Lavoro: partecipazione, dinamica e valutazione di politiche

Misura, metodi, modelli

Progetto anno 2003

Would declining exit rates from welfare provide evidence of welfare dependence in homogeneous environments?

D. Contini, N. Negri***

** Dip. Statistica. e Matem. Applic. alle Scienze Umane, Univ. Torino*

*** Dipartimento di Scienze Sociali, Università di Torino*

Working Paper n. 68, ottobre 2005

Metodi e studi di valutazione degli effetti di politiche del lavoro, di aiuto alle imprese e di welfare

Cofinanziamento MIUR, anno 2003

Unità locali del progetto:

Dip. di Economia "S. Cognetti De Martiis", Univ. di Torino	(coord. B. Contini)
Dip. di Scienze Economiche, Univ. "Ca' Foscari" di Venezia	(coord. G. Tattara)
Dip. di Metodi Quantitativi, Univ. di Siena	(coord. A. Lemmi)
Dip. di Scienze Statistiche, Univ. di Padova	(coord. U. Trivellato)
Dip. di Scienze Economiche, Univ.di Salerno	(coord. S. Destefanis)
Dip. di Politiche Pubbliche e Scelte Collettive, Univ. del Piemonte Orientale	(coord. A. Martini)

Dipartimento di Scienze Statistiche
via C. Battisti 241-243, 35121 Padova
www.valutazione2003.stat.unipd.it

Per la presente pubblicazione sono stati adempiuti gli obblighi previsti dalle norme per la consegna obbligatoria di esemplari degli stampati e delle pubblicazioni di cui alla legge del 2 febbraio 1939 n.374 e successive modificazioni, presso la Procura della Repubblica e la Prefettura di Padova.

1. Introduction♦

The duration of economic subsidies paid out by public assistance is an important characteristic distinguishing different local welfare systems (Saraceno, 2002). The focus on this dimension is generally founded on the assumption that systems characterized by long duration are less effective, more costly and therefore less efficient than those of brief duration. Moreover, according to the "welfare trap" theory, long duration of interventions may itself constitute a cause of poverty, as recipients may develop dependence on the subsidy, making it more difficult to become autonomous from public support. In this perspective, local welfare systems characterized by longer durations are judged negatively not only because they are considered less efficient in solving beneficiaries' problems, but also because this inefficiency exacerbates the beneficiaries' situation.

The exit rate from welfare is thus a common subject of analysis in the welfare dynamic participation literature. The hypothesis underlying this strand of research is that, if subsidies have a corrupting effect on beneficiaries' behaviour, individual exit probabilities should diminish as time in assistance increases. In the following sections we argue, instead, that negative duration dependence in the exit rate from welfare is not necessarily a consequence of welfare dependence, even in the absence of unobserved heterogeneity[1].

As a starting point, we develop a model that illustrates the possible causal links occurring between the domains of work/unemployment, poverty and social assistance. The model is coherent with the framework developed by Bane and Ellwood (1994), according to which beneficiaries' difficulties in becoming autonomous from public support can arise because of three different behavioural models, emphasizing respectively: choices and incentives, confidence and control, values and culture. Following the guidelines for the analytical sociology approach or mechanisms based explanation (Goldthorpe, 2000; Hedström 2004, Hedström and Swedberg 1998; Coleman 1990, Boudon 1985), the model "dissects" the effects between unemployment, poverty and social assistance with respect to individual opportunities, preferences, and expectations. It will be claimed that the behavioural mechanisms of Bane and Ellwood can be activated by each of the domains under study: a welfare recipient could have a hard time becoming autonomous, not because he receives the benefit, but because he is poor or

♦ The general structure of this contribution and in particular of the model presented in fig. 1 is the result of collaboration of the two authors. N. Negri and D. Contini have written together sections 1, 4 and 6. D. Contini is the author of sections 2, 3 and 5.

ADDRESS FOR CORRESPONDENCE: dalit.contini@unito.it

[1] It is well known from the econometric literature that negative duration dependence may be a spurious effect due to unobserved heterogeneity (see section 2). The point we want to make in this paper is that factors other than that of unobserved heterogeneity make identification of the effects of welfare a difficult task when the empirical analysis is based on the shape of exit rate from welfare.

unemployed. Thus, the model is useful for distinguishing the effects of benefit receipt on recipients' behaviour from other factors which are not related to the welfare program.

The paper is organized as follows. In section 2 we briefly review the empirical literature on welfare dependence and deal with the issue of negative duration dependence in the exit rate from welfare. The main point of the paper is developed in sections 3-5. In section 3 we discuss the arguments provided in the literature to explain negative duration dependence, highlighting some inconsistencies in this line of reasoning. The qualitative model linking work/unemployment, poverty and social assistance is developed in section 4. In section 5 we describe a simulation study based on a simplified version of the previous model, carried out with the aim to show that negative duration dependence in the exit rate from welfare may be observed in environments where no corruptive effects of benefits are at work. Concluding remarks on the problems related to the assessment of cumulative effects of time on welfare are discussed in section 6.

2. Welfare dependence in the literature

The most common definition of welfare dependence focuses on the length of individual welfare spells, with longer episodes taken as representing greater dependence (Gottschalk, Moffit; 1994)[2]. Although the concept of welfare dependence is generally related to the amount of time spent on welfare, the *causal* effect of the subsidy is frequently referred to. The idea is that a prolonged period on welfare may be the result of the negative effect of the benefit itself on recipients' choices and behaviour.

One major strand of the literature has focused on evaluating the work disincentives of income support programs, i.e. the negative effects of welfare transfers on labor supply (Dazinger, Haveman and Plotnick, 1981; Ermish and Wright, 1990; Hoynes, 1996; see also Moffit, 1992, Moffit, 2002 and Blank, 2002 for extensive surveys). Reference is to classic economic theory (Borjas, 2000) according to which individuals – subject to the constraints given by actual work opportunities and welfare policies – choose whether to work and how much to work following the principle of maximization of utility. Most of the empirical studies, largely referred to the U.S. program *AFDC*[3], exploit time and cross-state variation in the benefit level[4] for identification of the impact of the programs. The focus is on assessing the absolute magnitude of the labor supply reduction due to benefit receipt (this is accomplished by

[2] Since many recipients experience more than one spell, some studies focus on total time on welfare in a given time interval, or on the fraction of total income that derives from welfare over a fixed time period (Duncan, 1984; Moffit, 1992; Gottschalk e Moffit, 1994).

[3] *Aid to Families with Dependent Children,* the main income support for the poor in the USA, which was specifically designed to support lone mothers with children. The program was replaced in 1996 by the more restrictive program *Temporary Aid for Needy Families*.

[4] The differences among states in the potential maximum benefit level under the *AFDC* program were very marked; moreover this level underwent significant changes in the 1960s to '80s period (Moffit, 1992).

comparing labor market behaviour at different benefit levels, and estimating, by extrapolation, what would have happened with a level of zero – Moffit, 2002). This body of work as a whole confirms that transfer programs considerably reduce work effort. More recent studies deal with the incentive effect of welfare reforms, the role of work requirements, sanctions, time limits, education or training programs (for example: Moffit, 2003; Van den Berg, Van der Klaauw and Van Ours; 2004).

Another part of the literature is that of welfare participation studies. The effects of specific features of policies, such as the level of benefits on welfare participation at a point in time (for static models) and on entry/exit rates from welfare (for dynamic models), are estimated As regards exit rates in particular, the aim is to assess the indirect effect of the benefit level on welfare spell length – if people reduce work effort because of the subsidy, time in welfare should increase (Blank, 1989; Hoynes e MaCurdy, 1994, Fortin, Lacroix and Drolet, 2004). Across the studies there is empirical evidence that as the amount of the subsidy increases, participation and entry rates also increase, while exit rates drop.

A number of dynamic participation studies (O'Neill *et al*, 1987; Blank, 1989; Sandefur, Cook; 1998; Walker, Shaw, 1998; Gustaffson, Voges; 1998; Gustaffson *et al,* 2002; Dahl, Lorentzen, 2003; Gangl, 2003; Chay *et al*, 2005) address the issue of negative duration dependence in the exit rate from welfare. Some authors actually define the concept of welfare dependence in this sense (Blank, 1989; Walker e Shaw, 1998; Sandefur e Cook, 1998). The term "negative duration dependence" means that the longer the time spent in welfare, the more difficult it is to exit. The decline of the exit rate is related to the reduction of the capability to get off welfare – due to the detrimental effects of the benefit – as time in welfare passes. Thus, the focus of the statistical analyses is the shape of the hazard function of time on welfare[5], or, with a similar perspective, of the transition intensity from welfare to a stable working position (Dahl and Lorentzen, 2003; Gangl, 2003) [6].

But identification of the shape of individuals' hazard and transition functions is not a simple task (Lancaster, 1990). An empirical decreasing exit rate may be due to "state dependence" (the causal effect of time already spent in welfare) or it may be a spurious effect, due to unobserved heterogeneity[7]. This problem is clearly acknowledged in the empirical welfare evaluation literature. For example, Dahl and Lorentzen (2003, 519) argue that: "The heterogeneity hypothesis claims that beneficiaries with less resources and more problems tend to stay on assistance, while those who are better off tend to leave

[5] Let T be the duration of the welfare spell. The hazard function (also called "exit rate") describes the instantaneous exit probability given survival to time t and is given by $h(t) = \lim_{dt \to 0} \frac{P(t \le T < t + dt \mid T \ge t)}{dt}$.

[6] The evidence supporting the existence of negative duration dependence is not compelling: in a few studies such dependence does not appear to be statistically significant (Blank, 1989; Fitzgerald, 1991; Walker and Shaw, 1998, see also Bane and Elwood, 1994).

[7] We consider a group of people – heterogeneous with respect to the level of "ability" and identical for every other aspect – who receive subsidies in the same period. Let's observe the exit rate from assistance. The original group includes able and less able: the rhythm of exit from assistance is relatively fast at first. As time passes, the group of beneficiaries grows smaller, the more able having found work; hence only less able individuals are left. Even in the absence of corruptive effects of assistance on beneficiaries' behaviour, what we observe overall is a rate of exit which decreases over time.

after a short while. The time dependency hypothesis maintains that time on social assistance influences beneficiaries' attitudes and behaviours in detrimental ways. As time passes claimants lose self-efficacy, morale, motivation or skills". In this light, the aim of the empirical work is to consistently estimate the shape of the exit rate, having controlled for all potential sources of heterogeneity – individual differences and features of the context – which could obscure the "true" causal relation between time spent in welfare and the exit probability from welfare[8].

The purpose of this paper is to show that consistent estimation of the causal effect of time in welfare over the probability of exiting welfare cannot be successfully accomplished through analysis of the shape of the hazard function – even if we control for individual differences – because, as we will see, other identification issues arise if the complex nature of the process governing welfare dynamics is not properly taken into account.

3. Effects of time on welfare and negative duration dependence

The behavioural explanation provided for negative duration dependence in the exit rate from welfare is that: "[…] people's attitudes and behaviour change over time in response to living on benefit and this, in turn, makes it increasingly difficult for them to leave. […] claimants may no longer bother to look for work, or may have lost the habit of work that appeals to prospective employers" (Leisering and Leibfried, 1998).

In their influential paper on welfare dependence, Bane and Ellwood (1994) state: "The term dependency is used quite loosely in public discussion and most academic work […]. Both the popular and the academic treatments of dependency have, in general, been flawed by incomplete, inconsistent, or non-existent behavioural models." Reviewing and systematizing the literature, they provide a theoretical framework which highlights the reasons underlying the possible detrimental role of time in assistance. They propose three models: the *rational choice* model, the *expectancy* model and the *cultural* model.

The rational choice paradigm motivates most of the empirical studies on work disincentives. Individuals evaluate the available options and select the option with the highest utility: thus, long-term welfare use is the result of a series of reasoned choices. The expectancy model is related to individuals' sense of self-esteem. Dependency may result when people lose a sense of control over their lives, when they cease to believe that they can realistically get off welfare. The cultural model, strictly related to the "culture of poverty" theory, claims that living in environments where most of the people rely on welfare instead of work may favour the change of attitudes and mores, and the development of a

[8] Some authors (Sandefur and Cook, 1998; Dahl and Lorentzen, 2003) introduce a random component in order to take into account unobserved heterogeneity as well.

different system of values. According to Bane and Ellwood, it is the expectancy model in particular that assumes that the longer the time on welfare, the harder it is to get off, because confidence and self-esteem are expected to decay with time in the system. The cultural model – maintaining the role of the living environment – also suggests that actions may be subject to change with time spent on welfare. On the other hand, the difficulty of leaving welfare ought not to vary with time on the program under the rational choice model.

But what are the mechanisms triggering these effects on recipients' behaviour?

Let us go back to the viewpoint of Dahl and Lorentzen (2003). They maintain that time on welfare causes *loss of skills*. In a similar fashion, Sandefur and Cook (1998, 764) argue that: "To understand whether welfare may be a *trap*, it is important […] to look more carefully at why some recipients use welfare for long periods of time. […] The reasons for this may be that (1) a woman's *skills* deteriorate […], (2) the *stigma* […] grows stronger […], (3) the intensity of *searching of jobs* […] decreases over the duration of welfare receipt […]". Again, reference is to deterioration of skills as one of the intervening effects in the causal relation (*welfare as a trap*) between income support policy and the capability of going back to work. In his influential review of the literature on evaluation of welfare programs in the USA, Moffit (1992, 26) argues that: "Such dependence [negative duration dependence] could arise from the *deleterious effects* of *ADFC* receipt itself, as might happen if *human capital* deteriorates from lack of se as the spell progresses […]. Yet another explanation […] is a spurious statistical result arising from the existence of unobserved heterogeneity"[9]. In this case the causal relation between benefit receipt and exit from welfare (*deleterious effects of AFDC*) is assumed to take place because of the intervening effect of human capital deterioration.

We do not find these arguments completely persuasive:

(i) Skill loss and human capital deterioration occur as a consequence of *being out of the labour market*, and not directly because of the welfare benefit: unemployed people who are not eligible for income support are also exposed to these risks. If a causal link between welfare participation and unemployment does exist, this link should be more clearly specified.

(ii) Stigma may arise as a consequence of living on public support, but also whenever a person's standard of living is too far below that of the majority of the people around him, i.e. because of *poverty*.

(iii) Job search reduction may indeed take place because people develop an opportunistic attitude towards the subsidy, but also because of loss of self-confidence, which may result as a response to being out of the labour market or in a condition of economic deprivation.

[9] Moffit on the other hand criticizes this strand of the literature, which he believes not well supported by economic theory.

Is job search reduction then ultimately due to welfare, or is it due to *unemployment* or *poverty* themselves?

If it is true that in most cases *being in welfare* implies *being poor*[10]– most income support policies do not take people out of poverty - and that it may also denote *being unemployed* (although the link may be weaker), then we should agree that observed persistence in welfare could be the consequence of persistence in poverty or in unemployment. The distinction is crucial if the aim of the empirical research is to evaluate the negative causal effects of income support policies. There seems to be a need for a more precise causal model – linking unemployment, poverty and social assistance receipt – to disentangle these effects. A qualitative version of such a model is developed in the next section.

We may add that, aside from identification issues, the analysis of the shape of the exit rate from welfare could be a relevant topic of investigation only if the interventions are *according to need* (Saraceno, 2002), so that beneficiaries receive help as long as the need persists (this is the case of northern European welfare systems, of France and Germany, but also of the very strongly category-based *AFDC* program[11] in force in the USA until 1996). Instead, in regimes subject to budget constraints, a household may find its subsidy revoked even if its economic situation has not improved. Thus, the duration of time in welfare is a relevant outcome for evaluating dependence if it is conditioned exclusively by the beneficiaries' behaviour. What would otherwise be the semantic value of a prolonging of assistance episodes? Who are the agents involved: welfare recipients, who are less willing to find a job, or social workers, who can intervene in a discretionary way to regulate resource allocation?

4. Linking unemployment, poverty and social assistance. A behavioural model

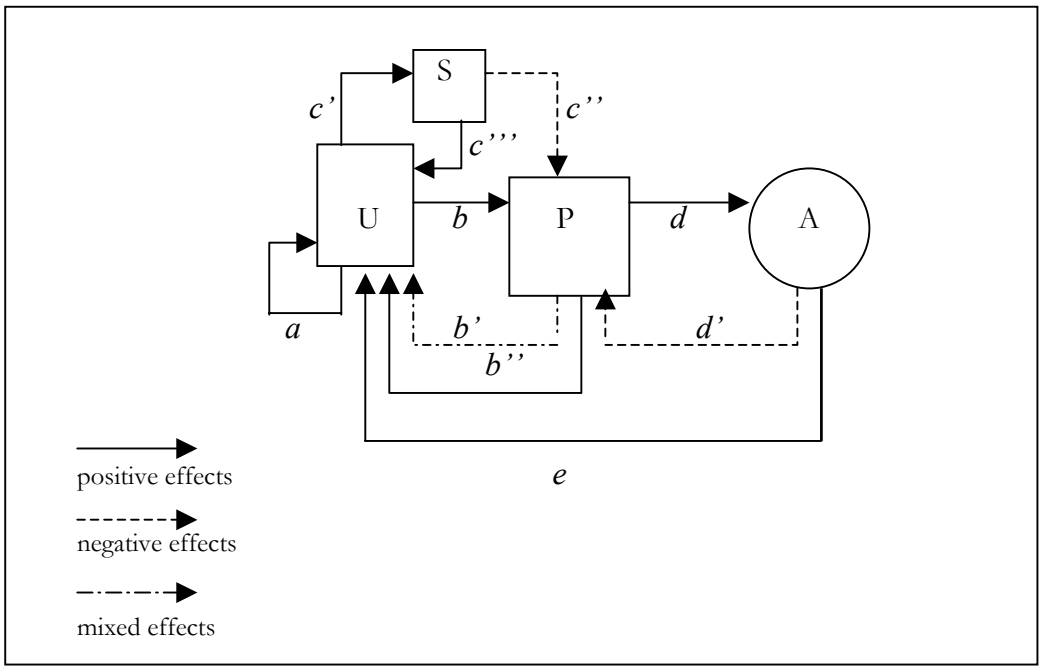
In Figure 1, U indicates the area of unemployment while S indicates 'protected unemployment', that is periods in which a worker receives non-means-tested benefits which are guaranteed by contract in case of job loss. P represents poverty; A represents public social assistance, that is the period during which an individual receives means-tested income support financed by the state and granted to poor households.

The arrows indicate the effects (positive or negative) that each area potentially exercises on the others or on itself. We say "potentially" because some of the effects are not obvious, and their being or not being at work is often an issue of empirical research. The model may not illustrate all the possible

[10] The issue of specificity of social-assistance income programs is discussed in the next section.
[11] As long as eligibility conditions are still met. Empirical research shows that exits from *AFDC* are often due to marriage or to the fact that women no longer have eligible children (Bane, Elwood; 1994).

interdependencies among unemployment, poverty and assistance, but only those analytically relevant to the present discussion. Thus, it has a merely heuristic value[12].

Fig. 1. *Micro relations among unemployment, poverty and assistance*



Relation a

Arrow *a* illustrates an effect typically connected to a prolonged period of time in unemployment: the unemployed individual slips backwards in the queue of "employability" (Thurow, 1975, 89) making his

[12] The effects represented by the arrow are not necessarily additive. Since a quantitative specification of the model is not among the purposes of the present paper, this issue will not be developed further.

reinsertion in the labour market more difficult[13]. Various mechanisms can generate relation *a* (Sen, 1999, 99): the longer an individual remains unemployed, the more his skills become obsolete and he loses those social contacts which facilitate the meeting between labor supply and demand (Granovetter, 1983 and 1995), the less confidence potential employers will have in hiring him. Relation *a* may also be generated by psychological mechanisms: prolonged unemployment can demoralize and "discourage" the jobless individual to the point where he simply stops looking for work.

Relation b

Arrow *b* indicates a possible effect of unemployment on the jobless individual's income: not receiving any kind of remuneration he may slide, with his family, into a condition of poverty (although unemployment is not the sole cause of poverty among able persons: there are also the "working poor" with low income and large families). The timing and intensity of the fall from joblessness into poverty depend on the characteristics of the unemployed individual's family: for example the presence of other members who work, the availability of savings, the economic solidarity of relatives. Also significant is the presence of non-means-tested income support guaranteed by the social security regime for certain categories of workers in case of job loss. Relations *c'* and *c"* indicate the latter case: a protected worker who loses his job but has access to benefits (*c'*) which can slow his fall into poverty (*c"*). We will return to these relations later.

Relation b'

Arrow *b'* indicates that current income (and future expected income) can affect the probability of leaving unemployment. The relation may have a *negative* sign; hypotheses drawing on the rational choice model can explain this effect. The reservation wage[14] is expected to increase with the person's non labor income, so that lack of income acts as a strong incentive to accept any job offer. On the other hand, relation *b'* can also have a *positive sign* and thus perpetuate a 'vicious circle' between impoverishment and unemployment. A positive *b'* relation can be attributed to the cost of job-search: the lack of a (minimum) income may compromise the individual's capacity to undertake an efficient search by making the costs prohibitive – the cost of acquiring information, communication, transportation, as well as the cost of substituting time dedicated to unpaid domestic and care activities.

Relation b"

[13] There is an extensive econometric literature addressing the problem of the existence of true negative duration dependence in the exit rate from unemployment, i.e. the possibility that the longer people stay out of the labor market, the more difficult re-entry would be.

[14] The reservation wage is the minimum income that would make a person indifferent between not working and working.

This can be considered as an effect of time in poverty, due to psycho-social factors. While in the classic labor economics framework, individuals' preferences are treated as given and the budget line describing available options is only subject to exogenous changes, by allowing for psychological and cultural factors we can take into account that preference systems can gradually change as time in poverty grows longer, and that individuals' work opportunities may also vary for endogenous reasons. First, income deprivation may cause stigmatization, which contributes to imprisoning the individual in marginal social networks, isolating him – even more than unemployment – from those social contacts which help him to find out about and gain access to work opportunities. Attitudes of demoralization and learned helplessness may take root in the poor, favouring the reduction of the intensity of job search. Second, when individuals live in situations of socio-economic exclusion and spatial segregation, they may progressively internalize behavioural models typical of the so-called "poverty culture", according to which poor people learn to manage without a regular job. These effects are likely to induce individuals' preferences to change as time in poverty grows longer, making work less attractive. In addition – overturning the classical economic argument that lack of income should act as an incentive to work – in the long run poverty may reinforce the condition of unemployment, by obliging individuals to accept jobs which are not only precarious, but also unskilled, physically exhausting and harmful to health, thus increasing marginalization from the labor market.

Relation d

Arrow *d* indicates that family poverty is a condition for access to means-tested assistance. This apparently trivial relation is not deterministic, since there can be situations of assistance without poverty and poverty without assistance. On the one hand, in the presence of "specificity problems" linked to social assistance programs, that is errors or omissions leading the social services to classify as poor individuals who are not in fact poor, poverty is not a necessary condition for coming under the tutelage of the social services. On the other hand the "sensitivity" of public assistance – its capacity to guarantee economic support to all eligible persons – is affected by the behaviour of the poor. Their propensity to turn to the social services may vary according to the obligations imposed on them as beneficiaries, or the risk of sanctions if informal paid activities, which the poor rely on for survival, are discovered. There are also psychological factors to take into account, for example the sense of shame that may prevent an individual from seeking public assistance, or the so-called "institutional anorexia" that hinders him from obtaining information about his personal rights or legitimate interests, or exploiting them fully. Relation *d* depends finally on institutional factors: the level of poverty giving entitlement to benefits varies among different public assistance regimes. These can have a universalistic or a *category-based* orientation (Saraceno, 2002). In the latter case there can be discrimination between "deserving" and "non-deserving" poor, and the social services may require, before granting or renewing

subsidies, that economic need be "qualified" by circumstances such as incapacity to work, presence of small children, etc.. Another relevant institutional feature is duration of assistance: under some regimes benefits can be interrupted even when poverty persists. Hence intervention is not always *according to need*.

Relation d'

Arrow *d'* represents the simple effect on income of means-tested financial subsidies for the poor. These subsidies, while generally not sufficient to eliminate poverty, can at least attenuate it. The pure income effect of social assistance on unemployment is represented by arrows *d'+b'*. Assuming a relation *b'* of negative sign (poverty as a work incentive), the model can account for the possible disincentive effects of public subsidies, the study of which is at the heart of dependency theories based on the rational choice model. Public assistance guarantees an income (although generally a low one), thus causing a rise in the reservation wage: the larger the subsidy and the longer its guaranteed duration, the less motivated the beneficiary is to accept whatever work comes his way in order to leave unemployment. On the other hand, considering that the relation between poverty and unemployment can have a positive sign – lowered capacity to find a good job due to lack of income (arrow *b'*); loss of confidence and cultural reasons (arrow *b"*) – the model can account for how the subsidies may interrupt the vicious circle of poverty and unemployment. This possibility would exist when benefits help an individual to sustain the costs of looking for work and enlarge his network of social relations, and allow him to turn down undesirable job offers.

Relation e

Arrow *e* indicates the potential corruptive effects related to psychological and cultural factors (from now on, we will call them "psycho-social" effects) of public assistance[15] (see expectancy and cultural models in Bane and Ellwood, 1994). As in relation *b"*, these mechanisms trigger endogenous changes of preferences and available options. First, a prolonged period of living on public support, which in certain cultural contexts is equated with living on charity, can take on a demoralizing significance and lead to loss of self-esteem which may discourage a search for work[16]. Second, living in environments where most of the people rely on welfare rather than work may affect values and attitudes. When public assistance is not accompanied by interventions aimed at reintegrating the individual socially and economically, income support policies may favour the development of environments in which antisocial behaviour is widespread. Moreover, being a welfare recipient may lead to social

[15] Arrow *e* can also represent a positive effect of the subsidy on work, in cases where financial benefits are integrated with activation measures aimed at reinsertion in society and in the labor market.

[16] These dynamics may be triggered by poorly-managed interactions with social workers, and are likely to involve mainly men, who see themselves as the male breadwinner.

disqualification and stigmatization, to the point where potential employers become mistrustful. These mechanisms altogether modify the pure income effect described by *d'+b'*, thus weakening the potential empowerment effects of the benefit or enhancing the work disincentive effect. Complex interaction effects with relation *b''* – which should be more deeply investigated – could also occur.

Relations c', c'' *and* c'''

These relations refer to the case of protected workers who lose their job but have access to non-means-tested income support guaranteed by the social security regime for certain categories of unemployed (arrow *c'*), which can prevent, attenuate or at least slow the fall into poverty (*c''*). Thus, arrow *c''* accounts for an income effect similar to that of type *d'*, but this effect is likely to be stronger, because the level of these benefits is generally much higher than that of social assistance. On the other hand, benefits can sustain the capacity to look for work and to invest in human capital. Relation *c'''* indicates that unemployment benefits can have demoralizing effects comparable to those of type *e*. However, since these benefits are often seen more as a right, and are collected by workers in conditions of vulnerability but not of exclusion or social segregation, they are not likely to be particularly stigmatizing.

Further remarks

Institutional features are relevant in the present model in two different respects.

(i) The characteristics of welfare systems and social assistance programs substantively affect some of the relations we have described above:

- relation *d*: depends on *eligibility rules* (related to the universalistic vs. category based orientation of policies and to the income threshold);
- relation *d'*: current disposable income (and thus being/not being poor) is dependent on the *level of the subsidy*;
- relation *b'*: reservation wage depends on current non-labor income, but also on future income expectations, which are related to the amount of the benefit and to *expected duration of the allowance*;
- relation *e*: if social assistance is highly *stigmatized*, psychological and cultural effects are likely to be stronger; the relation is also affected by the existence and features of *activation measures*, aimed at reinsertion of the poor into the labor force;
- all relations are also affected by the existence of informal rules working at the local level, and thus by how policies are actually implemented.

A more detailed specification of the way institutional differences affect the model – although not immediately relevant for the present paper – should be a subject of deeper investigation.

(ii) The empirical assessment of institutional effects has interesting policy implications. While work disincentives due to pure income effects of the subsidy have been extensively studied with a variety of empirical strategies, psycho-social effects of welfare benefits – as we will see in the following section – seem to be much more difficult to evaluate. The reason is that many of the factors leading to a reduction in the chances to leave unemployment (stigma, changes of values, loss of confidence) may be ascribed to different domains of the model. The effects related to loss of self-confidence, for example, can occur because of unemployment (arrow *a*), or because of income deprivation (arrow *b'*), or as a consequence of living on public support (arrow *e*). In all of these cases – which are difficult to consider as clearly distinct – loss of confidence leads to a reduction in the chances to leave unemployment. But policy implications are different if this effect is due to poverty – i.e. not being able to reach the standard of living of the majority – or to living on welfare – i.e. not being able to make it on your own. In the former case the benefit, by providing more income, should have empowerment effects; thus income support may encourage self-sufficiency. In the latter, receiving income support reduces the chances to find a job: active labor market programs should be endorsed in this case, as the way in which supplementary income is provided is critical for the success of the policy.

5. Simulations

A simulation study is carried out with the purpose to show that negative duration dependence in the exit rate from welfare does not imply the existence of a causal effect of the benefit on working life courses, even in the absence of unobserved heterogeneity. The idea is that negative duration dependence in the exit rate from welfare could be the consequence of persistence in poverty or in unemployment. Welfare spells are generated under the assumption that no corruptive effects of social assistance are at work: we will show that negative duration dependence in the exit rate from welfare may turn up also in this context.

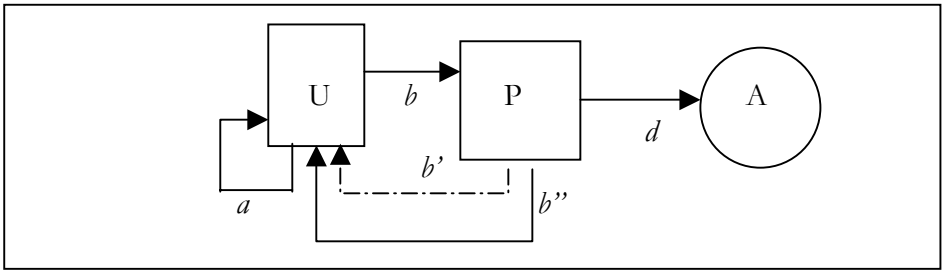
Let's make a very extreme assumption: that social assistance, instead of providing real money, assigns people pieces of paper with no legal value. Moreover, let this "social assistance" be granted to the same people and with the same rules applying as for real welfare benefits. Obviously, in this environment individual behaviour cannot be affected by the cash transfer. In particular, with reference to the model depicted in fig. 1:

(a) Social assistance does not produce an income effect (so there is no *d'* arrow), which implies that no disincentive effects of the program – the indirect effect of A on U, represented by *d'*+*b'* – are at work.

(b) Time in welfare does not have any effect on self-confidence or attitudes (so there is no *e* arrow).

To simplify the exposition, we do not take into account other income support programs such as unemployment benefits. The restricted model is depicted in fig.2.

Fig.2. *The behavioural model with no effects of social assistance on poverty or unemployment*



Now let the current working condition – and perhaps also past unemployment history – affect current poverty status, and let past poverty history and past unemployment history affect the current working condition:

$$U_t = f\left(U_{past}, P_{past}\right) \qquad \text{through } a, b' \text{ and } b'' \qquad (1a)$$

$$P_t = f\left(U_t, U_{past}\right) \qquad \text{through } b \qquad (1b)$$

Given the recursive structure of (1a) and (1b), we may obtain the following[17]:

$$P_t = f\left(P_{past}\right) \qquad (2)$$

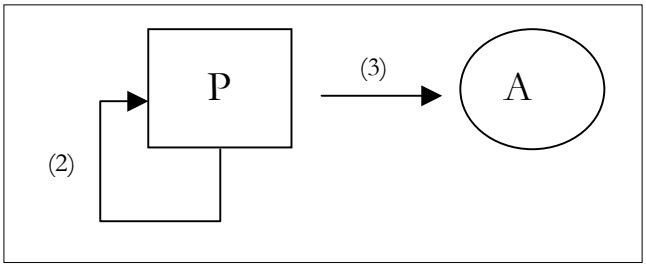
which represents the net effect of relations *a, b, b', b"*. In addition:

$$A_t = f\left(P_t, P_{past}\right) \qquad \text{through } d \qquad (3)$$

The starting point of the simulation study is the reduced form version of the behavioural model (fig. 3) given by (2) and (3). We use this model because, being still adequate for the present purpose, it allows a simpler simulation design than that deriving from the model depicted in fig. 2.

Fig.3. *The reduced form model*

[17] The result is obtained by repeated substitution of *Upast* and *Ppast* in the equation for *Ut*.



We take a set of identical individuals, all of whom are poor at time t=1 (so that there is no heterogeneity at the onset of the process). We impose that they all follow the same process probability rules. We let past poverty experience positively affect the probability of current poverty, thus assuming the existence of a *vicious circle of poverty*. Let's discuss this condition.

As we have shown, equation (2) represents the net effect of relations *a, b, b', b"*. Both *a* and *b* are positive effects. The former represents persistence in unemployment (which may be due, for example, to loss of skills and social networks); the latter trivially stands for income loss due to unemployment. On the other hand *b'* – the income effect of poverty on unemployment – may be positive, as income deprivation may reduce the efficiency of job search, or negative, as it may raise the probability of accepting a job, through the decline of the reservation wage. Psycho-social effects due to poverty (and indirectly influenced by the benefit), represented by *b"*, can take place as well. The net effect of past poverty on current poverty is therefore theoretically undetermined. Nevertheless, the body of theoretical and empirical literature on persistence of poverty does highlight that a major concern for social scientists is that past poverty may cause *more* future poverty (Stevens, 1999; Devicienti, 2002; Giraldo, Rettore and Trivellato, 2003), implying that the *a, b, b'*, *b"* effects could actually represent all together a vicious circle[18].

Poverty and welfare histories have been generated for 5000 hypothetical individuals, for 3650 time units[19] (we may think of this as daily data, recorded for 10 years). Four different specific process models (see table 2) – defined with respect to the way future poverty status is allowed to depend on the current poverty status and past poverty history – have been employed.

Table 2. *Models underlying the simulation study.*

The terms "state" and "duration" refer to the nature of the dependence on the past.
The first line refers to equation (2), the second one to equation (3).

[18] Although we are aware that this concern is sometimes related to the potential negative effect of welfare on poverty - the "welfare trap", which in this restricted version of the model cannot take place by assumption - it is clear that persistence of poverty may also potentially occur for psychological and cultural reasons that are not related to recipiency of the benefit.
[19] The reason for such a large number of time units is to generate nearly continuous duration data.

model 1 (state/state)

Pt depends only on previous state *Pt*-1
At depends only on current poverty status *Pt*

model 2 (duration/state)

Pt depends on elapsed duration in poverty at time *t*-1
A*t* depends only on current poverty status *Pt*

model 3 (state/duration)

Pt depends only on previous state *Pt*-1
At depends on elapsed duration in poverty at time *t*

model 4 (duration/duration)

Pt depends on elapsed duration in poverty at time *t*-1
At depends on elapsed duration in poverty at time *t*

Equation (2) is specified as:

$$\Pr\left\{P_t = 1 \mid P_{past}\right\} = \frac{1}{1 + e^{-(\gamma_0 + \gamma_1 P_{t-1} + \gamma_2 \sqrt{Dur_{t-1}(P)})}}$$

while equation (3) is specified as:

$$\Pr\left\{A_t = 1 \mid P_t = 0\right\} = 0$$

$$\Pr\left\{A_t = 1 \mid P_t = 1, P_{past}\right\} = \frac{1}{1 + e^{-\left(\delta_0 + \delta_1 \sqrt{Dur_t(P)}\right)}}$$

where $Dur_t(P)$ represents the amount of time elapsed in poverty within the present spell at time *t*. The longer the duration of past poverty, the higher the probability of current poverty, and the higher the probability of welfare participation. Under this model, all welfare recipients are poor.

Given the aim of the simulation study, we wish to obtain a relevant number of welfare spells. Parameters have been set in such a way that most individuals eventually receive the social assistance benefit (so, we have set the probability of welfare participation and the probability of being poor, given past poverty, as being quite high).

More specifically[20], parameters of equation (2) are set as follows: $\gamma_0 = 6.65$ and $\gamma_1 = 0.16$ for all models, while $\gamma_2 = 0$ in models 1 and 3 and $\gamma_2 = 0.025$ in models 2 and 4. Parameters are non-negative, depicting a situation where past poverty reinforces future poverty. (For example, if a person is poor one day, the probability of being steadily poor for at least one year is approximately 67% in models 1 and 3, and 75% in models 2 and 4). In equation (3), $\delta_0 = 6.8$ for all models, while $\delta_1 = 0$ in

[20] Similar results are obtained with different values of the parameters (provided the signs are unchanged). We do not describe other parameter configurations because the purpose of the simulation study is merely to provide a counterexample to the general "theory" that negative duration dependence implies welfare dependence.

models 1 and 2 and $\delta_1 = 0.025$ in models 3 and 4 (this implies, for example, that in model 1, a person who becomes poor will have a 45% probability of experiencing at least one year in welfare thereafter).

After generation of poverty and welfare spells, data regarding poverty was discarded. The hazard function:

$$h(t) = \lim_{dt \to 0} \frac{P(t \le T < t + dt \mid T \ge t)}{dt}$$

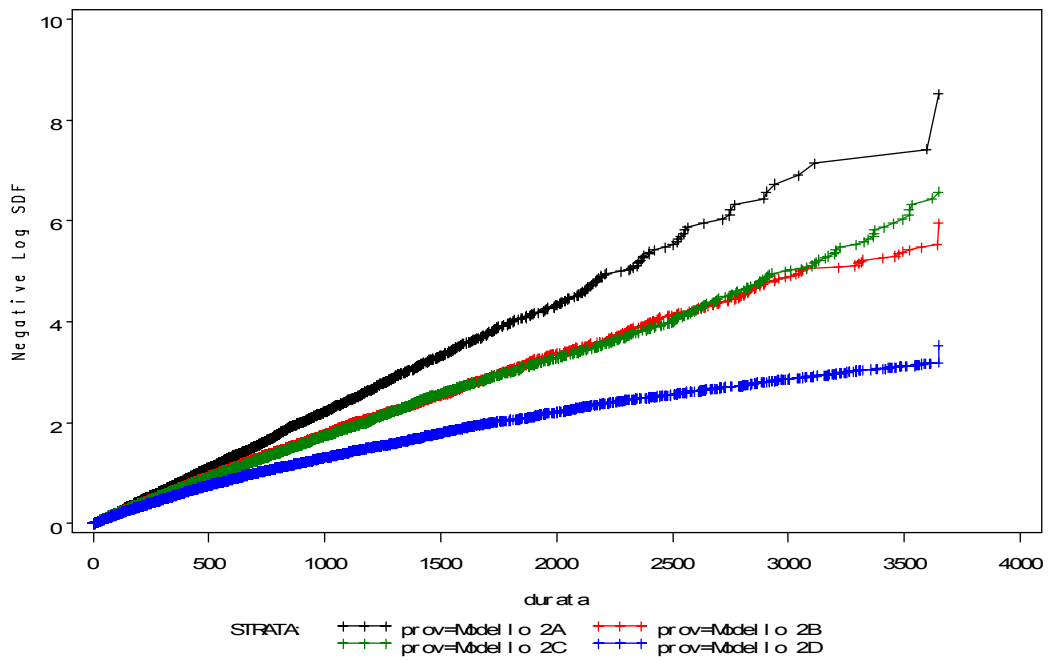
for first welfare spells was estimated with the non-parametric method of Kaplan-Meier. T is welfare spell length. A graphical representation of the estimated integrated hazard:

$$-\ln \hat{S}(t) = \int_0^t \hat{h}(u)du$$

was obtained for each of the four data sets generated from the models described in table 2. If exit rates do not depend on time – i.e. durations follow an exponential distribution – the function should be close to a straight line.

Results

The estimated integrated hazard is nearly a straight line just for model 1 (fig. 4). We observe a departure from the linear function for models 2 and 3, while model 4 definitely exhibits a concave shape. We can see that a concave functional form for $-\ln S(t)$ implies a decreasing hazard function, i.e., negative duration dependence in the exit rate.



(1)

(3)

(2)

(4)

More formally, we also employ different non-parametrical tests (Kolmogorov-Smirnov, Anderson-Darling, Cramer-Von-Mises[21]) for the null hypothesis that spell durations follow an exponential distribution. The percentage of times the null hypothesis is rejected at given significance levels has been calculated for each model. If the distribution of spell duration is indeed exponential, this percentage should be close to the corresponding significance value. On the contrary, if the percentage appears to be much higher than the significance value, there is strong empirical evidence of the existence of duration dependence. Results are summarised in table 3, and refer to 100 replications for each case. The percentage of rejections is close to significance levels only in model 1. When current poverty or welfare use are assumed to depend on elapsed duration in poverty, it rises steeply, almost reaching 100% in model 4, where both equations of the model comprise duration effects.

[21] Given the length of the simulated observation period, we find very few right censored first spells, so employment of these tests should be adequate enough.

Table 3. *Percentage of times the null hypothesis is rejected, for different test-statistics and different significance levels*

Model type	Significance levels	Kolmogorov-Smirnov	Anderson-Darling	Cramer-Von Mises
1	0.01 0.05 0.10	0.02 0.07 0.11	0.02 0.02 0.07	0.02 0.02 0.08
2	0.01 0.05 0.10	0.15 0.34 0.44	0.19 0.40 0.55	0.22 0.41 0.60
3	0.01 0.05 0.10	0.17 0.28 0.39	0.20 0.35 0.44	0.21 0.38 0.50
4	0.01 0.05 0.10	0.97 0.98 0.99	0.99 0.99 0.99	0.99 0.99 0.99

Conclusive remarks

(i) The analytical strategy based on the shape of the welfare hazard function is generally employed to test the subsistence of corruptive effects of welfare benefits that tend to accumulate with time. According to our model (fig 1, section 4), we are dealing with the effects described by relation *e*. As we have shown, negative duration dependence in the exit rate from welfare does not imply the existence of such effects, nor does it imply the existence of *any* causal effect of being on welfare on working condition or income. Exit rates from welfare may in fact exhibit negative duration dependence even when welfare cannot possibly affect individual behaviour and choices – and in a perfectly homogeneous environment. We conclude that assessment of the existence of corruptive effects of welfare benefits should not be based on the shape of the hazard function, even when heterogeneity is taken into account. These effects are generally not identifiable with data on welfare spells only. We will discuss alternative strategies in the next section.

(ii) As we have just stated, the problem – a problem of identification – is not related to the classical unobserved heterogeneity v.s. true dependence issue. Let's reconsider this assessment. Consider a homogeneous population at time t =1, and a process in and out of poverty, governed by the same rules for all individuals. Because of random luck (or bad luck), the population will become heterogeneous as time goes by. A person who becomes poor at the beginning will experience a higher probability of being poor in the future compared to a more fortunate person who has not fallen into poverty yet. Thus, even if heterogeneity is not present at the onset of the process, it will show up with time, being represented by the individual's past poverty and unemployment history. When data come from social assistance administrative archives – or from longitudinal surveys that do not collect data on income and work – only data on welfare spells are available, so this source of heterogeneity is not observable. Would the techniques conventionally adopted to control

unobserved heterogeneity help to solve the problem in this context? We are sceptical. Standard techniques involve the introduction of a time invariant random component representing neglected heterogeneity, but heterogeneity is intrinsically time-varying in this case, and a reasonable ad hoc specification for a time-varying random component seems to be quite a difficult task.

We conclude that, if longitudinal data on poverty and unemployment are available, "cross-career effects" among the domains of welfare, poverty and unemployment should be investigated.

6. Assessing "psycho-social" effects

The model described in section 4 states that the negative effects of welfare benefits on recipients' behaviour occur: (i) through an indirect income effect induced by the transfer (arrows *d'*): as reservation wage rises, work effort declines[22] (arrow *b'*); (ii) through a direct effect – growing with time on welfare– on the probability to exit unemployment, due to cultural and psycho-social factors (arrow *e*). Both effects are related to how social assistance benefits influence the domain of work/unemployment.

On the contrary, duration dependence in the exit rate from welfare describes the relation between past and future social assistance participation – a very indirect causal link, given by the net effect of *b, d, d', b', b''*, *e, a.* As we have seen in section 5, duration dependence can have alternative explanations, not always congruent with the welfare dependence perspective.

In this light, any assessment of the effects of welfare should focus directly on the relation between benefit receipt and labor market behaviour, in line with the tradition in the literature on work disincentives.

The relevant conceptual framework for the evaluation of welfare dependence is that of the *impact evaluation* literature (Heckman and Smith, 1997), according to which the causal effect of a program should be evaluated with counterfactual reasoning. If the aim is the evaluation of the "impact on the treated", i.e. how program participation affects recipient's behaviour[23], an outcome measure of the impact for recipients should be contrasted with that of an appropriate comparison group[24]. In principle, the evaluation design can be based on the comparison between assisted poor vs. unassisted poor[25] – in

[22] Although a positive effect may be at work as well, if the subsidy has empowerment effects (by providing support for the costs of job-search and alleviating negative psycho-social effects of income deprivation).

[23] Some studies focus instead on the global impact of the program, which also involves "entry effects" (given by the fact that the non-eligible can change their behaviour in order to become eligible) and substitution effects.

[24] The counterfactual is represented by the (average) outcome which would have occurred to the "treated" if they had not been treated. Under certain (often untenable) assumptions, the counterfactual can be consistently estimated by the (average) outcome of a convenient comparison group, or by that of the treatment group before implementation of the program. The former strategy implies the existence of a proper comparison group (i.e. the absence of selection bias on unobservables); the latter, the possibility of keeping control over the ongoing changes in the environment.

[25] The strategy is quite difficult to pursue in systems with universalistic orientation (Saraceno, 2002) such as those at work in the Scandinavian countries, where it is rare to find non-assisted poor, since the subsidy is guaranteed to anyone with an income below a specific threshold and there is little stigma attached to receiving it. Recipients and non-recipients are likely to have intrinsic differences also in "category-based" assistance regimes, which select beneficiaries not only on the basis of their economic condition, but of other qualifying circumstances as well (for example, the composition of the household).

order to assess the impact of a specific intervention with respect to the situation where no program is at work – or between assisted poor in different welfare programs, for example programs that allocate different amounts of benefit[26].

In this framework, let's try a simple line of reasoning. Assume that we can find a group of non-recipient poor who are not too different from recipients, and that these differences can be taken under control. This could occur, for example, in assistance regimes – such as that at work in Italy – where laws and norms regulating access to benefits leave social workers a wide margin of discretionality and the transfer is not always "according to need"[27] (Contini and Melis, 2002). Or in systems with universalistic orientation, if not all the eligible claim the benefit, as with the French *Revenu Minimum d'Insertion, RMI* program (Terracol, 2004): in this case, the group of non-recipient poor could be that of eligible non-recipients[28].

Thus, we can compare the exit rates from *unemployment* for the two groups (Contini and Melis, 2002; Terracol, 2004), the relevant question being: does benefit receipt reduce this exit rate? (see fig. 5). Evidence of welfare dependence is provided if, *ceteris paribus,* non-recipients leave unemployment more rapidly than recipients (notice that welfare dependence is not related to the shape of the exit rate from unemployment, and it does not imply negative duration dependence)[29].

This is the case of the main US welfare programs *AFDC* and *TANF*, but also of the local social assistance systems in Italy and Germany (Bonny, Bosco; 2002). In all cases, if the two groups differ with respect to unobservable characteristics, the problem of "selection bias" has to be dealt with.

[26] Most of the studies in the literature on welfare dependence do not strictly refer to the impact evaluation framework. Among the exceptions, the study conducted by Fortin, Lacroix and Drolet (2004), which exploits the exogenous change which occurred in 1989 in the Canadian Quebec-Welfare Program, thus considered a "natural experiment". The impact of the change of the benefit level is estimated with the "difference in difference" method (Heckman, Smith; 1997).

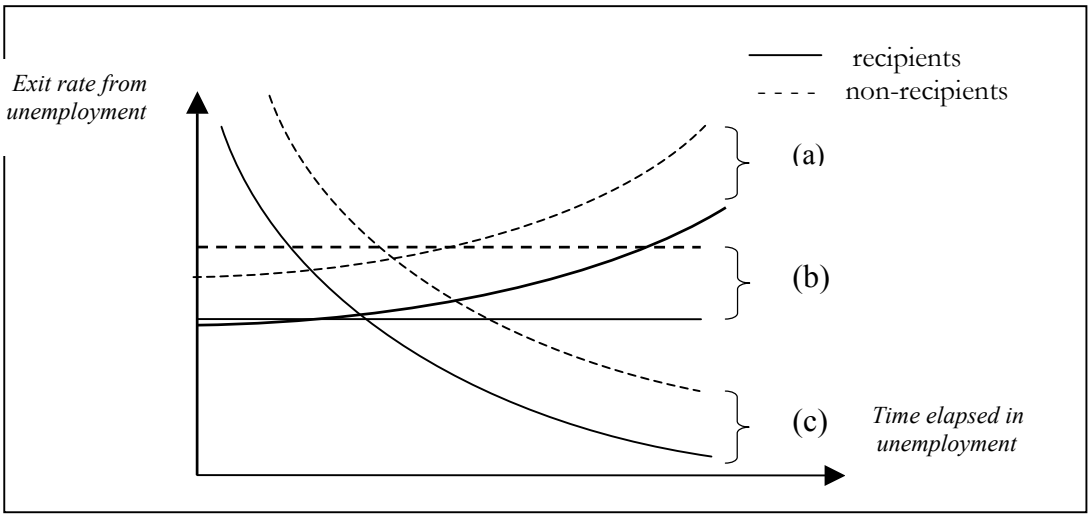
[27] In this case the working behaviour of recipients could be compared to that of the same persons when they do not receive the benefit.

[28] The endogenous nature of participation given eligibility has to be dealt with. Terracol (2004) jointly estimates the equation for the exit rate from unemployment spell and the equation explaining take-up behaviour by eligible agents.

[29] This effect may instead be represented by arrow *a* in fig.1.

Fig 5. *Comparing the exit rate from unemployment for recipients and non-recipients*

The exit rate from unemployment is higher for the non-recipient poor.
(a) increasing hazard; (b) constant hazard; (c) decreasing hazard.



More specifically, let's try to identify both the negative effects of welfare receipt traced in our model. As we have seen in the previous sections, psycho-social effects (arrow *e*) are likely to develop and grow stronger with time on welfare, whereas behavioural effects based on the rational choice model (arrows *d'+b'*) are not. Thus, the level of the exit rates from unemployment is affected by the work disincentive effect of the subsidy. Can we identify also cumulative effects of time on welfare?

We could evaluate whether unemployment exit rates differ between long-term and short-term assisted by including currently elapsed time on welfare as a time-varying covariate. Evidence of psycho-social effects being at work is supplied if we find that work effort decays with time on welfare. But a significant coefficient for elapsed time on welfare does not prove the existence of detrimental effects of the benefit. Identification issues arise also in this context: as time spent in welfare can stand for time in poverty, separating the psycho-social effect due to time in welfare (type *e* effects) from that due to time in poverty (type *b"*) is not a simple task[30].

In principle, when poverty spells are available, a time-covariate representing elapsed time in poverty or some relevant features of past poverty history can be added to elapsed time on welfare. But even with a very rich longitudinal data set on unemployment, poverty and welfare participation, the following minimal conditions have to hold: (i) spells in poverty and spells on welfare must not be nearly overlapping[31]; (ii) the effects of elapsed time in poverty and elapsed time on welfare have to be additive, or, if there are interaction effects, these effects have to be correctly specified. Unfortunately the above conditions – related to the local context and to the specific features of the welfare programs – do not always hold.

[30] As we have pointed out in section 4, the policy implications are quite different in the two cases.
[31] As it would happen in universalistic welfare systems.

We may conclude that "dissecting" the effects underlying welfare participation is extremely important in order to indentify - from a theoretical point of view - the different mechanisms at work: on one hand, distinguishing negative effects of the benefit from those related to conditions different from that of being a welfare recipient; on the other hand, distinguishing the different modes of welfare dependence. Nevertheless, the above discussion highlights that the empirical assessment of the different mechanisms has no simple general solution: very rich data archives are required and evaluation designs must be strictly related to institutional and cultural factors, thus, have to be deeply rooted into the local environment.

References

Bane M., Elwood D. (1994), *Welfare Realities: From Rhetoric to Reform*, Cambridge, MA, Harvard University Press.

Blank R. (1989), "Analyzing the Length of Welfare Spells", *Journal of Public Economics*, 39, 245-274.

Blank R. M. (2002), "Evaluating Welfare Reform in the United States", *Journalof Economic Literature*, XL, 1105-1166.

Blank R. M., Ruggles P. (1994), "Short-term Recidivism among Public-Assistance Recipients", *American Economic Review*, 84, 2, 49-53.

Bonny Y. Bosco N. (2002), "Income support measures for the poor in European cities", Saraceno (eds), *Social Assistance Dynamics in Europe: National and Local Poverty Regimes*, The Policy Press, Bristol, 81-125.

Borjas G. J. (2000), *Labor Economics*, McGraw Hill.

Bosco N., Contini D., Negri N. (1999), "Out of welfare: functioning of income support in Torino", *Quality and Quantity*, 33, 243-260.

Boudon, R. (1984), *La place du désordre*, Paris, Presses Universitaires de France.

Buhr P., Weber A. (1998), "Social assistance and social change in Germany", in Leisering L. e Walker R. (eds), *The dynamics of modern society: Poverty, policy and welfare*, Bristol, The Policy Press, 183-198.

Chay K. Y., Hoynes H., Hyslop D. (2005), "A non-experimental analysis of true state dependence in monthly welfare participation sequences", *Journal of Econometrics,* forthcoming

Coleman, J.S. (1990), *Foundations of Social Theory*, Cambridge, Harvard University Press, Harvard.

Contini D., Melis N. (2002), "I sussidi assistenziali inducono dipendenza? Evidenze dall'archivio sui residenti in edilizia pubblica", *Statistica Applicata*, 12, 197-225.

Dahl E., Lorentzen T. (2003), "Explaining exit to work among social assistance recipients in Norway: heterogeneity or time dependency?", *European Sociological Review*, 19, 5, 519-536.

Dazinger S., Haveman R., Plotnick R. (1981), "How income transfers affect work, savings and the income distribution", *Journal of Economic Literature*, 19, 3, 975-1028.

Devicienti F. (2001), "Poverty persistence in Britain: a multivariate analysis using the BHPS, 1991-1997", *Journal of Economics*, Suppl. 9, 1-34.

Duncan G. J. (1984), *Years of Poverty, Years of Plenty*, Survey Research Center, Institute for Social Research, University of Michigan.

Ermish J. F., Wright R. E. (1991), "Welfare benefits and lone parents' employment in Great Britain", *The Journal of Human Resources*, pp. 424-456.

Fitzgerald J. (1991), "Welfare durations and the marriage markets. Evidence from the Survey of Income and Program Particpation", *The Journal of Human Resources*, pp. 545-561.

Fortin B., Lacroix G., Drolet S. (2004), "Welfare benefits and the duration of welfare spells: evidence from a natural experiment in Canada", *Journal of Public Economics*, 88, 1495-1520.

Gangl M. (2003), "Tra sussidio sociale e mercato del lavoro: un'analisi empirica nella Repubblica Federale Tedesca", in Alcock P. e Siza R. (eds), *La Povertà Oscillante*, *Sociologia e Politiche Sociali*, 6, 2, 147-167.

Giraldo A., Rettore E. , Trivellato U. (2001), "The persistence of poverty: true state dependence or unobserved heterogeneity? Some evidence form the Italian survey on household income and wealth", *Working Paper n. 40, Progetto COFIN 1999 "Occupazione e disoccupazione in Italia: misura e analisi dei comportamenti"*.

Goldthorpe J.H. (2000), *On Sociology. Numbers, Narrative and the Integration of Theory and Research,* Oxford University Press.

Gottschalk P. e Moffit R. (1994), "Welfare Dependence: Concepts, Measures, and Trends", *American Economic Review,* 84, 2, 38-42.

Granovetter M. (1983), "The Strength of Weak Ties", *Sociological Theory*, 1 (tr. it. "La forza dei legami deboli", in Granovetter M., *La forza dei legami deboli e altri saggi*, Liguori, Napoli, 1998, 115-146).

Granovetter M. (1995), *Getting a Job: A Study of Contacts and Careers*, seconda edizione (tr. it. "Postfazione alla seconda edizione di *Getting a Job*: riesame dei risultati e nuove prospettive di ricerca", in Granovetter M., *La forza dei legami deboli e altri saggi*, Liguori, Napoli, 1998, 146-196).

Gustaffson B., Muller R., Negri N. e Voges W. (2002) "Paths through (and out) social assistance", in Saraceno C. (eds), *Social Assistance Dynamics in Europe: National and Local Poverty Regimes*, The Policy Press, Bristol, 173-234.

Hedström P. (2005), *Dissecting the Social: on the Principles of Analytical Sociology*, Oxford University Press

Hedström, P., Swedberg R. (1998), eds, *Social Mechanisms*, Cambridge, Cambridge University Press.

Heckman J. J., Smith A. J. (1997), "The Sensitivity of Experimental Impact Estimates: Evidence from the National JTPA Study", *NBER Working Paper N° 6105,* National Bureau of Economic Research.

Hoynes H., MaCurdy T. (1994), "Has the Decline in Benefits Shortened Welfare Spells?", *American Economic Review*, 84, 2, 43-48.

Lancaster T. (1990), *The Econometric Analysis of Transition Data*, Cambridge University Press, Cambridge.

Leisering L., Leibfried S. (1999), *Time and Poverty in Western Welfare States*, Cambridge University Press, Cambridge.

Leisering L., Walker R. (1998), "Making the future: from dynamics to policy agenda", in Leisering L. e Walker R. (eds) (1998), *The dynamics of modern society: Poverty, policy and welfare*, The Policy Press, Bristol, 265-285.

Leisering L., Walker R. (eds) (1998), *The dynamics of modern society: Poverty, policy and welfare*, The Policy Press, Bristol.

Martini A. (1997) "Valutazione dell'efficacia di interventi pubblici contro la povertà: questioni di metodo e studi di casi", www.prova.org/SezProge/contri.htm

Moffit R. (1992), "Incentive Effects of the U.S. Welfare System: a Review", *Journal of Economic Literature*, 30, 1-61.

Moffit R. (2002), "The Temporary Assistance for Needy Families Program", *NBER Working Paper N° 8749*.

Moffit R. (2003), "The role of nonfinancial factors in exit and entry in the TANF program, *The Journal of Human Resources*, XXXVIII Supplement, 1221-1254

Negri N., Saraceno C. (1996), *Le politiche contro la povertà in Italia*, il Mulino, Bologna.

O'Neill J.A., Bassi L.J., Wolf D.A. (1987), "The duration of welfare spells", *The Review of Economics and Statistics*, 241-248.

Sandefur G. D., Cook S. T. (1998), "Permanent Exits from Public Assistance: the Impact of Duration, Family and Work", *Social Forces*, 77, 2, 763-787.

Saraceno C. (2002), *Social Assistance Dynamics in Europe: National and Local Poverty Regimes*, The Policy Press, Bristol.

Sen A. (1999), *Development as Freedom*, Alfred A. Knopf Inc. (tr. it. *Lo sviluppo è libertà,* Arnoldo Mondadori Editore, Milano, 2000).

Shaw A., Walker R. (1996), "Disjointed interaction: the labour market and the benefit system", in Meadows P. (eds), *Work out or work in?*, York Publishing Service/Joseph Rowentree Foundation, York, 87-115.

Stevens A. H. (1999), "Climbing out of poverty, falling back in: measuring the persistence of poverty over multiple spells", *Journal of Human Resources*, 34, 3, 557-588.

Terracol A. (2004), "Welfare programs and unemployment duration in France", unpublished preliminary version

Thurow L. C. (1975), *Generating Inequality. Mechanism of Distribution in the U.S. Economy*, Basic Book Inc., New York (tr. it. *Alle origini dell'ineguaglianza*, Vita e Pensiero, Milano).

Van der Berg G. J., Van der Klaauw B., Van Ours J.C. (2004), "Punitive sanctions and the transition rate from welfare to work", *Journal of labor Economics*, 22, 1, 211-241.

Walker R., Ashworth K. (1998), "Welfare benefits and recession in Great Britain", in Leisering L. e Walker R. (eds) (1998), *The dynamics of modern society: Poverty, policy and welfare*, The Policy Press, Bristol, 199-220.

Walker R., Leisering L. (1998), "New tools: towards a dynamic science of modern society", in Leisering L. e Walker R. (eds) (1998), *The dynamics of modern society: Poverty, policy and welfare*, The Policy Press, Bristol, 17-33.

Walker R. e Shaw A. (1998), "Escaping from social assistance in Great Britain", in Leisering L. e Walker R. (eds) (1998), *The dynamics of modern society: Poverty, policy and welfare*, The Policy Press, Bristol, 183-198.

Would declining exit rates from welfare provide evidence of welfare dependence in homogeneous environments?

Summary

The existence of negative duration dependence in the exit rate from social assistance is one of the main issues addressed in the dynamic welfare participation literature. If heterogeneity is properly modelled, the decline of the exit rate is ascribed to a progressive reduction of the capability to get off welfare due to the detrimental effects of the benefit as time in welfare increases (Blank, 1989; Sandefur and Cook, 1998; Dahl and Lorenzen; 2003; Gangl, 2003, Chay, Hoynes and Hyslop, 2005).

The aim of this paper is to show that the correct inference regarding the corruptive effect of benefits is difficult to obtain with this analytical strategy. As a starting point we develop a model, coherent with the Bane and Ellwood (1994) theoretical framework, that describes the possible causal links occurring between work/unemployment, poverty and social assistance. A simulation study is carried out in order to show that negative duration dependence in the exit rate from welfare may arise in environments where no corruptive effects of benefits are at work, even in the absence of heterogeneity at the onset of the process. Thus negative duration dependence in the exit rate from welfare does not imply "welfare dependence": it may be due to effects of persistence in poverty or in unemployment.

Working Papers

68. D. Contini, N. Negri, Would declining exit rates from welfare provide evidence of welfare dependence in homogeneous environments?, Ottobre 2005

67. E. Battistin, E. Rettore, U. Trivellato, Choosing among alternative classification criteria to measure the labour force state, Ottobre 2005

66. G. Tattara, M. Valentini, Evaluating the Italian training on the job contract (CFL), Ottobre 2005

65. A. Paggiaro, E. Rettore, U. Trivellato, The impact of the Italian "Mobility Lists" on employment chances: new evidence from linked administrative archives, Ottobre 2005

64. D. Bondonio, R.T. Greenbaum, Do Tax Incentives Affect Local Economic Growth? What Mean Impacts Miss in the Analysis of Enterprise Zone Policies, Ottobre 2005

63. D. Bondonio, The employment impact of business incentive programs in declining areas. Mean impacts versus impacts by degrees of economic distress, Ottobre 2005

62. U. Trivellato, F. Bassi, A. Discenza, A. Giraldo, Transizioni e mobilità nel mercato del lavoro italiano, 1979-2003, Giugno 2005.

61. A. De Angelini, A. Giraldo, La mobilità dei lavoratori nel Veneto.Confronto fra misure su dati RTFL e su dati NETLABOR, Settembre 2003.

60. F. Bassi, E. Salvan, Dinamiche di ricollocamento per lavoratori che perdono un'occupazione stabile, Settembre 2003.

59. M. Romano, Abbinamento tra gli archivi INPS e Netlabor: il caso degli iscritti alle liste di mobilità, Settembre 2003.

58. P. Baretta, U. Trivellato, La mobilità dei lavoratori da fonti amministrative e da surveys sulle famiglie: un'analisi comparata, Settembre 2003.

57. D. Bondonio, R.T. Greebaum, A comparative evaluation of spatially targeted economic revitalization programs in the European Union and the United States, Settembre 2003.

56. F. Berton, L. Pacelli, G. Segre, Tra lavoro dipendente e lavoro parasubordinato: chi sono, da dove vengono e dove vanno i lavoratori parasubordinati, Settembre 2003.

55. G. Betti, V. Verma, M. Natilli, F. Ballini, Statistical imputation in conjunction with micro-simulation of income data, Settembre 2003.

54. V. Verma, G. Betti, F. Ballini, M. Natilli, S. Galgani, Personal income in the gross and net forms: applications of the Siena micro-simulation model (SM2), Settembre 2003.

53. R. Canu, G. Tattara, Quando le farfalle mettono le ali. Osservazioni sull'ingresso delle donne nel lavoro dipendente, Settembre 2003.

52. D. Favaro, S. Magrini, Gender wage differentials among young workers: methodological aspects and empirical results, Settembre 2003.

51. F. Devicienti, Downward nominal wage rigidity in Italy: evidence and consequences, Novembre 2002.

50. V. Verma, G. Betti, Longitudinal measures of income poverty and life-style deprivation, Novembre 2002.

49. A. Borgarello, F. Devicienti, Trends in the Italian earnings distribution, 1985-1996, Novembre 2002.

48. S. Bragato, F. Occari, M. Valentini, I problemi di contabilizzazione dei lavoratori extracomunitari. Una verifica nelle province di Treviso e Vicenza, Novembre 2002.

47. B. Anastasia, D. Maurizio, Misure dell'occupazione temporanea: consistenza, dinamica e caratteristiche di uno stock eterogeneo, Novembre 2002.

46. E. Rettore, U. Trivellato, A. Martini, La valutazione delle politiche del lavoro in presenza di selezione: migliorare la teoria, i metodi o i dati?, Novembre 2002.

45. U. Trivellato, A. Giraldo, Assessing the 'choosiness' of the job seekers. An exploratory approach and evidence for Italy, Novembre 2002.

44. E. Battistin, E. Rettore, Another look at the regression discontinuity design, Novembre 2002.

43. B. Contini, F. Cornaglia, C. Malpede, E. Rettore, Measuring the impact of the Italian CFL programme on the job opportunities for the youths, Novembre 2002.

42. F. Devicienti, Estimating poverty persistence in Britain, Novembre 2001.

41. A. Giraldo, E. Rettore, U. Trivellato, Attrition bias in the bank of Italy's survey on household income and wealth, Novembre 2001.

40. A. Giraldo, E. Rettore, U. Trivellato, The persistence of poverty: true state dependence or unobserved heterogeneity? Some evidence form the Italian survey on household income and wealth, Novembre 2001.

39. G. Barbieri, P. Gennari, P. Sestito, Do public employment services help people in finding a job? An evaluation of the italian case, Novembre 2001.

38. N. Torelli, A. Paggiaro, Estimating transition models with misclassification, Novembre 2001.

37. B. Anastasia, M. Gambuzza, M. Rasera, Le sorti dei flussi: dimensioni della domanda di lavoro, modalità di ingresso e rischio disoccupazione dei lavoratori extracomunitari in Veneto, Novembre 2001.

36. L. Pacelli, Fixed term contracts, social security rebates and labour demand in Italy, Novembre 2001.

35. A. Borgarello, F. Deficienti, C. Villosio, Mobilità retributiva in Italia 1985-1996, Novembre 2001.

34. B. Contini, C. Villosio, Job changes and wage dynamics, Novembre 2001.

33. B. Contini, Earnings mobility and labor market segmentation in Europe and USA: preliminary explorations, Novembre 2001.

32. A. Borgarello, F. Devicienti, Trend nella distribuzione dei salari italiani 1985-1996, Novembre 2001.

31. F. Bassi, U. Trivellato, Gross flows from the French labour force survey: a reanalysis, Novembre 2001.

30. F. Bassi, M. Gambuzza, M. Rasera, Imprese e contratti di assunzione: prime analisi da Netlabor, Novembre 2001.

29. N. Rosati, Further results on inequality in Italy in the 1980s and the 1990s, Aprile 2001.

28. A. Ichino, M. Polo, E. Rettore, Are judges biased by labor market conditions?, Novembre 2000.

27. E. Battistin, E. Rettore, Testing for the presence of a programme effect in a regression discontinuity design with non compliance, Novembre 2000.

26. E. Battistin, E. Rettore, U. Trivellato, Measuring participation at work in the presence of fallible indicators of labour force state, Giugno 2000.

25. A. D'Agostino, G. Ghellini, L. Neri, Percorsi di ingresso dei giovani nel mercato del lavoro, Giugno 2000.

24. F. Bassi, M. Gambuzza, M. Rasera, E. Rettore, L'ingresso dei giovani nel mercato del lavoro: prime esplorazioni dall'archivio Netlabor, Giugno 2000.

23. A. Paggiaro, U. Trivellato, Assessing the effects of the "Mobility List" programme in an Italian region: do (slightly) better data and more flexible models matter?, Marzo 2000.

22. A. D'Agostino, G. Ghellini, L. Neri, Modelli statistici per l'analisi dei comportamenti di transizione scuola lavoro, Marzo 2000.

21. G. Betti, B. Cheli, A. Lemmi, Analisi delle dinamiche di povertà e disoccupazione su uno pseudo panel italiano, Marzo 2000.

20. N. Rosati, Permanent and Temporary Inequality in Italy in the 1980s and 1990s, Marzo 2000.

19. F. Bassi, M. Gambizza, M. Rasera, Struttura e qualità delle informazioni del sistema NETLABOR. Una verifica sui dati delle Scica delle province di Belluno e Treviso, Marzo 2000.

18. B. Anastasia, M. Gambuzza, M. Rasera, La durata dei rapporti di lavoro: evidenze da alcuni mercati locali del lavoro veneti, Marzo 2000.

17. G. Betti, B. Cheli, A. Lemmi, Occupazione e condizioni di vita su uno pseudo panel italiano: primi risultati, avanzamenti e proposte metodologiche, Ottobre 1999.

16. A. D'Agostino, G. Ghellini, L. Neri, A Multiple Imputation Method for School to Work Panel Data, Ottobre 1999.

15. A. Paggiaro, N. Torelli, Una procedura per l'abbinamento di record nella rilevazione trimestrale delle forze di lavoro, Ottobre 1999.

14. S. Campostrini, A. Giraldo, N. Parise, U. Trivellato, La misura della partecipazione al lavoro in Italia: presupposti e problemi metodologici di un approccio "time use", Ottobre 1999.

13. T. Di Fonzo, P. Gennari, Le serie storiche delle forze di lavoro per il periodo 1984.1-92.3: prospettive e problemi di ricostruzione, Giugno 1999.

12. A. Paggiaro, Un modello di mistura per l'analisi della disoccupazione di lunga durata, Maggio 1999.

11. M. Lalla, F. Pattarin, Alcuni modelli per l'analisi delle durate complete e incomplete della disoccupazione: il caso Emilia Romagna, Maggio 1999.

10. F. Bassi, M. Gambuzza, M. Rasera, Il sistema informatizzato NETLABOR. Caratteristiche di una nuova fonte sul mercato del lavoro, Maggio 1999.

9. B. Contini, M. Filippi, L. Pacelli, C. Villosio, Working careers of skilled vs. unskilled workers, Gennaio 1999

8. B. Contini, L. Pacelli, C. Villosio, Short employment spell in Italy, Germany and Great Britain: testing the "Port-of-entry" hypothesis, Gennaio 1999

7. B. Contini, Wage structures in Europe and in the USA: are they rigid, are they flexible?, Gennaio 1999.

6. M. Forni, S. Paba, Industrial districts, social environment and local growth. Evidence from Italy, Novembre 1998.

5. Ginzburg, M. Scaltriti, G. Solinas, R. Zoboli, Un nuovo autunno caldo nel Mezzogiorno? Note in margine al dibattito sui differenziali salariali territoriali, Ottobre 1998.

4. F. Bassi, Un modello per la stima di flussi nel mercato del lavoro affetti da errori di classificazione in rilevazioni retrospettive, Ottobre 1998.

3. U. Trivellato, Il monitoraggio della povertà e della sua dinamica: questioni di misura e evidenze empiriche, Settembre 1998.

2. N. Rosati, E. Rettore, G. Masarotto, A lower bound on asymptotic variance of repeated cross-sections estimators in fixed-effects models, Agosto 1998.

1. E. Battistin, A. Gavosto, E. Rettore, Why do subsidized firms survive longer? An evaluation of a program promoting youth entrepreneurship in Italy, Agosto 1998.