). These studies are largely based on specific empirical research. However, a connection between this kind of study and the NTU research concerning Social Assistance has never been established - neither theoretically nor methodologically. In order to do so, it would be particularly suitable to make use of an approach which combines quantitative and qualitative methods and also starts from an individual household level, where manifestations of non-take-up can be observed directly, but also in their respective contexts.

Yet such a widely designed research approach which jointly analyses similar phenomena and behaviours of non-take-up in different welfare-state sectors and could thus produce a comprehensive methodology and theory, is still lacking to a large extent in Germany.

c. In France

France has no regular national surveys explicitly focused, either totally or partially, on NTU/EF phenomena. However, regular surveys produce data on consumption of social benefits (allowances and services), which can be used to make estimations in terms of *rate of coverage* (registered beneficiaries, or benefits due) and *rate of non-take-up* (non-consumption of services). For example, this is the case in the health field, with:

- *Echantillon Permanent des Assurés Sociaux* (EPAS): this "permanent sample of social welfare beneficiaries" is representative of 1/600th of the beneficiaries of the various health insurance fund agencies (CAM – *caisses d'assurance maladie*) and their dependents. It contains two types of data: data on individuals covered by health insurance for a determined period of time (age, sex, dispensed or not from paying the beneficiary's share), and data on all medical refunds paid to individuals in the sample (although certain expenditures are overlooked).

- *Santé et Protection Sociale* (SPS): this two-yearly survey by the CREDES on households in the EPAS is representative of roughly 95% of French households. It is administered on a random sample of 8,000 households (approximately 20,000 individuals). The survey focuses essentially on consumption of health care and medical insurance (especially complementary insurance). It contains a socio-economic description (income, lifestyle) as well as a health questionnaire designed to relate consumption to objective factors.

The DREES (Direction de la recherche, des études, de l'évaluation et des statistiques, common to both the *Ministère des Affaires sociales, du travail et de la solidarité* and the *Ministère de la Santé et de la Famille*) regularly analyses the impact of universal health insurance (CMU) on individual consumption of health care by matching the EPAS and the SPS.

At the same time, some one-off national surveys contain data concerning NTU. This is the case of the national study on homeless people who make use of free accommodation and meals (*Enquête française auprès des "sans domicile" fréquentant les services d'hébergement et de restauration gratuite*), by the INSEE in January 2001. This survey, still being processed, has provided data on benefits received by this group and behaviours regarding NTU or refusal.

As in the Netherlands, an approach using an independent survey in the general population can provide certain estimations of NTU. Every year the "living conditions" ("*conditions de vie*") indicator¹⁰⁹, calculated by the national statistics and economic

¹⁰⁹ Social indicators: the core components of the INSEE continuous survey of household living conditions: Social indicators have been harmonised at the European Union (EU) level and cover the entire social sphere. They allow an effective comparison of household and individual living conditions in EU countries. They are also used as a basis for analysing the distribution of social well-being and exclusion phenomena. Since 1996 these indicators are an integral part of the French statistical system via the INSEE continuous survey of household living conditions (*Enquête Permanente sur les Conditions de Vie des Ménages*: EPCV). The data are gathered in three separate annual surveys in January, May, and October. The first focuses on the quality of the residential

research institute (INSEE) (*“Enquête sur les Conditions de Vie” – EPCV*), is used to measure 27 dimensions of daily life in four main areas of poverty: budgetary constraints, restrictions on consumption, overdue payments, and housing conditions. Objective criteria are thus combined with criteria of privation. Households faced with at least eight of the 27 difficulties are considered to be “poor in terms of living conditions”. Other general indicators of this type are proposed. For example, the BIP40 (Barometer of Inequalities and Poverty) developed by a network of NGOs is used to analyse (by means of the scoring method) the risk of being in a situation of poverty due to the lack of certain aid. Another example is found in the health field where the EPICES score, an indicator of precariousness, is used by the national health insurance's medical examination centres (650,000 consultations annually). Of importance here is the current effort by professional, NGO and academic actors to model “groups at risk of NTU”, based on statistical methods of factorial analysis of correspondences and multiple regression, applied to various data bases relative to particular publics. We see the appearance of the first elements of a possible preventive approach to NTU, in which the identification of “groups at risk of NTU” should make them easier to target – with everything that that implies in terms of impacts on the content of public policies and their implementation.

The same methodological effort can be expanded considerably since many potential data sources are still unknown. In the diversity of administrative services and primarily in local administrations, particular evaluations of NTU can be found. Another major source of regular health-related data is provided from the NGOs.

d. In Spain

Most measurement instruments are drawn from general statistics of a demographic, economic or social nature, generated by the public sector and combined with user-level statistics. The comparison between those who benefit from a right or service, and potential users (as estimated from general statistics) makes it possible to deduce an approximate estimate of non take-up levels in some cases, and of exit from rights in other.

Apart this first possibility, there are a few ad hoc studies which focus in a specific way on one or more aspects of the NTU issue:

1. Use of the right to participate in civil and political activities: nationwide survey performed in 2002, for the Spanish population aged 18 and over. 4,252 questionnaires were developed on in-house personal interviews.
2. Use of Primary Care Public Social Services: representative surveys on the general population, users/clients and social service professionals to evaluate the impact or coverage of primary care public social services.

environment and neighbourhood, the second on health, housing, and financial situation, the third on workplace conditions and social contacts.

3. Use of public and private resources from the poor population's point of view: Specific survey reaching 29,592 families with poverty status (1994-96). Data are gathered on outcomes of NTU of care benefits.
4. Frictional NTU in Health Public Services: investigation on a nationwide level, in order to know precisely the volume and characteristics of the waiting lists or frictional NTU in the Public Health System (2002).

Two other studies include some aspects of NTU:

1. Research on non take up of Judicial tutelage of Ethnic Minorities. In the case of Spain it was applied in 2002 to samples of the immigrant Rom minority. More than 95% of the people discriminated against did not denounce the situation.
2. Non take up of the right to an impartial Judicial Tutelage: research on 8,182 cases developed in six *comunidades autónomas* with high immigrant figures, to obtain accurate information about the *non take up* of the right to impartial Judicial tutelage of immigrants in Spain.

e. In Greece

To date, no statistical investigations of the extent of non-take up and its potential gravity for the efficacy of social policy have been undertaken. The absence of expressed policy concern for non-take up is counterbalanced by the interest aroused by its converse - the collection of social benefits by those *not* entitled. System abuse is often mentioned as a manifestation of the grey economy, and many recent institutional and administrative developments were explicitly motivated by a desire to limit it. The first step in our approach is thus to clarify the two concepts. This is done by borrowing a simple framework from statistical sampling theory.

The Greek social welfare system, being particularistic by nature and with very limited use of means testing, limits the kind of data that can be used to test for non-take up. Nevertheless, there are three cases where testing based on survey data can be consistently employed, using known statistical methodologies.

The investigation draws on data from the Household Expenditure Survey and the European Community Household Panel. Use of the latter (or its successor, the Survey of Income and Living Conditions), raises the prospect of producing comparable estimates of take-up in all members of the EU-15 and (soon) for the EU-25. The ability to produce estimates for a "difficult" case such as Greece increases the probability of being able to define indicators on a European-wide basis, which can be useful in the open method of coordination. European databases, apart from comparability, give rise to the possibility of following changes over time.

The analysis proceeds by examining non-take up for the specific cases of family benefits and low pensions. Point estimates are derived for both by comparing predicted and actual collection of benefits. However, a note of caution is sounded, by identifying the existence of potentially sizeable system abuse. A key problem encountered is the small number of observations for which inference is possible. The analysis of confidence intervals

concludes that though estimates of non-take up are not very stable, they are in all cases significantly greater than zero. The analysis suggests *three* key suppositions or working hypotheses:

- First, a problem of non-take up exists, though its exact magnitude is uncertain. The estimates derived in this paper, even if necessarily couched in very cautious terms, must be taken to imply that the issue is sufficiently important to (a) warrant further study and (b) be an explicit concern in benefit design and policy formulation.
- Second, the widespread parallel problem of under-declaration cannot easily be disentangled from non-take up and could be disguising the latter's true magnitude. Under-declaration itself is a manifestation of pathology in the administration of social benefits; addressing non-take up cannot happen independently of parallel measures to get to grips with the causes of under-declaration. Combating both should be in the priorities of well-run social protection systems.
- Third, dealing with take-up issues should be a priority in any social protection system, which aims to achieve a particular outcome. Progress in tackling non-take up must go hand-in-hand with adapting social policy to be more open, more results-oriented and ultimately more efficient in feeding into societal goals.

f. In Hungary

Statistics on access show that there are major regional problems, but one of the main factors distorting access is the ethnic problem: the Roma form one of the poorest groups, and are excluded from many services that would improve life chances and their quality of life. Moreover, huge gaps exist in measurement and availability of data. On the basis of (at least the Hungarian) experience, it seems that the information on access, take-up, refusal rates and non-take-up can be best secured by means of surveys focusing on the poor. The large data sets have handled these issues inadequately, and nation-wide samples may not be large enough to study the experiences of the poor.

3.2. Three examples of ad hoc institutional devices

In our report we pointed out the existence of two institutional devices devoted to the study of NTU. One is in the Netherlands and the other in France. This does not mean that ad hoc tools of this kind do not exist in other European countries, apart from the six studied. They most probably do in the UK and especially in Belgium, as indicated in the brief presentation of the Crossroads Bank for Social Security (CBSS) which, without being specialised in the study of NTU, does help to highlight some forms of the phenomenon.

The KWIZ and ODENORE proceed in different ways. In order to develop indicators of NTU, the KWIZ draws on a Municipal Population Register in which all legal citizens of a town have to be recorded. Available administrative data are then related to this register, by means of social security numbers, for example, to be able to calculate the gap

between the population of eligible beneficiaries and that of potential beneficiaries. In France, ODENORE does not have this type of access to data on potential beneficiaries. It therefore draws up inventories, in various territories, of sources of useful administrative and NGO data. It also undertakes computer searches on these data bases in order to constitute field-specific (health, occupational insertion, dependence (the aged)) "operating reports" of data gathered or compiled with partners. Despite their differences, these two tools have several strong convergences on aspects of great value to the production of knowledge on NTU:

- They both work on individual administrative information (and sometimes data from NGOs) that can allow approaches to the accumulation of situations of NTU, and a detailed description of the socio-economic characteristics of the people concerned. ODENORE, as an institution incorporated into a scientific research programme, develops complementary qualitative inquiries.
- Their work concerns targeted areas or specific types of aid, so that a cumulative effect allows a diachronic analysis of NTU.
- Different territorial scales are concerned, which makes it possible to apply knowledge on NTU to more comprehensive reflection on the social dynamics at play (for instance in terms of withdrawal from the public offer; see Part 1), and on trends in public modes of action confronted with certain groups' difficulties in taking up their benefits. Like the preceding one, this point sets these two devices immediately next to the administrative and NGO actors' interests, and thus makes them "useful tools for action".

A. *The Kenniscentrum voor Werk en Inkomen en Zorg (Expertise Center for Employment and Care) (KWIZ)*

Concretely, measuring non-take-up is done by a wide variety of actors. Some cities like Rotterdam use their own statistical research departments (some of which are now externalised). Measuring non-take-up can also be done by purely private research bureaus like the KWIZ¹¹⁰ based in Groningen and lately commissioned by the municipality of Amsterdam for the purpose of the implementation of its anti-deprivation policy.¹¹¹

The KWIZ considers that it is possible to monitor poverty (and calculate non-take-up) on the basis of existing administrative data files. This has become one of their larger studies in which they used many different administrative data sources and from which some interesting figures about the rate of non-take-up can be derived.

¹¹⁰ www.kwiz.nl. KWIZ stands for *Kenniscentrum voor Werk en Inkomen* (Knowledge Centre for Work and Income). The research centre does not only deal with non-take-up issues. More generally, KWIZ provides expertise in monitoring poverty in urban areas throughout the country but mostly in the Northern part of the Netherlands. For the municipality of Amsterdam, the KWIZ investigated the use of some benefits at the household level for a period of three years.

¹¹¹ KWIZ 2002. *Armoede in Amsterdam: Over doelgroepen in het lokaal sociaal beleid, instrumenten voor inkomensondersteuning en participatiebevordering en het gebruik en niet-gebruik van deze voorzieningen* (About target groups in the local governmental social policy, instruments for the support of income and encouraging participation and the use and non-take-up of these benefits). Groningen.

The data sources used include:

- The municipal population registers (*Gemeentelijke Basis Administratie (GBA)*) a database in which all legal citizens in Amsterdam are registered (on 1 September 2001)
- The file containing data about the registration of houses, of the Amsterdam tax office (on 1 September 2001);
- Data about social assistance clients from the Amsterdam social services department in the period September 1999 until September 2001;
- Registered data about special assistance for the year 2000;
- The file containing data about the exemption of local taxes, of the Amsterdam tax office for the period 1998-2000;
- Local data about the registration of the housing benefit for the years 1999/2000 and 2000/2001;
- Data of the national tax office about persons over the age of 65 receiving only a state pension.

Using administrative data, the KWIZ (2002), found indications of the non-take-up of special assistance on an individual level. In several studies it uses administrative databases to determine the number of households with incomes at 140 percent of the social minimum, and to measure the rate of non-take-up of several benefits. One of the KWIZ's largest studies was undertaken in Amsterdam. For that study it used data from the above-mentioned administrative sources.

a. Examples of research

In several studies the KWIZ has already used (linked) administrative databases to monitor poverty in urban areas in the Netherlands. The following procedure was used:

- The starting point is the municipal population register (*Gemeentelijke Basis Administratie (GBA)*) in which all legal citizens in Amsterdam are registered. In a first step all the data of the used registration files are linked, on an individual level, to this population register GBA. In this way an historical perspective is obtained on every citizen's history regarding the use of income supporting measures (social benefits like special assistance, tax exemptions, housing benefits etc.).
- In the next step, with help of the data in the population register GBA, it is determined to which type of household a person belongs.
- The actual use of benefits of all the persons in the household is then determined. This is important because it often happens that different members of the household apply for benefits.
- Finally, there is a data file on the level of the household for the city of Amsterdam. In this file there is information about the use of certain social benefits over a period of three years. On the basis of this linked database, more or less accurate conclusions can be drawn, at the population level, about the volume and distribution of non-take-up of several social benefits.

b. Amsterdam as an example

Commissioned by the city of Amsterdam, the KWIZ examined whether it would be possible to obtain information about the income conditions (poverty status) of the population of Amsterdam by exploiting administrative data files, and whether it would be possible to monitor 'poverty' year by year on the basis of these recordings. This monitoring had three functions. One of these functions was the so-called application function. An example of this is the automatic remission or exemption from certain municipal taxes such as property tax and garbage tax. This application function aimed to increase the outreach (or coverage) of certain measures/benefits and thus to minimise non-take up rates. It could therefore (as a side effect) provide direct insight into the extent of non-take up.

In its research the KWIZ started by examining which data sources could be used. Within the municipality of Amsterdam a large amount of information is registered that can be very useful for monitoring poverty. In this case it concerns data by which the income position can be determined directly or indirectly at the level of economic entities. In the table below the sources of information of the different measurements are presented. Because this is an example we will not go in detail with respect to all the different measurements.

The following parameters are used:

- Is the information source of the regulation useful for the instrument; a source is useful for the instrument if the recordings contain relevant information on persons and households on a social minimum.
- Does the information source give a quantitative contribution to the instrument: the data source adds minimum households "registered" to the total number of minimum households in Amsterdam. The starting point is the number of persons receiving social assistance.
- Can the (social) minimum income be determined: is it possible to determine on the basis of the recording whether a person or household has an income on the social minimum.
- Is it possible on the basis of the registration to determine a person's wealth. This is necessary because several measures only are valid (is someone entitled to or eligible) if their possessions are below a certain limit.
- A system is suitable to be incorporated into the instrument as it is technically possible to derive the necessary data from it.

Table 1: Relevant measures /information sources

Information source of the benefit	Useable	Contribution	social minimum	possessions registered	system appropriate
municipal population register	No	Yes, for linking	No	No	Yes
assistance to person with debts	Yes	Yes	Yes	Yes	No
assistance	Yes	Yes	Yes	Yes	Yes
special assistance	Yes	Yes	Yes	Yes	Yes
Other assistance	Yes	Yes	Yes	Yes	Yes
measurements					
WIK	No	No	Yes	Yes	Yes
Categorical special assistance	No	No	not applicable	not applicable	not applicable
exemption taxes	Yes	Yes	Yes	Yes	Yes
Housing benefit	Yes	Yes	Yes	Yes	Yes
benefit disabled	Yes	Yes	Yes	Yes	Yes
Citypass	No	No	No	No	Yes
WIW	Yes	Yes	Yes	No	Yes

Source: KWIZ

c. Amsterdam and other examples

Table 2: Research on NTU of various social benefits using administrative databases at an individual level

Benefit (s)	Publication ¹¹²	Target group	Data
Special Assistance Act (BB)	KWIZ (2002)	households with minimum incomes in Amsterdam 2001,2003	Population of persons/households with minimum incomes on administrative data files
Special Assistance Act (BB)	KWIZ	households with minimum incomes in 1999 in: -De Wolden -Hoogeveen -Dongeradeel -Almere -Noordoostpolder	Population of persons/households with minimum incomes on administrative data files
Housing Benefit (IHS)	KWIZ	households with minimum incomes in Amsterdam (2001) en Almere (1999)	Population of persons/households with minimum incomes on administrative data files
Local income assistance schemes	KWIZ (2002)	households with minimum incomes in Amsterdam 2001,2003	Population of persons/households with minimum incomes on administrative data files
Local income assistance schemes	KWIZ	households with minimum incomes in 1999 in:	Population of persons/households with minimum incomes on

¹¹² - KWIZ 2002. *Armoede in Amsterdam: Over doelgroepen in het lokaal sociaal beleid, instrumenten voor inkomensondersteuning en participatiebevordering en het gebruik en niet-gebruik van deze voorzieningen* (Poverty i Amsterdam: About target groups in the local governmental social policy, instruments for the support of income and encouraging participation and the use and non-take-up of these benefits). Groningen.

- KWIZ 2000. *Zicht op Armoede; onderzoek naar de mogelijkheden voor het uitvoeren van positieve bestandskoppelingen ten behoeve van lokaal sociaal beleid* (View on Poverty; research of the possibilities for the implementation of a linkage of administrative data files for local policy purposes). Groningen.

- KWIZ 2002. *Armoede in Amsterdam: Over doelgroepen in het lokaal sociaal beleid, instrumenten voor inkomensondersteuning en participatiebevordering en het gebruik en niet-gebruik van deze voorzieningen* (About target groups in the local governmental social policy, instruments for the support of income and encouraging participation and the use and non-take-up of these benefits). Groningen.

		-De Wolden -Hoogeveen -Dongeradeel -Almere -Noordoostpolder	administrative data files
Supplementary assistance (<i>aanvullende Bijstand</i>)	KWIZ (2002)	households with minimum incomes in Amsterdam	Population of persons/households with minimum incomes on administrative data files
Collective Health care insurance (<i>collective ziektekostenregeling</i>)	KWIZ	households with minimum incomes in 1999 in: -De Wolden -Hoogeveen	Population of persons/households with minimum incomes on administrative data files

B. L'Observatoire des non recours aux droits et services (ODENORE) – Unit for research on NTU of benefits and services

ODENORE is a product of a research programme on non-take up (NTU) of public services, run by a CNRS laboratory at the *Institut d'études politiques* in Grenoble¹¹³. The idea developed from exploratory research on non-take up of public services, undertaken in the early 2000s for the *Direction générale de l'administration et de la fonction publique*¹¹⁴. Although actors in the government administration and non-governmental organisations were familiar with the concept of NTU, it was not being measured. In order to develop scientific knowledge on NTU, it therefore seemed necessary to construct an ad hoc tool that could be used to identify it. With the initial support of the national network "France Qualité Publique", a research unit, ODENORE, was launched on an experimental basis. The Isère *département* was chosen for its geographical proximity to the CNRS laboratory.

Institutional partners were immediately found to help fund the Unit: the CNAF, the local CAF in the *département*, the Isère *Conseil Général* and the City of Grenoble. Further support was provided by the Fund for State Reform, the Isère *préfecture*, and devolved State administrations. The Research Unit was set up in March 2003 in the *Maison des sciences de l'homme – Alpes*, an organisation that hosts research programmes.¹¹⁵

>From the outset ODENORE has followed the same procedure. It works with its partners on the compilation of data bases relative to the groups entitled to benefits, with a view to measuring NTU and reporting those results. The idea is to produce knowledge that can be shared and used in research work and in operational reflection and action. This approach takes into consideration the need for quantification of NTU and for explanation of the phenomenon from the points of view of both the welfare organisations concerned and potential beneficiaries. It therefore consists of a process of construction of elements of statistical measurement and an explanatory approach via qualitative surveys.

¹¹³ <http://ODENORE.msh-alpes.prd.fr>. The initiator and scientific director of the Unit is also the coordinator of the Consortium EXNOTA.

¹¹⁴ WARIN P. (ed.). 2002. *Le non recours aux services de l'Etat. Mesure et analyse d'un phénomène méconnu*. Grenoble : CERAT-IEP.G., September: 245p.

¹¹⁵ For a detailed presentation of ODENORE, its objectives, partners, work and results, the reader is referred to the site <http://ODENORE.msh-alpes.prd.fr>

a. Starting by observing particular types of NTU

Initially, ODENORE's main concern was to rouse the different partners' interest so that their commitment would last. Attention was focused on the concerns pointed out from the start by the Isère CAFs, the deputy director-general of the Isère *Conseil general*, the councillor responsible for public health, the president of the CCAS of the City of Grenoble, and the general secretary of the Isère *préfecture*. To launch the construction of data on observed or potential NTU, several projects were launched. Each one necessitated the constitution of working groups with the actors appointed to be ODENORE's direct contacts. Two examples:

- Project 1: NTU of welfare benefits:

With the CAFs, the initial choice was to identify possibilities of NTU among beneficiary groups by launching data base searches. Hypotheses relative to possible NTU were made by considering the different stages in a typical trajectory, from the first time the person registers until they exit from the system¹¹⁶. The main results concern the "back payment of entitled benefits":

- These payments can suggest *temporary NTU* or *frictional NTU*. They can be perceived from data relative to the updating of entitled benefits. This updating is done individually for each benefit, quarterly or annually.
- Local CAF data indicate, for 2001, a total of 6,000 back payments amounting to 3 million euros and concerning 35,000 files checked, and for 2002, just over 7,000 back payments, almost 4 million euros and 46,000 files checked. These are back payments made by the CAF after a control. But there are also back payments initiated by the beneficiary (e.g. informing the CAF late about a change of address). If these are counted as well, the overall amount concerned by back payments was 66 million euros in 2001 and over 60 million euros in 2002.

Table 3: Comparative amounts of overuse and back payments in 2001 and 2002 (million euros)

Year	Total number of controls	Number of back payments	Amount involved in back payments initiated by CAF control	Total amount involved in back payments initiated by beneficiaries	Total amount of overuse
2001	35,414	5,884	3.254	65.974	18.385
2002	45,958	7,146	3.719	60.535	22.418

Source: Grenoble CAF for ODENORE.

These results indicate a large number of beneficiaries who, at a given point in time, do not receive all the benefits to which they are entitled. Depending on the origin of the back payments (CAF control or request by the beneficiary) the amounts vary considerably. Two contrasting interpretations of the back payment/overuse ratio are possible. If we consider only the back payments resulting from controls, their amount is

¹¹⁶ ODENORE 2003. Mesure du non recours aux prestations sociales, recherche d'indicateurs. *Recherches et Prévisions*, 73, September: 90-96.

three to four times smaller than that of overuse. On the other hand, if we include the back payments resulting from beneficiaries' requests, the ratio is inverted: the total amount of overuse is three to four times lower than all back payments. Beneficiaries' vigilance thus seems to be a guarantee against possible losses of earnings for themselves, and against *partial NTU* of benefits. In this case the claimants' action has a high cost for the institution. Hence, the importance of control and communication policies seems evident.

- Project 2: NTU of "*contrats d'insertion*"¹¹⁷

The initial proposal of the Isère *Conseil Général* was to work on beneficiaries of the RMI who had never had a *contrat d'insertion* or had not renewed their contract. This absence of a contract is assumed to indicate a situation of NTU of those benefits which are designed to help jobless people enter or return to employment, without assuming the reasons for that NTU. The study was undertaken jointly with the *Insertion Adultes* service of the *Conseil Général*, on the basis of data received from the 11 *Commissions locales d'insertion* in the Isère *département*.

The first results concern data on 29 February 2004. Three groups were identified: beneficiaries of the RMI for over six months; beneficiaries of the RMI for over six months without a *contrat d'insertion*; and beneficiaries of the RMI for over six months whose contract had not been renewed. On 29 February 2004 the Isère *département* had 15,341 beneficiaries of the RMI. Of those, 12,000 had been receiving the RMI for over six months. 15% of them had never had a *contrat d'insertion* and 41% had not renewed their *contrat d'insertion*. By combining the criterion of family structure with that of age, we can show that the absence of a *contrat d'insertion* and the failure to renew the contract tend to concern mainly young men living alone. Hence, family responsibilities act in favour of more take-up of the *contrat d'insertion*, which is consistent with what we know of the causal link between the breakdown of family ties and de-socialisation, at the root of processes of social exclusion. Current statistics enable us to identify differences between territorial areas. These findings need to be interpreted by taking into account as precisely as possible actions and their contexts, and the detailed characteristics of RMI populations which are by no means homogeneous, but include too few variables to provide real explanations.

b. Narrowing down an objective

The methodological work undertaken by ODENORE has two objectives:

- First, it constructs estimations of actual NTU or identifies possibilities of NTU via searches on existing data bases (CAF beneficiaries, RMI beneficiaries, CMUC beneficiaries, schoolchildren, the aged, clients of the CPAM CES, people received by various NGOs providing accommodation and healthcare, etc.). The secondary objective is

¹¹⁷ Beneficiaries of the RMI are compelled to embark on a process of occupational insertion, which may involve attendance of training courses with a view to entering employment. This is known as the *contrat d'insertion*, the "insertion contract" between the State and the beneficiary.

to contribute towards the systematic measurement of NTU through proposals to modify or develop data bases.

- ODENORE also produces qualitative surveys of people whose benefits are being (or have been) cut off, with a view to shedding light on NTU in relation to personal trajectories. In this respect the work undertaken with various NGOs also involves the development of a common tool for collecting data provided by potential beneficiaries in the form of unverifiable statements. This tool will allow a longitudinal study of the evolution of the benefits of the people received, and at the same time an evaluation of the capacity for insertion (in terms of *(re)insertion* as beneficiaries) of those agencies assisting the most vulnerable people. This tool is of use to the partners in reporting on their activity. It can serve as an "indicator of activity or of implementation" such as *Rate of (re)insertion as beneficiaries* of the most vulnerable people. By becoming a permanent indicator, this tool could help, partially (on NTU of welfare benefits) and locally (although its dissemination is possible), to solve the difficulty identified by the ONPES relative to the absence of longitudinal data for monitoring the rate of return to poverty. According to INSEE, exits from poverty, that reportedly concern only 30-40% of "poor households", are only temporary since half of these households sink back into poverty within two years. The tool proposed by ODENORE can illuminate, on its own scale, a *Rate of return to NTU*.

ODENORE tends to show that for a given "social field", we can have a regular set of estimations, if not of statistical measurements and analyses. This set would probably never cover the full diversity of benefits, beneficiaries and target groups in a particular "field". However, we can always strive to move towards an expansion wherever it is possible and relevant. Irrespective of the scope of such sets, they will always be composed of diverse measurements, so that NTU will appear to be a "synthetic" indicator.

As an initial demonstration, ODENORE is preparing a set of NTU indexes in the healthcare field. These indexes related to work underway are summed up in the table below. They are *characterised indexes*, in that ODENORE has several characteristic data for the people concerned. In other words, these indexes make it possible to say *how much* and (partly) *who* is concerned. This work is currently allowing the development of a probabilistic approach to "groups at risk of NTU", based on socio-economic profiles. With the probabilistic approach, which involves extensive statistical analyses, it is possible to define scores that can be applied to various groups in order to identify the *most vulnerable individuals or families in terms of access to benefits and services*. The development of this approach is being tested with ODENORE's partners working in the health field. It is strongly supported by the central administrations concerned.

Indexes	Targeted public	Observation scale
Delays in treatment, especially dental care	School pupils	Grenoble (City public health service)
Delays in treatment for a diversity of pathologies Basic health insurance benefits not received	MdM Health centres CPAM CES	Grenoble and national (all MdM centres) Grenoble and National (CETAF, all 90 CES)
NTU of CMUC	RMI beneficiaries (CAF)	Local (Grenoble CPAM) and National in 2005 (work under way with the CETAF, contact with the CMU Fund)

ODENORE is also able to conceive of the construction of sets of indexes of NTU of social benefits, starting with projects launched with several partners:

Indexes	Targeted publics	Observation scale
"Frictional NTU" of welfare benefits, especially estimation on the basis of back payments	Beneficiaries	Local (Grenoble CAF), National (CAF Network)
"Total/partial, permanent/temporary NTU" of welfare benefits	Individuals or households that are socially excluded or in a precarious situation	Local (Grenoble MdM, La Boussole: accommodation for homeless men over 40; SATIS; <i>Réseau de voisinage Villeneuve</i> ; Isère accommodation facilities, in collaboration with the Isère <i>Observatoire Social</i> ; etc.)

C. A noteworthy example of "e-administration" for identifying situations of NTU: the Crossroads Bank for Social Security (CBSS)

The case of the Crossroads Bank for Social Security is a fine example of the possibility of uniting several individual administrative data bases in the same country (here, Belgium) for the purpose of making potential beneficiaries known to all the social welfare institutions¹¹⁸. This example is part of an approach to develop exhaustive knowledge on populations, similar to the KWIZ experience in the Netherlands. But here the process of matching up data bases is far more extensive. It is the outcome of a strong political will by the central government, to improve the efficiency and effectiveness of public services.

Ever since 1990 Belgian social security institutions collaborate in an electronic network. This process has led to a successful combination of back-office integration (between social security institutions) and an e-portal solution, which serves as an example for all Europe.

¹¹⁸ <http://www.kse.fgov.be> All the information provided here is drawn from this site.

a. The environment

The Belgian social security system consists of 3 insurance systems (workers, self-employed workers and civil servants), that cover a maximum of 7 social risks (incapacity for work, industrial accident, occupational disease, unemployment, old age, child care and holiday pay – the so-called branches of social security), and 4 assistance systems (subsidies for the handicapped, guaranteed family allowance, minimum income and income guarantee for the elderly), that grant people specific minimum services after checking their subsistence resources. In total about 2,000 institutions are responsible for operating the Belgian social security system. More than ten million socially insured persons and 200,000 employers have very regular contact with those institutions to claim their benefits, to furnish information for that purpose or to pay contributions.

b. The problem

Fifteen years ago, an in-depth analysis about the workings of social security showed that:

- the organization of the business processes of the social security institutions was not very customer-oriented and was certainly not harmonised between the different social security institutions;
- each social security institution had its own set of forms with accompanying instructions on how to apply for a specific benefit to meet a particular need;
- the social security institutions very often asked the socially insured persons and their employers for information that was available from another social security institution, rather than directly collecting that information themselves;
- the insured persons and their employers thus had to provide several social security institutions with the same information, each time according to different legal concepts and administrative instructions;
- the insured persons and their employers had to look for their rights themselves, throughout the social security system, and could not count on the automatic granting of all rights on the basis of one declaration.

c. The creation of the Crossroads Bank and its mission

To improve the service delivery to socially insured people and companies, and to solve the above-mentioned dysfunctions, the Crossroads Bank for Social Security (CBSS) was created 14 years ago.

The CBSS' mission is to be the motor of e-government in the social sector, i.e.:

- to stimulate and support the actors in the Belgian social sector, so that they provide more effective and efficient services with a minimum of administrative formalities and costs for all involved; based on a common and concerted vision, the actors in the Belgian social sector benefit from new technologies to radically improve and re-organize their mutual relationships and processes;

- to promote information security and the protection of privacy by the actors in the Belgian social sector so that all the institutions and people involved can have justified confidence in the system;
- to deliver integrated statistical information to politicians and researchers in order to support the social policy.

d. The actual results

A global review of the processes throughout the social security system has been made. The actual situation can be summarised as follows:

- Socially insured persons and their employers must now make only one declaration to the social security system as a whole in the following cases:

- at the latest at the beginning of an employment relationship, an employer has to declare at which time (date and hour) the concerned worker enters into office;
- every quarter, the employer has to declare the income of each worker, divided into income components that from now on have uniformly been defined throughout the social security branches for workers and civil servants, and the number of workdays that each worker has worked, divided into sorts of days that from now on have also been defined uniformly throughout the social security branches for workers and civil servants;
- when a "social risk" occurs, the socially insured persons or their employers have only to report the accident or new situation; information about the history of the person's income or work performance does not have to be reported anymore because it is obtained from the quarterly declaration of wages and working time data; only if wages and working time data are necessary concerning a period for which the quarterly declaration has not yet been made, will they have to be reported, in the form of an anticipated declaration and according to exactly the same principles as the quarterly declaration;
- at the latest at the end of an employment relationship, an employer has to declare at which time (date and hour) the concerned worker leaves office.

- All the declarations of the beginning and the end of an employment relationship have to be made electronically, via either the exchange of XML messages between applications, or transactions that are available on the social security portal, or a voice server; the declarations can be modified electronically, via either the exchange of XML messages between applications, or transactions that are available on the social security portal; each employer has access, via transactions on the social security portal, to the list of his or her workers, and can obtain, via file transfer in XML format, an electronic list of his or her workers so that a personnel register is no longer necessary:

- all the quarterly declarations of wages and working time data have to be made electronically, either via the exchange of XML messages between applications or via transactions that are available on the social security portal; the declarations can be modified electronically, either via the exchange of XML

messages between applications, or via transactions that are available on the social security portal;

- all the declarations of social risks can be made either on paper or electronically either via the exchange of XML messages between applications or via transactions that are available on the social security portal;
 - the elements in the XML schemes have uniformly been defined throughout the declarations; the XML schemes per declaration can be downloaded from the social security portal; every quarter a new version of the XML schemes, which takes into account the adaptations of the regulation, is available with the indication of the modifications compared to the previous version;
 - all the social security institutions are connected to a network for the electronic data traffic managed by the Crossroads Bank for Social Security and have the legal obligation to electronically ask one another for all information available in the network;
- The Crossroads Bank for Social Security manages a reference repertory, that indicates:
- for each citizen, in which social security institutions he or she is known, in which position and for which period;
 - the type of social security institution in which a socially insured person can be known and the reason, as well as the types of data on the socially insured persons that are available;
 - the type of social security institution in which a socially insured person can be known and the reason, as well as the types of data this institution needs and is authorized to receive from other institutions to fulfil its tasks.
- The Crossroads Bank for Social Security uses this reference repertory:
- to preventively ensure that a social security institution only gains access to the data to which it is allowed access and on the people who are known in it;
 - to route data requests to the social security institution that can deliver the concerned data;
 - to automatically transmit the received data to the social security institutions that can use the concerned data to fulfil their tasks;
- Every socially insured person is identified throughout the whole social security system by a common and unique identification key and has an electronically readable social security card (the so-called SIS-card) containing this identification number and his or her social insurance status in the health care sector.

The introduction of this system resulted in the following:

- about 170 types of paper certificate that socially insured persons or their employers had to obtain from one social security institution, only to hand it over to another social security institution, have been eliminated and replaced by direct electronic data exchanges between the concerned social security institutions; in the year 2003, a total of 339 million electronic data exchanges took place with a response time for the on-line messages lower than 4 seconds in 99.2 % of the cases;

- about 50 types of declaration forms for social security have been eliminated;
- in the remaining 30 declaration forms for social security the number of headings has on average been reduced by two thirds;
- many declarations are directly and electronically made from the personnel administration and accountancy packs at the employers;
- the socially insured persons and their employers can from now on make all the declarations to social security on the basis of a uniform concept apparatus and uniform instructions, and will only have to report each set of data only once to social security as a whole;
- the number of contacts between the socially insured persons and their employers on the one hand and social security on the other has been reduced drastically;
- the remaining contacts have been streamlined in relation to events in the labour relationship between the employer and the worker/civil servant (entering into office, performing work, becoming ill, leaving office, becoming unemployed, being retired, etc.);
- personal services to employers and to socially insured persons are offered;
- a huge number of subsidiary rights are automatically granted without the socially insured persons or their employers having to make declarations anymore;
- hospitals and pharmacists are freed from encoding about 100 million paper certificates a year concerning the insurance status in the health care sector; they now can read it electronically on the social security card.

The described @-government approach of the Belgian social security sector was mentioned as best practice in the most recent benchmarking study ordered by the European Commission.

The Crossroads Bank for Social Security was asked by the Belgian federal government to draw up an E-government plan for the federal public services. This plan, that is now being executed and permanently updated by FEDICT, the recently created federal public service for ICT, contained *inter alia* the creation of an electronic identity card, a company register, a messaging engine between federal public services and an integrated portal environment.

4. CONCLUSION: SUGGESTIONS FOR MOVING TOWARDS MEASUREMENT OF NTU IN EUROPE

The production of statistical data on living conditions is European institutions' response to a growing political awareness of the phenomena of poverty and social exclusion. In March 2000 the European Council in Lisbon considered it "unacceptable that so many people in the Union are living below the poverty line and are affected by social exclusion"¹¹⁹.

European policy to promote social inclusion consists essentially in monitoring the policies implemented by Member States because European institutions have no competence regarding social policy. Although programmes to combat social exclusion are recommended by the European Council, these are national and not Community programmes. The only lever that the EU has in this respect is tools for monitoring and evaluating national policies and publishing their results. In December 2000, in the follow-up to the Lisbon summit, the European Council urged all the Member States of the European Union to "*define indicators and monitoring methods to assess the progress made*"¹²⁰ in the struggle against poverty and social exclusion. In view of the conditions of emergence of the NTU theme in the countries studied, this institutional reminder is worth noting in our conclusion. The question that we would now like to answer is what the simplest or most accessible conditions are, *a priori*, for improving the measurement of NTU in European countries.

Studying the way in which relevant indicators are determined for describing the state of European society and the impact of social policies is not the purpose of our work. This highly technical question exceeds the initial objectives of the EXNOTA project. We can, however, offer a modest contribution to reflection on the subject.

Producing European statistics on NTU (as on income, poverty or living conditions) requires agreement between the Member States of the EU on what is being measured. Before indicators for describing and comparing national situations can be presented in the same table, they have to be constructed by means of comparable statistical data from different countries. Comparisons between countries through the European Commission's *benchmarking* policy depends on the unquestionable nature of the indicators used. When even those countries with the best track record of social inclusion can be criticised for non-comparability of data, the European Commission loses its lever on national social policies. Nevertheless, the history of difficulties (if not failures) in constructing European statistics on income and poverty, like on homelessness, shows that other areas probably need to be explored, at least as initial steps, if we want to try to move towards the measurement of NTU in Europe.

Our exploratory work on the measurement of NTU shows something important, it seems, and that is that we probably know very little on available sources of information and data, but do know enough to be sure that no immediate and reliable comparison of

¹¹⁹. "Conclusions de la présidence", Conseil européen de Lisbonne, 23 et 24 mars 2000, point 23.

¹²⁰. "Conclusions de la présidence", Conseil européen de Nice, 7, 8 et 9 décembre 2000, point 20.

results is possible from a methodological or scientific point of view. **The EXNOTA Consortium's work feeds doubt on the limitations of available sources, and strengthens the conviction that at this stage it is impossible to propose an indicator of NTU of welfare benefits that could correspond to the "Laeken indicators"**¹²¹.

As we reach the end of this exploratory work, two solutions seem promising to promote the measurement of NTU:

- The first consists in facilitating the creation of *an inventory* of available sources of information and data bases in each country, which could help to develop an approach to NTU. We are by no means sure that our inventories in the six countries studied are exhaustive. In France the ODENORE experimental device shows, in its own way, that the observation of NTU can be based on a large number of information sources and data bases which are not initially known. It would be interesting to examine in more detail the resources of the different actors, especially the NGOs. An approach targeted at a type of population seems useful as a start, so that from there one moves on to other actors and groups and a diversity of welfare benefits. Specific work could be undertaken from *Caritas* in Germany, for instance, or from the *Federatie Opvang* in the Netherlands which receives large numbers of homeless people.

Drawing up an inventory on the local authority scale (infra-national territories) at first, could have the objective of producing operating reports on NTU by collecting (or preparing) data at the level of networks of actors working on the same types of population or unclaimed benefits.

- The second suggestion concerns the "interestment" of administrative actors and NGOs in measurement of NTU. Becoming aware of the existence and importance of the phenomenon is still very much a necessity. This question is highly complex and tricky. The only example that we have, the CBSS in Belgium, clearly shows that the political will can be strong enough to set up large-scale national ad hoc devices to provide social welfare institutions with the maximum amount of information on the population. Since the extension of this convincing experiment to other European countries is still not on any government's agenda, neither at national nor at European level, it could prove

¹²¹ The Laeken indicators were defined in 2001 by the "indicators" sub-group of the Social Welfare Committee at the Directorate General for Employment and Social Affairs (Employment DG) of the European Commission. This sub-group consisted of representatives of the social affairs ministries.

Of the 18 indicators listed, 11 have to be measured by the EU-SILC tool, ten concern income and one concerns health: rate of low incomes after transfers with income threshold set at 60% of the median income; income distribution (ratio of income quintiles); persistence of low incomes; median deviation of low incomes; self-evaluation of the state of health; distribution of the threshold to 60% of the median low income; rate of low income established at time "t"; rate of low income before transfers; distribution of income (Gini coefficient); persistence of low incomes (on the basis of 50% of the median income).

These indicators are formulated in the Social Welfare Committee's report on poverty and social exclusion indicators, a document produced for the European Council at Laeken. Suggestions for follow-up work relative to living conditions were added to the list of indicators by the Social Welfare Committee: quantitative information on decent accommodation, housing costs, homeless people and other conditions of precarious accommodation, and information on access to care.

useful to start showing institutions that they do stand to gain by knowing about NTU. One of the obstacles to the measurement of NTU is often the fact that social welfare actors and institutions prefer to push aside an unfamiliar problem, especially when they assume that to deal with it they would need more funds, something that is hardly conceivable today. Thus, to avoid this "deliberate myopia" that simply worsens the situation, it would be judicious to demonstrate the value of *probabilistic approaches to "groups at risk of NTU"*. >From there a policy of prevention of exclusion from social benefits could be organized, albeit at the cost of probable redefinitions of priorities and goals.